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THE EFFECT OF STRATEGIC ORIENTATIONS ON SMEs' INTERNATIONAL MARKETING STRATEGY AND BUSINESS PERFORMANCE

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"Better is to get wisdom than gold"

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Abstract

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This thesis aims to contribute to the marketing strategy research in SME context by examining in detail how strategic orientation dimensions contribute to performance in combination with marketing strategy adaptation/ standardization. The overall research question of this study is: Do strategic oriented SMEs have more sophisticated international marketing strategies and thus also perform better?

This study focuses on explaining the effect of different strategic orientation dimensions, including learning, entrepreneurial, and market, on diverse business performance indicators, as well as on marketing strategy adaptation degree.

The hypotheses were tested for mail survey data of 298 Finnish SMEs, operating in five industry sectors: software, metal, food, furniture, and knowledge-intensive business services industry (KIBS). Factor analysis, correlation tables, and hierarchical multiple regression analysis were employed to test the hypotheses.

Empirical results confirm partially the relationship between strategic orientations, marketing strategy and performance. The empirical results are indicative and would require further testing with improved measures for the marketing strategy adaptation/standardization.

Tiivistelmä

Tekijä:	Andberg, Janne
Tutkielman nimi:	Strategisten orientaatioiden vaikutus PK-yritysten kansainväliseen markkinointistrategiaan ja kaupalliseen menestykseen
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Avainsanat:	Strateginen orientaatio, markkinointi strategia, sopeuttaminen, standardointi, kaupallinen menestys

Tämän työn tavoitteena on myötävaikuttaa markkinointistrategiatutkimukseen pienten ja keskisuurten yritysten toimintaympäristössä tutkimalla yksityiskohtaisesti miten strategisten orientaatioiden eri dimensiot myötävaikuttavat yrityksen menestymiseen, yhdistettynä markkinointistrategian sopeuttamiseen/standardoimiseen. Tämän tutkimuksen päätutkimuskysymys on: Onko strategisesti suuntautuneilla pk-yrityksillä entistä kehittyneemmät kansainvälisen markkinoinnin strategiat, ja sitä kautta ne myös menestyvät paremmin?

Työ keskittyy selittämään eri strategisten orientaatioiden, sisältäen oppimisen, yrittäjyyden ja markkinaorientaation, dimensioiden vaikutuksia eri menestyksen mittareihin sekä markkinointistrategian sopeuttamisasteeseen.

Tutkielman empiirinen osuus suoritettiin verkkopohjaisella kyselytutkimuksella, johon osallistui 298 kotimaista pk-yritystä viideltä eri teollisuuden alalta: ohjelmisto-, metalli-, huonekalu-, ruoka-, ja osaamis-intensiivinen liike-elämän palveluteollisuus (KIBS). Faktorianalyysiä, korrelaatio-taulukoita ja hierarkkista monimuuttujaregressioanalyysiä käytettiin hypoteesien testaamisessa.

Empiiriset tulokset vahvistavat osittain strategisten orientaatioiden, markkinointi-strategian ja kaupallisen menestymisen suhteen. Empiiriset tulokset ovat viitteellisiä ja vaatisivat uudelleen testaamista parannetuilla markkinointistrategian sopeuttamisen/standardoinnin mittareilla.

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Pointless to say, all errors and oversights are entirely my own.

List of abbreviations and definitions

Beta coefficient Standardized regression coefficient that allows for a direct comparison between coefficients as to their relative explanatory power of the dependent variable.

Collinearity Expression of the relationship between independent variables. Complete collinearity means correlation coefficient 1.

Content validity Assessment of the degree of correspondence between the items selected to constitute a summated scale and its conceptual definition.

Cronbach's alpha Measure of reliability that ranges from 0 to 1, with values of 0,60 to 0,70 deemed the lower limit of acceptability.

Eigenvalue Column sum of squared loadings for a factor; also referred to as the latent root. It represents the amount of variance accounted for by a factor.

EO Entrepreneurial orientation

Homoscedasticity/ Heteroscedasticity Description of data for which the variance of the error terms (e) appears constant over the range of values of an independent variable. When the error terms have increasing or modulating variance, the data are said to be heteroscedastic.

LO Learning orientation

MO Market orientation

Mediator variable Mediator is an explaining variable between an independent (or predictor) variable and a dependent (or criterion) variable, explaining *how* or *why* certain effects occur.

Moderator variable Moderator is a variable that affects the direction and/or strength of the relation between an independent (or predictor) variable and a dependent (or criterion) variable. Moderators explain *when* certain effects occur.

Multicollinearity Extent to which a variable can be explained by the other variables in the analysis.

BP Business performance (objective and subjective)

Summated scales Method of combining several variables that measure the same concept into a single variable in an attempt to increase the reliability of the measurement.

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1   Introduction

1.1   Background

The increasing globalization of markets and businesses is playing a major role on small and medium size enterprise's (SME's) business situation and internationalization process. SMEs are confronted by the fact that globalization opens opportunities in potential international markets but same time increases home market competition.

In the research field, strategic orientations have received increasing attention as a potential determinant of a firm's performance. Although the relationship between international marketing strategy and performance is less known, the same mechanisms shall apply. The thesis aims to clarify whether there are situations in which adaptation or standardization is more profitable. However, in both research areas the lack of consistency in findings might be attributed, at least partly, to a lack of precision in defining performance, especially in the case of SMEs.

The thesis aims at contributing to the international marketing research by investigating the relationship between different strategic orientations and marketing mix standardization/adaptation, and their influence on firm's business performance. The study specifically focuses on understanding the drivers for exceptional business performance, and how it would help SMEs in small countries, like Finland, to be more competitive globally. Therefore the topic is not only theoretically interesting but could offer practical approaches for SMEs of small import/export nations.

A vertical view of a layered business concept is presented in Figure 1. At the bottom there are general underlying factors, i.e. culture, industry, internationalization, and other general strategies, influencing business performance. Above the general level there are firm specific strategic orientations of which entrepreneurial orientation, learning orientation and market orientation are studied. The next level summarizes company

specific international marketing strategy from the view point of adaptation or standardization. In this study four basic components, product, price promotion and place, are studied. Finally on the top there is financial perspective explaining business performance of a firm. In this layered structure, it appears that there shall be causal effects explaining the business performance.

Financial Perspective	**Business performance**
	Revenue · Profit · Growth · ROCE · %-Int'l sales

International Marketing Strategy	**Adaptation / standardization**
	Brand · Sales
	Targeting · Product · Price
	Positioning · Promotion · Distribution

Strategic Orientations	**Entrepreneurial orientation** Risk-taking, Innovativeness, Proactiveness	**Learning orientation** Commitment to learning, Shared vision, Open-mindedness	**Market orientation** Customer, Competitor, Inter-functional cooperation

Underlying Factors	Culture of international market(s)
	Industry characteristics
	Internationalization scope and scale
	General strategies

Figure 1. A vertical overview of the layered business concept.

1.2 Research gap and questions

The purpose of this thesis is to examine business performance of Finnish SMEs from the viewpoint of their strategic orientations and international marketing strategy. In present literature there is a very limited understanding of the mechanism through which strategic orientations influence international marketing strategy and its influence further on performance.

One of the major shortcomings in strategic orientation literature is that multiple dimensions are aggregated into single composite scores even if the different dimensions would be contradictory and each operating differently on performance (Cadogan, 2012).

In addition the effect of marketing strategy adaptation/standardization has been a theoretical battle between two different schools of thought, although the benefits of both are well recognized. The literature has focused mainly in product and promotion, however lacking a real conceptualization with related dimensions on each item, and related commonly accepted scales.

Further in business performance measure there is a lack of precision. Performance is often used as single composite, and the definition remains unclear (Cadogan, 2012). Turnover, growth and profitability are at least partially opposite measures. Especially tricky is the performance assessment for SME's. However, performance as term appears to sell well also in the research field.

In this context, the following main research question is posed:

- *Do strategic oriented SMEs have more sophisticated international marketing strategies and thus also perform better?*

The main research question is approached by developing an appropriate conceptual framework to break down and examine in detail a number of specific questions. First we need to understand what is meant by strategic orientations, international marketing strategy standardization/adaptation and business performance. Secondly we need to understand how these are interconnected, and thirdly understand the influence of circumstances e.g. industry or company size. Therefore more specific research questions are addressed:

- *How is business performance defined for SMEs?*
- *Does a relationship between strategic orientation(s) and business performance exist?*
- *Does international marketing strategy standardization/adaptation affect SME's business performance?*
- *Does international marketing strategy moderate the relationship between strategic orientation(s) and performance?*
- *Is the relationship meditated by international marketing strategy?*
- *Is there any difference in national vs. international context?*

The general framework is presented below in figure 2, showing the different relationships under study. Further on it shows that for each firm an individual business context exists, potentially affecting the relationships between and within the constructs under study.
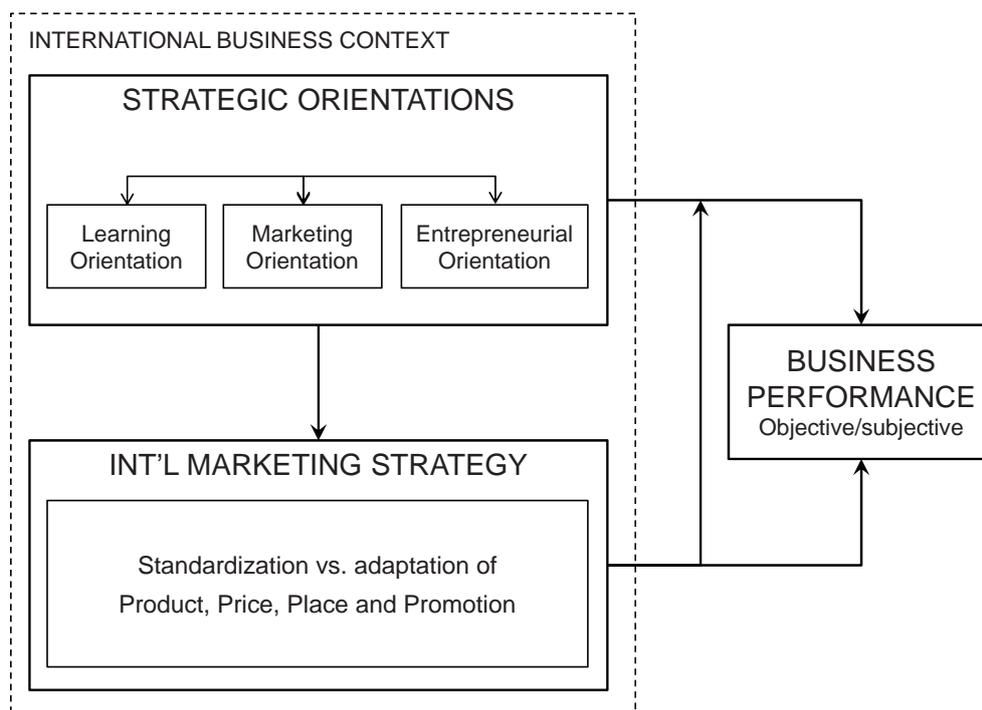
Figure 2. General framework for the study (the dotted line refers to business context potentially affecting the relationships).

1.3 Objectives and delimitations

The overall objective of this thesis is to identify some of the mechanisms through which international marketing strategy influence the expected relationship between strategic orientations and business performance of SMEs. More specifically, the study aims at understanding how strategic orientations relate to different performance measures, both objective and subjective, and what is the role of international marketing strategy in this phenomenon.

The conceptual framework and related hypotheses have been developed based on an extensive literature review and the theoretical constructs mainly adopted from scales used in previous studies.

Delimitations

The thesis does not focus on summarizing literature available but introducing the conceptualizations and creating hypotheses based on the concluding studies available in the literature.

Learning orientation, entrepreneurial orientation and market orientation were the selected strategic orientations, as market orientation has confirmed positive effect on performance, and market-oriented firms are likely to combine market orientation with learning and/or entrepreneurial orientations (Matsuno et al., 2002), (Grinstein, 2008).

This study focuses on independent firms operating in five different industry sectors: software, metal, food, furniture, and knowledge-intensive business services industry (KIBS). The empirical data of the study is restricted to a single country, Finland. As the data set is part of a larger research project, it is mainly restricted by the number of questions per construct.

Although the cultural difference between home and international market influence the degree of adaptation needed, the degree of

internalization (DOI) was left out of the study. This relates to the fact that DOI cannot explain the cultural differences.

The study uses conventional statistical modelling and linear models for learning purposes, although Cadogan et al. (2009) have shown relationship could take the form of inverted U-shape at high level of strategic orientations.

1.4   Research methodology

Data for the study was collected 2008 using an online Webropol-questionnaire, mainly using a seven-point Likert scale. The quantitative approach makes enables to empirically test theoretical hypotheses derived from the literature. Internet questionnaire method is efficient in terms of cost and time, and it is geographically flexible. The main issues with such data collection method are low response rate, risk of misunderstanding the questions, and that responses are essentially based on the perceptions of single respondents.

Finnish SME context was considered appropriate for the study. Amadeus database was used in selecting domestic firms having 10-500 employees and less than 50 million Euros turnover. From 1147 inquiries 298 responses were received. Of the 298 firms 179 were active only domestic and 119 had some level of international activity or were in the middle of the internationalization process.

In this study previously validated operationalizations are used whenever possible. Factor analysis with Varimax rotation has been used to find factors or constructs where a variable load highly on one particular factor and loads as low as possible on others, thus reducing multicollineriaty but improving validity and internal reliability. Multiple regression analysis are employed to test whether the hypothesized relationships between the constructs hold the data. The reliability, validity, and limitations of the study are carefully assessed.

1.5 Outline of the study

The thesis is divided into six main chapters of which Chapter 1 is the introduction part for reviewing and analyzing the fundamentals of strategic orientations, international marketing strategy standardization/adaptation and the definition of business performance. Chapter 2 defines the central concepts used and reviews the previous research. The same chapter further on presents the theoretical framework and related hypotheses to be investigated.

