THE LEARNING ORGANISATION AND MARKET ORIENTATION

A STUDY OF EXPORT COMPANIES IN THE NETHERLANDS

by

Paul Breman

A thesis submitted in partial fulfilment of

the requirements for the degree of

Doctor of Business Administration

Henley Management College

and Brunel University

1998

THE LEARNING ORGANISATION AND MARKET ORIENTATION
A STUDY OF EXPORT COMPANIES IN THE NETHERLANDS

ABSTRACT

This study focused on the interrelationships between formalisation, the learning organisation, market orientation and business performance, and on the possible moderating influence of the environmental variables turbulence and competitive intensity on the learning organisation/market orientation-business performance link. This study was done in the context of the larger Dutch export companies. A review of the literature enabled the development of four hypotheses (see below). Until now, there has been hardly any empirical evidence of the relationship of the learning organisation with market orientation, of the relationship between the learning organisation and business performance and of the possible moderating influences on this relationship. Furthermore, the relationship of market orientation with business performance is mainly studied in the USA, Japan and the UK, but not in the Netherlands.

A review of the literature enabled the development of the following four hypotheses:

H1:   The greater the level of formalisation, the lower the level of learning organisation and the level of market orientation.

H2:   The greater the level of learning organisation, the greater the level of market orientation and vice versa.

H3.   The greater the level of learning organisation and the level of market orientation, the greater the level of business performance.

H4:   The greater the level of turbulence and the level of competitive intensity, the stronger the relationship between the learning organisation and market orientation with business performance.

The study used both quantitative and qualitative research methods, an approach which may be referred to as "methodological triangulation". Measuring instruments were developed for all constructs used in the study. The questionnaire, making use of the Learning Organisation Practices Profile (LOPP) and an extended version of MARKOR, consisted of 81, six-point, scale statements. 670 questionnaires were mailed to larger export companies (as determined by number of employees). A response rate of 17% was recorded. Finally, 20 open interviews were conducted with executives of companies who participated in the survey to gain a greater understanding of the properties of learning and market oriented organisations. The scale of the learning organisation was factor analysed in an exploratory way and the scale of market orientation in a confirmatory way, using the principal components method of factor extraction by a varimax rotation. In this way, the scales were refined and underlying factors were identified for the two constructs. Statistical analysis of the constructs of the research model showed instruments with acceptable levels of reliability and validity.

The relationships between the constructs were explored by bivariate correlation and moderated regression techniques using SPSS 7.5.1. Structural equation modelling was applied to gain a deeper understanding of the interrelationships between the constructs by developing and testing four hypothetical models using AMOS (Analysis of moment structures). Results indicated that only the model where the learning organisation and market orientation were combined into one construct was satisfactory. Statistical analysis provided support for H2 and H3. In contrast, for H1 and H4 no convincing statistical evidence was found.

The study produced a modified and short questionnaire to measure the learning organisation, market orientation and business performance. This questionnaire may be used by companies for self-assessment. This study also provided benchmarks for companies with which to compare themselves.

ACKNOWLEDGEMENTS

The writing of a thesis for a doctorate degree in business administration (DBA) is a lengthy, complex and arduous task, which cannot be fulfilled without the help of numerous people, of whom I can only mention a few here. Firstly, my thanks go to Professor Tevfik Dalgic who guided me so well through the doctorate process. His professional and emotional support and enthusiasm were invaluable on the long road of theoretical study, research design, empirical study and writing the thesis. I will always remember the many stimulating and sociable meetings of the Dutch DBA/PhD group he presided over. I also want to thank Professor Arthur Money, who supported me in the understanding of statistical analysis, and stimulated me to become enthusiastic about quantitative research methods. I am also grateful to Leanna Roscoe, who edited the thesis for the usage of the English language, an important task in my case, as the English language is not my mother tongue. The acknowledgements would not be complete without expressing my gratitude to my Dutch DBA and PhD fellows, particularly Jack van Minden and Maarten Leeuw, whose friendship was of great support to keep on going, especially at times when an occasional dip threatened the progress of my project.

My gratitude also goes to the respondents of my research, without whom this project would not have been possible. My thanks go especially to the twenty executives whom I interviewed in their companies and whose infectious enthusiasm for their work and their organisation and whose sympathy with my research project helped me to persevere.

I also want to thank my wife, Hanneke, for her grace, tenderness and support throughout the five years of this DBA project. Her help with numerous jobs during the research process and putting up with my long working hours and modest participation in everyday and social life have been much appreciated. Last, but not least, my thanks go to all the people - friends, colleagues, conference attendees, family and clients - whose great interest in my doctorate project and whose occasional tap on my shoulder, helped me to go on with the job more than they will ever know.

Table of Contents

APPENDICES

Appendix A.
The Questionnaire Used in the Research

Appendix B.
The Integration of the LOPP and "Extended MARKOR" and Item Deletion

Appendix C.
Covering Letter to the Pre-test Survey

Appendix D.
Covering Letter to the Actual Survey

Appendix E.
Coupon that Accompanied the Questionnaire

Appendix F.
The Dutch Questionnaire with Covering Letter

Appendix G.
Proposed Questionnaire for Self-Assessment of Organisations for Learning Organisation, Market Orientation and Business Performance. English version

Appendix H.
Proposed Questionnaire for Self-Assessment of Organisations for Learning Organisation, Market Orientation and Business Performance. Dutch version

Appendix I.
Tables of Chapter 6

Appendix J.
Tables of Chapter 8

Appendix K.
Overview of the Characteristics of the Twenty Companies who Participated in the Interviews

LIST OF FIGURES

LIST OF TABLES

CHAPTER 1. INTRODUCTION

1.1. The background and motivation for the study

The *primary objectives* of this study are to assess the following (in the context of the larger Dutch export companies):

- The relationship between the learning organisation and market orientation;
- The influence of formalisation on the learning organisation and market orientation;
- The influence of the learning organisation and market orientation on business performance;
- The moderating influence of turbulence and competitive intensity on the relationship of the learning organisation and market orientation with business performance.

The *secondary objectives* of this study are:

(1) The development of a theoretical framework, resulting from the objective mentioned above;
(2) The generation of quantitative data to test this theoretical framework;
(3) The collection of qualitative data to deepen understanding of this theoretical framework.

The motivation for this study was as follows. As a management consultant the author of this study is involved in assignments where companies are striving to become learning organisations and to increase their market orientation. These companies are convinced that this will improve business performance and thus their business results and competitive power in the long term. However (apart from some articles in popular management magazines and in the daily newspapers) most of these companies are unaware of the literature and the research on these issues. Intrigued by these topics, the author of this study wanted to gain a deeper understanding of the phenomenon of the learning organisation and of the "ins and outs" of a market orientation. Studying

these issues would hopefully satisfy his curiosity and help him to be more effective as a consultant. This is the reason why this DBA study is devoted to the search for relevant literature and research on the relationship of the learning organisation and market orientation with business performance. This drive to learn more about these phenomena was given impetus by Professor Tevfik Dalgic, the first supervisor for this doctorate study, who was very enthusiastic about market orientation and who strongly believed in the relationship of a market orientation with the learning organisation. The author of this study, a sociologist by training, approached it from another angle. Being enthusiastic about the idea of the learning organisation, he was concerned about the way learning organisations utilise their competencies to become more sensitive and responsive to their markets, customers and competitors. Thus, where the sociologist and the marketing scholar met, something special was born. Together they discussed the ideas of the learning organisation and market orientation and in this way gradually the focus of this study developed.

The concept of the learning organisation alone does not explore the way organisations approach their markets. The concept of a market orientation on the other hand does not fully capture the manner in which people interact within the organisation. Implementation of market orientation needs knowledge of how to change the behaviour of the people in the organisation. The theory of the learning organisation promises the key to this knowledge.

Whilst studying the literature on the learning and the market oriented organisation, the author discovered that the literature on market orientation was more than 30 years old (Felton, 1959; Levitt, 1960), but it was not until recently that some empirical studies investigated this concept in practice. He also found that the learning organisation concept is not much newer. In 1963, Cyert and March described organisational learning as a process by which organisations as collectives learn through interaction with their environments. Nevertheless, the learning organisation concept received little empirical research. This thesis, therefore, investigates the relationship of both concepts with the performance of businesses and it studies the relationship between the learning organisation and market orientation. It also investigates the (moderating)

2

influence of the environment on these relationships. The thesis reports the results of a research project in the Netherlands to investigate the model: a survey to gain a broad understanding and interviews to study some companies in more depth. The thesis concludes with suggestions for the research agenda. The experiences and results of this research are also used to develop a new and brief questionnaire that may be used by organisations to assess their learning and market oriented properties.

1.2. The activities accompanying this study

The literature search and the research for this study took five years to complete. The literature search resulted in some publications (Breman and Straathof, 1993; Breman and Mensingh, 1997) and in presentations at the Annual Conference of the Academy of Marketing Science (AMS), 17-20 May 1995 in Orlando, Florida and at the Hogeschool Utrecht, 21 June 1995. The research results were also presented at the Annual Conference of the AMS, 29 May -1 June 1996 in Phoenix, Arizona and at a special Henley seminar in Zeist, 14 June 1996 attended by the respondents of this research and by fellow researchers. Two book reviews about important books on the learning organisation were also published (Breman and Rekvelt, 1995; Breman and Nutters, 1996). A publication on the main conclusions of this study in an international journal is in preparation and these conclusions were also presented at the Annual Conference of the AMS, 27-30 May 1998 in Norfolk, Virginia (Breman and Dalgic, 1998).

1.3. The research group

The research project was undertaken in the Netherlands with all 670 Dutch "exporting companies", of more than 200 employees, who are included in the "*The Trade Directory "Holland Exports" 1995* " database. In the Netherlands, companies of the size of 200 employees or more are considered larger firms. The larger companies were chosen, because they are known to be the most innovative and powerful companies in the Netherlands. Most larger companies - on which the Netherlands is very much dependent for its wealth - have to cope with intense international competition in their domestic

markets, thus these companies have an urge to be learning and market oriented organisations. Export companies were chosen because of the idea that companies who go international are motivated to be or become a learning and market oriented organisation.

1.4. The importance of the study

The importance of this study may be seen as an advancement in theoretical developments and empirical findings in the areas of the learning organisation and market orientation, especially in relation to business performance and to the moderating influence of environmental variables on this relationship. This is the case whether the proposed research model is verified or not. Until now there has hardly been any empirical evidence of the relationship of the learning organisation with market orientation, of the relationship between the learning organisation and business performance and of the possible moderating influences on this relationship. Furthermore, the relationship of market orientation with business performance is mainly studied in the USA, Japan and the UK, but not in the context of Dutch companies. So the study of companies in the Netherlands with regard to this issue adds to the empirical knowledge of the learning organisation and market orientation.

This study should also be useful for managers in larger organisations (operating in an international context). It may help these managers to build more competitive organisations with a more pleasant and learning organisational climate for their personnel.

Furthermore, the generation of qualitative findings in this study may add to the knowledge of the companies "behind" the learning and market orientation constructs. This knowledge may possibly lead to the development of different "types" of learning organisation and market oriented companies.

1.5. Limitations of the research

A number of limitations became evident in the course of this study. Although rigour was applied throughout, these limitations should be borne in mind when inferences are drawn from the findings.

1. The possibility of specification error resulting from the omission of a relevant variable from the proposed model in the study.
2. The availability and strength of the instruments used in this study have not yet been tested in Dutch export companies.
3. The questionnaire contained 81 items, making it rather lengthy. This may have resulted in measurement error of the constructs from respondents unable to maintain their concentration over prolonged periods of time.
4. In the questionnaire a six-point scale was used. Many researchers in the social disciplines, however, propose a five- or seven-point Likert-type scale.
5. Business performance was measured by subjective (judgmental) and not by objective (largely financial) measures. These subjective measures may influence the power of the performance scale in the study.
6. In the structural equation modelling only 105 responses were recorded. Although this is acceptable for a structural equation analysis, 200 responses would have been more satisfactory.
7. The response rate of this study was only 17%. This may introduce non-response bias where non-respondents may hold views that are significantly different from those of respondents, thereby limiting the generalisability of the findings.
8. The sample of the survey was restricted to larger and export companies in the Netherlands, while a large proportion of Dutch firms is composed of small firms with domestic markets.
9. A relatively small number of interviews were conducted to study different themes and patterns behind the concepts of the learning organisation, market orientation and business performance.

Any future research must address the above concerns.

1.6. The structure of the thesis

The structure of the thesis is as follows:

Chapter 2 outlines the different perspectives on organisational learning and the learning organisation, their relationship with business performance and the operationalisation of the learning organisation.

Chapter 3 gives an overview of the relevant literature on market orientation, the relationship with business performance and the operationalisation of market orientation.

Chapter 4 elaborates on the literature on the relationship of the learning organisation with market orientation, on the possible influences of environmental moderators and on the operationalisation of business performance.

Chapter 5 addresses some issues with regard to the research design and research methodology of this study.

Chapter 6 describes the function of exports in the organisation's marketing policy and gives an overview of the main characteristics of the Dutch export sector.

Chapter 7 describes the research model and the research hypotheses.

Chapter 8 performs factor analysis. Furthermore, reliability and validity checks on the constructs are made.

Chapter 9 analyses the association between the constructs by examining the correlation coefficients, by moderated regression analysis and by the structural equation modelling approach.

Chapter 10 describes the results of the qualitative study and an attempt is made to classify the companies who were interviewed.

Chapter 11 presents the major research findings and the implications of the research. The limitations of the study are given and areas of further research are suggested.

In the thesis, concepts like "organisation", "company", "firm" and "corporation" are considered equivalent. This also applies to the concepts of "business performance" and "performance". These concepts are therefore used interchangeably.

CHAPTER 2. THE LEARNING ORGANISATION

2.1. Introduction

In this Chapter an overview is given of the relevant literature on the learning organisation.

The learning organisation is a "hot" topic in the nineties. In order to be able to compete successfully for survival, on the one hand, and to attract, retain and motivate personnel, on the other hand, the concept of the learning organisation is embraced by managers and scholars alike. It is difficult to tell if there is an important difference between the notion of the learning organisation and organisational learning. In principle organisational learning focuses on the learning processes in organisation, while the theory on the learning organisation describes characteristics of this type of organisation. The organisational learning literature is older (organisational learning was already addressed by Cyert and March in 1963) and more developed than the literature on the learning organisation. However, in most cases this distinction is not clear-cut. In this thesis, therefore, they will be considered as two sides of the same coin. The learning organisation concept usually consists of the idea that successful adaptation to change and uncertainty depends for an important part on sufficient and appropriate learning throughout the organisation all the time. The learning organisation is essentially an organisation where the individual learning of its personnel is promoted and facilitated and where sharing of these learning experiences is emphasised. Learning in the learning organisation cannot be understood simply as the sum of the learning of individual organisation members. Instead, the learning processes follow patterns that consist of team, departmental and organisational learning.

In the following text the different perspectives on organisational learning and the learning organisation are described. In this chapter, first it is described how organisations learn by a learning cycle, from experience to reflection to conceptualisation to action and so forth; how this cycle can be maintained in an

7

adaptive way (single-loop learning) or in a generative (double-loop learning) way in which organisations are prepared to discuss and change existing norms and their frame of reference. Then it is shown that individual learning and organisational learning are linked by team learning and the difference between individual and organisational intelligence is explained. Furthermore it is described how organisations link individual learning and organisational learning and how knowledge is kept and added by the use of shared individual mental models. This learning process is facilitated by so-called dialogue or the exploring of questions and paths that can lead to the solution of those problems, thus forming the organisation's organisational memory. How organisations try to learn by collaborating with other organisations is described. After this different types of learning organisations are outlined and the possible relationship between a learning organisation and excellent business performance is explored and some instruments are described that may operationalise the learning organisation concept.

2.2. The organisational learning cycle

Essential to learning organisations is, of course, the way the organisation learns (Kolb, 1976, 1984). Kolb sees organisational learning as "experiential learning processes" in a four-stage cycle of concrete experience, reflective observation, abstract conceptualisation and active experimentation. Kolb's learning cycle goes from (1) concrete experience, followed by (2) observation and reflection, leading to (3) formation of concepts and generalisations, which leads ultimately to (4) hypothesis tested in future action, which leads to new experimentation and so forth. This learning cycle is continuous and recurring all the time. Kolb calls this the "experiential learning model" (see Figure 2.2.1.). Kolb (1976, p.21):

> "The model is labeled "experiential" for two reasons. The first is historical, tying it to its intellectual origins in the social psychology of Kurt Lewin in the 1940s and the sensitivity training and laboratory education work of the 1950s and 1960s. The second reason is to emphasize the important role that experience plays in the learning process, an emphasis that differentiates this approach from other cognitive theories of the learning process".

8

Figure 2.2.1. - The Experiential Learning Cycle (Kolb, 1976, p.22)
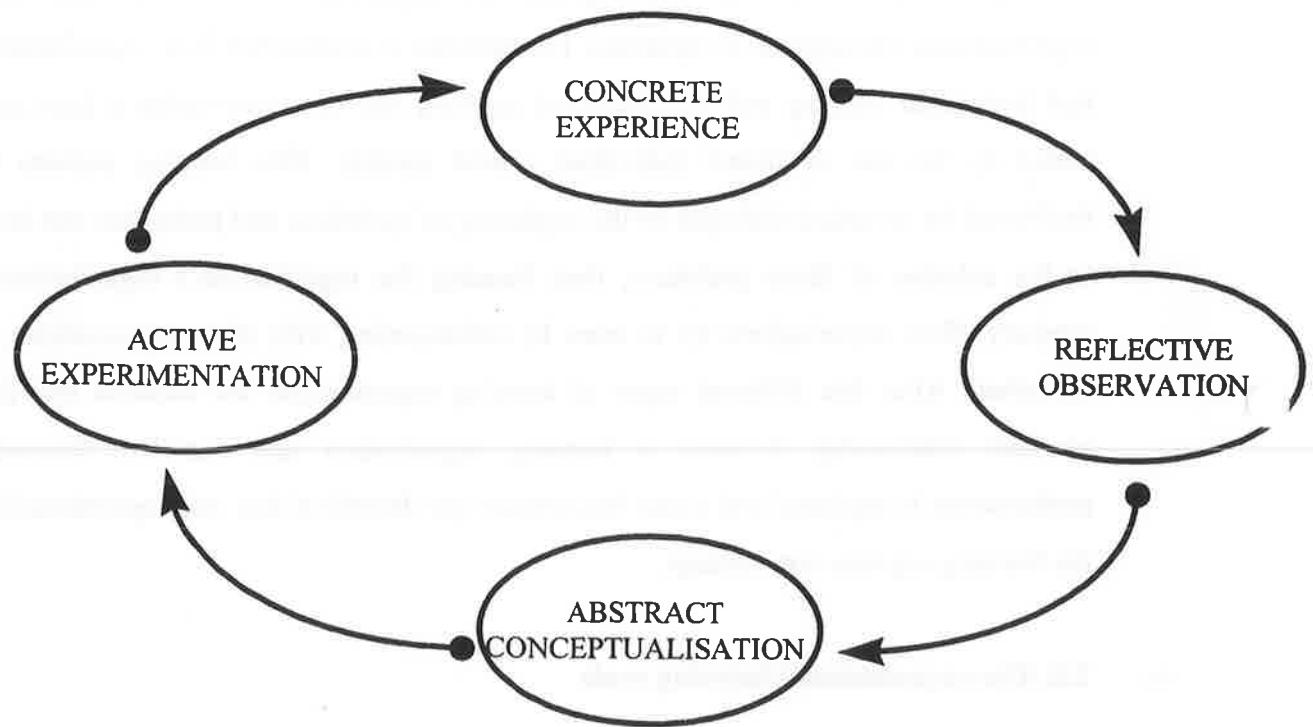
People develop learning styles as a result of their hereditary equipment, past life experience and the demands of the environments people have to cope with.

Kolb (1976) developed the "Learning Style Inventory" (LSI), to diagnose people's individual learning style. The research performed with this LSI gave rise to four learning styles: the converger, the diverger, the assimilator and the accommodator. The reason for these four dominant learning styles was that the LSI research results showed that Abstract Conceptualisation and Concrete Experience were highly negatively correlated as were Reflective Observation and Active Experimentation. This means that respondents who scored high on both Abstract Conceptualisation and Concrete Experience or on both Reflective Observation and Active Experimentation occurred with less frequency than the other four combinations of LSI scores.

The converger's (Abstract Conceptualisation and Active Experimentation) greatest strength is the practicable application of ideas. These people are relatively unemotional and prefer to deal with things rather than with people. According to Kolb (1976) this learning style is characteristic of many engineers.

The diverger's (Concrete Experience and Reflective Observation) strength is his/her imaginative ability. He/she is well able to view concrete situations from many perspectives. An example of people characterised by this learning style, according to Kolb (1976), are personnel managers.

The assimilator's (Abstract Conceptualisation and Reflective Observation) strength lies in his/her ability to create theoretical models. He/she is good in inductive reasoning and the development of abstract concepts. Researchers or corporate planners are examples of such a learning style.

The accommodator (Concrete Experience and Active Experimentation) is best at doing things, carrying out plans and experiments. He/she excels in situations where one must adapt to specific immediate circumstances. Kolb mentions (1976) marketers and sales persons as examples of this learning style.

Redding and Catalanello (1994) modify the four stages of Kolb (1976, 1984) to a three phase model: develop a plan, implement the plan and reflect on the plan. Redding and Catalanello (1994) apply their three phase model to organisations, which they call the "strategic learning cycle". The three phases are called: "continuous planning", "improvised implementation" and "deep reflection". "Continuous planning" means open strategic directions which are planned by top management and supported by all personnel involved. Strategic plans are necessary for strategic change. The information about environments must be analysed and insights must be gained from implementation efforts. "Improvised implementation" means the autonomous and creative interpretation and implementation of the strategic direction by individuals and teams. "Deep reflection" means that each iteration of the learning process starts with the act of reflection, stepping back, and asking: "To what degree are we accomplishing our

goals?" The next step is to examine barriers to learning by questioning original assumptions and developing solutions to newly emerging problems. These insights are then used to modify the original plans.

Redding and Catalanello (1994, p.43) believe that in order to be able to learn in deep and fundamental ways, organisations require a heightened state of *"strategic readiness"*:

> "To a large degree, individuals cannot learn until they are ready to learn (...). In an analogous way, once an organizational system has the necessary prerequisites, change is likely to take place regardless of which methodology is applied (...). The degree to which readiness is present at any given moment in a firm's history will significantly determine how well it learns from its own experience and adapts in anticipation of and response to environmental challenges. And the relative degrees of readiness of two organizations determines, to a large extent, the differences in their abilities to learn quickly from internal and external changes".

The actions organisations can take to develop their strategic readiness are "heightening strategic awareness", "making learning a way of life", and "continuously changing shape by becoming self-organising systems".

Heightening strategic awareness means being constantly aware of the environment and of the need for change in order to survive. When this is combined with accurate and objective information on the organisation's performance, then the status quo is not considered as given and that prevents organisations from "freezing". *Making learning a way of life* means that work and learning are inseparably united. *Becoming self-organising* means that organisational structures become flexible and are continuously shifting.

2.3. Single- and double-loop learning

Argyris and Schon (1978) make an important distinction between "adaptive" and "generative" learning. Adaptive or "single-loop learning" occurs between the organisation's assumptions about "how things are done around here". Generative or "double-loop learning" takes place when the long-held assumptions of the

11

organisation about its strategy, customers, and mission are questioned, whenever a problem cannot be solved by adaptive learning. This means that learning organisations should have the capacity for double-loop learning.

In this perspective Argyris (1993) developed the concept of "theories of action". These inform actors of the strategies they should use to achieve their intended consequences. Theories of actions are governed by sets of values that provide the framework for the action strategies chosen. Argyris distinguishes between two types of theories of action. "Espoused theory" is the beliefs, attitudes and values people believe they have. The other is "theory-in-use", referring to the beliefs, attitudes and values people actually have. Argyris found that the theory-in-use people employ differs significantly from their espoused theory: people behave differently from how they believe they behave. Single-loop learning, now, refers to the learning process within the theory-in-use of an organisation by detecting and correcting errors within a given system of rules, while double-loop learning refers to the learning process where the theory-in-use of an organisation is not taken as given but can be questioned and where incompatible organisational norms are resolved by setting new priorities and by the possible formulation of alternative or new norms.

The importance of double-loop learning is also stressed by Garvin (1993) who defines a learning organisation as "an organization skilled at creating, acquiring, and transferring knowledge, and at modifying its behavior to reflect new knowledge and insights" (p.80).

The creation of new ideas and the continuing changes in the way work is done are important properties of the learning organisation. Garvin (1993) states that many organisations fail the test if this definition is applied, such as universities, many consulting firms and even General Motors. These organisations have been effective at creating or acquiring new knowledge but are less successful in applying the knowledge to their activities. Examples of organisations that "pass the test" are, according to Garvin (1993), Honda, Corning and General Electric, because they are able to translate new knowledge into new ways of behaving.

According to Garvin (1993) learning organisations are skilled at five main activities: systematic problem solving, experimentation with new approaches, learning from their own experience and past history, learning from the past experiences and best practices of others and transferring knowledge quickly and efficiently throughout the organisation. The problem is, according to Garvin (1993), that many companies practise some of these activities but fail to integrate them and to apply them consistently. Therefore the first step to a learning organisation is the fostering of an environment that is conducive to learning. Garvin (1993, p.91):

> "There must be time for reflection and analysis, to think about strategic plans, dissect consumer needs, assess current work systems, and invent new products. Learning is difficult when employees are harried or rushed, it tends to be driven out by the pressure of the moment. Only if top management explicitly frees up employees' time for the purpose does learning occur with any frequency. That time will be double productive if employees possess the skills to use it wisely. Training in brainstorming, problem solving, evaluating experiments, and other core learning skills is therefore essential".

A second step, according to Garvin (1993) is to open up boundaries and stimulate the exchange of ideas, with conferences, meetings, project teams and the like. In this manner Garvin (1993) gives some hints how to improve double-loop learning and thus to produce a learning organisation.

2.4. Team learning

The link between individual learning and organisational learning goes via team learning. Belbin (1981) studied management teams attending courses at Henley Management College over a period of five years. He discovered that people tend to play one or two dominant team roles, which each have their own strengths and weaknesses. Belbin (1981) found that successful teams were composed of members with additional team roles.

The importance of teams in organisational learning is also stressed by Senge (1990). According to Senge (1990), team learning is based on the capacity of individual team members to converse, and on a balance between dialogue and discussion. Discussion

means that different points of view are presented and defended, while in dialogue these different perspectives are the point of departure for finding new views. Decision making situations demand discussions, while exploring issues and finding solutions for complex problems demand dialogue.

Team working is also promoted by the development of flatter organisations. O'Brien and Buono (1996) stress the important role managers have in stimulating and managing team work, when old structures have broken down. Many managers, however, make mistakes when they are building teams. Sometimes they refer to a group of individuals as a team, but they manage the team as "individual individuals". Also some managers provide too much direction rather than stimulating "self-steering" of the team, for example by encouraging participation in a decision that has already been made. O'Brien and Buono (1996) have studied learning teams at Digital Equipment Corporation (DEC) and identified four critical factors of success in building learning teams:

1. *Building a culture that supports learning.* This means that a context and reward system must be created that supports learning and innovation and that stimulates risk taking by reducing the fear of making mistakes.
2. *Building teams whose outcomes require innovation or paradigm shifts.* This can be done by requiring the team members to examine work-related outcomes from a stakeholder's perspective (by actually getting into contact with customers), which can lead to paradigm shifts in terms of how services and products are perceived.
3. *Building teams that know, value, and use their individual and collective strengths.* All the team members have to get to know each other's strengths and weaknesses (in terms of their knowledge, skills and abilities: KSA) as well as the team's strengths and weaknesses. In creating learning teams, therefore it is advisable to start with a members' KSA inventory.
4. *Building teams whose members possess sufficient self-knowledge and self-mastery.* Team members must be trained to listen to each other, perform brainstorming sessions, take part in decision processes etc.

Managers, according to O'Brien and Buono (1996), must be aware of these critical success factors in building learning teams and must "rethink" their role as a manager. Some team members may still look at the manager as the expert. Therefore the manager must achieve a balance between his role as an expert and as a coach.

2.5. Individual and organisational intelligence

Organisational learning depends on individual as well as on "organisational intelligence". Glynn (1996) defines both concepts and explains the relationship between both kinds of intelligence. He explains that, in the psychological literature, individual intelligence is conceptualised as an information-processing capability that is used to solve problems or to meet task challenges and that this literature distinguishes two approaches to individual intelligence. The one, from a cognitive or psychometric perspective, focuses on intelligence as an individual trait, and the other, from a contextualist perspective, focuses on intelligence as a social product. Glynn (1996) believes that organisations exhibit intelligence that is comparable to that of individuals. As individuals, organisations process information from the environment. This information processing implies that organisations, like individuals, are also systems that scan, interpret and diagnose environmental data, which means that adaptive capability underlies intelligent action. Finally, organisations are seen as networks of intersubjectively shared meanings. These assumptions lead Glynn (1996) to the following definition of organisational intelligence, which is "an organization's capability to process, interpret, encode, manipulate, and access information in a purposeful, goal-directed manner, so it can increase its adaptive potential in the environment in which it operates" (p.1086).

Glynn (1996) stresses that, although there is a functional resemblance to individual intelligence, organisational intelligence is strictly a social outcome.

The link between individual and organisational intelligence is made by three mechanisms: (1) "aggregation effects", (2) "cross-level effects" and (3) "distributed effects". Glynn (1996) develops each mechanism into a theoretical model:

15

1. *Aggregation model.* Organisational intelligence is made up of the accumulated intelligence of the individual organisation members.

2. *Cross-level model.* In this model diffusion and institutionalisation processes convert and encode individual intelligence in the organisation's memory. Socialisation processes transmit intelligence to the individual members. These transference systems can be organisational (organisational systems and procedures), technical (computer information processing) and social or political (interpersonal factors, political influences).

3. *Distributed model.* This model is focused on how organisational intelligence emerges from the patterned interactions that constitute the organisation. This model follows from the contextual perspective and postulates that (a) intelligence must be understood in terms of the social and cultural context in which it develops and (b) that it may exist beyond individuals and that it may be distributed within the structural and symbolic systems of the collective.

Glynn's (1996) attempts to link individual intelligence with organisational intelligence points to the importance of managing "intellectual organisational capital". Managers should place employees in jobs that fit their cognitive skills and abilities. This optimises the organisation's learning capabilities. On the other hand, managers must also attend to the situational factors that influence organisational intelligence, like information technology, organisational structure and culture, team work and the like.

2.6. Organisational memory, mental models and systems thinking

Another important link between organisational and individual learning is the notion of "organisational memory" and individual and shared "mental models". Individuals come and go without important consequences for the learning in an organisation. This is the case because the organisation possesses an organisational memory (Senge, 1990; Kim, 1993). Psychologists make a distinction between learning and memory. Learning is focused on acquisition, while memory has to do with the retention of what is acquired. Distinguishing these two processes is difficult however, because they are

interconnected: our memory affects what we learn and what we learn affects our memory. Mental models play an important role in the learning process of building organisational memory. Kim (1993, p.44) describes organisational memory as follows.

"The parts of an organization's memory that are relevant for organizational learning are those that constitute active memory - those that define what an organization pays attention to, how it chooses to act, and what it chooses to remember from its experience - that is, individual and shared mental models. They may be explicit or implicit, tacit or widely recognised, but they have the capacity to affect the way an individual or organization views the world and takes action. Organizational learning is dependent on individuals improving their mental models; making those mental models explicit is crucial to develop new shared mental models. This process allows organizational learning to be independent of any specific individual".

Thus, mental models exist in the heads of organisation members. These mental models (which are shared by organisation members) make up the organisational memory. They link individual learning with organisational learning. Although the notion of organisational memory is more a theoretical than a practical one, it is nonetheless a useful concept for understanding learning processes in organisations. Without exaggeration, one might state that the organisation would not exist without shared mental models. It is important to note, in this respect, that organisational memory differs from organisational culture in the sense that it deals with cognitive elements and not with values, norms and beliefs as culture does (see for example Lyles and Schwenk (1992) who call organisational memory "organisational knowledge structures").

Senge (1990) stresses the importance of "systems thinking" that constitutes a glue between "personal mastery", "mental models", "building shared visions" and "team learning".

Systems thinking means that events in and between organisations are strongly interrelated.

Personal mastery is the art of continually clarifying and deepening our personal vision.

Mental models are deeply ingrained assumptions and generalisations of how we understand the world around us and of how we take action.

Building Shared Vision. Senge (1990, p.9):

> "If any one idea about leadership has inspired organizations for thousands of years, it's the capacity to hold a shared picture of the future we seek to create (...). When there is a genuine vision (as opposed to the all-too-familiar "vision statement"), people excel and learn, not because they are told to, but because they want to".

Team learning is the learning (together) of management teams, professional teams, project teams and all other possible teams in organisations.

Senge (1990) sees a strong relationship between "personal mastery" and mental models. Personal mastery means that individuals develop their learning through a creative tension of their future and current reality. Different methods that can contribute to this process are advised by Senge (1990), like meditation, imagery and visualisations. So-called learning barriers from our defensive routines can hinder learning. Defensive routines form an important part of Argyris' (1993) theory on organisational learning and are used by people to "solve" the discrepancies between their "espoused theories" and their "theories-in-use" (in a dysfunctional manner).

Important in this process of personal knowledge and learning to organisational knowledge and learning is the concept of "tacit knowledge", developed by Nonaka and Takeuchi (Nonaka, 1991; Nonaka and Takeuchi, 1995). This is the art of creating new knowledge by "tapping" the tacit and people's highly subjective insights, intuitions and hunches. For Nonaka and Takeuchi (1995) tacit or explicit knowledge is the main output of the learning process. Powerful management tools to stimulate the "production" of tacit knowledge are, according to Nonaka and Takeuchi, the use of figurative language, symbolism and metaphors that can help managers to articulate their intuitions and insights and convert tacit to explicit knowledge. Another tool to

stimulate learning and to help employees to understand the business from a multiplicity of perspectives is the so-called instrument of strategic rotation.

2.7. Dialogue and organisational learning

In addition to Senge (1990) who advocates dialogue as a medium for learning, Schein (1993) sees dialogue as an important instrument to improve thought processes within and between organisations. Dialogue is the art of open communication between people within and between organisations or groups. Schein (1993) gives examples of issues where dialogue seems to be essential, like Arab relations, the problems between Serbs, Croats and Bosnians, getting control of the state's budget deficit etc. The solving of such issues is often inhibited by cultural misunderstandings that prevent parties to deal with the problem constructively.

Schein (1993) argues that dialogue, culture and organisational learning are closely related and that these concepts must be placed in the context of important developments facing organisations. These developments are the following:

1. The increasing rate of change in the environment makes it essential for organisations to learn rapidly.
2. The growth of technological complexity of organisations moves organisations in the direction of knowledge-based, distributed information forms.
3. Therefore organisations show an increasing tendency to break down into subunits.
4. These subunits are likely to develop their own subcultures.
5. This "subunitiation" contributes to the increasing dependency of organisations on communication across subcultural boundaries.
6. Organisational learning will therefore be dependent on shared mental models that cut across the subcultures of the organisation.
7. The evolution of these shared mental models is inhibited by cultural rules about interaction and communication.

Regarding these developments, Schein stresses the importance of dialogue. Problem solving and conflict resolution in groups are increasingly important in our complex society, so the dialogue skill can become a fundamental "tool" to handle these.

According to Schein (1993) dialogue is something different from "sensitivity training". In sensitivity training relationships are explored through "opening up", giving and receiving feedback etc. and are focused on the *emotional* aspect of communication. Dialogue, however, is focused on the *mental/cognitive* side of communication.

2.8. The importance of collaborative know-how

Recently an article was published about a research project on how firms learn from their strategic alliances (Simonin, 1997). The importance of this article is, firstly, that it is one of the very few empirical contributions to the learning organisation and, secondly, that it focuses on the way organisations can develop know-how, a seldom researched topic up until now (Huber, 1991; Nonaka and Takeuchi, 1995). The aim of Simonin's (1997) research project was to examine whether firms learn from the success and failure of collaborations and if they apply these lessons to new collaborations. The central idea is that the company's experience must be transformed into know-how before it can improve its performance. Performance was measured by tangible benefits (profits, improved market share, competitive advantage) and intangible collaborative benefits (learning specific skills and competencies, learning about inter-firm co-operation, learning how to behave co-operatively, learning how to learn from collaborations). Simonin (1997) hypothesised that firms with higher levels of collaborative know-how will achieve higher levels of both tangible and intangible benefits from a collaboration and that firms with greater collaborative experience will achieve higher levels of collaborative know-how. A random sample was drawn of 1000 large and medium-sized companies in the USA.

The response consisted of 151 fully completed, usable questionnaires. The results were analysed by structural equation modelling, using LISREL. The research results

supported the three hypotheses described above. However, the results also demonstrated that previous collaborative experience alone does not ensure that a firm will benefit from a collaboration. Experience is only valuable if the lessons of this experience (both positive and negative) are internalised by the firm and transformed into know-how that can be used for future actions. This indicates the importance of developing a learning organisation in the sense of shared mental models and organisational memory (Kim 1993; Senge, 1990). Thus, Simonin's (1997) article highlighted and empirically underpinned the relationship between experience, knowledge and performance and therefore broadened and deepened the learning organisation perspective. Simonin (1997) stresses that it is often assumed wrongly that the process of transforming experience into knowledge is unproblematic. Specialisation and departmentalisation often stand in the way of such "know-how building".

2.9. Different types of (non) learning organisations

Because the distinction between a learning and a non-learning organisation does not give much insight into the question of how far an organisation is removed from being a learning organisation, it seems fruitful to elaborate on the different types of (non) learning organisation one can encounter. Slocum and McGill (1994) distinguish four basic types of (non) learning organisations, mainly based on the different roles the training function plays in these organisations: the "knowing organisation", the "understanding organisation", the "thinking organisation" and the "learning organisation".

In a *knowing organisation*, the company is confident that it already understands the best way to do whatever it does. It seeks only incremental improvements. The organisation members regularly have narrowly defined jobs. To a great extent workers are interchangeable. The training function helps to select people for jobs and makes sure that job descriptions are accurate, that manuals are correct and that rules and regulations are followed.

This type of organisation is the oldest organisational model, the concept can be traced back to Adam Smith's "division of labour", Max Weber's "bureaucracy", Frederick W. Taylor's "scientific management" and Henri Fayol's "administrative theory". These scholars believed that there was always "one best way" to do things and they believed that this best way was either known or knowable: hence the knowing organisation. Examples are Disney, UPS and Avis. The philosophy of a knowing organisation is rationality, above all it values efficiency. A knowing organisation focuses on standardised policies, procedures, rules and regulations. Customers of knowing organisations must simply accept these rules.

Knowing organisations are "learning disadvantaged". The (formerly) "best way" becomes the "company way". Knowing organisations can be successful as long as there is no need to learn. Learning would require management to give up control, predictability and efficiency.

In an *understanding organisation*, answers to new challenges are sought by a deeper exploration of the company's core values. The training function's primary role is that of keeping alive the corporate vision and extending the corporate culture by taking care that the right people are in the right jobs and that they get the right training at the right time.

With increasing foreign competition, eroding market share, higher quality demands imposed by customers and changing technology in the 1980s, many companies had to change their way of doing things. It became clear that a continued focus on one "best way" was no longer a formula for success. These companies changed their practices and routines, but kept these closely in line with their core values - their "ruling myth" - to retain their identity. The strong cultures in these understanding organisations give meaning to experience, but they can also constrain the organisation from taking action. Examples are GM, IBM and Sears.

Understanding organisations can "understand" only those changes that are consistent with their core values. They are unlikely to be open to enhancing and expanding experiences.

In a *thinking organisation*, quick responses are sought for problems that arise. Many of those answers are bought right off the book shelves. The training function is therefore directed at fixing problems smoothly and rapidly. "You ask and we deliver", is the trainer's motto. Energy is focused on solving problems and almost no attention is given to the cause of or the background to these problems. In thinking organisations managers sell programmes (like total quality management) to employees and customers alike. They are expected to embrace these programmes enthusiastically. Although employee commitment and involvement is encouraged, they are only focused on the solution at hand. An example of a thinking organisation is Foley's Department Store.

In a *learning organisation*, new markets and opportunities are opened by learning from every aspect of the organisation's own experience, as well as from customers, vendors and competitors. The training function helps in selecting and developing people with sound learning abilities.

Learning organisations process both the experience and the way the organisation experiences it. An example of a learning organisation is Home Depot store, a warehouse store where much energy is focused on learning from the way customers learn to carry out do-it-yourself jobs. The primary responsibility of management in a learning organisation is to create and foster an organisational climate that promotes learning by encouraging experimentation, open communication, dialogue etc. These organisations are always in a process of change.

Of these four types of organisation, only the last type is a "real", double-loop, learning organisation. The "understanding" and "thinking" organisations might be considered as single-loop learning organisations, as they find one-way solutions for problems without broadening their perspectives, which means that they are not (yet) "full"

learning organisations. The first type, the "knowing organisation", might be considered a non-learning organisation, as it is so confident what it already knows that no new learning takes place.

Many organisations that want to become a learning organisation have to *unlearn* established learning patterns first. Unlearning makes way for new responses and mental maps. The unlearning of learning patterns is difficult when an organisation is successful for prolonged periods of time. Success reinforces organisations' theories of action (Argyris and Schon, 1978) and makes unlearning difficult. Unlearning typically starts in organisations when problems arise: funds shortages, filling revenues, profit losses, public criticism etc. These problems cause hesitancy and build up distrust in procedures and leaders, followed by a turbulent period. Leaders communicate inconsistent messages, and personnel and other stakeholders begin to search for new leadership and alternative strategies and missions. Ultimately the established philosophy, patterns and procedures break down. The organisation is unlearning its present learning patterns which then become learning patterns of the past (Hedberg, Nystrom and Starbuck, 1976). When this unlearning has taken place, organisations can relearn and reorient almost instantaneously. A new theory of action replaces the old one. Some organisations, however, get so disoriented during their unlearning process that they never manage to pull together again.

A balance between the organisations' abilities to learn and to unlearn are necessary for long-time survival. Unlearning abilities are needed in order to make room for more adequate interpretative frameworks and responses in organisational memory. Learning abilities are needed to generate new knowledge and to adjust and update existing knowledge (Hedberg, Nystrom and Starbuck, 1976).

2.10. The learning organisation and business performance

Simonin's (1997) article, as described in Section 3.8., showed, empirically, a relationship (albeit specific) between the learning organisation and business performance. Such empirical evidence is scarce. The learning organisation-

performance link has been until now a theoretical one, with some exceptions, like Simonin (1997) and Jashapara (1995). Slater and Narver (1995) state that learning may facilitate behaviour change that leads to improved performance. Therefore it seems most likely that a fully functioning learning organisation will perform better than one which has only partly embraced learning organisation principles. Organisations that are able to adapt to and perhaps influence their environments, that learn from their customers' behaviour and that know how to improve their skills and knowledge continuously must somehow be more successful than their counterparts! As Ray Stata (1989, p.64) of Analog Devices observes:

> "I would argue that the rate at which individuals and organizations learn may become the only sustainable competitive advantage, especially in knowledge-intensive industries".

This need for learning to obtain competitive advantage was also highlighted by De Geus (1988) who states that the only source of sustainable competitive advantage arises from those companies who can learn faster than their competitors.

Some empirical findings about the learning organisation and performance became available in Ashok Jashapara's (1995) study of the UK construction industry. He found statistical evidence of positive relationships between "double-loop learning" and performance, "organisational learning focused on efficiency" and performance, "organisational learning focused on proficiency" and performance and between "internal forces of co-operation" and performance. Double-loop learning was elaborated upon above. Learning focused on efficiency, proficiency and co-operation was derived by Jashapara from Mintzberg (1991) who proposed a system of seven forces in every organisation. These forces concern direction, efficiency, proficiency, innovation, concentration, co-operation and competition. The force for direction refers to strategic vision, the force for efficiency concerns standardisation and formalisation of processes, the force for proficiency concerns tasks requiring high levels of knowledge and skills, the force for concentration concerns efforts on serving markets and the force for innovation concerns the discovery of new things for the customer. The forces of (internal) co-operation concern the pulling together of norms, beliefs

and values and the forces of (internal) competition concern the pulling apart of internal organisational politics.

2.11. The operationalisation of the learning organisation concept

Instruments for measuring the extent of the learning organisation are scarce and only in the late eighties and early nineties have some instruments (Pareek, 1988, O'Brien, 1994) become available. However, these instruments have until now hardly been statistically validated and scrutinised (for an overview see Van Buren and Lucadamo, 1996). One statistically validated instrument that did become available was developed by Jashapara (1995) in his doctoral research to measure different aspects of learning organisations (described in Section 2.10.). Jashapara reported that most dimensions of the instrument had a Cronbach Alpha >0.60.

The "Organizational Learning Diagnostics" (OLD) instrument, developed by Pareek (1988), is not (yet) validated. This instrument assesses organisational learning subsystems and organisational learning mechanisms. It consists of 23 items ("mechanisms") on a five-point Likert-type scale. The more frequently the mechanisms occur (such as "sharing ideas", "innovations are rewarded" and "newly proposed practices are linked with known practices"), the stronger the extent of organisational learning. These "mechanisms" were grouped into three subsystems: acquiring and examining ("the innovation phase"), retaining and integrating ("the implementation phase"), and using and adapting ("the stabilisation phase").

A promising and more elaborate instrument that became available during the course of this study (1994) was the "Learning Organization Practices Profile" (LOPP), developed by O'Brien (1994). The LOPP has, according to its author, been created by studying approximately 35 successful Fortune 1000 corporations and is a diagnostic questionnaire that examines twelve subsystems: vision and strategy, executive practices, managerial practices, climate, organisational and job structure, information flow, individual and team practices, work processes, performance goals and feedback,

training and education, rewards and recognition, individual and team development. In total, the LOPP consists of 60 items with a six-point scale.

No paper on the validation of the LOPP (O'Brien) is available. In August 1995, the researcher asked O'Brien for a validation report. He responded that a clear statistical validation report was not available, but that approximately eight graduate students were using the LOPP in their doctorate research and he expected to have some statistical validation in the future. In June 1996, at a personal meeting with O'Brien in Orlando, Florida, the question was repeated, but still no such report was available. In his reply to the researcher's fax in 1995 O'Brien made the following comments about the LOPP (literal quotation):

The instrument has four types of direct validity (Thorndike and Hagan) which depends on rational analysis and professional judgement. It has:

- *content validity - The 60 items were judged by my panel of experts to be an adequate sampling of the known (and still emerging) universe of relevant content.*
- *face validity - Systems theory, a number of learning theories (including social/team learning, motivational and attitude change theory, and organisational learning theory). All form the "screen" through which the items were "sifted" and among my experts, were evaluated as appropriate.*
- *intrinsic validity - The experts made independent judgements in selecting the 12 factors and the appropriateness of the items for each, providing evidence that the survey indeed measures what it ought to measure. The original sample set of items was over 200, and through iterative consensus we ended with the 60 you see in the instrument.*

I have no derived validity data, i.e., that which is based on empirical and correlational statistical evidence. The main reason this is because my Profile is the first of its kind, and, therefore, there is no other instrument that for I know of to compare it to. However the companies I studied (and from whence the items came) all attributed organizational success (or progress towards goals) to their deliberate attempts to become a learning organization.

In an article in *Training Magazine*, O'Brien gave some more information on the background of the LOPP (O'Brien and Kremer Bennett, 1994). This article stated that the practices of 25 successful companies were studies, which met two criteria: (1) they had announced a commitment to becoming learning organisations, and (2) they had demonstrated this commitment by adopting practices that foster organisational learning. The practices of these companies that enabled them to apply the principles of organisational learning successfully were studied. Then a list was compiled of more than 200 practices, values, programmes and structures. After this the list was

condensed to 100 fundamental business practices that promote organisational learning and apply to most organisations. Finally these practices were clustered into 12 fundamental factors. To recap, these factors were strategy and vision, executive practices, managerial practices, climate, organisation/job structure, information flow, individual and team practices, work processes, performance goals and feedback, training and education, individual and team development, rewards and recognition.

Although no "hard evidence" on the statistical validity of the LOPP was available, O'Brien's "soft evidence" and the link with theory on learning organisation clearly gave the researcher confidence in the soundness of the instrument. At the time of the research (1994) Jashapara's (1995) instrument was not yet available.

2.12. Conclusions

The concepts of organisational learning and the learning organisation provide a promising path to understanding how organisations survive in present turbulent times by managing the learning of organisation members in a coherent, productive and effective way. Most literature on organisational learning and on the learning organisation still has a predominantly theoretical character. Some empirical work is now appearing. The focus of most authors on organisational learning and the learning organisation is directed at how organisations learn and how this learning can be facilitated by management. Much attention is directed at how a learning organisation can contribute to the competitive advantage of the firm. Most authors on organisational learning and the learning organisation agree that learning has become a strategic asset in view of the dynamic environments organisations encounter. Instruments to measure organisational learning or the learning organisation are still scarce and most are not validated, but it appears that much effort is being invested by scholars in the development of more and better validated instruments.

CHAPTER 3. MARKET ORIENTATION

3.1. Introduction

In this Chapter an overview is given of the relevant literature on market orientation.

Market orientation consists of the terms "market" and "orientation". Kotler (1994) defines a market as "consisting of all the potential customers sharing a particular need or want who might be willing and able to engage in exchange to satisfy that need or want" (p.11).

The term "orientation" describes a state to which a business might be said to tend (Pierson, 1993). A firm's business orientation consists of the underlying philosophies that determine the nature and scope of the activities of that firm (Peterson, 1989). A business orientation results in perceptions of priorities, how the customer is viewed, and how the organisation defines its business (Miles and Arnold, 1991). A market oriented organisation successfully applies the marketing concept (Kohli and Jaworski, 1990). The definition of market orientation depends very much on the perspective of the author. Four types of definitions are distinguished, namely market orientation as:

- a stage of chronological development
- a philosophy
- a culture
- a concept.

In this chapter these different perspectives of market orientation are described, as well as the influence of market orientation on sales force behaviour and the relationship of market orientation with an entrepreneurial orientation and with the size of the firm. Also the relationship of market orientation with international marketing, with business performance, the measuring of business performance and the operationalisation of market orientation are described.

3.2. Market orientation as a chronological development of marketing stages

One way of looking at market orientation is as a chronological development of marketing stages. Those who subscribe to this view see market orientation as the ultimate stage of development and draw a parallel with the economic development of a country by assuming that market orientation develops through stages or eras of business orientations (Dalgic, 1994). These stages are production orientation, sales orientation and market orientation. This approach tries to explain the enabling macro-environmental factors, mainly supply and demand relationships and competitive conditions, which are thought to influence progression of firms through these different orientation stages.

In this view market orientation has been a natural progression from the practice of selling towards understanding customers, their problems and needs and working towards solving and satisfying those needs. At first the emphasis was on producing. After the Industrial Revolution, mass production, assembly line and division of labour made it possible to manufacture products more efficiently and cheaply. As a result of new technology, new ways of using labour and an increasing demand for goods, production was foremost in the Western economy ("any colour you want, as long as it is black"). Companies were manufacturing oriented, and "marketing" was limited to taking orders and shipping goods. In such a situation, companies were usually not expected to be interested in customers' desires and wishes because of the excess demand to be satisfied. As competition between manufacturers became more intensive, however, because of saturated markets, the product orientation had to be developed into a sales orientation ("tell us what colour you want"). The next stage in this process is that of becoming market oriented. According to Sharp (1991) market orientation is an evolution of marketing management and business philosophy to overcome the inadequacies of product and sales orientation ("let's figure out whether and how colour matters to your larger goal").

30

3.3. Market orientation as a philosophy

Market orientation can also be seen as a philosophy held by the management of the organisation. This philosophy consists of five core aspects (Narver and Slater, 1990; McGee and Spiro, 1988): customer orientation, competitor orientation, integration of effort, organisational objectives and profitability:

- *Customer Orientation*: the will to really understand the factors that determine the customer's action. Two aspects are critical here. First, understanding the psychological and social factors that determine the customer's action. Secondly, understanding customer behaviour makes it possible for the company to specify the right market research questions.

- *Competitor Orientation*: the company is very sensitive to the characteristics and actions of the main competitors.

- *The integration of effort*, which means that the whole firm is organised and co-ordinated in the service of the customer. Furthermore, it is important that the company co-ordinates the different elements of the marketing mix, in order to provide customers with the products and services they want.

- *Organisational objectives*: serving customer needs in order to meet the requirements for achieving objectives and profit.

- *Profitability*: market oriented companies make a profit, which is not only a short-term profit, but (mainly) a long-term profit. This long term orientation is an essential characteristic of a market oriented company, especially because many companies are under severe pressure (e.g. from their shareholders) to focus on short-term profitability.

3.4. Market orientation as a culture

Market orientation may also be seen as an organisational culture. Deshpande, Farley and Webster (1993) describe market orientation as a form of culture that (1) places the highest priority on the profitable creation and maintenance of superior customer value while considering the interests of other key stakeholders; and (2) provides norms for

behaviour regarding the organisational development of and responsiveness to market information. Day (1994) sees the definitions of Kohli and Jaworski (1990) and Narver and Slater (1990) (see below) as "behavioural definitions" and proposes a cultural perspective instead that holds market orientation as a deeply rooted and pervasive culture. As Day (1994, p.43) puts it:

> "A market-driven culture supports the value of thorough market intelligence and the necessity of functionally co-ordinated actions directed at gaining a competitive advantage. An absence of these shared beliefs and values would surely compromise the activity patterns advocated by the behavioral perspective".

In a market-driven externally oriented culture, human resources management is based on several premises. First, that customer satisfaction is both a cause and a consequence of employee satisfaction and rewards are linked to customer satisfaction and retention; second, that employees are empowered to take autonomous decisions to resolve customers' problems; and third, that new personnel are selected on the ability of customer problem-solving skills etc. By contrast, in an internally oriented organisational culture far from being market-driven, the link between the intrinsic drives of personnel and the external customer will be almost non-existent and people will put much more energy into internal worries instead.

Notwithstanding Day's (1994) criticism of the behavioural definitions of Slater and Narver (among others), Slater and Narver (1994b) in an article entitled "Market Orientation, Customer Value and Superior Performance" acknowledge the importance of organisational culture in market oriented companies. In the past, they argue, competitive advantage was based on *structural* characteristics, like market power, economies of scale or a broad product assortment. Nowadays, these characteristics do not suffice, a market oriented *culture* is the only way businesses can consistently deliver superior value to their customers. Slater and Narver (1994b, p.22):

> "A business is market-oriented when its culture is systematically and entirely committed to the continuous creation of superior customer value".

3.5. Market orientation as a concept

Kohli and Jaworski (1990) provide an operational definition of market orientation. In their 1990 article they elaborate on the market orientation concept by a thorough study of the literature and by a field study of 62 managers in 47 organisations. Kohli and Jaworski (1990) compare the term "market orientation" with the (older) term "marketing orientation". They consider market orientation preferable, firstly, because this label does not suggest an exclusive concern for the marketing department, secondly, because this concept makes marketing the responsibility of all departments in the organisation and thirdly, because this label focuses attention on markets instead of a focus on marketing activities. Kohli and Jaworski (1990) define market orientation as "the organisation-wide *generation* of market intelligence pertaining to current and future customer needs, *dissemination* of the intelligence across departments and organisation-wide *responsiveness* to it" (p.6).

Kohli and Jaworski (1990) consider market intelligence as the starting point of *intelligence generation*. It entails more than the customers' needs and preferences, as market intelligence is also based on an analysis of exogenous factors, such as government regulation, technology, competitors etc., that influence those needs and preferences. Furthermore, market intelligence does not only include current customers' needs and preferences, but also future needs which organisations have to anticipate. Market intelligence is generated by customer surveys, meetings and discussions with customers and trade partners, analysis of sales reports and analysis of world-wide customer databases etc. Also, as Kohli and Jaworski (1990) state, intelligence generation is not the exclusive responsibility of the marketing department, but can also be done by R&D engineers, senior executives and personnel who interacts directly with customers.

Effective *intelligence dissemination* is important, because it provides a basis for co-ordinated actions by different departments of an organisation. It is important that all departments in an organisation, like R&D, manufacturing, marketing, finance and personnel, share market intelligence and communicate intensively about experiences

with or on the market. Apart from formal procedures, informal "hall talk" is very important for keeping employees focused on consumers and their needs.

Without market *responsiveness*, however, very little is accomplished. Responsiveness is the action taken in response to intelligence that is generated and disseminated. Responsiveness to market developments often encompasses the courage to invest in new products and services without knowing beforehand if these investments will yield the expected results.

Kohli and Jaworski (1990, p.6) distinguish between *antecedents to* and *consequences of* market orientation:

> "Antecedents to a market orientation are the organisational factors that enhance or impede the implementation of the business philosophy represented by the marketing concept".

These antecedents are senior management factors, interdepartmental dynamics and organisational systems.

Senior management factors. Kohli and Jaworski (1990) accept the general idea in management theory that top managers play a critical role in encouraging employees to act in harmony with the norms and values of market orientation. The emphasis of top management on market orientation will encourage their personnel to be sensitive to market developments, to share this information with colleagues and to respond to this information accordingly. Top managers should demonstrate a willingness to take risks and accept occasional failures to stimulate subordinates to be responsive to changes in customer needs, otherwise personnel will be cautious in proposing and introducing new offerings in response to changes in customer needs. Furthermore top managers should be positive toward change and be open to new ideas.

Interdepartmental dynamics. Interdepartmental dynamics are the formal and informal interactions and relationships among the departments of an organisation. This determines the quality of the interdepartmental co-operation. A certain amount of

interdepartmental conflict will affect the sharing of and the responsiveness to relevant market information and may stem from desires of individual departments to be powerful. Another interdepartmental dynamic is "interdepartmental connectedness", which is the amount of formal and informal direct contact among employees across departments. A final interdepartmental dynamic Kohli and Jaworski (1990) mention is openness and receptivity to the suggestions and proposals of other individuals and groups.

Organisational systems refer to the structural form of organisations. The first aspect of organisational structure is "formalisation", the second is "centralisation". Kohli and Jaworski (1990, p.10):

> "Formalization is the degree to which rules define roles, authority relations, communications, norms and sanctions, and procedures (...). A second aspect is "centralization" that "is defined as the delegation of decision-making authority throughout an organization and the extent of participation by organizational members in decision making".

Kohli and Jaworski expect both formalisation and centralisation to be inversely related to market intelligence, because market orientation involves doing something new or different in response to market conditions. However, innovative behaviour involves two stages and the impact of formalisation and centralisation on both stages may differ: (1) "the initiation stage" (i.e. awareness and decision making stage) and (2) "the implementation stage" (i.e. carrying out the decision). Kohli and Jaworski (1990, p.11):

> In our context, the initiation stage corresponds to intelligence generation, dissemination and the design of organizational response, whereas the implementation stage corresponds to the actual organizational response".

It may very well be, according to Kohli and Jaworski (1990), that centralisation and formalisation, because of their conservative character, hinder the initiation stage, but because of their "organising power", facilitate the implementation stage.

Another antecedent (Kohli and Jaworski, 1990) described is the *system of market based rewards for managers*. They argue if managers are rewarded on the basis of market based criteria they are likely to support a market orientation. If they are only rewarded for short-term profitability, they will focus on short-term profitability and sales and will miss the essentially long-term focus of market orientation.

The final antecedent Kohli and Jaworski (1990) refer to is the *acceptance of political behaviour* in organisations. Political behaviour concerns individuals' promotion of self-interest. A highly politicised organisational system will, because it stimulates interdepartmental conflict, inhibit market orientation.

These antecedents to market orientation may be linked. That is, the greater the perceived expertise and trustworthiness of the source generating market intelligence, the greater the responsiveness; the smaller the challenge to the status quo posed by market intelligence, the greater its dissemination and responsiveness to it by the organisation and the greater the political acceptability of market intelligence, the greater its dissemination and responsiveness to it by the organisation.

The *consequences* of market orientation are threefold. The first is that it enhances the *profitability* of an organisation. Kohli and Jaworski (1990, p.13):

> "A market orientation appears to provide a unifying focus for the efforts and projects of individuals and departments within the organisation, thereby leading to superior performance".

The second consequence is that it contributes to the *esprit de corps* of an organisation. Market orientation can have psychological and social benefits to employees, it can lead to a sense of pride in belonging to an organisation in which everyone works toward the common goal of serving customers adequately. This feeling can also lead to higher levels of job satisfaction and commitment to the organisation. The third consequence refers to customer attitudes and behaviour. Kohli and Jaworski (1990, p.13):

"A market orientation leads to satisfied customers who spread the good word to other potential customers and keep coming back to the organization".

This means that the greater the market orientation, the greater the *customer satisfaction* and the greater the *repeat business* of customers.

Jaworski and Kohli put much effort into the measurement of market orientation (Jaworski and Kohli, 1993). The way Kohli and Jaworski operationalise market orientation focuses on activities and thus makes it easier to measure the level of market orientation in a company. Organisations differ with respect to their amount of market orientation and one is therefore more market oriented than another.

3.6. Market orientation and the influence on sales force behaviour

Siguaw, Brown and Widing (1994) studied a specific consequence of market orientation, namely the influence on the behaviour and attitudes of its sales force. Their point of departure is the external environment of an organisation, which is examined prior to adopting a market oriented strategy. Following Kohli and Jaworski (1990) and Narver and Slater (1990), they state that the degree to which an organisation implements a market orientation is based on its organisation-wide concern and responsiveness to customer needs and competitive actions. On deciding the strategy of choice, an important aspect of implementation is to influence salespersons to adopt the chosen orientation in their selling efforts. Organisations can for example promote a customer-oriented philosophy by training and rewarding sales persons based on a customer oriented attitude, they can reward immediate sales without much regard for customer interests and thus foster a selling orientation, or they can send mixed signals. Siguaw, Brown and Widing (1994, p.106) define their research objectives as follows:

> "Our first research objective involves identifying the effect of the selected firm orientation, as viewed from the salesperson's perspective, on the salesperson's customer orientation and job attitudes (...). Our second research objective, a corollary to the first, is to determine whether the orientation of the salesperson is related to job attitudes (...). The third research objective is to examine

whether differences in orientations affect the job-related attitudes of salespeople".

Different scales were developed for customer orientation (Saxe and Weitz, 1982), job satisfaction (Smith, Kendall and Hulin, 1969), organisational commitment (Porter et al, 1974), role perception (Rizzo, House and Lirtzman, 1970) and market orientation (Narver and Slater, 1990).

The research was performed by a survey of 585 randomly selected salespersons in 241 companies involved in the sale of document imaging supplies, equipment, and services. In addition, questionnaires were sent to 353 randomly selected sales/marketing managers, representing over 245 companies in the same industry. The response was 278 usable questionnaires (16.9%).

The results of the research indicated that the market orientation of the firm significantly influences the customer orientation of the salespersons and their job attitudes (e.g. job satisfaction, organisational commitment), but that the customer orientation of the salespersons itself is unrelated to these job attitudes and that the difference between the market orientation of the firm and the customer orientation of the salesperson only marginally influences role conflict, in the sense that no significant role conflict arises when the differences between both are great (Siguaw, Brown and Widing, 1994).

These results mean that an organisation that has a clear market oriented strategy, that is also perceived as such by the salesperson, positively influences the customer orientation of the salesperson, who is also more committed to and satisfied with his/her job. The degree to which the firm is perceived to be market oriented strongly influences the way in which the salespersons will behave in interactions with customers. The salesperson's own customer orientation does not seem to influence his/her behaviour much and neither does a large discrepancy between organisational market orientation and personal customer orientation cause much role conflict, both of which may be due to the overwhelming influence of the firm's market orientation on the salesperson. Thus an interesting addition was made by Siguaw, Brown and Widing

(1994) to the more "general" market orientation concept and research of Kohli and Jaworski and Narver and Slater, amongst others.

3.7. The relationship between market orientation and entrepreneurial orientation

Miles and Arnold (1991, p.49) studied whether there is a difference between an organisation's market orientation (which they call "marketing orientation") and its "entrepreneurial orientation":

> "While a marketing orientation implies that a firm should focus on its customers, an entrepreneurial orientation suggests that organizations must constantly seek to exploit the dynamics of their macroenvironment and task environments".

It may very well be that both marketing and entrepreneurial orientations are adequate strategic responses to increasing levels of macroenvironmental uncertainty. Therefore Miles and Arnold (1991) state that the construct defined by an organisation's level of marketing orientation and the construct defined by an organisation's level of entrepreneurial orientation are in fact the same and that both constructs represent the business philosophy of organisations.

Marketing orientation was measured by a scale developed by Morris and Paul (1987) and entrepreneurial orientation was measured by Covin and Slevin (1989) in a combined questionnaire.

A field study was carried out by a self-administered survey instrument. 901 firms were sent the survey instrument and were requested to complete and return them. The sample consisted of 375 members of a nation-wide furniture manufacturer trade association and 526 furniture manufacturing firms located in Mississippi and Alabama. To increase the response rate and minimise the non-response, a cash inducement was offered to respondents. Respondents were offered an opportunity to win cash prizes of $100.00, $75.00, or $50.00 if their completed and returned survey

form was one of three selected in a random draw. Of the 901 surveys mailed 169 (18%) were completed and returned.

The results of this study were that market orientation and entrepreneurial orientation were positively correlated. However, they did not appear to have the same underlying philosophy. The conclusion was that the marketing orientation can exist independently and does not always need certain aspects of an entrepreneurial orientation such as the need to be innovative, to accept risks, and to act in a proactive manner. An explanation for this correlation was suggested by Murray (1981), who proposed that the marketing function tends to act in an entrepreneurial manner when faced with entrepreneurial environments and by Covin and Slevin (1989) who stated that, as financial performance expectations continue to increase, management may be forced by these financial pressures and environmental dynamics to become more innovative, proactive and risk taking, whilst retaining a marketing orientation.

Miles and Arnold (1991, p.63) concluded that:

> "The assessment of the interrelationships between marketing orientation and entrepreneurial orientation is probably more important to the development of the theory of entrepreneurship than it is to the extension of marketing theory. However, the lack of support found for the interrelationship between the two orientations is significant in developing a more complete understanding of the range of organizational responses to environmental turbulence".

What is interesting about this article is that marketing orientation is closely connected to an entrepreneurial orientation, but that companies can have an entrepreneurial orientation without being marketing oriented. Commercially aggressive small companies, managed by their owner and founder, may be examples perhaps. In these kinds of firms it is the top manager who is market directed, but the personnel are not stimulated to serve customers in their perceived own best way. They are directed by their boss, who knows what is best. Such firms are far away from a market orientation, whilst they have a strictly entrepreneurial character.

3.8. Market orientation and firm size

Hong Liu (1995) studied the relationship between market orientation and firm size. An interesting aspect of this article is that Hong Liu (1995) utilises a broader definition of market orientation than Kohli and Jaworski (1990) and Narver and Slater (1990) for example. Hong Liu (1995, p.58):

> "In general, four elements of market orientation have been accepted and widely used: profitability, market focus and customer orientation, integrated marketing efforts and a business philosophy. A recent study has suggested three additional elements of market orientation: intelligence generation, intelligence dissemination and responsiveness to market intelligence. However, market orientation also comprises important elements which deserve attention:
>
> - *Innovation* (...). Market orientation involves better than, or different from, competitors, and this is largely achieved through innovation.
> - *Competitor reference*. The commercial validity of market orientation is rooted in the context of the strategic triangle - customer, competitor and firm. The customer is the target to be created and maintained, and competition serves as a frame of reference from which the firm differentiates itself, employing its relative corporate strengths to improve, or deliver in a different way customer-desired satisfactions".

The *research model* proposes a negative effect of "direct control" on market orientation and a positive effect of "indirect control". *Direct control* is planning control by corporate headquarters in production, purchasing, sales, distribution, personnel, finance and pricing or any policy which directly involves the operational process or direction of the company. *Indirect control* features the constraints on firm behaviour imposed by policy or personal influences. Furthermore the market effect (defined as an index of factors that impel market competition and affect a firm's viability) gives the impetus for market orientation, through which marketing costs rise, which brings about a decrease in the market effect. The adoption of market orientation then tends to lead to a better performance. The practice of market orientation is constrained by factors such as management capability, corporate and national culture, resources etc.

41

Hong Liu's (1995) study focused on the differences in market orientation between firms of different size. The research project was aimed at medium-sized (annual sales of <£9,000,000) to large (annual sales of £10,000,000 - £49,000,000) and extra large (annual sales of >£50,000,000) subsidiary firms. 550 questionnaires were sent to managing directors or marketing directors/managers of manufacturing firms in the UK. Three weeks later, a follow-up letter with a new copy of the questionnaire was sent to the non-respondents. 253 completed questionnaires (a response of 46%) were returned).

Market orientation was measured by indices such as "new product development", "market segmentation", "co-ordination of business activities", "marketing planning" and "marketing research". The *market effect* was measured by "perceived competitive threats", "supply situation in the major product market" and "supply situation in the major supply market". The *control effect* was measured by "corporate sales planning", "production planning", "supply planning", "pricing control by the corporate headquarters" and the "perceived overall influence from the corporate headquarters". *Performance* was measured by "return on assets" and "profit growth". A five-point scale was used in the questionnaire.

The results of the research indicated that large and extra-large firms are more market oriented and also showed a better performance level than medium-sized firms. There were no differences in the level of new product development between extra-large, large and medium-sized firms. There was no difference in the market effect between firms of different size. Production seemed to be subject to the highest degree of planning and supply to the least degree of planning from the corporate headquarters. Perceived constraints on market orientation were "not enough time" (32.7% of the firms), "technology" (16.1%), "low margins" (15.4%) and "difficulty in co-ordination" (12.2%).

Thus, Hong Liu's (1995) most interesting findings are that large and extra-large firms are more market oriented than medium-sized firms and that there is hardly any difference between large and extra-large firms. No explanation is given for this result.

It was also discovered that large and extra-large firms show a better profit performance than medium-sized firms. Hong Liu (1995, p.68):

> "This suggests that study of the relationship between market orientation and performance needs to isolate the contribution of market orientation to performance from size or other related factors such as advertising, vertical integration and distribution channels".

Another interesting finding of this study is that many UK companies operate with a short-term perspective, which makes it more difficult for these organisations to become market oriented and to keep or develop a competitively advantageous position.

3.9. Market orientation and international marketing

Dalgic (1994) observes that there are several studies covering exporting and market orientation separately which aim at investigating empirical and theoretical issues. However, despite increasing numbers of separate studies, studies integrating both subjects are few. He suggests that market orientation researchers' earlier pre-occupation with domestic markets and emergent aspects and problems related with domestic markets might have affected their immediate research agendas. Consequently this might have postponed further studies to link market orientation studies with international marketing activities.

Dalgic (1994) mentions that, in some limited studies, authors identified export orientation as a separate organisational characteristic from the home country market orientation. Kotabe (1989) found three independent strategic thrusts of US multinationals: "home market orientation", "export orientation" and "foreign production orientation". However, Kotabe did not elaborate on the constructs and antecedents of these organisational orientation characteristics in detail. It is, however, generally accepted that Kotabe's home market orientation is the same market orientation concept used by Kohli and Jaworski (1990), Narver and Slater (1990) and Jaworski and Kohli (1993).

Dalgic (1994, p.75):

> "Scott and Keller (1991) report that multinational companies' decision on the location of their Research and Development activities are contingent upon several factors, particularly the (host) market orientation of the multinational companies. Local factors include tax levels, proximity to a major university or research lab, proximity to major airport and quality of life factors. According to these authors information on host market macro-environmental factors represent determining factors for the location selection of Research and Development activities of multinational companies".

Dalgic reports that in the international marketing literature Piercy (1981) observed that aggressive exporters view exporting as the main source of growth and that Burton and Schlegelmilch (1987) analysed the profiles of non-exporters and exporters grouped according to their export involvement. They concluded that increasing export involvement by the firm is accompanied by specific improvements, changes in organisational, managerial and attitudinal characteristics and that export involvement can be predicted by sets of organisational and attitudinal variables. However, their study was not aimed at the investigation of the link between international marketing and market orientation but, more generally, at organisational and managerial attitudinal characteristics of exporters with their degree of involvement in exporting activities. Furthermore, Dalgic (1994) reports that Doyle, Saunders and Wright (1988) in a comparative study of British, US and Japanese marketing strategies in the British market, found that Japanese subsidiaries in the UK were much more marketing oriented, more single-minded in their pursuit of market share and more alert to strategic opportunities, while US subsidiaries seemed less committed to the UK, oriented toward the home country and excessively concerned with short-term profit performance.

Dalgic's (1994) conceptual study was an early attempt to see whether international marketing companies may be classified as market oriented organisations by applying domestic market orientation constructs. As in domestic markets, depending upon the competitive environment, some companies may be successful not because of their market orientation, but because of their position due to lack of competitors or their technological leadership. This may be true for international marketers as well, for example being the only company in a foreign market or having established oneself in a

foreign market as a monopoly, due to political, social, geographic or technological factors. However, the findings of empirical studies in both market orientation studies and international marketing support the view that companies with market orientation constructs display proactive, aggressive, flexible, dynamic organisational and managerial characteristics and closeness to the customer as well as an awareness of the changes in their macro-environments. As a consequence Dalgic (1994, pp.79-80) suggested the following propositions:

"**Proposition 1**
Market oriented companies tend to have more proactive motives to international marketing than non market oriented companies.

Proposition 2
Market oriented companies in international markets tend to be more active and committed exporters than non marketing oriented companies.

Proposition 3
Market oriented companies in international markets are more profitable in those markets than non market oriented companies".

Dalgic (1994) made a call for further research, in order to see the antecedents of market orientation in international marketing and urged further conceptual and empirical studies to be carried out on a comparative basis on whether national market characteristics and macro-environmental factors play a more dominant role.

3.10. Market orientation and business performance

After market orientation received new attention in the 1990's, much attention has been addressed to the presumed positive relationship between market orientation and business performance.

As described above, Kohli and Jaworski (1990) stated that the greater the level of market orientation of organisations, the higher their performance. This hypothesis was investigated by Narver and Slater (1990), who also investigated the influence of the direction of the market orientation (customer and/or competitor oriented) on the market orientation-performance link, Jaworski and Kohli (1993), Slater and Narver

(1994a), Reukert (1992), Deshpande, Farley and Webster (1993), Webster (1993), Hart and Diamantopoulos (1993), Caruana (1994; 1995) Greenley (1995a, 1995b) and Pelham and Wilson (1996). The plausible argument goes as follows: performance is defined by the competitive advantage of the firm. Slater and Narver (1994b p.22) put it this way:

> "A business is market oriented when its culture is systematically and entirely committed to the continuous creation of superior customer value. Specifically, this entails collecting and co-ordinating information on customers, competitors, and other significant market influences (such as regulators and suppliers) to use in building that value (...). A developing stream of empirical research has found a strong relationship between market orientation and several measures of business performance, including profitability, customer retention, sales growth and new product success".

Day (1994, p.38) finds the explanation of market orientation in the role of capabilities in creating a market oriented organisation:

> "Capabilities are complex bundles of skills and collective learning, exercised through organisational processes, that ensure superior co-ordination of the functional activities. I propose that organisations can become more market oriented by identifying and building the special capabilities that set market-driven organisations apart."

According to Day (1994) market-driven organisations are superior in their market-sensing and customer-linking capabilities.

Jaworski and Kohli (1993) indeed found a significant association between market orientation and business performance, as was the case with Slater and Narver (1994a). Reukert (1992) investigated, among other aspects, the degree of market orientation and long-term financial performance, which also turned out to be positive. Deshpande, Farley and Webster (1993) also found a positive relationship (in Japan). However, the assessment of suppliers of customer (market) orientation did not correspond with that of customers. A weak customer (market) orientation instrument could be the cause of this weak relationship. Webster (1993) found a positive relationship between marketing culture and ROI. Hart and Diamantopoulos (1993) only found a weak

positive association between market orientation and performance. This may be caused by the fact that their data were drawn from an earlier study with different research objectives, while their market orientation measures did not fully correspond with those of Kohli and Jaworski. Caruana (1994; 1995), who studied the relationship between excellence, market orientation, the management of expectations, service reliability and business performance in service firms in the UK, used the MARKOR instrument of Jaworski and Kohli (1993) in his research. Caruana did not find strong support for the market orientation-performance link. Greenley (1995a, 1995b) studied the relationship between market orientation and business performance in the UK. Using the Narver and Slater scale (1990), Greenley (1995a, 1995b) sent a questionnaire to the CEO/managing director of 1000 UK companies of more than 5000 employees. He yielded a usable response of 240 fully completed questionnaire (which is 24%). The research results indicated some effect of market orientation on business performance, but only below certain levels of the moderator variables. Above these levels market orientation was negatively associated with performance. The explanation Greenley (1995b) offered for this phenomenon was as follows: at higher levels of the moderator variables (like market turbulence and technological change) the costs involved in increasing the level of market orientation become disproportionately high, relative to sales revenue, and market conditions are such that sales revenue cannot be increased, resulting in a decline of profits.

Pelham and Wilson (1996) studied the impact of, amongst other things, market orientation on small business performance. They also used the Narver and Slater scale (1990) and found strong consistent influences of market orientation on various (subjective) measures of small firm performance (small business new product development, relative product quality, growth/share and profitability). As shown in Section 3.8., Hong Liu (1995) showed that large and extra-large firms show a better profit performance than medium-sized firms. So it seems that most research provides some evidence for the market orientation-performance link, although some studies have not found convincing evidence.

3.11. Measuring business performance

Measuring business performance is a difficult task. Pure financial and objective measures may be preferred, such as net profit, sales growth, ROI, turnover. The difficulty is that companies can hardly be compared (Dess and Robinson, 1984), taking their "unique" characteristics and their different industrial sector backgrounds into account. In one industrial sector a net profit of 2% is excellent, while in another a profit of 10% is rather low. Also the phase (growth or decline, for example) in which the sector finds itself, and its history (huge investments for the future, reorganisations and the like) influence the rate of "normal" profit. In management research, moreover, objective financial information is difficult to obtain, as much of this information is strategic and sensitive from a competitive point of view. Therefore, subjective (sometimes called "judgmental") and partly non-financial measures of performance are sometimes proposed (Caruana and Pitt, 1994). Jaworski and Kohli (1993) used two distinct approaches reflected in the literature - "judgmental" and objective measures. Narver and Slater (1990), for example, relied largely on subjective measures in their research on the relationship between market orientation and business performance. As described above, while Jaworski and Kohli (1993) used the dollar share of the served market as an objective measure, they did not find satisfactory results with this measure and relied completely on the subjective ("judgmental") measures. Dess and Robinson (1984) and Pierce, Robbins and Robinson (1987) showed that such measures can be a reliable means of measuring performance. Greenley (1995a, 1995b) incorporated objective and subjective criteria for measuring performance. Hong Liu (1995) measured performance by "return on assets" and "profit growth" (see Section 3.8.).

3.12. The operationalisation of market orientation

Kohli, Jaworski and Kumar (1993) developed an instrument to measure market orientation, "MARKOR", which consists of a general market orientation factor, a factor for intelligence generation, one factor for dissemination and responsiveness, one marketing informant factor and one nonmarketing informant factor. Their scale

consists of 32 items and with a Cronbach (Cronbach, 1951) Alpha for each dimension of greater than 0.70. Kohli, Jaworski and Kumar describe the validation of this instrument in their 1993 articles: one article specifically on the MARKOR instrument (resulting in a 20-item version by the deletion of 12 items in the validation process) (Kohli, Jaworski and Kumar, 1993) and one article to report their empirical research with MARKOR (the original 32-item version) (Jaworski and Kohli, 1993).

Narver and Slater (1990) also developed an instrument to measure market orientation. In their view market orientation is defined as "the organization culture that most effectively and efficiently creates the necessary behaviours for the creation of superior values for buyers and thus, continuous superior performance for the business" (p.21). Their instrument, therefore, consists of three "behavioural criteria" and two "decision criteria". The behavioural criteria (14 items) are:

- Customer orientation, which concerns understanding the target buyers in order to provide superior value on a continuous base.
- Competitor orientation, which involves understanding the short-term strengths and weaknesses and long-term capabilities and strategies of current and potential key competitors.
- Interfunctional co-ordination, which concerns the co-ordinated utilisation of company resources to create superior value for target customers.

The decision criteria concern the long-term focus and the profit of the company. Narver and Slater report a Cronbach Alpha coefficient of 0.88 for their scale.

A third instrument was developed by Deshpande, Farley and Webster (1993). They studied the relationship between organisational culture, customer orientation, innovation and business performance in Japan. Their research also involved the experiences of the customers of the organisations. Deshpande, Farley and Webster (1993) use the term "customer orientation" instead of market orientation, which is defined as "the set of beliefs that puts the customer's interest first, while not excluding those of other stakeholders such as owners, managers, and employees, in order to develop a long-term profitable enterprise" (p.27). They developed two versions of a

short 9-item questionnaire to measure this so-called customer orientation and reported a Cronbach Alpha coefficient of 0.69 and 0.83 respectively.

A fourth instrument was developed by Webster (1993), who developed a scale for measuring "marketing culture" in service firms. This scale consisted of 34 items with a seven-point Likert-type scale with a Cronbach Alpha coefficient of 0.94.

Reukert (1992, p.228) also developed an instrument to investigate the relationship between market orientation and long-term financial performance. He defined the level of market orientation in a business unit as the degree to which the business unit:

"(1)   obtains and uses information from customers;
(2)   develops a strategy which will meet customer needs; and
(3)   implements that strategy by being responsive to customer needs and wants".

His Likert-type scale consists of 23 items, with a Cronbach Alpha coefficient of 0.89.

Finally see Section 3.8. for a description of the operationalisation of market orientation by Hong Liu (1995).

3.13. Conclusions

Market orientation is at the centre of attention in the nineties. Many publications have appeared and, unlike the concept of the learning organisation, a considerable number of empirical studies have been published. Research has mainly focused on the properties of market orientation, on the way it contributes to competitive advantage and the performance of the firm, on the effect of organisational (formalisation, size, age, culture etc.) and environmental (competition, turbulence, technology etc.) moderators on market orientation and on the relationship of market orientation with the company's performance (profit, sales etc.). Few authors have elaborated on the relationship of market orientation with international marketing and this relationship has been barely researched. For the market orientation concept, some well-validated

50

measuring instruments have been developed. The literature suggests that measuring business performance, in relation to market orientation, can best be done by subjective or judgmental criteria. Objective criteria have been more difficult to use until now.

CHAPTER 4. THE RELATIONSHIP BETWEEN THE LEARNING ORGANISATION AND MARKET ORIENTATION, THE INFLUENCE OF ENVIRONMENTAL MODERATORS AND THE MEASUREMENT OF BUSINESS PERFORMANCE

4.1. Introduction

In this chapter an overview is given of the literature on the relationship of the learning organisation with market orientation.

Firstly, some literature is described that focuses on how organisations direct learning processes to markets and how learning is managed *inside* the organisation in order to construct antennae for the relevant (market) developments *outside* the organisation, thus in the environment. After that there is an elaboration of an important article by Slater and Narver (1995) that is devoted to the relationship between the learning organisation and performance. Furthermore, some articles on the moderating role of environmental variables are reviewed (e.g. market and technological turbulence, competitive intensity, buyer power, market growth and competitor concentration) and on the relationship of the learning organisation and market orientation with business performance.

4.2. The relationship between the learning organisation and market orientation

Learning organisations have the collective capacity to learn, as entire organisations. They learn from their environment, they learn from their clients, they learn from their competitors and one part of the organisation can learn from the mistakes of another part. So essentially, market orientation and the learning organisation seem to have much in common. For instance, market orientation theorists stress intelligence generation and intelligence dissemination, while the learning organisation scholars mention open-minded inquiry and synergistic information distribution.

4.2.1. Day: market-driven firms and continuous learning processes

George Day sees an important link between being market oriented or - in his words being market-driven - and continuous learning. For him learning is always linked to learning from markets and learning is essentially continuous. Day (1992, p.47):

"When talking about continuous learning organisations, the word "continuous" bears emphasis. "Continuous" is used in the sense that one does not conduct a single study at a single point in time and then use it as a basis for all following activities".

Continuous learning about markets is a core competence of companies. This is the case because the amount of available market data is growing at an exponential rate. Organisations become overwhelmed by this enormous amount of data and by its complexity. Furthermore, product life cycles are reduced and therefore organisations have to be very alert to developments in their markets. Day (1992) distinguishes three stages of the "market-driven learning process", namely "open minded inquiry", "interpretation" and "memory".

Open-minded inquiry refers to active environmental scanning activities of organisations in such a way that the organisations are open to opportunities. Day, (1992, p.48):

> "It involves continuously talking with distributors, getting their feedback, running focus groups and conducting self-critical benchmarking. Through active scanning, learning companies also try to get into the organization of their competitors - benchmark against their systems, figure out what their beliefs are and understand their intentions".

Interpreting information involves "mental models" (see Section 2.6.). For Day (1992) "market-driven mental models" are models that focus on customers as well as on competitors. *Memory* has the same significance for Day (1992) as described in Section 2.6. According to him the memory of an organisation consists of lessons learned from daily experiences in the field that are readily available for review. Day warns that a take-over by another company can destroy an organisation's memory. If the take-over

is followed by the departure of too many people, ideas, lessons learned etc. may be lost.

Day (1992) also addresses the question of how organisations can remain successful learning organisations. He stresses the importance of going through the benchmarking process over and over again and re-examining the operative mental models continuously. Another important aspect of remaining a learning organisation and being successful is the motivation and susceptibility of the front-line people. These are the employees who talk to customers and - sometimes competitors - directly. Organisations have to show service, sales and other front-line personnel that their information will be used. Furthermore, continuity can only be maintained by valuing this continuity, for example by managing team structures in the sense that if project teams are disbanded the team knowledge is not lost and by incorporating the lessons learned in the strategic processes.

In a later article Day (1994) calls the specific characteristics of market-driven learning organisations described above "capabilities". The *capabilities approach* (Day, 1994, p.38):

> "locates the sources of a defensible competitive position in the distinctive, hard-to-duplicate resources the firm has developed".

Capabilities are close to Nonaka's (1991) concept of "tacit knowledge" (see Section 2.6.). They are deeply embedded in the fabric of the organisation and hard for management to identify. The knowledge embedded in capabilities is distributed along four separate dimensions: (1) accumulated employee *knowledge and skills* coming from technical knowledge, training and experience; (2) *technical systems*, consisting of the information in linked databases, formal routines, procedures etc.; (3) *management systems*, that consist of the formal and informal way of creating and controlling knowledge and (4) *values and norms* that define the content and interpretation of knowledge, that cluster individual capabilities and that unify these capabilities (Day, 1994).

4.2.2. Kiernan: the new strategic architecture

Kiernan (1993) describes the importance of the internal organisation in the process of becoming and remaining competitive and successful. He states that the corporate strategy debate puts too much emphasis on factors external to the firm. This external focus tends to blind organisations to important internal factors that are also critical for the competitive success of the company. In this sense he argues that in fact an external directed market orientation must be accompanied by an internal oriented learning strategy. This "internal strategy" includes seven core elements:

- Organisational learning;
- Innovation/experimentation;
- Constructive contention;
- Empowerment/shared leadership;
- Optimised value potential;
- Corporate sustainability;
- Strategic re-framing.

Organisational learning is considered the most important factor by Kiernan (1993) and, in his view, will replace control by (top) management. Because of the need to speed up, to respond globally and to innovate constantly, enabled by the new information technologies, learning will become the only viable alternative. Kiernan proposes Management Information Systems (MIS), performance measurement systems of personnel, benchmarking best practices, intensive training and development of the front line workers, temporary personnel assignments and rotations. So an important role is attributed to Human Resources Policies (HRM).

Innovation and experimentation. Innovation and experimentation are encouraged, which also means that inevitable failures are expected. This innovative character is accompanied by a strong market orientation, a focus on customers which is directed to satisfying their needs and to anticipating and solving their problems (Kiernan, 1993).

Constructive contention means that the inevitable internal tensions within organisations (e.g. stability versus transformation, hierarchy versus democratisation) must not be rooted out, but must be embraced as sources of dynamism and renewal.

Empowerment/shared leadership. The continuing de-layering of the organisational hierarchy and the rapid diffusion of information technologies stimulate and facilitate the process of empowerment.

Optimised value potential. This is the conscious usage of "hidden" value potential in the organisation, like hidden production capacity, human talent, networks, brand name recognition and R&D results.

Corporate sustainability. This means that the organisation should focus its basic sources of competitive advantage and watch for threats that affect long-term survival. Environmental sustainability should be incorporated into the organisation's striving for durability. This striving cannot be successful if environmental questions are overlooked.

Strategic re-framing. The mind-set must go from "linear-reductionist" to "lateral thinking". This goes against Western conventional thinking. Strategic reframing comes close to the double-loop learning of Argyris and Schon (1978).

Kiernan (1993) thus combines the primary external orientation to the market with an internal focus on the facilitation and stimulation of internal learning processes, that are still closely linked to the external organisational environment.

4.2.3. Sinkula: market information processing and organisational learning

Sinkula (1994) describes the link between market orientation and the learning organisation from the viewpoint of the relationship between market information processing and organisational learning. Only when we understand how organisations process market information, can we understand the nature of organisational learning.

Sinkula (1994, p.36) follows Huber (1991, p.90) in defining organisational learning by four constructs:

> "*Knowledge acquisition* is the process by which knowledge is obtained. *Information distribution* is the process by which information from different sources is shared and thereby leads to new information or understanding. *Information interpretation* is the process by which distributed information is given one or more commonly understood interpretations. *Organizational memory* is the means by which knowledge is stored for future use".

Thus in successful organisations market information is firstly acquired, secondly distributed, thirdly interpreted and finally stored for future use in the organisational memory. This sound way of market information processing is typical for a learning organisation and for a market oriented organisation.

Sinkula (1994) states that, like individual learning, organisational learning is a function of age and experience. As organisations grow and age, market information processing will - at least partly - require search routines that will yield higher levels of knowledge. When minor tasks can be replicated, managerial attention can shift to higher levels of abstraction. Market information that contradicts existing rules will promote the highest learning, because it leads to greater change. Also, this kind of information requires more interpreters, and as more people are involved enhanced organisational learning occurs.

Sinkula (1994) argues that organisational learning directed towards markets is different from other types of organisational learning: (1) it is a core competency with an external focus and it is less visible than more internally oriented organisational learning competencies; (2) it results in the fundamental basis of competitive advantage; (3) observing other organisations (e.g. competitors) is essential; (4) the market information that resides in the organisational memory is more difficult to access; (5) market-based organisational learning is unique, because it is more equivocal. Market information is difficult to interpret and this interpretation is the key to organisational learning.

Sinkula (1994, p.38) makes a distinction between the early and later stages of knowledge development. In the beginning the organisation is driven by "congenital knowledge":

> "Newly conceived organizations possess congenital knowledge that focuses on generalized, rationalized concepts of how markets work with less situation-specific knowledge than they would desire, because such knowledge often comes only with trail and error".

When the organisation grows older, it will learn to make sense of its markets and develop rules for the acquisition, distribution and interpretation of market information. Thus, an "endorsed" way of doing so arises which will become manifest in the form of organisational norms, training programmes, policies and strategies. In the later stages of knowledge development "higher-order learning" becomes more prominent. This means not merely adjusting to developments, following organisational norms, but rather resolving inconsistencies by adapting the norms themselves (double-loop learning).

To understand the relationship between organisational learning and market information processing, however, it is important to understand the two principal requirements for organisational learning according to Sinkula (1994). The first is the resolution of the "supply/need problem" and the second the reduction of equivocality. (1) The information supply increases with time as the organisation grows (older). When supply outpaces need, however, the utility of market information will diminish and it will be processed to a lesser extent. (2) Equivocality is reduced by (further) development of the organisational memory. Organisations use memory to filter market information and market information filtering is a function of organisational age and size. As memory develops, organisations tend to distribute, interpret and store less of the newly acquired market information.

From his article Sinkula (1994) draws four important conclusions: (1) research should focus more on the way organisations process information than how they use it; (2) the analogy between market information processing and decision making should be ended

as market information processing and organisational learning do not always imply decision making; (3) researchers should attempt to develop measures of market-based learning competency which may lead to the identification of learning-oriented organisations and also to the assessment of their market performance; (4) researchers should investigate the questions of when to ignore market information and when is there too much information?

Sinkula's argument that there is a close relationship between market information processing and organisational learning is supported by Glazer (1991) who proposes that information and knowledge have a high value for organisations in the marketing context, but that this value depends significantly on the information intensity of the particular organisation. The more information intensive the organisation, the more important the role of information (processing and application) and thus of learning is. Information and knowledge are assets that can be managed in order to enhance the competitive advantage of the company.

4.2.4. Slater and Narver: market oriented companies with an organisational climate that produces a learning organisation

Slater and Narver (1995) also support the proposition that there is a relationship between the learning organisation and market orientation. Like Miles and Arnold (1991) (see Section 3.7.) they believe that a market orientation should be complemented by an entrepreneurial drive. However, this will be the case only if it is accompanied by a climate that produces a learning organisation that entails "higher-order learning": double-loop or generative learning. Slater and Narver (1995, p.63):

> "We argue that though a market orientation provides strong norms for learning from customers and competitors, it must be complemented by entrepreneurship and appropriate organizational structures and processes for higher-order learning (double-loop learning in Argyris, 1977; generative learning in Senge, 1990) to occur. In summary, the cultural values of a market orientation are necessary, but not sufficient, for the creation of a learning organization".

Slater and Narver (1995) define organisational learning as "the development of new knowledge or insights that have the potential to influence behavior" (p.63), which will lead to improved performance. As described in Chapter 2 of this thesis, they distinguish between adaptive (single-loop) and generative (double-loop) learning. Generative learning is likely to be more positive for the competitive advantage of an organisation, but very difficult to continue for prolonged periods of time. Slater and Narver (1995, p.64):

> "Generative learning is frame-breaking and more likely to lead to competitive advantage than adaptive learning. However, sustained generative learning is an elusive goal (...). Thus, revolutionary periods of generative learning may provide a window of competitive advantage that can be kept open only through continuous improvement. Eventually the window will begin to close as knowledge about the innovation diffuses to competitors".

Slater and Narver (1995) describe the process of organisational learning very much in terms of Kohli's and Jaworski's concept of market orientation. Organisational learning takes place by a three stage process of information acquisition, information dissemination and shared interpretation.

Slater and Narver (1995) observe that organisational learning contributes to the competitive advantage and performance of an organisation when this organisation possesses skills or resources that (1) provide superior values to customers, (2) are difficult to imitate, and (3) are capable of multiple applications. The first characteristic implies an organisational culture that stimulates personnel's behaviour to improve effectiveness and efficiency which provide lower prices or better product quality for customers. The second characteristic refers to socially complex organisational environments that are difficult for competitors to understand and thus to imitate. The third characteristic means that organisations that have unique insights into opportunities in existing or new markets are capable of multiple applications.

According to Slater and Narver (1995), another important characteristic of learning organisations is that they are loosely coupled with their environments by a "buffer" between the organisation and the environment that prevents a reactionary response to

every event. This buffer is provided by "a learning culture" in three ways: (1) generative learning is forward looking and helps to reduce the impression of too much environmental complexity; (2) a learning organisation has close and extensive relationships with customers, suppliers etc. which facilitate mutual adjustments in unexpected situations; (3) learning organisations are very flexible and are able to reconfigure their structure and reallocate their resources to focus on emergent opportunities or threats.

Slater and Narver (1995, p.67) argue, therefore, that organisational learning is an important propensity of companies because of the increasing dynamism of the organisational environment:

> "Thus, we concur with Day (1992), who states that a superior ability to learn is (1) critical because of the accelerating market and technological changes, explosion of advanced market data, and importance of anticipatory action; and (2) a competency-based source of competitive advantage because of its complexity, usefulness (for numerous activities from product development to customer service) and difficult to imitate".

It is interesting that in Slater and Narver's view (1995, p.67) market orientation - together with an entrepreneurial orientation - is a key element of the culture of the learning organisation:

> "The five critical elements of the learning organization - the two key elements of culture: market orientation and entrepreneurship; and the three elements of climate: facilitative leadership, organic and open structure, and a decentralized approach to planning, that we suggest have a synergistic influence on learning and performance" Slater's and Narver's (1995) vision of *market orientation* is broadly comparable to the text in Chapter 2 of this thesis and their vision of *entrepreneurship* is close to that of Miles and Arnold (1991), described above".

Slater and Narver (1995) state that a culture that values entrepreneurship is an essential "addition" to market orientation. Although market orientation, with its focus on understanding latent needs, is inherently entrepreneurial, they believe that the entrepreneurial values must be made explicit. *Facilitative leadership* is a leadership style that focuses on the development of the people in the organisation. Following

Burns and Stalker (1961), Slater and Narver define an *organic structure* as "an organizational architecture that is decentralized, with fluid and ambiguous job responsibilities and extensive lateral communication processes" (p.69). *Decentralised strategic planning* refers to strategic planning processes in organisations that take place both bottom-up and top-down. The role of top management is to encourage experimentation and the development of creative ideas, no matter from which hierarchical level these ideas originate. In such a planning process much energy is also devoted to the continuous evaluation of earlier plans and of key assumptions about markets, the business and the environment of the organisation.

In this way, Slater and Narver (1995) link the concepts of the learning organisation and market orientation in a convincing way. They stress the importance of further research on this relationship as empirical evidence is scarce. An important objective of this thesis is therefore to contribute to the body of knowledge on the learning organisation and market orientation by providing more empirical material on their relationship and on their influence on a company's performance.

4.3. The moderating role of the environment

Some authors (Jaworksi and Kohli, 1993; Slater and Narver ,1994a; Greenley, 1995a, 1995b; Lusch and Laczniak, 1987) have written about the moderating role of the environment on the market orientation-performance link. The author knows of no comparable literature on the moderating role of the environment on the learning organisation-performance link. In view of the expected close relationship between the learning organisation and market orientation described in the above section, however, it may very well be that the moderating influence of environmental factors on the market orientation-performance link also applies to the learning organisation-performance link.

4.3.1. Jaworski and Kohli

Jaworski and Kohli (1993, p.57) studied the effect of environmental factors on market orientation:

> "Several scholars suggest that the environmental context is likely to influence its level of market orientation. As a result, organizations in more competitive environments may be expected to be more market-oriented".

Kohli and Jaworski (1990) mentioned four moderators that influence the relationship between market orientation and business performance, namely: market turbulence, technological turbulence, competitive intensity and performance of the economy. In their empirical study Jaworski and Kohli (1993) included three of the four mentioned environmental characteristics: market turbulence, technological turbulence and competitive intensity. The performance of the economy appeared to be too complex to measure and so they did not include this variable.

Kohli and Jaworski considered *market turbulence* as the rate of change in the composition of customers and their preferences. If an organisation operates in a turbulent market, it has to modify its products and services more often than when it operates in a stable market. Therefore it seems likely that firms operating in turbulent markets have a greater need to be market and learning oriented than when operating in relatively stable markets. They have to monitor and respond to quickly evolving customer preferences.

Technological turbulence, or the rate of technological change, may negatively influence the learning organisation and market orientation-performance link. Jaworski and Kohli (1993, p.58):

> "Organisations that work with nascent technologies that are undergoing rapid change may be able to obtain a competitive advantage through technological innovation, thereby diminishing - but not eliminating - the importance of a market orientation. By contrast, organisations that work with stable (mature) technologies are relatively poorly positioned to leverage technology for

gaining a competitive advantage and must rely on market orientation to a greater extent."

If *competitive intensity* is low, it does not seem to be difficult for an organisation to be profitable. The need to be market oriented is low, as customers will buy the companies' products and services anyhow. If a business encounters high competition, customers can walk away to the competition at a moment's notice. Therefore, under these circumstances, it seems worthwhile to be highly market oriented in order to be able to constantly satisfy the customers' needs and wants.

Jaworski and Kohli (1993) used two US samples. The first sample was drawn from the member companies of the Marketing Science Institute (MSI) and of the top 1000 companies listed in the Dun and Bradstreet "Million Dollar Directory". Of the 49 MSI member companies, 13 companies agreed to co-operate, of which 27 SBU's provided names of marketing and non-marketing executives. After some follow-up the response rate was 88.9% for the marketing executives and 77.8% for the non-marketing executives. From the Dun and Bradstreet Database, 102 companies (229 SBUs) agreed to participate. These 102 companies provided names for 206 marketing and 187 non-marketing executives. Here the response rate was 79.6% for the marketing executives and 70% for the non-marketing executives. The second sample was done to cross-validate the findings. This sample frame came from the American Marketing Association of which 487 names were selected at random. A total of 230 responses were obtained (a response rate of 47.2%).

However, Jaworski and Kohli (1993) found no support for these environmental effects, and had to conclude that the market orientation-performance link held, irrespective of the investigated environmental characteristics. The results (see Section 9.4.) did not support the hypothesised moderating effects for any of the three moderator variables. The link between market orientation and performance appeared to be robust across contexts characterised by varying levels of market turbulence, competitive intensity, and industrial turbulence.

4.3.2. Slater and Narver

Slater and Narver (1994a) also studied the moderating effect of environmental variables on the market orientation-performance link. They considered the following "moderating variables":

Market growth, which is defined as "the estimated annual growth rate of total sales in a business's principal served market segment over the past three years" (p.49). Because high market growth could be an indication of a favourable environment, a positive relationship between market growth and performance was expected.

Another variable Slater and Narver (1994a) considered was *buyer power*. Buyer power is the extent to which buyers can negotiate lower prices from sellers. Because strong buyer power implies low profit margins for sellers, the argument goes that there will be a negative relationship between buyer power and business performance.

The next moderating variable was *market turbulence*, which was adopted from Kohli and Jaworski and defined by Slater and Narver (1994a) as "changes in the composition of customers and their preferences" (p.51).

Slater and Narver (1994a) also borrowed the *technological turbulence* variable (being the rate of technological change) from Kohli and Jaworski, to which they attributed the same negative effect on the market orientation-performance link.

Another moderating dimension of Slater and Narver (1994a, p.51) was *competitor hostility*:

> "The scale consists of three items: the predictability of a business's key competitors" market activities, the hostility of a business's key competitors, and the breadth of a business's key competitors' activities (e.g., pricing, service, etc.). Intense competition is expected to be negatively related to performance".

65

Furthermore, *competitor concentration* was also used, which is the proportion of sales revenue in the SBU (Strategic Business Unit) of its principal served market segment, accounted for by the four largest firms. Slater and Narver (1994a) stated that, according to economic theory, high concentration leads to higher performance for the major competitors, because they recognise the advantages of price competition avoidance.

Lastly, Slater and Narver (1994a) defined *market performance* "as the top management team's assessment of the SBU's return on assets (ROA), sales growth, and new product success relative to all other competitors in the SBU's principal served market over the past year" (p.51).

Slater and Narver's (1994a) sample consisted of 81 SBU's (Strategic Business Units) in a forest products company and 36 SBU's in a diversified manufacturing company, which were both listed among the Fortune 500 largest industrial firms. Slater and Narver (1994a, p.50):

> "Within each SBU the top management team (TMT) was identified by the responsible group executive, and each member was sent a questionnaire titled "Business Practices Survey" containing questions regarding the SBU's competitive practices and strategies, competitive environment, and performance in its principle served market segment. We used multiple, knowledgeable members of the TMT to offset biases of individual respondents and thus reduce measurement error".

The response rates were 84% in the forests products corporation and 74% in the diversified manufacturing corporation (3.3. and 7.4 respondents per SBU respectively).

Slater and Narver's (1994a) research results found partial support for the moderation of:

- Market turbulence with ROA;
- Technological change with new product success;

- Market growth with sales growth.

Despite these results, Slater and Narver (1994a) reported that in fact only limited support for the market orientation-performance link was provided, as none of the afore-mentioned associations was significant. Slater and Narver (1994a, p.53) remarked that in fact this is not a surprising research result:

> "Even if the evidence of a moderator effect was stronger than we have found, one should ask whether the influential environmental conditions are sufficiently long lasting for it to be cost-effective for a business to attempt to "adjust" its market orientation, given the complexity of changing a market orientation, that is, culture (...). Why should a market-oriented business necessarily be influenced by "environmental moderators"? With its external focus on commitment to innovation, a market oriented business should be prepared to achieve and sustain competitive advantage in any environmental situation. Indeed, a substantially market-oriented business should find more opportunities in any environment than its less market-oriented competitors (...). This is why market orientation is as important, if not more important, during low market turbulence and is supported further by the finding that the coefficient for market orientation is as important, if not more important, during high market turbulence and is supported further by the finding that the coefficient for market orientation is positive in all environments studies".

Thus, Slater and Narver (1994a) suggest that a market orientation always "pays off ", no matter what environment one is in, a market orientation always leads to a competitive advantage. This is a very interesting conclusion indeed.

4.3.3. Greenley

As mentioned above (Section 3.10.), Greenley (1995b) studied the relationship of market orientation and business performance and the influence of environmental variables on this relationship for UK companies. Greenley used the Slater and Narver (1994a) model for market orientation and business performance, as well as for the moderating variables. The research results showed (see Sections 3.10 and 9.2.2.) that market turbulence, technological change and customer power exhibited some moderator effects.

4.3.4. Lusch and Laczniak

One of the earlier studies on the moderating influence of environmental variables on the market orientation-performance link was done by Lusch and Laczniak (1987). They studied the conditions which lead firms to adopt a "good business practice" business philosophy and the influence of adopting such a philosophy on organisational performance. This study was done in the context of the "stakeholder concept". Lusch and Laczniak (1987, p.1):

> "The *stakeholder* concept holds that the actions of an organization should take into consideration all the *publics* of a business firm including customers, employees, suppliers, the host community, the general public, etc."

Lusch and Laczniak (1987) postulated that increased competitive intensity is associated with more emphasis on the marketing concept and stakeholder concept philosophies of business and that this emphasis would lead to improved organisational performance. They developed a short (20 item) questionnaire using a five-point Likert-type scale. To assess performance they used subjective, judgmental measures. They surveyed Fortune 500 vice-presidents of marketing and planning and received a total of 103 usable responses. One of their research results was that they indeed found some evidence that external factors - mainly competitive intensity - were moderators of the market orientation - performance link.

4.4. Conclusions

In recent years some publications have appeared about the relationship of (organisational) learning and the learning organisation with market orientation, or with the market-driven culture of organisations. Though mainly theoretical in character, these publications suggest that organisational learning and the learning organisation seem to be closely related to market orientation. According to theoretical elaborations and to some empirical findings, these concepts are likely to exert a positive influence on companies' business performance, although this effect may be

moderated by environmental variables. See Table 4.4.1. for a synthesis of the relevant literature - described in Chapters 2, 3 and 4.

Table 4.4.1. - Synthesis of the relevant literature on organisational learning, the learning organisation and market orientation

Study	Country Theoretical (T) Empirical (E)	Key Concept(s)	Key Findings
Kolb (1976;1984)	US T/E	Experiential learning Learning cycle	Learning processes are a function of a four-stage learning cycle of (1) concrete experience, (2) reflective observation, (3) abstract conceptualisation and (4) active experimentation.
Redding and Catalanello (1994)	US T/E	Strategic learning cycle Strategic readiness	Learning processes are a function of a three-stage learning cycle of (1) continuous planning, (2) improvised implementation and (3) deep reflection. Organisations have to develop a heightened state of strategic readiness: they cannot learn until they are ready to learn.
Argyris and Schon (1978)	US T/E	Single- and double-loop learning	Single- or adaptive learning occurs within the limits of the long-held organisational assumptions. Double-or generative learning takes place when the long-held assumptions are discussed and questioned.
Argyris (1993)	US T/E	Espoused theory and theory-in-use	A distinction has to be made between espoused theory - the beliefs, attitudes and values people believe they have and theory-in-use - the beliefs, attitudes and values people actually have. These differ significantly: people behave differently from how they believe they behave.
Garvin (1993)	US T	Integrative approach of organisational learning	The creation of new ideas and the continuing changes in the way work is being done are important characteristics of the learning organisation. However, many organisations don't have these characteristics. Of critical importance for a learning organisation is the fostering of an environment that is conducive to learning.
Belbin (1981)	UK T/E	Team learning/team roles	The link between individual learning and organisational learning occurs via team learning. People in (management)teams tend to play one or two dominant team roles. Successful teams are composed of members with additional team roles.
O'Brien and Bueno (1996)	US T/E	Building learning teams	Networks of (learning) teams are replacing traditional hierarchies. There are four critical factors of success in building learning teams: (1) building a culture that supports learning, (2) building teams whose outcomes require innovation or paradigm shifts, building teams that know, (3) value and use their individual and collective strengths and (4) building teams whose members possess sufficient self-knowledge and self-mastery.

Table 4.4.1. - Continued

Glynn (1996)	US T	Organisational intelligence	Organisations are systems that, like individuals, scan, interpret and diagnose information from the environment. The link between organisational and individual intelligence can be understood as follows: (1) organisational intelligence is made up of the intelligence of the individual organisation members, (2) diffusion and institutionalisation processes convert and encode individual intelligence in the organisation's memory and socialisation processes transmit organisational intelligence to the individual members and (3) organisational intelligence emerges from the patterned interactions that constitute the organisation.
Kim (1993)	US T	Organisational memory/mental models	Organisational and individual learning is linked by organisational memory that consists of individual and shared mental models. Organisational memory differs from organisational culture in the sense that it deals with cognitive elements and not with values, norms and beliefs as culture does.
Senge (1990)	US T/E	Organisational learning trough system thinking	Organisational learning is a product of personal mastery (the continuous clarification and deepening of personal vision), mental models (deeply ingrained assumptions and generalisations that influence perception and action), building shared vision (a shared picture of the future of the organisation) and team learning (the capacity of a team to learn together), bound together by systems thinking (the capacity to see the whole or holistic picture of the stream of events and (interrelated) actions.
Nonaka (1991) and Nonaka and Takeuchi (1995)	Japan T/E	Tacit knowledge	The link between personal and organisational knowledge and learning can be understood by the concept of tacit knowledge: the art of creating new (organisational) knowledge by tapping the tacit and people's subjective insights, intuitions and hunches.
Schein (1993)	US T/E	Organisational learning trough dialogue	Organisational learning is much improved by dialogue practices: Dialogue is (the skill) of open communication between people within and between organisations or groups and is focused on the mental and cognitive side of communication.
Simonin (1997)	US T/E	Collaborative know-how	Organisations learn from the successes and failures of collaborations with other organisations and apply this knowledge to new collaborations. However, previous collaborative experience alone does not ensure that an organisation will benefit from a collaboration. This experience is only valuable if the lessons learned are internalised and transformed into specific know-how to be used for future actions.

Table 4.4.1. - Continued

Slocum and McGill (1994)	US T/E	Typology of learning organisations Importance of unlearning processes	Four basic types of (non)learning organisations are distinguished: (1) the knowing organisation that does not learn because it thinks that everything is known that has to be known, (2) the understanding organisation that learns single-loop, because its core values are not discussed, (3) the thinking organisation that also learns single-loop, because its energy is focused on solving problems and almost no attention is given to the cause or background of these problems and (4) the actual learning organisation that learns in a double-loop manner. To become a learning organisation it is important to unlearn established learning patterns first.
Jashapara (1995)	UK T/E	Organisational learning and performance	Statistical evidence was found of a positive relationship between double-loop learning and performance, organisational learning focused on efficiency (on standardisation and formalisation) and performance, organisational learning focused on proficiency (on tasks requiring high levels of knowledge and skills) and performance and internal forces of co-operation (the pulling together of norms, beliefs and values) and performance.
Ray Stata (1989)	US T	Learning and competitive advantage	The rate at which individuals and organisations learn becomes the only sustainable competitive advantage.
De Geus (1988)	US/ Nether- lands T	Learning faster than competitors	The only source of sustainable competitive advantage arises from those companies who can learn faster than their competitors.
Pareek (1988)	Indone- sia T/E	Organisational Learning Diagnostics Instrument (OLD)	OLD assesses organisational learning subsystems and organisational learning mechanisms. It consists of 23 items on a five-point Likert-type scale.
O'Brien (1994) O'Brien and Kremer Bennett (1994)	US T/E	Learning Organisation Practices Profile (LOPP)	LOPP is an instrument to measure the level of learning organisation. This questionnaire examines 12 subsystems. The LOPP was used to build the questionnaire for this study.
Kotler (1994)	US T/E	Strategic marketing	Book on strategic marketing. From this book a market definition and some notions on export marketing were derived.
Sharp (1991)	US T	Market orientation as chronological development of marketing stages	Market orientation is an evolution of marketing management and business philosophy to overcome the inadequacies of product and sales orientation.
McGee and Spiro (1988)	US T	Market orientation as a philosophy	Market orientation is seen as a philosophy held by the management of an organisation and consists of five core aspects: customer orientation, competitor orientation, integration of effort, organisational objectives and profitability.
Deshpande, Farley, Webster (1993)	Japan T/E	Market orientation as a culture and the relationship with performance	Market orientation is seen as an organisational culture that (1) places the highest priority on the profitable creation and maintenance of superior customer value and (2) provides norms for behaviour regarding market information. The study in Japan provided evidence of a significant positive relationship of market orientation with performance.

Table 4.4.1. - Continued

Day (1992)	US T	Market-driven culture	Learning is always linked to learning from markets, which should be the core competence of companies.
Day (1994)	US T	Capabilities of market-driven cultures	The capabilities of market-driven learning organisations stem from four dimensions: (1) employee knowledge and skills, (2) technical systems, (3) management systems and (4) values and norms.
Kohli and Jaworski (1990)	US T	Market orientation, performance and environmental moderators	Operational definition of market orientation: (1) the organisation-wide generation of market intelligence pertaining to current and future customer needs, (2) dissemination of intelligence across departments and (3) organisation-wide responsiveness to it. The article provided a conceptual model for research on the relationship of market orientation with performance.
Kohli and Jaworski and Kumar (1993)	US T/E	MARKOR: Instrument to measure Market Orientation	The validation of the MARKOR instrument (that is used in this study) is described resulting in a 20-item version of MARKOR on a five-point Likert-type scale.
Jaworski and Kohli (1993)	US T/E	Market orientation and environmental moderators	Evidence of a significant positive relationship between market orientation and performance, no influence of moderating environmental variables on the market orientation-performance link was found.
Narver and Slater (1990)	US T/E	Market orientation, performance and environmental moderators	The results indicated a positive relationship between market orientation and performance.
Slater and Narver (1994a)	US T/E	Market orientation and environmental moderators	No significant influence of moderating environmental variables on the market orientation-performance link was found.
Slater and Narver (1994b)	US T	Market orientation and superior performance	A business is market oriented when its culture is systematically and entirely committed to the continuous creation of superior customer value.
Slater and Narver (1995)	US T	Market orientation and the learning organisation	Market orientation, together with an entrepreneurial orientation, is a key element of the culture of the learning organisation.
Dalgic (1994)	Netherlands T	Market orientation and international marketing	A relationship is postulated between market orientation, international marketing and performance: market oriented companies in international markets are more profitable than non-marketing companies.
Siguaw, Brown and Widing (1994)	US T/E	Influence of market orientation on sales force behaviour	Market orientation significantly influences the customer orientation of salespersons and their job attitudes, but the customer orientation of the salespersons itself is unrelated to these job attitudes.
Miles and Arnold (1991)	US T/E	Relationship between marketing orientation and entrepreneurial orientation	Marketing orientation and entrepreneurial orientation are positively correlated. However, they do not have the same underlying philosophy: marketing orientation can exist independently of an entrepreneurial orientation.

Table 4.4.1. - Continued

Hong Liu (1995)	UK T/E	Market orientation and firm size	Large and extra-large firms are more market oriented and also show a better performance than medium-sized firms but there is hardly any difference between large and extra-large firms.
Greenley (1995a) Greenley (1995b)	UK T/E	Market orientation, business performance and environmental moderators	Market orientation has a positive influence on performance and moderators like market turbulence technological change and customer power exhibit moderating effects on this market orientation-performance link.
Reukert (1992)	US T/E	Market orientation and long-term financial performance	A 32-item instrument was developed to investigate the relationship between market orientation and long-term financial performance.
Webster (1993)	US T/E	Relationship between marketing culture and ROI	A 34-item scale was developed to measure marketing culture and its influence on ROI (Return On Investments) in service firms.
Hart and Diamantopoulos (1993)	US T/E	Market orientation and performance	A significant positive association between market orientation and performance was found.
Caruana (1994;1995)	UK T/E	Relationship between excellence, market orientation and performance	The relationship between excellence, market orientation, the management of expectations, service reliability and business performance was studied in service firms in the UK. No strong support was found for the market orientation-performance link.
Pelham and Wilson (1996)	US T/E	Market orientation and small business performance	The impact of market orientation on small business performance was studied. A significant influence of market orientation on various (subjective) measures (small business new product development, relative product quality, growth/share and profitability) of small firm performance was found.
Dess and Robinson (1984)	US T/E	Measuring of business performance	Using subjective perceptual measures is an acceptable way of measuring organisational performance.
Caruana and Pitt (1994)	UK T/E	Measuring of business performance	Using subjective perceptual measures is an acceptable way of measuring organisational performance.
Kierman (1994)	US T	Market orientation and internal organisational learning	The primary external orientation to the market is combined with an internal focus on the facilitation and stimulation of internal learning processes.
Sinkula (1994)	US T	Market information processing and organisational learning	Argument of a close relationship between market information processing and organisational learning. Organisational learning that is directed towards markets is different from other types of organisational learning.
Glazer (1991)	US T	Value of information and knowledge in the marketing context	Information and knowledge have a high value for organisations in the marketing context, but this value depends significantly on the information intensity of the organisation. The more information intensive the organisation, the more important the role of information processing and application and thus of organisational learning.
Lusch and Laczniak (1987)	US T/E	Conditions which lead firms to adopt a "good business practice	External factors - mainly competitive intensity - are moderators of the market orientation-performance link.

CHAPTER 5. METHODOLOGY

5.1. Introduction

In this chapter the methodology of the study is addressed.

The chapter describes the research methodology, the problem statements and research hypotheses, followed by the design of the questionnaire. After this the research group is described. Also the issue of replicating a study, and the possible influence of national organisational culture, is addressed. This is followed by a description of the way the mail survey, the interviews and the data analysis were organised. Furthermore, the reliability and validity of the research procedures used are described.

5.2. Research methodology

All research starts with the following methodological questions: Why do we want to do this? How are we going to perform it? What are we going to gain from it? In other words: what is the issue and how can it be studied?

The research presented in this thesis can be described as a "postpositivist interpretative framework" (Guba and Lincoln, 1994), which indicates a mixture of quantitative and qualitative research, with the emphasis on quantitative research. This postpositivist approach was undertaken for the following reasons. The phenomenon of learning and market oriented organisations seems best studied by a survey of a large group of companies in order to derive conclusions that may be generalised to companies in general. On the other hand, in order to get to know a learning and market oriented organisation, or its opposite, a survey alone does not suffice. Open interviews with executives can go beyond the written questionnaire in order to learn about some of the motives, behaviours and other contextual issues of these companies. In this respect the remarks of Emory (1980, p.294) about personal interviewing are illustrative:

"The greatest value of this method is the depth and detail of information that can be secured. It far exceeds, in volume and quality, the information we can usually secure from telephone and mail surveys".

In management studies, quantitative research dominates. In recent years however, qualitative approaches in management studies have also been utilised, but these still form the minority. Gummeson (1991, p.1) observes:

"Qualitative methods are used only to a limited degree, however; universities and business schools often oppose their use and classify them as being second rate".

This practical approach of combining research methods is sometimes called "methodological triangulation", where quantitative and qualitative research methods are mixed (Todd, 1979).

5.3. Problems and hypotheses

Without a problem statement there is no need for research. Kerlinger (1986) defines a problem as "an interrogative sentence or statement that asks: What relation exists between two or more variables?" (p.16).

Kerlinger (1986) mentions three criteria of problem statements:

1. the problem should address a relationship between two or more variables;
2. the problem should be stated in question form;
3. the problem "should be such as to imply possibilities of empirical testing".

The thesis, now, has the following problem statements:

- What is the influence of formalisation on the learning organisation and on market orientation?
- What is the relationship between the learning organisation and market orientation?

- What is the influence of the learning organisation and of market orientation on businesses performance?
- What is the (moderating) influence of the environment on these relationships?

Kerlinger's criteria seem to apply to these problem statements: a relation between variables is expressed, the problem is stated in question form and the problem may be empirically tested by measuring instruments on the learning organisation and market orientation.

Kerlinger (1986) defines a hypothesis as "a conjectural statement of the relation between two or more variables. Hypotheses are always in declarative sentence form, and they relate, either generally or specifically, variables to variables" (p.17). Kerlinger (1986) mentions the following two criteria for hypotheses:

- Hypotheses are statements about the relationship between variables;
- Hypotheses carry clear implications for testing the stated relationships.

The research hypotheses of this study (see Section 7.2.) are as follows:

- The greater the level of formalisation, the lower the level of learning organisation and market orientation.
- The greater the level of learning organisation, the greater the level of market orientation and vice versa.
- The greater the level of learning organisation and market orientation, the greater the level of business performance.
- The greater the level of turbulence and competitive intensity, the stronger the relationship between the learning organisation and market orientation with business performance.

It seems likely that the criteria mentioned by Kerlinger (1986) apply to the hypotheses stated in Section 7.2. These hypotheses are statements about the relations between variables and they carry implications for testing the stated relations.

5.4. Design of the questionnaire

The design of the questionnaire was a combination of items from the LOPP and MARKOR instruments.

5.4.1. LOPP

As described in Section 2.11. no "hard evidence" on the statistical validity of the Learning Organisation Practices Profile (LOPP) was available, however, the "soft evidence" from O'Brien (1994) and the clear link with the theory on the learning organisation gave the researcher confidence in the soundness of the instrument. Furthermore, no other validated instrument was available at that time[1]. So it was decided to use the LOPP instrument (with O'Brien's permission)[2].