Chapter 3 presents the research design and methodology of the empirical study. It also discusses reliability and validity of the study. Chapter 4 presents descriptive statistics, scale developments, hypotheses tests and their results. Chapter 5 answers the research questions, discusses the theoretical and practical implications, and identifies limitations and future areas for research. Finally chapter 6 concludes the findings.

2   Theoretical foundation and hypotheses

In order to establish the research context, this chapter first reviews relevant literature for the study. Special efforts are placed in defining the concept "business performance" in a way that valuable and reliable results could be achieved. It appears that the term is very extensively used but lacks consistent in definition, especially for SMEs. Based on the literature overview the theoretical framework and related hypotheses are developed in the final part of the chapter.

2.1   Strategic orientations

Strategy is a central concept influencing business performance of a firm. Strategic orientations can be considered as the general principles that influence strategic activities within an organization, i.e. descriptions on how resource allocation and coordination patterns are created, rooted, adopted, and/or passed in different market environments. Superior performance has been claimed to depend on the combination between strategic orientations and organization's resources (Miles et al., 1978).

In this study learning orientation, entrepreneurial orientation and market orientation are studied in combination with international marketing strategy as those are all very internal to an organization and could thus offer potential competitive advantages and explain superior performance.

Previous research on marketing orientation has confirmed the positive effect of market orientation on performance but also that no single strategic orientation leads to superior performance in all situations. Recent studies show that firms combining market orientation with other strategic orientations are likely to perform even better than firms adopting only MO, and market-oriented firms are likely to combine market orientation with learning and/or entrepreneurial orientations (Matsuno et al., 2002), (Grinstein, 2008).

2.1.1 Entrepreneurial orientation

Entrepreneurial orientation can be considered as a strategic orientation that captures entrepreneurial characteristics of firm's decision-making procedures and practices, providing a foundation for entrepreneurial decisions and actions (e.g. Covin & Slevin (1989), Lumpkin & Dess (1996), and Wiklund & Shepherd (2003). Therefore it is a multidimensional construct characterizing firm's entrepreneurial behavior.

Based on Miller's (1983) original conceptualization, three dimensions of entrepreneurial orientation are used consistently in the literature: *innovativeness*, *risk taking*, and *proactiveness*. Two further dimensions, *competitive aggressiveness* and *autonomy*, were suggested by Lumpkin and Dess (1996) as additional components of the EO construct. All the dimensions are covered in this thesis.

Innovativeness can be explained as the willingness to innovate and renew market offerings in order to pursue new opportunities. It is a phenomenon supporting new ideas, novelty, experimentation, and creative processes, which could then enable new products, services or processes (Miller, 1983).

Risk taking is associated with the willingness to try new and unknown products and/or services, and to allocate more resources to projects where the outcomes are uncertain. Therefore the cost of failure may also be high. It mainly relates to the desire to disengage and venture into uncertain markets Miller (1983) and (2011).

Proactiveness on the other hand refers to the anticipation on future wants and needs within a market and simultaneously aiming to create a first-mover advantage based on those (Lumpkin & Dess, 1996). Proactive firms with progressive perspective have the desire to be pioneers in seeking out new marketplace opportunities and thereby capitalizing emerging opportunities.

Competitive aggressiveness means the strength a firm tries to outperform their industry rivals, characterized by the position and forceful response to competitor's actions. Whereas *autonomy* is refers to an independent action aiming to bring forward a business concept or vision, and also completing the action (Lumpkin & Dess, 1996).

2.1.2 Learning orientation

Learning orientation can be understood as an organization-wide activity which aims at creating and utilizing knowledge in order to improve competitive position and/or advantage. Companies committed to learning recognize and exploit opportunities, as well as proactively create new opportunities. Learning orientation changes organization culture so that information is acquired, disseminated and shared internally, so that individual knowledge is turned into organizational knowledge (Belohlav, 1996), (Wang, 2008), (Nonaka & Takeuchi, 1995).

Based on the conceptualization proposed Sinkula et al. (1997), learning orientation consists of three dimensions: *commitment to learning, shared vision* and *open-mindedness*. The main dimensions influence the information that the organization gathers, interprets, evaluates, and shares, as well as finally accepts or rejects. Commitment to learning and open-mindedness are covered in this study.

Commitment to learning, creates a learning climate in which the individuals consider learning to be an important investment for the firm's long-term existence. When organization values learning, the more likely individual learning will happen. Commitment to learning is therefore a long-term strategic orientation.

Shared vision means organization-wide focus on learning which further enhances the quality of learning. If there is no shared vision, individuals are less likely to share information and thus have also lower learning motivation. Shared vision forms an organizational strength or even a core

competence whereas diverse interests in the organization will cause great ideas to fail.

Open-mindedness can be considered as the willingness to accept new ideas and critically evaluate operational routines. In turbulent markets firms must cope with rapidly changing technology. Often as important as the new knowledge is the capability of unlearning, that is paramount for organizational change.

Further on *intra-organizational knowledge sharing* refers to collective routines used to spread learning among different organizational units. According to Moorman & Miner (1998) learning takes place when the organization has an effective and efficient information sharing system. Intra-organizational knowledge sharing includes systematic reevaluation, structuring and storing of information.

2.1.3 Market orientation

Market orientation has been a popular research subject during the last decade's (Kirca et al., 2005) and (Cano et al., 2004), although Drucker (1954) wrote six decades ago that the entire organization shall be viewed from the customer's point of view and thus be customer oriented. The two most well-known conceptualizations of market orientation are divided into *cultural* (Narver & Slater, 1990) and *behavioral* (Kohli & Jaworski, 1990) dimensions.

Narver and Slater (1990) define market orientation as "the organization culture that most effectively and efficiently creates the necessary behaviors for the creation of superior value for buyers and, thus, continuous superior performance for the business", whereas Kohli and Jaworski (1990) defines market orientation as "the organization-wide generation of market intelligence, dissemination of the intelligence across departments and organization-wide responsiveness to it". The later shares to some extend the principle of learning orientation.

The view of Narver and Slater (1990) divides MO into *customer orientation*, *competitor orientation*, and *inter-functional coordination* which utilizes the market information.

Customer orientation is the capability to create superior customer value continuously, either by increasing benefits in relation to cost or reducing costs in relation to the benefits. It is important to understand customer's entire value chain as it is but also how it will evolve over time, under internal and external dynamics. By understanding also the economic and political constraints, potential future customer's perceptions can be assessed.

Competitor orientation refers to finding current and potential key competitor's long-term capabilities and strategies as well as short-term strengths and weaknesses, in combination with technologies capable of satisfying both present and anticipated needs.

Interfunctional coordination refers to coordinated utilization of company's resources in order to create superior value for target customers. Any individual or subgroup shall therefore be integrated effectively for synergy and focus of the entire business. Effective leadership and encouragement are needed in achieving interfunctional coordination.

The behavioral dimension of market orientation used in this thesis is adopted from Matsuno et al. (2002, 23, 28 and 29), which is a modification of the original scale (Kohli & Jaworski, 1990) dividing market orientation into *intelligence generation* and *intelligence dissemination*.

2.2 Marketing strategy standardization/adaptation

Zou & Cavusgil (2002, 42) conceptualize global marketing strategy as "the degree to which a firm globalizes its marketing behaviors in various countries through standardization of the marketing-mix variables, concentration and coordination of marketing activities, and integration of competitive moves across the markets".

The last fifty decades (Elinder, 1965) international marketing research has focused on understanding whether to use a standardized or an adapted marketing strategy on foreign markets, and under what circumstances, and to what degree it is more appropriate.

Levitt's (1983) controversial article enhanced the ongoing international marketing standardization/adaptation strategy debate. He argued that technology, communication, transport, and travel have caused the emergence of global markets for standardized consumer products.

2.2.1 Adaptation vs standardization

International and global marketing decisions are commonly different for regional market since many countries or regions have a distinctive business environment. When a company decides to offer products and/or services abroad, it has the possibility either to use a standardized marketing strategy (product, price, place, promotion, people, physical evidence, process management) in foreign countries or to adapt the marketing mix for the unique environment of the local market.

The literature identifies three schools of thought:

1. standardization school
2. adaptation school, and
3. contingency perspective (Cavusgil & Zou, 1994)

Supporters of standardization believe that globalization trends cause market similarity, consumer needs, tastes, and preferences, as well as technological uniformity. Growth of international communication channels, internet, and the emergence of global market segments further promotes standardization. (Codita, 2011)

Standardization strategy offers several benefits such as: (1) economies of scale in all value-adding activities, and essential means in achieving a low-cost competitive position; (2) consistent corporate/brand image across

countries; and (3) reduced managerial complexity as a consequence of better coordination and control. (Codita, 2011).

Standardization strategy has been claimed to oversimplify the international marketing concept. The main objective of any firm shall be the long-term profitability through understanding customer preferences and thus increasing sales across countries, and not only reducing cost through standardization. (Theodosiou & Leonidou, 2003)

Supporters of the international adaptation approach argue that differences between countries still make the standardized approach difficult. These differences include consumer needs, usage, purchasing power, commercial infrastructure, culture and traditions, laws and regulations, and technological development. (Terpstra & Sarathy, 2000).

According to contingency perspective, adaptation and standardization shall be viewed as two extremes of the same scale. The contingency perspective recognizes both advantages and disadvantages associated with each of the two extremes (Lages & Montgomery, 2004). Later international marketing research is mainly based on this perspective.

2.2.2 International marketing mix

Product

Product is considered to be the marketing-mix element which has the strongest effect on competitive success in international markets (Czinkota & Ronkainen, 2013, 248). High degree of product standardization allows economies of scale in production and R&D, as well as higher level internal production controls and quality standards.

The product itself often consists of several sub products, or modules. Modularization splits a product into smaller modules that can be independently created and used in different products. A modular system uses industry standards for interfaces. Besides lower cost and flexibility in design and user interphase, modularity offers the possibility for mass

customization. The concept of modularity has been discussed in detail elsewhere (Rajahonka, 2013).

In addition to above, Kotler & Armstrong (2010, 279) divide product into three levels. First there is the core benefit which addresses purchase reasons. Secondly the actual product consists of features, style and design, quality level, brand name, labeling, and the packaging. Finally, the augmented product which consists of additional consumer services and other benefits, such as warranties, after-sale service, delivery and credit, installation etc.

A strong brand however enables higher standardization possibility for product offerings (Czinkota & Ronkainen, 2013, 338). Therefore brand name standardization could allow higher cost savings within the whole marketing strategy, including e.g. positioning, product design and features, packaging and labeling, services, and warranty (Theodosiou & Leonidou, 2003, 145). As noted earlier, national regulations, market conditions and habits can make implementation of standardized packaging and labeling difficult.

Pricing

Globalization requires international pricing strategies. Developing an effective strategy is challenging, even though price is a fundamental determinant of performance and profitability. A review of the literature indicates that little attention has been devoted to this (Theodosiou & Leonidou, 2003), resulting in missed opportunities and lower profits (Lancioni, 2005).

Researchers generally divide pricing strategies into three groups, based on the main drivers:

1. Cost-based pricing (more standardized)
2. Competition-based pricing
3. Customer value-based pricing (more adapted)

These various approaches are summarized by Hinterhuber (2008, 42).

Management is usually concerned with the profit margins while salesforce tends to focus on sales volumes and thus competition. Hinterhuber (2008, 43) found that competition-based pricing is the dominant pricing strategy, followed by cost-based pricing. Customer sophistication and intense competition dictate competition-based pricing (Myers et al., 2002, 170). Further on pricing objectives can be targeted differently e.g. either profit or competitive positioning.

Value-based pricing practice has been proclaimed to be the most profitable pricing strategy (Anderson & Narus, 1998, 54). However, the main challenges in value-based pricing, value assessment and value communication, limit its usage as pricing strategy.

An extensive overview on international pricing framework has been presented by Hollensen (2004, 496). Several external factors i.e. price escalation, inflation, exchange rate fluctuations, import policies, trade barriers, governmental regulations, influence international pricing strategies. (Cavusgil, 1996)

Further on pricing objectives change within the international market as product lifecycle, internationalization phase and competitive levels change, e.g. when competitors enter with similar products but new process technologies which could result in price competition.

Pricing strategy may differ between B2B and B2C markets and depend on uniqueness of the product. Business-to-business sector rely both on value identification of different segments and customer-unique demands, and adaptations to such demands.

Promotion

Promotion includes advertising, sales promotion, public relations, personal selling and direct marketing tools. Because promotion is commonly culture driven its adaptation is often necessary. Longer cultural distance

necessitates adaptation of product names, packaging, and sales promotions. Communication methods and language require local adaptation for advertising messages, formats, and promotional approaches (Cavusgil & Zou, 1994).

Although market conditions indicate the requirement for promotion adaptation, availability, suitability, and cost of advertising channels define the economical level of adaptation. Branding, positioning, and promotion can be used to superficially adapt a product to local conditions, making the adaptation of the product itself less necessary (Still & Hill, 1984).

Place (distribution)

Although the principle of distribution channels follows rather standardized approach, several factors may require adaptation of distribution in global markets, e.g. availability and affordability, size and functionality, legal restrictions, inventories, purchasing habits, competition, form of international business, and service requirements (Cavusgil & Zou, 1994) (Theodosiou & Katsikeas, 2001).

Rapid international expansion typically increases both distribution costs and delivery times significantly due to increased transportation distance, local distribution structure and practicalities. Through limiting delivery terms or co-operating with local distribution specialists, SMEs can better standardize its own distribution strategy.

2.3 Business performance

Business performance is a key concept in a firm's strategic management. It is a unidimensional concept consisting of different sub-dimensions, and thus often hides the underlying relationships, e.g. the conflicting nature of long-term growth and short-term profitability. Business performance depends upon the indicators used to assess performance.

The most common categorization between business performance measures is the one of objective and subjective performance measures

(Cano et al., 2004). Financial measures are commonly used as objective indicators of performance. A broader conceptualization would also include operational performance indicators (i.e. nonfinancial) in addition to financial performance indicators (Julian & Ahmed, 2005).

Financial indicators include revenue-based performance measures, e.g. sales revenue, growth and market share, and cost-based performance measures, e.g. profit measures. The most commonly used financial indicators are profit/loss (in absolute terms or relative to net sales) and profitability (profit relative to investment). Financial measures are mostly targeted to serve the interests of stock market participants.