The LOPP consists of twelve scales with a totality of 60 items: *vision and strategy, executive practices, managerial practices, climate, organisational and job structure, information flow, individual and team practices, work processes, performance goals and feedback, training and education, rewards and recognition, individual and team development.*

5.4.2. MARKOR

As mentioned in Chapter 3, "MARKOR" is a well established and well validated instrument. Kohli, Jaworski and Kumar describe the validation of this instrument in their 1993 articles: one article specifically on the MARKOR instrument (Kohli, Jaworski and Kumar, 1993) and one article to report their empirical research with MARKOR (Jaworski and Kohli, 1993). Therefore MARKOR was well suited for the research purpose and it was therefore decided to use it (with the authors' permission).

---

[1] The ASTD (Van Buren and Lucadamo, 1996) published an overview of learning organisation instruments. However it remains unclear which of those instruments are validated.

[2] During the summer of 1997, the researcher contacted O'Brien for relevant developments in this respect. O'Brien answered that he was working together with John Redding to validate the LOPP and that this would take some more time. John Redding added that he expected the validation of the LOPP (and of some other learning organisation scales) no earlier than by the end of 1998.

MARKOR consists of scales on market intelligence generation, intelligence dissemination, and responsiveness. Although in the article on the validation of MARKOR (Kohli, Jaworski and Kumar, 1993), the original 32-item MARKOR scale was reduced to a 20-item scale, in the article by Jaworski and Kohli (1993) on the research results of the relationship of market orientation with business performance and of the moderating influence of environmental variables on this relationship, the original 32-item MARKOR scale was used. In order to be able to compare the results of this study with the results of Jaworski and Kohli's (1993) study, the original 32-item MARKOR scale was chosen. In this latter article, Jaworski and Kohli (1993) also developed and/or used scales to measure the antecedents, consequences and moderators of market orientation. These were *top management emphasis on market orientation and risk aversion, conflict and connectedness, formalisation and centralisation* (from Aiken and Hage, 1966, 1968), *departmentalisation* and *reward-system orientation* (antecedents), *market turbulence, competitive intensity* and *technological turbulence* (moderators) and *business performance* and *organisational commitment and esprit the corps* (consequences). This totality of scales is referred to in this thesis as the "extended MARKOR".

5.4.3. Building a questionnaire from LOPP and MARKOR components

In order to study the influence of formalisation on the learning organisation and on market orientation, the relationship between the learning organisation and market orientation with business performance and to assess the moderating influence of environmental variables on this relationship, the LOPP which measures the learning organisation and the "extended MARKOR", which measures market orientation, antecedents to market orientation, business performance and environmental variables, were taken as the starting point. Business performance was measured by subjective self-perception of the respondents. Although the questionnaire contained questions on sales growth, profit, market share and the like, it was thought that many respondents would not actually be prepared to produce this "sensitive" information, therefore these subjective (judgmental) measures were added.

The items used to measure business sales and profit performance resembled Jaworksi and Kohli's (1993) business performance items, but were not exactly the same. Jaworksi and Kohli (1993) used the following items in their "extended MARKOR" business performance scale:

- "Overall performance of the business unit last year"
- "Overall performance to major competitors last year"

The questionnaire for this study, however, used the following items:

- "Our sales growth has been better than our competitors over the last five years"
- "Our business is significantly more profitable than our competitors"

The judgmental business performance items were modified to make them more direct, to improve the precision of the questions and, with regard to sales growth, to cover a five-year instead of a one-year period. It was thought that a period of five years covered the question of sales growth better than a period of one year. It is not inconceivable that, by coincidence, a company's sales growth is better than its competitors in one year and worse in the preceding and following years. If the company has a higher sales growth than its competitors over a five-year period, its superior sales growth is more convincing. As profitability is a more complex and ambiguous phenomenon than sales growth, it was thought that it would be difficult for the respondents to oversee a five-year period. Therefore the question about superior profitability was limited to a one-year period.

The expectation that many respondents would not actually be prepared to produce this "sensitive" information proved to be true in the actual data: of the 105 completed questionnaires item 70 "Guilder Sales of our company last year" had a non-response of 13, item 71 "Market share of guilder volume of served market" of 26 and item 72 "Net profit before last year" of 48, while item 74 "Our sales growth has been better than our competitors over the last five years", had a non-response of 0, item 75 "Our

business is significantly more profitable than our competitors" of 1 and item 76 "Overall, our organisation has an excellent business performance" of 9.

Caruana and Pitt (1994, p.9) observed:

> "To measure performance it was thought impracticable to expect busy managers to collect actual performance data (...). Dess and Robinson (1984) who looked at the accuracy of such data hold that it is also of minimal use in explaining variation in performance between firms and recommend that researchers consider using subjective perceptual measures of organisation performance. Pearce, Robbins and Robinson (1987) show that such subjective evaluations are reliable means for measuring performance".

Furthermore, the scale measuring business performance was extended with two quality performance items. These items were part of the extended MARKOR, but were not originally intended to measure business performance. Instead, they were meant to measure the product quality perception of customers. These items were as follows:

- "The quality of our products and services is better than that of our major competitors"
- "Our customers are firmly convinced that we offer very good quality products and services"

The reason to extend the business performance scale with quality performance items was that some influential authors in the management field (e.g. Deming, 1982; Peters, 1989; Grönroos, 1990, Berry and Parasuraman, 1991; Parasuraman, Zeithaml and Berry, 1994) propose that the delivery of quality by organisations is an important performance indicator. The researcher supported this view and therefore did not limit measuring performance to sales and profit indicators but also included quality performance items.

Because this extended version of MARKOR consisted of 132 questions and the LOPP of 60 (a total of 192) the large number of items had to be reduced, to reach an acceptable response rate. So, both questionnaires were analysed critically and 100

questions were deleted. Appendix B. gives a detailed explanation of which items were omitted and why. As some items were added (classification items and items referring to the experiences of the respondents when filling out the questionnaire), the final total of the (mainly multiple choice) questions numbered 114. The pre-test was carried out with this 114-item questionnaire, which was further reduced to a 81-item questionnaire in the actual study. Like the LOPP the items were scored on a six-point scale, ranging from "Strongly Disagree" to "Strongly Agree". This six-point scale was the same as O'Brien's (1994) LOPP, but differed from Jaworski and Kohli's (1993) five-point scale.

The original Likert scale is a five-point scale. This five-point scale was used in MARKOR. For practical reasons, in order to use a uniform scale for both the LOPP and MARKOR items and to discourage neutral, possibly meaningless, answers a six-point scale was chosen. In the researcher's own experience, with research done in the context of consultancy assignments, many respondents tend to score in the middle position in Likert-type scales. This is also why some renowned Dutch market research firms apply four-, six or ten-point scales, instead of Likert-type scales.

Nunnally (1978) holds that this should not make a difference, while Churchill and Peter (1984) found that an increase in scale points improves the reliability of the scale. The five-point (sometimes seven-point) Likert-type scale has an "escape valve" (a non-opinion value). The six-point scale does not have this. So it is not a Likert-type scale, but it is still a scale of summated ratings, in that it measures the intensity of (dis)agreement with statements (see Section 5.9.1.).

Some items from MARKOR were reverse-scored items. Before the statistical analysis was performed, the reverse of these items was computed, after which they were indicated as 'R" (reverse-scored variable) instead of "V" (variable).

5.5. The research group

The mail survey was undertaken in the Netherlands with Dutch "exporting companies" of more than 200 employees. These companies were selected from a database of the Dutch Ministry of Economic Affairs. This is *"The Trade Directory "Holland Exports" 1995"* from the Netherlands Foreign Trade Agency of the Ministry of Economic Affairs. This Directory is distributed around the world in co-operation with the Netherlands Foreign Trade Agency of the Ministry of Economic Affairs. It is available as a book and CD-ROM version and is in use in all Dutch embassies and consulates. From this database the total of 670 companies of more than 200 employees (1995 figures) was selected.

According to the Dutch Chamber of Commerce, in the Netherlands companies with 200 employees or more are considered larger firms. The larger companies were chosen, because they are known to be the most innovative and powerful companies in the Netherlands. Most larger companies - on which the Netherlands is very much dependent for its wealth - have to cope with intense international competition in their domestic markets, thus these companies have an urge to be learning and market oriented organisations. Export companies were chosen because of the idea that companies who go international, are motivated to be or become learning and market oriented organisations. See for example the discussion in Section 3.9., where Dalgic (1994) was quoted, who proposed a relationship between international marketing and market orientation. "Going abroad" means the importance of (foreign) market intelligence/information, of the dissemination of this information across departments (marketing, manufacturing, R&D, personnel, finance etc. departments all need information to act effectively and coherently with regard to the export activities) and responsiveness to this information, thus being a learning and market oriented organisation. With regard to this responsiveness, Dalgic (1994, p.78) makes the following remark:

> "As a response to market intelligence/information, the international marketing activities of a firm are a matter of complex, strategic decisions, covering both internal strengths and weaknesses and external threats and opportunities".

Because of this small population of "target companies" (670 in 1995), it was decided to approach all the companies selected from the database who employed more than 200 people and who were known as exporters - according to the Ministry of Economic Affairs. Thus, no sampling was administered. All companies belonging to the research population were approached.

5.6. The replication issue

An issue that should be addressed in the context of this thesis is that of replication. To some extent the research described in the thesis can be characterised as *replication research*. Research done in the United States on the learning organisation and market orientation is being replicated in the Netherlands. Hubbard and Amstrong (1994, p.233) observed that:

> "Replication is held in high regard by some scientists. Other things being equal, the failure to obtain similar findings in a replication indicates the need for further work in the area. A successful replication, on the other hand, promotes confidence in the reliability of the results, and suggests the need to study whether the findings can be generalized to different populations, products, geographical areas, and so on".

However, despite the universally accepted importance of this issue, replication studies are not undertaken frequently in marketing. In a survey carried out by Hubbard and Armstrong (1994) they found that of 1120 papers sampled from three major marketing journals, none were replications. Only 1.8% of the papers were extensions and they consumed 1.1% of the journal space. They concluded that replication is a rare phenomenon in marketing and listed the following reasons for this scarcity:

a-Misinterpreting statistical significance as a measure of replicability;

b-Statistical power of replicated studies is low;

c-Information is difficult to obtain;

d-Replications are published outside the major journals;

e-Replications and extensions are of little importance;

f-Original works are not worth replicating;

g-Conducting replications is not career-enhancing.

This scarcity is regrettable, as the value of marketing and management research would much improve, if it could be shown that a theory that holds in one country also holds in another.

Berthon, Money and Pitt (1996) state that the term "replication" should be reserved for the exact copy or duplication of a study. When parameters are changed one has to speak of an "extension", which is "a duplication of a target study when one or more key parameters are altered" (p.3). As will be described in Section 5.6.2. this study is an "extension" as key parameters are altered. In this thesis, however, the term "replication" is used in a broader sense, namely to refer to the "replication issue".

This thesis describes a kind of replication or extension. Two issues are important in this respect: (1) the issue of replicating from one national culture into another and (2) the type of replication. These issues are addressed below.

5.6.1. Replicating from one national organisational culture into another

The replication or extension from research done in one country to another country focuses attention on the implication of national culture for the research process. Dutch researcher Hofstede (1980) studied national cultures in more than 50 countries, by analysing the organisational cultures of the IBM subsidiaries around the globe and by grouping the national cultures with the help of five dimensions: 1-Power Distance, 2-Individualism versus Collectivism, 3-Masculinity versus Femininity, 4-Uncertainty Avoidance and 5-Long Term versus Short Term Orientation. This fifth dimension was not included in Hofstede's original IBM studies, but was found in a study among students in 23 countries around the world, using a questionnaire designed by Chinese scholars. Long term orientation values are thrift and perseverance; short term orientation values are respect for tradition, fulfilling social obligations and saving one's face (Hofstede, 1994). Hofstede (1994, p.7) stresses the importance of national

culture when one is undertaking research in management and organisations and concludes:

> "Therefore management practices in a country are culturally dependent, and what works in one country does not necessarily work in another. However not only the managers are human and children of their culture; the management teachers, the people who wrote and still write theories and create management concepts, are also human and constrained by the cultural environment in which they grew up and which they know. Such theories cannot be applied in another country without further proof; if applicable at all, it is often only after considerable adaptation".

In terms of Hofstede, how does the Dutch national organisational culture differ from the American (US) organisational culture? Hofstede collected data for organisations in the different countries that were scored against a scale of 0 for the lowest scoring to 100 for the highest. He ranked the national organisational cultures accordingly. For the distribution of the number of points and the ranking of the American and Dutch national organisational culture by Hofstede (1994), see Table 5.6.1.

Table 5.6.1. - Scores of 12 countries on five dimensions of national culture with the Netherlands and the USA in italics (Hofstede, 1994, p.5)

Country	Power Distance Index/Rank	Individualism Index/Rank	Masculinity Index/Rank	Uncertainty avoidance Index/Ranks	Long term orientation Index/Rank
Brazil	69/14	38/26-27	49/27	76/21-22	65/6
France	68/15-16	71/10-11	43/35-36	86/10-15	no data
Germany	35/42-44	67/15	66/9-10	65/29	31/14-15
Great Britain	35/42-44	89/3	66/9-10	35/47-48	25/18-19
Hong Kong	68/15-16	25/37	57/18-19	29/49-50	96/2
India	77/10-11	48/21	56/20-21	40/45	61/7
Japan	54/33	46/22-23	95/1	92/7	80/4
The Netherlands	*38/40*	*80/4-5*	*14/51*	*53/35*	*44/10*
Sweden	31/47-48	71/10-11	5/53	29/49-50	33/12
Thailand	64/21-23	20/39-41	35/44	64/30	56/8
USA	*40/38*	*91/1*	*62/15*	*46/43*	*29/17*
Venezuela	81/5-6	12/50	73/3	76/21-22	no data

Ranks: 1 = highest, 53 = lowest (for long term orientation, 23 = lowest)

Table 5.6.1. shows the differences of some national cultures on five dimensions and from it some differences between the national cultures of the USA and the Netherlands can be drawn. The main difference is on the *masculinity* dimension (the

USA ranks number 15 and the Netherlands 51): the USA is much more masculine than the Netherlands. According to Hofstede (1994) in masculine countries men are very assertive and directive, while women are modest, caring and oriented towards mutual relationships. So there is a great deal of difference between men's and women's values. In feminine countries the men have almost the same caring, modest and relational values as the women, so the difference between their values is limited. The concepts of the learning organisation and market orientation put much emphasis on the quality of the social interaction. This means that in the Netherlands, where the organisational culture tends more to an emphasis on relationships, this might have a positive influence on the degree of learning and market oriented organisation, while in the USA, where the emphasis is more on (personal) achievement, this might exercise a negative influence on the degree of learning and market oriented organisation.

On other dimensions there is also some difference between the organisational cultures of the two countries. The first is the difference on *uncertainty avoidance* (the USA ranks 43 and the Netherlands 35), which is the tolerance for uncertainty and ambiguity, the extent to which organisation members feel (un)comfortable in unstructured situations. The Netherlands has a stronger tendency to avoid uncertainty than the USA. This might imply that with regard to this aspect the organisational culture in the USA favours market orientation and possibly the learning organisation more than in the Netherlands. According to Jaworski and Kohli (1993) risk avoidance might have a negative influence on market orientation (the effect on the learning organisation is not proposed in the literature, but it seems likely that organisations that dare to take risks learn more than organisations that avoid risks).

Also on *long term orientation* the two countries differ (the USA ranks 17 and the Netherlands 10). (Hofstede, 1994, p.5):

> "Values associated with long term orientation are thrift and perseverance; values associated with short term orientation are respect for tradition, fulfilling social obligations, and protecting one's "face" ".

Thus in this respect the organisational culture of the Netherlands is more favourable to market orientation (and possibly to the learning organisation) than the American one, as market orientation demands by definition a long term orientation (Kohli and Jaworski, 1990).

Another difference is on the dimension *individualism* - the USA is more individualistic (ranks 1) than the Netherlands (ranks 4-5). (Hofstede, 1994, p.2):

> "On the individualist side, we find societies in which the ties between individuals are loose: everyone is to look after him/herself and his/her family. On the collectivist side, we find societies in which people from birth onwards are integrated into strong, cohesive in-groups, often extended families (...)".

The ranking in Table 5.6.1. means that in the USA the ties between individuals are very loose and looser than in the Netherlands. But in both countries, the role of the family and the collective is not a very dominant one. Individualism might have a negative influence on the learning organisation and market orientation (leads to a lower emphasis on social relations).

Finally, both countries have a small *power distance* (the USA ranks 38 and the Netherlands 40, while a 48th rank is the maximum). This is the extent to which the less powerful members of organisations expect and accept that power is distributed unequally.

To conclude: the (partial) replication or extension of the "extended MARKOR" and LOPP from the American national organisational culture to the Dutch national organisational culture does not encounter too many cultural differences. The main difference is between the emphasis on masculinity in the USA and on femininity in the Netherlands. It would be feasible, because of the emphasis learning and market oriented organisations put on human co-operation and information dissemination, that a feminine, relationship oriented organisational culture would have a positive effect on learning and on information processing capability. However, on all organisational cultural dimensions some differences were found. In the Netherlands the learning organisation and market orientation seem to be favoured to a small degree by a lower

level of individualism and of power distance and by a higher level of long term orientation than the USA. The USA seems to be favoured by a lower degree of uncertainty avoidance than the Netherlands. These organisational cultural differences might influence the results when replicating American research in the Netherlands. If these preliminary ideas do have some relevance, then in the Netherlands there would be a somewhat more positive organisational climate for learning and market oriented organisations than in the USA.

5.6.2. Type of replication

As described above, the questionnaires that O'Brien (1994) developed to assess the Learning Organisation (LOPP) and Kohli, Jaworski and Kumar (1993) and Jaworski and Kohli (1993) to measure Market Orientation ("extended MARKOR") were used to perform the research in the Netherlands. Both questionnaires were shortened, integrated with each other and some items were added.

Berthon, Money and Pitt (1996) think that it is useful to characterise research in a continuum from pure replicative studies to pure generative studies (where entirely new parameters are created). They consider this continuum in terms of *research space* and *degrees of freedom*. Research space is defined by three degrees of freedom: the research phenomena or problem, the method and the context.

5.6.2.1. Research strategy with zero degrees of freedom

In this strategy all dimensions remain constant: the same theoretical framework is employed, the same methodology and the same phenomenological context are used.

5.6.2.2. Research strategy with three degrees of freedom

At the other (generative) extreme, new theory, method and context are employed.

5.6.2.3. Research strategy with one degree of freedom

In this strategy:

- an existing theory and method are applied in another context, or
- an existing theory and context are linked through a different research method, or
- an existing method and context are used, but a different theory is employed.

5.6.2.4. Research strategy with two degrees of freedom

In this strategy:

- a new method and context are used, but with an existing theory, or
- a new context and theory are applied, but an existing method is utilised, or
- a new theory and method are applied to an existing context.

The research project described in this thesis could be characterised as a research strategy with two degrees of freedom, where the theory or research phenomena on learning organisations and market orientation underpinning LOPP and "extended MARKOR" remained constant, but where the method was slightly changed (the questionnaires LOPP and "extended MARKOR" were integrated, shortened and some items were added) and the context changed from the USA to the Netherlands[3].

Berthon, Money and Pitt (1996) state that the greater the number of degrees of freedom, the greater the risk of the research outcome. They argue that zero to one degree of freedom suits master level research, one to two degree freedom strategies doctorate research and two to three degree of freedom strategies post doctorate research.

---

[3] Berthon, Money and Pitt (1996) mention a comparable example to illustrate this research strategy, namely the work of Pitt, Caruana and Berthon (1996) where the theory on market orientation, MARKOR and business performance are extended to Europe.

In terms of degree of freedom strategies, the doctorate research project described here thus seems to entail an acceptable amount of degree of freedom strategies. The risk is limited and the research strategy chosen makes it possible to adapt theory and methods that have been proven elsewhere to another context in order to investigate the important issue of the learning organisation and market orientation further.

5.7. Mail survey

The study was carried out by a mail survey. Before the actual study a pre-test was carried out.

The survey was done by self-administered questionnaires (Appendices A. and B.). As organisational surveys generally suffer a low and decreasing response, some methods were used to increase the response rate (see for example Tomaskovic-Devey, Leiter and Thompson (1994) for an overview).

The questionnaire was accompanied by a letter (Appendices C. and D.) and a stamped, self-addressed envelope for returning the questionnaire. After that two follow-up mailings were administered: the first after four weeks with a reminder letter and another after seven weeks with a new questionnaire, translated into Dutch. The follow-up was done of course to increase the response rate. O McKee (1992, p.179) states in an article:

> "A meta-analysis of mail survey response methods found evidence that the following methods are effective: pre-notification by letter, follow-up by postcard, stamped (versus metered) outgoing mail, stamped (versus business) reply return postage and university sponsorship".

Some of these methods have been applied in the research. The follow-up by letter (instead of the postcard mentioned by O McKee), the use of stamped return-envelopes and sending the questionnaire a second time (in Dutch) with a reminder. The same counts for the introduction letter with the questionnaire, which showed that the research was supported by Henley Management College.

Another measure that was taken to improve the response rate took the form of an incentive to respondents. The questionnaire and the introduction letter were accompanied by a coupon (Appendix E.). If the respondents filled out their name on this coupon they would receive a profile of their company in terms of learning organisation, market orientation, business performance etc. Furthermore, the respondents were invited for a special workshop, organised by Henley Nederland, where the research results (and those from fellow researchers) would be presented. A further advantage of this method was that those who filled out the coupon identified themselves and thus could be excluded from follow-up mailings and could be approached for the follow-up interviews. On this coupon, it was asked explicitly if they were prepared to participate with these interviews. Once identified it would always be possible to telephone the "refusers" and ask them for their co-operation. Overall, ninety-two filled out the coupon and forty-two respondents replied that they were prepared to co-operate with the interview. Only ten responses were anonymous, which is 9.5%. The incentive was not performed in the pre-test (Section 5.7.1.). Of the 9 responses of the pre-test 3 were anonymous (33.3%). When the 9 respondents are deducted from the total population from 105, only 7 from the 96 respondents were anonymous (7.2%). So it seems that the incentive reduced the amount of anonymous responses significantly.

5.7.1. Pre-test

Prior to the actual study, a pre-test was undertaken on a sample of 70 exporting companies, belonging to the target group of 670. Because the LOPP and MARKOR are both accepted instruments to study the learning organisation and market orientation, a pilot study was not considered to be necessary. The pre-test was performed to test the questionnaire in practice and thus to be able to improve the design and the application of the questionnaire. The first 70 companies on the list (in alphabetical order) were selected. The result was a response of 9 (as one questionnaire was returned and two respondents explicitly did not want to co-operate, a response rate of approximately 13 percent was calculated). See Appendix I., Tables I.1. – I.7.

These tables show that most respondents (seven out of nine) had no problems with the length of the questionnaire (Table I.1.) and with the time needed to fill it out (Table I.2.). The mean was 18.75 minutes and the median 15 minutes, although two respondents needed 30 minutes (while two others needed only 10 minutes) (Tables I.3.). This result made the researcher look critically at the length of the questionnaire and made him try to limit the number of items further. The questions made sense (Table I.4.) and were easy to understand (Table I.5.). All respondents agreed on this. No respondent thought the English language a problem (Table I.6.), although two preferred a Dutch version nonetheless (Table I.7.). This information was taken into consideration with the decision to send out a Dutch version of the questionnaire in the follow-up mailing (see Section 6.6.). Three mailings, namely, were sent out: the first mailing with the English version of the questionnaire, a second mailing to the non-respondents with a reminder and a third mailing with a Dutch version of the questionnaire to those companies who still had not responded. Although the pre-test did not highlight the English version of the questionnaire as a problem, one has to bear in mind that, whilst *respondents* reported no language problems, *non-respondents* might very well have been experienced difficulties with the English language.

5.7.2. Actual study

Because of the positive experience with the pre-test, it was decided to keep the final questionnaire largely unchanged and to send it out to the rest of the 670 companies (see Appendix I., Table I.8. for the frequency distribution of the pre-test questionnaire respondents in relation to the final questionnaire respondents). The only change made after a critical scrutiny of the questionnaire was a further reduction in the number of items to 81, to boost the response (Appendix B.). The pre-test questionnaires were included in the sample, as all questions in the final questionnaire overlapped with the pre-test questionnaire and because the pre-test respondents were not told that their questionnaire was a pre-test questionnaire.

This reduction in the number of items was made because questionnaire length has a significant impact on the response rate, as demonstrated in a group of managers (Ford

et al, 1992) and in other groups (Bean and Roszkowski, 1995). Put differently, a large *negative correlation* between the number of questions (and the degree of perceived difficulty) and the level of non-response can be expected. Childers and Ferrell (1979) have found that response rate is related to questionnaire size, while Kanuk and Berenson (1975) discovered that the response rate increases with a decrease in the questionnaire length.

When the pre-test and final questionnaires were compared, it appeared that a very limited bias on the variable competitive intensity showed up (see Appendix I., Table I. 9.). Table I.9. shows the Analysis of Variance (ANOVA) of the type of respondent as a factor. "Analysis of Variance" or ANOVA, is a method of testing the null hypothesis that several group means are equal in the population, by comparing the sample variance estimated from the group means to that estimated within the groups. Table I.9. shows that no statistically significant differences at the 1% level were found when the pre-test and final questionnaire groups of respondents were compared, the variable competitive intensity (significant at 1.6%) was however close to the significance level of 1% and significant at the 5% level. So it seems safe to state that the difference between these groups is not significant (at the 1% level of significance), but with some caution with respect to competitive intensity. This conclusion must be interpreted cautiously, however, as the sample size of the pre-test was small.

After one month a reminder was sent and, two months after the initial mailing, all non-respondents received a final reminder with a Dutch version of the questionnaire. This was done by the "translation-back translation method". As Hofstede and Bond (1988) show that using the translation-back-translation method in cross-cultural research is feasible and effective. The idea behind this translation was that, as the response at this time was still low, some non-response might perhaps be caused by language problems.

35 organisations had moved, changed their addresses or refused to co-operate, thus reducing the sample frame to 635. 105 companies from all industrial sectors returned a completed and usable questionnaire. This brought the response rate to almost 17

percent. Although this response rate was disappointing to the researcher, the Dutch Chamber of Commerce, which supports companies and consultants who survey organisations, convinced him that this response rate was rather good[4]. Of the total number of respondents 63 (60%) filled out an English questionnaire and 42 (40%) a Dutch (see Appendix I., Table I.10.).

See Appendix I. Table I.11. for the Analysis of Variance (ANOVA) of English as factor, which shows that no statistically significant differences at the 1% level were found when the English and non-English groups of respondents were compared, except for the variable competitive intensity (significant at 0.06%). So it seems safe to state that the difference between these groups is not significant, except for competitive intensity. Although the ANOVA comparison for the pre-test and final questionnaire also drew attention to this variable (significant at the 5% level but not at the 1% level) in the case of the English and Dutch questionnaire, it could mean that the interpretation of the two underlying items V54 and V55 is different in English and in Dutch.

These items were in English:

54) Competition in our industry is cut-throat.
55) Price competition is a hallmark of our industry

And in Dutch:

54) De concurrentie binnen onze branche/bedrijfstak is moordend.
55) Prijsconcurrentie is een kenmerk van onze branche/bedrijfstak.

Although these sentences were translated very precisely, the possibility that the respondents interpreted the English and Dutch differently cannot be excluded.

---

[4] One fellow Henley Management College Doctorate associate, Maarten Leeuw, experienced an even lower response rate (10%) in his research study in the Netherlands.

The questionnaire was mailed to export managers[5] in all the companies across all industrial sectors in the target group. The target group consisted of whole companies. The SBU (Strategic Business Unit) level used by Jaworski and Kohli (1993) did not seem suitable[6] for the Netherlands where most companies are rather small. As stated before, these 670 companies were taken from a database of the Dutch Ministry of Economic Affairs. The introductory letter addressed these managers in person (Appendix D.).

Table 5.7.1. shows that the response consisted of broadly three groups. Most companies did not employ "pure" *Export Managers*. Most respondents actually had job titles such as *Marketing Manager, Controller, Personnel Director, Sales Director, CEO, President* and the like (see Appendix I. Table I.12.). So it seems likely that the job title *Export Manager* is used by most companies as a kind of second job title for reasons of external international representation.

Table 5.7.1. - The job titles of the respondents

Management Category	Frequency	Percentage
CEO, President, Director	22	21%
Manager	61	58%
Export Manager	22	21%
Total	105	100%

The responding companies represented all significant industrial sectors in the Netherlands. Manufacturing companies were in the majority (67.5%) followed by services (21%), while the share of agricultural firms in the total response (1.9%) was low (see Table 5.7.2.).

---

[5] As registered in the *"The Trade Directory 'Holland Exports' 1995"*.

[6] Greenley (1995a,1995b) also studied whole companies.

Table 5.7.2. - Industrial classification frequency of the sample in relation to the total population

Industrial Sector	Count	%	Population Count	Population %	Response as part of Population
Agriculture	2	1.9%	41	6.3%	4.9%
Manufacturing	71	67.6%	420	62.6%	16.9%
Wholesale/Retail	6	5.7%	63	9.4%	9.5%
Finance	4	3.8%	25	3.7%	16.0%
Services	22	21.0%	121	18.0%	18.0%
Total	105	100%	670	100%	15.7%

Table 5.7.3. shows that many companies who participated in the research have a small (<25%) to medium (25-50%) market share. Only two companies have a large (>50%) market share. Note in Table 5.7.3. that "small", "medium" and "large" apply to the size of the market share of the companies and not to the size of the companies.

Table 5.7.3. - Market share of the companies who participated in the survey

	Market Share	
	Count	%
Small	41	51.9%
Medium	36	45.6%
Large	2	2.5%

Table 5.7.4. shows where the companies of the response group export their products and services to. See Appendix I., Tables I.13., for an overview of the export countries. Although all companies were registered in *"The Trade Directory "Holland Exports" 1995"* as export companies, nine companies reported no export markets. This may be due to the questionnaire item (number 81) which stated: "Which country represents the major market for your products and services?". The adjective *major* might have stimulated respondents to fill out the answer "The Netherlands only", because that is where their major markets were, despite the fact that perhaps they did export part of their products and services. Most companies participating in the research were serious exporters, as shown by Table 5.7.4. More than 50% of these companies export to four or more countries. However, as the research was not directed at the question of

(successful) export marketing policies, the questionnaire did not ask about their mode of entry (indirect or direct export, licensing, joint ventures and direct investment), about the export problems these companies experience (Kotler, 1994) or about the success of their export activities (Dalgic, 1994), thus no information was gathered about these topics.

Table 5.7.4. - Frequencies of the export countries in the sample

	Number of export Countries	
	Count	%
no exports	9	8.6%
1 export country	19	18.1%
2 export countries	13	12.4%
3 export countries	10	9.5%
4 or more export countries	54	51.4%

5.8. Interviews

The mail survey was followed up by interviews with twenty of the one-hundred-and-five executives who had filled out and returned the questionnaire. Kerlinger (1986) defines an interview as "a face-to-face interpersonal role situation in which one person, the interviewer, asks a person being interviewed, the respondent, questions designed to obtain answers pertinent to the research problem." (p.441).

The interviews were done in an open, *unstructured* way. Babbie (1991, p.293):

"An unstructured interview is an interaction between an interviewer and a respondent in which the interviewer has a general plan of inquiry but not a specific set of questions that must be asked in particular words and in particular order. An unstructured interview is essentially a conversation in which the interviewer establishes a general direction for the conversation and pursues specific topics raised by the respondent. Ideally the respondent does most of the talking".

To limit the bias levels a single interviewer (the researcher) conducted all interviews. This ensured consistency of asking, explaining and recording. This single interviewer may have introduced uniform and systematic bias. It was felt however, that this was preferable to a bias resulting from more interviewers (Churchill, 1995). The interviews were conducted as follows: a short introduction about the aims of the interview, a summary of the general results of the survey and a presentation of the information comparing the interviewee's company with the other companies surveyed on a particular variable. The researcher asked further questions about their explanations of the position of their company in relation to other companies to encourage the interviewee to tell more and to go into more detail, in order to grasp what was behind the interviewee's answer. In fact the interviewer said very little. Approximately 80-90% of the interview time was used by the interviewee.

Emory (1980, p.294) mentions three requirements for interview success:

"(1) accessibility of the needed information to the respondents, (2) understanding by the respondents of their roles, and (3) motivation of the respondents to accept such a role and to fulfill its requirements".

As far as the question of access to relevant information was concerned and how well respondents understood their roles, this was not judged a problem. The person who was interviewed was the same person who filled out the questionnaire and because of his or her executive position, it was more or less guaranteed that this person had access to the required information and that he/she would understand his/her role. Furthermore, prior to the interview, he or she received a letter stating the aims and the content of the interview and the researcher spoke to him or her by telephone to explain

the issues related to this appointment, so the interviewee had enough time and ample scope to prepare him or herself in advance.

Regarding the motivation of the respondents, a distinction can be made between *extrinsic* and *intrinsic* motivation. Emory (1980, pp.295-296) observes:

> "First there is *extrinsic* motivation, described as the desire to bring about a change or take an action that they consider desirable (...). Motivation of the *intrinsic* type depends much more on the personal relationship between the interviewer and the respondents. The interview is a unique social situation and how the parties perceive each other has much to do with the interaction that takes place".

The interviews were aimed at a better understanding of the companies' properties along learning organisation and market orientation dimensions. This appeared to be instructive for the interviewees who had often struggled with the question of how to improve performance, how to survive amidst harsh competition, and so forth. So the extrinsic motivation was there. A positive interaction with the interviewee and encouraging him or her in the role of informant were among the researcher's explicit objectives in performing the interviews. Furthermore, he presented himself as a researcher and an experienced management consultant who advises organisations on strategic, personnel and managerial issues. This profile seemed to reduce the distance between the interviewer and interviewee. Consequently most interviewees appeared to be contented with the atmosphere and interaction during the interviews, suggesting they were intrinsically motivated. During this interview the respondent would be presented with the survey results relevant to his or her company (see Figure 5.8.1.).

In most instances marketing, strategy, finance or production directors were interviewed. In a few cases the CEO was interviewed. The interviews took one to two hours, were conducted by the researcher himself and were recorded on tape. The researcher also took some notes. The tapes and interview notes were used to make a written summary of the interviews.

The interview started with a presentation and discussion of the survey results in general. Then a chart summarising one of the six constructs of the study (formalisation, learning organisation, market orientation, business performance, turbulence or competitive intensity) by individual case was shown to the interviewee. See Figure 5.8.1. for the chart summarising the construct learning organisation.

Figure 5.8.1. - Chart summarising the construct learning organisation by individual case
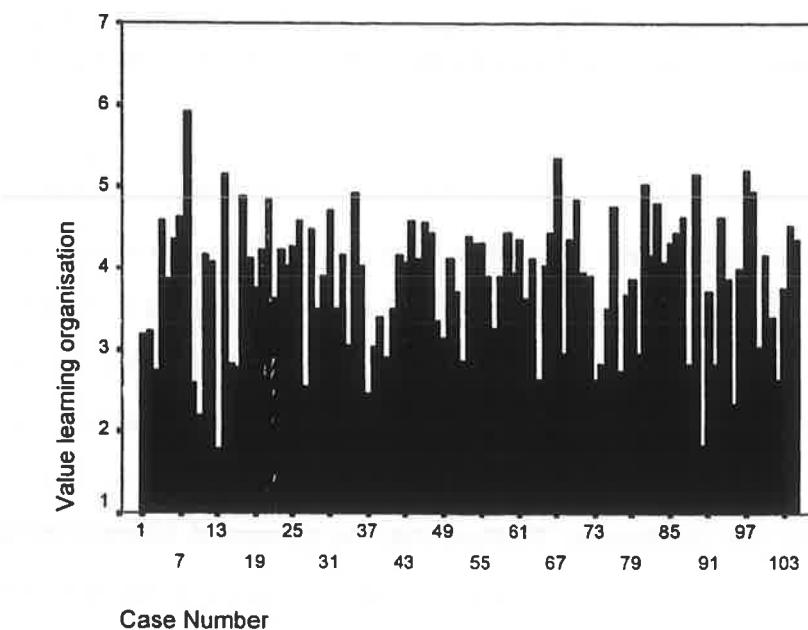
The chart depicted by Figure 5.8.1. gives the score of the 105 companies who participated in the research on the construct learning organisation. On the chart shown to the interviewee, the respective company's case number was highlighted, in order to compare his company with the other participating companies, without the researcher having to reveal their actual identity. So, the interviewee could see that his company scored, for example, 5.36 on learning organisation. After this the chart depicted in Figure 5.8.2. was shown, representing the cumulative number of cases as a percentage of the total number of cases, of the construct learning organisation.

Figure 5.8.2. – Chart summarising categories of the construct learning organisation

learning organisation
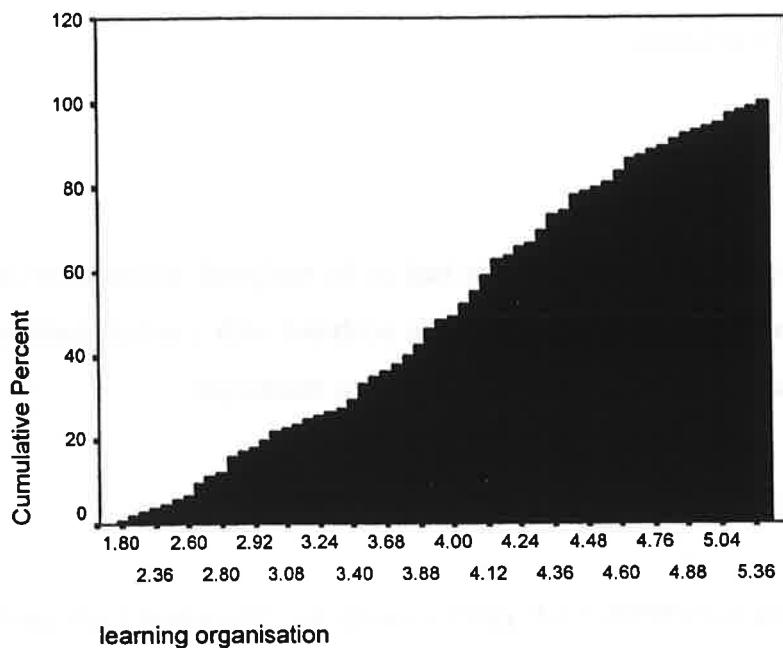
This chart shows that 5.36 is at the top of the scores. Then, the interviewee was asked if he recognised and accepted these research results and how he would explain them. In this way all six constructs were discussed with the interviewee, comparing the scores of the particular company with the other companies that participated in the research and eliciting the meaning the interviewee attached to these scores.

What was surprising about the interviews was that many companies were trying to apply the concepts of the learning organisation and market orientation to some extent. Although there is a lot written about the learning organisation and market orientation in the management literature, the researcher had expected that because of the sober, Calvinistic Dutch culture many managers would wait until the storm was over and then see what these concepts are worth. It was unsurprising that some of these companies were not very successful in implementing these concepts. This is understandable, of course, as the implementation of a learning and market oriented organisation is not done overnight. These concepts are very complex in nature and demand a lot of persistence by management to apply them successfully. The researcher was also surprised about the low thresholds of the companies. It was not

very difficult to make an appointment and most interviewees were very open and took the time for the interview. Because the response rate of the questionnaire research was rather low (17%) it was expected that making appointments for time-consuming interviews would be more difficult.

5.9. Data analysis

As described above, two kinds of research data had to be analysed: quantitative and qualitative research data. The quantitative data were analysed with a set of statistical tools; the qualitative data by interpretation of the interview transcripts.

5.9.1. Statistical analysis

For the statistical analysis both SPSS 7.5.1. (SPSS stands for "Statistical Package for the Social Sciences") and AMOS 3.6. (AMOS stands for "Analysis Of Moment Structures") were used. From a statistical perspective, the decision whether to accept or reject the research hypotheses is based on a sample of observations taken from the population of interest and the sample values are then compared with what was hypothesised about the population. Emory (1980, p.406):

> "Since any sample we draw will almost surely vary somewhat from its population, we must judge whether these differences are statistically significant or insignificant".

Two types of hypotheses can be formulated, the null (H_0) and the alternative hypothesis (H_A or H_1). The alternative hypothesis is developed by the researcher. Emory (1980, p.407):

> "In the sampling-theory approach to hypothesis testing we develop the null hypothesis (H_0) for testing statistical significance. The null hypothesis is a statement that no difference exists between the parameter and the statistic being compared to it. Any observed difference found, according to this hypothesis, is due to random sampling fluctuations only. The null hypothesis

is expressly formulated for testing for possible rejection. A companion, the alternative hypothesis (H_A), is the logical opposite of the null and is usually the operational statement of the researcher's regular hypothesis".

The researcher tries to reject H_0 in order to accept H_A (or H_1). Siegel (1956, p.8):

> "Stated differently, our procedure is to reject H_0 in favour of H_1, if a statistical test yields a value whose associated probability of occurrence under H_0 is equal to or less than some small probability symbolised as α. That small probability is called the level of significance. Common values of α are .05 and .01"

In the social and management sciences, however, nowadays it has been accepted in some situations - for practical reasons - to use higher levels of significance like .10 (Kerlinger, 1986; Hair, Anderson, Thatham and Black, 1992; Churchill, 1995).

The rejection of the null hypothesis when it should not have been rejected, is called the *Type 1 error*. The probability associated with this type 1 error is the significance level which is usually designated by α (alpha). Another error, the *Type 2 error* (β or beta) which refers to the acceptance of H_0, when it is false, also needs consideration.

In choosing a statistical test, the *power* of the test is important. The power is defined "as the probability of rejecting H_0 when it is in fact false" (Siegel, 1956, p.10), that is the power equals $1 - \beta$. In general the more valid assumptions underlying a statistical test the more powerful it is. There are two types of tests: *parametric* and *non-parametric* tests. Parametric tests assume that:

1. The observations are independent (Siegel, 1956, p.19):

> "That is, the selection of any one case from the population for inclusion in the sample must not bias the chances of any other case for inclusion, and the score which is assigned to any case must not bias the score which is assigned to any other case".

2. They are drawn from a normally distributed population.

3. These populations have the same variance.

4. The variables involved are measured on at least an interval scale.

5. The means of the populations are linear combinations of effects due to columns and or rows. "That is, the effects must be additive" (p.19).

Non-parametric tests are not built on such extensive assumptions.

In this study it was thought that the assumptions for parametric tests were fulfilled, including the assumption of normality of the population distribution and of variables on an interval scale, after checks had been made.

The assumption of the interval scale was considered to be met by the use of the method of summated ratings, that allows an expression of intensity of feeling (feeling of (dis)agreement) (Churchill, 1979,1995). Churchill (1995, p.467):

> "The basic format of the scale for the summated ratings method is the same in both construction and use. Subjects are asked to indicate their degree of agreement or disagreement with each and every statement in a series by checking the appropriate cell".

Another aspect of statistical analysis when using the questionnaire type is construct validation and reliability analysis. Traditional techniques are factor analysis and reliability analysis (computing Cronbach Alpha). To test and elaborate on the learning organisation and market orientation constructs a factor analysis was performed. Factor analysis attempts to identify underlying variables, or factors, that explain the pattern of correlations within a set of observed variables. Factor analysis is often used in data reduction, by identifying a small number of factors which explain most of the variance observed in a much larger number of manifest variables. Churchill (1995, p.963) observes:

Amos reads its model specifications only in the form of equations or path diagrams. Even complex models can be drawn out as path diagrams, and at the press of a button (literally) Amos goes ahead and calculates the estimates. The graphics are always in publication quality.

3. By the same token, and in contrast to LISREL, Amos does not support model specifications in matrix notation.

4. Mean models, and multi-group models, can be specified with either program. However, it can be done very easily with Amos.

5. Similarly, bootstrapping and Monte Carlo simulations are very easily set up in Amos, and there are sophisticated output options. For instance, the following three commands will cause Amos to produce 1000 bootstrap replications of the current structural model and compute 95% confidence intervals with bias correction:

$bootstrap=1000 ! 1000 bootstrap replications

$seed=123489 ! pick some seed value for the random number generator

$confidencebc=95 ! compute bias-corrected confidence intervals

6. Analysis of missing data is by full information maximum likelihood in Amos.

The full-information method used by Amos are more efficient in the missing-at-random case. If missingness is not at random, Amos' estimates are generally less biased than those produced by ad-hoc methods as pairwise or listwise deletion.

7. LISREL 8 excels in ordinal data modeling via polychoric/serial correlations. However, there has been some debate about the asymptotic covariance matrices computed by Prelis 2. Methods for ordinal-categorical data are still subject of ongoing research. While it was clear from early on that the polychoric approach can remove, or largely reduce, bias due to discrete measurement, the asymptotically distribution-free estimation employed by LISREL and EQS is limited to a maximum of 25 observed variables and appears to require formidable sample sizes of at least 2,000-5,000 observations per group.

8. Lisrel also features instrumental variables (IV) and two-stage least-squares (TSLS) as estimation methods, although in non-standard implementations. Amos does not provide any IV or TSLS estimation methods.

9. Lisrel 8 allows general polynomial parameter constraints.

5.9.2. Analysis of the qualitative data

The interviews were written down in transcripts by using the hand-written notes of the researcher and the cassette tapes. After this the "raw material" was interpreted and excerpts from the transcripts were classified along the core research variables (formalisation, learning organisation, market orientation, business performance, turbulence and competitive intensity). For example, if the interviewee said that his company stimulates managers to interact intensively with clients, this was classified ("filed") under market orientation. If his company was experiencing increasing

competition from some important competitors, then this was filed under competitive intensity, and so on. In this way themes "emerged" like the shifting process from a production to market orientation, the importance of HRM policies, quality and environmental management and the like. Also in this way the different "Mintzberg (1979) types" of companies (machine bureaucracies, professional bureaucracies, safety bureaucracies and adhocracies) were "discovered", which will be described in Section 10.4. Answers were found to questions such as why companies were or were not a learning organisation or how certain company characteristics (e.g. a flat hierarchical structure or a non-bureaucratic culture) related to environmental characteristics (e.g. a complex or dynamic environment). These themes were written down and the material was read again and again, and new themes were written down. In this manner the raw material was transformed into information that deepened the understanding of the quantitative findings on the research questions. In this way a typology of the interviewed companies was developed and also some notion or feeling of what it means to be a learning or market-oriented organisation emerged. For example that the development of products is mainly done by regular workers (learning) or that seminars, round table conferences and panel discussions for clients are organised to communicate and learn from them (market oriented).

The qualitative research was done after the questionnaire research to contribute to the validation of the quantitative empirical findings and to illustrate these with examples from the participants. For this kind of qualitative analysis, no structural procedures are available. The researcher must rely on his or her creativity and persistence. Bogdan and Taylor (1975, p.126). illustrate this by a quotation from C. Wright Mills in his conclusion to the "Sociological Imagination":

> "Be a good craftsman: Avoid a rigid set of procedures. Above all seek to develop and to use the sociological imagination. Avoid fetishism of method and technique. Urge the rehabilitation of the intellectual craftsman, and try to become a craftsman yourself. Let every man be his own methodologist...".

In this kind of research the creativity of the researcher still prevails, even though computer software like NUD*IST has become available (Richards and Richards,

1994). This software can help the researcher to organise, file and perhaps even analyse data, but apart from progress in speed and efficiency it offers little more than the old pen, pair of scissors and (physical) database.

5.10. Reliability and validity

An important issue in social research is the reliability and validity of how the data are gathered and measured. Babbie (1991, p.129) observes:

> "In the abstract *reliability* is a matter of whether a particular technique, applied repeatedly to the same object, would yield the same result each time".

For example if MARKOR was applied over and over again to the same organisation (for example by different researchers), would the research results be the same each time?

Validity on the other hand refers to the extent to which an empirical measure adequately reflects the real meaning of the concept under consideration (Babbie, 1991). Babbie (1991) distinguishes four types of validity: face validity, criterion-related validity, construct validity and content validity.

Face validity means that a certain measure is associated with a meaning that on the whole makes sense to us and is in accordance with our common agreements and our individual mental images about this measure. For example, a measure of how many words somebody recognises in a certain language would be for most of us a sound measure of this person's capability in that language.

Criterion-related or predictive validity means that a certain measure, such as intelligence predicts another variable, for example someone's career.

Construct validity says something about the logical relationship between variables. For example verbal and numerical ability could both be a measure of intelligence.

Content validity refers to the degree to which a measure covers the range of meanings included within the concept. For example a test of somebody's mathematical ability cannot be limited to addition alone but should also cover subtraction, multiplication, division and so forth.

5.11. Conclusions

This study was done from a postpositivist methodological stance, which means the use of mainly quantitative research (survey) methods supplemented by qualitative research methods (open, unstructured interviews). After the research problem and hypotheses were defined, a self-administered questionnaire was designed combining the Learning Organisation Practices Profile (LOPP) and an extended version of MARKOR, which was mailed to the selected respondents (Jaworski and Kohli, 1993). In addition, twenty open, unstructured interviews were done. The research group consisted of larger Dutch organisations that develop and perform export activities.

The issue of replication of a study from one culture to the other was addressed in terms of Hofstede (1994). It was concluded that the replication or extension of the "extended MARKOR" and LOPP from the American national organisational culture to the Dutch national organisational culture met some cultural differences. In the Netherlands the learning organisation and market orientation seem to be favoured by a lower degree of masculinity, individualism and of power distance and by a higher degree of long term orientation than the USA. The USA seems to be favoured by a lower degree of uncertainty avoidance than the Netherlands. These organisational cultural differences might influence the results when replicating American research in the Netherlands. If these preliminary ideas do have some relevance, then in the Netherlands there would be a somewhat more positive organisational climate for learning and market oriented organisations than in the USA.

Furthermore - in terms of replication and extension - the research project described in this thesis could be characterised as a research strategy with two degrees of freedom, where the theory on learning organisations and market orientation underpinning LOPP

109

and "extended MARKOR" remained constant, but where the method was slightly changed (the questionnaires LOPP and "extended MARKOR" were integrated, shortened and some items were added) and the context changed from the USA to the Netherlands. It was concluded that this was acceptable. The risk was limited and the research strategy chosen made it possible to adapt theory and methods that have been proven elsewhere to another context in order to investigate further the important issue of the learning organisation and market orientation.

After a pre-test, a mail survey was done with a response of 17%. After that twenty open, unstructured (follow-up) interviews were conducted to gain a deeper understanding of the characteristics of (non-)learning and market oriented organisations. These research activities yielded dependable and interesting results.

The data generated by the questionnaire were analysed by different statistical methods and the interview data were analysed in a qualitative manner, consistent with the open and qualitative way the interviews were done themselves. Questions about the reliability and validity of the research were also addressed.

Thus, after considering the research design, research methods and the relevant questions relating to the soundness of this research, it seems safe to conclude that the research described in this thesis meets acceptable standards.

CHAPTER 6. FOREIGN EXPORT AS A MARKETING POLICY AND THE CHARACTERISTICS OF THE DUTCH EXPORT SECTOR

6.1. Introduction

Because this study was directed at Dutch export companies, the function of exports in the marketing policy of companies (like those who participated in the research) and the main characteristics of the Dutch export sector are described in this chapter.

6.2. Foreign export as a marketing policy

This section will elaborate on export as a possible part of an organisation's marketing policy.

Producing, selling and marketing on an international scale are becoming more important with the emergence of an interdependent global economy. Philips, Doole and Lowe (1994, p.8) observes:

> "The pressures of the international environment are now so great and the bases of competition within many markets are changing so fundamentally that the opportunities to survive with a purely domestic strategy are becoming limited to small and medium-sized companies in local niche markets. Because of this, many companies in both product and service markets are having to develop an international marketing orientation in order to survive".

Philips, Doole and Lowe (1994) describe how, as the world moves towards the year 2000, we are witnessing the emergence of an interdependent global economy, characterised by faster communication, transportation and financial flows, which are creating new marketing opportunities and challenges. Kotler (1994) observes that the 1990s mark the first decade when domestic (US) companies have had to start to think globally.

All companies who want to export must address fundamental questions. (Kotler, 1994, pp.409-410):

> "What market presence should we try to achieve in our country, on our continent, and globally? Who will our competitors be and what are their strategies and resources? Where shall we produce or source our product? What strategic alliances should we form with other firms?"

Douglas and Graig (1995) observe that the articulation of an international marketing strategy must begin with the understanding of the many forces that continually shape and change the context in which international strategies are played out. The most important environmental influences on international marketing strategy are, according to Douglas and Graig (1995), economic, technological, political and sociocultural.

Economic forces play an important role in determining the company's strategic direction, the cost and availability of resources, the capital intensity of operations and the possibilities of economies of scale. *Technological forces* apply to the level of technological innovation, the development of new production techniques, advances in communication facilities etc.

Political forces can either encourage or hamper international business. Douglas and Graig (1995, p.15):

> "Government policy, for example, can foster the growth of international trade and market integration by removing barriers to trade and establishing linkages in the market infrastructure. Alternatively, government policy can be designed to protect national competitors and national markets through erecting barriers to international competitors and establishing industrial policies favoring local companies. Similarly, political instability or insurgence will dampen economic growth and stifle technological progress".

Sociocultural forces influence local consumers' tastes, life-styles and consumption patterns. The rapid development of international communication systems contribute to international life-styles, although increased ethnic awareness results in greater market fragmentation at the same time.

Kotler (1994) mentions the following possible problems companies can encounter:

1. *Foreign Indebtedness*. Many countries have accumulated huge foreign debts, which destabilise the economy and thus the financial dependability of business partners;

2. *Unstable Governments*. High indebtedness, high inflation and high unemployment also contribute to the destabilisation of foreign economies;

3. *Foreign Exchange Problems*. Many unstable countries have a currency that fluctuates wildly and which is very unreliable;

4. *Foreign Country Entry Requirements and Bureaucracy*. Governments can force foreign companies to participate in joint ventures, to hire a high number of nationals etc.;

5. *Tariffs and Other Trade Barriers*. Governments can impose high tariffs to protect their own industries and impose all kinds of import barriers;

6. *Corruption*. Firms can be confronted with bribery of officials;

7. *Technological Pirating*. Managers hired abroad learn how to make the product and can break away to compete openly or clandestinely;

8. *High Cost of Product and Communication Adaptation*. Kotler (1994, p.410):

> "A company going abroad must study each foreign market carefully, become sensitive to its economics, laws, politics, and culture, and adapt its products and communications to foreign tastes. Otherwise, it might make serious blunders. It will bear higher costs and must wait longer for its profits to materialize".

Discouraging factors can also turn into challenges. A recent example is the case of environmental product and production constraints enforced by European governments which companies may approach with a so-called green marketing policy. Mintu-Wimsatt and Lozado (1996), for example, describe several research projects in Europe about customers' preferences whether to buy or not to buy "green products". Many consumers are concerned with the environment and are prepared to pay more for green

products or accept lower performance against the same price. Therefore exporters have an opportunity to differentiate products on a green basis and thus meet this international green consumer demand.

The reasons why a company is willing to go abroad may be numerous (Kotler, 1994). The first reason may be that the company's domestic markets are being attacked by foreign competitors who offer lower prices or better products. The company may decide to counterattack these foreign competitors in their home markets to tie up their resources. A second reason might be that the company discovers higher profit opportunities than are offered at home. A third reason could be that the company needs a larger customer base in order to achieve economies of scale. A fourth reason could involve the reduction of domestic dependency to reduce risk and a fifth reason could be the company's customers have going abroad and require international service. Philips, Doole and Lowe (1994) mention the following possible reasons: large market size, stability through diversification, profit potential, unsolicited orders, proximity of market, utilisation of excess capacity, offers by foreign distributors, increasing growth rate, smoothing out business cycles.

International marketing depends on the level of involvement of the company in international markets. Philips, Doole and Lowe (1994) observe that international marketing could therefore be:

- *Export marketing*: the company markets its goods and/or services to other countries.
- *Multinational marketing* Philips, Doole and Lowe (1994, p.15):

> "The marketing activities of an organisation include activities, interests or operations in more than one country, and where there is some kind of influence or control of marketing activities from outside the country in which the goods or services will actually be sold. Each of these markets is typically perceived to be independent and a profit centre in its own right".

114

- *Global marketing*: the whole company is focused on global marketing opportunities and withdraws resources from around the world in order to achieve a global competitive advantage.

Kotler (1994) mentions some questions about the best mode of entry a company wishing to go abroad has to answer: indirect or direct export, licensing, joint ventures or direct investment.

Indirect Export. This can be *occasional*: the company exports on an occasional basis in an open way, without following strict or consistent patterns; or this can be in an *active* way, where the company makes a commitment to expand exports to a particular market. In both cases, however, all goods are produced in the home country and the exporting does not involve changes in the organisation, product lines, investments, mission etc. The advantages of indirect export are low investments and a low risk.

Direct Export. In this case the company handles its own exports. Of course, here the investments and risks are higher, but the return may also be higher. Direct exporting can be done by installing a domestic based export department or division, an overseas sales branch or subsidiary, travelling sales representatives or foreign based distributors of agents.

Licensing involves offering a license to a foreign company to use a trademark, patent, manufacturing process, secret etc. The advantage is the small financial risk involved, but the disadvantage is that the firm has less control over its foreign operations. Alternatives to a license include a management contract to manage a foreign hotel or other company for a fee or contract manufacturing, where the company engages local manufacturers to produce the product. Management contracting is also a low risk operation, but it may put a claim on scarce management talent. Kotler (1994, p.416):

> "Contract manufacturing has the drawback of less control over the manufacturing process and the loss of potential profits on manufacturing. On the other hand it offers the company a chance to start faster, with less risk,

and with the opportunity to form a partnership or buy out the local manufacturer later".

Joint ventures means joining with local investors to create a joint venture in which ownership, control and profits are shared. In most cases joint ventures are necessary because of political or economic reasons. The drawback is the serious capital investment without gaining full control over the operations.

Direct investment involves direct ownership of foreign based operations. The advantage is gaining full control, the disadvantage may be the risk of losing large investments through expropriation, blocked or devaluated currencies or rapidly worsening markets because of political and economical destabilisation, for example (Kotler, 1994).

Keegan (1986) describes five alternative strategies for international marketing. The first strategy is *the same product and the same message world-wide*. A uniform approach to international marketing offers some advantages, according to Keegan (1986). It is simple, it puts minimal demands upon executives and it requires no original analysis or data generation, only execution and implementation. The second strategy is *same product-different communications*. When a product fills a different need or is used differently under conditions similar to those in domestic markets, the only adjustment that is required is in the marketing communications. Examples are outboard motors or bicycles that satisfy recreation needs in the US and needs for transportation in developing countries. So the market strategy differs in these different national markets, but the product remains (almost) the same.

The third strategy is *a different product and same communications*. In this strategy the communications strategy developed for the home market is extended, but the product is adapted to local conditions. An example is Esso's basic message: "Put a Tiger in Your Tank". While the gasoline products had to be adapted to local weather conditions, its basic message (a tiger is an almost universal symbol of power) could remain the same. The fourth strategy is *dual adaptation*: both product and communications strategies have to adapt to local conditions. An example is Nescafe's

instant coffee. The original blend was too strong for the Englishman. Therefore a lighter blend was produced and sold with a campaign to appeal the young who want to distinguish themselves from the older people who drink tea. The fifth strategy is *product invention*. Sometimes, when local conditions differ considerably, an entirely new product has to be developed. This is a demanding, but a potentially rewarding product strategy for mass markets in less developed countries, if product development costs are limited.

The final decision an exporting company has to make concerns its marketing organisation. When firms develop their export activities they will mostly establish an *export department*, consisting of an export manager and some assistants. When exports grow further and the company becomes involved in many countries with many different product demands, it will likely develop *(an) international division(s)*. When the international activities develop beyond this stage, companies become real *global organisations* where the link with the original national market is a very loose one and where the slogan "the world is my home" applies (Kotler, 1994).

6.3. The Dutch export sector

The companies who were approached for the research were companies who exported or intended to export (part of) their products and services to markets outside the Netherlands.

The export sector is important in the Netherlands which, being a small country, is economically very much dependent on sales to other countries. Over the centuries the Netherlands has been known as an exporting country. See Figure 6.3.1. for the relative position of the Netherlands as an exporter in relation to other export countries. As can be seen from Figure 6.3.1., the value of exports in the Netherlands, with its 16 million inhabitants, is not far behind much larger economies like Canada, Italy and the UK. The information about the Dutch economy and its exports/imports was derived from

117

the "Centraal Bureau van de Statistiek" (CBS) and "The Netherlands Foreign Trade Agency" (EVD)[7].

Figure 6.3.1. - The international position of the Netherlands as an exporter

Dutch exports in 1997 were booming. The export growth doubled in relation to the preceding year. This growth was 5.7% compared with 2.9% in 1996. Employment grew 4.5% in the Services sector, 3.6% in the Construction industry, 3.4% in the Wholesale sector, 2.3% in Agriculture, 1.7% in Manufacturing and 1.6% in the Retail sector.

The composition of the export package from the Netherlands is shown in Figure 6.3.2.

---

[7] At the time of the editing of the final version of the thesis, the 1997 figures were not yet available. Furthermore, as the research was done in 1995/1996, the 1996 figures best present the situation at the time of the research.

Figure 6.3.2. - Composition of the export package from the Netherlands

Composition of Dutch exports package 1996
(Value of Dutch exports in 1996: NLG 333 bln.) Source:CBS

Oils and fats 0,8 %   Fuels 8,9 %

Chemicals 12 %

Raw materials 4,3 %

Manuf.goods
14,5 %

Food 11,6 %

Other products 12,8 %

Machinery 34,6 %
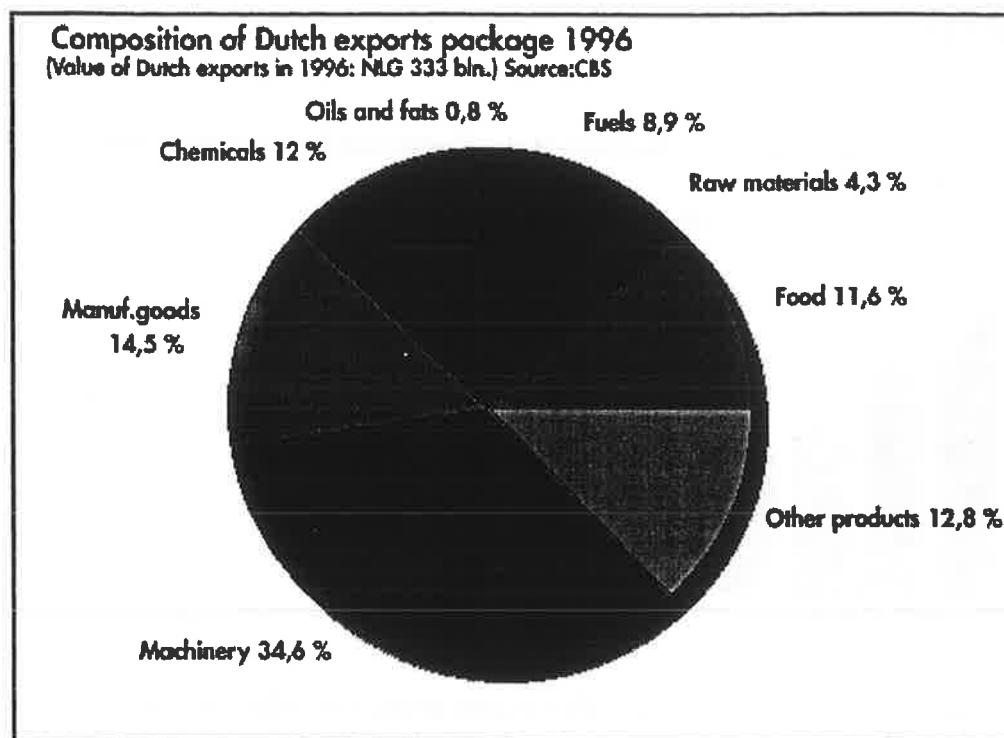
The size of Dutch industry is largely determined by (1) the chemical, (2) food processing and (3) metal processing industries. There is also a well-developed graphics and electrotechnical industry. The food processing industry is the largest industrial sector. In the last decade, production within the various business sectors has been automated to a large extent, enabling companies to operate competitively on an international basis. Their world-wide sales are not only made from the Netherlands, but also from foreign establishments. The Dutch chemical industry comprises the largest chemical concerns in the world.

The third industrial sector is the Dutch metal processing industry, which mainly specialises in the manufacturing of machines for the three large industrial sectors in the Netherlands. The industry enjoys a leading international position in the area of food processing machines, transport means and processing installations for the foodstuffs and chemicals industry. This can mainly be attributed to the increasing application of electronic steering mechanisms in its machines. This has also enabled the electronics industry to develop at a fast pace.

The most important sales areas are found in the demanding markets of the German Federal Republic, France, Belgium and the United Kingdom. The Netherlands are the second largest supplier of industrial high-tech equipment and consumer goods to this well-developed and extremely demanding market. The Netherlands' share of Germany's imports exceeds that of the United States and of the United Kingdom.

The Netherlands offers a range of economic sectors adding value in the area of services. The export of services has undergone dynamic growth: in 10 years the foreign turnover of this Dutch "product" doubled from NLG 41 bln. in 1987 to NLG 82 bln. by 1996. Traditionally, traffic and transport services constitute an important part of this export package, but technical and professional services as well as project execution and communications have recently been taking giant steps forward.

The Netherlands is also an important distribution country. Holland is a central distribution point and Europe's distribution centre. Between 1991 and 1994, more than 45 percent of all major American and Japanese European distribution centres (EDCs) were located in the Netherlands. Within the total export market, re-exports have for some years been experiencing the strongest growth. In Europe, the Netherlands is the market leader in European distribution centres for large multinational companies. Traditional distribution activities are increasingly being supplemented by, for example, assembly, marketing and after-sales services. This upgrading of distribution tasks is part of the so-called "value-added logistics" philosophy. As a result, the transport industry has become one of the fastest growing sectors in recent years. More than 27% of all international road transport in Europe is of Dutch origin. The Netherlands is the cross-roads for much of Europe's traffic and transport. Freight transport is boosted mainly by the presence of the port of Rotterdam and Schiphol Amsterdam Airport. In 1996, Schiphol handled 1,082,846 tonnes of air freight, an increase of 10.8 percent. This makes Schiphol the second largest airport in Europe for freight traffic after Frankfurt. The port of Rotterdam is still the biggest in the world. In 1996, around 34,000 sea-going vessels and 130,000 inland shipping vessels entered Rotterdam port. See Table 6.3.1. for the Dutch balance of services (1996).

Table 6.3.1. - Dutch balance of payments (service sector) (1996)

in NLG mln. (USD 1 = NLG 1.69)

	Import	Export
Transportation	23,492	31,438
Communication services	1,047	1,032
Travel	19,336	10,953
Construction services	2,558	5,109
Insurance and financial services	2,215	1,182
Computer and information services	1,072	1,065
Trade and transit	3,438	6,280
Miscellaneous business, professional and technical services	14,975	15,119
Royalties and licence fees	4,790	3,955
Operational leasing services	812	784
Personal, cultural and recreational services	877	797
Government services n.i.e.	2,057	1,717
Total	76,668	82,191

Source: Dutch Central Bank

Figures 6.3.3. and 6.3.4. represent exports and imports of the Netherlands to/from different geographical areas in the world.

Figure 6.3.3. - Exports from the Netherlands in 1996 to different geographical areas (in million guilders)

Source: The Netherlands Foreign Trade Agency (EVD)

121
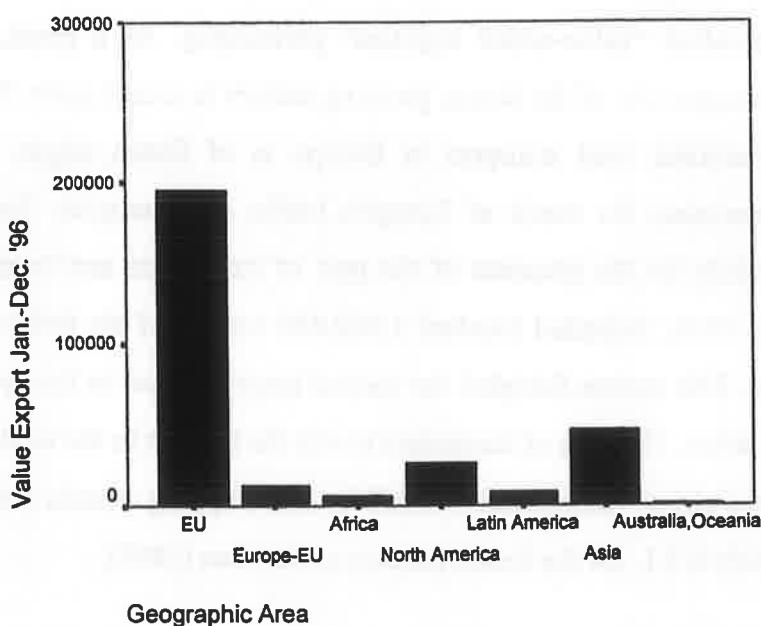
Figure 6.3.4. - Imports to the Netherlands in 1996 from different geographical areas (in million guilders)

Source: The Netherlands Foreign Trade Agency (EVD)
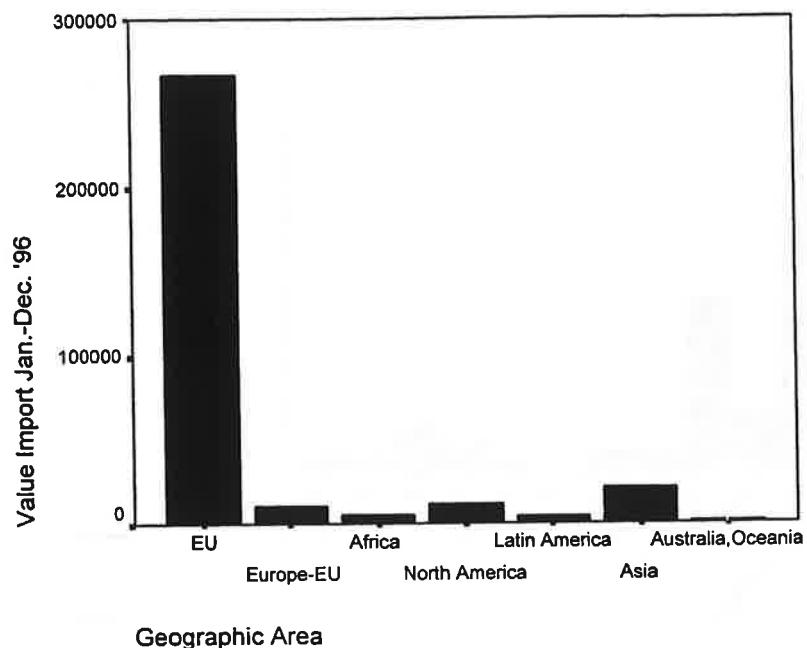
Geographic Area

It can be seen from these figures that the European Union is by far the most important geographical area for exports and imports. Figures 6.3.5. and 6.3.6. show the different countries in the European Union the Netherlands exports to and imports from.

Figure 6.3.5. - Exports from the Netherlands in 1996 to different countries in the European Union (in million guilders)

Source: The Netherlands Foreign Trade Agency (EVD)

Exports to the European Union
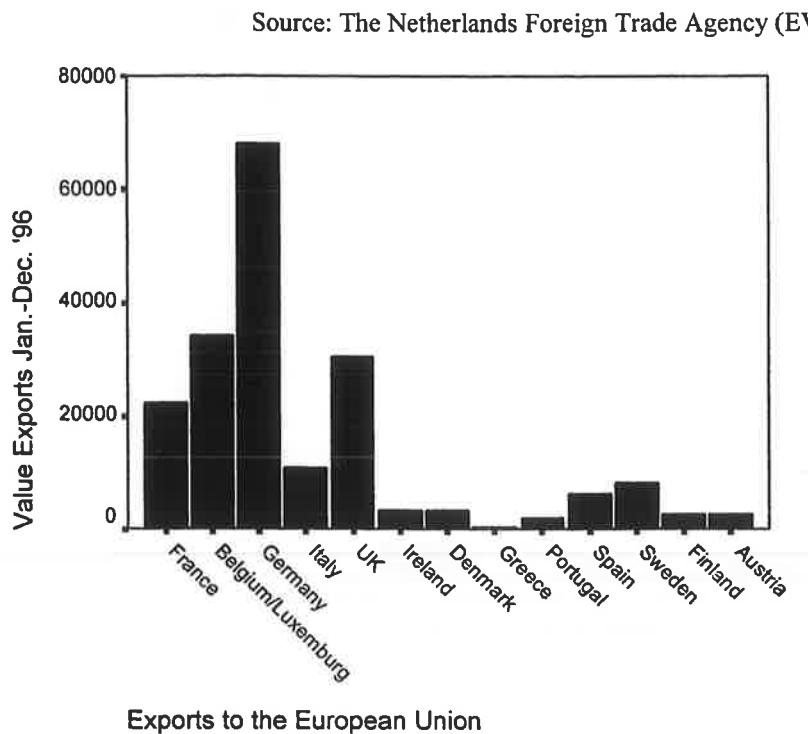
Figure 6.3.6. - Imports to the Netherlands in 1996 from different countries in the European Union (in million guilders)

Source: The Netherlands Foreign Trade Agency (EVD)

Imports from the European Union

123
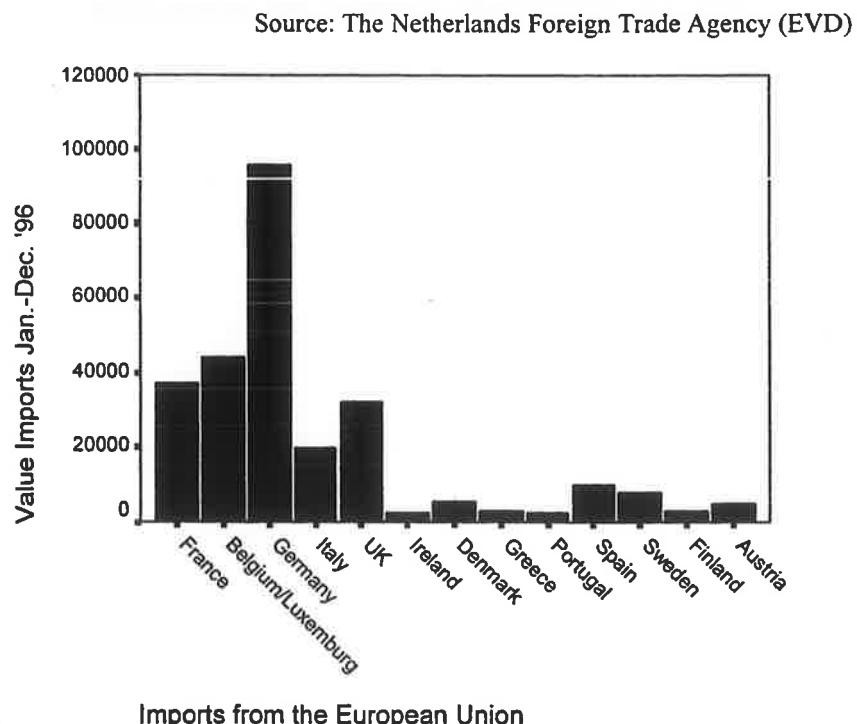
These figures show that Germany is the most important country for exports and imports, followed by Belgium and Luxemburg, France and the UK.

6.4. Conclusions

As the research group of this study consisted of Dutch export companies, in this chapter the function of exports in the marketing policies of companies and the characteristics of the Dutch export sector were described. It was shown that the export policy of companies needs explicit consideration to be successful. Also the importance and the influence of exports to the well-being of the Dutch economy was shown.

CHAPTER 7. THE RESEARCH MODEL AND HYPOTHESES

7.1. Introduction

In this chapter the research model is described, the research hypotheses are formulated and the constructs are defined and it is described how these are measured.

7.2. Research model

The research model described here encompasses both the conceptual model and the hypotheses, together with a careful articulation justifying the hypotheses. Given the time and resource constraints of the DBA programme, the need to limit the complexity of the research model and the length of the questionnaire (in order to receive a reasonable response), the scope of the research had to be limited.

Furthermore, for reasons of parsimony, the research model should not be overfitted. Hair, Anderson, Thatham and Black, 1992, (p.430) define parsimony as follows:

> Parsimony - "The degree to which a model achieves model fit for each estimated coefficient"

Models with relatively few parameters and relatively many degrees of freedom are said to be high in parsimony. The opposite is also true of course: models with many parameters and few degrees of freedom are lacking in parsimony. Arbuckle (1997, p.552):

> "While one can inquire into the grounds for preferring simple, parsimonious models (...), there does not appear to be any disagreement that parsimonious models are preferable to complex ones. When it comes to parameters, all other things being equal, less is more. At the same time, well fitting models are preferable to poorly fitting ones".

Although this meant that not all aspects of the learning organisation and market orientation could be examined, the key elements of these concepts were nonetheless

included in the research. Therefore the focus was on a limited number of aspects - namely the relationship between the learning organisation and market orientation, the influence of formalisation on these variables; the influence of the learning organisation and market orientation on business performance and the moderating influence of turbulence and competitive intensity on the relationship of the learning organisation and market orientation with business performance.

An investigation into the literature on the learning organisation, market orientation and business performance led to the proposition of the conceptual model in Figure 7.2.1.

Figure 7.2.1. - Conceptual model for research on the learning organisation, market orientation and business performance
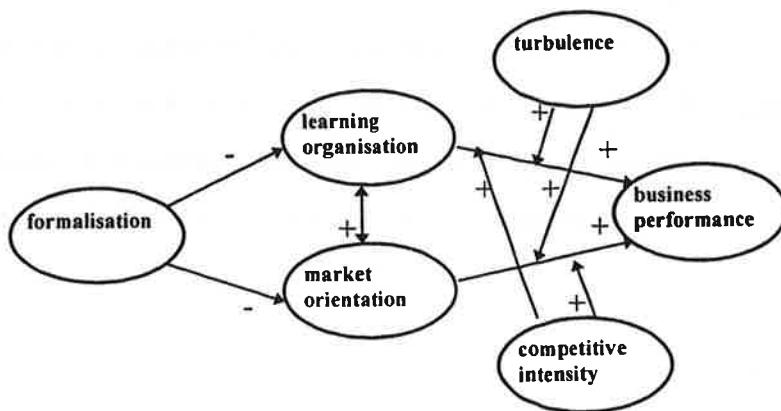
The conceptual model in Figure 7.2.1. indicates feedback and shows:

- A negative influence of formalisation on the learning organisation and market orientation (a negative influence means here that increases in the degree of formalisation lead to decreases in the degree of learning).
- A two-way positive relationship between the learning organisation and market orientation (a positive relationship means here that increases in the degree of learning organisation cause increases in the degree of market orientation and vice versa).
- A positive influence of the learning organisation and market orientation on business performance (which means here that increases in the degree of learning

organisation and market orientation cause increases in the degree of business performance).

- Positive moderating influences of the environmental variables turbulence and competitive intensity on the influence of the learning organisation and market orientation on business performance (which means here that increases in the degree of turbulence and competitive intensity lead to increases in the strength of the effect of the learning organisation and market orientation on business performance).

In this conceptual model learning organisation and market orientation are both dependent variables of formalisation (independent variable), while business performance is in its turn a dependent variable of learning organisation and market orientation (in this instance independent variables). A variable whose value is influenced is called the dependent variable, while the variable which exerts the influence is called the independent or exploratory variable (it explains the value of the dependent variable). Turbulence and competitive intensity are moderator variables: they moderate the learning organisation/market orientation-business performance link.

7.3. Research hypotheses

The conceptual model of this study forms the key to the following hypotheses:

H1: The greater the level of formalisation, the lower the level of learning organisation and the level of market orientation.

H2: The greater the level of learning organisation, the greater the level of market orientation and vice versa.

H3. The greater the level of learning organisation and the level of market orientation, the greater the level of business performance.

H4:   The greater the level of turbulence and the level of competitive intensity, the stronger the relationship between the learning organisation and market orientation with business performance.

This fourth hypotheses concerns the moderating influence of turbulence and competitive intensity on the learning organisation/market orientation-performance link.

These hypotheses are explained as follows:

Market orientation is directed at innovation and risk taking. Formal decision-making, rules and procedures are essentially conservative in character. Therefore it seems likely (see Section 3.5.) that *formalisation* (the degree to which rules define roles, authority relations, communications, norms, sanctions and procedures) is inversely related to market orientation (Jaworski and Kohli, 1993). It is interesting to see if this also applies to the influence of formalisation on the learning organisation.

Therefore the first hypothesis states:

H1:   The greater the level of formalisation, the lower the level of learning organisation and the level of market orientation.

Learning organisations have the collective capacity to learn, as entire organisations. They learn from their environment, they learn from their clients, they learn from their competitors and one part of the organisation can learn from the mistakes of another part. Likewise market oriented organisations process, disseminate and respond to market information (from customers and competitors). So the learning organisation and market orientation seem to have much in common. For example Slater and Narver (1995), as described in Section 4.2.4., see market orientation as a culture that

contributes to the creation of a learning organisation[8]. This leads to the following hypothesis:

H2: The greater the level of learning organisation, the greater the level of market orientation and vice versa.

Kohli and Jaworski (1990, p.13) stated (see Section 3.5.) that the greater the level of market orientation of organisations, the higher their performance level:

> "A market orientation appears to provide a unifying focus for the efforts and projects of individuals and departments within organisations, thereby leading to superior performance".

Likewise Slater and Narver (1995, p.63) stated in their article (see Section 4.2.4.):

> "Presumably, learning facilitates behaviour change that leads to improved performance".

Therefore it seems most likely that a learning organisation will perform better than a non-learning organisation. Organisations that are able to adapt to and perhaps even to create their environments, who learn from their customers' behaviour and who know how to continuously improve their skills and knowledge must somehow be more successful than their counterparts. As Ray Stata (1989, p.64) of Analog Devices suggests (see Section 2.10.):

> "I would argue that the rate at which individuals and organisations learn may become the only sustainable competitive advantage, especially in knowledge-intensive industries".

Therefore the third hypothesis is stated as follows:

---

[8] This statement may be understood as the suggestion that market orientation causes a learning organisation. In Section 9.3.4. it is explained that some authors suggest (in an implicit way) that there may exist a causal order between learning organisation and market orientation.

H3. The greater the level of learning organisation and the level of market orientation, the greater the level of business performance.

Kohli and Jaworski (1990) mentioned four moderators that influence this relationship, namely: market turbulence, technological turbulence, competitive intensity and performance of the economy (see Section 4.3.1.). In their 1993 study and the empirical research of Slater and Narver (1994a) however, they found that the market orientation-performance link held irrespective of the investigated environmental characteristics (see Section 4.3.2.). Nonetheless it seems worthwhile to consider the role of the environment explicitly, for example in other cultures than the US, in order to collect more empirical evidence on this complex matter. Also it would be interesting to extend this investigation to the probable positive relationship between business performance and the learning organisation. This study limited the assessment of environmental variables to competitive intensity and turbulence. This leads to the fourth hypothesis:

H4: The greater the level of turbulence and the level of competitive intensity, the stronger the relationship between the learning organisation and market orientation with business performance.

7.4. Constructs and questionnaire items

A construct is a concept that is defined by the researcher in conceptual terms, but that cannot be directly measured or measured without error (Hair, Anderson, Thatham and Black, 1992). The reliability of the scales that represent constructs can be checked by their respective Cronbach Alpha scores. Nunnally (1978) suggests an acceptable level for Cronbach Alpha of 0.70, while Robinson, Shaver and Wrightsman (1991) propose that coefficients above 0.60 are acceptable for research purposes. In this thesis the 0.60 level is considered to be the minimum acceptable level. The six constructs of the

conceptual model are defined, measured[9] (for a description of the items of the constructs see Appendix A) and the Cronbach Alpha scores are reported as follows:

Formalisation[10] is "the degree to which rules define authority relations and autonomy of individual workers". Formalisation is measured by items 8 and 9 (Cronbach Alpha of 0.7307).

A **learning organisation** is "an organisation where the individual learning of its personnel is promoted and facilitated, where sharing of these learning experiences and (tacit) knowledge in mental models is emphasised and where double-loop or generative learning are stimulated". Learning organisation is measured by items 26-49 (Cronbach Alpha of 0.9371).

Market-orientation is "the organisation-wide *generation* of market intelligence pertaining to current and future customer needs, *dissemination* of the intelligence across departments and organisation-wide *responsiveness* to it" (Kohli and Jaworski, 1990, p.6). Market orientation is measured by items 11 to 25 (Cronbach Alpha of 0.8593).

The **business performance** of an organisation refers to its "competitive advantage in terms of sales growth, profitability and to the quality of its products and services". It consists of self-developed judgmental business performance items that are close to those of Jaworksi and Kohli (1993) (see Section 5.4.3.): items 74 and 75 (profitability in relation with competition) and of the "extended MARKOR" "quality items" 60 and 61. The reason why items 60 and 61 are included in the business performance construct is that business performance should not be measured only in terms of

---

[9] The reader will notice that not all items of the questionnaire are covered. This is the case because (1) some of the items were intended to collect general or "control" information about the respondents' companies and (2) at the time of the mailing of the questionnaire the proposed conceptual model was more complex. This model also covered concepts like "top management emphasis", "interdepartmental relations", "product quality", "buyer and supplier power", "entry barriers" and "pressures from substitutes". The supervisors of this research study advised the researcher to simplify the model, for reasons explained in Section 7.2. But this advice was given after the questionnaire was already mailed to the Dutch export companies.

[10] The number of items was reduced to improve Cronbach Alpha.

profitability, but also in terms of perceived quality (see Section 5.4.3.). Both are indicators of the performance of a company (Cronbach Alpha of 0.7026).

Turbulence is defined as: "the rate of technical change in the environment of the organisation and the rate of change in the composition of customers and their preferences this organisation encounters". Turbulence is measured by items 50-53 and 57. Turbulence consists of "market turbulence items" (items 50-53) and of a "technological turbulence item" (item 57). It was thought that a more general turbulence construct which includes both market and technological turbulence better covers the turbulence concept than a construct limited to market turbulence (Cronbach Alpha of 0.6794).

Competitive intensity[11] is "the degree of competition an organisation experiences on the marketplace". Competitive intensity is measured by items 54 and 55 (Cronbach Alpha of 0.8163).

7.5. Conclusions

In this chapter the research model and hypotheses were presented. After this the constructs were defined and it was described how these are measured by the questionnaire items. Furthermore, the Cronbach Alpha scores of the scales the constructs represent were reported.

---

[11] The number of items was reduced to improve Cronbach Alpha.

CHAPTER 8. FACTOR ANALYSIS AND STATISTICAL DESCRIPTION OF THE CONSTRUCTS

8.1. Introduction

In this chapter a factor analysis is performed on the learning organisation and market orientation constructs. The objective is to "tidy up" the learning organisation and market orientation constructs. The other constructs do not contain enough items to perform factor analysis. Furthermore, all constructs are statistically described and normality, reliability and validity checks are made.

8.2. Factor analysis on the research data

Factor analysis can be used in two ways in the development and/or evaluation of scales to measure concepts. The two approaches are referred to as exploratory and confirmatory factor analysis. *Exploratory factor analysis* is appropriate for determining the structure (i.e. dimensions) of the concept and the items that are to be used in measuring the dimensions. *Confirmatory factor analysis* on the other hand is used to validate (i.e. confirm) hypotheses on previously developed scales (Sharma, 1996).

In this study both exploratory and confirmatory factor analysis was used. It was used in a exploratory manner for the learning organisation scale (based on LOPP) where no reliability and validity data were presented in the literature (O'Brien, 1994; O'Brien and Kremer Bennett, 1994), whereas it was used in a confirmatory fashion to validate the market orientation scale (based on MARKOR), which was described in reliability and validity terms in Kohli, Jaworski and Kumar (1993) and Jaworski and Kohli (1993).

The factor analysis was performed by SPSS 7.5.1.

There are seven steps in performing a factor analysis (Hair, Anderson, Thatham and Black, 1992; Norusis, 1993):

Step 1: Decide on which variables to include and how many, how the variables are measured and ensure a credible sample size. Regarding the sample size, Hair, Anderson, Thatham and Black (1992, pp.226-227) observe:

> "The researcher generally would not factor-analyze a sample of fewer than 50 observations and preferably the sample size should be 100 or larger. As a general rule, there should be four or five times as many observations as there are variables to be analyzed (...) in many instances the researcher is forced to factor-analyze a set of variables when only a 2:1 ratio of observations is available. When dealing with smaller sample sizes and a lower ratio, the analyst should interpret any findings cautiously".

Step 2: Computation and analysis of the correlation matrix of the variables. From this matrix and other statistics computed from the correlations, variables for deletion can be identified. Norusis (1993) observes that if correlations between variables are small, it is unlikely that they share common factors. Variables that have correlations of less than 0.30 with other variables should be deleted as they do not belong to the dimensions (factors) that explain the correlations.

Another measure is the partial correlation. For variables that share common factors, the partial correlation should be small. A measure often used that is related to the partial correlation is the measure of sampling adequacy (MSA). The MSA values appear as the diagonal elements in the anti-image correlation matrix produced by the factor analysis routine of SPSS. Variables with small MSA are candidates for deletion. How small this measure should be is difficult to estimate. Sharma (1996, p.116):

> "One can examine the partial correlations controlling for all other variables. These correlations, also referred to as negative anti-image correlations, should be small for the correlation matrix to be appropriate for factoring. However, how small is "small" is essentially a judgmental decision".

An index (single overall measure) often used to establish whether a factor analysis will be worthwhile is the Kaiser Meyer-Olkin (KMO) statistic. The KMO tests whether the partial correlations among variables are small. SPSS (1993, pp.53-54):

> "Kaiser (1974) characterises measures in the 0.90's as *marvellous*, in the 0.80's as *meritorious*, in the 0.70's as *middling*, in the 0.60's as *mediocre*, in the 0.50's as *miserable* and below 0.50 as *unacceptable*".

Step 3: The choice of a *factor analytical approach*. This can be one of two approaches - principal component and common factor analysis. Hair, Anderson, Thatham and Black (1992 , p.228):

> "The two most frequently employed factor analytic approaches are component analysis and common factor analysis. Selection of the factor model depends upon the analyst's objective. The *component model* is used when the objective is to summarize most of the original information (variance) in a minimum number of factors for prediction purposes. In contrast, *common factor analysis* is used primarily to identify underlying factors or dimensions not easily recognized".

Step 4: Decide on how the factors will be extracted. Hair, Anderson, Thatham and Black (1992, p.228):

> "Two options are available: orthogonal factors and oblique factors. In an *orthogonal solution*, the factors are extracted in such a way that the factor axes are maintained at 90 degrees, meaning that each factor is independent of all other factors. Therefore, the correlation between factors is arbitrarily determined to be zero (...). As the term "*oblique*" implies, the factor solution is computed so that the extracted factors are correlated".

Hair, Anderson, Thatham and Black (1992) observe that the oblique factor solution is much more complicated than the orthogonal solution and that entirely satisfactory analytic procedures are not yet available. They advise researchers who have the goal of reducing the number of original variables or who want to reduce a larger number of variables to a smaller set of uncorrelated variables for further analysis (like regression) to use the orthogonal factors factor solution. If the ultimate goal of the factor analysis

is to obtain several theoretically meaningful factors or constructs, an oblique situation is appropriate.

Step 5: Determine the number of factors to extract. The most common approaches for doing this are the scree tail test (scree plot) and the latent root criterion. Hair, Anderson, Thatham and Black (1992, p.238):

> The scree test is derived by plotting the latent roots against the number of factors in their order of extraction, and the shape of the curve is used to evaluate the cut-off point".

Cattell (1965) suggests examining the scree plot and to stop factoring at the point where eigenvalues form a smooth slope as "factorial litter or scree". The interpretation of the scree plot can be subjective as it is possible to find more than one break in the scree plot.

The rationale for the latent root criterion is that any individual factor should account for at least the variance of a single variable if it is to be retained in the factor analysis. In component analysis only the factors having latent roots (eigenvalues) greater than 1 are considered significant.

Step 6: Computation of the rotated factor matrix. Rotation means that the reference axes of the factors are turned about the origin until some other position has been reached.

There are *three major orthogonal approaches: quartimax, varimax and equimax.* Anderson, Thatham and Black (1992, p.235):

> "The ultimate goal of a QUARTIMAX rotation is to simplify the rows of a factor matrix. That is, it focuses on rotating the initial factor so that a variable loads high on one factor and as low as possible on other factors. In contrast to QUARTIMAX, the VARIMAX criterion centers on simplifying the columns of the factor matrix. The EQUIMAX approach is a compromise between the QUARTIMAX and VARIMAX criteria. Rather than concentrating either on

136

simplification of the rows or on simplification of the columns, it tries to accomplish some of each".

Hair, Anderson, Thatham and Black (1992) observe that the equimax method has not gained much acceptance and the quartimax has not proved successful in producing simpler structures. The varimax method, that computes loadings between -1 (clear negative assocation between the variable and the factor), 1 (clear positive association) and where 0 means no association and therefore a simple structure, is very successful in obtaining orthogonal rotation of factors.

Step 7: Interpretation of rotated factors. Hair, Anderson, Thatham and Black (1992) suggest the following procedure (pp.240-241):

1. Examine each column of the factor matrix for the higher factor loadings.
2. Start with the first variable on the first factor and move from left to right and look for the highest loading for that variable on any factor, which should then be underlined. Then move to the second variable and look for the highest loading for that variable on any factor, which should be underlined, and so on and on.
3. Examine the variables that have not been underlined and decide whether or not to eliminate these variables.
4. Finally the analyst should attempt to assign some meaning to the pattern of factor loadings and place greater emphasis on the variables with higher loadings. Then try to assign a name or label to a factor that reflects what the several variable loadings on that factor represent. This procedure is followed for each of the extracted factors. The final result will be a name or label that represents each of the derived factors as accurately as possible.

8.2.1. Factor analysis of the learning organisation construct

Exploratory factor analysis of the learning organisation construct was performed along the seven steps described above.

<u>Step 1</u>: Decide on which variables to include and how many, how the variables are measured and ensure a credible sample size. The first three questions are answered by the description of the variables of the learning organisation construct in Table 8.2.1.with a Cronbach Alpha of 0.9371 (for an explanation of acceptable Alpha levels, see Section 7.4.) and how these are measured is described in Section 5.4.3.

Table 8.2.1. - Original variables of the learning organisation construct

Variable	Label of variable
V26	Vision and strategy are continually updated
V27	Long term orientation
V28	Learning vision
V29	Managers help employees to integrate learning experiences
V30	Managers communicate effectively about the development of employees
V31	Managers admit their mistakes
V32	Not afraid to share opinions and speak our minds
V33	Reducing the number of rules, procedures and the like
V34	Key business information dissemination
V35	Key business performance dissemination
V36	Analyse mistakes in order to learn
V37	Systematic use of problem-solving techniques
V38	Active experimentation
V39	Inter-group learning
V40	Customer satisfaction is considered in performance reviews
V41	Giving feedback to suppliers
V42	Training on "learning how to learn"
V43	Creativity training
V44	Special learning projects
V45	Training to enhance job performance
V46	Managers are rewarded for supporting the development of their employees
V47	Risk taking by employees is rewarded
V48	Learning from experience
V49	Individual development plans that stimulate performance

The question about the sample size can be answered as follows. In this research sample 105 observations were available. The number of items on the learning organisation was 25, which meets the 4:1 ratio and is therefore deemed acceptable to proceed with the factor analysis.

<u>Step 2</u>: Computation and analysis of the correlation matrix of the variables.

Correlations greater than 0.30 are generally considered good (Nunnally, 1978). The correlation matrix in Appendix J.1. shows that 22% of the coefficients were less than 0.30. All variables but item 48 (Learning from experience) had moderately high correlations with at least one other variable. Item 48 was clearly a candidate for elimination. When item 48 was eliminated, 18% of the coefficients were less than 0.30.

Another measure is that of sampling adequacy (MSA). The MSA values appear as the diagonal elements in the anti-image correlation matrix. Variables with small MSA are candidates for deletion. After the elimination of item 48 (Learning from experience) the measures of sampling adequacy displayed on the diagonal of the anti-image correlation matrix were all high and greater than 0.828, while Cronbach Alpha was improved from 0.9371 to 0.9422.

To establish whether a factor analysis will be worthwhile the KMO statistic was computed. This was 0.905, thus in the "marvellous" range (Kaiser, 1974).
So the body of evidence to proceed with the factor analysis seems acceptable.

<u>Step 3</u>: The choice of a factor analytical approach.

As for this research the objective was to summarise the original information to a minimum number of factors, the (principal) component model was chosen. According to Nunnally (1978) one of the major advantages of using the principal components (PC) method of factor extraction is that each principal component factor explains more variance than any other factoring method would.

<u>Step 4</u>: Decide on how the factors will be extracted.

As the objective of the research was to test and refine theoretically developed constructs by reducing the large number of questionnaire items to meaningful

constructs, which were expected to be close to the constructs of the conceptual model, the orthogonal solution seemed most appropriate. Therefore the orthogonal factor solution was chosen.

Step 5: Determine the number of factors to extract.

This is done by the scree tail test (scree plot) and the latent root criterion. Figure 8.2.1. shows that the scree plot begins to straighten out after the 6th factor.

Figure 8.2.1. - Scree plot for learning organisation
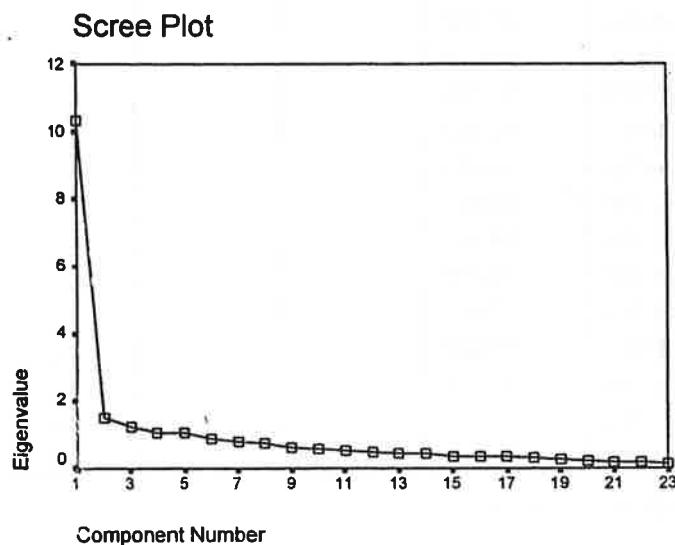
The latent root criterion statistic is shown in Table 8.2.2.

Table 8.2.2. - Total variance explained for learning organisation

Total Variance Explained

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	10.312	44.837	44.837	3.523	15.315	15.315
2	1.498	6.515	51.351	3.340	14.523	29.839
3	1.251	5.438	56.789	3.184	13.841	43.680
4	1.079	4.691	61.481	2.967	12.900	56.580
5	1.044	4.541	66.021	2.172	9.442	66.021
6	.898	3.903	69.924			
7	.783	3.403	73.327			
8	.749	3.257	76.584			
9	.603	2.622	79.206			
10	.555	2.414	81.619			
11	.525	2.283	83.902			
12	.495	2.152	86.055			
13	.446	1.938	87.993			
14	.421	1.830	89.823			
15	.373	1.620	91.443			
16	.351	1.525	92.967			
17	.341	1.483	94.451			
18	.305	1.328	95.779			
19	.263	1.143	96.922			
20	.239	1.038	97.960			
21	.172	.748	98.708			
22	.162	.703	99.411			
23	.136	.589	100.000			

Extraction Method: Principal Component Analysis.

The factor statistics in Table 8.2.2. show that 5 factors with an eigenvalue above 1 account for 66.021% of the variance. These results come close to those of the scree plot shown in Figure 8.2.1. In the social sciences a solution that accounts for approximately 60% or less of the cumulative percentage of variance is acceptable (Hair, Anderson, Thatham and Black, 1992).

Step 6: Computation of the rotated factor matrix.

Because principal components and orthogonal varimax rotation are widely used and easy to interpret, this factor rotation method was chosen for this research.

Table 8.2.3.shows the varimax rotated factor matrix.

Table 8.2.3. - Varimax rotated factor matrix for learning organisation

Rotated Component Matrix

	Component				
	1	2	3	4	5
V41	.755				
V33	.592				
V28	.574				
V29	.545				
V40	.538				
V39					
V45		.789			
V43		.773			
V42		.739			
V44		.638			
V37					
V32			.740		
V47			.698		
V31			.624		
V30			.493		
V27					
V49				.774	
V26				.570	
V46				.538	
V38				.531	
V35					.736
V34					.730
V36					.500

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 7 iterations.

In Table 8.2.3. absolute values less than 0.50 were suppressed (these are the blank "gaps" in the columns). This was done in order to show only the very significant loadings. Hair, Anderson, Thatham and Black (1992, p.239):

> "It is a rule of thumb that has been used frequently by factor analysis as a means of making a preliminary examination of the factor matrix. In short, loadings greater than +.30 are considered significant; loadings of +.40 are considered more important; and if the loadings are +.50 or greater, they are considered very significant".

<u>Step 7</u>: Interpretation of rotated factors.

Table 8.2.3. shows that all items with a loading of ≥0.50 had the highest loading on one of the five factors. However, four items had loadings less than 0.50. These were eliminated. After elimination of these items, Cronbach Alpha for the learning organisation (19 items) was somewhat reduced (from 0.9422) to 0.9260. See Table 8.2.4. for the items that were eliminated due to loadings less than 0.50.

Table 8.2.4. - Items that were eliminated due to loadings less than 0.50

Variable	Label of variable	Highest Factor Loading on
V27	Long term orientation	.446 on factor 3
V30	Managers communicate effectively about the development of employees	.493 on factor 3
V37	Systematic use of problem-solving techniques	.485 on factor 2
V39	Inter-group learning	.481 on factor 1

Table 8.2.5. shows the highest loadings on the first factor. This factor was called **"learning climate"**, because these five items of factor 1 specify important aspects of an organisational climate that is favourable to learning. Cronbach Alpha was 0.8074.

Table 8.2.5. - Highest loadings on the first factor of learning organisation: learning climate

Variable	Label of variable	Highest Factor Loading
V28	Learning vision	.574
V29	Managers help employees to integrate learning experiences	.545
V33	Reducing the number of rules, procedures and the like	.592
V40	Customer satisfaction is considered in performance reviews	.538
V41	Giving feedback to suppliers	.755

Table 8.2.6. shows the highest loadings on the second factor. This factor was called **"learning methods and techniques"**, because the items of factor 2 represent methods and techniques (training, techniques, projects) to stimulate organisational learning. Cronbach Alpha was 0.8522.

Table 8.2.6. - Highest loadings on the second factor of learning organisation: learning methods and techniques

Variable	Label of variable	Highest Factor Loading
V42	Training on "learning how to learn"	.739
V43	Creativity training	.733
V44	Special learning projects	.638
V45	Training to enhance job performance	.789

Table 8.2.7. shows the highest loadings on the third factor. This factor was referred to as "**learning attitudes**", because it specifies behaviour that induces learning. Cronbach Alpha was 0.7189.

Table 8.2.7. - Highest loadings on the third factor of learning organisation: learning attitudes

Variable	Label of variable	Highest Factor Loading
V31	Managers admit their mistakes	.624
V32	Not afraid to share opinions and speak our minds	.740
V47	Risk taking by employees is rewarded	.698

Table 8.2.8. shows the highest loadings on the fourth factor. This factor was called "**learning to enhance performance**", because its items represent behaviour that influence individual, team and organisational performance in a positive way. Cronbach Alpha was 0.7959.

Table 8.2.8. - Highest loadings on the fourth factor of learning organisation: learning to enhance performance

Variable	Label of variable	Highest Factor Loading
V26	Vision and strategy are continually updated	.570
V38	Active experimentation	.531
V46	Managers are rewarded for supporting the development of their employees	.538
V49	Individual development plans that stimulate performance	.774

Table 8.2.9. shows the highest loadings on the fifth factor. This factor refers to "**individual and team practices**" that individuals and teams employ in order to learn. Cronbach Alpha was 0.7600.

Table 8.2.9. - Highest loadings on the fifth factor of learning organisation: individual and team practices

Variable	Label of variable	Highest Factor Loading
V34	Key business information dissemination	.730
V35	Key business performance dissemination	.736
V36	Analyse mistakes in order to learn	.500

It is this revised construct of the learning organisation (the aggregate of the five subconstructs) that is used in subsequent analysis.

8.2.2. Factor analysis of the market orientation construct

The market orientation construct is factor analysed with a confirmatory factor analysis along the seven steps described above.

Step 1: Decide on which variables to include and how many, how the variables are measured and ensure a credible sample size. The first three questions are answered by the description of the variables of the market orientation construct in Table 8.2.7. (Cronbach Alpha of 0.8593) and these are measured is described in Section 5.4.3.

Table 8.2.10. – Original variables of the market orientation construct

Variable	Label of variable
V11	Customer satisfaction assessments influence senior managers' pay
V12	Meeting with customers once a year
V13	In-house market research
V14	Polling end users to assess the quality of products and services
V15	Collecting industry information through informal means
V16	Reviewing the effects of environmental changes on customers
V17	Quarterly interdepartmental meetings to discuss market trends
V18	Circulating documents about customers
V19	Data on customer satisfaction are disseminated regularly
R20	Interdepartmental alertness
R21	Alertness to changes in customers' needs
V22	Reviewing product development efforts
R23	Market research driven
V24	Quick response to competitors' prices
V25	Speed of response on customer complaints

In Table 8.2.10. some items are reverse-scored items. Before the statistical analysis was performed, the reverse of these items was computed, after which they were indicated as 'R" (reverse-scored variable) instead of "V" (variable).

As for a sufficient sample size, the following reasoning was applied: the research sample contained 105 observations and the number of items of market orientation was 15, the 5:1 ratio was met. This means that the sample size is sufficient to perform the factor analysis.

Step 2: Computation and analysis of the correlation matrix of the variables.

Correlations greater than 0.30 are considered good. The correlation matrix in Appendix J.2. shows that 53% of the coefficients were less than 0.30. All variables but item 24 (Quick response to competitors' prices) had moderately high correlations with at least one other variable. Therefore item 24 was a candidate for deletion. When item 24 was eliminated, 49% of the coefficients were less than 0.30.

Another measure is that of sampling adequacy (MSA). The MSA values appear as the diagonal elements in the anti-image correlation matrix. Variables with small MSA are candidates for deletion. After the elimination of item 24 (Quick response to competitors' prices) the measures of sampling adequacy displayed on the diagonal of the anti-image correlation matrix were all high and greater than 0.768, while Cronbach Alpha was improved from 0.8593 to 0.8619.

To establish whether a factor analysis would be worthwhile the KMO statistic was computed. This was 0.845, thus in the "meritorious" range (Kaiser, 1974). So the body of evidence to proceed with the factor analysis seems acceptable.

Step 3: The choice of a factor analytical approach.

As the objective for this research was to summarise the original information to a minimum number of factors, the (principal) component model was chosen.

Step 4: Decide on how the factors will be extracted.

As the objective of the research was to test and refine theoretically developed constructs by reducing the large number of questionnaire items to meaningful constructs, which were expected to be close to the constructs of the conceptual model, the orthogonal solution seemed most appropriate. Therefore the orthogonal factor solution was selected.

Step 5: Determine the number of factors to extract.

This is done by the scree tail test (scree plot) and the latent root criterion. Figure 8.2.2. shows that the scree plot begins to straighten out after the 3rd factor.

Figure 8.2.2. - Scree plot for market orientation

Scree Plot
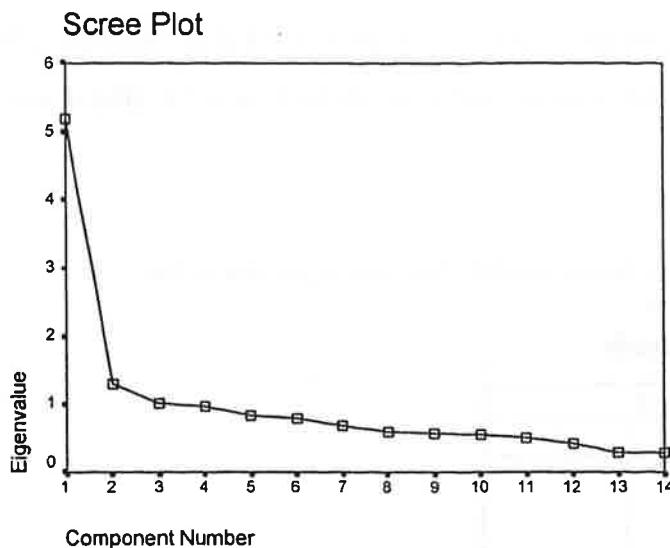
The latent root criterion statistic is shown in Table 8.2.11.

Table 8.2.11. - Total variance explained for market orientation

Total Variance Explained

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.194	37.102	37.102	3.007	21.481	21.481
2	1.304	9.313	46.416	2.446	17.473	38.954
3	1.017	7.262	53.678	2.061	14.724	53.678
4	.961	6.866	60.544			
5	.837	5.977	66.522			
6	.794	5.673	72.195			
7	.689	4.923	77.118			
8	.586	4.187	81.305			
9	.566	4.046	85.351			
10	.554	3.955	89.305			
11	.505	3.604	92.909			
12	.419	2.990	95.899			
13	.288	2.056	97.956			
14	.286	2.044	100.000			

Extraction Method: Principal Component Analysis.

The factor statistics in Table 8.2.11. show that 3 factors with an eigenvalue above 1 account for 53.678% of the variance. These results are comparable to those of the scree plot shown in Figure 8.2.2.

<u>Step 6</u>: Computation of the rotated factor matrix.

Table 8.2.12.shows the varimax rotated factor matrix. In Table 8.2.12. absolute values less than 0.50 were suppressed for reasons explained in Section 8.2.1. (these are the blank "gaps" in the columns).

Table 8.2.12. - Varimax rotated factor matrix for market orientation

Rotated Component Matrix

	Component		
	1	2	3
V15	.714		
V12	.667		
V22	.643		
V17	.643		
V16	.553		
V25	.545		
R20	.527		
V14		.752	
V11		.675	
V19		.644	
V13		.569	
R23			.659
V18			.649
R21			.609

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 8 iterations.

Table 8.2.12. shows that all items with a loading of ≥0.50 had the highest loading on one of the three factors. The three factor structure of Kohli, Jaworski and Kumar (1993) and Jaworski and Kohli (1993) ("intelligence generation", "intelligence dissemination" and "responsiveness") was not confirmed by the three factor solution in Table 8.2.12., probably because in this study the original 32 items were reduced to only 17. Therefore, the definition of the three factors was different from those of Kohli, Jaworski and Kumar (1993) and Jaworski and Kohli (1993).

Table 8.2.13. shows the highest loadings on the first factor. This factor was called **"external orientation"**, because the seven items in factor 1 concern an orientation to

149

the developments in the (market) environment of an organisation. Cronbach Alpha was 0.8082.

Table 8.2.13. - Highest loadings on the first factor of market orientation: external orientation

Variable	Label of variable	Highest Factor Loading
V12	Meeting with customers once a year	.667
V15	Collecting industry information through informal means	.715
V16	Reviewing the effects of environmental changes on customers	.553
V17	Quarterly interdepartmental meetings to discuss market trends	.643
R20	Interdepartmental alertness	.527
V22	Reviewing product development efforts	.643
V25	Speed of response on customer complaints	.545

Table 8.2.14. shows the highest loadings on the second factor. This factor was called **"Information processing attitudes"** as its items relate to attitudes regarding the processing and the following-up of (market) information. Cronbach Alpha was 0.7356.

Table 8.2.14 - Highest loadings on the second factor of market orientation: information processing attitudes

Variable	Label of variable	Highest Factor Loading
V11	Customer satisfaction assessments influence senior managers' pay	.675
V13	In-house market research	.569
V14	Polling end users to assess the quality of products and services	.752
V19	Data on customer satisfaction are disseminated regularly	.644

Table 8.2.15. shows the third factor called **"market alertness"**, because its three items relate to an alertness to the market. The Cronbach Alpha was: 0.5466, which is not at an acceptable level (Nunnally, 1978).

Table 8.2.15 - Highest loadings on the third factor of market orientation: market alertness

Variable	Label of variable	Highest Factor Loading
V18	Circulating documents about customers	.649
R21	Alertness to changes in customers' needs	.609
R23	Market research driven	.659

It is this revised construct of market orientation (the aggregate of the three subconstructs) that is used in subsequent analysis.

8.3. Statistical description of the constructs

For each of the constructs the score for the scale was obtained by summarising the scores, for each respondent, over the number of items comprising the scale. As items were all scored on a 1 to 6 point interval scale, the range of scores for the composite variable scales depended on this number of items in the scale. In order that the scores on the composite scales could be more easily compared these scores were divided by the number of items so that the scores were expressed on a 1 to 6 scale.

Summary statistics of all constructs are given in Table 8.3.1.

Table 8.3.1. - Summary statistics for all constructs (Standard errors)

Construct	Minimum	Maximum	Mean	Standard Deviation	Skewness (0.236)	Kurtosis (0.467)
Formalisation	1.00	6.00	3.66	1.10	0.00	-0.51
Learning organisation	1.74	5.89	3.94	0.82	-0.35	-0.18
Market orientation	2.07	5.71	4.12	0.77	-0.44	-0.31
Business performance	2.50	6.00	4.25	0.733	-0.07	-0.22
Turbulence	1.80	6.00	3.78	0.87	-0.13	-0.56
Competitive Intensity	1.00	6.00	4.39	1.23	-0.60	-0.23

A box plot depicting the above is presented in Figure 8.3.1.

Figure 8.3.1. - Box plot for all constructs
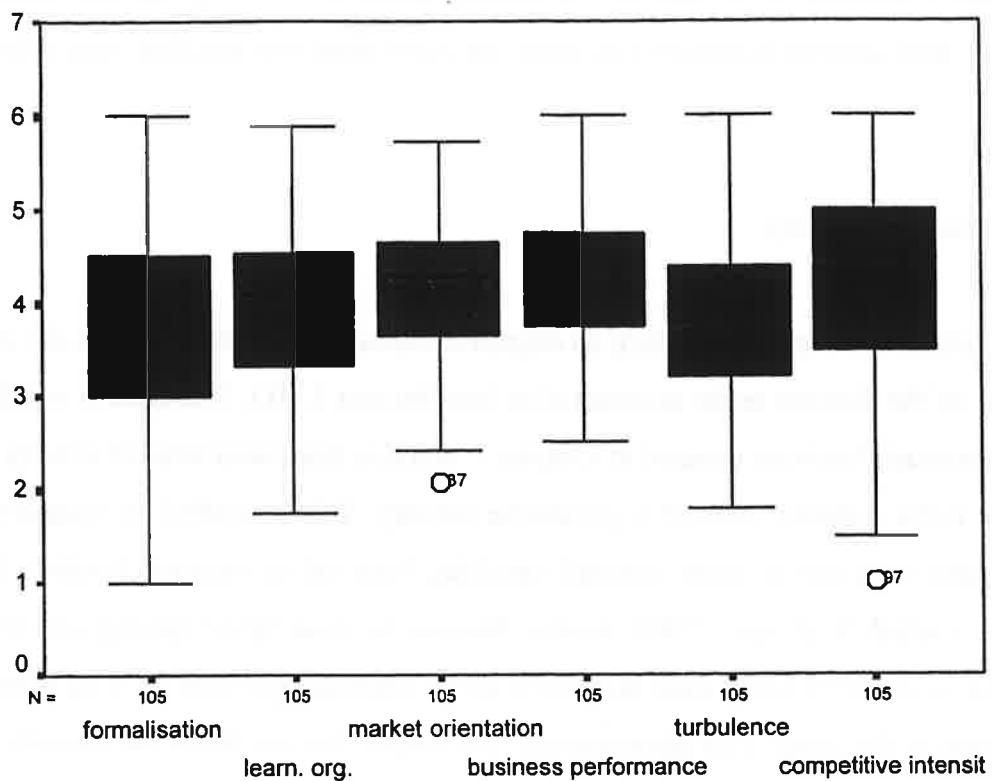
A box plot is a summary plot based on the median, quartiles, and extreme values. The box represents the interquartile range which contains 50% of the values. The whiskers are lines that extend from the box to the highest and lowest values, excluding outliers. A line across the box indicates the median (from the SPSS 7.5.1. Help function).

All constructs appear to conform to the normal distribution. This is indicated by the sample skewness and the kurtosis in Table 8.3.1. Both are distribution measures. Skewness is a measure of the asymmetry of a distribution. The normal distribution is symmetric, and has a skewness value of zero. A distribution with a significant positive skewness has a long right tail. A distribution with a significant negative skewness has a long left tail. Kurtosis is a measure of the extent to which observations cluster around a central point. For a normal distribution, the value of the kurtosis statistic is 0. Positive kurtosis indicates that the observations cluster more and have longer tails than those in the normal distribution and negative kurtosis indicates that the observations cluster less and have shorter tails (from the SPSS 7.5.1. Help function).

As can be seen from Table 8.3.1., kurtosis and skewness are present, but they are not significantly different from that of the normal distribution (as mentioned above, values of zero indicate normality) as none are more than two standard errors from zero.

8.4. Instrument validity

Validity refers to the extent to which an empirical measure adequately reflects the real meaning of the concept under consideration (see Section 5.10.). The *content validity* of the constructs has been covered in Chapter 7. Another important form of validity to measure is the *criterion-related or predictive validity*. This is studied by comparing scale scores with one or more external variables, believed to measure (predict) the attribute studied (Kerlinger, 1986). Firstly, this can be done by comparing the mean score for respondents under each dimension of the construct grouped by their overall impression of the measure of this construct. The overall impression of the measure of the construct was available for the learning organisation, market orientation and business performance. See Table 8.4.1. This table shows increases for each factor as the overall score increases.

Table 8.4.1. - Construct scores with scores for the overall impression variable for learning organisation (V78), market orientation (V77) and business performance (V76), mean ratings (# respondents)

Strongly Disagree--Strongly Agree

Variable	1	2	3	4	5	6
Overall learning organisation	2.26 (3)	3.29 (15)	3.47 (16)	4.11 (35)	4.42 (20)	5.12 (7)
Overall market orientation	2.07 (1)	2.79 (2)	3.42 (11)	3.98 (31)	4.36 (38)	4.88 (13)
Overall business performance	2.75 (1)	3.39 (9)	4.09 (40)	4.12 (40)	4.65 (27)	5.28 (8)

Secondly, the criterion-related or predictive validity can be studied by the correlation between the construct and the overall measure of the construct. See Table 8.4.2. This

table shows that there is a significant correlation of the constructs with the overall measures of the constructs.

Table 8.4.2. - Correlation of the constructs with overall measure variable of the construct for learning organisation (V78), market orientation (V77) and business performance (V76)

Relationship	Correlation	Significance
Overall learning organisation versus learning organisation	0.698	p<0.01
Overall market orientation versus market orientation	0.643	p<0.01
Overall performance versus performance	0.612	p<0.01

8.5. Conclusions

In this chapter a factor analysis was performed on the learning organisation and market orientation constructs. The objective was to "tidy up" the learning organisation and market orientation constructs. The other constructs did not contain enough items to perform a factor analysis. Furthermore, all constructs were statistically described and reliability and validity checks were made.

The exploratory factor analysis of the learning organisation construct revealed five factors (called "learning climate", "learning methods and techniques", "learning attitudes", "learning to enhance performance" and "individual and team practices"), which had acceptable Cronbach Alpha levels (>0.71). The confirmatory factor analysis of the market orientation construct revealed three factors: "external orientation", "information processing attitudes" and "market alertness. The third factor ("market alertness") did not show an acceptable Cronbach Alpha (0.5466). The other two factors had acceptable Cronbach Alpha levels (>0.73). Although these factors essentially refer to an organisation's market orientation, they do not appear to be analogous to the conceptualisation of Kohli and Jaworksi (1990), who proposed "intelligence generation", "intelligence dissemination" and "responsiveness" instead. These factors were confirmed in Kohli, Jaworski and Kumar's article (1993).

154

The formalisation, learning organisation, market orientation, business performance, turbulence and competitive intensity constructs were statistically described and their normality and reliability were checked. These were found to be acceptable. Because the overall impression of the measure of the construct was available for learning organisation, market orientation and business performance, the criterion-related or predictive validity could be assessed for these scales, which was also found to be acceptable.

CHAPTER 9. THE RELATIONSHIPS BETWEEN THE CONSTRUCTS

9.1. Introduction

In this chapter the relationships between the constructs are analysed. Firstly, the correlations between the constructs are investigated by examining the correlation coefficients and possible moderator effects are assessed by moderated regression analysis. Secondly, the relationships between the constructs are analysed by the structural equation modelling approach. After this a modified questionnaire for organisations to assess their levels of learning organisation, market orientation and business performance is presented. Conclusions are drawn about the relationships between the constructs and about the consequences for the research hypotheses.

9.2. Correlation between the constructs and investigation of moderator effects

In this section the correlation coefficients between the constructs are investigated and the moderating influence of turbulence and competitive intensity on the learning organisation/market orientation-performance link is assessed.

9.2.1. Correlation between the constructs

The association between the constructs can be investigated by examining the correlation coefficients between the constructs (the value of the coefficient obtained indicates the strength of the linear relationship with an absolute value of one meaning that all points fall exactly on a straight line and a value of zero indicating no linear relationship between constructs). See Table 9.2.1. for the bivariate correlations between the constructs. Significant at the 1% confidence level were learning organisation with market orientation (0.733), learning organisation with business performance (0.373), learning organisation with turbulence (0.336), market orientation with business performance (0.420) and market orientation with turbulence

(0.329). Significant at the 5% confidence level was the correlation of business performance with turbulence (0.248). Not significant was the relationship of formalisation and competitive intensity with learning organisation, market orientation and business performance.