It is difficult to conceptualize financial performance, as no single performance construct is able to explain business performance. For example growth and profitability measures are presenting two contrasting phenomena. Further on the business as such varies between and within industries.

In addition to the financial measurements, non-financial objective measures first emerged in areas like Total Quality Management. The well known Balanced Scorecard (Kaplan & Norton, 1992) monitors critical areas of performance (financial, customer, internal business processes, learning and growth) in a balanced manner.

2.3.1 Performance dilemma of SME's

Most of the research related to performance has been done in terms of large firms. This contradicts with the size and significance of the small firm sector in our economy as most of the firms are owner-managed. Performance can have a different set of meanings for small firms than for large firms. As long as the content of organizational performance remains undefined, it is problematic to claim that certain measures would be more objective than others.

Profit based performance measures are potentially unreliable in small business context, because the profit rates of the income statements can be incomparable between various forms of enterprises (sole trader, partnership, limited partnership, or limited company) and sometimes also between succeeding years in single firms because different methods of owner compensation can be used in succeeding years.

In small companies the owner-manager is financially tightly bonded with the firm. The main reason for the unreliability of profit based measures lies in the differing practices in owner-compensation. Normally, the owner-management receives salaries, which reduce the profit rate in the income statement. Alternatively, depending on the form of enterprise, the owners may choose to receive dividends, or commit plain cash withdrawals. The taxation gives the owner-managers an option to choose between alternative methods of compensation.

2.3.2 SME performance assessment

From lack of comparability, it follows that profit-based indicators of performance may be subject to potential misinterpretation in SME research. Financial performance measures are often elaborate or difficult to understand in order to become widely accepted by SMEs. Smaller firm size means fewer personnel and more informal but fast and efficient information flow. Therefore, control type measurement systems have less significance in small firms and also accounting systems are often informal and underdeveloped.

In this thesis both objective and subjective performance measures are used. International performance measures found in literature seem to be mainly subjective (Leonidou et al., 2002). The subjective performance here is assessed as defined in Appendix 1. In order to overcome the effect of company size, following effective objective measures are used in this thesis: profit margin in percentage, sales revenue per employee, profit/loss per employee, average growth per year and return on capital employed (ROCE).

2.4 Theoretical framework and hypothesis

Considering the literature on the subjects, there is already plenty of existing information available. As in many areas if the existing information is analyzed properly, the result could be foreseen. Therefore understanding the discrepancy between the knowledge obtained from individual studies is essential. Denyer et al. (2008) argue that rather than conducting new empirical studies, consensus can be created through combining existing research.

Meta-analysis is a statistical technique used in synthesizing empirical results, in order to gain information about the relationships between different constructs. A meta-analysis aims to group conflicting results and thus establish an empirical generalization. It is like an analysis of the analyses.

This study employs results from meta-analysis found in the literature on the subjects. The following discussion and hypotheses are based on the findings from more than 550 individual studies, found in the following articles.

Table 1. Main meta-analysis used for the hypotheses

Author	Area of study	Studies
Cano et al., 2004	Market orientation and business performance	53
Ellis, 2006	Market orientation and business performance	56
Grinstein, 2008	Market orientation, alternative strategic orientations, and performance	70
Kirca et al., 2005	Market orientation and business performance	114
Brei et al., 2011	Marketing strategy adaptation/standardization on performance	23
Birnik & Bowman, 2007	Marketing strategy standardization and perfomance	84
Schilke et al., 2009	Marketing strategy standardization and perfomance	13
Shoham, 2003	Marketing strategy standardization and performance	17
Waheeduzzaman & Leon, 2004	Adaptation/standardization of marketing strategy	130

2.4.1 Strategic orientations and performance

Market orientation

Majority of strategic orientation studies have focused on the market orientation business performance relationship. Market orientation has been shown to be a significant antecedent of performance and therefore also to contribute for long-term success of a firm. (Cadogan, 2012, 341) (Kirca et al., 2005) (Cano et al., 2004, 180), (Ellis, 2006, 3).

Superior ability of the market-oriented firms to understand markets (sensing emerging opportunities, anticipating competitor's moves, and making fact-based decisions) and both attract and keep customers (deliver superior value and encourage loyalty) explain the positive effects on performance (Day, 1999). According to Cano et al. (2004) higher performance can be achieved by satisfying customer's needs more efficiently and effectively than competitors.

Based on the findings of most empirical studies, it is hypnotized that:

H1$_a$ There is a positive relationship between market orientation and performance

Regarding different performance dimension, it has been shown, that market orientation-performance relationship is stronger in terms of subjective measures, and that market orientation would enhance especially revenue-based objective performance (i.e., sales and market share), but cost of its implementation could reduce the cost-based performance (i.e., profits) (Jaworski & Kohli, 1993) (Harris, 2001) (Cano et al., 2004) (Kirca et al., 2005).

Based on the findings, following hypothesis are:

H1$_b$ Market orientation–performance relationship is stronger for subjective than objective performance measures.

H1$_c$ Market orientation–performance relationship is stronger for revenue-based than cost-based objective performance measures.

Although it is generally accepted that the relationship between market orientation and business performance is both positive and linear, Cadogan et al., (2009, 71) have shown that high levels of market orientation may reduce performance, meaning that at high end the relationship would not be not linear.

Even if the greater dependence on person-to-person interactions within service sector is expected to result in stronger market orientation–performance correlation for service than manufacturing firms (Gray & Hooley, 2002), However, Kirca et al. (2005, 34) have shown the opposite, i.e. both objective measures have been stronger in manufacturing than in service firms.

Market orientation studies show that combining with other strategic orientations the business performance may further be improved (Bhuian et al., 2005). Grinstein (2008, 115) therefore suggest that various combinations of strategic orientations in relation to business performance shall be studied.

Learning orientation

Combining market-oriented firm's attempt to satisfy customer's needs and observe competitors strategic maneuvers with the ability to learn faster than competitors, would be offer e.g. better product differentiation and thus a source for sustainable competitive advantage (Baker & Sinkula, 1999) and (Narver et al., 2004). It has been suggested that learning orientation is the basis for well-working marketing orientation (Baker & Sinkula, 1999) (Slater & Narver, 1995).

Organizational members with learning orientation would not only gather and disseminate information about the market but also examine the quality and its dominant logic. In more turbulent markets, organizations would

need to have a greater learning orientation to both monitor and respond to changing consumer preferences (Farrell, 1999, 3).

As noted earlier, learning orientation both produces market information and develops knowledge within an organization, which further enables continuous organizational-wide learning values and skills (Slater & Narver, 1995).

Based on the above discussion it is hypothesized that:

$H1_d$ There is a positive relationship between learning orientation and performance.

$H1_e$ There is relationship is weaker than the relationship between market orientation and performance

$H1_f$ Market orientation combined with learning orientation results in stronger positive relationship than using only market orientation

Entrepreneurial orientation

Entrepreneurial orientation business performance relationship has be shown to be relatively strong in meta-analysis (Rauch et al., 2004). It is expected that entrepreneurially acting firms can better adjust their operations in dynamic competitive environments (Covin & Slevin, 1989), which results in positive effects on firm performance (Keh et al., 2007) (Wiklund & Shepherd, 2005).

In order to satisfy customer needs, to pursue market expansions, and to capitalize the emerging opportunities, market information and knowledge are central also for the entrepreneurial process (Bhuian et al., 2005). Market orientation is considered essential for new ventures at their early stages, when adaptation to the environment and rapid reaction to opportunities and threats are needed (Luo et al., 2005).

Similar to learning orientation, empirical studies show higher level of performance for firms combining the synergetic effect of both market and

entrepreneurial orientation. It has however be shown that high levels of entrepreneurial orientation could influence this relationship negatively especially for highly technology-driven firm. (Grinstein, 2008); (Luo et al., 2005)

It is thus hypnotized that:

$H1_g$ There is a positive relationship between entrepreneurial orientation and performance.

$H1_h$ The relationship is weaker than the relationship between market orientation and performance

$H1_i$ Market orientation combined with entrepreneurial orientation results in stronger positive relationship than using only market orientation

Strategic orientations

According to the above discussion, different strategic orientations would intercorrelate. Grinstein (2008) found that market orientation is strongly linked to both learning and entrepreneurial orientations, an in-depth analysis of the data confirms that the association of market orientation with learning orientation is stronger. This leads to the following hypotheses:

$H2_a$ There is a positive relationship between market orientation and learning orientation

$H2_b$ There is a positive relationship between market orientation and entrepreneurial orientation

$H2_c$ There is a positive relationship between learning orientation and entrepreneurial orientation

2.4.2 Marketing strategy and performance

The main purpose of international marketing strategy is to determine which marketing mix elements to adapt or standardize, and to what degree. As the world has been changing a lot, theories which have been

valid several decades ago may not be valid for today's international markets and related businesses. Waheeduzzaman & Leon (2004) summarized historical trends in adaptation-standardization research in international marketing. For further reading a very broad view on the contingency factors of marketing-mix standardization has been discussed by Codita (2011).

Using meta-analysis technique Birnik & Bowman (2007) systematically reviewed marketing mix standardization related literature, in order to find and combine contextual variables related to marketing mix standardization practices in multinational corporations, and to understand the performance impact of marketing mix standardization.

They found that type of product (industrial, consumer, high-tech, culture-bound), product/market similarity, level of local competitive intensity and ownership control over subsidiaries are the most influential to higher standardization.

Based on these findings product and brand would be the most standardized ones, followed by advertising, distribution, promotions and finally pricing being the most adapted element. This view is supported by several other studies. (see Birnik & Bowman (2007)).

Product and promotion (including advertising) have also been the most investigated elements (Waheeduzzaman & Leon, 2004, 32). Research has covered mainly manufacturing firms but not service firms (Chung, 2003, 50). The figure 3 below summarizes the findings on standardization degree of different elements and the contextual factors influencing standardization.

Context Variables (C)

- Industrial products
- High tech industries
- Product/market similarity
- Fully owned subsidiaries

- Consumer products
- Intensive local competition
- Culture-bound products

Degree of Mix Standardization

Higher

Lower

Design parameters regarding mix elements (D)

- Brand
- Product

- Packaging
- Advertising
- Customer service

- Sales & distribution
- Promotions
- Pricing
- (Web)

	Stronger evidence	Weaker evidence
More standardization	• Industrial products • High-tech products • Market similarities • Products in same stage in PLC • Fully owned subsidiaries	• Essential products • Luxury products • Indirect entry modes • Parent and subsidiary have similar competitive positions • High degree of communication between parent and subsidiary • Foreign operations centralized in an international division • Strategy based on either (a) cost-based competition or (b) product/innovation oriented • Centralization in decision-making
Less standardization	• Consumer products • High local competitive intensity	• Products used at home • Culture bound products • Direct entry modes • Local in-country production • Customer-based strategy
Inconclusive		• Size of local market • Country of origin of parent company • International experience of parent

Figure 3. Degree of standardization for marketing strategy elements (left), and related contextual factors and influence on standardization (right), (Birnik & Bowman, 2007, 311).

Standardization–performance relationship has been found to be stronger for large firms with a homogeneous product offering, high levels of global market penetration, utilizing cost leadership strategy, and high level of global market participation (Schilke et al., 2009)

However, the performance impact of marketing standardization is often shown to be conflicting (Birnik & Bowman, 2007), as both views of standardization and adaptation are reasonable. Therefore international companies should incorporate both elements of standardization and those requiring local adaptation, in order to satisfy the needs of the local market (Vrontis, 2003), (Vrontis & Kitchen, 2005).

Sousa and Bradley (2009) found that the greater the environmental differences between home and foreign markets, the greater is the adaptation level of marketing mix components (Sousa & Bradley, 2009). Higher levels of customization would enable targeting to smaller customer segments and thereby increase revenue-based performance measures. Higher costs on the other hand would reduce cost-based performance.

Shoham (2003) found in his meta-analysis that empirical evidence mostly favors high product adaptation, however objective but not subjective performance. Further on Cavusgil and Zou (1994, 15) point out that product adaptation can help gain a competitive superiority over rivals in intense competition.

Brei et al. (2011) found the existence of a positive impact of both marketing mix adaptation and standardization on performance. Their results suggest that price should be the most adapted, followed by promotion, product, and distribution.

Based on the discussion above, it is thus hypothesized that:

H3$_a$ There is a positive relationship between product adaptation and revenue-based performance but negative with cost-based performance

Price standardization has also produced mixed results. Shoham (2003) found that the degree of price standardization is unrelated to performance. This could be related to earlier discussion, indicating that more adapted pricing could increase sales and thus turnover but same time reduce margins and thus profitability.

H3$_b$ There is a positive relationship between price adaptation and revenue-based performance but negative with cost-based performance

The degree of adaptation of promotion strategies did not affect objective neither subjective export performance.

H3$_c$ There is a positive relationship between promotion adaptation and revenue-based performance but negative with cost-based performance.

Higher degree of distribution standardization harmed both objective and subjective performance significantly.

H3$_d$ There is a positive relationship between distribution adaptation and revenue-based performance but negative with cost-based performance

Based on the very mixed results, also from different meta-analysis, one could conclude that no impact, negative impact, mixed results as well as positive results can be found for both standardization and adaptation,

The research focuses mainly on the individual marketing mix components leaving thus potential interrelationships unexplored. In order to understand

the degree of adaptation/standardization and cover intercorrelation between the items, the following hypotheses are proposed:

H4$_a$ Although product is known to be the most standardized element, for small and medium-sized enterprises with low level of global market penetration and participation, product is expected to be mainly adapted.

H4$_b$ Pricing elements will exhibit the lowest degree of standardization among the marketing mix elements

H4$_c$ Promotion will be standardized to a higher degree than pricing.

H4$_d$ The distribution elements will have a low degree of standardization, showing a similar standardization level as the pricing elements.

2.4.3   Strategic orientations and marketing strategy

Both strategic orientations and marketing strategy have been studied in relation to business performance but very limited information about their relationship exists. However, expecting the causal relationship between strategic orientations, marketing strategy adaptation/standardization and business performance, it should be possible to explain marketing strategy decisions by the strategic orientations, e.g. better understanding on market demands or competitive situation would allow higher/lower adaption of marketing strategy elements.

Therefore the following hypotheses are proposed:

H5$_a$ Higher level of learning orientation increases marketing strategy adaptation.

H5$_b$ Higher level of entrepreneurial orientation increases marketing strategy adaptation.

H5$_c$ Higher level of market orientation increases marketing strategy adaptation.

2.4.4 Moderating and mediating effects of marketing strategy

Following the idea of causal relationship between strategic orientations, marketing strategy adaptation/standardization and business performance, further two phenomena shall be covered, namely moderating and mediating effects.

Moderator would affect the direction and/or strength of the relation between strategic orientations and business performance, i.e. explain when certain effects occur. Marketing strategy as mediator would be an explaining variable between strategic orientations and business performance, explaining how or why certain effects occur.

H6   Marketing strategy will moderate strategic orientation performance relationship.

H7   Marketing strategy will mediate strategic orientation performance relationship.

2.4.5 Framework

Four firm-level concepts are central to this thesis: strategic orientations, marketing strategy adaptation/standardization, business performance, and business context. For the sake of clarity, business context is considered only as control variable although it could also moderate strategic orientations and marketing strategy.

According to Cadogan (2012, 342) researchers need to match performance metrics and strategic orientations carefully when developing their conceptual models. The thesis intends to study separately all factors shown below, in order to avoid errors related to composite scores, such as contradictory operation on performance. Figure 4 shows the general framework with related hypotheses' groups.
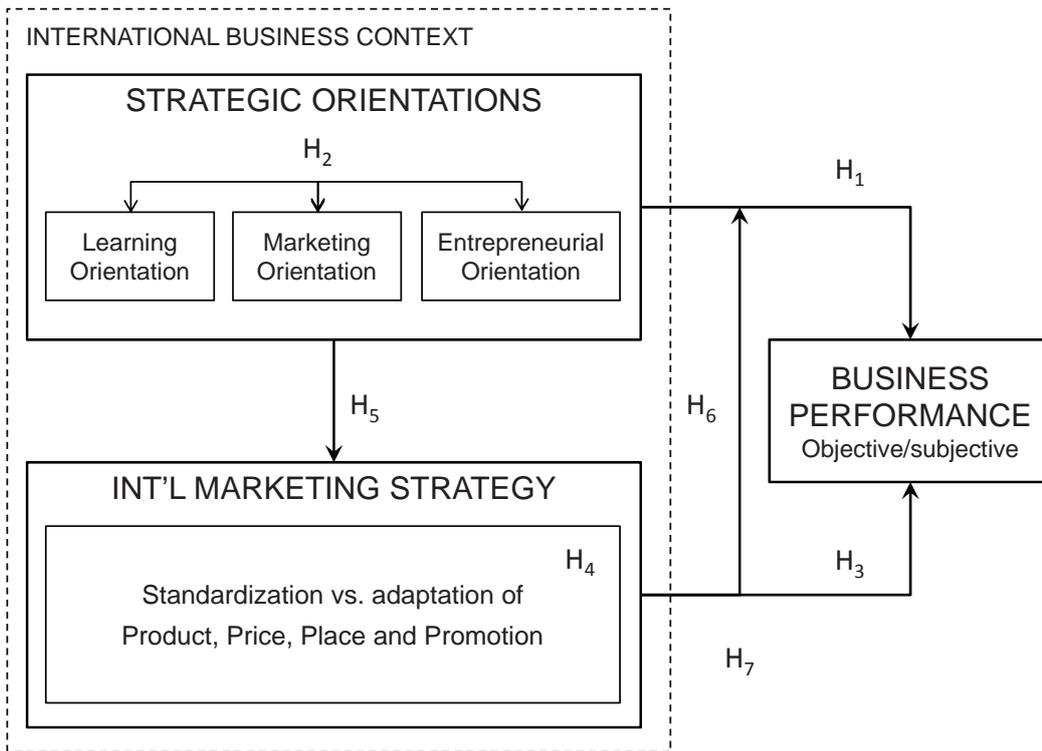
Figure 4. General framework showing hypotheses (the dotted line refers to business context potentially affecting the relationships).

3 Research methodology

This chapter describes the methodology of the present study. First, the research design is shortly described before target population and sampling criteria are defined. Thereafter the questionnaire, data collection process, and non-response analyses are presented. Further scales development process and main statistical methods employed are briefly explained. The final section discusses reliability and validity related to the study.

3.1 Research design

This study aims to examine the effect of different strategic orientations and marketing mix standardization/adaptation strategy on international performance of small and medium-sized entrepreneurial firms (SMEs). The study follows the general design presented below:

1. Data collection: *questionnaire, response rate, scales, controls*
2. Data screening: *missing data, outliers, normality, homoscedasticity, linearity*
3. Descriptive analysis: *averages, deviations, correlation, scales*
4. Construct operationalization: *factor analysis with Varimax, multicollinearity*
5. Regression analysis: *linear, moderator, and mediator*

Figure 5. General research structure

The thesis is part of a larger research program carried out at Lappeenranta University of technology during 2008 and 2009. In this study particular focus is set on understanding the role of marketing mix standardization/adaptation strategy. Other theses have focused on the role of network competence in internationalization of SMEs (Torkkeli, 2009) as well as market orientation and performance relationship within entrepreneurial SMEs (Falck, 2008).

3.2 Data collection

The data were collected during a time span of 6 months (February 2008-July 2008) from Finnish SMEs in five industries: software, metal, food,

furniture, and knowledge-intensive business services industry (KIBS). Different industries were chosen in order to capture and explain differences between domestic and international firms, between low and high technology firms, as well as between manufacturing and service firms.

Finnish SME context was considered appropriate for the study due to developed industry sectors and rapidly internationalizing knowledge-intensive industries, attributable to small domestic markets. Amadeus database was used in selecting domestic firms having 10-500 employees and less than 50 million Euros turnover, a population which was considered clear and representative. The data was gathered using an online Webropol-questionnaire.

Table 2. The search criteria's for SME contact information. The effective sample size was 1147 entrepreneurial SMEs. Sample distribution between industries in parenthesis (number of responses/inquiries, response rate %).

Firm size	10 – 500 employees
Industry (NACE-coding)	Software industry (67/247, 27%) 7221. Publishing of software 7222. Other software consultancy and supply
	Metal industry (50/325, 15%) 29. Manufacture of machinery and equipment
	Furniture industry (33/107, 31%) 361. Manufacture of furniture
	Food industry (56/209, 27%) 15. Manufacture of food products and beverages
	Knowledge intensive business services (49/259, 19%) 7411. Legal activities 7412. Accounting, book-keeping and auditing activities, tax consultancy 7413. Market research and public opinion polling 7414. Business and management consultancy activities 744. Advertising
Geographical location	Finland

Questionnaire

The questionnaire was designed by a group of academics at Lappeenranta University of Technology, mainly using scales found in the

literature. Preliminary scales were pre-tested and reviewed by three industrial managing directors. Final alterations were made according to the comments and notions given, in order to improve reliability and validity of the item scales. The questionnaire was strategic and tactic oriented and thus sent primarily to top-level management.

In order to minimize response time and respondent effort, all constructs were measured using a seven-point Likert scale ranging from "strongly disagree" (1) to "strongly agree" (7), following the original scales from previously published studies. Some of the items were negatively worded in order to reduce pattern response bias, although negatively worded items are known to lower item loadings (Hinkin, 1995, 972). The survey included also additional items on internationalization indicators for internationalized firms.

Response rate

From 1147 inquiries 298 responses were received, as indicated in table 2. The 26% response rate is considered sufficient rate for a web survey. Of the 298 firms 179 were active only domestic and 119 had some level of international activity or were in the middle of the internationalization process. Both types of SMEs were thus sufficiently represented.

The respondents were first contacted by phone for participation agreement. The link to the questionnaire was sent thereafter by the means of an e-mail if an agreement of participation was reached. The respondents were hereafter given a period of two weeks to reply after which the first reminder was sent. In case of no response, two reminders were sent at one week intervals after the previous reminder.

A clear majority of the respondents (66%) were managing directors. Moreover, 20% indicated themselves as owners and 14% as other key persons in the company.

3.3 Measurement scales

Scales developed shall assess various attitudes, perceptions, or opinions in order to examine their relationships. The generation of items is an important part in developing measures and linking those with the theoretical domain and content validity. However, in survey research measures are many times used before adequate data exist regarding their reliability and validity (Hinkin, 1995). In this study mainly established scales were used.

Regarding sample size, a sample having less than 50 observations shall not be not factor analyzed. Preferably the sample size should be 100 or larger. As a general rule, a sample shall have at least five times as many observations as the number of variables to be analyzed, and a more acceptable sample size would have a 10:1 ratio. (Hair et al, p.101)

Regarding scale length, scales shall generate sufficient variance among respondents for following statistical analysis. Scales containing five or six items that utilize five or seven point Likert scales would assure adequate domain sampling, and provide adequate internal consistency reliability for most measures. Scales with too few items may lack content and construct validity, internal consistency and test-retest reliability (Hinkin, 1995). Coefficient alpha reliability has been shown to increase up to five points Likert-type scales, but then levelling off.

In this survey items were adapted from the original scales found in the literature. All constructs were measured with multi-item scales, with the exception of adaptation/standardization items, which included only one item per construct.

Four dimensions of entrepreneurial orientation (innovativeness, risk-taking, proactiveness, and competitive aggressiveness) were measured using scales developed and tested for reliability by Miller (1983), Covin and Slevin (1989) and Covin and Covin (1990).

The items for learning orientation (commitment to learning and open-mindedness were adapted from Sinkula et al. (1997). Market orientation scale MKTOR was adapted partially from Narver and Slater (1990), including the three dimensions (customer orientation, competitor orientation, and interfunctional coordination) and partially from Matsuno et al. (2002), including market intelligence and dissemination constructs.

Prior literature identified both subjective and objective approaches to evaluate business performance and therefore both are used in this thesis. Effective objective performance measures are:

- *sales revenue per employee*
- *profit/loss per employee*
- *profit margin*
- *return on capital employed*
- *average growth per year*

The subjective aspect of performance was attained by the respondents' estimation of performance during the three precedent years (2005-2007). The objective aspect on the other hand was captured by the financial information collected from the Amadeus-database for the period 2005-2007. The reason for using data from those years only, is the fact that the amount of missing data increased remarkably for 2008-2009.

Control variables

In addition to the main explanatory factors, we also included some control variables to the analyses. Firstly, we controlled for firm age. Secondly, we controlled for industry. Industry might have an effect on the market orientation–performance relationship, since that relationship has been found to be stronger in manufacturing firms (Kirca et al., 2005). This was done both for each industry separate and by dividing the firms to low and high knowledge-intensive firms. Finally, we controlled also for environment dividing it into domestic and international.

3.4   Analytical methods and tools

Multivariate analysis techniques are used to find relationships between constructs and to create new knowledge, in order to improve future decision making. The properties of the constructs in this study were evaluated by conducting multivariate analyses using SPSS software.

The data was first screened for missing data and outliers, and tested for the assumptions underlying most multivariate techniques, such as normality, homoscedasticity, and linearity. As some of the firms were either lacking all strategic orientation data or performance related data, related data sets were removed from the analysis.

The most fundamental assumption for multivariate analysis, *normality*, was tested using both statistical assessment, skewness and kurtosis, as well as visually checked data distribution, as recommended by Hair et al. (2009).

The following assumption, *homoscedasticity*, refers to the assumption that dependent variable(s) exhibit equal levels of variance across the range of predictor variable(s). Homoscedasticity is desirable because then the explaining variance is equally spread.

The assumption of all multivariate techniques based on correlational measures of association is *linearity*. The most common way to assess linearity is to examine scatterplots of the variables and to identify any nonlinear patterns in the data. An alternative approach is to run a simple regression analysis and to examine the residuals which reflect the unexplained portion of the dependent variable. After data screening process, measures were subjected to a purification process.

Summated scales

In the present study, summated scales are used to combine dimensions of different strategic orientations into single constructs, in order to compare

the concepts as well as to study their internal reliability and multicollineriaty.

Summated scales aim at combining several measured variables into a single composite score. The objective is to avoid using only a single variable to represent a concept and thus to obtain a more well-rounded perspective. The attempt is to reduce measurement error inherent in all measured variables, and therefore to increase the reliability.

Essential requirement for summated scales is that the items are unidimensional and represent a single concept, as separate variables are summed and then their average score is used in the analysis. (Hair et al., 2009).

Factor analysis

In the present study, factor analysis is used to summarize most of the original information (variance) of latent theoretical constructs in a minimum number of factors for prediction purposes. *Principal Component Analysis* (PCA) is most suitable when data reduction is a primary concern, focusing on the minimum number of factors needed to account for the maximum portion of the total variance represented in the original set of variables (Hinkin, 1995). It is also a means of assessing the validity and internal consistency, or reliability, of the construct (Schumacker & Lomax, 2004).

Eigenvalues are used as measures of how much of the variation in the data a factor explains. They are the basis for extracting factors in factor analysis. The commonly used guideline is that any factor with an eigenvalue of less than 1.0 should not be used because it accounts for less than the variation explained by a single variable.

The coefficients which define the linear combination of factors for each variable are called *factor loadings* and can be interpreted as a standardized partial correlation coefficient between the variable and the factor while controlling for the other factors (Shumacker & Lomax 1996). In

this study items with factor loadings of .60 or higher on a primary dimension and .40 or lower on any other dimension are retained for practical significance.

In order to find the best distribution of the factor loadings in terms of the meaning of the factors, the factor solution obtained with principal components analysis was rotated with *Varimax rotation algorithm*. Varimax is an orthogonal rotation algorithm, and thus the rotated factors are uncorrelated with each other. It aims at finding a factor solution where a variable load highly on one particular factor and loads as low as possible on the other factors, and thus also helps to avoid issues with multicollinearity. Varimax is the most commonly used rotation algorithm (Osborne & Costello, 2009).