Table 9.2.1. - Correlation matrix for constructs

CONSTRUCTS	Formalisation	Learning organisation	Market orientation	Business performance	Turbulence	Competitive intensity
Formalisation	1	-0.069	0.036	-0.111	0.018	0.173
Learning organisation	-0.069	1	0.733**	0.373**	0.336**	-0.042
Market orientation	0.036	0.733**	1	0.420**	0.329**	-0.002
Business performance	-0.111	0.373**	0.420**	1	0.248*	-0.158
Turbulence	0.018	0.336**	0.329**	0.248*	1	0.048
Competitive intensity	0.173	-0.042	-0.002	-0.158	0.048	1

* = significant at the 5% level ** = significant at the 1% level

9.2.2. Investigation of moderator effects

Analysis of moderator effects can be done in different ways. For example, Jaworksi and Kohli (1993) performed a split group analysis. The sample was sorted in ascending order of a moderator variable and then it was split in the median to form two groups, one with a low level of the moderator variable and one with a high level. Then performance was regressed on market orientation and the moderator variables. Slater and Narver (1994a) carried out the same procedure as Jaworksi and Kohli's, but also performed a moderated regression analysis, while Greenley (1995) relied solely on moderated regression analysis. Moderated regression analysis requires the introduction of a multiplicative interaction term into the regression equation. In this study a moderator effect is indicated when the regression coefficient of the interaction

term is statistically significant in addition to the significance of the coefficient of market orientation and of the moderator variable (e.g. market turbulence). If a moderator effect is identified, then further analysis can identify differences in the relationship between the predictor variable and the dependent variable, over the range of the moderator variable. The nature of this moderation can then be determined by calculating the partial derivative, using the unstandardised regression coefficients. Jaworski and Kohli (1993), Slater and Narver (1994a) and Greenley (1995b) did not use structural equation modelling to analyse moderator effects.

In this study a moderator regression analysis like that performed by Slater and Narver (1994a) and Greenley (1995b) was carried out on subsets of the full model and in addition structural equation modelling was carried out on the full model (see Section 9.3.).

By performing moderated regression analysis, Greenley (1995b) was able to report moderator effects. These results were in contrast to Jaworksi and Kohli's (1993) and Slater and Narver's (1994a) who did not find convincing statistical significant evidence in support of moderator effects. As was described in Chapter 3, Slater and Narver used different performance measures than Jaworski and Kohli, namely ROA, sales growth and new product success (see Section 3.10.). Jaworski and Kohli used a more general business performance scale (see Section 5.4.3.). The performance scale of this study was based on Jaworski and Kohli's. Greenley adopted Slater and Narver's performance measures.

The results of the possible moderator effects are given in Table 9.2.2. as compared with Slater and Narver's (1994a) and Greenley's (1995b) results.

Table 9.2.2. - Results of the moderated regression analysis for this study, Slater and Narver (1994b) and Greenley (1995b) standardised regression coefficients (t-values) (interaction terms)

This study

Independent variables	Business Performance
Learning organisation	0.083 (0.197)
Turbulence	-0.124 (-0.278)
Interaction term	0.418 (0.600)
F	6.374***
Adjusted R_2	0.134
Multiple R	0.399
Learning organisation	1.018*** (3.045)
Competitive intensity	0.741 (1.660)
Interaction term	-1.090** (-2.021)
F	8.012***
Adjusted R_2	0.168
Multiple R	0.438
Market orientation	0.144 (0.329)
Turbulence	-0.175 (-0.318)
Interaction term	0.439 (0.549)
F	7.998***
Adjusted R_2	0.168
Multiple R	0.438
Market orientation	0.883** (2.559)
Competitive intensity	0.535 (1.058)
Interaction term	-0.841 (-1.390)
F	9.257***
Adjusted R_2	0.192
Multiple R	0.464

Slater and Narver

Independent variables	ROA	Sales Growth	New Product Success
Market orientation	0.63**	0.91***	0.52**
Market turbulence	-0.06 (-0.31)	0.23 (-0.43)	0.26 (-0.33)
Technol. turbulence	-0.09 (-0.22)	0.11 (-0.24)	-0.20 (-0.13)
Competitive hostility	0.06 (0.38)	-0.41* (0.57)	-0.19 (0.34)
Market growth	-0.06 (-0.00)	0.04 (-0.04)	-0.04 (-0.06)
Relative emphasis	-0.67	0.04	-0.14
Market growth	-0.06 (-0.29)	0.04 (-0.58)	-0.04 (-0.23)
Buyer power	-0.37** (-0.21)	-0.01 (0.00)	-0.08 (2.02)
Firm concentration	-0.08 (-1.77)	-0.35** (-0.27)	-0.06 (0.90)
Competitive hostility	0.06 (-3.57)	-0.41* (0.88)	-0.19 (-1.31)
F	6.47***	6.35***	3.91***
Adjusted R_2	0.34	0.34	0.22

Greenley

Independent variables	ROA	Sales Growth	New Product Success
Market turbulence	0.94** (2.04)		
Market orientation	0.53** (2.10)		
Interaction term	-0.95* (-1.85)		
Relative size	0.22*** (3.36)		
Relative cost	-0.18** (-2.64)		
Technol. change		1.16** (2.48)	
Market orientation		0.61** (2.34)	
Interaction term		-1.26** (-2.28)	
Relative size		0.18*** (2.82)	
Customer power			-0.80* (-1.80)
Market orientation			0.21 (1.32)
Interaction term			0.90* (1.91)
Market growth			0.22*** (3.26)
Relative size			0.18*** (2.84)
Relative cost			-0.11* (-1.66)
F	2.32***	2.17***	2.77***
Adjusted R2	0.10	0.10	0.12
Multiple R	0.32	0.31	0.33

*$p < 0.1$ **$p < 0.05$ ***$p < 0.001$

As is shown in Table 9.2.2., for this study the condition of statistical significant regression coefficients of the interaction term, in addition to the significance of the other dependent variables, was not satisfied at the 5% or 10% confidence level, so no further analysis was carried out. As can be seen from Table 9.2.2., these results were comparable to Slater and Narver's where none of the coefficients for the multiplicative interaction terms (t-values and multiple R's were not reported) was statistically significant. However, as is also shown in Table 9.2.2., Greenley did find significant multiplicative interaction terms for market orientation and ROI, significantly moderated by market turbulence, for market orientation and new product success rate, significantly moderated by technological change, and for market orientation and sales growth significantly moderated by customer power.

Thus, the results of the moderated regression analysis for this study produced findings similar to that of Slater and Narver's (1994a). Greenley's (1995b) results are different from those found in this study. However, caution should be exercised when interpreting the results of this study as the performance scales used in this study are different from those of Slater and Narver (1994a) and Greenley (1995b).

9.3. Structural equation model estimation

In Section 9.2. some statistical significant correlations between constructs and the absence of significant moderator effects were shown. For the further study of the interrelationships between the constructs structural equation model estimation was applied. Structural equation modelling enables the researcher to estimate a series of separate, but interdependent, multiple regression equations simultaneously. Furthermore, it enables the representation of latent constructs or variables, which have been operationalised by some measuring instrument. The analysis in this study was conducted using the computer programme AMOS, version 3.6 which was developed by James L Arbuckle (Arbuckle, 1997). AMOS stands for "Analysis of moment structures". The advantage of AMOS over LISREL (an acronym for "*Li*near *S*tructural *Rel*ations") 7.0. by Jöreskog and Sörbom, which was mostly used until now in

160

structural equation modelling, is that it much easier to use. Also, the graphical representation of the model can be used directly for analysis and does not have to be translated into matrices and syntax commands (see Section 5.9.1.).

Structural equation modelling specifies a structural model (a set of dependence relationships) that links the model constructs of the researcher. These proposed relationships are translated into a series of structural equations for every dependent variable. This is the measurement model that specifies the indicators for each construct and that assesses the reliability of each construct for use in estimating the causal relationships.

9.3.1. Performing structural equation modelling

There are seven steps in performing structural equation modelling (Hair, Anderson, Thatham and Black, 1992):

Step 1: Development of a theoretically based model that specifies all causal relationships between the variables in the research.

Step 2: Construction of the path diagram of causal relationships.

In the construction of a path diagram the relationships between constructs are represented with arrows. A straight arrow indicates a direct causal relationship from one construct to another. A curved line between constructs indicates a correlation between constructs. Two assumptions underlie path diagrams. The first one is that all causal relationships (based on theory) are indicated in the sense that the smallest possible number, that is still justified by theory, of causal paths and correlations are modelled. The second assumption is that the causal relationships are linear. There are two types of constructs in the model: *exogenous* (these are the independent variables that are not predicted by other variables in the model) and *endogenous* (these are the variables that are predicted by other variables in the model).

Step 3: Converting the path diagram into a set of structural equations that specify the measurement model.

In this model the *latent variables* (comparable with factors that are variables that cannot be measured directly, but only by the measurement of other variables: the *manifest variables)* and *indicators* (the same as manifest variables) are specified. Also possible *correlations* between the exogenous and endogenous constructs are specified.

Step 4: Choosing the input matrix type and estimating the proposed model.

A correlation or variance/covariance matrix of indicators can be used in the model. The measurement model then specifies which indicators correspond to each construct, and the latent construct scores are then employed in the structural model. After this a statistical programme will be chosen to run the estimation.

Step 5: Assessment of the identification of the structural model.

Identification (Hair, Anderson, Thatham and Black, 1992, p.429). is:

> "The degree to which there is a sufficient number of equations to "solve for" each of the coefficients (unknowns) to be estimated. Models can be underidentified (can't be solved), just identified (number of equations equals the number of estimated coefficients with no degrees of freedom), or overidentified (more equations than estimated coefficients and the degrees of freedom greater than zero). The analyst desires to have an overidentified model for the most rigorous test of the proposed model".

The only solution for identification problems is the defining of more constraints on the model.

9.3.2. Evaluation of the Goodness-of-Fit

Step 6: Evaluation of the Goodness-of-Fit Criteria.

The first thing to be done is to assess the degree to which the data and models meet the assumptions of structural equation modelling. The three assumptions of structural equation modelling are the same as for other multivariate methods. These are independent observations, random sampling of respondents and the linearity of all relationships.

Hair, Anderson, Thatham and Black (1992, p.447) observe that, once these assumptions are satisfied, the results have to be checked for the *offending estimates*:

> "These are estimated coefficients in either the structural or measurement models that exceed acceptable limits. The most common examples of offending estimates are (1) negative error variances or nonsignificant error variances for any construct, (2) standardized coefficients exceeding or very close to 1.0, or (3) very large standard errors associated with any specific results of the model, as changes in one portion of the model can have significant effects on other results".

Then the *overall model fit* has to be assessed with one or more goodness-of-fit measures. Goodness-of-fit is a measure of the correspondence of the actual or observed input (covariance or correlation) matrix with that predicted from the proposed model. If the proposed model has reached an acceptable fit, the proposed model has not been "proved", but it has only been confirmed as one of several possibly acceptable models.

It is important that the researcher does not overfit the model to the data: striving for a large number of degrees of freedom (the difference between the number of coefficients for a perfectly fitting model (one coefficient for each covariance/correlation) and the actual number of coefficients in the proposed model. In doing so, the model achieves *parsimony*, this is the achievement of better or greater model fit for each estimated coefficient.

With regard to the *overall model fit*, there are three goodness-of-fit measures:

1. Absolute fit measures that assess the overall model fit without adjustments for the degree of overfitting;
2. Incremental fit measures that compare the proposed model to a comparison model specified by the researcher;
3. Parsimonious fit measures.

9.3.2.1. Absolute fit measures

The fundamental measure of overall fit is the *likelihood-ratio chi-square statistic (χ^2)*. Large values of chi-square relative to the degrees of freedom with statistical significance levels exceeding 0.05 are recommended.

The χ^2 measure is very sensitive however to *sample size differences*. As sample size increases, this measure has a greater tendency to indicate significant differences for equivalent models. Hair, Anderson, Thatham and Black (1992) consider a sample size of 100 the minimum (in this context). They state that the sensitivity increases as the sample increases over 100 and reaches a "critical sample size" for a sample of 200. This means that the sample size of 105 in this study appears to be satisfactory. An alternative approach is offered by Bentler and Chou (1987), who recommend that the ratio of sample size to free parameters be at least 5:1.

Another index is the *GFI (Goodness-of-Fit Index)*. GFI is a non-statistical measure that ranges from 0 (poor fit) to 1 (perfect fit). Values greater than 0.90 are desirable. The *Non Centrality Parameter (NCP)* is an alternative measure of fit to χ^2 that does not depend on sample size. The columns *LO 90* (11.459) and *HI 90* (60.708) contain the lower and upper limit of a 90% confidence interval.

9.3.2.2. Incremental fit measures

Incremental fit measures provide indices to compare the proposed model to the independence model.

For the *Comparative Fit Index (CFI)* (Bentler, 1990) values greater than 0.90 are desirable.

The *Tucker-Lewis coefficient (TLI)*, which is also known as the *Bentler-Bonett non-normed fit index (NNFI)* was discussed by Bentler and Bonett (1980) in the context of analysis of moment structures and is also known as the Bentler-Bonett non-normed fit index (NNFI). The typical range for TLI lies between zero and one, but is not limited to that range. A TLI value close to 1 indicates a good fit, values greater than 0.90 are desirable.

The *Normed fit index (NFI)* was proposed by Bentler and Bonett (1980) as an incremental measure of fit. A value of zero means no fit at all and a value of one indicates a perfect fit. Values greater than 0.90 are desirable.

Bollen's (1986) *Relative fit index (RFI)* values close to 1 indicate a very good fit. Values greater than 0.90 are desirable.

The *Incremental fit index (IFI)* is proposed by Bollen (1989). An IFI of close to one indicates a good fit.

Hoelter's (1983) "Critical N" is the largest sample size for which one would accept the hypothesis that a model is correct. Hoelter does not specify a significance level to be used in determining the critical N, although he uses 0.05 in examples. AMOS produces a critical N for significance levels of 0.05 and 0.01.

9.3.2.3. Parsimonious fit measure

The interpretation of the parsimonious fit measure provides information about the identification of the model. The parsimonious fit measure relates the goodness-of-fit of the proposed model to the number of coefficients required to achieve this level of fit. This is done in order to diagnose if model fit has been achieved by overfitting.

The *Adjusted goodness-of-fit index (AGFI)* is an extension of the GFI, adjusted by the ratio of degrees of freedom for the proposed model to the degrees of freedom for the null model. GFI (Goodness-of-Fit Index) is a non-statistical measure that ranges from 0 (poor fit) to 1 (perfect fit). The AGFI can reach a maximum score of one, which means a perfect fit. A recommended acceptance level is a value of greater than 0.90. The AGFI is not bounded by zero, as the GFI is.

9.3.3. Interpretation and modification of the model

Step 7: Interpretation and modification of the model.

Once the model is considered to be acceptable, it may be examined if possible model modifications will improve the goodness-of-fit of the model.

9.3.4. Investigation of the structural models

Four structural models were investigated by the seven steps procedure proposed by Hair, Anderson, Thatham and Black (1992) that was described earlier. See Figure 9.3.1. for model A, Figure 9.3.2. for model B, Figure 9.3.3. for model C and Figure 9.3.4. for model D.

Step 1: Development of a theoretically based model that specifies all causal relationships between the variables in the research.

The theoretical model was described in Section 7.2., and was graphically presented in Figure 7.2.1. Although none of the literature addressed explicitly the question of the causal order between the learning organisation and market orientation, it was thought it would be interesting to fit competing models which address the causal order question by structural equation modelling. This seemed to be justified by implicit indications of this causal order made by some authors described in Section 4.2. (see below).

Thus, four theoretical models were analysed. Because it was shown in Section 9.2. that there was no significant correlation of formalisation with the learning organisation and market orientation, this construct is not included in these models. All models specify the relationship between the learning organisation and market orientation, the influence of the learning organisation and market orientation on business performance and the moderating influence of turbulence and competitive intensity on the relationship of the learning organisation and market orientation with business performance. The only difference between the models is the nature of the relationship between learning organisation and market orientation. The four models are as follows:

- Model A, where the learning organisation causes a market orientation.

Day (1992) observes that continuous learning about markets is a core competence of companies. The ability to process and disseminate information from markets and to respond to this information may be seen as the company's learning capability (Day, 1994). This view may be interpreted as a statement that the learning organisation (the capability to learn) causes a market orientation (i.e. the organisation is able to process and disseminate information from markets and to respond to this information).

Likewise, Kiernan (1993) observes that an internal oriented learning strategy is a prerequisite of an externally directed market orientation, which may also be interpreted externally as a view that the learning organisation causes a market orientation.

- Model B, where market orientation causes a learning organisation.

Sinkula (1994) describes how organisations learn the skills of how to process market information effectively in practice and how this learning gradually leads to higher levels of skills (of how to process market information) and higher levels of learning. Organisations "start" with the processing of market information, which develops into a market orientation, which subsequently develops into a learning organisation.

Therefore, Sinkula (1994) puts it the other way around: market orientation causes the learning organisation, although subsequently in this process higher levels of learning organisation cause higher levels of market orientation which cause higher levels of learning organisation etc.

Slater and Narver (1995) see market orientation as a culture that contributes to the creation of a learning organisation. By this statement they suggest that market orientation comes first and causes a learning organisation. However, they also believe that a market orientation should be accompanied by an entrepreneurial drive or culture to be able to create a learning organisation and, like Sinkula (1994), they observe that a learning organisation, in its turn, contributes to higher levels of market orientation.

- Model C, where the learning organisation and market orientation are correlated.

The theoretical relationship between the two was elaborated upon in Chapter 4 (explained by the same authors mentioned with models A and B), while in Section 9.2.1. significant statistical evidence was shown to support the relationship between learning organisation and market orientation.

Model D, where the learning organisation and market orientation are integrated.

Model D goes a step further than model C. Here the learning organisation and market organisation are integrated into one construct.

Step 2: Construction of the path diagram of causal relationships.

The proposed procedure by Hair, Anderson, Thatham and Black (1992) of drawing a path diagram was followed in the construction of model A (see Figure 9.3.1.), model B (see Figure 9.3.2.), model C (see Figure 9.3.3.) and model D (see Figure 9.3.4.).

Figure 9.3.1. (model A) shows three unobserved (latent) endogenous variables (drawn as ellipses): learning organisation (LO), market orientation (MO) and performance

(PER). Learning organisation (LO) is indirectly measured by its factors (see Section 8.2.1.): the observed endogenous variables (indicators) learning climate (learncli) learning methods and techniques (learnmet), learning attitudes (learnatt), learning to enhance performance (learnper) and individual and team practices (lerarnpra). Market orientation (MO) is indirectly measured by its factors (see Section 8.2.2.): external orientation (markex), information processing attitudes (markinf) and market alertness (markal). Performance (PER) is indirectly measured by the observed endogenous variables performance 1 (perform1) and performance 2 (perform2). The original business performance construct was split, in order to make a distinction between the self-developed general (sales and profit) business performance items (V74 and V75) (see Section 5.4.3.) that were used in the study (perform2) and the quality performance items (V60 and V61) (perform1).

Furthermore, the model describes a path from learning organisation (LO), to market orientation and from market orientation (MO) to performance (PER) in order to assess the influence of LO on MO and of MO on PER. In order to assess the moderating influence of the observed exogenous variables turbulence (turbulen) and competitive intensity (compet) on the relationship of learning organisation (through market orientation) with performance, two single-headed arrows were drawn from turbulence (turbulen) and competitive intensity (compet) directed at LO, MO and at PER and a covariance relationship from turbulence (turbulen) and competitive intensity (compet) with each other and with learning organisation (LO) was drawn. In this way it was thought that the moderating influence of turbulence and competitive intensity on the relationship of the learning organisation and market orientation with performance was measured. This was done by measuring in one model the influence of learning organisation (through market orientation) and market orientation on performance, the influence of turbulence and competitive intensity on performance and the correlation of turbulence and competitive intensity with the learning organisation[7].

---

[7] Arbuckle (1977, pp.307-541) gives some examples of structural models that address these kinds of problems.
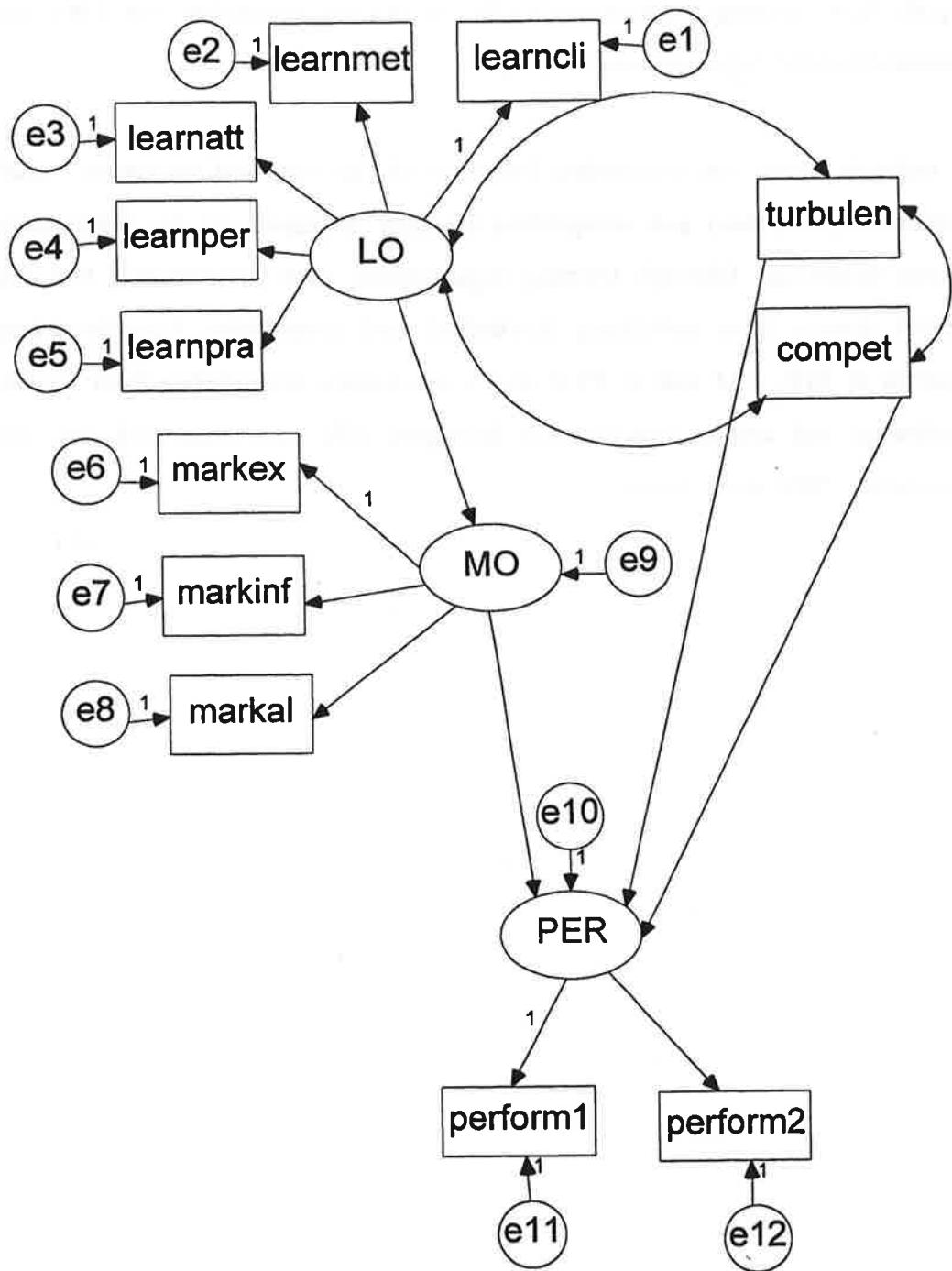
See Figure 9.3.2. for model B. The difference between model A and model B is that model B describes a path from market orientation (**MO**) to learning organisation (**LO**) and from learning organisation (**LO**) to performance (**PER**), while model A describes a path from learning organisation (**LO**), to market orientation and from market orientation (**MO**) to performance (**PER**).

In order to assess the moderating influence of the observed exogenous variables turbulence (**turbulen**) and competitive intensity (**compet**) on the relationship of market orientation (through learning organisation) with performance, two single-headed arrows from turbulence (**turbulen**) and competitive intensity (**compet**) directed at **MO, LO** and at **PER** and a covariance relationship from turbulence (**turbulen**) and competitive intensity (**compet**) with each other and with market orientation (**MO**) were drawn.

Figure 9.3.2. - Structural model B: market orientation causes learning organisation
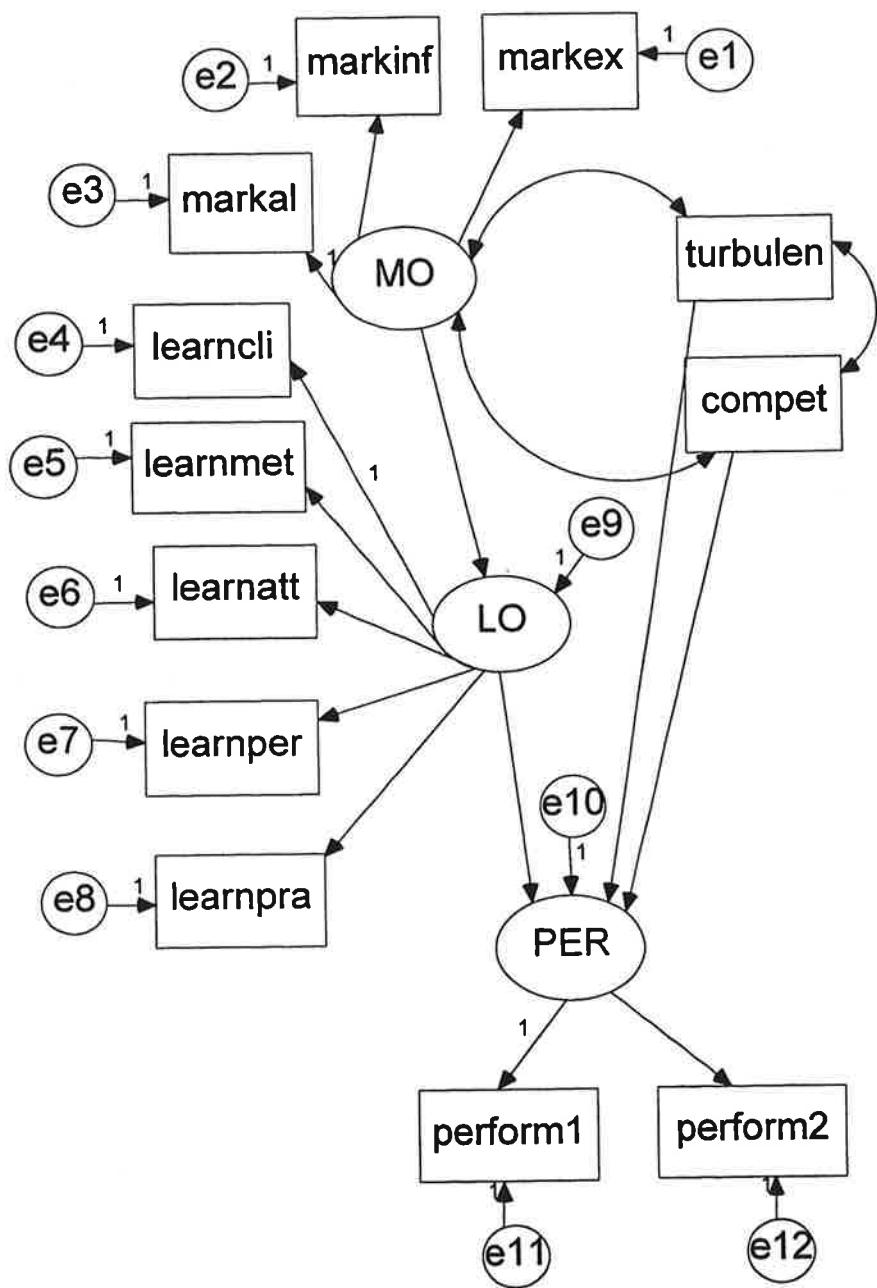
See Figure 9.3.3. for model C. In model C learning organisation (**LO**) and market orientation (**MO**) are allowed to correlate. Also covariance relationships were drawn between turbulence (**turbulen**) and competitive intensity (**compet**) with learning organisation (**LO**) and market orientation (**MO**).

Figure 9.3.3. - Structural model C: learning organisation and market orientation are correlated
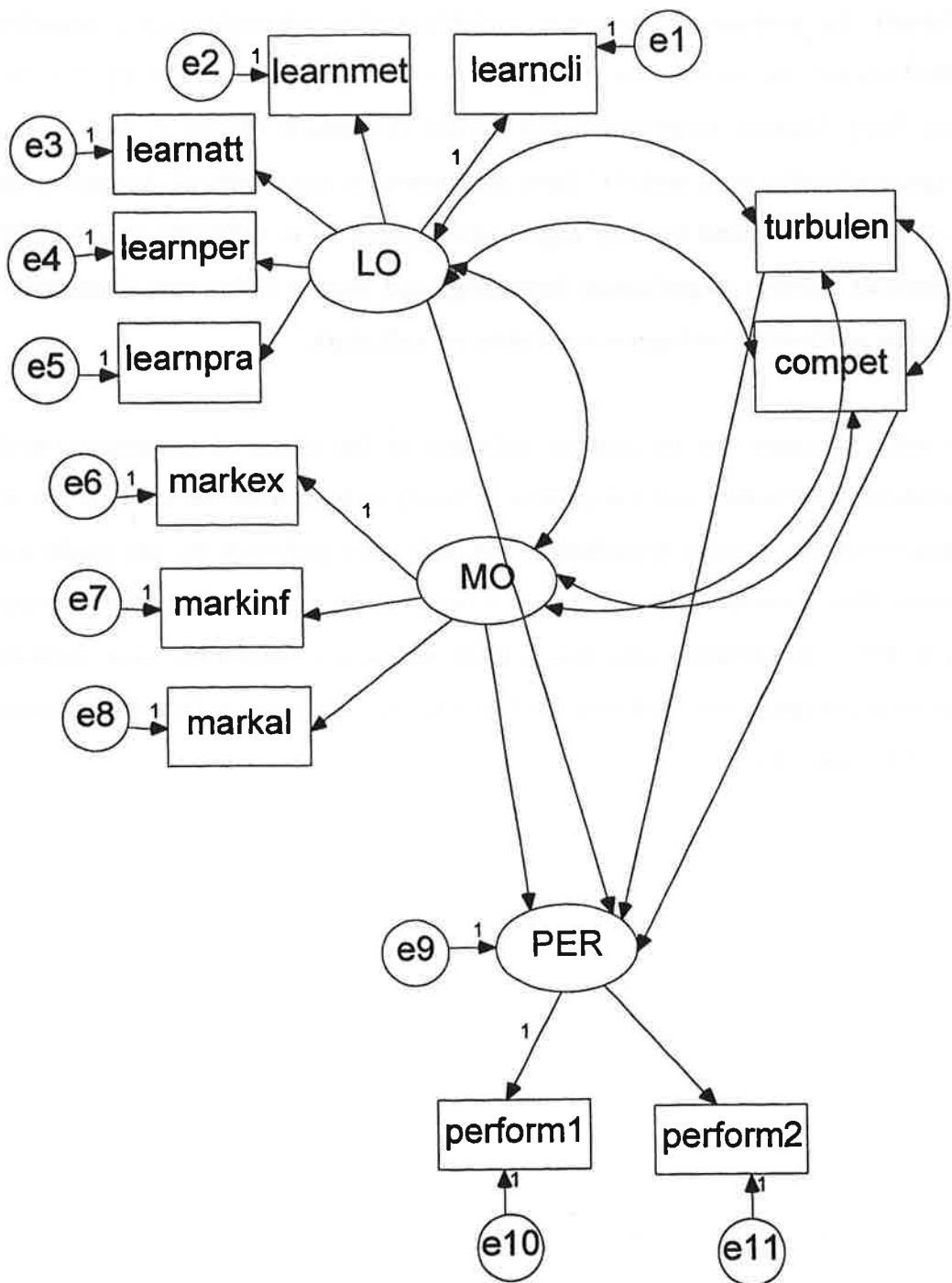
See Figure 9.3.4. for model D. In model D learning organisation and market orientation are combined into one construct, the market oriented learning organisation (**MOLO**). In this model there are two unobserved (latent) variables (drawn as ellipses): the unobserved exogenous variable market oriented learning organisation (**MOLO**) and the unobserved endogenous variable performance (**PER**). The factors underlying learning organisation and market orientation (model A and B) are no longer applicable, as in model C these two constructs are combined. Instead, in model C, the market oriented learning organisation (**MOLO**) is indirectly measured by its constructs learning organisation (**learnorg**) and market orientation (**markor**) that function as observed endogenous variables or indicators.

In order to assess the moderating influence of the observed exogenous variables turbulence (**turbulen**) and competitive intensity (**compet**) on the relationship of the market oriented learning organisation (**MOLO**) with performance, two single-headed arrows from turbulence (**turbulen**) and competitive intensity (**compet**) directed at **PER** and a covariance relationship from turbulence (**turbulen**) and competitive intensity (**compet**) with each other and with the market oriented learning organisation (**MOLO**) were drawn.

Figure 9.3.4. - Structural model D: learning organisation and market orientation are combined
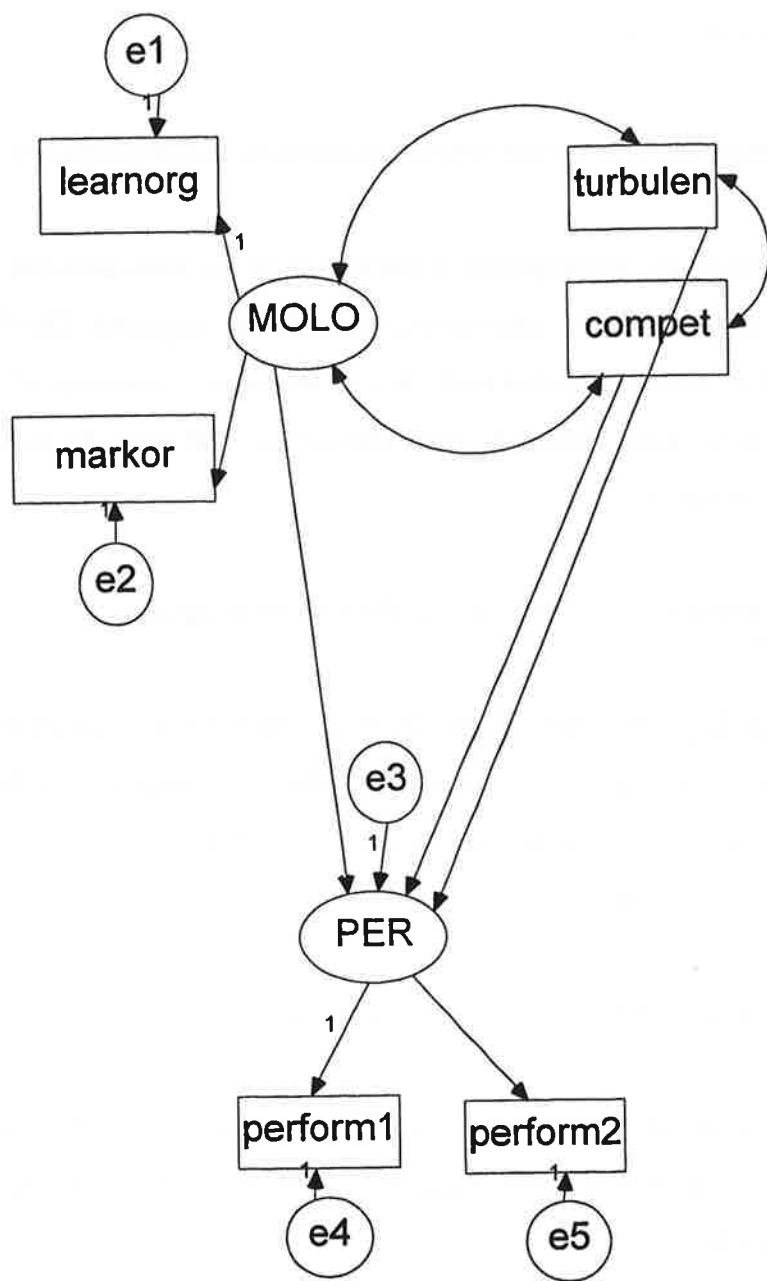
Step 3: Converting the path diagram into a set of structural equations that specify the measurement model.

The graphical properties of AMOS made it possible to take the three steps at once, just by drawing the model.

Step 4: Choosing the input matrix type and estimating the proposed model.

As with step three, the development of the structural and measurement model may be done simply from the theory and the drawing of path diagrams. The AMOS models can be based on both correlation and variance/covariance matrices of indicators. No decision has to be made before drawing the model. The resulting model can handle both types of matrices.

Step 5: Assessment of the identification of the structural model.

As can be seen from Figures 9.3.1., 9.3.2., 9.3.3. and 9.3.4. the unit of measurement of each unobserved variable was fixed by putting constraints on the parameters. Furthermore, in order to anticipate under-identification, it was necessary to put constraints on some paths.

Step 6: Evaluation of the Goodness-of-Fit Criteria.

The three assumptions of structural equation (independent observations, random sampling of respondents and the linearity of all relationships) were met for the three structural models.

The *first assumption, independent observations,* was met, because all respondents in the sample were independent from each other and there was no influence in the answering process from the one respondent to another. Neither did the respondents have any knowledge about the other respondents.

The *second assumption, random sampling of respondents,* was not applicable, as all respondents of the target group were approached and received a questionnaire. The idea behind this assumption, however, is whether the researcher influences the sampling composition. As this was not the case, it means that this assumption was not violated. The same counts for the non-response: the question of who responded and who did not was not influenced by the researcher.

The *third assumption, the linearity of all relationships* was also met. As we have seen in Chapters 4 and 5, the normality of the data and the skewness and kurtosis were checked and appeared to be within acceptable limits.

The models, depicted by Figure 9.3.1., 9.3.2., 9.3.3. and 9.3.4., did not produce any of the *offending estimates*.

Then the *overall model fit* has to be assessed with the goodness-of-fit measures. See Table 9.3.1.

Table 9.3.1. - Goodness-of fit measures for the structural models

Type of measure	Measure	Model A	Model B	Model C	Model D	Recommended Level
Absolute fit	χ^2	79.709 DF=49 p=0.004	84.326 DF=49 p=0.001	78.713 Df=46 p=0.002	7.032 DF=5 p=0.218	p>0.05
	Sample Size	105 3.6:1	105 3.6:1	105 3.3:1	105 6.56:1	>100 sample size to free parameters> 5:1
	GFI	0.900	0.890	0.899	0.979	>0.90
	NCP	30.707 LO=10.132 HI=59.185	35.326 LO=13.731 HI=64.786	32.713 LO=12.007 HI=61.286	2.032 LO=0.000 HI=13.277	between lower and upper limit of a 90% confidence interval
Incremental fit	CFI	0.939	0.930	0.935	0.985	>0.90
	TLI/NNFI	0.918	0.906	0.907	0.956	>0.90
	NFI	0.861	0.852	0.862	0.954	>0.90
	RFI	0.812	0.801	0.802	0.861	>0.90
	IFI	0.941	0.932	0.938	0.986	>0.90
	Hoelter's Critical N	87 98	82 93	84 95	164 224	values for p=0.05 and p-0.01
Parsimonious fit	AGFI	0.840	0.826	0.828	0.910	>0.90

Step 7: Interpretation and modification of the model.

When the goodness-of fit measures of the structural models A, B C and D are interpreted, it shows that model D is the model with the best model fit. Model D has a good fit on all indices but RFI, while models A, B and C have a poor fit on χ^2, Ratio of Sample Size to Free Parameters, GFI, NFI, RFI, Hoelter's Critical N and AGFI. So it may be concluded that this study did not produce fit for models A, B and C. The only model that was convincing was the model where the learning organisation and market orientation are combined into one construct.

Because model D shows a good fit, the regression weights and correlation estimates from this model are reported.

9.3.5. Regression weights and correlations

Apart from the assessment of the model fit, an important objective of the structural equation modelling procedure is to assess the regression weights and correlations in order to collect information for the acceptance or rejection of the research hypotheses. See Table 9.3.2. for the regression weights.

Table 9.3.2. - Standardised regression weights estimates for structural model D

Dependent variables	Independent variables			
	MOLO	PER	turbulence	competitive intensity
PER	0.605**		-0.012	-0.252
learning organisation	0.822**			
market orientation	0.892**			
performance1		0.765**		
performance2		0.561**		

* = significant at the 5% level   ** = significant at the 1% level

As can be seen from Table 9.3.2, the influence of the market oriented learning organisation (**MOLO**) on performance (**PER**) was significant (0.605, p=0.004). The market oriented learning organisation (**MOLO**) itself was to a greater extent influenced by market orientation (0.892, p=0.002) than by learning organisation (0.822, p=0.002). Performance (**PER**) was to a greater extent influenced by performance 1 (quality performance) (0.765, p=0.002) than by performance 2 (general business performance) (0.561, p=0.002). The influence of turbulence (-0.012, p=0.880) on performance (**PER**) and of competitive intensity (-0.252, p=0.052) on performance (**PER**) were not significant at the 5% level.

Table 9.2.3. shows the correlations for model D.

Table 9.2.3. - Correlation estimates for model D

	MOLO	turbulence	competitive intensity
MOLO	1	0.383**	-0.019
turbulence	0.388**	1	0.048
competitive intensity	-0.019	0.048	1

* = significant at the 5% level ** = significant at the 1% level

A significant correlation existed between the market oriented learning organisation (**MOLO**) and turbulence (0.388, p=0.002), a non-significant negative correlation between **MOLO** and competitive intensity (-0.019, p=0.907) and a non-significant correlation between competitive intensity and turbulence (0.048, p=0.618)

These results supply further evidence for the significant *influence of the learning organisation and market orientation on business performance*, as was also concluded in Section 9.2. However, no evidence was found for the *moderating influence* of turbulence and competitive intensity on the relationship of the learning organisation and market orientation with business performance. Although the correlation of turbulence and the market oriented learning organisation (**MOLO**) was significant, no significant influence was found for turbulence on performance (**PER**). The same applied to correlation of competitive intensity on the market oriented learning organisation (**MOLO**) and its influence on performance (**PER**), which were all insignificant.

9.4. Modified questionnaire

With the results from the analysis in this chapter and in Chapter 8 it was possible to develop a modified, shorter 36 item questionnaire, which is shown in Appendices G. and H. Because no significant influence was shown of formalisation on learning organisation and on market orientation and of turbulence and competitive intensity on the learning organisation/market orientation-performance link, these constructs are not included in the questionnaire. Preferably this questionnaire uses a five- or a seven-point Likert-type scale. Although the use in this study of a six-point scale should not

produce difficulties (see Section 5.4.3.) as it is still a scale of summated ratings, a five- or seven-point Likert-type scale - with its neutral middle position - is much more common and accepted.

This questionnaire may be used by organisations to assess their levels of learning organisation, market orientation and business performance. For reasons of convenience, the order of the questions follows the order of the three constructs (learning organisation, market orientation, business performance). The practical application of the questionnaire will require further study about the possible uses for the underlying factors (Sections 8.2.1. and 8.2.1.) and the desirable order of items from the respondents' point of view (Babbie, 1992). Organisations may use this questionnaire to compare their results with the data of 105 companies who participated in this study. In this way the database may grow to become a large reference database for (Dutch) organisations.

See Table 9.4.1.

Table 9.4.1. - The items of the modified and shortened questionnaire

Construct	Item	Label
Learning Organisation	V1	vision and strategy are continually updated
Alpha =0.9260	V2	learning vision
	V3	managers help employees to integrate learning experiences
	V4	managers admit their mistakes
	V5	not afraid to share opinions and speak our minds
	V6	reducing the number of rules, procedures and the like
	V7	key business information dissemination
	V8	key business performance dissemination
	V9	analyse mistakes in order to learn
	V10	active experimentation;
	V11	customer satisfaction is considered in performance reviews
	V12	giving feedback to suppliers
	V13	training on "learning how to learn"
	V14	creativity training
	V15	special learning projects
	V16	training to enhance job performance
	V17	managers rewarded for supporting development employees
	V18	risk taking by employees is rewarded
	V19	individual development plans that stimulate performance
Market Orientation	V20	customer satisfaction influences senior managers' pay
Alpha =0.8619	V21	meeting with customers once a year
	V22	in-house market research
	V23	polling end users to assess the quality products and services
	V24	collecting industry information through informal means
	V25	reviewing the effects of environmental changes on customers
	V26	quarterly departmental meetings to discuss market trends
	V27	circulating documents about customers
	V28	data on customer satisfaction are disseminated regularly
	R29	interdepartmental alertness
	R30	alertness to changes in customers' needs
	V31	reviewing product development effort
	V32	speed of response on customer complaints
Business Performance	V33	quality of products and services in relation with competition
Alpha =0.7026	V34	our customers are firmly convinced of quality products/services
	V35	sales growth in relation with competition
	V36	profitability in relation with competition

Vx = positively defined variable
Rx = negatively (reverse-scored) variable

9.5. Conclusions

In this chapter the association between the constructs was analysed. Firstly, by examining the correlation coefficients between the constructs and by moderated regression analysis and secondly, by the structural equation modelling approach. For the structural equation modelling, four models were developed, estimated and identified and the results were evaluated for the goodness-of-fit indices. Only model D, in which learning organisation and market orientation were combined into one construct, showed an acceptable level of overall fit using a number of indices. Model A (learning organisation causes market orientation), model B (market orientation causes learning organisation) and model C (learning organisation and market orientation are correlated) showed a poor model fit.

The hypotheses of this study (see Section 7.2.) were as follows:

H1:   The greater the level of formalisation, the lower the level of learning organisation and the level of market orientation.

H2:   The greater the level of learning organisation, the greater the level of market orientation and vice versa.

H3.   The greater the level of learning organisation and the level of market orientation, the greater the level of business performance.

H4:   The greater the level of turbulence and the level of competitive intensity, the stronger the relationship between the learning organisation and market orientation with business performance.

No convincing evidence was found in support of hypothesis 1. There was no significant correlation between formalisation and the learning organisation, nor between formalisation with market orientation.

Statistically significant evidence was provided in support of hypotheses 2 and 3. There were significant correlations between the learning organisation and market orientation and of the learning organisation and market orientation on business performance. A significant effect of learning organisation and market on business performance was shown by the structural equation modelling. The structural equation modelling did not produce significant information on the possible causal order of learning organisation and market orientation.

For hypothesis 4 no support was found. The moderated regression analysis did not produce significant statistical evidence for the moderating influence of turbulence and of competitive intensity on the learning organisation-performance and the market orientation-performance link. Likewise, the structural equation modelling approach did not provide evidence for moderator effects on the learning organisation/market orientation-performance link.

As a by-product of this study, a modified and shorter 36-item questionnaire was presented which may be used by organisations to assess their own levels of learning organisation, market orientation and business performance.

CHAPTER 10. THE QUALITATIVE RESEARCH RESULTS

10.1. Introduction

In this chapter the qualitative research results are described. The qualitative research was done after the questionnaire research to contribute to the validation of the quantitative empirical findings and to illustrate these with examples of the participating organisations. The interviews were done in an open, *unstructured* way. This means an open interaction between the interviewer and the interviewee according to a general plan of inquiry.

Executives of companies that had participated in the research were interviewed. Of course, there are good arguments for a research approach of interviewing managers who had not participated. For example, in this way the non-response might have been analysed to some extent (if non-respondents had been approached), the twenty interviews would have added to the insight already gained by the 105 respondents who filled out the questionnaires and the respondents would not be influenced by the questionnaire items they had filled out, which may focus their attention and stimulate their consciousness of learning organisation and market orientation themes. However, this interview research was carried out in order to gain a better and deeper understanding of what it means to be a learning and a market oriented organisation and to comprehend fully the organisations behind the figures produced by the survey. Because of this it was thought important to interview people who had filled out the questionnaire: to look behind the figures and in so doing to reach more depth. Furthermore, it was thought that the interviews could modestly contribute to the assessment of the validity of the survey: the interviews were partly focused on receiving feedback from the executives on the survey results in general and on the results of their companies specifically. Therefore it was decided to interview executives who had already responded to the survey.

The interviews were written down in transcripts using the hand-written notes of the researcher and the cassette tapes. After this the "raw material" was interpreted and

186

excerpts from the transcripts were classified along the research core variables (formalisation, learning organisation, market orientation, business performance, turbulence, competitive intensity). The material was read again and again, and the impressions that came up were written down. In this manner the raw material was transformed into information that deepened the understanding of the quantitative findings on the research questions.

In this chapter, firstly, the interviews of the executives of twenty export companies who participated in the research are summarised. Secondly an attempt is made to discover the central themes of these interviews. Thirdly, the companies who were interviewed are classified in terms of Mintzberg (1979).

10.2. Interview data

Below the reader will find short summaries of the twenty interviews. The interviews were carried out between March and June 1996. More general information about the interviewed companies can be found in Appendix K., Table K.1. The interviews began by introducing the interviewee to the general research results (for all participating companies) and the specific research results (for his company). Then he was asked to give his reactions to and explanations for these results for his company. The interviews took one to two hours and were tape-recorded. In the interview summaries in Section 10.2.1., the reader can find company specific research results between brackets. These were derived from the processed questionnaires. With these figures the reader can deduce the relative position of the company in comparison with the other participant companies. For example, "learning organisation (4.08; 45%)" means the company scored 4.08 on the learning organisation indicator and has a position of 45% as compared with the other companies on this indicator. This position means that 45% of the participating companies scored equal or lower and 55% scored equal or higher. After this quantitative information, the reactions and explanations of the interviewees are presented. Every summary starts with a short general description of the company. Table 10.2. shows how the positioning of the twenty companies was labelled by the researcher in terms of "low", "high" etc.

Table 10.2.1. - Labels for the positioning of companies on the different constructs

Value	Label
<20	very low
20-30	low
31-44	relatively low
45-55	medium
56-69	relatively high
70-80	high
>80	very high

10.2.1. Summary of the interviews

Company A: Producing steel products

Introduction

Company A produces stamped and drawn parts. Deep drawing, 3D-lasercutting; job enamelling of steel, cast iron and stainless steel. It employs 250 people and was founded before the Second World War. The general level of education is modest. Only management and staff members are highly educated. The company has ISO 9001 certification. The company is doing well, makes a normal profit and does not show much growth. The management team consists of a Managing Director, a Production Director and a Marketing Director. The Director of Production was interviewed.

Formalisation

This level (4.50; 80%) is high. This is due to requirements imposed by the complex production process and the quality standards (ISO 9001).

Learning Organisation

The degree of learning organisation (4.08; 45%) is medium. The interviewee explained this medium level as follows: most employees are only modestly educated which negatively influences the level of learning. On the other hand, despite this low education level, the production process is very complex and changing rapidly with the fast technological development of production techniques. Furthermore, the company is switching to the use of stainless steel, which demands a higher level of knowledge and skills. This means that the workers have to learn rapidly and they are trained continuously.

Market Orientation

The degree of market orientation (3.79; 30%) in the company is low. According to the interviewee, one explanation for this relatively low level of market orientation may be the company's technical and production focus and the emphasis on product quality. Thus a great deal of energy is put into production and very little energy is used to monitor the market, a market which demands high quality and which is characterised by a very limited number of competing companies.

Business Performance

The company has a high level of business performance (4.33; 75%). The manager interviewed explained this was due to the high quality of the company's products which is not matched by their competitors.

Turbulence

The level of turbulence (4.50; 80%) is high. This is due to the ever increasing and rapidly changing quality demands.

Competitive Intensity

The level of competitive intensity (4.67; 60%) is relatively high. Although competition is scarce, where it exists, it is on price and it has an international character.

Company B: Producing grass seeds and clover seeds

Introduction

This company produces grass seeds and clover seeds for international professional markets and is investing heavily to improve recent products and develop new varieties. It employs 100 people. The Senior Product Manager was interviewed.

Formalisation

Formalisation (3.50; 50%) is at a medium level. Until now there were few rules and procedures. Because of quality management programmes these have become more elaborate and strict. Until recently staff have experienced a substantial amount of personal freedom.

Learning Organisation

The degree of learning organisation (3.83; 38%) is relatively low. The interviewee explained this relatively low level as follows: although Research & Development (this department consists of approximately 10 people) is important for this company, most employees have traditional production jobs and very limited resources are spent on education.

Market Orientation

The degree of market orientation (4.00; 30%) is low. The interviewee explained this was because the company's main focus is on research and production. Marketing is not at the centre of attention. Furthermore, the markets for their products are quite stable, as some large international companies serve and protect their markets on a product and regional base.

Business Performance

The company's business performance (4.00; 60%) is at a relatively high level. The manager explained that, despite low product margins and high research costs, thanks to the stable market position and innovative power of the company, performance is at an acceptable level.

Turbulence

The level of turbulence (3.75; 45%) is at a medium level. On the one hand the market is relatively stable, on the other hand market developments are difficult to predict. It is not possible to look further than two to three years ahead.

Competitive Intensity

The level of Competitive Intensity (4.00; 35%) is relatively low. This can be explained by its relatively stable markets and the company's continuing and long-lasting relationships with customers.

Company C: Development and manufacturing of parts or assemblies from metal/metal or metal/plastic to customers' specifications

Introduction

This company produces parts for international industrial companies. It employs 4000 people. The company is a subsidiary of a larger company and used to produce solely for its mother company. Some years ago, however, it started to manufacture for external markets. Now 40% of the turnover goes outside the corporation. The ambition for years to come is to sell 60% of the total production to external customers. The company consists of a large development and production unit in the Netherlands and some smaller ones around Europe and in Asia. The Marketing & Industrial Relations Manager was interviewed.

Formalisation

Formalisation (2.00; 5%) is at a very low level. The company is characterised by very few rules and procedures. The interviewee describes the organisational culture as very informal. The management is very conscious of restricting rules and procedures. There is a strong focus though on keeping one's word.

Learning Organisation

The degree of learning organisation (3.58; 25%) is low. This can be explained by the company's recent history, when all production was sold to sister companies within the same enterprise. So there was little impetus to learn fast as the company was protected and did not experience any competition. Now the company also sells to external markets and learning has become much more important. Considerable time and money are nowadays spent on training and education. There is also a focus of attention on on-the-job training and the appraisal system emphasises the continuous development of its employees.

Market Orientation

The degree of market orientation (3.90; 25%) is also low. Of course this can also be explained by the company's recent internal focus, which was exacerbated by the safe haven in which the firm operated. Also the company employs many engineers and most managers are technicians. So the focus is more on technical than on market issues. As already noted, this is changing now as the company also develops and produces for external customers. The urge to become more market oriented is therefore certainly present.

Business Performance

The company's business performance (3.67; 45%) is at a medium level. The manager interviewed stated that there are quite a variety of performance levels in different business units. Some are performing excellently while others are only performing moderately. On the whole there is a lack of pro-active behaviour and of intensive communication with customers. Recently a "best practices" and "manufacturing excellence" policy was launched that aims to improve employees' level of achievement.

Turbulence

The level of turbulence (3.75; 45%) is at a medium level. Because of the concentration on a limited amount of products in a specialised domain (electronic circuit boards) the markets are relatively easy to follow.

Competitive Intensity

The level of competitive intensity (5.00; 78%) is high. There is intense competition from highly specialised small to medium sized companies, who are able to run with lower costs.

Company D: International transport, forwarding and distribution, warehousing and custom clearance services

Introduction

This large international transport employs 600 people, runs 100 trucks and employs 45 agents throughout the whole of Europe. Services entail door to door logistics and warehousing. The Chief Executive Officer was interviewed.

Formalisation

Formalisation (6.00; 100%) is at a very high level. The company is characterised by many written rules and procedures. Responsibilities are well described and clear to every one. There is a clearly described organisational and job structure. The company's founder and owner, a strongly technically oriented person who established the company 33 years ago, visits the company now and then and still has a strong influence on its organisational culture in terms of: "Look out there's the boss"! (This actually happened at the time of the interview, when the owner entered the CEO's office where the interview was being held and asked us "What's all this about?"). The CEO has a business administration background.

Learning Organisation

The degree of learning organisation (5.00; 90%) is very high. Much effort and money (200.000 Dutch Guilders a year) are spent on training and education. Many training programmes are focused on the improvement of client-oriented behaviour. Of course a lot of time is also dedicated to logistical and transport-related educational programmes. All personnel get the message that career planning is greatly improved by education.

Market Orientation

The degree of market orientation (5.00; 85%) is also very high. The company is indeed very focused on the market. Much time is devoted to client contacts. Each forwarding agent shares customer information with 14 sales persons. Account managers are very active in visiting clients. Each region is equipped with a developmental manager who develops a regional strategy. All trucks are red and blue and are easily recognised by the customers. Information about competitors is gathered systematically and bench marking is widely used.

Business Performance

The company's business performance (4.33; 75%) is at a high level. The CEO explained that all their energy is focused on performance. The credo "99.8% performance" is used to communicate the company's high performance ambitions to everyone in the company.

Turbulence

The level of turbulence (5.00; 95%) is very high. Markets change rapidly in the transport industry. Governmental and European regulation, the price of petrol, duties, and custom procedures are changing all the time. New competitors are established every day and customers shop around for the lowest price.

Competitive Intensity

The level of competitive intensity (5.33; 85%) is also very high. There is severe competition from small companies who operate on lower costs. Client loyalty is very low. This is why value added services like total logistics and warehousing are very important to distinguish the company from the small transport companies who sometimes run one truck with one driver only.

191

Company E: Consulting engineers for the chemical, petrochemical and petroleum industries

Introduction

This large international technical consultancy firm employs 350 people and manages complex projects all over the world. The firm is specialised in everything to do with gas and oil engineering. Services are gas treatment, complete hydrogen plants, methanol plants, CO town gas, SNG plants, sulphur plants, heat transfer systems, ethylene plants, gas/oil separation systems, environmental control processes and recycling processes. The Vice President of Sales & Marketing was interviewed.

Formalisation

Formalisation (4.00; 70%) is at a high level. This is mainly due to an ISO 9001 quality programme that was launched five years ago. This quality programme involves many procedures. The company is trying though to control the number of rules and regulations.

Learning Organisation

The degree of learning organisation (4.08; 45%) is at a medium level. Although a reasonable amount of money and time are spent on (mainly technical) training and education, these activities are done in a fairly ad hoc manner. There are no developmental plans available and training and development are not embedded in HRM policies. Furthermore, the company is quite hierarchical in terms of junior and senior management, which reduces the chance of learning from and with colleagues throughout the organisation. Recently the focus has shifted to team learning and long term individual development.

Market Orientation

The degree of market orientation (4.21; 40%) is at a relatively low level. This modest level is lower than the interviewee had expected. In his view the company is very much focused on market opportunities and consultants are expected to be client oriented. The Vice President admits though that the customer is not always the focus of attention and that this client-oriented behaviour can be improved. This may be due to the technological orientation of many consultants and project managers.

Business Performance

The company's business performance (3.67; 45%) is at a medium level. The Vice President acknowledged that performance could be improved. Recently a programme has been launched to achieve better performance. One problem with their market is price competition, while the quality of the service always has to be at a very high level. So both quality and cost reduction programmes are being launched.

Turbulence

The level of turbulence (4.00; 60%) is relatively high. This is due to all kinds of new regulations, including safety, environmental protection, occupational health. Every country has its own rules and regulations, so it is quite difficult to keep up with these.

Competitive Intensity

The level of competitive intensity (5.00; 78%) is high. There is intensive competition from other engineering consultancy firms, whilst domestic suppliers are preferred in some countries. The company is quite powerful though as one out of every three proposals is granted.

Company F: Production of buses for public transport and of coaches

Introduction

This factory produces buses, mainly for the public transport sector, and employs 210 people. The company was established in 1926, was taken over by another company some years ago, which ended in bankruptcy two years ago. Immediately afterwards, some investors made a new start possible. The Financial Director was interviewed.

Formalisation

Formalisation (4.00; 70%) is high. This is mainly due to an ISO 9001 quality programme that was launched one year ago. This quality programme involves many procedures. The company is experiencing tension between the required level of formalisation and desired levels of freedom.

Learning Organisation

The degree of learning organisation (4.42; 70%) is at a high level. The interviewee explained that two years ago an explicit personnel development policy was implemented. Every employee has his/her own development plan with a focus on education, training, on-the-job training and so forth. The company also launched teamwork, job rotation and quality circles initiatives.

Market Orientation

The degree of market orientation (4.64; 70%) is also high. This high level has also been achieved recently. Only a few years ago, the company used to sit and wait for the telephone to ring to book orders. Times have changed. Nowadays this is no longer possible and eight salespersons are working hard to sell buses to public agencies in the Netherlands as well as abroad. Market orientation has much improved in these years, but there is still a boundary between Sales, Production and Research & Development.

Business Performance

The company's business performance (3.67; 45%) is in the medium range. The interviewee acknowledged that performance could be improved. This is due to the bankruptcy two years ago and the energy required to rebuild the company. Performance is improving, although, according to the Financial Director, not fast enough. The company is very much dependent on government policies. The Dutch government is reluctant to invest in public bus companies and this squeezes turnover. This is the main reason why the company is exporting to countries all over the world. Nowadays 50% of the turnover is being exported. Product quality is its main asset, with the prices of the buses in second place.