Cronbach alpha considers the variance of the individual items in the group in the data, the variance of the group of items in the data, and the number of items in the group. Cronbach alpha .70 minimum level was used for assessing the variance of the individual items in the group and thus the inter-item reliability (Nunnally & Bernstein, 1994).

Multiple regression analysis

Multiple regression analysis aims at explaining the past variation or predicting the future values of one dependent variable by estimating the influence of several independent variables on the dependent variable. Multiple linear regression analysis is based on the assumptions that sample observations are independent, relationships between variables are linear, and the error term is normally distributed.

The regression equations of the present study are based on least squares estimation, which minimizes the sum of the squared residual vertical distances between the observed data points and the associated points on the regression line, thus minimizing the dispersion of the data points around the regression line.

The statistical significance of each *regression coefficient b* is tested with a t-test. The t-value indicates how many standard errors the coefficient is from zero, and the probability value p indicates the significance of the test that b is different from zero. Regression coefficients with p-values below .05 can be considered significant (Hair et al., 2009).

The *standardized regression coefficient beta* can be used to compare the explanatory power of several regression coefficients in the same equation. Beta is calculated for each independent variable by multiplying the regression coefficient by the ratio of the standard deviation of the independent variable to the standard deviation of the dependent variable. Standardized betas make it possible to evaluate the relative importance of independent variables in explaining variance in the dependent variable.

Collinearity is expression of the relationship between two independent variables (Hair et al., 2009). *Multicollinearity*, or correlations among the independent variables, affects the stability of the regression weights in that slight changes in the data will produce substantial changes in the weights (Nunnally & Bernstein, 1994). Multicollinearity may further cause the regression coefficients of the correlated independent variables to appear not significant, as the variables mask each other's explanatory power. In this study factor analysis with varimax rotation has been used to overcome complications caused by multicollinearity.

The multiple coefficient of determination R^2 measures the proportion of the variation in the dependent variable that is explained by the combination of the independent variables in the multiple regression model. The *adjusted R^2* is the multiple coefficient of determination corrected for degrees of freedom, thus taking into account the number of independent variables and sample size. The adjusted R^2 is the most often used measure of explanatory power, or goodness of fit, of the overall multiple regression equation.

Sample size has a direct effect on the explanatory power of multiple regression analysis. Hair et al. (2009) have suggested a minimum of 15 to 20 times as many observations as there are independent variables in the model. Multiple regression analysis is not recommended for sample sizes of less than 20-30 observations. Also, in large samples with more than 1000 observations, regression analysis can be overly sensitive.

In the present study, also two main types of indirect effects are examined, namely moderation and mediation.

Moderator Regression Analysis

Moderated multiple regression is the most standard way to investigate possible slope and intercept differences (Nunnally Bernstein 1994). Sharma et al. (1981) classify moderator variables into two main types: first type affects the strength of the relationship and second modifies the form. Figure 6 illustrates a moderating effect: the relationship between X and Y varies as a function of M_o. In testing for moderation effects, regression analyses are usually carried out in two stages. In the first equation, the direct effects of X and M_o on Y are examined. In the second equation the interaction term XM_o is included. A significant effect of the interaction term on Y indicates a moderating effect.
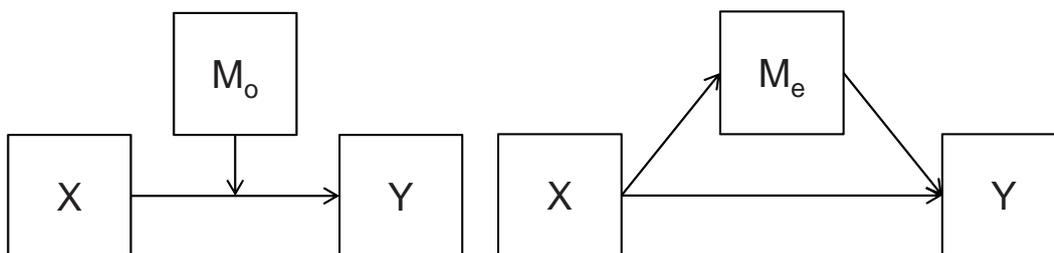
Figure 6. Moderating effect of M_o on the relationship between X and Y (left) and Mediating effect on M_e on the relationship between X and Y (right).

Mediation Regression Analysis

Figure 6 illustrates a mediating effect: the influence of X on Y takes place through M_e. In regression analysis, mediation effects can be tested by using a staged approach. First, in a regression equation where M_e is the dependent variable and X is the independent variable, X should have a significant effect on M_e. In the second equation, Y is the dependent variable and X is the independent variable. In order for mediation to be possible X should have a significant effect on Y. In the third stage, M_e is added as an independent variable into the second equation. In the case of full mediation, the effect of X on Y is no longer significant and instead, M_e has a significant effect on Y. Often, mediation is partial, that is, X has both a direct effect and a mediated effect on Y. In this case, the effect of X decreases but is still significant in the third equation.

3.5 Reliability and validity

In order to contribute to the theoretical development of a research field, a study must demonstrate sufficient reliability, validity, and also generalizability. Reliability refers to the replicability of the results of the study in a repeated measurement, while validity is the extent to which the study measures and tests the phenomenon that it is assumed to examine Generalizability, or external validity, refers to how broadly the findings of a study can be generalized into contexts outside the setting of the study. Table 3 illustrates the elements of reliability, validity, and generalizability used to evaluate the quality of the present study. In this section, the reliability and validity are assessed. Generalizability is addressed in the discussion chapter.

Table 3. Elements of reliability, validity, and generalizability (based on Salvendy & Carayon 1997 and Babbie 1990).

Reliability	Reliability of measures: inter-item reliability Reliability of data sources: stability over time
Validity	Face validity: conforms to common understanding of concept Content validity: covers all relevant facets of a concept
	Construct validity: theoretically reflects phenomenon under study - Discriminant validity: constructs conceptually distinct - Convergent validity: different measures of same are correlated
	Criterion-related validity: results support theory and previous results
Generalizability (External validity)	Representativeness: sample is representative of population Generalizability to other contexts

Reliability

Reliability is an important indicator of the measure's quality because it determines the impact of inconsistencies in measurement on the results. The concept of reliability addresses whether or not the results of a measurement are the same when similar measurement operations are carried out or when the operation is repeated (Hinkin, 1995).

The empirical data of this study were collected from one respondent in each sample firm. This method of using single-respondent, self-reported data poses the problem of potential bias in the data. The reliance on this method in the study was motivated by two main factors. First, the respondents needed to have overall knowledge of the firm's operations. Accordingly, the respondents were the managing directors or other executive directors of the firms. Second, the use of self-reported data was motivated by the lack of objective sources of information.

The use of single respondents means that the data are essentially based on the perceptions of the respondents. In order to ensure reliable answers to the questionnaire and to thereby minimize potential bias in the data, questionnaire was properly designed and pre-tested, and items were clearly formulated to measure tangible matters rather than opinions, whenever possible. The coverage and quality of the obtained questionnaire data was good as discussed earlier.

Inter-item reliability depicts the internal consistency of a set of items measuring a construct. It reflects the degree to which the items represent a common latent unobserved construct. The most commonly used methods of assessing inter-item reliability are factor analysis and the Cronbach alpha coefficient with .70 minimum level (Nunnally & Bernstein, 1994).

Multiple measurement items were used for all of the strategic orientation constructs. Single measures were used for adaptation/standardization variables as well as for quantifiable performance measures, measuring different construct. The results of the factor analyses and the Cronbach alpha coefficients are presented in the results chapter.

Validity

In the present study, previously validated measures were adopted whenever possible to help ensure their validity. In the following, the validity of the constructs of this study is assessed in detail along four dimensions: face, content, construct, and internal validity. External validity is discussed in discussion chapter.

Face validity is the extent to which a test is subjectively viewed as covering the concept it purports to measure. It refers to the degree to which constructs and empirical measures are consistent with common agreements and generally accepted notions regarding the underlying concepts. In this study, all of the constructs were theoretically derived following an extensive literature review. They are in line with the general usage and understanding of the concepts and should therefore have high face validity.

Content validity refers to the degree to which a measure covers various facets of a construct within the underlying concept. Content validity must be built into the measures to include all of the facets. In this study, the measures were mainly based on measures found in the literature and also

pre-tested. Multiple-item measures were used whenever possible to enhance the content coverage.

Construct validity refers to the way in which a measure relates to other measures within a system of theoretical relationships. It consisting of two aspects: convergent and discriminant validity. *Convergent validity* is the degree to which multiple independent attempts to measure the same construct are in agreement. High correlations indicate that the scale is measuring its intended concept. *Discriminant validity* is the extent to which measurements of two or more different constructs are distinct. Correlation should be low, demonstrating that the scale is sufficiently different from the other similar concept. In this study, factor analysis confirmed the unidimensionality of the constructs.

Internal validity refers to the establishment of a causal relationship where certain conditions are shown to lead to others. Therefore it focuses on the robustness of the relationship of a concept to another internal to the research questions under study. In this study widely accepted models and variables were used, and it is thus claimed that the study has high internal validity.

4 Results and findings

This chapter presents descriptive statistics of the empirical sample. The purpose is to give an understanding of what the firms are like in terms of their basic characteristics. The sample firms are also compared across the five industry sectors in both domestic and international context. The hypotheses are tested first with regression analysis between strategic orientations and international marketing strategy, then using hierarchical multiple regression for covering the explanation rate of control variables, strategic orientations and international marketing strategy in relation to business performance. Further on correlation tables both for domestic and international performance are used to study possible mediator effect as well as understanding the interdependence of different performance constructs. Correlation table is also used in detail study between international marketing strategy and business performance for those five different industry sectors. Finally possible moderator effect is studied using regression analysis.

4.1 Descriptives

In order to compare the firms operating in different industry sectors both in domestic and international context, the main differences are covered in table 4.

In all industries the operating revenue was higher for international firms compared to domestic ones, by 71% on average. The main difference can be seen in the food industry. The same tendency applies also for the number of employees with the difference that international firms have on average 31% more people.

When looking at the number of firms in both context, for software, food and KIBS there are more domestic firms, whereas for metal and furniture there are more international ones. Food industry appears to be the oldest sector, followed by furniture, metal, KIBS and finally software.

Table 4. General comparison between the companies

	Software	Metal	Furniture	Food	KIBS
Operating revenue DOM	946	1294	2191	1490	778
Operating revenue INTL'	1370	3565	3224	12583	2297
Employees DOM	12	15	19	18	14
Employees INTL'	18	21	34	32	18
Number of firms DOM	47	30	12	47	42
Number of firms INTL'	28	48	19	10	12
Age (in 2011) DOM	16	23	33	30	20
Age (in 2011) INTL'	12	23	25	46	23

Data validation

The importance of valid data is explicit for statistical analysis. Therefore in the following, the mean values and related distributions are shortly inspected and discussed for each group: strategic orientations, international marketing strategy and business performance. Further on the differences in strategic orientation dimensions between industries and domestic vs. international context are covered.

Visual inspection of the histograms showed that the exam scores were approximately normally distributed for the samples. However, as table 5 shows, there are several items which have high mean value with a skewness >1 and also kurtosis >1. Obviously this indicates that the not normally distributed but in order to keep the results understandable, no transformation for these items was made.

The form of the histogram is especially skewed for all "learning orientation" items (LO_01-05) as well as for "customer orientation" items (MO_01-005), meaning that most of the companies are both highly learning and customer oriented.

Table 5. Descriptive statistics for strategic orientations

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
LO_01	280	0	7	5,78	1,042	-1,128	,146	3,055	,290
LO_02	280	0	7	5,70	1,190	-1,319	,146	2,817	,290
LO_03	280	0	7	5,71	1,087	-1,260	,146	3,211	,290
LO_04	280	0	7	5,67	1,201	-1,077	,146	1,865	,290
LO_05	280	0	7	5,85	1,118	-1,241	,146	3,072	,290
EO_01	279	1	7	4,27	1,491	-,161	,146	-,712	,291
EO_02	280	1	7	4,24	1,611	-,166	,146	-,911	,290
EO_03	280	1	7	4,54	1,456	-,440	,146	-,426	,290
EO_04	280	1	7	4,28	1,637	-,143	,146	-,894	,290
EO_05	279	1	7	3,95	1,624	-,061	,146	-,934	,291
EO_06	280	1	7	3,03	1,397	,527	,146	-,175	,290
EO_07	280	1	7	2,59	1,378	,701	,146	-,265	,290
EO_08	280	1	7	3,21	1,654	,286	,146	-,980	,290
EO_09	279	1	7	4,10	1,426	-,238	,146	-,569	,291
EO_10	280	1	7	2,55	1,401	,799	,146	-,144	,290
EO_11	280	1	7	3,19	1,527	,243	,146	-,922	,290
EO_12	279	1	7	3,99	1,573	-,272	,146	-,923	,291
EO_13	279	1	7	4,35	1,359	-,243	,146	-,462	,291
EO_14	280	1	7	3,83	1,515	-,005	,146	-,789	,290
EO_15	279	1	7	4,80	1,254	-,754	,146	,252	,291
MO_01	278	3	7	6,41	,720	-1,217	,146	1,782	,291
MO_02	277	1	7	6,31	,778	-1,712	,146	7,487	,292
MO_03	278	4	7	6,61	,619	-1,519	,146	2,000	,291
MO_04	278	3	7	6,37	,703	-1,039	,146	1,504	,291
MO_05	276	1	7	5,18	1,297	-,647	,147	,182	,292
MO_06	274	1	7	5,15	1,403	-,796	,147	,333	,293
MO_07	275	1	7	3,55	1,668	,041	,147	-1,017	,293
MO_08	278	1	7	4,27	1,545	-,181	,146	-,634	,291
MO_09	277	1	7	4,62	1,536	-,486	,146	-,226	,292
MO_10	277	1	7	5,05	1,486	-,708	,146	,047	,292
MO_11	277	1	7	5,53	1,273	-1,126	,146	1,549	,292
MO_12	278	1	7	5,48	1,251	-,906	,146	,915	,291
MO_13	278	2	7	5,95	1,001	-,944	,146	,786	,291
MO_27	277	0	7	3,13	1,653	,393	,146	-,811	,292
MO_28	276	0	7	2,91	1,658	,535	,147	-,781	,292
MO_29	276	0	7	3,44	1,625	,067	,147	-,903	,292
MO_30	276	0	7	3,43	1,560	,133	,147	-,743	,292
MO_31	276	0	7	3,52	1,617	,131	,147	-,763	,292
MO_32	275	0	7	3,71	1,595	-,043	,147	-,743	,293
MO_33	273	0	7	3,60	1,547	-,044	,147	-,677	,294
MO_34	276	0	7	4,37	1,447	-,405	,147	-,269	,292
Valid N (listwise)	257								

The figure 7 summarizes differences between industries for all strategic orientation dimensions used in this study for domestic context and figure 8 for international context. As indicated above all industries are highly learning, customer and also interfunctional oriented. Domestic firms are generally less entrepreneurial, competitor and intelligence oriented. Of the domestic firms main differences can be found in their tendency to be entrepreneurial. Software companies are clearly more entrepreneurial.
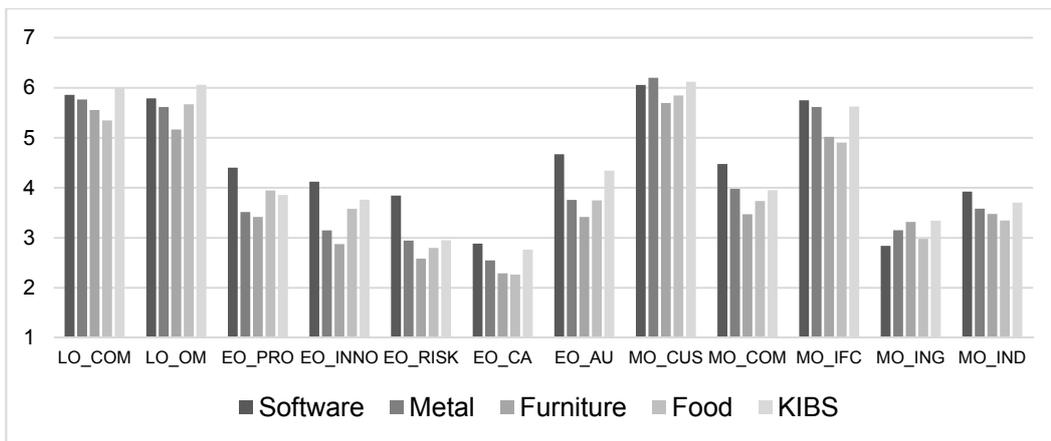
Figure 7. Mean values for strategic orientation dimensions for different industries in domestic context

When comparing the international firms with domestic ones, the main differences can be found in entrepreneurial proactiveness (0,95), innovativeness (0,89) and competitive aggressiveness (0,69). For market orientation both intelligence generation (0,46) and dissemination (0,36) dimensions shows higher levels.

None of the strategic orientation dimensions was lower in average for the international firms. Therefore it can be stated that companies operating in international markets are also more strategic oriented. Whereas international markets offer higher operating revenues, those require also higher entrepreneurial behavior as well as better understanding of the markets.
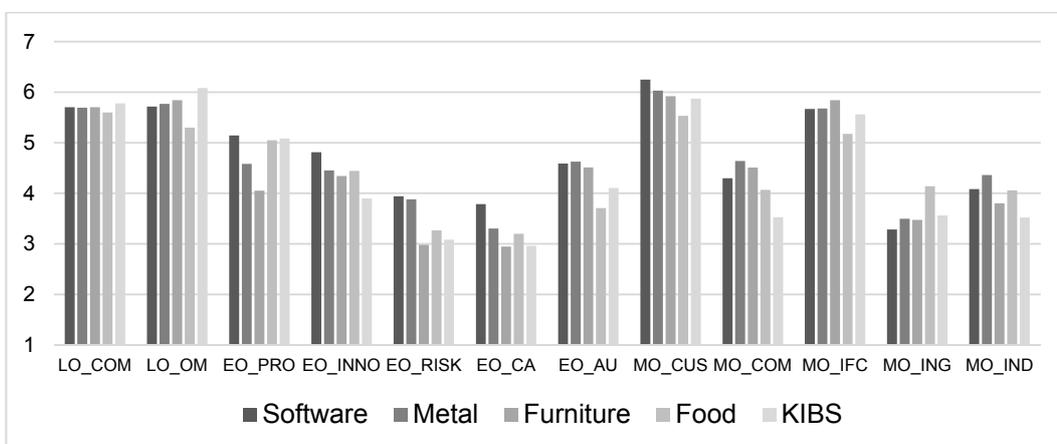
Figure 8. Mean values for strategic orientation dimensions for different industries in international context

Marketing strategy adaptation/standardization

For the marketing strategy adaptation/standardization only single items were available for describing each construct of marketing decision four Ps. As can be found in the appendix, the statements are almost as short as in the table 6 below, leaving the meaning possibly quite unclear. This could be the case especially for the product.

Table 6 shows that the mean values for product, price and promotion are on high level and the distributions, particularly for the product, slightly skewed and peaked. The distribution of distribution adaptation is totally different. The level is low as well as skewness, and the form is rather flat. This is interesting, as this question was reversed and located in different part of the questionnaire. Therefore data is also available only for the international firms.

Table 6. Descriptives for marketing strategy items

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Product adaptation	276	1	7	5,63	1,086	-1,036	,147	1,620	,292
Price adaptation	278	1	7	5,27	1,107	-,671	,146	,833	,291
Promotion adaptation	273	1	7	5,04	1,293	-,600	,147	,217	,294
Distribution adaptation	87	1	7	2,34	2,118	-,255	,258	-1,154	,511
Valid N (listwise)	82								

Table 8 shows Pearson correlation values for marketing strategy adaptation/standardization. It can be seen that product, price and promotion all correlated significantly with each other. This indicates that when one of the marketing strategy components is adapted, also other components will be more adapted. This however does not apply to the distribution adaptation, which as can be seen, has no significant correlation to the other ones. This may depend on the data collection as described above.

Table 7. Correlation table for marketing strategy adaptation/standardization

		Product	Price	Promotion	Distribution
Product adaptation	Pearson Correlation	1			
	Sig. (2-tailed)				
	N	276			
Price adaptation	Pearson Correlation	,324**	1		
	Sig. (2-tailed)	,000			
	N	276	278		
Promotion adaptation	Pearson Correlation	,346**	,319**	1	
	Sig. (2-tailed)	,000	,000		
	N	273	273	273	
Distribution adaptation	Pearson Correlation	,115	-,036	-,143	1
	Sig. (2-tailed)	,287	,739	,188	
	N	87	87	86	87

**. Correlation is significant at the 0.01 level (2-tailed).

Figure 9 presents graphically differences between marketing strategy adaptation/standardization for different industries in both domestic and international context. Adaptation is slightly higher (0,16) for international companies resulting mainly from higher product (0,94) and promotion adaption (0,59) in furniture industry.

It can also be seen that the adaptation is highest for software firms in product and promotion but on lower level for pricing. For food industry there is a tendency that both product and price shall be more adapted for the international markets. Metal industry appears to have lowest adaptation and software industry highest adaptation in distribution.
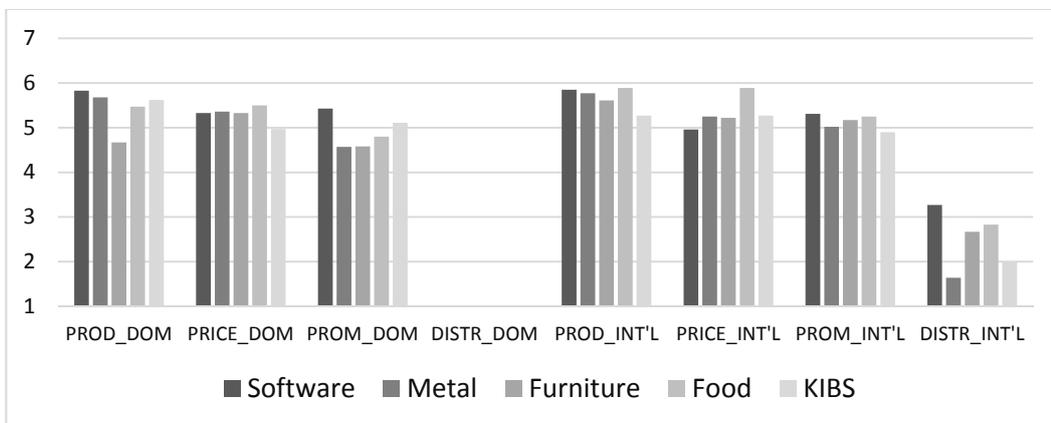
Figure 9. Mean values for marketing strategy items for different industries in domestic (left) and international (right) context.

Business performance

As discussed in the theoretical part, performance assessment of SMEs' is not as standardized as MNEs' and e.g. owner compensation may influence the figures. It is also recognized that distributions for objective measures would be highly skewed and peaked. Therefore for this study it was decided to use effective performance measures, i.e. monetary measures related to number of people.

Descriptive statistics for business performance measures are presented in table 8. Despite of the effective measure for operating revenue, the distribution was extremely skewed and peaked. Therefore logarithmic transformation for the respective data was made. As can be seen in the table, almost all objective measures are highly peaked, meaning that most of the companies report very similar figures but then there are some which have much higher (or even lower) values. In addition for all measures standard deviation is similar or higher than the mean value, meaning that the spreading is extremely wide. Despite of the high kurtosis, rest of the objective measures were considered approximately normally distributed.

Table 8. Descriptives for business performance items

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
~~OR_EMP~~	~~275~~	~~5,92~~	~~1130,15~~	~~121,960~~	~~109,6929~~	~~4,348~~	~~,147~~	~~29,349~~	~~,293~~
OR_EMP_Log	275	,77	3,05	1,9853	,28727	-,036	,147	2,607	,293
PL_EMP	279	-87,58	63,32	7,3182	15,72080	-,751	,146	10,698	,291
RTA_MEAN	280	-87,85	60,96	11,0155	18,64962	-,659	,146	4,006	,290
PMA_MEAN	276	-69,45	45,98	4,9624	12,03027	-1,733	,147	11,459	,292
GROW_MEAN	251	-35,82	276,42	20,6847	35,92547	3,291	,154	15,726	,306

Figure 10 shows the mean values for business performance items for different industries in domestic context. It can be seen that the operating revenue is high for furniture industry, profit creation per employee as well as return on assets is the lowest.

There is also a clear difference between conventional industries, metal, furniture and food, and modern/service industries, software and KIBS. The

later shows much higher profit rates per employee, higher return on assets, as well as higher growth rates.
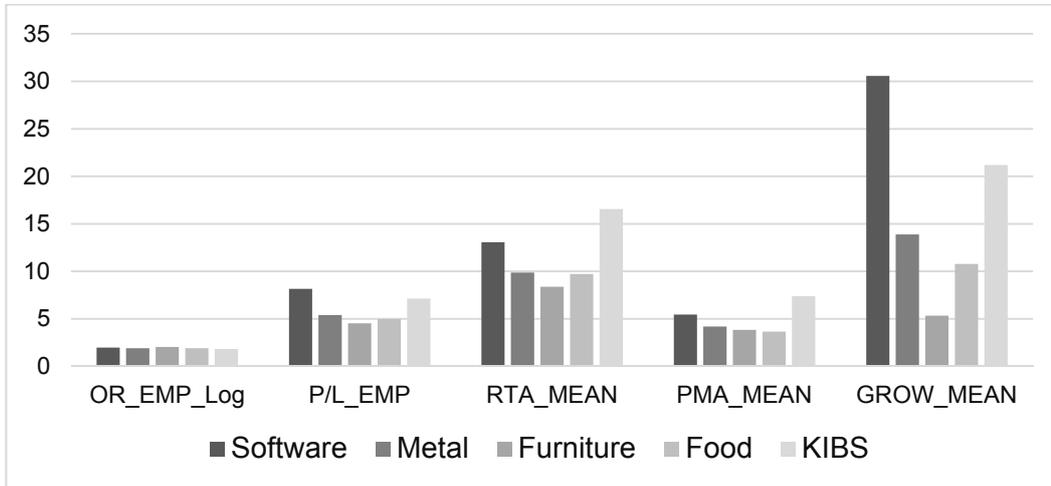
Figure 10. Mean values for business performance items for different industries in domestic context.

Figure 11 indicates the situation for international companies, which is rather similar. Profit levels per employee are on clearly higher level (26% on average), only furniture industry showing lower values (-35%). Return on assets and profit margins are clearly lower for metal and furniture industries, which could be explained by high growth levels (60% average on both). It is interesting to see that KIBS growth is high for domestic market but rather low for international market.
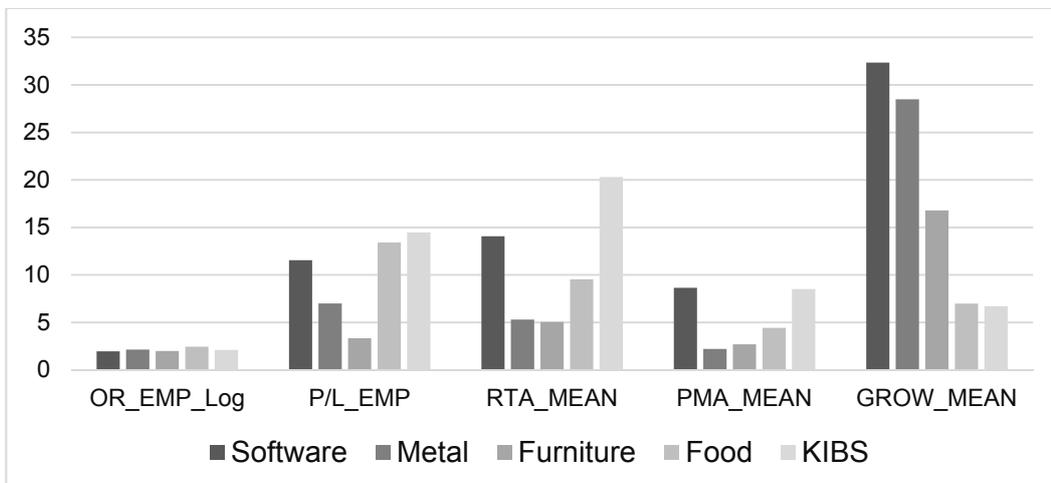
Figure 11. Mean values for business performance items for different industries in international context.