Turbulence

The level of turbulence (5.00; 95%) is very high. This is due to governmental policies on public transport that are very difficult to predict and change easily. Furthermore, environmental regulations are being developed that heavily influence production methods.

Competitive Intensity

The level of competitive intensity (6.00; 100%) is very high. There is intensive competition from a limited number of other public bus factories. Furthermore, competition is getting more and more international in character, in the domestic market as well as in international markets.

193

Company G: Producing glass bottles and jars for the food preserving and bottling industry

Introduction

This Swedish owned company produces glass bottles and jars for the food preserving and bottling industry. Its customers are soft drink and food industries. The factory employs 560 people in its plant in the Netherlands. It is a very innovative and socially conscious factory that devotes much time and energy to sound labour relations. The Director of External Affairs was interviewed.

Formalisation

Formalisation (5.00; 95%) is at a very high level. There are too many rules, procedures and structures. The organisational change programmes, mentioned previously, have to decrease the level of formality.

Learning Organisation

The degree of learning organisation (4.00; 50%) is at a medium level. Despite its sophisticated HRM policies the learning organisation level is disappointing. This may be due to the company's production and sales orientation, with its many blue-collar workers. In order to improve the learning orientation different programmes are being launched. For example quality circles, team development and decentralisation programmes should improve the sharing of knowledge and experience in the making of the product.

Market Orientation

The degree of market orientation (4.43; 55%) is at a medium level. Much is being done to improve market orientation, like "touch" and "co-maker ship" programmes that are aimed at communicating with the customer in an open manner. Relationship marketing is being developed and information systems that are connected to the information systems of major customers are being implemented. These information systems are mainly used for ordering and quality control management.

Business Performance

The company's business performance (3.00; 20%) is low. The interviewee acknowledged that the performance level is disappointing. This is the reason that a couple of organisational change programmes have been launched. Last year was a financially difficult year.

Turbulence

The level of turbulence (4.25; 70%) is high. This is due to environmental regulations, periodically changing demands of customers (production depends on the weather and on the economy) and the harsh competition.

Competitive Intensity

The level of competitive intensity (4.67; 60%) is relatively high. There is intensive competition from a very limited number of competing companies.

Company H: Producing wooden puzzles for small children

Introduction

This company produces wooden puzzles for children. The company employs 210 mainly mentally and physically disabled people. This company was originally established by a large industrial company in order to employ personnel who had had an industrial accident. Nowadays it is an ordinary social welfare facility, heavily subsidised by the Dutch government to employ mentally and physically disabled people. Every employee receives a certain level of subsidy. The rest of the costs have to be

194

earned by producing and selling the product. The puzzles are sold throughout the world. The USA is an important market. The Business Manager was interviewed.

Formalisation

Formalisation (4.50; 80%) is at a high level. This is mainly a legacy of the company's hierarchical and bureaucratic past. Change programmes have to decrease the level of formality. Because an ISO certification process will be launched soon, there will have to be greater attention to rules and procedures. This may have a reverse influence on the aims of decreasing hierarchy and bureaucracy.

Learning Organisation

The degree of learning organisation (4.67; 80%) is at a high level. Much money and time are spent on education and training. Furthermore the development of products is mainly done by regular workers. Openness in communication is promoted and self-managing teams are being developed. These progressive policies are only a few years old. In the past the organisation was far from being a learning organisation and was characterised by a hierarchical, strict regime.

Market Orientation

The degree of market orientation (4.43; 55%) is at a medium level. Much is being done to improve market orientation. Apart from the salespeople and management who are spending a lot of time and energy on networking, customer relations and selling, all employees are encouraged to get to know their clients and to act accordingly. Retailers and other customers regularly visit the factory and are brought into contact with the workforce who communicate with them enthusiastically.

Business Performance

The company's business performance (4.00; 60%) is relatively high. Although the productivity, turnover and selling success rates are quite high, performance is under pressure because most employees are disabled.

Turbulence

The level of turbulence (3.75; 45%) is medium. The interviewee explained this as due to strong loyalty from their customers, the relatively simple production process and the absence of strong competition.

Competitive Intensity

The level of competitive intensity (4.33; 55%) is medium. There is some competition from other companies, but because of government subsidies this company is not easy to beat.

Company I: Producing sanitary fittings and accessories, brass/copper pipe fittings and valves, compression fittings, laboratory and hospital equipment

Introduction

This company produces sanitary fittings and accessories, brass/copper pipe fittings and valves, compression fittings, laboratory and hospital equipment. The company employs 240, mostly technically skilled, people. The company is 60 years old. Until 1992 the company was family-owned but this year it was sold to a large holding company. The main market for its products is the Netherlands. The company's business results are very good. The Commercial/Export Manager was interviewed.

195

Formalisation

There is a low level of formalisation (2.50; 20%). Although the interviewee remarked that the company is characterised by an authoritarian family culture with strong, traditional norms and values, this does not imply many rules and regulations.

Learning Organisation

The degree of learning organisation (2.42; 5%) is at a very low level. Because of the company's satisfactory results and thanks to its traditional culture there is not much urge to spend time on training and development and on learning.

Market Orientation

The degree of market orientation (3.79; 30%) is at a low level. This is mainly due to the company's strong production orientation (the CEO is an engineer), its internal orientation and the aforementioned satisfactory business results. The interviewee stated that the company is becoming more conscious of the disadvantages of being internally and production oriented when looking to the longer term (international competition, competition of producers of plastic fittings and valves) and that it is moving slowly towards an external, market orientation.

Business Performance

Although the financial business results of the company are quite good, the company has a low level of business performance (3.33; 30%). The interviewee put this down to a lack of a strategic long-term company vision and the aforementioned internal orientation, which endangers the company's competitive power.

Turbulence

The level of turbulence (5.00; 95%) is very high. This is due mainly to the rapidly changing production technology, which makes it possible to apply cheaper materials like plastics and thus threatens the comfortable market position the company has held for so many years.

Competitive Intensity

The level of competitive intensity (5.00; 78%) is high. This high level is caused by the aforementioned changing technology and by competition from low cost countries like Eastern Europe.

Company J: Producing bearings

Introduction

This company produces bearings for a large part for the automotive industry, but also for other industries. In fact it produces bearings "for everything that turns". This Swedish company is the market leader. The company was founded in 1907 and has been the market leader for most of its lifetime. The company is ISO certified and employs 40,000 people world-wide. In the Dutch part of the company 200 people are employed. The Research & Development Manager was interviewed.

Formalisation

Formalisation (3.50; 50%) is at a medium level. Despite this moderate level, the company is trying to restrict rules and regulations further to improve company flexibility. Flexibility is becoming a very important item in resisting the competition.

Learning Organisation

The degree of learning organisation is at a very high level (5.50; 100%): The focus of the company is indeed on learning, learning and learning. Almost all people are enrolled in courses. Action learning is also widespread in this company, by way of inter-competence teams. All personnel are monitored against educational plans.

Market Orientation

Market orientation (4.30; 50%) is at a medium level. The main reason for this modest score is the predominantly technical orientation of the company. Recently this has been changing and some reorganisation projects are endeavouring to improve the degree of market and client orientation.

Business Performance

The company's business performance (4.00; 60%) is at a relatively high level. Several (quality, just in time) programmes are trying to improve this performance further.

Turbulence

The level of turbulence (3.25; 30%) is low. There is a stable market for bearings and it is relatively easy to keep ahead of market developments.

Competitive Intensity

Despite the low level of market turbulence, the level of competitive intensity (6.00; 100%) is very high. Although this company is a market leader, it has to watch the competition, which has become stronger in recent years. The company's most precious asset against the competition is the quality of its products. Therefore much money and effort are spent on continuous improvement of product quality.

Company K: Producing condensing boilers, high-efficiency boilers, water heaters (gas)

Introduction

This company is one of the biggest Dutch producers of central heating systems and integrated boilers. 400 people are employed in the company. Its name is generally known to the public and many people associate its products with the word "innovative". The company exports part of its turnover, mainly to Germany. The CEO was interviewed.

Formalisation

Formalisation (3.00; 30%) is at a low level. Flexibility, delegation of authority, restriction of procedures and rules are all instruments to limit the level of formalisation in order to improve flexibility and promote a pro-active attitude.

Learning Organisation

The degree of learning organisation (5.20; 90%) is at a very high level. The CEO expressed his vision that all activities in the company must be focused on learning. Team development, total quality programmes, training and education are important instruments for this company "to beat the competition".

Market Orientation

Market orientation (4.64; 75%) is at a high level. A great deal of effort is employed to get to know the product's end users and much time is invested in the relationships with dealers. All kinds of market research are done to keep up with the customer and an intensive client feedback programme is being

carried out. Bench marking and information sharing with the main competitors are important instruments for the company to improve its market orientation.

Business Performance

The company has a high level of business performance (4.67; 80%). However, the CEO was still dissatisfied with this performance level. Consumers were still experiencing too many problems in their daily use of the products. So ambitious quality programmes are being launched to improve the products' reliability and dependability.

Turbulence

The level of turbulence (4.00; 60%) is relatively high, although there is a stable market for heating and boiler systems and market developments are - with some effort - relatively easy to keep up with.

Competitive Intensity

Competitive intensity (3.67; 30%) is at a low level. The main suppliers of heating and boiler systems respect each other's market share and mainly compete on specific properties their products possess and refrain from price or quality competition.

Company L: Services: Organising parties, receptions and dinners for individuals and companies for between 15 and 15,000 people in tents and company halls, including complete decoration

Introduction

This company is one of the most prominent caterers and party organisers in the Netherlands. All kinds of parties, receptions, dinners, and official meetings are supported. The company supplies all the food itself and all supplies and decorations have been developed and are owned by the company. The company's main market is the Netherlands, but it also exports to surrounding countries, particularly Belgium, and this area of business is becoming more important. 365 people are employed in the company. The Marketing & Sales Manager was interviewed.

Formalisation

Formalisation (3.00; 30%) is at a low level. Although high quality standards for food and services demand strict rules and procedures, for the most part the work is done through informal mutual adjustment and if necessary by meetings. The company has an explicit policy to restrict rules and procedures.

Learning Organisation

The degree of learning organisation (4.54; 70%) is at a high level. The interviewee explained that all activities in the company are focused on learning. Training and education are the most important instruments for the company to stimulate learning.

Market Orientation

Market orientation (4.64; 75%) is also at a high level. Being client and market oriented is one of the company's most important assets. Most (smaller) competitors offer lower prices for the same products. In-depth knowledge of the customer and a high degree of sensitivity for fashion and trends in the industry are important instruments to distinguish oneself from the competition.

Business Performance

The company's business performance (4.33; 75%) is high. Much energy is devoted to performing to the highest standards and the company is doing very well as a result.

Turbulence

The level of turbulence (4.00; 60%) is relatively high. Although fashions and trends change rapidly and easily, market developments are relatively easy to follow and to predict.

Competitive Intensity

Competitive intensity (5.00; 78%) is at a high level. As already stated, there is a lot of competition in this particular industry. But most competition is price competition and this company competes successfully with some companies at the top end of the market. In this small niche they are quite able to keep up with the competition.

Company M: Producing shelving systems in wood and metal, cupboards, wall cabinets, shop fittings, office furniture (wooden and metal)

Introduction

The company is a producer of furniture components. Customers can compose their own furniture and change the size and shape whenever they want. Most furniture produced is wooden and metal cupboards, bookcases and so forth for the private sector (higher income groups) and office furniture for the business sector. The company has its own outlets but also supplies dealers. The company is family-owned and is mainly oriented towards the Dutch and German market. A few years ago the recent (and at that time new) CEO initiated a huge reorganisation, because the financial results were disappointing. Recently these results are improving. 350 people are employed in the company. The Managing Director/CEO was interviewed.

Formalisation

Formalisation (3.00; 30%) is at a low level. This is the case because there is little emphasis on developing rules and procedures and on controlling them. All energy is focused on selling and producing the products.

Learning Organisation

The degree of learning organisation (3.96; 40%) is at a relatively low level. The interviewee explained this in terms of the recent focus on improving productivity which squeezes the learning orientation.

Market Orientation

Market orientation (4.43; 60%) is at a relatively high level. In recent years considerable energy has been spent on improving client and market orientation. All middle and shop floor managers receive commercial training in an attempt to change the culture into a client and market orientation. The interviewee is positive about the results of these efforts.

Business Performance

The company's business performance (5.00; 90%) is at a very high level. This is the result of the reorganisation, training and cultural change efforts in the last three years.

Turbulence

Turbulence (4.50; 80%) is at a high level. Fashions, trends and customer preferences change rapidly.

Competitive Intensity

Competitive intensity (2.00; 5%) is at a very low level. There are not many competitors in the specific markets they serve. Furniture components are sold by other companies but they focus on different

consumer (middle and lower income) groups. In the business sector there are hardly any other larger producers of office furniture components.

Company N: Producing cotton and polyester/cotton fabrics, work garments, jeans and shirts

Introduction

The company is one of the few surviving textile companies in the Netherlands. It is family owned and it produces mainly work clothes and half-fabrics that are used to produce work clothes. Its survival depends on the quality of the products. Price competition can never be won, as the low wage countries can always produce cheaper. The products are mainly produced for the Dutch market although the company does engage in some export activities, world-wide. 600 people are employed. The Export Manager was interviewed.

Formalisation

Formalisation (3.00; 30%) is at a low level. The company is characterised by a high degree of informal relations. The interviewee stressed that it would be advisable to develop more rules and procedures in order to manage the company more strictly.

Learning Organisation

The degree of learning organisation (3.38; 25%) is at a low level. Aside from the Research & Development department and the higher management level, most employees are poorly educated. Furthermore, for most employees the work is quite simple. There is large gap between lower and higher personnel and career opportunities are scarce. This means that most people do not place a high value on training and education. Management, however, is trying to improve this situation and encourages training and mutual communication that improve learning.

Market Orientation

Market orientation (3.57; 20%) is also at a low level. The company, including its top management, is mostly product and internally oriented. There is not sufficient follow-up of customer complaints. Because of growing international competition, in recent years more energy has been spent on improving the market orientation. As a consequence product quality is improving and a larger variety is being offered. The company is trying to become a supreme quality producer - for example it is implementing an ISO 9002 project.

Business Performance

The company's business performance (3.67; 45%) is medium. Although production is growing fast, profit margins are low because of a high cost structure, mostly due to overstaffing. The company's family structure impedes necessary changes.

Turbulence

Turbulence (1.75; 2%) is at a very low level. The main markets, which the company is focusing on, are developing very slowly.

Competitive Intensity

Competitive intensity (4.33; 50%) is at a medium level. The competition is there (20 to 30 competing European companies), but it is not very difficult to keep existing clients. Client relationships are characterised by durability, loyalty and trust. Regular clients are visited twice a year.

Company O: Software development, IT consultancy and helpdesk support

Introduction

The company is a subsidiary of a large international IT company, attracts ambitious and bright young people, operates in the lower market segment and tries to build a creative and entrepreneurial image. The company was founded two years ago, is fairly autonomous in its management and operations and concentrates mainly but not solely on the Dutch market. All new recruits are expected to enrol in a MBA-programme at one of the leading international business schools in the Netherlands. These young people are also engaged in a programme that teaches them consultancy and project management skills. Overall commitment of personnel is expected, almost every employee is a member of one of the numerous task forces that develop strategy and business policies for the company. The company employs 250 people and is growing fast. The Operations Manager (second manager in command after the CEO) was interviewed. The company is mainly focused on the Dutch market, but it also spreading its wings to Germany and Belgium.

Formalisation

The level of formalisation (1.00; 2%) is very low. The company is characterised by a high degree of informality. The company has an explicit policy to restrict and discourage rules and procedures.

Learning Organisation

The degree of learning organisation (5.38; 90%) is at a very high level. The company heavily promotes training, education and on-the-job learning. Much energy is invested in creating a learning organisation. The circumstances for doing this are favourable: many young, ambitious and well-educated employees working in an industry where today's knowledge and technology are obsolete tomorrow.

Market Orientation

Market orientation (4.00; 30%) is at a low level. This is due to the company's internal orientation (mainly focusing on human resources development) and to its product orientation. Furthermore, more than 50% of the services are bought by Head Office, which does not encourage a market focus. The company acknowledges this and is putting more effort into building its own client relationships, into marketing and into acquiring projects that serve the higher end of the IT market. Furthermore, it encourages entrepreneurship among its employees.

Business Performance

The company's business performance (6.00; 100%) is very high. The company is growing fast, there is a lot of work to do and costs are relatively low (mainly because of the young workforce, but also because of low overheads).

Turbulence

Turbulence (6.00; 100%) is very high. IT markets develop very fast and the predictability of market developments is very low.

Competitive Intensity

The level of competitive intensity (1.00; 2%) is very low. According to the interviewee, in the markets they serve well, software development and support and help desk assistance, they hardly meet any competition. Furthermore, a lot of work is done for the mother company, without any competition. The higher level (external) IT markets are however very difficult to penetrate.

Company P: Producing components and systems for the distribution and application of electrical energy

Introduction

The company is a well-established originally Dutch firm, which produces all kinds of systems and components for the electrical energy industry. In recent years the company has encountered more competition than it was used to and has lost all kinds of State protection. This puts turnover and profitability under pressure. Nowadays, the company is owned by a Swiss conglomerate and employs 1700 people. Its markets are mostly in the Netherlands. The Marketing Manager was interviewed.

Formalisation

Formalisation (5.00; 90%) is at a very high level. This is compensated by a "shadow culture" of informality. Employees are very restricted in their autonomy. There are many rules and procedures.

Learning Organisation

The degree of learning organisation (3.21; 20%) is at a low level. The company does not have the money to invest heavily in training and education. Most learning takes place at managerial level and to a lesser degree on the workshop floor.

Market Orientation

Market orientation (3.57; 20%) is also at a low level. The company is characterised by a product and technical orientation. The culture and top management are mostly technical. Nowadays client and market orientation get more attention and market research is being done to improve the fit with the market.

Business Performance

Despite its positive financial business results, the company's business performance (2.67; 10%) is at a very low level. Employee motivation is a problem due to the hierarchical organisational structure and traditional management style.

Turbulence

Turbulence (2.75; 20%) is at a low level. Customer needs change slowly. The company is in a low profile business.

Competitive Intensity

Competitive intensity (4.00; 35%) is at a relatively low level. Competition is relatively minor, although there is growing competition from abroad.

Company R: Trading vegetables, fruit, potatoes, onions

Introduction

The company is an international trading firm operating from the Rotterdam harbour area. The company employs 700 people. Its markets are mostly in Latin America, Asia and Africa. The Sales Manager was interviewed.

Formalisation

Formalisation (3.00; 30%) is at a low level. The interviewee stated that there are too few rules and procedures and that co-ordination depends too much on direct supervision.

<u>Learning Organisation</u>

The degree of learning organisation (1.92; 1%) is at a very low level. The interviewee explained that there is no sharing of information and until recently management was very paternalistic which impeded initiative and autonomous thinking by employees.

<u>Market Orientation</u>

Market orientation (4.08; 30%) is at a low level. As the company is the market leader there is not much urge to be market oriented. Competition is growing however and the characteristics of the industry are changing. The chain from producer to consumer is becoming shorter and the focus is changing from trade to distribution, so the role of trading companies is threatened. This means that the urge to become market oriented is growing.

<u>Business Performance</u>

Despite low levels of learning and market orientation the company has a very high business performance (5.33; 90%). This is due to the strong position it still holds on its markets and to many years' experience in international trading of vegetables, fruit, potatoes, onions.

<u>Turbulence</u>

Turbulence (4.75; 90%) is at a very high level. This is caused by two important trends in this industrial sector: concentration and scale enlargement. The company has to invest lots of energy to keep up with these trends.

<u>Competitive Intensity</u>

Competitive intensity (4.67; 60%) is at a relatively high level. Competition was limited until recently because of the market leadership of the company, but is growing.

Company S: International transport, expedition and custom clearance services

<u>Introduction</u>

The company transports high value and specialised products, like computers, photocopying machines, robots, medical goods and equipment. It offers services like transport, logistics, physical distribution, storage, handling and warehousing. The company employs 1100 people. The shares are owned by a few large conglomerates. Its markets are the Netherlands, the UK, Germany, Japan, Ireland, Belgium and the USA. The Marketing & Sales Manager was interviewed.

<u>Formalisation</u>

Formalisation (4.50; 80%) is at a high level. This is due to high quality standards (the company is ISO 9002 certified) and also to the procedures and regulations for the medical products that are being transported. Strict rules and procedures are needed to meet client expectations.

<u>Learning Organisation</u>

The degree of learning organisation (4.90; 85%) is at a very high level. The interviewee explained that training and education are very important for the company. All employees have developmental plans that are assessed frequently. Also seminars, round table conferences and panel discussions for clients are organised to communicate with and learn from them. So relationship marketing is really being put into practice.

Market Orientation

Market orientation (5.07; 90%) is also at a very high level. The characteristics mentioned above in the Learning organisation paragraph illustrate this. The company also puts much time and energy in competition analysis and bench marking. It uses IT enthusiastically to gather information about customers and competitors.

Business Performance

Business Performance (4.33; 75%) is at a high level. The company does well because of its innovative character and the energy it puts into customer relations. Its regular customer surveys show that in general customers are satisfied with the quality of the company's services. One point mentioned by customers is the difficulty of getting hold of people on the telephone. This will be improved by a new telephone exchange.

Turbulence

Turbulence (5.00; 95%) is at a very high level. Its markets are changing rapidly due to IT innovations and international logistic developments. International logistic streams change rapidly and all kinds of environmental regulations and EU procedures result in a high level of complexity.

Competitive Intensity

Competitive intensity (5.00; 78%) is at a high level. The transport business is a very competitive industry and only by specialisation, innovation, quality control and management of costs is it possible to keep a strong position in the market.

Company T: International transport, mainly shipping

Introduction

This large company is active across the whole range of logistic services, world wide. Core activities are container logistics, principally using their own shipping links. The company employs 19000 people. A Consultant from the Strategy & Planning Department at the company headquarters was interviewed.

Formalisation

Formalisation (5.00; 95%) is at a very high level. This is due to the company's centralised, hierarchical and bureaucratic organisational structure with many rules and procedures. Decentralisation and deregulation are most urgently needed according to the interviewee.

Learning Organisation

The degree of learning organisation (2.42; 5%) is very low. The interviewee explained that until recently there was very little attention paid to training and development and on-the-job training. Now lots of energy is being put into changing this "low learning culture".

Market Orientation

Market orientation (2.71; 5%) is also at a very low level. Although the interviewee is a little surprised by this "low score", he nonetheless admits that the organisation does not focus very much on its markets and customers. The company's primarily technical orientation could be one of the reasons in his view.

Business Performance

Of course it is not surprising, given the low scores on learning and market orientation, that the company has a low level of business performance (2.33; 7%). According to the interviewee this is due

to the lack of a strong uniform culture that points in the right direction. An improvement in the communication of values, norms, mission and strategy throughout the organisation is clearly needed. A modest profit is however being made.

Turbulence

Turbulence (3.75; 45%) is at a medium level. Although markets change rapidly in this industry, their degree of unpredictability is limited.

Competitive Intensity

Competitive intensity (5.67; 90%) is at a very high level. As was mentioned with "Company "D" and S", also transport companies, the transport business is a very competitive industry.

Company U: Producing fire fighting equipment

Introduction

This company produces fire fighting equipment, fire extinguishers, hose reels and cabinets, CO_2, Halon-Foam, mist and sprinkler systems, refinery, offshore and marine protection systems. It also trades fire fighting fittings, fire hoses, foam liquids and foam branch pipes. The company employs 180 people. The company concentrates on the Dutch market. A Business Unit Manager was interviewed.

Formalisation

Formalisation (4.50; 80%) is at a high level. This is caused by the nature of the company's products, which have to be very reliable and are subject to strict quality procedures. Products are ISO 9001 certified.

Learning Organisation

The degree of learning organisation (3.83; 38%) is at a relatively low level. The interviewee stated that they are working hard on building a learning culture. Every employee now has his or her own development plan and people are encouraged to move every few years (horizontally and vertically). Appraisal interviews from managers with employees are now very important in the development of a learning organisation. Empowerment, coaching and on-the-job learning are very important nowadays. One of the company's core values is lifetime employment. But when people do not perform and do not improve their performance with help from their manager, they have to leave the company.

Market Orientation

Market orientation (5.21; 95%) on the other hand is at a very high level. Some years ago the company used to be production and sales oriented. In the nineties this has changed towards a market orientation. Client panels, regular market research, competitor analysis and bench marking are important instruments to focus on the market. Employees are also trained to improve their social skills in order to interact effectively with customers.

Business Performance

Company business performance (4.67; 82%) is at a very high level. Although the company's products are the most expensive in the market, the company is able to retain its competitive power, due to the quality and innovative character of the products. However recently it also serves B-label markets under the name of large retail companies.

Turbulence

Turbulence (3.25; 30%) is at a low level. The market for their products has a constant character and changes and developments in this market are easy to predict.

<u>Competitive Intensity</u>

Competitive intensity (4.67; 50%) is at a medium level. Although competition in this industry is cut throat, because the company is the market leader it easily beats the competition.

10.3. General impression from the interviews

As may be discerned from the interview summaries, the executives from the twenty export companies generally recognised and accepted the survey results from their companies when compared with other companies who participated in this study, with regard to the measures of learning organisation, market orientation, business performance and the like. Company F (production of buses for public transport and of coaches) for example:

"The company's business performance (3.67; 45%) is in the medium range. The interviewee acknowledged that performance could be improved. This is due to the bankruptcy two years ago and the energy required to rebuild the company. Performance is improving, although, according to the Financial Director, not fast enough".

Sometimes a company did not recognise survey results, but after a reflection on these findings, they generally admitted that the findings did make some sense. Company E (Consulting engineers for the chemical, petrochemical and petroleum industries):

"The degree of market orientation (4.21; 40%) is at a relatively low level. This modest level is lower than the interviewee had expected. In his view the company is very focused on market opportunities and consultants are expected to be client oriented. The Vice President admits though that the customer is not always the focus of attention and that this client-oriented behaviour can be improved. This may be due to the technological orientation of many consultants and project managers".

Most interviewees had experienced increasing competition, also in their domestic markets, which had become more international in character. They acknowledged the importance of being a learning organisation and of adopting a market orientation in order to compete successfully under these difficult circumstances and thus to ensure their long-term survival. Company I (Producing sanitary fittings and accessories, brass/copper pipe fittings and valves, compression fittings, laboratory and hospital equipment):

"The interviewee stated that the company is becoming more conscious of the disadvantages of being internally and production oriented when looking to the longer term (international competition, competition of producers of plastic fittings and valves) and that it is moving slowly towards an external and market orientation".

Many companies, however, were still in the process of shifting top management's focus from a production or sales to a market orientation. Company P (producing components and systems for the distribution and application of electrical energy):

"The company is characterised by a product and technical orientation. The culture and top management are mostly technical. Nowadays client and market orientation get more attention and market research is being done to improve the fit with the market".

This was often reflected in the actual person of the CEO, formerly a technical person, but who was now replaced by a marketing or business administration executive. Company D (international transport, forwarding and distribution, warehousing and custom clearance services):

"The company's founder and owner, a strongly technically oriented person who established the company 33 years ago, visits the company now and then and still has a strong influence on its organisational culture in terms of: "Look out there's the boss"! (This actually happened at the time of the interview, when the owner entered the CEO's office where the interview was being held and asked us "What's all this about?"). The CEO has a business administration background".

Also many interviewees expressed the feeling that their companies were in the process of becoming more learning oriented. This was illustrated by training and development programmes, empowerment projects, the development of quality circles, and team development programmes. Company F (production of buses for public transport and of coaches):

"The interviewee explained that two years ago an explicit personnel development policy was implemented. Every employee has his/her own development plan with a focus on education, training, on-the-job training and so forth. The company also launched teamwork, job rotation and quality circles initiatives".

Those companies characterised by a high degree of learning organisation and market orientation seemed to know how to implement these desired characteristics. To improve the learning organisation, HRM policies were shown to be very important, including a clear HRM vision, appraisal systems, personal development plans,

training & education, teamwork, learning on the job, communication programmes, workers' participation, and quality circles. Company J (producing bearings):

"The degree of learning organisation is at a very high level (5.50; 100%): The focus of the company is indeed on learning, learning and learning. Almost all people are enrolled in courses. Action learning is also widespread in this company, by way of inter-competence teams. All personnel are monitored against educational plans".

Market orientation proved to be supported by a clear and widely supported mission statement, client satisfaction research, bench marking, client participation, and client information systems. Company K (producing condensing boilers, high-efficiency boilers, water heaters):

"A great deal of effort is employed to get to know the product's end users and much time is invested in the relationships with dealers. All kinds of market research are done to keep up with the customer and an intensive client feedback programme is being carried out. Bench marking and information sharing with the main competitors are important instruments for the company to improve its market orientation".

In order to survive, most companies focused on the strict management and reduction of costs, on quality improvements and on innovation, all at the same time. Therefore most organisations were implementing organisational development activities in order to stimulate cultural change in a move to become more innovative, more flexible and more client oriented. Company N (producing cotton and polyester/cotton fabrics, work garments, jeans and shirts):

"The company, including its top management, is mostly product and internally oriented. There is not sufficient follow-up of customer complaints. Because of growing international competition, in recent years more energy has been spent on improving the market orientation. As a consequence product quality is improving and a larger variety is being offered. The company is trying to become a supreme quality producer - for example it is implementing an ISO 9002 project."

10.4. Mintzberg's theory on environment as a contingency factor

Mintzberg's book *"The Structuring of Organizations"* (1979) synthesises the numerous research and theories (e.g. Burns and Stalker, 1961; Woodward, 1965; Lawrence and Lorsch, 1967; Perrow, 1972) on the relationship between organisational structure and contingency factors, like technology, age and size of the company, environment and power relationships. This type of theory is mostly called

"contingency theory". Although Mintzberg's book is almost twenty years old, it still serves as the main body of knowledge regarding contingency theory. This is the reason why Mintzberg's synthesis of contingency theory was chosen to classify the twenty companies.

Mintzberg (1979, p.267) characterises environments as follows:

> "So environment compromises virtually everything outside the organisation - its "technology" (i.e., the knowledge base it must draw upon), the nature of its products, customers and competitors, its geographical setting, the economic, political, and even meteorological climate in which it must operate, and so on".

Mintzberg distinguishes four main characteristics of organisational environments: stability, complexity, market diversity and hostility.

Stability refers to the measure of predictability of the environment. In a stable environment nothing changes very much. Customer demand, supply, regulations, economic factors etc. remain roughly the same, year after the year. In a dynamic environment on the other hand, things change very rapidly and it is therefore very difficult for a company to predict how its environment will look next year or even next month.

Complexity refers to the measure of knowledge that is necessary to fulfil the demands imposed by customers, government etc. Mintzberg (1979, p.268):

> "An environment is complex to the extent that it requires the organization to have a great deal of sophisticated knowledge about products, customers or whatever. It becomes simple, however, when the knowledge can be rationalized, that is broken down into easily comprehended components".

Market Diversity refers to the range of clients or markets an organisation serves. In an integrated market a company sells to one or a very limited number of buyers. In a diversified market, the company sells to many different buyers who also differ significantly in their respective needs.

Hostility refers to the degree a company has to compete in order to sell its products and to attract its resources. Mintzberg (1979, p.268):

> "An organization's environment can range from munificent to hostile, from that of a prestige surgeon who picks and chooses his patients, through that of a construction firm that must bid on all its contracts, to that of an army fighting a war".

Mintzberg (1979) then defines five "hypotheses" about the relationship of the environment with the organisational characteristics.

The *first hypothesis* is stated as follows. "The more dynamic the environment, the more organic the structure" (p.270). An "organic structure" is a structure that is characterised by a minimum amount of standardisation, while a non-organic, "mechanic structure", is characterised by a high amount of standardisation (Burns and Stalker, 1961). Mintzberg's main argument for this hypothesis is that in a stable environment an organisation can easily standardise its activities, because of future predictability, and will do so for efficiency reasons, while in a dynamic environment this is not possible, because of the unpredictability of customer demand, rapid changing technology, unstable political situation etc.

The *second hypothesis* is as follows: "The more complex the environment, the more decentralised its structure" (p.273). This hypothesis refers to the (de)centrality of decision making: does top management take all decisions or do middle managers, business unit managers, professionals and perhaps even shop floor workers also have decision making power? The argument for this hypothesis is that, in a simple environment, it is very easy and efficient for top management to take all the decisions, because of the comprehensibility of the work, while in a complex environment, the top level of an organisation is very much dependent on the knowledge of its "lower organisational levels" and therefore has to loosen the ties and leave much more room for decentralised decision making.

The *third hypothesis* is the following. "The more diversified the organization's markets, the greater the propensity to split it into market-based units (given favorable economies of scale)" (p.278). This hypothesis speaks for itself: organisations that encounter diversified markets (for example an oil company which serves markets for fuel, chemical products, food and pharmaceutical products) will tend to set up separate divisions to serve these different markets. Companies that have integrated markets on the other hand will not - for efficiency reasons - diversify but will integrate their operations.

The *fourth hypothesis* is as follows: "Extreme hostility in its environment drives any organization to centralize its structure temporarily" (p.281). When an organisation encounters extreme hostility, like extreme unexpected competition or a sudden price fall in its products in its markets, it is likely that it will centralise decision making power in order to be able to act promptly. In fact, in extremely hostile situations, this might lead to a situation of direct supervision by the top manager. Mintzberg (1979, p.281):

> "Direct supervision is the fastest and tightest means of coordination - only one brain is involved. All members of an organization know exactly where to send information; no time is wasted in debate, authority is clearly defined; one leader makes and coordinates all decisions".

The *fifth hypothesis*: "Disparities in the environment encourage the organization to decentralize selectively to differentiate work constellations" (p.282). Disparities in the environment stimulate the organisation to differentiate its structure: a centralised structure in one part of the company, a decentralised structure in another part, a divisionalised structure in still another part and so forth.

Mintzberg (1979) describes five so-called *structural configurations* that follow from these five hypotheses: the simple structure, the machine bureaucracy, the professional bureaucracy, the divisionalised form and the adhocracy. But other influences like technical system, age and size of the company also have an impact. See Table 10.4.1.

211

Table 10.4.1. Mintzberg's (1979) structural configurations, grouped by main environmental characteristics

Environment	Stable	Dynamic
Simple	Machine Bureaucracy	Simple Structure
Complex	Professional Bureaucracy	Adhocracy
Diversified	Divisionalised Form	

The *simple structure* has a strongly centralised, organic structure. It is managed by direct supervision and it prospers in a simple and dynamic environment or under extreme hostile environmental circumstances. Examples: a small, young entrepreneurial firm, a retail store or a firm involved in a serious crisis that is struggling for survival. The *machine bureaucracy* is managed by the standardisation of work processes. It has a mechanical, strongly formalised and centralised structure and it relates to a simple and stable environment. Examples: a steel company, an airline and a prison. The *professional bureaucracy* is managed by the standardisation of skills. It has a decentralised structure and it relates to a complex and stable environment. Examples: a university, a hospital, a consultancy firm and a specialised technical manufacturing company. The *divisionalised form* is managed by the standardisation of outputs. It has a divisionalised (market grouped) and limited decentralised structure and it relates to an environment characterised by diversified markets. Examples: most large corporations, like Shell, Phillips, Unilever and Mitsubishi. Finally the *adhocracy* which is managed by mutual adjustment and which has a organic, decentralised and project type of structure. The adhocracy prospers in complex and dynamic environments. Examples are NASA and Boeing.

10.5. Typology of companies

In this section an attempt is made to classify the interviewed companies with the help of Mintzberg's theory about the relationship of organisational structure and the organisational environment described above. See Table 10.5.1.

Table 10.5.1. - Positioning of the twenty companies who were interviewed against the level of learning organisation and market orientation and the stability and complexity of the environment, resulting in a typology of these companies

Learning organisation/ Market orientation	Stable/Simple Environment	Dynamic/Complex Environment
Low	Company N P *Safety Bureaucracy*	Company A B C E I R T *Professional Bureaucracy*
high	Company U *Machine Bureaucracy*	Company D F G H J K L M O S *Adhocracy*

Table 10.5.1. shows the companies, who were interviewed, positioned against two dimensions: the level of learning organisation and market orientation versus the stability and complexity of the environment. For reasons of efficiency, learning organisation and market orientation on the one hand and stability and complexity on the other hand were combined into these two dimensions. A "score" of ≤50%[8] on the dimension of learning organisation and market orientation indicates a "low level"[9] and a "score" of >50% indicates a "high level" of learning organisation and market orientation. The stability/complexity dimension represents a combination of the variables turbulence and competitive intensity. A low level (≤50%) of turbulence and competitive intensity indicates a stable and simple environment and a high level (>50%) of turbulence and competitive intensity indicates a dynamic/complex environment.

Mintzberg's (1979) typology was used to classify the companies, which is shown in Table 10.5.1. The *simple structure* did not show up from the interviews, which is

---

[8] The scores from these companies (see Appendix K., Table K.1.) were derived from the processed questionnaires and were related to the scores of the other companies who participated in the research study. >50% means that more than 50% of the other participating companies scored lower and ≤ 50% means that 50% or more of the other participating companies scored higher.
[9] Because in Table 10.5.1. "low" and "high" represented dichotomous values, these labels were different from those of Table 10.2.1. which represented a greater variety.

understandable due to the fact that the interviewed companies were larger export firms. Simple structures tend to be small and young organisations or organisations in a very hostile environment. The study did not cover small companies, while export companies tend to be well-established companies, and none of the twenty interviewed companies appeared to encounter a hostile environment at the time of the interviews.

The *divisionalised form* does not appear in Table 10.5.1. Although many of the companies depicted in this table are in fact divisionalised forms, the interviewed companies are better classified by the other types mentioned. This is, because the divisionalised form is a kind of "superstructure". It is a structure superimposed on the other (organisational) structures. It consists of a headquarters and divisions, that may be shaped differently according to the properties of the markets they encounter. Therefore the divisionalised form is not very useful as a type that summarises the core properties of the organisations that participated in the interview research.

The *machine bureaucracy* represents a mechanical and centralised structure, while the *adhocracy* is the opposite: organic and decentralised. The *safety bureaucracy* is a special type of machine bureaucracy, it also represents a mechanical and centralised structure, but for safety reasons it is extremely focused on control, while the *professional bureaucracy* varies between these opposites. The professional bureaucracy relies heavily on the skills of its personnel. Therefore, an important issue of the professional bureaucracy is the effective management of the skills of its organisation members by the application of strict educational entry requirements and by continuous on and off the job training.

When interpreting Table 10.5.1., the reader must be aware that Mintzberg's (1979) typologies are "ideal types": in their pure form they do not exist in reality. They are developed merely to offer a frame of reference to understand reality better.

The reader may be surprised by Table 10.5.1., because this table seems to be at odds with the earlier rejection of hypothesis 4 ("the greater the turbulence and competitive intensity, the stronger the relationship between the learning organisation and market

214

orientation with business performance"). However, this hypothesis is concerned with the moderating influence of environmental characteristics on the correlation of the learning organisation and market orientation with business performance. Table 10.5.1., on the contrary, endeavours to find a relationship between the environment and general organisational characteristics. The typology of Table 10.5.1. can be explained as follows.

10.5.1. Machine Bureaucracy

This type of organisation is found in a stable and simple environment and is characterised by a low degree of learning organisation and market orientation. Among the twenty interviewed companies only two cases of this type of organisation emerged. This may indicate that this type is rare among the larger Dutch export companies. This type of organisation has no urge to learn fast and to be market oriented due to its stable and simple environment. It experiences hardly any competition and low levels of turbulence do not put pressure on this type of company to change. These companies are typical low profile companies and are very well established in their markets. As Mintzberg (1979, p.325) observes:

> "The Machine Bureaucracy is typically found in the mature organization, large enough to have the volume of operating work needed for repetition and standardization, and old enough to have been able to settle on the standards it wishes to use".

Thus these (older) companies have a traditional organisational culture, they learn single-loop, and are production, sometimes sales-, internally and often technically oriented. They employ mainly blue collar workers, are typical manufacturing companies and their top management is mainly production oriented. The functional and typically patriarchal organisational structure gives rise to tensions between the production, sales and research & development departments. Personnel management is limited to personnel administration and hardly any money or time is spent on training & development. These companies can survive with their low levels of learning organisation and market orientation as long as their environments remain stable.

When this comfortable situation changes, they are in deep trouble, as their traditional nature is not very conducive to organisational change. Mintzberg (1979, p.347):

> "As a machine, it is designed for one purpose only. It is efficient in its own limited domain, but cannot easily adapt itself to any other. Above all it cannot tolerate an environment that is either dynamic or complex".

An example of a machine bureaucracy is company N (producing cotton and polyester/cotton fabrics, work garments, jeans and shirts):

> "The company is one of the few surviving textile companies in the Netherlands. It is family owned and it produces mainly work clothes and half-fabrics that are used to produce work clothes. Its survival depends on the quality of the products. Price competition can never be won, as the low wage countries can always produce cheaper. The products are mainly produced for the Dutch market although the company does engage in some export activities, world-wide. 600 people are employed (...) for most employees the work is quite simple. There is large gap between lower and higher personnel and career opportunities are scarce. This means that most people do not place a high value on training and education".

10.5.2. Professional Bureaucracy

Mintzberg (1979, p.348) developed the concept of the professional bureaucracy to refer to organisations that are bureaucratic without being centralised:

> "Their operating work is stable, leading to "predetermined or predictable, in effect, "standardized" behavior, but it is also complex, and so must be controlled directly by the operators who do it".

So in the professional bureaucracy control is not achieved by the application of rules and regulations but by the "standardisation of skills". Personnel are required to have and to obtain specified diplomas and certificates to do and to retain their jobs and to be able to move up the career ladder.

Seven professional bureaucracies were found amongst the twenty companies in the interview research. These encounter a dynamic and complex environment but are nonetheless characterised by a low degree of learning organisation and market orientation. In Mintzberg's view professional bureaucracies are found in complex but stable environments. Table 10.5.1. does not specify between complexity and stability,

so it may well be that these seven organisations are fit for a complex environment but unfit for a dynamic environment. What showed up from the interviews, however, was that these companies are merely following developments in their environments. They adapt to the changes in their environments but are certainly not keeping ahead of developments. They are professional bureaucracies, nonetheless, because they are characterised by a decentralised organisational structure, a high emphasis on formal training and by a work force that consists mostly of professionals. In these companies personnel management is characterised by personnel development. Investments in training & development are high and directed to formal (mainly technical) occupational training and knowledge acquisition. Although their environments are characterised by a high level of turbulence, and competition intensity, they are single-loop learners, mainly production-, sales- and internally oriented and their top management is mainly technically oriented. This may be an indication that these companies do not fit well with their environments or that their organisational structures are lagging behind the changes in their environments. During the interviews it appeared that many of these companies were preparing organisational change programmes in order to improve the level of learning organisation/market orientation.

An example of a professional bureaucracy is company C (development and manufacturing of parts or assemblies from metal/metal or metal/plastic to customers' specifications):

"The degree of learning organisation (3.58; 25%) is low. This can be explained by the company's recent history, when all production was sold to sister companies within the same enterprise. So there was little impetus to learn fast as the company was protected and did not experience any competition. Now the company also sells to external markets and learning has become much more important. Considerable time and money are nowadays spent on training and education. There is also a focus of attention on on-the-job training and the appraisal system emphasises the continuous development of its employees".

Another example is company E (consulting engineers for the chemical, petrochemical and petroleum industries):

"This large international technical consultancy firm employs 350 people and manages complex projects all over the world. The firm is specialised in everything to do with gas and oil engineering. Services are gas treatment, complete hydrogen plants, methanol plants, CO town gas, SNG plants, sulphur plants, heat transfer systems, ethylene plants, gas/oil separation systems, environmental control

processes and recycling processes (...). The degree of learning organisation (4.08; 45%) is at a medium level. Although a reasonable amount of money and time are spent on (mainly technical) training and education, these activities are done in a fairly ad hoc manner. There are no developmental plans available and training and development are not embedded in HRM policies. Furthermore, the company is quite hierarchical in terms of junior and senior management, which reduces the chance of learning from and with colleagues throughout the organisation. Recently the focus has shifted to team learning and long-term individual development".

10.5.3. Safety Bureaucracy

This type of organisation is found in stable and simple environments but is nonetheless characterised by a high degree of learning organisation and market orientation.

Among the twenty companies interviewed, only one example of this type of organisation emerged. This may indicate that this type is rare. Furthermore, the high (mean) level of learning organisation/market orientation in this case is caused by a very high (5.21;95%) score on market orientation, while the score on learning organisation (3.83;38%) was relatively low. So the question arises: does this type of company really exist? Other examples of similar companies are however easy to come up with: nuclear power stations, cable network companies and firms in the chemical/petroleum processing industries who have to follow strict procedures, are based on a high level of knowledge, but who also operate in stable and simple environments. Thus the existence of this safety bureaucracy type of company seems to be plausible. This focus on strict procedures and regulations is why this type of organisations was called by Mintzberg (1979, p.332) the "control or safety bureaucracy". He gives as examples airlines and fire departments:

> "Organizations that fly airplanes or put out fires must minimize the risks they take. Hence these *safety bureaucracies* formalize their procedures extensively to ensure that these are carried out to the letter".

The learning organisation indicator that is used in this research consists of (mental) knowledge acquisition on the one hand and (behavioural) learning on the job, sharing of learning experiences and learning by experimentation on the other hand. The first type may be predominant in the safety bureaucracy type of company, while the second

type is of lesser importance. Thus, this type of organisation may be knowledge based and driven (single-loop learning), but altogether may not be a learning organisation in the full (double-loop) sense of this concept.

The high level of learning organisation and market orientation of this type of organisation together with a stable and simple environment is likely to be caused by the very demanding product specifications it encounters. In the case of the company in question, fire fighting equipment is produced, which must be very dependable and is subject to many legal regulations and specifications. This gives rise to a bureaucratic organisational structure, thus to a machine bureaucracy.

The need to be sensitive to regulatory constraints and the urge to invest in knowledge and technology are obvious. Thus top management is externally and market oriented (due to the necessary close fit to market specifications) and its educational background is technical (due to the complex products). Thanks to the stable and simple environment there is no urge to learn double-loop. Therefore heavy investment in training and development is mainly directed at knowledge acquisition and little attention is given to behavioural and attitudinal training and development. The typical worker is an engineer who develops and produces the complex products in accordance with strict specifications. Personnel management is at a high level and is integrated in and contributes to the strategy and direction of the company. This is also called Human Resources Management (HRM) (Fombrun, Tichy, Devanna, 1984).

An illustration from the interview with the only safety bureaucracy in the interview research, company U (producing fire fighting equipment):

"This company produces fire fighting equipment, fire extinguishers, hose reels and cabinets, CO_2, Halon-Foam, mist and sprinkler systems, refinery, offshore and marine protection systems. It also trades fire fighting fittings, fire hoses, foam liquids and foam branchpipes (...). Every employee now has his or her own development plan and people are encouraged to move every few years (horizontally and vertically). Appraisal interviews from managers with employees are now very important in the development of a learning organisation. Empowerment, coaching and on-the-job learning are very important nowadays. One of the company's core values is lifetime employment. But when people do not perform and do not improve their performance with help from their manager, they have to leave the company (...). Although the company's products are the most expensive in the market, the company is able to retain its competitive power, due to the quality and innovative character of the products. However recently it also serves B-label markets under the name of large retail companies.

Formalisation (4.50; 80%) is at a high level. This is caused by the nature of the company's products, which have to be very reliable and are subject to strict quality procedures. Products are ISO 9001 certified".

10.5.4. Adhocracy

This type of organisation is found in dynamic and complex environments and is characterised by a high degree of learning organisation and market orientation. Ten of the twenty companies belonged to this type.

Mintzberg (1979, pp.432-433) describes the adhocracy as follows:

> "Highly organic structure, with little formalization of behavior, high horizontal job specialisation based on formal training (...) To innovate means to break away from established patterns. So the innovative organization cannot rely on any form of standardization for coordination. In other words, it must avoid all the trappings of bureaucratic structure, notably sharp divisions of labor, extensive unit differentiation, highly formalized behaviors, and an emphasis on planing and control systems".

The ten companies are innovative, practise double-loop learning, put a great deal of energy into understanding their markets and invest much money and time in training and development and in on-the-job learning. These companies are leaders in their industrial sectors, are ahead of their time and engage in pro-active behaviour. Top management is externally oriented, often with a marketing or management educational background. The organisational structure is flat, organic and allows employees much freedom to organise their own work. HRM is state of the art and time and money are invested in the quality of the employees and in their mutual co-operation (behaviour, attitude). The typical adhocracy is a niche marketer who produces for international markets.

An example of an adhocracy is company O (Software development, IT consultancy and helpdesk support):

"The company is a subsidiary of a large international IT company, attracts ambitious and bright young people, operates in the lower market segment and tries to build a creative and entrepreneurial image. The company was founded two years ago, is fairly autonomous in its management and operations and

concentrates mainly but not solely on the Dutch market. All new recruits are expected to enrol in a MBA-programme at one of the leading international business schools in the Netherlands. These young people are also engaged in a programme that teaches them consultancy and project management skills. Overall commitment of personnel is expected, almost every employee is a member of one of the numerous task forces that develop strategy and business policies for the company. The company employs 250 people and is growing fast. The degree of learning organisation (5.38; 90%) is at a very high level. The company heavily promotes training, education and on-the-job learning. Much energy is invested in creating a learning organisation. The circumstances for doing this are favourable: many young, ambitious and well-educated employees working in an industry where today's knowledge and technology are obsolete tomorrow. The level of formalisation (1.00; 2%) is very low. The company is characterised by a high degree of informality. The company has an explicit policy to restrict and discourage rules and procedures".

In Table 10.5.2. an overview of the most important characteristics of the four types of organisations is presented.

Table 10.5.2. - An overview of the characteristics of the four types of companies found in the interview research

Characteristics	Machine Bureaucracy	Professional Bureaucracy	Safety Bureaucracy	Adhocracy
Learning organisation/ Market orientation	low	low	high	high
Environment	stable/simple	dynamic/ complex	stable/simple	dynamic/ complex
Learning type	single-loop	single-loop	single-loop	double-loop
Management Orientation	internal production	internal production	external market	external market
Management Background	technical	technical	technical/ market	market/ management
Organisational Structure	patriarchal	bureaucratic	bureaucratic	organic/flat/ participative
Personnel Management	personnel administration	personnel development	HRM	state of the art HRM
Training & Development	almost non-existent	high investment: mainly formal education and training	high investment: mainly on knowledge acquisition	high investment: mainly on behavioural and attitudinal training and development
Typical worker	blue collar	professional	engineer	professional

The customary division of personnel management in Table 10.5.2. to a large degree reflects the development of this profession since World War II. Personnel administration merely supports basic personnel tasks, like contract, salary and vacation administration. Personnel development is largely based on personnel planning and on improving the quality of work. HRM is equal to financial management, marketing management and production management and is integrated in and contributes to the company's mission and general direction. State of the art HRM is "HRM plus" or strategic HRM: in addition to "regular HRM", empowerment, teamwork, action learning, 360° feedback are encouraged (Fombrun, Tichy, Devanna, 1984).

10.6. Conclusions

In this chapter the results of the qualitative research were described and an attempt was made with the help of Mintzberg's (1979) "contingency theory" to classify the companies who were interviewed. The twenty respondents generally recognised and accepted the survey results of their company when compared with other companies who participated in this research with regard to the measures of learning organisation, market orientation, business performance and the like. Those companies characterised by a high degree of learning organisation and market orientation seemed to know how to implement these desired characteristics. To improve the learning organisation, HRM policies were shown to be very important, including a clear HRM vision, appraisal systems, personal development plans, training & education, teamwork, learning on the job, communication programmes, workers participation, and quality circles. Market orientation proved to be supported by a clear and widely supported mission statement, client satisfaction research, bench marking, client participation, and client information systems.

Mintzberg's (1979) contingency theory gave rise to the notion that the stable/simple-dynamic/complex dimension affects the measure of market orientation: namely the more complex and dynamic the environment the more learning and market oriented the organisation (should be). For many companies who participated in the interviews,

namely the machine bureaucracies (two cases) and the adhocracies (ten cases), this indeed seemed to be the case. The other two types, professional bureaucracies (seven cases) and safety bureaucracies (one case), could not be classified along these two dimensions. The professional bureaucracy - which operates in a dynamic and complex environment but despite this is characterised by a low level of learning and market orientation - may be lagging behind the developments in its environment. The safety bureaucracy - which operates in a stable and simple environment but despite this is characterised by a high level of learning organisation and market orientation - needs the application of a high level of sophisticated knowledge due to its vulnerable primary process (like flying aeroplanes) which makes it necessary to focus on strict procedures and regulations and to stay close to the demands of the customers.

The adhocracies thus come closest to learning and market oriented organisations. Some companies, such as the machine bureaucracies, operate in such a stable environment that becoming a learning and market oriented organisation will not enhance business performance. On the contrary, this may have a negative influence on business results, as a learning and market oriented organisation has to increase costs to reach and maintain this learning and market oriented level. Companies who would profit most from such a transformation to a learning and market-oriented organisation are the professional bureaucracy type of company.

The classification into four types of company threw some light on the characteristics of the learning and market oriented organisation and thus seemed to be an useful addition to the results acquired by the quantitative research.

CHAPTER 11. CONCLUSIONS AND DISCUSSION

11.1. Introduction

The *primary objectives* of this study were to assess the following (in the context of the larger Dutch export companies):

- The relationship between the learning organisation and market orientation;
- The influence of formalisation on the learning organisation and market orientation;
- The influence of the learning organisation and market orientation on business performance;
- The moderating influence of turbulence and competitive intensity on the relationship of the learning organisation and market orientation with business performance.

The *secondary objectives* were:

(1) The development of a theoretical framework, resulting from the objectives mentioned above;

(2) The generation of quantitative data to test this theoretical framework;

(3) The collection of qualitative data to deepen understanding of this theoretical framework.

In this concluding chapter the reader finds an elaboration of the research findings, followed by an overview of the implications of the research for theory development and for business and management. The limitations of the study are then described and areas for further research are suggested.

11.2. Research results

The key findings we can take with us follow from a discussion of the four research hypotheses.

H1: *The greater the level of formalisation, the lower the level of learning organisation and the level of market orientation.*

The idea behind this hypothesis is that the learning organisation and market orientation are directed at innovation and risk taking. Because formal decision-making rules and procedures are essentially conservative in character, they will impede these innovative and risk taking processes (Kohli and Jaworksi, 1990). Therefore it was expected that formalisation (the degree to which rules define roles, authority relations, communications, norms, sanctions and procedures) would be inversely related to the learning organisation and market orientation.

The statistical results of this study showed that there was no significant correlation of formalisation with the learning organisation and business performance.

With regard to the relationship of formalisation with market orientation, these results were comparable to those of Jaworksi and Kohli (1993) who reported no significant influence of formalisation on market orientation either. They argued that the mere existence of rules is less important than the content of the rules. Rules may describe for example monthly meetings with clients or a prompt response to customer complaints. These rules would stimulate a market orientation. So it seems that the mere existence of rules (formalisation) does not tell us much about the degree of market orientation. This explanation is convincing and may also be applied to the relationship of formalisation with the learning organisation. It appears from the interviews with the executives of the twenty export companies, and borne out by the researcher's own consultancy experience, that this is in fact usual practice. Often rules and procedures are employed to stimulate personnel to have regular meetings with clients, to influence the way customers are dealt with, to take part in educational and

professional courses, to participate in team work etc. Of course it is possible that the absence of these relationships is due to the potentially insufficient power of the statistical test.

These research results suggest that the formalisation construct does not seem to be of much value to the research on the relationship of the learning organisation and market orientation.

H2:   *The greater the level of learning organisation, the greater the level of market orientation and vice versa.*

This hypothesis is fuelled by the notion that the learning organisation and market orientation have much in common (Slater and Narver, 1995). Learning organisations learn from their environment, they learn from their clients and they learn from their competitors. Market oriented organisations process, disseminate and respond to market information (of customers and competitors). Thus it is plausible that learning organisations are also market oriented and vice versa.

Exploratory factor analysis of the learning organisation construct revealed five factors (which were called "learning climate", "learning methods and techniques", "learning attitudes", "learning to enhance performance" and "individual and team practices"), which had acceptable Cronbach Alpha levels (>0.72). Confirmatory factor analysis of the market orientation construct revealed three factors: "external orientation", "information processing attitudes" and "market alertness. The third factor ("market alertness") did not show an acceptable Cronbach Alpha (0.55). The other two factors had acceptable Cronbach Alpha levels (>0.74). Although these factors essentially refer to an organisation's market orientation, it does not appear to be analogous to the conceptualisation of Kohli and Jaworksi (1990), who proposed "intelligence generation", "intelligence dissemination" and "responsiveness" instead - factors, which were confirmed in Kohli, Jaworski and Kumar's article (1993).

The statistical results of the study showed that the correlation between the constructs learning organisation and market orientation was 0.733 and significant at the 0.01 level. This indicated that the second hypothesis could be accepted.

The question whether there is a causal order between the learning organisation and market orientation has been addressed (implicitly) by some authors.

Day (1992), for example, observes that continuous learning about markets is a core competence of companies. The ability to process and disseminate information from markets and to respond to this information may be seen as the company's learning capability (Day, 1994). This view may be interpreted as a statement that the learning organisation (the capability to learn) causes a market orientation (i.e. the organisation is able to process and disseminate information from markets and to respond to this information). Likewise, Kiernan (1993) observes that an internally oriented learning strategy is a prerequisite of an externally directed market orientation, which may also be interpreted externally as a view that the learning organisation causes a market orientation.

Sinkula (1994), however, describes how organisations learn the skills of how to process market information effectively in practice and how this learning gradually leads to higher levels of skills (of how to process market information) and higher levels of learning. Organisations "start" with the processing of market information, which leads to a market orientation, which subsequently develops into a learning organisation. Therefore, Sinkula (1994) puts it the other way around: market orientation causes the learning organisation, although subsequently in this process higher levels of learning organisation cause higher levels of market orientation which cause higher levels of learning organisation. Slater and Narver (1995) see market orientation as a culture that contributes to the creation of a learning organisation. This statement suggests that market orientation comes first and causes a learning organisation. However, they also believe that a market orientation should be accompanied by an entrepreneurial drive or culture to be able to create a learning

organisation and, like Sinkula (1994), they state that a learning organisation, in its turn, contributes to higher levels of market orientation.

By structural equation modelling four competing models were fitted which address the causal order question. These four models were as follows: a model where learning organisation causes market orientation, a model where market orientation causes learning organisation, a model where learning organisation and market orientation are correlated and a model where learning organisation and market orientation are combined into one construct: the market oriented learning organisation. Only the last model showed a good fit.

So it is not possible to derive an unequivocal conclusion about the causal order of the learning organisation and market orientation. Theoretically it is conceivable that there is a distinction between organisations that are market oriented in an intrinsic way and market oriented in an extrinsic way. In the first case, e.g. "the A-type company", a high level of learning organisation may be the cause of the high level of market orientation of this organisation and, in the second case, e.g. "the B-type company", external circumstances compel the organisation to be market oriented which leads to a learning organisation, thus in this case market orientation is the cause of the learning organisation[10].

H3.   The greater the level of learning organisation and the level of market orientation, the greater the level of business performance.

This hypothesis follows from Kohli and Jaworski (1990) who state that the greater the level of market orientation of organisations, the higher their performance level and from Slater and Narver (1995) who state that organisational learning facilitates behaviour change that leads to improved performance.

---

[10] This idea about A- and B-type companies was inspired by suggestions made by Professor Tevfik Dalgic at the viva voca at Henley Management College dd. 22 May 1998, where an earlier version of this thesis was discussed.

The statistical results of this study indicated that H3 could be accepted. The correlation of learning organisation with business performance was 0.373 and of market orientation with business performance 0.420, both significant at the 0.01 level.

The structural equation modelling approach produced a standardised regression weight coefficient of 0.605 (p=0.004) of the influence of the market oriented learning organisation on business performance for model D. This model, where learning organisation and market orientation were combined, was the only one of the four models with a good model fit

These statistical results from the study were supported by earlier findings of other authors, although in the literature the only available statistical evidence of the learning organisation-performance link was of Jashapara (1995) and Simonin (1997) who found a positive and significant association.

The market orientation-performance link was supported by statistical evidence provided by Narver and Slater (1990), Jaworski and Kohli (1993), Slater and Narver (1994a), Reukert (1992), Deshpande, Farley and Webster (1993), Webster (1993), Greenley (1995a, 1995b) and Pelham and Wilson (1996).

H4:   *The greater the level of turbulence and the level of competitive intensity, the stronger the relationship between the learning organisation and market orientation with business performance.*

This hypothesis is inspired by Kohli and Jaworski (1990) who suggest that environmental variables, like competitive intensity, market turbulence, technological turbulence and performance of the economy moderate the relationship between market orientation and business performance. No literature was available on the moderating influence of environmental variables on the relationship between the learning organisation and business performance. In this study Kohli and Jaworksi's (1990) competitive intensity variable was included and their market turbulence and technological turbulence variables were combined into one turbulence construct.

Because Jaworksi and Kohli (1993) reported that the performance of the economy appeared to be too complex to measure and so they did not include this variable in their research, this variable was also excluded from the research in this study. Despite a dearth of literature on the moderating influence of environmental variables on the relationship between the learning organisation and business performance, it was decided to include this issue in H4. It was thought - given the postulated association between the learning organisation and market orientation - that such a moderating influence would be likely if a comparable moderating influence on the market orientation-performance link could be found.

The moderated regression analysis did not produce significant statistical evidence for the moderating influence of turbulence and competitive intensity on the learning organisation-performance and the market orientation-performance link.

The structural equation modelling results, for the only model of the four that were tested, that fitted well and in which learning organisation and market orientation were combined, showed no evidence for the moderating influence of turbulence and competitive intensity on the relationship of the learning organisation and market orientation on business performance. Although the correlation (0.383) of turbulence with the market oriented learning organisation was significant at the 1% confidence level, no significant influence was found for turbulence on performance. The same applied to the correlation of competitive intensity with the market oriented learning organisation and to its influence on performance, which were all insignificant.

These results indicate that no support was produced for the moderating influence of turbulence and competitive intensity on the relationship of the learning organisation and market orientation on business performance.

With regard to the moderating influence on the market orientation-performance link (no results were available on the learning organisation-performance link), these results were comparable to those of Jaworksi and Kohli (1993) and Slater and Narver (1994a) who did not find moderating influences either. These results were however different

from Greenley's (1995b) research results who found indications for a moderating influence of turbulence (Greenley, 1995b) on the market orientation-performance link and different from the results reported by Lusch and Laczniak (1987), who found some evidence for a moderating influence of competitive intensity on the market orientation-performance link.

Although the moderating influence of environmental variables needs more study in future research to be able to draw unequivocal conclusions, the research results suggest that, for most companies, being a learning and market oriented organisation does have a beneficial effect, no matter what the environmental moderators are. As Slater and Narver (1994a, p.53) observe with regard to the moderating effects on the market orientation-performance link (see Section 4.3.2.):

> "Why should a market-oriented business necessarily be influenced by "environmental moderators"? With its external focus on commitment to innovation, a market oriented business should be prepared to achieve and sustain competitive advantage in any environmental situation."

11.3. Implications of the study

This study has implications both for theory development on the one hand and for business and practising managers on the other hand.

The main contribution to *theory development* concerns the (non)confirmation of the four research hypotheses, as described in Section 11.2. This (non)conformation of the hypothesised relationships and influences is preliminary. The learning organisation scale needs further validation in future research and the causal order between the learning organisation and market orientation should be clarified to understand the nature of the relationship between the two constructs. The formalisation scale consisted of only two items and it is therefore not unlikely that it lacked the necessary robustness. The environmental constructs turbulence and competitive intensity should be scrutinised further and applied in future research to find out if they measure what they are intended to measure (i.e. are they valid?), while perhaps other environmental

231

variables, that are not yet discovered, exercise a moderating influence on the learning organisation/market orientation-performance link.

The study also represents a small step in the further development of instruments to measure the learning organisation, market orientation and business performance.

The implications of this study for *business and managers* are, firstly, that these instruments are available for managers to assess their own company. A proposal for a modified questionnaire was presented by the researcher to be used for that purpose (see. Appendices G. and H.). Benchmark scores for the larger Dutch export companies are derived from this research and may be used as a comparative guide. Because the influence of formalisation, turbulence and competitive intensity was not confirmed by this study, these scales were not included in the proposed questionnaire.

Furthermore, it was shown that high levels of learning organisation and market orientation exercise a positive influence on business performance. The level of turbulence or of competitive intensity do not seem to influence these effects.

The literature search and the qualitative study showed that the implementation of a learning organisation and market orientation is far from easy. Processes of unlearning the established routines (Hedberg, Nystrom and Starbuck, 1976) are inevitable if organisations want to transform from a machine or professional bureaucracy to a adhocracy, as labelled by Mintzberg (1979), for example. The capabilities of managers to coach their personnel through this transformation process are decisive. Many of these managers may be trained to develop such developmental skills, but some will not be able to transform themselves and will inevitably have to leave the organisation. It is questionable if in all instances managers are courageous enough to accept these consequences and to persist in the transformation to a learning and market oriented organisation or to accept that they can do nothing about it.

Also, it was shown that (organisational) learning and becoming or remaining a market oriented organisation are two sides of the same coin (Slater and Narver, 1995). This

means that training personnel to become more client friendly or more attentive to the needs of the customer is not enough. Organisation members must learn to learn from their clients and to pass this knowledge on to their colleagues. In this learning process of "learning from the customer", organisation members must be able and willing to discuss familiar procedures and practices if necessary and provide solutions for problems raised by the client in a creative, open and innovative way. To facilitate this process personnel must be coached and stimulated in an enthusiastic way by management and work closely together in teams to serve and to learn from the customer and from their colleagues. This means a departure from common practice in organisations who endeavour to become market oriented exclusively by training their personnel to become more commercial (i.e. more client oriented), but where learning processes themselves do not get any attention (Slocum and McGill, 1994). Likewise, this study suggests that a consequence of the strong association between the learning organisation and market orientation is that learning in organisations should be directed at learning from their markets (Day, 1992).

From this study it became evident that the transformation towards a learning and market oriented organisation may be facilitated by the adoption of practices that shape the learning and market oriented culture. These practices are as follows:

a. Development by top management of a vision and mission that is continually updated with reference to changes in the business environment and in customers' needs;

b. Development of an open, democratic organisational culture where organisation members are not afraid to share their opinions and speak out their minds, where people and groups are encouraged to analyse mistakes in order to learn and where people communicate important information about (market) developments and customers with their colleagues all over the organisation;

c. Emphasis on formal training and development activities for all personnel, the assignment of special work projects - where possible and appropriate - in which people are given time, support and knowledge in order to learn as well as do the

work, and coaching by managers to integrate what they have learned in development or training programs by discussing its application in practice;

d. Individual development plans for all personnel, coached by management and periodical (external and internal) customer satisfaction assessments that are considered in performance reviews and influence all organisation members' salaries;

e. Periodical review of the likely effect of changes in the business environment on customers, polling of end users to assess the quality of the products and services, meetings with customers to find out what products or services they will need in the future, collection of industry information through informal means and in-house market research;

f. Quick response on signals that customers are unhappy with the quality of products and services, periodical review of the product development efforts to ensure that they are in line with what customers want and feedback to suppliers on the quality of the products and services they deliver;

g. Communication of key business information to all employees through channels such as newsletters, departmental meetings, and all-personnel meetings, periodical interdepartmental meetings to discuss market trends and developments, regular dissemination of quality, productivity, cost, and sales data throughout the organisation, periodical circulation of documents (e.g., reports, newsletters) that provide information on customers and on technological, political and economical trends and regular dissemination of data on customer satisfaction at all levels on a regular basis.

The proposal for a modified questionnaire, shown in Appendices G. and H., may be used by organisations to assess the presence of these practices.

11.4. Limitations of the study

This study has a number of limitations that must be borne in mind when interpreting the results:

1. The possibility of specification error resulting from the omission of a relevant variable from the proposed model in the study. The use of a theory-based model in this study should avoid such an error but it cannot be completely ruled out that a relevant construct has been overlooked.

2. The availability and strength of the instruments used in this study have not yet been tested in Dutch export companies. Although the scales used showed acceptable Cronbach Alpha reliability scores, these instruments may probably be improved through the development of a larger battery of scales. The instrument to measure the learning organisation was in its initial stage and therefore requires further replication to strengthen its validity.

3. The questionnaire contained 81 items, making it rather lengthy. This may have resulted in measurement error of the constructs from respondents unable to maintain their concentration over prolonged periods of time. The proposal for a modified questionnaire (see. Appendices G. and H.) that was developed in the course of this study was much shorter as it has been reduced to 36 items.

4. For practical reasons a six-point scale was used in the questionnaire, mainly to discourage neutral possibly meaningless answers[11]. However, the Likert-type scale is superior for methodological reasons. The original Likert-type scale is a five-point scale with a neutral middle position that serves as a kind of "safety valve". A six-point scale does not have such a "neutral" position. Although a six-point scale is still a scale of summated ratings and some renowned authors like Nunnally (1978) and Churchill and Peter (1984) believe that such a scale should not make a difference, a five-point Likert-type scale - with its neutral middle position - is much more common and accepted. Therefore, for the proposal for a modified questionnaire (see Appendices G. and H.), a five-point Likert-type scale was adopted.

---

[11] See the discussion in Section 5.4.3. where it is observed that, because many respondents tend to score in the middle position, in business research sometimes four-, six or ten-points scales are applied.

5. Business performance was measured by subjective (judgmental) and not by objective (largely financial) measures, as objective financial information is difficult to obtain. Although some authors, for example Dess and Robinson (1984) and Pearce, Robbins and Robinson (1987) showed that such measures can be a reliable means of measuring performance, these subjective measures may have influenced the power of the performance scale in the study.

6. As suggested by Hair, Anderson, Thatham and Black (1992) structural equation modelling is superior to multiple regression analysis, as it enables the researcher to make a simultaneous estimation of a series of separate, but interdependent multiple regression equations. Its χ^2 measure is very sensitive however for sample size differences. Hair, Anderson, Thatham and Black (1992) state that the sensitivity increases as the sample increases over 100 and reaches a "critical sample size" for a sample of 200. Although 105 responses are acceptable for a structural equation analysis, 200 responses would have been more satisfactory.

7. A major disadvantage of mail surveys is the relatively low response rate as evidenced by a 17% response rate in this study. The Dutch Chamber of Commerce, which supports companies and consultants who survey organisations, stated that in their experience this response rate was rather good and one fellow Henley Management College doctorate associate, Maarten Leeuw, experienced an even lower response rate (10%) in his study on niche marketing in the Netherlands. Chapter 3 described some examples of researchers with comparable response rates, like Siguaw, Brown and Widing (1994), who recorded a response rate of 16.9% and Miles and Arnold (1991) who recorded a response rate of 18% in their research studies in the USA. However, low response rates may introduce non-response bias where non-respondents may hold views that are significantly different from those of respondents, thereby limiting the generalisability of the findings.

8. The sample of the survey was restricted to larger export companies in the Netherlands. The research findings are therefore limited to this population only. As a very large proportion of Dutch firms are composed of small firms with domestic

markets, this consideration should be borne in mind when interpreting the findings. Any generalisation to other type of organisations or countries should be done with extreme caution.

9. A relatively small number of twenty interviews were carried out to study different themes and patterns behind the concepts of the learning organisation, market orientation and business performance. This is an inevitable consequence of qualitative research, which is not well suited for large scale studies. This small number, however, may not be indicative of Dutch export companies in general.

11.5. Further research

1. One of the main areas for further research concerns the refinement of the measures learning organisation, market orientation, business performance, turbulence and competitive intensity. Every instrument for measuring each of these constructs requires further development and refinement, both from a theoretical perspective in order to make it more relevant for (larger Dutch export) companies, as well as for the items required to adequately capture each construct. It is advisable to give priority to the refinement and further validation of the learning organisation scale, as the learning organisation scale is still in its preliminary stage.

2. This study found no convincing statistical evidence of the moderating influence of environmental characteristics on the relationship between the learning organisation, market orientation and business performance. Therefore more study on this subject would be very helpful. This is also advisable because the qualitative research results suggested a relationship between the "level" of learning organisation and market orientation with the organisational environment, although it was not focused on the moderating influence of the learning organisation/market orientation-performance link. These qualitative research results showed that an organisation with a "high level" of learning organisation and market orientation (labelled "adhocracy" in Mintzberg's (1979) terminology) is most likely to be found in a complex and dynamic environment, while an organisation with a "low

level" of learning organisation and market orientation (labelled "machine bureaucracy" in Mintzberg's (1979) terminology) is most likely to be found in a simple and stable environment. This research may be directed, on the one hand, to the moderating influence of (market and technological) turbulence and competitive intensity themselves and, on the other hand, to the search for other possible moderator variables.

3. This study used a business performance construct which consisted of "general performance" (sales growth and profitability) and "quality performance" (quality of products and services) items. Further study of the content of business performance would therefore be advisable.

4. In this study an association between the learning organisation and market orientation was shown. However, the causal direction of this association was not proven. None of the references used in this study provided convincing arguments or evidence of such a direction and neither did the statistical analysis of this study. Future research to study this important issue may make an important contribution to the theory of learning and market oriented organisations. With regard to this question of causal order, this research may be directed at the question if there is a distinction (as mentioned in Section 11.2.) between organisations that are market oriented in an intrinsic or in an extrinsic way. In the first case, e.g. "the A-type company", a high level of learning organisation may be the cause of the high level of market orientation in this organisation and, in the second case, e.g. "the B-type company", external circumstances compel the organisation to be market oriented and hence to be a learning organisation, thus in this case market orientation is the cause of the learning organisation.

5. There are no major empirical studies about the way the learning organisation and market orientation can be introduced, implemented and kept alive in organisations. Such research would be very fruitful to bridge the gap between the business disciplines and management practice. The idea or "art" of "unlearning" (Slocum

and McGill, 1994, see Section 2.9.), the application of the HRM discipline and the suggestions made in Section 11.3., may be helpful in guiding this research.

6. Although the sample frame consisted of (Dutch) export companies, this study was not directed at the question of (successful) export marketing policies in relation to the learning organisation and market orientation and the author knows of no empirical work about this relationship. Therefore, future research that focuses on how export marketing policies, the learning organisation and market orientation are related and how their combination may lead to higher export successes and business performance (see Dalgic, 1994 for a theoretical elaboration on this topic) would be valuable.

7. The replication of this research in cultures other than the USA (e.g. Jaworksi and Kohli, 1993 and Slater and Narver, 1994a), Japan (Deshpande, Farley and Webster, 1993) and Europe (Greenley, 1995a, 1995b) would be advisable. This cannot be stressed enough: it is very important that this type of research is extended to countries beyond the USA, Japan and Europe. More of this research should be done in, for example, the Far East and in developing countries. If a relationship between variables holds in one culture it does not necessarily have to hold in another culture. Perhaps Hofstede's (1994) international organisational culture theory may therefore be helpful.

8. In addition to quantitative research techniques, it also seems important to use more qualitative types of investigation. Questions such as "what does a market orientation really mean to an organisation?", or "what makes a learning organisation different from a non-learning organisation?" can hardly be answered by using quantitative research methods. Case studies and in-depth interviews seem better suited to these kinds of questions. This study offered a modest illustration of such research. Thorough case studies of organisations that are in the process of becoming more learning and market oriented may contribute much to the understanding of this process.

BIBLIOGRAPHY

Aiken, M., and J. Hage, (1966), Organizational Alienation, <u>American Sociological Review</u>, 31 (August), pp.497-507.

Aiken, M., and J. Hage, (1968), Organizational Independence and Intra-Organizational Structure, <u>American Sociological Review</u>, 33, pp.912-930.

Arbuckle, J.L., (1997), <u>AMOS User Guide Version 3.6.</u> Chicago, Illinois - Small Waters Corporation.

Argyris, C., (1977), Double-loop Learning in Organisations, <u>Harvard Business Review</u>, September/October.

Argyris, C., and D.A. Schon, (1978), <u>Organizational Learning: A Theory of Action Perspective.</u> Reading, Massachusetts - Addison Wesley.

Babbie, E., (1992), <u>The Practice of Social Research.</u> Belmont, California - Wadsworth Publishing Company.

Bean, A.G., and M.J Roszkowski, (1995), The Long and Short of It, <u>Marketing Research: A Magazine of Management & Applications</u>, 7, 1, pp.20-26.

Belbin, M., (1981), <u>Management Teams: Why They Succeed or Fail.</u> London - Heinemann.

Bentler, P.M., and D.G. Bonett, (1980), Significance Tests and Goodness-of-Fit in the Analysis of Covariance Structures, <u>Psychological Bulletin</u>, 88, pp.588-606.

Bentler, P.M., and C. Chou, (1987), Practical Issues in Structural Modeling, <u>Sociological Methods and Research</u>, 16 (August), pp.78-117.

Berry, L.L., and A. Parasuraman, (1991), <u>Marketing Services - Competing Through Quality.</u> Free Press.

Berthon, P., A. Money and L. Pitt, (1996), Replication, Extension and Generation: A Framework of Potential Research Space, <u>Working Paper Series,</u> Henley-on-Thames - Henley Management College.

Bogdan, R., and S.J. Taylor, (1975), <u>Introduction to Qualitative Research Methods, A Phenomenological Approach to the Social Sciences.</u> New York - John Wiley & Sons.

Bollen, K.A., (1986), Sample Size and Bentler and Bonnett's Nonnormed Index, <u>Psychometrika</u>, 51, pp.375-377.

Bollen, K.A., (1989), A New Incremental Fit Index for General Structural Equation Models, <u>Sociological Methods and Research</u>, 17, pp.303-316.

Breman, P., and J.T.H. Straathof, (1993), Cultuurverandering en de Lerende Organisatie, Opleiding & Ontwikkeling, August/September, pp.19-23.

Breman, P., and C. Rekvelt, (1995), Bookreview of Redding, J.C. and R.F. Catanello, (1994), Strategic Readiness. The Making of the Learning Organization. San Francisco - Jossey-Bass, M&O, Tijdschrift voor Organisatiekunde en Sociaal Beleid, July/August, pp.309-314.

Breman, P., and C.E.M. Nutters, (1996), Bookreview of Broeck, van den H., (1996), Lerend Management, Verborgen krachten van managers en organisaties. Tiel - Lannoo Scriptum, M&O, Tijdschrift voor Organisatiekunde en Sociaal Beleid, May/June, pp.244-250.

Breman P., and V.C. Mensingh, (1997), Continu Leren, een Must voor Allen, Het lerende vermogen van organisaties en de rol van master-opleidingen, The Official Master Guide, Den Haag - McMillian & Company, pp.20-21.

Breman P., and T. Dalgic, (1998), The Learning Organization and Market Orientation: A Study of Export Companies in the Netherlands, Developments in Marketing Science, Proceedings of the Annual Conference of the Academy of Marketing Science, Norfolk, Virginia 27-30 May.

Burgoyne, J., (1992), Creating a Learning Organization, Royal Society of Arts Paper, April.

Burns T., and G.M. Stalker, (1966), The Management of Innovation. London - Tavistock.

Burton F.N., and B.B. Schlegelmich, (1987), Profile Analyses of Non-Exporters Versus Exporters Grouped by Export Involvement, Management International Review, Vol.27, No.1, pp.38-49.

Caruana, A., (1994), The Excellence, Market Orientation Link: Some Consequences for Service Firms. Unpublished DBA thesis Henley Management College/Brunel University.

Caruana, A, (1995), Propositions and a Model: Do Excellent Market Oriented Firms Who Deliver Quality Service Perform Better?, Management Research News, Vol. 18, No.1/2, pp.9-23.

Caruana, A. and L. Pitt, (1994), Market Orientation and Business Performance: Some European Evidence, Working Paper Series, Henley-on-Thames - Henley Management College.

Cattell, R.B., (1965), Factor Analysis: An Introduction to Essentials, (1) the Purpose and Underlying Models, (2) the Role of Factor Analysis in Research, Biometrics, Vol. 21, pp.190-215 and pp.405-435.

Childers, T.L., and O.C Ferule, (1979), Response Rates and Perceived Questionnaire Lengths in Mail Surveys, Journal of Marketing Research, 16, pp.429-431.

Churchill, G.A., (1979), A Paradigm for Developing better Measures of Marketing Constructs, Journal of Marketing Research, XVI, February, pp.64-73.

Churchill, G.A., (1995), Marketing Research Methodological Foundations. Orlando, Florida - The Dryden Press.

Churchill, G.A. Jr., and J.P. Peter, (1984), Research Design Effects on the Reliability of Rating Scales: A Meta Analysis, Journal of Marketing Research, Vol. XXI, (November), pp.360-375.

Covin, J.G., and D.P. Slevin, (1989), Strategic Management of Small Firms in Hostile and Benign Environments, Strategic Management Journal, 10, January, pp.75-87.

Cronbach, L.J., (1951), Coefficient Alpha and the Internal Structure of Tests, Psychometrika, 16, 3, (September), pp.297-333.

Cyert, R., and J. March, (1963), A Behavioral Theory of the Firm. New York - Prentice Hall.

Dalgic T, (1994), International Marketing and Market Orientation: An Early Conceptual Attempt at Integration, Advances in International Marketing, Vol. 6, pp.69-82.

Day, G.S., (1992), Continuous Learning About Markets, Planning Review, Vol. 20, No. 5, September/October, pp.47-49.

Day, G.S., (1994), The Capabilities of Market-driven Organizations, Journal of Marketing, Vol. 58, October, pp.37-52.

De Geus, A., (1988), Planning as Learning, Harvard Business Review, March/April.

Deming, W.E., (1982), Quality, Productivity and Competitive Position. Cambridge, Mass. - MIT Center for Engineering.

Deshpande, R., J.U. Farley and F.E. Webster, (1993), Corporate Culture, Customer Orientation, and Innovativeness in Japanese Firms: A Quadrad Analysis, Journal of Marketing, Vol. 57, January, pp.23-27.

Dess G.C., and R.B Robinson, (1984), Measuring Organizational Performance in the Absence of Objective Measures: The Case of the Privately-Held Firm and Conglomerate Business Unit, Strategic Management Journal, Vol. 5, July-September, pp.:265-273.

Douglas, S.P., and C.S. Graig, (1995), Global Marketing Strategies. New York -. McGraw-Hill.

Doyle P., J. Saunters and L Wright, (1988), A Comparative Study of British, US and Japanese Marketing Strategies, <u>British Market International Journal of Research in Marketing</u>, Vol.5, No.3, pp.171-184.

Emory, C.W., (1980), <u>Business Research Methods.</u> St. Louis - Washington University.

Felton, A.P., (1959), Making the Marketing Concept Work, <u>Harvard Business Review</u>, July/August, pp.55-65.

Fombrun, C.J., N.M. Tichy and M.A. Devanna, (1984), <u>Strategic Human Resource Management.</u> New York - Wiley.

Ford, R., McLaughlin, R.F.F. and S. Williamson, (1992), Using Certified Mail in Industrial Research; <u>Industrial Marketing Management</u>, 21, 4, pp.281-285.

Garvin, D.A., (1993), Building a Learning Organization, <u>Harvard Business Review</u>, July/August.

Glazer, R., (1991), Marketing in an Information-Intensive Environment: Strategic Implications of Knowledge as an Asset, <u>Journal of Marketing</u>, Vol. 55, October, pp.1-19.

Glynn, M.A., (1996), Innovative Genius: A Framework for Relating Individual and Organisational Intelligence to Innovation, <u>Academy of Management Review</u>, Vol. 21, No. 4, pp.1081-1111.

Greenley, G.E., (1995a), Forms of Market Orientation in UK Companies, <u>Journal of Management Studies,</u> Vol. 32, No. 1 (January), pp.47-66.

Greenley, G.E., (1995b), Market Orientation and Company Performance: Empirical Evidence from UK Companies, <u>British Journal of Management</u>, Vol. 6, pp.1-13.

Grönroos, C., (1990), <u>Service Management and Marketing - Managing the Moments of Truth in Service Competition.</u> Massachusetts - Lexington Books.

Guba, E.G., and Y.S., Lincoln, (1994), Competing Paradigms in Qualitative Research. In: Denzin, K. and Y.S. Lincoln, (1994), <u>Handbook of Qualitative Research.</u> Thousand Oaks - Sage.

Gummeson, E., (1991), <u>Qualitative Methods in Management Research.</u> Newbury Park - Sage.

Hair, J.F., R.E. Anderson, R.L. Tatham and W.C. Black, (1992), <u>Multivariate Data Analysis.</u> New York - Macmillan, 2nd edition.

Hart, S., and A. Diamantopoulos, (1993), Linking Market Orientation and Company Performance: Preliminary Work on Kohli and Jaworski's Framework, Journal of Strategic Marketing, 1, pp.93-122.

Hedberg, B. L. T., P. C. Nystrom and W.H. Starbuck, (1976), Camping on Seesaws: Prescription for a Self-designing Organization, Administrative Science Quarterly, 21, pp. 41-65.

Hoelter, J.W., (1983), The Analysis of Covariance Structures: Goodness-of-Fit Indices, Sociological Methods and Research, 11, pp.325-344.

Hofstede, G., (1980), Culture's Consequences. International Differences in Work-Related Values. Beverly Hills -. Sage Publications.

Hofstede, G., (1994), The Business of International Business is Culture, International Business Review, Vol. 3, No 1, pp.1-14.

Hong Liu, (1995), Market Orientation and Firm Size: An Empirical Examination in UK firms, European Journal of Marketing, Vol. 29, No. 1, pp.57-71.

Huber, G.P., (1991), Organization Learning: The Contributing Processes and the Literature, Organization Science, No.2, pp.88-115.

Hubbard, R., and J.S. Armstrong, (1994), Replications and Extensions in Marketing: Rarely Published but quite Contrary, International Journal of Research in Marketing, 11, pp.233-248.

Jashapara, A., (1995), Learning in Organizations: A Study of the UK Construction Industry. Unpublished DBA thesis Henley Management College/Brunel University.

Jaworski, J.B., and K.A. Kohli, (1993), Market Orientation: Antecedents and Consequences, Journal of Marketing, Vol. 57, July, pp.53-70.

Jöreskog, K.G., and D. Sörbom, (1984), LISREL-VI User's Guide. Mooresville, Indiana - Scientific Software.

Kaiser, H.F., (1974), An Index of Factorial Simplicity, Psychometrika, Vol. 39, pp.31-36.

Kanuk, L., and Berenson, C., (1975), Mail Surveys and Response Rates: A Literature Review, Journal of Marketing Research, 12, pp.440-453.

Keegan, W.J., (1986), Five Strategies for Multinational Marketing. In: Thorelli, H. and H. Becker, (1986), International Marketing Strategy. New York - Pergamon Press.

Kerlinger, F. N., (1986), Foundations of Behavioral Research. Orlando - Harcourt Brace Jonavich College Publishers.

Kiernan, M.J., (1993), The New Strategic Architecture: Learning to Compete in the Twenty-First Century, <u>Academy of Management Executive</u>, Vol. 7, No. 1, pp.7-21.

Kim. D.H., (1993), The Link Between Individual and Organizational Learning, <u>Sloan Management Review</u>, Fall, pp.37-50.

Kohli, K.A., and J.B. Jaworski, (1990), Market Orientation: The Construct, Research Propositions and Managerial Implications, <u>Journal of Marketing</u>, Vol. 54, April, pp.1-18.

Kohli, K.A., J.B. Jaworski and A. Kumar, (1993), MARKOR: A Measure of Market Orientation, <u>Journal of Marketing Research</u>, November, pp.467-477.

Kolb, D.A., (1976), Management and the Learning Process, <u>California Management Review</u>, Vol. XVIII, No. 3, Spring, pp.21-31.

Kolb, D.A., (1984), <u>Experiential Learning</u>. New York - Prentice Hall.

Kotler, P., (1994), <u>Marketing Management - Analysis, Planning, Implementation and Control</u>. New Jersey - Prentice-Hall, 7ed.

Kotabe, M., (1989), Assessing the Shift in Global Market Share of US Multinationals, <u>International Marketing Review</u>, Vol.6, No.5, pp.20-35.

Lawrence, P.R., and J.W. Lorsch, (1967), <u>Organization and Environment</u>, Boston - Harvard Graduate School of Business Administration.

Levitt, T., (1960), Marketing Myopia, <u>Harvard Business Review</u>, July/August, pp.45-56.

Lusch, R.F., and Laczniak, G.R., (1987), The Evolving Marketing Concept, Competitive Intensity and Organizational Performance, <u>Journal of Academy of Marketing Science</u>, Vol.15, Fall, pp. 1-11.

Lyles, M.A., and C.R. Schwenk, (1992), Top Management Strategy and Organizational Knowledge Structures, <u>Journal of Marketing Studies</u>, 29:2, March, pp.155-174.

McGee L.W., and R.L. Spiro, (1988), The Marketing Concept in Perspective. <u>Business Horizons</u>, Vol.31, (May-June), No.3, pp.40-45.

Mckee, D. O., (1992), The Effect of Using a Questionnaire Identification Code and Message about Non-Response Follow-up Plans on Mail Survey Characteristics. <u>The Journal of the Market Research Society</u>, Vol. 31, No 2.

Miles, M.P., and D.R. Arnold, (1991), The Relationship between Marketing Orientation and Entrepreneurial Orientation, <u>Entrepreneurship Theory and Practice</u>, Summer.

Miller, D., and P.H. Friesen, (1983), Strategy Making and Environment: The Third Link, Strategic Management Journal, 4, July, pp.221-235.

Mintu-Wimsatt, A., and H. R. Lozado, (1996), Green Marketing in a Unified Europe. Binghamton, NY - International Business Press.

Mintzberg, H., (1979), The Structuring of Organizations, Englewood Cliffs, New Jersey - Prentice Hall.

Mintzberg, H., (1991), The Effective Organization: Forces and Forms, Sloan Management Review, Winter, pp.54-67.

Morris, M.H., and G.W. Paul, (1987), The Relationship Between Entrepreneurship and Marketing in Established Firms, Journal of Business Venturing, 2 (3), pp.247-259.

Murray, J.A., (1981), Marketing Is Home for the Entrepreneurial Process, Industrial Marketing Management, 10 (2), pp.93-99.

Narver, J.C., and S.F. Slater, (1990), The Effect of a Market Orientation on Business Profitability, Journal of Marketing, Vol. 54, October, pp.20-35.

Nonaka, I., (1991), The Knowledge-Creating Company, Harvard Business Review. November/December.

Nonaka, I., and H. Takeuchi, (1995), The Knowledge-Creating Company. University Press, Oxford 1995.

Norusis, M., J., (1993), SPSS Professional: Statistics 6.1. Chicago, Illinois - SPSS Inc.

Nunnally, J.C., (1978), Psychometric Theory, New York - McGraw-Hill.

O'Brien, M.J., (1994), Learning Organization Practices Profile. San Diego - Pfeiffer and Co.

O'Brien, M.J., and J. Kremer Bennet, (1994), The Building Blocks of the Learning Organization, Training Magazine, June, pp.41-49.

O'Brien, C.D., and A.F. Buono, (1996), Building Effective Learning Teams: Lessons from the Field, SAM Advanced Management Journal, Summer, pp.4-9.

Parasuraman, A., V.A.Zeithaml, and L.L.Berry, (1994), Reassessment of Expectations as a Comparison Standard in Measuring Service Quality: Implications for Further Research, Journal of Marketing, Vol. 58 (January), pp. 111-124.

Pareek, U., (1988), Organizational-Learning Diagnostics (OLD): Assessing and Developing Organizational Learning, The Annual Developing Human Resources, San Diego - Pfeiffer & Co.

Pelham, A.M., and D.T. Wilson, (1996), A Longitudinal Study of the Impact of Market Structure, Firm Structure, Strategy, and Market Orientation Culture on Dimensions of Small-Firm Performance, Journal of the Academy of Marketing Science, Vol. 24, No. 1, pp.27-43.

Perrow, C, (1972), Complex Organizations: A Critical Essay. Dallas - Scott/Foresman.

Peters, T., (1989), Coming to Terms with the Dismal Record of Quality Programs. TPG Communications.

Peterson, R.T., (1989), Small Business Adoption of the Marketing Concept vs. Other Business Strategies. Journal of Small Business Management, 27 (January), pp.38-46.

Pierce, J.A., D.K. Robbins and R. Robinson, (1987), The Impact of Grand Strategy and Planning Formality on Financial Performance, Strategic Management Journal, Vol.8, March-April, pp.125-134.

Piercy N., (1981), Company Internationalization: Active and Reactive Exporters, European Journal of Marketing, Vol.15, No.3, pp.26-40.

Pierson, G.J., (1993), Business Orientation: Cliché or Substance?, Journal of Marketing Management, Vol. 9 (3), pp.233-243.

Pitt, L. Caruana, A. and Berthon, P., (1996), Market Orientation and Business Performance: Some European Evidence, International Marketing Review, Vol. 13 (1), pp.5-18.

Philips, C., I. Doole and R. Lowe, (1994), International Marketing Strategy, Analysis, Development and Implemenation. London - Routledge.

Porter, L.W., R.M. Steers, R.T. Mowday and P.V. Boulian, (1974), Organizational Commitment, Job Satisfaction and Turnover Among Psychiatric Technicians, Journal of Applied Psychology, 59 (5), pp.603-609.

Redding, J.C., and R.F. Catanello, (1994), Strategic Readiness. The Making of the Learning Organization. San Francisco - Jossey-Bass.

Reukert R.W., (1992), Developing a Market Orientation: An Organizational Strategy Perspective, International Journal of Research Marketing, Vol. 68, No. 5, pp.105-111.

Richards, T.J., and L. Richards, (1994), Using Computers in Qualitative Research. In: Denzin, K. and Y.S. Lincoln, (1994), Handbook of Qualitative Research. Thousand Oaks - Sage.

Rizzo, J.B., R.J. House and S.J. Lirtzman, (1970), Role Conflict and Ambiguity in Complex Organizations, Administrative Science Quarterly, 15, pp.150-163.

Robinson, J.P., P.R. Shaver and L.S. Wrightsman, (1991), Criteria for Scale Selection and Evaluation. In: Robinson, J.P., P.R. Shaver and L.S. Wrightsman (1991), Measures of Psychological Attitudes. San Diego - The Academic Press

Saxe, R., and B. A. Weitz, (1982), The SOCO Scale: A Measure of the Customer Orientation of Salespersons, Journal of Marketing Research, 19, August, pp.343-351.

Schein, H.E., (1993), On Dialogue, Culture and Organizational Learning, Organizational Dynamics, Vol. 22, Issue 2, Autumn, pp.40-51.

Scott D., and R. T. Keller, (1991), Multinational R&D Siting: Corporate Strategies for Success, Columbia Journal of World Business, Vol.26, No.3, pp.46-57.

Senge, P.M., (1990), The Fifth Discipline: The Art and practice of the Learning Organization. New York - Doubleday Currency.

Sharp, B., (1991), Marketing Orientation: More than Just Customer Focus, International Marketing Review, Vol. 8, No. 4, pp.20-25.

Siegel, S., (1956), Nonparametric Statistics for the Behavioral Sciences. Tokyo - McGraw-Hill.

Simonin, B.L., (1997), The Importance of Collaborative Know-How: An Empirical Test of the Learning Organization, Academy of Management Journal, Vol. 40, No. 5, October, pp.1150-1174.

Sinkula, J.M., (1994), Market Information Processing and Organizational Learning, Journal of Marketing, Vol. 58. January, pp.35-45.

Siguaw, J.A., G. Brown and R. E. Widing II, (1994), The Influence of the Market Orientation of the Firm on Sales Force Behavior and Attitudes, Journal of Marketing Research, Vol. XXXI, February, pp.106-116.

Slater, S.F., and J.C. Narver, (1994a), Does Competitive Environment Moderate the Market Orientation-Performance Relationships?, Journal of Marketing, Vol. 58, No. 1, pp.46-55.

Slater, S.F., and J.C. Narver, (1994b), Market Orientation, Customer Value, and Superior Performance, Business Horizons, March/April, pp.22-28.

Slater, S.F., and J.C. Narver, (1995), Market Orientation and the Learning Organization, Journal of Marketing, Vol. 59, July, pp.63-74.

Slocum J., and M. McGill, (1994), The Smarter Organization. Wiley & Sons.

Smith, P.C, L.M. Kendall and C.L. Hulin, (1969), The Measurement of Satisfaction in Work and Retirement: A Strategy for the Study of Attitudes. Chicago - Rand McNally.

SPSS, Inc., (1993), SPSS for Windows: Professional Statistics, Release 6.0. Chicago - SPSS Inc.

Stata, R., (1989), Organizational Learning - The Key to Management Innovation, Sloan Management Review, Vol. 30, Spring, pp.63-74.

Todd, D.J., (1979), Mixing Qualitative and Quantitative Methods: Triangulation in Action, Administrative Science Quarterly, 24, December, pp.602-611.

Tomaskovic-Devey, D., J. Leiter and S. Thompson, (1994), Organizational Survey Nonresponse, Administrative Science Quarterly, Vol. 39, pp.439-457.

Van Buren, M.E., and L. Lucadamo, (1996), ASTD's Guide to Learning Organization Assessment Instruments. Alexandria - ASTD.

Webster C., (1993), Refinement of the Marketing Culture Scale and the Relationship between Marketing Culture and Profitability of a Service Firm, Journal of Business Research, 26, pp.111-131.

Wick, C.W., and L.S. Leon, (1995), From Ideas to Action: Creating a Learning Organization, Human Resource Management, Vol. 34, No. 2, pp.299-311.

Woodward, J., (1965), Industrial Organization, Theory and Practice. London - Oxford University Press.

Questionnaire
PLEASE ANSWER THE FOLLOWING QUESTIONS AS FOLLOWS - UNLESS OTHERWISE INDICATED:

1. Strongly Disagree
2. Disagree
3. Somewhat Disagree
4. Somewhat Agree
5. Agree
6. Strongly Agree

A Top management
IN OUR ORGANISATION...

1) Top managers encourage the development of innovative marketing strategies, fully knowing that some will fail.
2) Top managers repeatedly tell employees that the survival of the company depends on its adapting to market trends.
3) Top managers often tell employees to be sensitive to the activities of our competitors.

B Interdepartmental Dynamics
IN OUR ORGANISATION...

4) Most departments get along well with each other.
5) Employees from different departments feel that the goals of their respective departments are in harmony with each other.
6) There is little or no interdepartmental conflict.
7) Communications from one department to another are expected to be routed through "proper channels".

C Organisational Systems/Structure
IN OUR ORGANISATION...

8) A person can make his or her own decisions without checking with anybody else.
9) How things are done is left to the person doing the work.
10) There can be little action taken until a supervisor approves a decision.

D Market Orientation
IN OUR ORGANISATION...

11) Customer satisfaction assessment influences senior managers' pay.
12) We meet with customers at least once a year to find out what products or services they will need in the future.
13) We do a lot of in-house market research.
14) We poll end users at least once a year to assess the quality of our products and services.

15) We collect industry information through informal means (e.g. lunch with industry friends, talks with trade partners).

16) We periodically review the likely effect of changes in our business environment (e.g. regulation) on customers.

17) We have interdepartmental meetings at least once a quarter to discuss market trends and developments.

18) We periodically circulate documents (e.g., reports, newsletters) that provide information on our customers.

19) Data on customer satisfaction are disseminated at all levels on a regular basis.

20) When one department finds out something important about competitors, it is slow to alert other departments.

21) For one reason or another we tend to ignore changes in our customers' product or service needs.

22) We periodically review our product development efforts to ensure that they are in line with what customers want.

23) Our business plans are driven more by technological advances than by market research.

24) We are quick to respond to significant changes in our competitors' pricing structures.

25) When we find out that customers are unhappy with the quality of our services, we take corrective action immediately in our organization.

E Learning Organisation

IN OUR ORGANISATION...

26) The vision and strategy are continually updated, based on changes in the business environment and customers' needs.

27) People take into account the organisation's long-term goals and strategies as they plan and execute their work.

28) We have a vision of ourselves as an organization in which learning and purposeful change are expected.

29) Managers help their people integrate what they have learned in development or training programs by discussing business applications.

30) Managers communicate effectively with their employees about the employees' developmental needs and progress.

31) Managers admit their own mistakes.

32) We are not afraid to share our opinions and speak our minds.

33) We are reducing the number of rules, policies, forms, and procedures, allowing more individual judgement.

34) We communicate key business information to all employees through channels such as newsletters, departmental meetings, and/or all-personnel meetings.

35) All of our employees receive quality, productivity, cost, or sales data relevant to their jobs on a daily or weekly basis.

36) People and groups are encouraged to analyse mistakes in order to learn how to do it better the next time.

37) We routinely and purposefully use systematic problem-solving techniques for solving difficult problems.

38) We routinely experiment with new approaches to our work: we try out new ideas.

39) When a group learns or discovers new information that would be helpful to others, it is quickly disseminated throughout the organization (for example, through presentations, memos, computer networks, etc.).

40) The satisfaction of our internal and external customers is considered in our performance reviews.

41) We routinely give our suppliers (internal and external) feedback on the quality of the services they deliver to us.

42) Educational programs include skill training on "learning how to learn" from one's own experience and from others.

43) Educational programs include skill training on becoming more creative problem solvers.

44) We assign special work projects in which people are given time and support and knowledge, as well as the work.

45) Formal training programs provide us with tools, job aids, or processes that enhance on the job performance.

46) Managers are rewarded for supporting the development of their employees.

47) We are not punished for making honest mistakes, for having tried something worthwhile and failed.

48) Much of our ongoing learning comes directly out of our work experiences rather than through formal training programs.

49) People have individual development plans that impact their performance in a positive way.

F Environment

50) In our kind of business, customers' product preferences change quite a bit over time.

51) Our customers tend to look for new products all the time.

52) We are witnessing demand for our products and services from customers who never bought them before.

53) New customers tend to have product-related needs that are different to those of our existing customers.

54) Competition in our industry is cut-throat.

55) Price competition is a hallmark of our industry.

56) Our competitors are relatively weak.

57) Technology in our industry is changing rapidly.

58) Our major customers are in a strong bargaining position with us.

59) Our customers see little difference between our products and those of our competitors.

60) The quality of our products and services is better than that of our major competitors.

61) Our customers are firmly convinced that we offer very good quality products and services.

62) We have a large number of suppliers to choose from for our essential inputs (e.g., raw materials).

63) Our major suppliers have the strength to bargain with us effectively

64) It is easy for new players to enter our industry.

65) The technology for entering our industry is readily available.

66) We are constantly under pressure from substitute products offered by other industries.

67)Our industry is in the introductory/growth/maturity/decline stage of its life cycle.
68)Over the last three years, our industry sales have grown annually at the rate of ....%.

G Company's size and performance

69)The number of employees in our company is approximately............................
70)Sales of our company last year:..............(in million guilders).
71)Market share:.........(% of guilder volume of served market).
72)Net profit before tax last year:..........................(in million guilders).
73)Overall, the industry in which we operate is highly attractive and most companies are highly profitable.
74)Our sales growth has been better than our competitors over the last five years.
75)Our business is significantly more profitable than our competitors.
76)Overall, our organization has an excellent business performance.
77)Overall, our organization is market oriented.
78)Overall, our organization is a learning organization.

H Demographic Data

79)Which industrial classification best describes your company activities?

- Agriculture/Forestry/Fishing
- Manufacturing: Consumer Goods
- Mining or Primary Processing
- Transport/Communications/Utilities
- Construction/Infrastructure
- Wholesale/Retail Trade
- Manufacturing: Heavy Goods
- Finance/Insurance/Real Estate
- Services
- Other

80)What is your job title?

- CEO
- President
- Director
- Export Manager
- Information Manager
- Marketing Manager
- Production Manager
- Logistics Manager
- Financial Manager
- Controller
- Personnel Manager
- Business Unit Manager
- Regional vice-president

- Commercial Manager
- Other

81) Which country represents the major market for your products/services?

- Austria
- Spain
- Germany
- Ireland
- Norway
- Denmark
- UK
- Japan
- Belgium
- Sweden
- Greece
- Finland
- Portugal
- France
- USA
- Netherlands
- Canada
- Switzerland
- Italy
- Other

Appendix B.

The Integration of the LOPP and "Extended MARKOR" and Item

Deletion

In this appendix the items that were added to the original LOPP (O'Brien, 1994) and "extended MARKOR" (Kohli, Jaworski and Kumar, 1993; Jaworski and Kohli, 1993) items in the questionnaire are described and an explanation is given as to which items were deleted and why.

The following items were added to the actual questionnaire:

(Belongs to G. Company's size and performance)

73)Overall, the industry in which we operate is highly attractive and most companies are highly profitable.
74)Our sales growth has been better than our competitors over the last five years.
75)Our business is significantly more profitable than our competitors.
76)Overall, our organisation has an excellent business performance.
77)Overall, our organisation is market oriented.
78)Overall, our organisation is a learning organisation.

Item 73 was added in order to be able to relate the company to the attractiveness and profitability of the company's industrial sector, items 74 and 75 were added in order to assess the general business performance of the company and items 76-78 were added in order to relate the learning organisation, market orientation and business performance indicators to the overall feeling of the respondents about these variables.

H Demographic Data
79)Which industrial classification best describes your company activities?

- Agriculture/Forestry/Fishing
- Manufacturing: Consumer Goods
- Mining or Primary Processing
- Transport/Communications/Utilities
- Construction/Infrastructure
- Wholesale/Retail Trade
- Manufacturing: Heavy Goods
- Finance/Insurance/Real Estate
- Services
- Other

80)What is your job title?

- CEO
- President
- Director
- Export Manager
- Information Manager
- Marketing Manager
- Production Manager
- Logistics Manager
- Financial Manager
- Controller
- Personnel Manager
- Business Unit Manager
- Regional vice-president
- Commercial Manager
- Other

81)Which country represents the major market for your products/services?

- Austria

- Spain
- Germany
- Ireland
- Norway
- Denmark
- UK
- Japan
- Belgium
- Sweden
- Greece
- Finland
- Portugal
- France
- USA
- Netherlands
- Canada
- Switzerland
- Italy
- Other

These items were of course added to classify the companies and to collect some demographic information about these companies.

Plus these general questions were added to the pilot questionnaire:

I. About the questionnaire

Finally, we would like to ask you some questions about completing the questionnaire.

107. The length of the questionnaire was ....Just right/ Too long
108. The time I needed to complete the questionnaire was   Just right/Too much
109. To complete the questionnaire took me ....minutes.
110. Do the questions make sense? ....Yes/No
111. Are the questions easy to understand?............................Yes/No
112. If not, which questions are difficult to understand or are unclear?

_____

113. Did the use of English cause any problems?...................Yes/No
114. Would you prefer a Dutch questionnaire?.......................Yes/No

In the following, **items** (in bold) are items that were included in the pilot questionnaire, <u>**items**</u> (in bold and underlined) are items that were included in both questionnaires and items (not highlighted) were items that were omitted from the original LOPP and "extended MARKOR" questionnaires. *Comments* (in italics) are made with the omitted items to explain why they were left out.

THE LEARNING ORGANISATION PRACTICES PROFILE

When reading the explanations that follow, the reader must bear in mind that the most important reason to omit items was to reduce the length of the questionnaire in order to increase response rates. In fact many items would have been valuable to include in the questionnaire, but had to be left out for reasons of efficiency.

A. Vision and Strategy

In our organisation...

1. <u>**The vision and strategy are continually updated, based on changes in the business environment and customers' needs.**</u>
2. <u>**People take into account the organisation's long-term goals and strategies as they plan and execute their work.**</u>
3. We discuss trends and forces that drive current and future changes in our marketplace and industry as a normal part of our work.
4. <u>**We have a vision of ourselves as an organisation in which learning and purposeful change are expected.**</u>
5. People have a broad understanding of our organisation's structure, processes, and systems and how they are interrelated.

3 and 5 were deleted because the text may be too complex to understand

B. Executive Practices

In our organisation...

6. **We are inspired to follow our executives toward our organisational vision.**
7. **Executives visibly lead and facilitate problem solving efforts or special projects.**
8. **Executives speak about the connections between continuous learning, continuous improvement, quality, and business results.**
9. We believe that our executives are proud of us.
10. Executives hold managers accountable for supporting the development of their employees.

6, 7 and 8 (7 and 8 were included in the pilot questionnaire), 9 and 10 were deleted from the actual questionnaire, because the respondents were executives themselves and these items seem to be directed at personnel who are managed by executives

C. Managerial Practices

In our organisation...

11. Managers encourage us to pursue personal development as part of our jobs and to learn by doing.
12. <u>**Managers help their people integrate what they have learned in development or training programs by discussing business applications.**</u>
13. <u>**Managers communicate effectively with their employees about the employees' developmental needs and progress.**</u>
14. Managers encourage people to contribute ideas for improvements through individual conversations and/or group meetings.

15. Managers admit their own mistakes.

11, was deleted because the respondents were managers themselves and 14 because it seems too complex to understand

D. Climate
In our organisation...

16. **We are not afraid to share our opinions and speak our minds.**
17. We have a healthy sense of "play" about our work; it's O.K. to enjoy our jobs.
18. We work hard to eliminate "we/they" mindsets; we co-operate and collaborate whenever possible.
19. We treat one another as adults - as people who can think for themselves and be responsible.
20. **People are interested in and care about one another.**

17 and 18, because they seem too complex to be fully understood by the respondents, 19 and 20 (20 was deleted from the actual research) because the answer on this question will obviously be positive (due to political correctness)

E. Organisational and Job Structure

In our organisation...

21. **Job rotation, ad hoc assignments, and/or cross-training (for other jobs) are used to build work-force flexibility.**
22. **We utilize self directed work teams that have responsibility for work processes from start to finish.**
23. Our work spaces are designed to allow for easy and frequent communication among those who work together most often.
24. We routinely modify work processes in response to changing circumstances or priorities or to improve efficiency.
25. **We are reducing the number of rules, policies, forms, and procedures, allowing more individual judgements.**

21, 22 (deleted from the actual research), 23 and 24 were deleted because they seemed to be too complex to understand

F. Information Flow

In our organisation...

26. We utilize advanced technology to improve the flow of information and to enhance our communication with one another (for example, satellite TV, computer networks, electronic mail, cellular phones, or pagers).
27. **We communicate key business information to all employees through channels such as organisational newsletters, department meetings, and/or all-personnel meetings.**
28. Those of us for whom it is appropriate have learned to use our computer system effectively.
29. **All of our employees receive quality, productivity, cost, or sales data relevant to their jobs on a daily or weekly basis.**
30. As our work groups or project teams solve business problems or create new approaches, we communicate our learning and results throughout the organisation (through things such as memos, presentations, E-mail etc.).

26 and 30 were deleted, because they seemed to be too complex to understand and 28 because nowadays the answer will obviously be positive

G. Individual and Team Practices

In our organisation...

31. Individuals and teams are encouraged to identify and solve problems in their work areas.
32. In conflict situations, blaming is minimized so that people openly and honestly discuss the issues and work toward solutions.
33. **People and groups are encouraged to analyse mistakes in order to learn how to do it better the next time.**
34. **We routinely ask one another for feedback on our performance so that we can continually improve our work.**
35. We share our expertise and learn from one another through informal conversations and "storytelling".

31, because it was too obvious (will almost always be true), and 32 and 35 because they are too complex too understand

H. Work Processes

In our organisation...

36. **We routinely and purposefully use systematic problem-solving techniques for solving difficult problems.**
37. **We routinely experiment with new approaches to our work; we try out new ideas.**
38. **When a group learns or discovers new information that would be helpful to others, that information is quickly disseminated throughout the organisation (for example, through presentations, memos, computer networks, etc.).**
39. When we engage in problem solving, we consider the "ripple" effects that various solutions or actions may have throughout the organisation.
40. We learn from the marketplace through studies of competitors and/or other industry leaders.

39, because the item seemed to be too complex and 40, because it is covered by MARKOR

I. Performance Goals and Feedback

In our organisation...

41. **The satisfaction of our internal and external customers is considered in our performance reviews.**
42. As appropriate, people periodically renegotiate their goals with their key customers, suppliers, and/or managers.
43. **We routinely give our suppliers (internal and external) feedback on the quality of the products and services they deliver to us.**
44. We set our individual development goals during an annual goal setting process, rather than during our performance appraisals.
45. Individuals' performance goals are clearly aligned with the organisation's strategic goals.

42 and 44, because they were too complex and 45 too obvious

J. Training and Education

In our organisation...

46. **Educational programs include skill training on "learning how to learn" from one's own experience and from others.**
47. **Educational programs include skill training on becoming more creative problem solvers.**
48. We have diagnostic tools for individual development and/or developmental-planning processes available for everyone.
49. **We assign special work projects in which people are given the time and support to learn new skills and knowledge, as well as do the work.**

50. **Formal training programs provide us with tools, job aids, or processes that enhance our on-the-job performance.**

K. Rewards and Recognition

48, because this item seemed to be too complex

In our organisation...

51. People are recognized for being courageous, that is, for experimenting and taking appropriate chances.
52. **Managers are rewarded for supporting the development of their employees.**
53. **We share directly in the profits of the business through a profit-based reward system.**
54. **We are not punished for making honest mistakes, for having tried something worthwhile and failed.**
55. We are recognized for solving business problems or successfully meeting challenges.

Due to the need to limit the questionnaire's length, only the most important items were chosen (52 and 54) from this section and the rest were deleted

L. Individual and Team Development

In our organisation...

56. **Much of our ongoing learning comes directly out of our work experiences rather than through formal training programs.**
57. **Teams are given appropriate assistance with their developmental (e.g. process facilitation, team-building support).**
58. **People have individual-development plans that impact their performance in a positive way.**
59. Work teams and long-term project teams have specific learning agendas.
60. Taking responsibility for our own learning and development is considered part of our jobs.

57 was deleted from the actual questionnaire because the text seemed to be too complex and 59 and 60 were too obvious

"Extended MARKOR"

The business unit level was not applicable for this study, therefore the questions were re-stated at the organisational level.

Section 1

1. **In this business unit, we meet with customers at least once a year to find out what products or services they will need in the future.**
2. Individuals from our manufacturing department interact directly with customers to learn how to serve them better.
3. **In this business unit, we do a lot of in-house market research.**
4. We are slow to detect changes in our customers' product preferences.
5. **We poll end users at least once a year to assess the quality of our products and services.**
6. **We often talk with or survey those who can influence our end users' purchases (e.g., retailers, distributors).**
7. **We collect industry information through informal means (e.g. lunch with industry friends, talks with trade partners).**
8. In this business unit, intelligence on our competitors is generated independently for several departments.
9. We are slow to detect fundamental shifts in our industry (e.g. competition, technology, regulation).
10. **We periodically review the likely effect of changes in our business environment (e.g. regulation) on customers.**
11. **A lot of informal "hall talk" in this business unit concerns our competitors' tactics or strategies.**
12. **We have interdepartmental meetings at least once a quarter to discuss market trends and developments.**
13. Marketing personnel in our business unit spend time discussing customers' future needs with <u>other</u> functional departments.
14. **Our business unit periodically circulates documents (e.g. reports, newsletters) that provide information on our customers.**
15. When something important happens to a major customer or market, the whole business unit knows about it in a short period.
16. **Data on customer satisfaction are disseminated at all levels in this business unit on a regular basis.**
17. There is minimal communication between marketing and manufacturing departments concerning market developments.
18. **When one department finds out something important about competitors, it is slow to alert other departments.**

2 was deleted because some of the respondents would not know the answer without further inquiry (and they probably would not take the time), 4 because it is stated in a very negative manner, 8 and 9 because they are very unclear, 11 (from the actual questionnaire) because it does not seem to contain a very realistic statement (don't people rather like to gossip?), 13 because it is business unit specific, 15 and 16 (from the actual questionnaire) because they do not add much to the other questions (from the perspective of the necessary limitations), 17 because some of the respondents won't know the answer without further inquiry

1. **It takes us forever to decide how to respond to our competitors' price changes.**
2. Principles of market segmentation drive new product development efforts to ensure that they are in line with what customers want.
3. **For one reason or another we tend to ignore changes in our customers' product or service needs.**
4. **We periodically review our product development efforts to ensure that they are in line with what customers want.**
5. **Our business plans are driven more by technological advances than by market research.**
6. Several departments get together periodically to plan a response to changes taking place in our business environment.

7. The product lines we sell depend more on internal policies than real market needs.
8. If a major competitor were to launch an intensive campaign targeted at our customers, we would implement a response immediately.
9. The activities of the different departments in this business unit are well co-ordinated.
10. Customer complaints fall on deaf ears in this business unit.
11. Even if we came up with a great marketing plan, we probably would not be able to implement it in a timely fashion.
12. We are quick to respond to significant changes in our competitors pricing structures.
13. When we find out that customers are unhappy with the quality of our service, we take corrective action immediately.
14. When we find that customers would like us to modify a product or service, the departments involved make concerted efforts to do so.

1 was deleted (from the actual questionnaire), because the item is very negatively stated, 2, because the meaning seems difficult to grasp, 6 and 7 (the reverse), because they are too obvious, 9 because it is covered by related items (with regard to the necessary efficiency), 10 and 11 are stated in a too negative manner and 14 because it seems to be too obvious

Section II: This section concerns the top managers in your business unit.

1. **Top managers in this business unit believe that higher financial risks are worth taking for higher rewards.**
2. Top managers here accept occasional new product failures as being normal.
3. Top managers in this business unit like to take big financial risks.
4. **Top managers here encourage the development of innovative marketing strategies, knowing well that some will fail.**
5. Top managers in this business unit like to "play it safe".
6. Top managers around here like to implement plans only if they are very certain that they will work.
7. **Top managers repeatedly tell employees that this business unit's survival depends on its adapting to market trends.**
8. **Top managers often tell employees to be sensitive to the activities of our competitors.**
9. **Top managers keep telling people around here that they must gear up to meet customers' future needs.**
10. According to Top managers here, serving customers is the most important thing our business unit does.

The number of items was limited (in the actual questionnaire even more than in the pre-test) in order to reduce the number of items. This limited number should nonetheless cover the top management orientation variables

Section III: This section deals with interdepartmental relations in your business unit

1. **Most departments in this business unit get along well with each other.**
2. When members of several departments get together, tensions frequently run high.
3. **People in one department generally dislike interacting with those from other departments.**
4. Employees from different departments feel that the goals of their respective departments are in harmony with each other.
5. Projecting one's departmental turf is considered to be a way of life in this business unit.
6. The objectives pursued by the marketing department are incompatible with those of the manufacturing department.
7. **There is little or no departmental conflict in this business unit.**
8. In this business unit, it is easy to talk with virtually anyone you need to, regardless of rank or position.
9. There is ample opportunity for informal "hall talk" among individuals from different departments in this business unit.
10. In this business unit, employees from different departments feel comfortable calling each other when the need arises.

11. Managers here discourage employees from discussing work-related matters with those who are not immediate superiors or subordinates.
12. People around here are quite accessible to those in other departments.
13. **Communications from one department to another are expected to be routed through "proper channels".**
14. Junior managers in my department can easily schedule meetings with junior managers in other departments.

The number of items was limited (in the actual research even more than in the pre-test) in order to reduce the number of items, hoping that this limited number would nonetheless cover the interdepartmental relations variables

Section IV: We would now like to ask you about your business unit's size and performance.

1. **Overall performance of the business unit last year.**
2. **Overall performance relative to major competitors last year.**
3. **Dollar sales of your business unit last year:_____ (in millions)**
4. **Dollar sales the year before last:_____(in millions)**
5. **Market share:_____ (% of dollar volume of served market)**
6. **Number of employees in your business unit:_____(approx.)**
7. Number of departments in your business unit:_____
8. Number of levels in your business unit:_____
9. **Net profit before tax last year:_____**
10. **Return on shareholders equity last year:_____(%)**

4 was deleted in the actual questionnaire, because respondents won't know the answer without further investigation, and only a few of them will be prepared to find out, 7 and 8 did not seem very relevant and 10 was only answered once by pilot respondents

Section V: The next set of items pertains to your business unit's structure and systems.

1. I feel that I am my own boss in most matters.
2. **A person can make his own decisions without checking with anybody else.**
3. **How things are done here is left up to the person doing the work.**
4. **People here are allowed to do almost as they please.**
5. Most people here make their own rules on the job.
6. The employees are constantly being checked on for rule violations.
7. People here feel as though they are constantly being watched to see that they obey all the rules.
8. **There can be little action taken here until a supervisor approves a decision.**
9. A person who wants to make his own decision would be quickly discouraged here.
10. **Even small matters have to be referred to someone up for a final answer.**
11. I have to ask my boss before I do almost anything.
12. Any decision I make has to have my boss's approval.
13. No matter which department they are in, people in this business unit get recognized for being sensitive to competitive moves.
14. **Customers satisfaction assessments influence senior managers' pay in this business unit.**
15. **Formal rewards (i.e. pay raise, promotion) are forthcoming to anyone who consistently provides good market intelligence.**
16. **Salespeople's performance in this business unit is measured by the strength of relationships they build with customers.**
17. Salespeople's monetary compensation is almost entirely based on their sales volume.
18. We use customer polls for evaluating our salespeople.

The number of items was limited (in the actual research even more than in the pre-test) in order to reduce the number of items, hoping that this limited number would nonetheless cover the structure and systems variables

<u>Section VI:</u> We would now like to ask you about the employees in your <u>business unit.</u>

1. People in this business unit are genuinely concerned about the needs and problems of each other.
2. A team spirit pervades all ranks in this business unit.
3. Working for this business unit is like being part of a big family.
4. People in this business unit feel emotionally attached to each other.
5. People in this organisation feel like they are "in it together".
6. This business unit lacks an "esprit de corps".
7. People in this business unit view themselves as independent individuals who have to tolerate others around them.
8. Employees feel as though their future is intimately linked to that of this organisation.
9. Employees would be happy to make personal sacrifices if it were important for the business unit's well being.
10. The bonds between this organisation and employees are weak.
11. In general, employees are proud to work for this business unit.
12. Employees, often go above and beyond the call of duty to ensure this business unit's well being.
13. Our people have little or no commitment to this business unit.
14. It is clear that employees are fond of this business unit.