4.2 Scale descriptive analysis

Summated scales are formed by combining several variables into a single composite measure according to the strategic orientation dimensions, in order to represent multiple aspects of a concept in a single measure. Summated scales have already been used for the previous descriptive analysis, as it makes the comparison relatively simple.

As indicated in the theory, there is a high risk for multicollinearity when using summated scales for strategic orientation. Meaning that the different strategic orientation dimensions would measure same construct and thus correlate with each other. This would increase the variance of the coefficient estimates and make the estimates very sensitive to minor changes.

Table 9 presents pearson correlation values for the different strategic orientation dimensions. Cronbach's alpha coefficients for inter-item reliability are on the diagonal in parentheses.

It can be seen that the alpha values are all above required 0,7. However, the correlation between the dimensions is not only significant but also on rather high level. Both learning orientation dimensions correlate with entrepreneurial orientation (especially innovativeness, risk-taking and autonomy) and market orientation (especially customer orientation and interfunctional coordination).

Similar way entrepreneurial orientation correlates on average ,346 with market orientation. The highest correlation is found for EO competitive aggressiveness and competitor orientation.

Table 9. Correlation table for strategic orientation dimensions

		1	2	3	4	5	6	7	8	9	10	11	12
1 LO_COM	Pearson, r	(,83)											
	Sig. (2-tailed)												
	N	280											
2 LO_OM	Pearson, r	,621**	(,844)										
	Sig. (2-tailed)	,000											
	N	280	280										
3 EO_PRO	Pearson, r	,168**	,175**	(,802)									
	Sig. (2-tailed)	,005	,003										
	N	280	280	280									
4 EO_INNO	Pearson, r	,309**	,291**	,657**	(,83)								
	Sig. (2-tailed)	,000	,000	,000									
	N	280	280	280	280								
5 EO_RISK	Pearson, r	,325**	,274**	,457**	,599**	(,825)							
	Sig. (2-tailed)	,000	,000	,000	,000								
	N	280	280	280	280	280							
6 EO_CA	Pearson, r	,175**	,171**	,479**	,436**	,472**	(,734)						
	Sig. (2-tailed)	,003	,004	,000	,000	,000							
	N	280	280	280	280	280	280						
7 EO_AU	Pearson, r	,345**	,450**	,351**	,447**	,480**	,330**	(,805)					
	Sig. (2-tailed)	,000	,000	,000	,000	,000	,000						
	N	280	280	280	280	280	280	280					
8 MO_CUS	Pearson, r	,296**	,253**	,173**	,177**	,145*	,261**	,275**	(,74)				
	Sig. (2-tailed)	,000	,000	,004	,003	,015	,000	,000					
	N	278	278	278	278	278	278	278	278				
9 MO_COM	Pearson, r	,147*	,155**	,379**	,400**	,402**	,554**	,259**	,377**	(,788)			
	Sig. (2-tailed)	,014	,010	,000	,000	,000	,000	,000	,000				
	N	278	278	278	278	278	278	278	278	278			
10 MO_IFC	Pearson, r	,446**	,342**	,266**	,438**	,360**	,330**	,357**	,502**	,482**	(,802)		
	Sig. (2-tailed)	,000	,000	,000	,000	,000	,000	,000	,000	,000			
	N	278	278	278	278	278	278	278	278	278	278		
11 MO_ING	Pearson, r	,147*	,091	,351**	,389**	,341**	,306**	,235**	,199**	,422**	,310**	(,80)	
	Sig. (2-tailed)	,014	,129	,000	,000	,000	,000	,000	,001	,000	,000		
	N	278	278	278	278	278	278	278	276	276	276	278	
12 MO_IND	Pearson, r	,220**	,235**	,357**	,412**	,431**	,423**	,422**	,301**	,484**	,500**	,625**	(,83)
	Sig. (2-tailed)	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000	
	N	277	277	277	277	277	277	277	275	275	275	277	277

**. , r is significant at the 0.01 level (2-tailed).
*. , r is significant at the 0.05 level (2-tailed).
Off-diagonal entries represent the Pearson correlation (*r*) values.
Entries in parentheses on the diagonal reflect reliabilities (Cronbach's *α*).

Due to the high level of multicollinearity it was decided to run principle component factor analysis for the strategic orientation data. The objective was twofold; to reduce the collinearity but to also test that the original scales measure distinctively different phenomena. Marketing strategy adaptation/standardization constructs as well as objective performance measures were kept and analyzed separately in order to find and understand possible relationships.

4.3 Construct operationalization

Principle component analysis (PCA) with Varimax orthogonal rotation was conducted for all items measuring the respective dimensions of each strategic orientation construct, in order to assess the underlying factor structure of the items and to improve unidimensionality, validity, and reliability of the measures.

Scales were purified by eliminating all items, which displayed low factor loadings on their theoretically assigned dimensions (i.e., EO: innovativeness, proactiveness, risk-taking; MO: intelligence generation, intelligence dissemination, responsiveness; LO: commitment to learning, shared vision, open mindedness) and/or high cross-loadings on other dimensions of the focal construct or of other constructs.

Table 10. Results for the extraction of component factors

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	11,311	27,588	27,588	11,311	27,588	27,588	3,564	8,692	8,692
2	3,557	8,676	36,263	3,557	8,676	36,263	3,415	8,330	17,023
3	2,882	7,030	43,293	2,882	7,030	43,293	3,163	7,714	24,736
4	2,132	5,200	48,493	2,132	5,200	48,493	3,142	7,663	32,399
5	1,745	4,257	52,750	1,745	4,257	52,750	2,832	6,908	39,308
6	1,592	3,882	56,632	1,592	3,882	56,632	2,812	6,858	46,165
7	1,399	3,411	60,043	1,399	3,411	60,043	2,681	6,540	52,705
8	1,220	2,977	63,019	1,220	2,977	63,019	2,660	6,487	59,192
9	**1,025**	2,499	**65,519**	1,025	2,499	65,519	2,594	6,326	65,519
10	,959	2,339	67,858						
...	...	...	...						
41	,157	,382	100,000						

Extraction Method: Principal Component Analysis with Varimax orthogonal rotation and Kaiser Normalization.

Table 10 shows the results for the extraction of component factors. Totally nine factors have Eigenvalues >1 and explain cumulatively more than 65,5% of the variance. Varimax rotated final factor solutions are presented in table 11. Of all the factors only one combines both entrepreneurial and market orientation. However both strongly related to market competition.

Table 11. Final factor solutions for strategic orientations

	Component								
	1	2	3	4	5	6	7	8	9
LO_01		,764							
LO_02		,732							
LO_03		,791							
LO_04		,784							
LO_05		,711							
EO_01	,764								
EO_02	,802								
EO_03	,763								
EO_04									
EO_05	,643								
EO_06									
EO_07							,779		
EO_08							,736		
EO_09							,636		
EO_10				,713					
EO_11				,607					
EO_12									,717
EO_13									,746
EO_14									,750
EO_15									
MO_01						,746			
MO_02						,778			
MO_03						,772			
MO_04						,700			
MO_05									
MO_06									
MO_07				,675					
MO_08				,687					
MO_09									
MO_10			,660						
MO_11			,772						
MO_12			,676						
MO_13									
MO_27								,726	
MO_28								,794	
MO_29								,737	
MO_30									
MO_31					,660				
MO_32					,752				
MO_33					,612				
MO_34					,643				

Extraction Method: Principal Component Analysis.

a. Varimax rotation converged in 8 iterations.

Factor analysis using the principal component analysis method yielded nine factors, explaining 65,5% of the total variation. Communalities were all above 0.50, and all factor loadings were above 0.60, indicating a sufficient factoring result. Items EO_04, EO_06, EO_15, MO_05, MO_06, MO_9, MO_13, and MO_ 30 were excluded from the further analysis.

Nine components extracted were:

1. LO commitment to learning and open-mindedness
2. EO proactiveness and innovativeness
3. EO risk-taking
4. EO competitive aggressiveness and MO competitor orientation
5. EO autonomy
6. MO customer orientation
7. MO interfunctional coordination
8. MO intelligence generation
9. MO intelligence dissemination

Kaiser-Meyer-Olkin measure of sampling adequacy was ,881 and Barlett's test Chi-Square 5589. Cronbach's alpha values for the resulting subjective scales were above 0.8. As inter-item and item-to-total-correlations all exceeded 0.30 and 0.50, respectively, the measure was deemed sufficiently reliable to be used in the analysis.

4.4 Antecedents to business performance

The purpose of this chapter is to give an understanding for different relationships in order to explain both strategic marketing decisions and which variables lead to higher business performance. First strategic orientations – marketing strategy relationship was studied using stepwise linear regression analysis. Secondly the relationship between control variables, strategic orientations, and marketing strategy with business performance was studied using hierarchical multiple regression analysis. Further on correlation tables are used for understanding the collinearity between business performance constructs, and their relationship to strategic orientations as well as marketing strategy in both domestic/international context but also for different international industries with the purpose to find mediating effect of marketing strategy on business performance.

4.4.1 Hierarchical multiple regression for business performance

After studying the strategic orientations – marketing strategy models, the possible relationship between strategic orientations, marketing strategy and different performance indicators was studied. Stepwise hierarchical multiple regression technique was used in order to capture also the effect of control variables age and industry.

Operational revenue per employee (logarithmic)

Table 12 shows the model summary for predicting operational revenue per employee. The first model (industry and firm age) explain 7,3% of the variability significantly. The combined model explain 20% of variability in the dependent variable that can be accounted for by all the predictors together. However the combined model is not significant.

Table 12. Model summary, operational revenue per employee (logarithmic)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	,270[a]	,073	,050	,28001	,073	3,155	2	80	,048
2	,447[b]	,200	,021	,28421	,127	,819	13	67	,638

a. Predictors: (Constant), Industry, Age

b. Predictors: (Constant), Industry, Age, Strategic orientations (PCA), and marketing strategy adaptation/standardization

In this case most of the predictors were not statistically significant (table 13) and therefore only some of the coefficients are interpretable.

Table 13. Model coefficients, operational revenue per employee (logarithmic)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1,989	,070		28,511	,000
	AGE_2011	,003	,001	,261	2,317	,023
	Indust_5_fixed	-,035	,022	-,181	-1,610	,111
2	(Constant)	1,731	,260		6,652	,000
	AGE_2011	,004	,002	**,295**	2,376	**,020**
	Indust_5_fixed	-,052	,025	**-,265**	-2,042	**,045**
	LO commitment and open-mindedness	-,014	,039	-,048	-,351	,726
	EO proactiveness and innovativeness	,020	,036	,068	,545	,587
	EO risk-taking	-,022	,038	-,077	-,579	,565
	EO aggressiveness and MO competitor orientation	,059	,037	,205	1,593	,116
	EO autonomy	,010	,037	,034	,263	,794
	MO customer orientation	,009	,035	,030	,251	,802
	MO interfunctional coordination	-,015	,040	-,053	-,386	,701
	MO intelligence generation	-,032	,040	-,113	-,813	,419
	MO intelligence dissemination	,038	,036	,132	1,051	,297
	Product adaptation	-,020	,035	-,075	-,564	,575
	Price adaptation	,007	,031	,026	,215	,830
	Adaptation of promotional approach	,028	,030	,127	,928	,356
	Adaptation of channel structure	,048	,018	**,355**	2,640	**,010**

The results indicate that older companies would have higher turnover per employee and thus be more efficient. Also the type of industry makes a significant difference. The last but maybe the most interesting is the significant influence of channel structure (distribution) adaptation, meaning that higher level distribution adaptation will result in higher turnover per employee as well.

Profit/loss per employee

Regression results for the next model are presented in table 14. The first model accounted for 0,9% of the variation and the combined model only 8,6%. Neither the first model nor the second model predicted scores to a statistically significant degree.

Table 14. Model summary, profit/loss per employee

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	,097[a]	,009	-,015	15,84127	,009	,379	2	80	,686
2	,293[b]	,086	-,118	16,62584	,077	,433	13	67	,952

a. Predictors: (Constant), Industry, Age

b. Predictors: (Constant), Industry, Age, Strategic orientations (PCA), and marketing strategy adaptation/standardization

The same can be found when looking at the model coefficients in table 15. None of the predictors were statistically significant and therefore the coefficients are not interpretable. Beta values for the independent variables are on low level but related significance levels high, on average ,581.

Table 15. Model coefficients, profit/loss per employee

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	6,907	3,946		1,750	,084
	AGE_2011	,072	,085	,098	,845	,400
	Indust_5_fixed	-,556	1,243	-,052	-,447	,656
2	(Constant)	-2,144	15,222		-,141	,888
	AGE_2011	,090	,097	,124	,935	,353
	Indust_5_fixed	-,659	1,480	-,062	-,446	,657
	LO commitment and open-mindedness	-3,038	2,280	-,193	-1,332	,187
	EO proactiveness and innovativeness	,781	2,105	,050	,371	,712
	EO risk-taking	-,572	2,243	-,036	-,255	,799
	EO aggressiveness and MO competitor orientation	1,940	2,167	,123	,895	,374
	EO autonomy	2,155	2,150	,137	1,002	,320
	MO customer orientation	1,188	2,038	,076	,583	,562
	MO interfunctional coordination	,327	2,327	,021	,141	,889
	MO intelligence generation	-1,353	2,332	-,086	-,580	,564
	MO intelligence dissemination	-1,074	2,118	-,068	-,507	,614
	Product adaptation	1,018	2,052	,070	,496	,621
	Price adaptation	,896	1,843	,063	,486	,628
	Adaptation of promotional approach	-,951	1,780	-,078	-,534	,595
	Adaptation of channel structure	,680	1,068	,092	,637	,526

Return on assets

Table 16 shows the model summary for predicting return on assets. The first model (industry and firm age) explain only 0,4% of the variability and not significantly. The combined model accounts for 8,3% of variability in the dependent variable that can be accounted for by all the predictors together. However also the combined model is not significant.