Section VI was deleted from the questionnaire altogether, because of reasons of limitation and because it was thought to be covered by LOPP

<u>Section VII:</u> This last set of items concerns your business unit's external environment (e.g. customers, and so on)

1. **In our kind of business, customers' product preferences change quite a bit over time.**
2. **Our customers tend to look for new products all the time.**
3. Sometimes our customers are very price sensitive, but on other occasions, price is relatively unimportant.
4. **We are witnessing demand for our products and services from customers who never bought them before.**
5. **New customers tend to have product-related needs that are different from our existing customers.**
6. We cater to much the same customers that we used to in the past.
7. **Competition in our industry is cut throat.**
8. There are many "promotion wars" in our industry.
9. Anything that one competitor can offer, others can match readily.
10. **Price competition is the hallmark of our industry.**
11. One hears of a new competitive move almost every day.
12. **Our competitors are relatively weak.**
13. **The technology in our industry is changing rapidly.**
14. Technological changes provide big opportunities in our industry.
15. **It is very difficult to forecast where the technology in our industry will be in the next 2-3 years.**
16. A large number of new product ideas have been made possible through technological breakthroughs in our industry.
17. **Technological developments in our industry are rather minor.**
18. **Our major customers are in a strong bargaining position with us.**
19. **Our customers see little difference between our products and those of our competitors.**
20. We pretty much have to comply with our customers' demands, even if they are unreasonable.
21. Our customers often praise our product quality.
22. **The quality of our products and services is better than that of our major competitors.**
23. **Our customers are firmly convinced that we offer very good quality products and services.**
24. **We have a large number of suppliers to choose from for our essential inputs (e.g. raw materials).**
25. **Our major suppliers have the strength to bargain with us effectively.**
26. **Our major suppliers/vendors have the power to dictate prices to us.**
27. **It is easy for new players to enter our industry.**

28. Potential entrants into our industry can expect strong retaliation from existing players.
29. **The technology for entering our industry is readily available.**
30. Competitors outside of our industry offer viable substitutes for our products.
31. **We are constantly under pressure from substitute products offered by other industries.**
32. The prices we can charge for our products are constantly under pressure from substitute products.
33. **Our industry is in the ( ) introductory ( ) growth ( ) maturity ( ) decline stages of its life cycle.**
34. **Over the last three years, our industry sales have grown annually at the rate of   %**

3 was deleted because the question is not very explicit, 6 because it is covered by 4. 8 and 9, because their relevance in the context of this Paragraph is not very clear, 11 because it is covered by 6. 14, 15 (was deleted from pre-test questionnaire), 16 and 17 (was deleted from pre-test questionnaire), because they are covered by 13. 20 because it is not stated very clearly, 21 because it is covered by 22 and 23. 26 (was deleted from pre-test questionnaire survey) and 28 were deleted, because they are covered by 25 and 27. Finally 30 and 32 were deleted, because they are covered by 31.

Appendix C.
Covering Letter to the Pre-test Survey

Date...

Dear Mr. X,

The *Henley Management College Market Orientation Group* is undertaking significant, original and international research in the area of strategy, marketing, market orientation, the learning organization, organizational climate and business performance. The objective is to produce an authoritative and highly pragmatic piece of research that will be of use to all business managers in defining strategies to create wealth for their companies and for society.

One research project of the *Henley Management College Market Orientation Group* is a study of Dutch export firms. This research is focusing on the relationships between market orientation, the learning organization, the business environment and business performance. Information is being gathered on the way Dutch export firms respond to the difficult and turbulent international setting in which they operate. One objective is to find out why some export firms are more successful than others and which factors may influence their business performance.

We kindly request you to spend a few minutes of your precious time to complete the questionnaire and to return it to the manager of the project, Drs. P. Breman. You can contact him any time if you have any questions about the research or the questionnaire. His telephone number is: 0184-616618. His fax number is: 0184-630702.

Your participation means that you can receive a free comparative profile of your company in terms of market orientation, the learning organization and business performance! We are also pleased to invite you to a Henley workshop, where we will present our results.

With kind regards,

Prof. Dr. T. Dalgic
Market Orientation Group

Appendix D.

Covering Letter to the Actual Survey

Driebergen, date...

Dear Mr. X,

You can now contribute to management research and at the same time receive a free comparative profile of your company!

The *Henley Management College Market Orientation Group* is undertaking significant, original and international research in the area of strategy, marketing, market orientation, the learning organization, organizational climate and business performance. The objective is to produce an authoritative and highly pragmatic piece of research that will be of use to all business managers.

One of these research projects is managed by Drs. Paul Breman. He has 15 years' experience as a management consultant and is now preparing his Doctor's Degree of Business Administration with Henley Management College. His study of Dutch export firms focuses on the relationships between market orientation, the learning organization, the business environment and business performance. Information is being gathered on how Dutch export firms respond to the difficult and turbulent international setting in which they operate. One objective is to find out why some export firms are more successful than others and which factors may influence their business performance.

We kindly request you to spend a few minutes of your precious time to complete the questionnaire and to return it to Paul Breman. You can contact him any time should you have any questions regarding the research or questionnaire. His telephone number is: 0184-616618. His fax number is: 0184-630702. In turn, you can receive a very interesting report and an invitation for a special workshop at Henley.

With kind regards,

Prof. Dr. T. Dalgic
Market Orientation Group

Appendix E.

Coupon that Accompanied the Questionnaire

COUPON

Yes, I want to receive a free copy of the *"Henley market orientation - learning organization profile" of my company*. I will therefore complete the next section or attach my business card and put this coupon in the return envelope of the questionnaire. I know that this report will only be available to me and to the project researchers and that all the information I produce will be strictly confidential.

Full Name_____

Job Title_____

Company_____

Address_____

Telephone/Fax_____

I also *would/would not* * like to receive an invitation to the special Henley workshop in April 1996. This workshop will be devoted to presenting the results of this and other comparable research.

Finally, I *would/would not* * like to cooperate with a follow-up interview.

_____

* Please cross out what does not apply.

Appendix F.

The Dutch Questionnaire with Covering Letter

Henley Management College Nederland
Hoofdstraat 78
3972 LB Driebergen

Date...

Geachte directeur/manager,

Enige tijd geleden ontving u onze vragenlijst over marktoriëntatie en de lerende organisatie. Volgens onze informatie heeft u deze (nog) niet ingevuld geretourneerd. Gaarne stellen wij u in de gelegenheid dit alsnog te doen. Inmiddels is de Engelstalige versie vertaald naar het Nederlands. Deze laatste versie treft u hier aan. Ook indien u de vragenlijst om enigerlei reden niet eerder onder ogen heeft gehad, stellen wij uw medewerking zeer op prijs. Heeft u de vragenlijst reeds ingevuld en opgestuurd, dan kunt u dit bericht als niet geschreven beschouwen.

Door deelname aan dit (promotie-)onderzoek, draagt u bij aan het internationale wetenschappelijke onderzoek naar optimale management- en organisatie-technieken, -methoden en -stijlen. Bovendien kunt u in het bezit komen van een gratis profiel van uw bedrijf met betrekking tot de marktoriëntatie en het lerende vermogen van uw organisatie. Dit 'persoonlijke' profiel, dat alleen u in uw bezit krijgt, is voor u zeer waardevol, omdat het wordt geplaatst binnen het perspectief van de grotere Nederlandse bedrijven/instituten. Uiteraard is bij dit onderzoek de anonimiteit van u en uw bedrijf of instituut, alsmede de vertrouwelijkheid van de door u verstrekte gegevens volledig gegarandeerd. Het invullen, kost u niet meer dan 10 minuten. Heeft u dit inmiddels gedaan, dan hiervoor mijn hartelijke dank. U kunt de vragenlijst eventueel doorgeven aan een collega-manager. Indien u het gratis profiel wilt ontvangen van uw bedrijf in relatie tot de totale onderzoeksgroep, vult u dan onderstaande gegevens in?

Naam bedrijf: _____
Naam functionaris: _____
Functie: _____
Adres: _____
_____
Telnr.: _____ Faxnr. _____
(of bevestig uw visite-kaartje)

Wilt u voorts een uitnodiging ontvangen voor de speciale Henley workshop eind april 1996 waar de resultaten van dit en van vergelijkbare onderzoeken worden gepresenteerd?   ja/neen*

Bent u bereid tot een follow-up interview met de onderzoeker Paul Breman?   ja/neen*

* = doorhalen wat niet wordt gewenst

De ingevulde vragenlijst gaarne opsturen aan: P. Breman, Antwoordnummer 932, 3350 WB Hardinxveld-Giessendam (geen postzegel!) Of fax deze naar 0184-630702.

Met Vriendelijke Groet,

Drs. P. Breman (tel. 0184-616618, adres: Schapedrift 47, 3371 HE Hardinxveld-Giessendam)

Omcirkel wat van toepassing is. De vragen hebben betrekking op uw organisatie.

Toelichting:
1 = helemaal mee oneens
2 = oneens
3 = enigszins oneens
4 = enigszins eens
5 = eens
6 = helemaal mee eens

A   Topmanagement

score

1. Topmanagers moedigen de ontwikkeling van innovatieve marketing strategieën   1 2 3 4 5 6
   aan, ook al is het hen goed bekend dat sommige daarvan zullen mislukken.

2. Topmanagers vertellen de medewerkers steeds maar weer dat de   1 2 3 4 5 6
   overleving van het bedrijf afhankelijk is van zijn aanpassing aan markt trends.

3. Topmanagers vertellen de medewerkers vaak dat ze gevoelig moeten zijn voor   1 2 3 4 5 6
   de activiteiten van de concurrenten.

B   Dynamiek tussen de afdelingen of onderdelen van het bedrijf

4. De meeste afdelingen/onderdelen gaan goed met elkaar om.   1 2 3 4 5 6

5. Medewerkers van verschillende afdelingen/onderdelen hebben het gevoel dat de   1 2 3 4 5 6
   doelen van hun respectievelijke afdelingen/onderdelen in harmonie met elkaar zijn.

6. Er bestaat tussen de afdelingen/onderdelen van het bedrijf weinig of geen conflict.   1 2 3 4 5 6

7. Van de communicatie van de ene afdeling naar de andere wordt verwacht dat deze   1 2 3 4 5 6
   via de "geëigende kanalen" verloopt.

C   Organisatorische systemen/structuur

8. Een persoon kan binnen ons bedrijf zelf beslissingen nemen, zonder deze met   1 2 3 4 5 6
   iemand af te stemmen.

9. Hoe de dingen hier gebeuren, wordt overgelaten aan de persoon die het werk doet.   1 2 3 4 5 6

10. Er kan hier weinig worden ondernomen, totdat een hoger geplaatste een beslissing   1 2 3 4 5 6
    goedkeurt.

D   Marktoriëntatie

11. Klantentevredenheidspeilingen beïnvloeden het inkomen van de senior managers   1 2 3 4 5 6

12. We ontmoeten klanten tenminste één keer per jaar, om er achter te komen   1 2 3 4 5 6
    aan welke produkten en diensten zij in de toekomst behoefte zullen hebben.

13. We doen veel aan marktonderzoek in eigen beheer.   1 2 3 4 5 6

14. We peilen gebruikers minstens een keer per jaar om de kwaliteit   1 2 3 4 5 6
    van onze produkten en diensten te bepalen.

15. We verzamelen branche/bedrijfstak-informatie via informele kanalen (zoals   1 2 3 4 5 6
    lunches met zakelijke relaties, gesprekken met handelspartners).

16. We gaan regelmatig de mogelijke gevolgen na van veranderingen   1 2 3 4 5 6
    in onze bedrijfsomgeving (bijv. van wetgeving) op onze klanten.

17. We hebben minstens één keer per kwartaal bijeenkomsten tussen de   1 2 3 4 5 6
    verschillende afdelingen/onderdelen van ons bedrijf om markt trends en-
    ontwikkelingen te bespreken.

18. We verspreiden periodiek informatie (zoals rapporten, nieuwsbrieven)   1 2 3 4 5 6
    binnen het bedrijf over onze klanten.

19. Informatie over de (mate van) klantentevredenheid wordt regelmatig en   1 2 3 4 5 6
    op alle niveaus binnen het bedrijf verspreid.

20. Als een afdeling/onderdeel iets belangrijks uitvindt over concurrenten,   1 2 3 4 5 6
    is zij traag in het waarschuwen van de andere afdelingen/onderdelen.

21. Om de een of andere reden, negeren we veranderingen in de produkt-   1 2 3 4 5 6
    of diensten-behoeften van onze klanten.

22. We beoordelen regelmatig onze produktontwikkelingsinspanningen,   1 2 3 4 5 6
    teneinde er zeker van te zijn dat deze in lijn zijn met wat de klanten willen.

23. Onze bedrijfsplannen worden meer gedreven door technologische   1 2 3 4 5 6
    vooruitgang dan door marktonderzoek

24. We reageren snel op belangrijke wijzigingen in de prijzen van   1 2 3 4 5 6
    onze concurrenten.

25. Wanneer we merken dat klanten ontevreden zijn met de kwaliteit van   1 2 3 4 5 6
    onze dienstverlening, nemen we direct actie ter correctie daarvan.

E   Lerende Organisatie

26. Onze visie en strategie worden voortdurend aangepast, gebaseerd   1 2 3 4 5 6
    op de bedrijfsomgeving en op veranderingen in de behoeften van de klanten.

27. De mensen binnen onze organisatie nemen de lange termijn doelen en   1 2 3 4 5 6
    strategieën in beschouwing als zij hun werk plannen en uitvoeren.

28. We hebben een visie van onszelf als een organisatie waarin leren en   1 2 3 4 5 6
    doelgericht veranderen tot het verwachtingspatroon behoort.

29. Managers helpen hun mensen met het integreren van wat zij hebben geleerd 1 2 3 4 5 6
    in ontwikkelings- en trainingsprogramma's, door middel van het bespreken
    van de mogelijke toepassingen.

30. Managers communiceren effectief over de ontwikkelingsbehoeften   1 2 3 4 5 6
    en vooruitgang van hun medewerkers.

31. Managers geven hun eigen fouten toe.   1 2 3 4 5 6

32. We zijn niet bang om onze meningen te delen en onze gedachten te uiten.   1 2 3 4 5 6

33. We beperken het aantal regels, voorschriften, formulieren en procedures,   1 2 3 4 5 6
    zodat er meer ruimte komt voor individuele oordelen.

34. We communiceren doorslaggevende bedrijfsinformatie met alle medewerkers via 1 2 3 4 5 6
    kanalen zoals nieuwsbrieven, afdelingsbijeenkomsten en/of personeelsbijeenkomsten.

35. Al onze medewerkers ontvangen, op een dagelijkse of wekelijkse basis, kwaliteits-, 1 2 3 4 5 6
    productiviteits-, kosten- en verkoop-overzichten die voor hun werk van belang zijn.

36. Mensen en groepen worden aangemoedigd om fouten te analyseren,   1 2 3 4 5 6
    teneinde te leren hoe het de volgende keer beter kan.

37. We gebruiken routinematig en opzettelijk systematische probleem-   1 2 3 4 5 6
    oplossingstechnieken voor het oplossen van moeilijke problemen.

38. We experimenteren routinematig met nieuwe benaderingen van ons   1 2 3 4 5 6
    werk: we proberen nieuwe ideeën uit.

39. Als een groep nieuwe informatie ontvangt of ontdekt die behulpzaam   1 2 3 4 5 6
    kan zijn voor anderen, dan wordt die snel door de organisatie
    verspreid (bijv. via presentaties, memo's, het computernetwerk).

40. De tevredenheid van onze interne en externe klanten wordt meegenomen in   1 2 3 4 5 6
    onze prestatiebeoordelingen.

41. We geven onze (interne en externe) toeleveranciers routinematig terugkoppeling 1 2 3 4 5 6
    over de kwaliteit van de produkten en diensten die zij ons leveren.

42. Onderwijsprogramma's voor onze mensen bestaan mede uit vaardigheids-   1 2 3 4 5 6
    trainingen over "leren hoe te leren" van iemands eigen ervaring en van anderen.

43. Onderwijsprogramma's bestaan mede uit vaardigheidstrainingen om   1 2 3 4 5 6
    meer creatieve probleemoplossers te worden.

44. We wijzen speciale projecten aan waarin mensen zowel de tijd en ondersteuning 1 2 3 4 5 6
    krijgen om nieuwe vaardigheden en kennis te leren, als om hun werk te doen.

45. Formele trainingprogramma's voorzien ons van de gereedschappen,   1 2 3 4 5 6
    hulpmiddelen en processen die de on-the-job prestaties verbeteren.

46. Managers worden beloond voor het ondersteunen van de ontwikkeling   1 2 3 4 5 6
    van hun medewerkers.

47. We worden niet gestraft voor het maken van eerlijke vergissingen: voor   1 2 3 4 5 6
    iets te hebben geprobeerd dat de moeite waard was en dat mislukte.

48. Veel van wat wij doorlopend leren, komt eerder direct voort uit onze   1 2 3 4 5 6
    werkervaring dan uit formele trainingsprogramma's.

49. Mensen hebben individuele ontwikkelingsplannen die hun prestaties   1 2 3 4 5 6
    op een positieve wijze beïnvloeden.

F   Omgeving

50. In ons type bedrijf veranderen de klantenvoorkeuren over een wat langere   1 2 3 4 5 6
    periode behoorlijk.

51. Onze klanten hebben de neiging voortdurend naar nieuwe produkten   1 2 3 4 5 6
    uit te kijken.

52 We zijn getuige van vraag naar onze produkten en diensten van   1 2 3 4 5 6
    klanten die deze nooit eerder bij ons hebben gekocht.

53. Nieuwe klanten neigen naar produkt-gerelateerde behoeften die   1 2 3 4 5 6
    afwijken van die van onze bestaande klanten.

54. De concurrentie binnen onze branche/bedrijfstak is moordend.   1 2 3 4 5 6

55. Prijsconcurrentie is een kenmerk van onze branche/bedrijfstak.   1 2 3 4 5 6

56. Onze concurrenten zijn relatief zwak.   1 2 3 4 5 6

57. De technologie in onze branche/bedrijfstak verandert snel.   1 2 3 4 5 6

58. Onze belangrijkste klanten hebben naar ons toe een sterke   1 2 3 4 5 6
    onderhandelingspositie.

59. Onze klanten zien weinig verschil tussen onze produkten en die   1 2 3 4 5 6
    van onze belangrijkste concurrenten.

60. De kwaliteit van onze produkten en diensten is beter dan die van onze   1 2 3 4 5 6
    belangrijkste concurrenten.

61. Onze klanten zijn er rotsvast van overtuigd dat we een zeer goede kwaliteit   1 2 3 4 5 6
    produkten en diensten aanbieden.

62. We hebben een groot aantal toeleveranciers waaruit we kunnen kiezen   1 2 3 4 5 6
    voor onze essentiële inkoop (bijv. grondstoffen).

63. Onze belangrijkste toeleveranciers hebben de kracht om effectief   1 2 3 4 5 6
    met ons te onderhandelen.

64. Het is gemakkelijk voor nieuwe spelers om onze branche/bedrijfstak   1 2 3 4 5 6
    binnen te komen.

65. De technologie om onze branche/bedrijfstak binnen te komen,   1 2 3 4 5 6
    is direct beschikbaar.

66. We staan onder constante druk van substituutprodukten die door andere   1 2 3 4 5 6
    branches/bedrijfstakken worden aangeboden.

67. Onze branche/bedrijfstak bevindt zich in de start-/groei-/volwassenheids-/neergangs*-fase.
                        (* = doorhalen wat niet van toepassing is)

68. Over de laatste drie jaar is de groei in onze branche/bedrijfstak _____% (per jaar)

G Grootte van het bedrijf en prestaties

69. Het aantal medewerkers in ons bedrijf bedraagt ongeveer: _____

70. De verkoopcijfers van ons bedrijf in 1994, bedragen: fl. _____(in miljoenen guldens).

71. Ons marktaandeel bedraagt: _____(% van het guldenvolume van de bediende markt).

72. Onze nettowinst over 1994 vóór belastingen: fl. _____(in miljoenen guldens).

Omcirkel wat van toepassing is. De vragen hebben betrekking op uw organisatie.

Toelichting:
1 = helemaal mee oneens
2 = oneens
3 = enigszins oneens
4 = enigszins eens
5 = eens
6 = helemaal mee eens   score

73. Door de bank genomen, is de branche/bedrijfstak waarin we opereren   1 2 3 4 5 6
    zeer aantrekkelijk en zijn de meeste bedrijven daarin zeer winstgevend.

74. De groei van onze verkopen is in de afgelopen vijf jaar beter   1 2 3 4 5 6
    dan die van onze concurrenten.

75. Ons bedrijf is belangrijk winstgevender dan de concurrentie.   1 2 3 4 5 6

76. Door de bank genomen, heeft onze organisatie een excellente bedrijfsprestatie.   1 2 3 4 5 6

77. Door de bank genomen, is onze organisatie marktgeoriënteerd.   1 2 3 4 5 6

78. Door de bank genomen, is onze organisatie een lerende organisatie.   1 2 3 4 5 6

H Demografische gegevens

79. Ons bedrijf beweegt zich In de volgende branche/bedrijfstak: _____

80. Mijn functie-aanduiding is de volgende: _____

81. De belangrijkste landen waarin ons bedrijf produkten/diensten afzet, zijn de volgende:

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

Appendix G.

Proposed Questionnaire for Self-Assessment of Organisations for Learning Organisation, Market Orientation and Business Performance. English version

Questionnaire

Please answer the following questions as follows - unless otherwise indicated:

1. *Strongly Disagree*
2. *Disagree*
3. *Neither Agree nor Disagree*
4. *Agree*
5. *Strongly Agree*

IN OUR ORGANISATION...

1) The vision and strategy are continually updated, based on changes in the business environment and customers' needs.
2) We have a vision of ourselves as an organization in which learning and purposeful change are expected.
3) Managers help their people integrate what they have learned in development or training programs by discussing business applications.
4) Managers admit their own mistakes.
5) We are not afraid to share our opinions and speak our minds.
6) We are reducing the number of rules, policies, forms, and procedures, allowing more individual judgement.
7) We communicate key business information to all employees through channels such as newsletters, departmental meetings, and/or all-personnel meetings.
8) All of our employees receive quality, productivity, cost, or sales data relevant to their jobs on a daily or weekly basis.
9) People and groups are encouraged to analyse mistakes in order to learn how to do it better the next time.
10) We routinely experiment with new approaches to our work: we try out new ideas.
11) The satisfaction of our internal and external customers is considered in our performance reviews.
12) We routinely give our suppliers (internal and external) feedback on the quality of the services they deliver to us.
13) Educational programs include skill training on "learning how to learn" from one's own experience and from others.
14) Educational programs include skill training on becoming more creative problem solvers.
15) We assign special work projects in which people are given time and support and knowledge, as well as the work.
16) Formal training programs provide us with tools, job aids, or processes that enhance on the job performance.
17) Managers are rewarded for supporting the development of their employees.
18) We are not punished for making honest mistakes, for having tried something worthwhile and failed.
19) People have individual development plans that impact their performance in a positive way.
20) Customer satisfaction assessment influences senior managers' pay.

21) We meet with customers at least once a year to find out what products or services they will need in the future.
22) We do a lot of in-house market research.
23) We poll end users at least once a year to assess the quality of our products and services.
24) We collect industry information through informal means (e.g. lunch with industry friends, talks with trade partners).
25) We periodically review the likely effect of changes in our business environment (e.g. regulation) on customers.
26) We have interdepartmental meetings at least once a quarter to discuss market trends and developments.
27) We periodically circulate documents (e.g., reports, newsletters) that provide information on our customers.
28) Data on customer satisfaction are disseminated at all levels on a regular basis.
29) When one department finds out something important about competitors, it is slow to alert other departments.
30) For one reason or another we tend to ignore changes in our customers' product or service needs.
31) We periodically review our product development efforts to ensure that they are in line with what customers want.
32) When we find out that customers are unhappy with the quality of our services, we take corrective action immediately in our organization.
33) The quality of our products and services is better than that of our major competitors.
34) Our customers are firmly convinced that we offer very good quality products and services.
35) Our sales growth has been better than our competitors over the last five years.
36) Our business is significantly more profitable than our competitors.

Appendix H.

Proposed Questionnaire for Self-Assessment of Organisations for

Learning Organisation, Market Orientation and Business

Performance. Dutch version

Omcirkel wat van toepassing is. De vragen hebben betrekking op uw organisatie.

Toelichting:
1 = helemaal mee oneens
2 = oneens
3 = noch mee eens, noch mee oneens
4 = eens
5 = helemaal mee eens

score

BIJ ONZE ORGANISATIE.......

1. Onze visie en strategie worden voortdurend aangepast, gebaseerd   1 2 3 4 5
    op de bedrijfsomgeving en op veranderingen in de behoeften van de klanten.

2. We hebben een visie van onszelf als een organisatie waarin leren en   1 2 3 4 5
    doelgericht veranderen tot het verwachtingspatroon behoort.

4. Managers geven hun eigen fouten toe.   1 2 3 4 5

5. We zijn niet bang om onze meningen te delen en onze gedachten te uiten.   1 2 3 4 5

6. We beperken het aantal regels, voorschriften, formulieren en procedures,   1 2 3 4 5
    zodat er meer ruimte komt voor individuele oordelen.

7. We communiceren doorslaggevende bedrijfsinformatie met alle medewerkers via   1 2 3 4 5
    kanalen zoals nieuwsbrieven, afdelingsbijeenkomsten en/of personeelsbijeenkomsten.

8. Al onze medewerkers ontvangen, op een dagelijkse of wekelijkse basis, kwaliteits-, 1 2 3 4 5
    productiviteits-, kosten- en verkoop-overzichten die voor hun werk van belang zijn.

9. Mensen en groepen worden aangemoedigd om fouten te analyseren,   1 2 3 4 5
    teneinde te leren hoe het de volgende keer beter kan.

10. We experimenteren routinematig met nieuwe benaderingen van ons   1 2 3 4 5
    werk: we proberen nieuwe ideeën uit.

11. De tevredenheid van onze interne en externe klanten wordt meegenomen in   1 2 3 4 5
    onze prestatiebeoordelingen.

12. We geven onze (interne en externe) toeleveranciers routinematig terugkoppeling   1 2 3 4 5
    over de kwaliteit van de produkten en diensten die zij ons leveren.

13. Onderwijsprogramma's voor onze mensen bestaan mede uit vaardigheids-   1 2 3 4 5
    trainingen over "leren hoe te leren" van iemands eigen ervaring en van anderen.

14. Onderwijsprogramma's bestaan mede uit vaardigheidstrainingen om   1 2 3 4 5
    meer creatieve probleemoplossers te worden.

15. We wijzen speciale projecten aan waarin mensen zowel de tijd en ondersteuning   1 2 3 4 5
    krijgen om nieuwe vaardigheden en kennis te leren, als om hun werk te doen.

16. Formele trainingprogramma's voorzien ons van de gereedschappen,   1 2 3 4 5
    hulpmiddelen en processen die de on-the-job prestaties verbeteren.

17. Managers worden beloond voor het ondersteunen van de ontwikkeling   1 2 3 4 5
van hun medewerkers.

18. We worden niet gestraft voor het maken van eerlijke vergissingen: voor   1 2 3 4 5
iets te hebben geprobeerd dat de moeite waard was en dat mislukte.

19. Mensen hebben individuele ontwikkelingsplannen die hun prestaties   1 2 3 4 5
op een positieve wijze beïnvloeden.

20. Klantentevredenheidspeilingen beïnvloeden het inkomen van de senior managers   1 2 3 4 5 6

21. We peilen gebruikers minstens een keer per jaar om de kwaliteit   1 2 3 4 5
van onze produkten en diensten te bepalen.

22. We doen veel aan marktonderzoek in eigen beheer.   1 2 3 4 5

23. We peilen gebruikers minstens een keer per jaar om de kwaliteit   1 2 3 4 5 6
van onze produkten en diensten te bepalen.

24. We verzamelen branche/bedrijfstak-informatie via informele kanalen (zoals   1 2 3 4 5
lunches met zakelijke relaties, gesprekken met handelspartners).

25. We gaan regelmatig de mogelijke gevolgen na van veranderingen   1 2 3 4 5
in onze bedrijfsomgeving (bijv. van wetgeving) op onze klanten.

26. We hebben minstens één keer per kwartaal bijeenkomsten tussen de   1 2 3 4 5
verschillende afdelingen/onderdelen van ons bedrijf om markt trends en-
ontwikkelingen te bespreken.

27. We verspreiden periodiek informatie (zoals rapporten, nieuwsbrieven)   1 2 3 4 5
binnen het bedrijf over onze klanten.

28. Informatie over de (mate van) klantentevredenheid wordt regelmatig en   1 2 3 4 5
op alle niveaus binnen het bedrijf verspreid.

29. Als een afdeling/onderdeel iets belangrijks uitvindt over concurrenten,   1 2 3 4 5
is zij traag in het waarschuwen van de andere afdelingen/onderdelen.

30. Om de een of andere reden, negeren we veranderingen in de produkt-   1 2 3 4 5
of diensten-behoefte van onze klanten.

31. We beoordelen regelmatig onze produktontwikkelingsinspanningen,   1 2 3 4 5
teneinde er zeker van te zijn dat deze in lijn zijn met wat de klanten willen.

32. Wanneer we merken dat klanten ontevreden zijn met de kwaliteit van   1 2 3 4 5
onze dienstverlening, nemen we direct actie ter correctie daarvan.

33. De kwaliteit van onze produkten en diensten is beter dan die van onze   1 2 3 4 5
belangrijkste concurrenten.

34. Onze klanten zijn er rotsvast van overtuigd dat we een zeer goede kwaliteit   1 2 3 4 5
produkten en diensten aanbieden.

35. De groei van onze verkopen is in de afgelopen vijf jaar beter   1 2 3 4 5
dan die van onze concurrenten.

36. Ons bedrijf is belangrijk winstgevender dan de concurrentie.   1 2 3 4 5

Appendix I.
Tables of Chapter 6

Table I.1. - How the respondents of the pre-test assessed the length of the questionnaire

Questionnaire length

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Just right	7	77.8	77.8	77.8
	Too long	2	22.2	22.2	100.0
	Total	9	100.0	100.0	
Total		9	100.0		

Table I.2 - How the respondents of the pre-test assessed the time needed to fill out the questionnaire

Time to fill out questionnaire

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Just right	7	77.8	77.8	77.8
	Too much	2	22.2	22.2	100.0
	Total	9	100.0	100.0	
Total		9	100.0		

Tables I.3. - The time needed by the respondents of the pre-test to fill out the questionnaire

Statistics

	N		Mean	Median	Std. Deviation
	Valid	Missing			
Minutes to fill out questionnaire	8	1	18.7500	15.0000	8.3452

Minutes to fill out questionnaire

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	10.00	2	22.2	25.0	25.0
	15.00	3	33.3	37.5	62.5
	25.00	1	11.1	12.5	75.0
	30.00	2	22.2	25.0	100.0
	Total	8	88.9	100.0	
Missing	System Missing	1	11.1		
	Total	1	11.1		
Total		9	100.0		

Table I.4. - Did the respondents of the pre-test think that the questions made sense?

Make questions sense?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	9	100.0	100.0	100.0
	Total	9	100.0	100.0	
Total		9	100.0		

Table I.5. - Did the respondents of the pre-test think that the questions were easy to understand?

Questions easy to understand?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	9	100.0	100.0	100.0
	Total	9	100.0	100.0	
Total		9	100.0		

Table I.6 - Did the respondents of the pre-test think that the use of the English language would raise any problems?

English problem?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	9	100.0	100.0	100.0
	Total	9	100.0	100.0	
Total		9	100.0		

Table I.7. - Did the respondents of the pre-test prefer a Dutch version of the questionnaire?

Prefer Dutch questionnaire?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	2	22.2	22.2	22.2
	No	7	77.8	77.8	100.0
	Total	9	100.0	100.0	
Total		9	100.0		

Table I.8. - Frequencies of types of respondents (on pre-test or final questionnaire)

		Pre-test	Final Questionnaire	Total
Type of Respondent	Count	9	96	105
	%	8.6%	91.4%	100.0%

Table I.9. -ANOVA with the respondent variable (pre-test or final questionnaire) as factor

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
learning organisation	Between Groups	135.572	1	135.572	.462	.498
	Within Groups	30243.628	103	293.627		
	Total	30379.200	104			
market orientation	Between Groups	41.144	1	41.144	.333	.565
	Within Groups	12709.389	103	123.392		
	Total	12750.533	104			
business performance	Between Groups	13.951	1	13.951	1.581	.211
	Within Groups	908.906	103	8.824		
	Total	922.857	104			
turbulence	Between Groups	16.677	1	16.677	.866	.354
	Within Groups	1984.181	103	19.264		
	Total	2000.857	104			
competitive intensity	Between Groups	34.886	1	34.886	6.033	.016
	Within Groups	595.628	103	5.783		
	Total	630.514	104			
formalisation	Between Groups	11.945	1	11.945	2.485	.118
	Within Groups	495.045	103	4.806		
	Total	506.990	104			

Table I.10. - Frequencies of types of respondents (on English or Dutch version of the questionnaire)

		No	Yes	Total
English	Count	42	63	105
	%	40.0%	60.0%	100.0%

Table I.11. - ANOVA with the English variable as factor

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
learning organisation	Between Groups	22.478	1	22.478	.076	.783
	Within Groups	30356.722	103	294.725		
	Total	30379.200	104			
market orientation	Between Groups	129.835	1	129.835	1.060	.306
	Within Groups	12620.698	103	122.531		
	Total	12750.533	104			
business performance	Between Groups	.635	1	.635	.071	.791
	Within Groups	922.222	103	8.954		
	Total	922.857	104			
turbulence	Between Groups	45.873	1	45.873	2.417	.123
	Within Groups	1954.984	103	18.980		
	Total	2000.857	104			
competitive intensity	Between Groups	44.800	1	44.800	7.878	.006
	Within Groups	585.714	103	5.687		
	Total	630.514	104			
formalisation	Between Groups	2.173	1	2.173	.443	.507
	Within Groups	504.817	103	4.901		
	Total	506.990	104			

Table I.12. - Job description frequency of the respondents of the survey

Job description

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	CEO	12	11,4	11,8	11,8
	President	2	1,9	2,0	13,7
	Director	8	7,6	7,8	21,6
	Export Manager	22	21,0	21,6	43,1
	Information Manager	1	1,0	1,0	44,1
	Marketing Manager	23	21,9	22,5	66,7
	Production Manager	1	1,0	1,0	67,6
	Logistics Manager	1	1,0	1,0	68,6
	Financial Manager	3	2,9	2,9	71,6
	Controller	1	1,0	1,0	72,5
	Personnel Manager	3	2,9	2,9	75,5
	Business Unit Manager	7	6,7	6,9	82,4
	Regional VP	5	4,8	4,9	87,3
	Commercial Manager	11	10,5	10,8	98,0
	Other	2	1,9	2,0	100,0
	Total	102	97,1	100,0	
Missing	System Missing	3	2,9		
	Total	3	2,9		
Total		105	100,0		

Tables I.13. - Export countries (frequencies) of respondents

		Yes	No	Total
Austria	Count	30	75	105
	%	28.57%	71.43%	100.00%
Denmark	Count	35	70	105
	%	33.33%	66.67%	100.00%
Greece	Count	28	77	105
	%	26.67%	73.33%	100.00%
Netherlands	Count	83	22	105
	%	79.05%	20.95%	100.00%
Spain	Count	35	70	105
	%	33.33%	66.67%	100.00%
UK	Count	50	55	105
	%	47.62%	52.38%	100.00%
Finland	Count	27	78	105
	%	25.71%	74.29%	100.00%
Canada	Count	23	82	105
	%	21.90%	78.10%	100.00%
Germany	Count	72	33	105
	%	68.57%	31.43%	100.00%
Japan	Count	36	69	105
	%	34.29%	65.71%	100.00%
Portugal	Count	28	77	105
	%	26.67%	73.33%	100.00%
Switzerland	Count	34	71	105
	%	32.38%	67.62%	100.00%
Ireland	Count	32	73	105
	%	30.48%	69.52%	100.00%
Belgium	Count	54	51	105
	%	51.43%	48.57%	100.00%
France	Count	46	59	105
	%	43.81%	56.19%	100.00%
Italy	Count	39	66	105
	%	37.14%	62.86%	100.00%
Norway	Count	30	75	105
	%	28.57%	71.43%	100.00%
Sweden	Count	31	74	105
	%	29.52%	70.48%	100.00%
USA	Count	35	70	105
	%	33.33%	66.67%	100.00%
Middle-East	Count	26	79	105
	%	24.76%	75.24%	100.00%
Eastern Europe	Count	29	76	105
	%	27.62%	72.38%	100.00%
Russia	Count	21	84	105
	%	20.00%	80.00%	100.00%
SE Asia	Count	31	74	105
	%	29.52%	70.48%	100.00%
Latin America	Count	20	85	105
	%	19.05%	80.95%	100.00%
Australia	Count	20	85	105
	%	19.05%	80.95%	100.00%
Indonesia	Count	24	81	105
	%	22.86%	77.14%	100.00%
China (PRC)	Count	27	78	105
	%	25.71%	74.29%	100.00%

Appendix J.
Tables of Chapter 8

Table J.1. Correlation matrix for learning organisation

(Direct SPSS-output)

Correlation Matrix[a]

		V26	V27	V28	V29	V30	V31	V32
Correlation	V26	1.000	.591	.518	.497	.451	.422	.413
	V27	.591	1.000	.608	.634	.645	.396	.526
	V28	.518	.608	1.000	.624	.504	.450	.519
	V29	.497	.634	.624	1.000	.737	.540	.491
	V30	.451	.645	.504	.737	1.000	.548	.512
	V31	.422	.396	.450	.540	.548	1.000	.499
	V32	.413	.526	.519	.491	.512	.499	1.000
	V33	.305	.405	.373	.421	.405	.318	.359
	V34	.264	.504	.314	.513	.525	.319	.365
	V35	.223	.359	.294	.357	.431	.341	.323
	V36	.436	.562	.531	.598	.595	.479	.446
	V37	.309	.403	.316	.335	.310	.245	.307
	V38	.525	.551	.520	.509	.502	.391	.492
	V39	.531	.514	.514	.571	.568	.511	.458
	V40	.533	.504	.490	.551	.515	.320	.316
	V41	.308	.368	.519	.458	.365	.348	.320
	V42	.355	.500	.465	.609	.445	.276	.226
	V43	.328	.544	.508	.595	.456	.250	.394
	V44	.410	.510	.450	.534	.414	.375	.379
	V45	.188	.380	.324	.453	.354	.313	.279
	V46	.497	.514	.464	.506	.540	.438	.328
	V47	.330	.410	.420	.416	.478	.376	.501
	V48	.038	-.164	-.158	-.146	-.195	-.005	-.068
	V49	.417	.396	.260	.369	.373	.267	.362
Sig. (1-tailed)	V26		.000	.000	.000	.000	.000	.000
	V27	.000		.000	.000	.000	.000	.000
	V28	.000	.000		.000	.000	.000	.000
	V29	.000	.000	.000		.000	.000	.000
	V30	.000	.000	.000	.000		.000	.000
	V31	.000	.000	.000	.000	.000		.000
	V32	.000	.000	.000	.000	.000	.000	
	V33	.001	.000	.000	.000	.000	.001	.000
	V34	.003	.000	.001	.000	.000	.001	.000
	V35	.012	.000	.001	.000	.000	.000	.000
	V36	.000	.000	.000	.000	.000	.000	.000
	V37	.001	.000	.001	.000	.001	.006	.001
	V38	.000	.000	.000	.000	.000	.000	.000
	V39	.000	.000	.000	.000	.000	.000	.000
	V40	.000	.000	.000	.000	.000	.000	.001
	V41	.001	.000	.000	.000	.000	.000	.000
	V42	.000	.000	.000	.000	.000	.002	.011
	V43	.000	.000	.000	.000	.000	.005	.000
	V44	.000	.000	.000	.000	.000	.000	.000
	V45	.029	.000	.000	.000	.000	.001	.002
	V46	.000	.000	.000	.000	.000	.000	.000
	V47	.000	.000	.000	.000	.000	.000	.000
	V48	.353	.049	.056	.070	.024	.479	.248
	V49	.000	.000	.004	.000	.000	.003	.000

		V33	V34	V35	V36	V37	V38	V39
Correlation	V26	.305	.264	.223	.436	.309	.525	.531
	V27	.405	.504	.359	.562	.403	.551	.514
	V28	.373	.314	.294	.531	.316	.520	.514
	V29	.421	.513	.357	.598	.335	.509	.571
	V30	.405	.525	.431	.595	.310	.502	.568
	V31	.318	.319	.341	.479	.245	.391	.511
	V32	.359	.365	.323	.446	.307	.492	.458
	V33	1.000	.316	.245	.484	.125	.340	.435
	V34	.316	1.000	.500	.565	.219	.478	.388
	V35	.245	.500	1.000	.518	.306	.370	.424
	V36	.484	.565	.518	1.000	.444	.618	.636
	V37	.125	.219	.306	.444	1.000	.488	.395
	V38	.340	.478	.370	.618	.488	1.000	.537
	V39	.435	.388	.424	.636	.395	.537	1.000
	V40	.236	.343	.271	.507	.338	.455	.487
	V41	.339	.285	.278	.424	.276	.354	.404
	V42	.385	.302	.262	.434	.437	.536	.424
	V43	.465	.358	.314	.479	.441	.567	.447
	V44	.244	.319	.307	.436	.391	.530	.468
	V45	.213	.312	.386	.274	.422	.326	.240
	V46	.399	.460	.372	.546	.427	.484	.522
	V47	.213	.429	.305	.347	.351	.454	.375
	V48	-.214	-.089	-.174	-.141	-.107	-.087	-.127
	V49	.228	.493	.246	.469	.351	.493	.398
Sig. (1-tailed)	V26	.001	.003	.012	.000	.001	.000	.000
	V27	.000	.000	.000	.000	.000	.000	.000
	V28	.000	.001	.001	.000	.001	.000	.000
	V29	.000	.000	.000	.000	.000	.000	.000
	V30	.000	.000	.000	.000	.001	.000	.000
	V31	.001	.001	.000	.000	.006	.000	.000
	V32	.000	.000	.000	.000	.001	.000	.000
	V33		.001	.006	.000	.104	.000	.000
	V34	.001		.000	.000	.013	.000	.000
	V35	.006	.000		.000	.001	.000	.000
	V36	.000	.000	.000		.000	.000	.000
	V37	.104	.013	.001	.000		.000	.000
	V38	.000	.000	.000	.000	.000		.000
	V39	.000	.000	.000	.000	.000	.000	
	V40	.008	.000	.003	.000	.000	.000	.000
	V41	.000	.002	.002	.000	.002	.000	.000
	V42	.000	.001	.004	.000	.000	.000	.000
	V43	.000	.000	.001	.000	.000	.000	.000
	V44	.007	.001	.001	.000	.000	.000	.000
	V45	.015	.001	.000	.003	.000	.000	.007
	V46	.000	.000	.000	.000	.000	.000	.000
	V47	.015	.000	.001	.000	.000	.000	.000
	V48	.015	.187	.039	.078	.140	.190	.100
	V49	.010	.000	.006	.000	.000	.000	.000

Correlation Matrix[a]

		V40	V41	V42	V43	V44	V45	V46
Correlation	V26	.533	.308	.355	.328	.410	.188	.497
	V27	.504	.368	.500	.544	.510	.380	.514
	V28	.490	.519	.465	.508	.450	.324	.464
	V29	.551	.458	.609	.595	.534	.453	.506
	V30	.515	.365	.445	.456	.414	.354	.540
	V31	.320	.348	.276	.250	.375	.313	.438
	V32	.316	.320	.226	.394	.379	.279	.328
	V33	.236	.339	.385	.465	.244	.213	.399
	V34	.343	.285	.302	.358	.319	.312	.460
	V35	.271	.278	.262	.314	.307	.386	.372
	V36	.507	.424	.434	.479	.436	.274	.546
	V37	.338	.276	.437	.441	.391	.422	.427
	V38	.455	.354	.536	.567	.530	.326	.484
	V39	.487	.404	.424	.447	.468	.240	.522
	V40	1.000	.482	.546	.477	.409	.273	.530
	V41	.482	1.000	.335	.314	.181	.148	.332
	V42	.546	.335	1.000	.774	.596	.492	.516
	V43	.477	.314	.774	1.000	.630	.566	.465
	V44	.409	.181	.596	.630	1.000	.476	.503
	V45	.273	.148	.492	.566	.476	1.000	.340
	V46	.530	.332	.516	.465	.503	.340	1.000
	V47	.299	.138	.265	.355	.396	.328	.309
	V48	-.126	-.116	-.206	-.213	-.216	-.127	-.282
	V49	.373	.182	.444	.445	.416	.182	.513
Sig. (1-tailed)	V26	.000	.001	.000	.000	.000	.029	.000
	V27	.000	.000	.000	.000	.000	.000	.000
	V28	.000	.000	.000	.000	.000	.000	.000
	V29	.000	.000	.000	.000	.000	.000	.000
	V30	.000	.000	.000	.000	.000	.000	.000
	V31	.000	.000	.002	.005	.000	.001	.000
	V32	.001	.000	.011	.000	.000	.002	.000
	V33	.008	.000	.000	.000	.007	.015	.000
	V34	.000	.002	.001	.000	.001	.001	.000
	V35	.003	.002	.004	.001	.001	.000	.000
	V36	.000	.000	.000	.000	.000	.003	.000
	V37	.000	.002	.000	.000	.000	.000	.000
	V38	.000	.000	.000	.000	.000	.000	.000
	V39	.000	.000	.000	.000	.000	.007	.000
	V40		.000	.000	.000	.000	.003	.000
	V41	.000		.000	.001	.034	.068	.000
	V42	.000	.000		.000	.000	.000	.000
	V43	.000	.001	.000		.000	.000	.000
	V44	.000	.034	.000	.000		.000	.000
	V45	.003	.068	.000	.000	.000		.000
	V46	.000	.000	.000	.000	.000	.000	
	V47	.001	.082	.003	.000	.000	.000	.001
	V48	.101	.121	.018	.015	.014	.101	.002
	V49	.000	.033	.000	.000	.000	.033	.000

		V24	V25
Correlation	V11	.103	.374
	V12	.179	.392
	V13	.091	.246
	V14	.072	.312
	V15	.177	.362
	V16	.183	.446
	V17	.190	.432
	V18	.045	.314
	V19	.162	.449
	R20	.014	.307
	R21	.049	.473
	V22	.130	.393
	R23	.071	.212
	V24	1.000	.211
	V25	.211	1.000
Sig. (1-tailed)	V11	.149	.000
	V12	.034	.000
	V13	.179	.006
	V14	.232	.001
	V15	.036	.000
	V16	.032	.000
	V17	.027	.000
	V18	.324	.001
	V19	.050	.000
	R20	.443	.001
	R21	.310	.000
	V22	.094	.000
	R23	.238	.015
	V24		.016
	V25	.016	

Appendix K.
Overview of the Characteristics of the Twenty Companies who Participated in the Interviews

Correlation Matrix

		V11	V12	V13	V14	V15	V16	V17
Correlation	V11	1.000	.266	.263	.437	.194	.324	.320
	V12	.266	1.000	.355	.310	.445	.387	.452
	V13	.263	.355	1.000	.372	.152	.301	.361
	V14	.437	.310	.372	1.000	.213	.357	.299
	V15	.194	.445	.152	.213	1.000	.330	.438
	V16	.324	.387	.301	.357	.330	1.000	.423
	V17	.320	.452	.361	.299	.438	.423	1.000
	V18	.252	.203	.306	.144	.308	.360	.298
	V19	.434	.309	.391	.499	.230	.435	.496
	R20	.071	.256	.152	.060	.256	.380	.332
	R21	.235	.249	.210	.203	.278	.385	.280
	V22	.330	.400	.376	.297	.353	.537	.561
	R23	.233	.285	.309	.103	.208	.273	.310
	V24	.103	.179	.091	.072	.177	.183	.190
	V25	.374	.392	.246	.312	.362	.446	.432
Sig. (1-tailed)	V11		.003	.003	.000	.024	.000	.000
	V12	.003		.000	.001	.000	.000	.000
	V13	.003	.000		.000	.062	.001	.000
	V14	.000	.001	.000		.015	.000	.001
	V15	.024	.000	.062	.015		.000	.000
	V16	.000	.000	.001	.000	.000		.000
	V17	.000	.000	.000	.001	.000	.000	
	V18	.005	.019	.001	.072	.001	.000	.001
	V19	.000	.001	.000	.000	.009	.000	.000
	R20	.237	.004	.061	.272	.004	.000	.000
	R21	.008	.005	.016	.019	.002	.000	.002
	V22	.000	.000	.000	.001	.000	.000	.000
	R23	.009	.002	.001	.150	.017	.003	.001
	V24	.149	.034	.179	.232	.036	.032	.027
	V25	.000	.000	.006	.001	.000	.000	.000

Correlation Matrix

		V18	V19	R20	R21	V22	R23
Correlation	V11	.252	.434	.071	.235	.330	.233
	V12	.203	.309	.256	.249	.400	.285
	V13	.306	.391	.152	.210	.376	.309
	V14	.144	.499	.060	.203	.297	.103
	V15	.308	.230	.256	.278	.353	.208
	V16	.360	.435	.380	.385	.537	.273
	V17	.298	.496	.332	.280	.561	.310
	V18	1.000	.451	.240	.218	.203	.281
	V19	.451	1.000	.206	.376	.435	.283
	R20	.240	.206	1.000	.441	.230	.149
	R21	.218	.376	.441	1.000	.350	.343
	V22	.203	.435	.230	.350	1.000	.206
	R23	.281	.283	.149	.343	.206	1.000
	V24	.045	.162	.014	.049	.130	.071
	V25	.314	.449	.307	.473	.393	.212
Sig. (1-tailed)	V11	.005	.000	.237	.008	.000	.009
	V12	.019	.001	.004	.005	.000	.002
	V13	.001	.000	.061	.016	.000	.001
	V14	.072	.000	.272	.019	.001	.150
	V15	.001	.009	.004	.002	.000	.017
	V16	.000	.000	.000	.000	.000	.003
	V17	.001	.000	.000	.002	.000	.001
	V18		.000	.007	.013	.019	.002
	V19	.000		.018	.000	.000	.002
	R20	.007	.018		.000	.009	.065
	R21	.013	.000	.000		.000	.000
	V22	.019	.000	.009	.000		.018
	R23	.002	.002	.065	.000	.018	
	V24	.324	.050	.443	.310	.094	.238
	V25	.001	.000	.001	.000	.000	.015

Correlation Matrix[a]

		V47	V48	V49
Correlation	V26	.330	.038	.417
	V27	.410	-.164	.396
	V28	.420	-.158	.260
	V29	.416	-.146	.369
	V30	.478	-.195	.373
	V31	.376	-.005	.267
	V32	.501	-.068	.362
	V33	.213	-.214	.228
	V34	.429	-.089	.493
	V35	.305	-.174	.246
	V36	.347	-.141	.469
	V37	.351	-.107	.351
	V38	.454	-.087	.493
	V39	.375	-.127	.398
	V40	.299	-.126	.373
	V41	.138	-.116	.182
	V42	.265	-.206	.444
	V43	.355	-.213	.445
	V44	.396	-.216	.416
	V45	.328	-.127	.182
	V46	.309	-.282	.513
	V47	1.000	-.010	.364
	V48	-.010	1.000	-.047
	V49	.364	-.047	1.000
Sig. (1-tailed)	V26	.000	.353	.000
	V27	.000	.049	.000
	V28	.000	.056	.004
	V29	.000	.070	.000
	V30	.000	.024	.000
	V31	.000	.479	.003
	V32	.000	.248	.000
	V33	.015	.015	.010
	V34	.000	.187	.000
	V35	.001	.039	.006
	V36	.000	.078	.000
	V37	.000	.140	.000
	V38	.000	.190	.000
	V39	.000	.100	.000
	V40	.001	.101	.000
	V41	.082	.121	.033
	V42	.003	.018	.000
	V43	.000	.015	.000
	V44	.000	.014	.000
	V45	.000	.101	.033
	V46	.001	.002	.000
	V47		.461	.000
	V48	.461		.319
	V49	.000	.319	

a. Determinant = 4.678E-07

Table J.2. - Correlation matrix for market orientation

(Direct SPSS-output)

See Table K.1. In this table the reader will find a general overview of the characteristics of the twenty export companies who participated in the interviews. These companies are part of the total group of 105 companies who participated in the research. Because most companies requested to remain anonymous for strategic and commercial reasons, the real names of the companies remain hidden.

Between brackets the reader can find the position of the company in relation to the other participant companies. For example, 2.00 (18%) on a specific variable means the company scored 2.00 on this variable and its position relative to the other participating companies is 18%. This position can be understood by the notion that 18% of the participating companies scored equal or lower and 82% scored equal or higher on this variable.

In the table below, the reader will also find some general information, such as who was interviewed (always the same person who filled out the questionnaire), which industry the company operates in, which international markets it serves, the life stage of the company, annual sales growth in the last three years, the number of employees, the companies' sales in the preceding year, the market share and the net profit in the preceding year.

The reader will see that some companies only serve national markets. Despite this, they are known as export companies. This is mainly due to the fact that they are a Dutch subsidiary of a large international concern. Also the reader will find that a few companies have fewer than 200 employees (the target group of the research). This is mainly due to incorrect information in the "Trade Directory "Holland Exports" 1995" and/or a recent decline in the number of employees.

Table K.1. - A general overview of the characteristics of the twenty companies who participated in the interviews

COMPANY

VARIABLE	Company A Case 33 Producing steel products	Company B Case 29 Producing grass seeds and Clover Seeds	Company C Case 42 Manufacturing of metal/plastic parts	Company D Case 81 Transport	Company E Case 56 Consulting engineers and contracting
Interviewee	Director of Production	Business Unit Manager	Marketing & Industrial Relations Manager	CEO	Vice-President Sales & Marketing
Formalisation	4.50 (80%)	3.50 (50%)	2.00 (5%)	6.00 (100%)	4.00 (70%)
Learning Organisation	4.08 (45%)	3.83 (38%)	3.58 (25%)	5.00 (90%)	4.08 (45%)
Market Orientation	3.79 (30%)	4.00 (30%)	3.90 (25%)	5.00 (85%)	4.21 (40%)
Business Performance	4.33 (75%)	4.00 (60%)	3.67 (45%)	4.33 (75%)	3.67 (45%)
Turbulence	4.50 (80%)	3.75 (45%)	3.75 (45%)	5.00 (95%)	4.00 (60%)
Competitive Intensity	4.67 (60%)	4.00 (35%)	5.00 (78%)	5.33 (85%)	5.00 (78%)
Industry	Manufacturing consumer goods	Agriculture/ Wholesale	Manufacturing components	Transport	Engineering
(Inter)national Markets	NL (Netherlands)	NL, UK, Germany, France	NL, Europe, Asia	Europe, USA, Far East	World-wide
Life Stage	Maturity	Decline	Maturity	Growth	Maturity
Sales Growth	2%	0%	12%	6%	6%
Employees	250	100	4000	600	350
Company Sales*	52M	54M	650M	9M	250M
Market Share	60%	18%	-	-	10%
Net Profit*	4.5M	4M	-	2.5M	-

* = in Dutch guilders

Table K.1. (Continued)

<div align="center">COMPANY</div>

VARIABLE	Company F Case 69 Producing buses and coaches	Company G Case 84 Producing glass bottles and jars	Company H Case 78 Producing wooden puzzles	Company I Case 10 Producing sanitary fittings	Company J Case 98 Producing bearings
Interviewee	Financial Director	Director External Affairs	Business Manager	Commercial/ Export Manager	Manager R&D
Formalisation	4.00 (70%)	5.00 (95%)	4.50 (80%)	2.50 (20%)	3.50 (50%)
Learning Organisation	4.42 (70%)	4.00 (50%)	4.67 (80%)	2.42 (5%)	5.50 (100%)
Market Orientation	4.67 (70%)	4.43 (55%)	4.43 (55%)	3.79 (30%)	4.30 (50%)
Business Performance	3.67 (45%)	3.00 (20%)	4.00 (60%)	3.33 (30%)	4.00 (60%)
Turbulence	5.00 (95%)	4.25 (70%)	3.75 (45%)	5.00 (95%)	3.25 (30%)
Competitive Intensity	6.00 (100%)	4.67 (60%)	4.33 (55%)	5.00 (78%)	6.00 (100%)
Industry	Manufacturing heavy goods	Manufacturing packing	Manufacturing consumer goods	Manufacturing consumer goods	Engineering
(Inter)national Markets	NL, Germany, Luxembourg, Greece, Belgium, Switzerland, Palestine	NL, Germany, Belgium, France	World-wide	NL, Poland	World-wide
Life Stage	Decline (NL) Growth (int.)	Maturity	Maturity	Maturity	Maturity
Sales Growth	-17,5% (NL) 2% (int.)	1,6%	2%	3%	-
Employees	210	560	210	240	200
Company Sales*	64M	180M	10M	70M	-
Market Share	45% (NL)	20%	25%	40%	20%
Net Profit*	-	13.5M	-0.5M	3M	-

* = in Dutch guilders

Table K.1. (Continued)

<div align="center">COMPANY</div>

VARIABLE	Company K Case 14 Producing boilers and water-heaters	Company L Case 59 Organisation of parties, receptions and diners	Company M Case 5 Producing shelving systems	Company N Case 57 Producing cotton and polyester/- cotton fabrics	Company O Case 97 Software develop- ment & IT consultancy
Interviewee	CEO	Manager Marketing & Sales	Managing Director	Export Manager	Manager Operations
Formalisation	3.00 (30%)	3.00 (30%)	3.00 (30%)	3.00 (30%)	1.00 (2%)
Learning Organisation	5.20 (90%)	4.54 (70%)	3.96 (40%)	3.38 (25%)	5.38 (90%)
Market Orientation	4.64 (75%)	4.64 (75%)	4.43 (60%)	3.57 (20%)	4.00 (30%)
Business Performance	4.67 (80%)	4.33 (75%)	5.00 (90%)	3.67 (45%)	6.00 (100%)
Turbulence	4.00 (60%)	4.00 (60%)	4.50 (80%)	1.75% (2%)	6.00 (100%)
Competitive Intensity	3.67 (30%)	5.00 (78%)	2.00 (5%)	4.33 (50%)	1.00 (2%)
Industry	Manufacturing consumer goods	Services	Manufacturing consumer goods	Manufacturing textiles	Services
(Inter)national Markets	NL, Germany, Italy	NL, Germany, Belgium	NL, Austria, Germany	World-wide	NL, Germany, Belgium
Life Stage	Growth	Maturity	Maturity	Maturity	Growth
Sales Growth	10%	10%	0	-	-
Employees	400	365	350	600	250
Company Sales*	296M	65M	80M	50M	44M
Market Share	33%	60%	-	30%	-
Net Profit*	26M	6M	5.1M	-	-

* = in Dutch guilders

Table K.1. (Continued)

COMPANY

VARIABLE	Company P Case 38 Producing components and systems for electrical energy	Company R[1] Case 13 Trading vegetables, fruits, potatoes, onions	Company S Case 21 International transport, expedition and custom clearance	Company T Case 95 International transport, mainly shipping	Company U Case 62 Producing fire fighting equipment
Interviewee	Marketing Manager	Manager Sales	Manager Marketing & Sales	Consultant Strategy & Planning	Business Unit Manager
Formalisation	5.00 (90%)	3.00 (30%)	4.50 (80%)	5.00 (95%)	4.50 (80%)
Learning Organisation	3.21 (20%)	1.92 (1%)	4.90 (85%)	2.42 (5%)	3.83 (38%)
Market Orientation	3.57 (20%)	4.08 (30%)	5.07 (90%)	2.71 (5%)	5.21 (95%)
Business Performance	2.67 (10%)	5.33 (90%)	4.33 (75%)	2.33 (7%)	4.67 (82%)
Turbulence	2.75 (20%)	4.75 (90%)	5.00 (95%)	3.75 (45%)	3.25 (30%)
Competitive Intensity	4.00 (35%)	4.67 (60%)	5.00 (78%)	5.67 (90%)	4.67 (50%)
Industry	Manufacturing heavy goods	Wholesale/ Retail Trade	Transport	Transport	Manufacturing heavy goods
(Inter)national Markets	NL	World-wide	NL, UK, Germany, Japan, Ireland, Belgium, USA	World-wide	NL
Life Stage	Maturity	Maturity	Growth	Maturity	Maturity
Sales Growth	3%	2,5%	10%	-	2%
Employees	1700	700	1100	19.000	180
Company Sales*	400M	900M	150M	6.607M	38M
Market Share	35%	70%	-	-	25%
Net Profit*	12M	90M	-	100M	2.8M

* = in Dutch guilders

---

[1] Because "Q" resembles "O" in writing this letter has been omitted.