Table 16. Model summary, return on assets

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	,066[a]	,004	-,020	18,83956	,004	,177	2	80	,838
2	,288[b]	,083	-,122	19,75506	,079	,443	13	67	,947

a. Predictors: (Constant), Industry, Age

b. Predictors: (Constant), Industry, Age, Strategic orientations (PCA), and marketing strategy adaptation/standardization

None of the predictors shown in table 17 were statistically significant and therefore the coefficients are not interpretable. Also here beta values for the independent variables are on low level but related significance levels high, on average ,644.

Table 17. Model coefficients, return on assets

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	8,984	4,693		1,914	,059
	AGE_2011	-,015	,101	-,017	-,149	,882
	Indust_5_fixed	,880	1,479	,069	,595	,553
2	(Constant)	2,936	18,087		,162	,872
	AGE_2011	,018	,115	,021	,157	,876
	Indust_5_fixed	,463	1,758	,037	,264	,793
	LO commitment and open-mindedness	-1,722	2,709	-,092	-,636	,527
	EO proactiveness and innovativeness	-,478	2,501	-,026	-,191	,849
	EO risk-taking	-1,380	2,665	-,074	-,518	,606
	EO aggressiveness and MO competitor orientation	1,562	2,574	,084	,607	,546
	EO autonomy	1,783	2,555	,096	,698	,488
	MO customer orientation	2,525	2,422	,135	1,042	,301
	MO interfunctional coordination	,546	2,765	,029	,198	,844
	MO intelligence generation	-1,583	2,772	-,085	-,571	,570
	MO intelligence dissemination	-2,029	2,517	-,109	-,806	,423
	Product adaptation	1,079	2,438	,063	,443	,660
	Price adaptation	,480	2,189	,029	,219	,827
	Adaptation of promotional approach	-1,182	2,115	-,082	-,559	,578
	Adaptation of channel structure	,783	1,269	,089	,617	,539

Profit margin

Unfortunately the situation for profit margin is very similar to the previous ones, table 18. The first model (industry and firm age) explain only 0,2% of the variability and the combined model 8,9%. Neither of the models is significant.

Table 18. Model summary, profit margin

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | |
					R Square Change	F Change	df1	df2	Sig. F Change
1	,048[a]	,002	-,023	12,16591	,002	,091	2	80	,913
2	,298[b]	,089	-,115	12,70474	,086	,489	13	67	,923

a. Predictors: (Constant), Industry, Age

b. Predictors: (Constant), Industry, Age, Strategic orientations (PCA), and marketing strategy adaptation/standardization

None of the predictors (table 19) were statistically significant and therefore the coefficients are not interpretable. Beta values are on low level but related significance levels high, on average ,638.

Table 19. Model coefficients, profit margin

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
		B	Std. Error	Beta		
1	(Constant)	4,123	3,031		1,361	,177
	AGE_2011	,025	,065	,045	,387	,700
	Indust_5_fixed	,055	,955	,007	,057	,954
2	(Constant)	1,308	11,632		,112	,911
	AGE_2011	,036	,074	,064	,487	,628
	Indust_5_fixed	,038	1,131	,005	,033	,973
	LO commitment and open-mindedness	-1,816	1,742	-,151	-1,042	,301
	EO proactiveness and innovativeness	-,331	1,609	-,027	-,206	,838
	EO risk-taking	-,861	1,714	-,072	-,502	,617
	EO aggressiveness and MO competitor orientation	,249	1,656	,021	,150	,881
	EO autonomy	1,575	1,643	,131	,959	,341
	MO customer orientation	1,239	1,557	,103	,795	,429
	MO interfunctional coordination	,350	1,778	,029	,197	,845
	MO intelligence generation	-,550	1,782	-,046	-,308	,759
	MO intelligence dissemination	-,981	1,619	-,082	-,606	,546
	Product adaptation	1,398	1,568	,126	,892	,376
	Price adaptation	,489	1,408	,045	,347	,729
	Adaptation of promotional approach	-1,230	1,360	-,132	-,904	,369
	Adaptation of channel structure	-,363	,816	-,064	-,445	,658

Growth

For growth the first model (industry and firm age) explain 7,5% significantly, and the combined model 14,5% (significant) in table 20.

Table 20. Model summary, growth

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	,274[a]	,075	,050	35,01062	,075	3,012	2	74	,055
2	,381[b]	,145	-,065	37,08291	,070	,382	13	61	,971

a. Predictors: (Constant), Industry, Age

b. Predictors: (Constant), Industry, Age, Strategic orientations (PCA), and marketing strategy adaptation/standardization

In table 21 the only statistically significant predictor is age, meaning that the older the company the lower is the growth. Other coefficients are not interpretable. Beta values are on low level but related significance levels high, on average ,677.

Table 21. Model coefficients, growth

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	37,811	9,059		4,174	,000
	AGE_2011	-,378	,195	**-,227**	-1,944	**,056**
	Indust_5_fixed	-2,453	2,854	-,101	-,859	,393
2	(Constant)	48,190	35,266		1,366	,177
	AGE_2011	-,401	,224	**-,241**	-1,794	**,078**
	Indust_5_fixed	-,810	3,428	-,033	-,236	,814
	LO commitment and open-mindedness	-1,915	5,283	-,053	-,363	,718
	EO proactiveness and innovativeness	1,220	4,877	,034	,250	,803
	EO risk-taking	6,971	5,197	,194	1,341	,185
	EO aggressiveness and MO competitor orientation	1,356	5,020	,038	,270	,788
	EO autonomy	2,662	4,981	,074	,534	,595
	MO customer orientation	-1,149	4,722	-,032	-,243	,809
	MO interfunctional coordination	2,526	5,391	,070	,469	,641
	MO intelligence generation	,208	5,404	,006	,038	,969
	MO intelligence dissemination	2,109	4,907	,059	,430	,669
	Product adaptation	-1,105	4,754	-,033	-,232	,817
	Price adaptation	-2,805	4,269	-,086	-,657	,514
	Adaptation of promotional approach	,703	4,125	,025	,170	,865
	Adaptation of channel structure	,677	2,474	,040	,274	,785

Subjective profitability

Table 22 shows the model summary for predicting subjective profitability, which would be one of the most interesting parameters. The first model (industry and firm age) does not explain any (0,0%) of the variability. The combined model explain 8,5% of variability in the dependent variable. The combined model is not significant.

Table 22. Model summary, subjective profitability

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	,021ᵃ	,000	-,025	1,357	,000	,017	2	80	,983
2	,292ᵇ	,085	-,119	1,419	,085	,478	13	67	,929

a. Predictors: (Constant), Industry, Age

b. Predictors: (Constant), Industry, Age, Strategic orientations (PCA), and marketing strategy adaptation/standardization

In table 23 none of the coefficients are interpretable. Beta values are on low level but related significance levels high, on average ,617.

Table 23. Model coefficients, subjective profitability

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4,442	,338		13,136	,000
	AGE_2011	,001	,007	,013	,110	,913
	Indust_5_fixed	-,018	,107	-,020	-,174	,863
2	(Constant)	4,153	1,299		3,197	,002
	AGE_2011	,004	,008	,069	,518	,606
	Indust_5_fixed	-,098	,126	-,108	-,779	,439
	LO commitment and open-mindedness	,151	,195	,112	,774	,442
	EO proactiveness and innovativeness	,028	,180	,021	,154	,878
	EO risk-taking	-,281	,191	-,209	-1,466	,147
	EO aggressiveness and MO competitor orientation	,213	,185	,159	1,154	,253
	EO autonomy	,093	,183	,069	,507	,614
	MO customer orientation	,076	,174	,056	,435	,665
	MO interfunctional coordination	-,015	,199	-,011	-,075	,940
	MO intelligence generation	-,138	,199	-,103	-,691	,492
	MO intelligence dissemination	-,032	,181	-,024	-,179	,858
	Product adaptation	,009	,175	,007	,049	,961
	Price adaptation	,034	,157	,028	,217	,829
	Adaptation of promotional approach	-,041	,152	-,040	-,271	,787
	Adaptation of channel structure	,085	,091	,134	,932	,355

4.4.2 Correlation tables for business performance

Due to the fact that it was almost impossible to find any correlation in regression models for strategic orientations and business performance, as well as marketing strategy adaptation/standardization and business performance, it was decided to study the correlations in detail for domestic and international context. Further correlations between marketing strategy adaptation/standardization and business performance were studied in detail for the different industries.

Table 24 indicates first of all that subjective profitability significantly correlates with profitability related objective measures, effective profit/loss, return on assets and profit margin (R ~,5), and effective operating revenue (R ,24).

Table 24. Correlation table for domestic business performance

	1 OR_EM_Log	2 PL_EMP	3 RTA	4 PMA	5 GROW	6 SUBJ_PRO
1 Operating revenue per employee (log)	1					
2 Profit/loss per employeee	,367**	1				
3 Return on assets	,130	,779**	1			
4 Profit margin	,154*	,839**	,904**	1		
5 Average growth	-,164*	-,126	-,078	-,182*	1	
6 Subjective profitability	,239**	,488**	,509**	,512**	-,097	1
LO commitment and open-mindedness	-,018	-,123	-,052	-,099	-,022	-,006
EO proactiveness and innovativeness	-,048	-,085	-,105	-,100	,000	,002
EO risk-taking	,021	-,155*	-,187*	-,190*	,147	-,261**
EO aggressiveness and MO competitor orientation	,153	,071	,027	,008	,109	,097
EO autonomy	,038	,057	,039	,062	,073	,080
MO customer orientation	,022	-,036	,082	,047	-,064	,058
MO interfunctional coordination	,179*	,071	,023	,003	-,010	-,027
MO intelligence generation	,068	-,037	-,057	-,035	,038	,001
MO intelligence dissemination	,085	-,065	-,105	-,065	,126	-,068
Product adaptation	-,011	,094	,066	,092	,025	,034
Price adaptation	,029	,071	,085	,082	-,066	-,033
Adaptation of promotional approach	,111	-,010	-,037	-,040	,029	-,047
Adaptation of channel structure	.d	.d	.d	.d	.d	.d

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

d. Cannot be computed because at least one of the variables is constant.

Secondly the table indicates that higher risk-taking will reduce profitability, both objective and subjective measures, but slightly improve growth rates. Further on higher level of interfunctional coordination would increase effective operating revenue (log). No significant correlation for marketing strategy adaptation/standardization was found, the levels are very low and no clear tendency either.

Similar situation applies also for the international context, as can be seen in table 25. In addition learning correlation appears to be negative for business performance, higher risk-taking gives significantly higher growth level, higher intelligence generation accounts for lower level of both effective operating revenue as well as profitability. Higher promotion adaptation (not significant) appears to lower the effective profitability but not increase the effective operating revenue.

Table 25. Correlation table for international business performance

	OR_EM_Log	PL_EMP	RTA	PMA	GROW	SUBJ_PRO
Operating revenue per employee (log)						
Profit/loss per employeee	,410**					
Return on assets	,194*	,778**				
Profit margin	,206*	,857**	,865**			
Average growth	-,130	-,292**	-,128	-,394**		
Subjective profitability	,220*	,469**	,562**	,425**	,071	
LO commitment and open-mindedness	-,097	-,191*	-,083	-,160	,156	,194*
EO proactiveness and innovativeness	-,069	,008	-,046	,018	-,006	,018
EO risk-taking	,064	-,031	-,017	-,131	,332**	,014
EO aggressiveness and MO competitor orientation	,038	,078	,118	,010	,066	,201*
EO autonomy	-,085	,002	,064	,048	,139	,135
MO customer orientation	,051	,137	,185	,154	-,047	,154
MO interfunctional coordination	-,030	,044	,025	-,014	,193	,138
MO intelligence generation	-,242*	-,171	-,150	-,197*	,201	-,066
MO intelligence dissemination	,186	-,026	-,112	-,084	-,007	,040
Product adaptation	-,092	-,031	,001	,024	,060	,020
Price adaptation	,016	,020	-,107	-,025	-,045	,024
Adaptation of promotional approach	-,066	-,142	-,165	-,172	,096	-,029
Adaptation of channel structure	,163	,026	,067	-,069	,098	,031

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Finally marketing strategy adaptation/standardization items are correlated with business performance for each industry separately in table 26. One shall notice that none of these correlations is significant. In order to find some consensus for the different marketing mix items, the direction (positive, none, negative) of higher adaptation is indicated in the last column on right.

Table 26. Correlation table for business performance industry wise

	OR_EM_Log	PL_EMP	RTA	PMA	GROW	SUBJ_PRO	DIRECTION
Software industry							
Product adaptation	,045	,129	,123	,178	-,070	,077	+
Price adaptation	,050	-,013	,015	,000	,024	,067	0
Adaptation of promotional approach	,034	-,110	-,069	-,082	-,007	-,041	-
Adaptation of channel structure	-,130	-,022	,081	-,018	,060	-,117	0
Metal industry							
Product adaptation	-,115	-,038	-,073	,007	,049	,028	0
Price adaptation	-,088	,081	-,010	,113	-,200	,020	0
Adaptation of promotional approach	-,043	-,145	-,130	-,159	,084	,014	-
Adaptation of channel structure	,276	,044	,093	-,071	,038	,014	+
Furniture industry							
Product adaptation	-,036	-,155	-,163	-,138	-,064	,076	-
Price adaptation	-,024	,051	,040	,059	,190	,166	0
Adaptation of promotional approach	,072	-,269	-,305	-,296	-,018	,079	-
Adaptation of channel structure	-,045	,016	,019	,053	,217	,011	0
Food industry							
Product adaptation	,109	,134	,130	,146	-,212	-,035	+
Price adaptation	,002	,162	,190	,068	-,052	-,048	0
Adaptation of promotional approach	,142	,118	-,133	-,058	-,017	-,133	+/0
Adaptation of channel structure	,006	,529	,578	,620	,339	,321	+
Knowledgeintensive services							
Product adaptation	-,141	-,006	,070	-,001	,313[*]	-,093	0
Price adaptation	,049	,054	,006	,117	,017	-,135	0
Adaptation of promotional approach	,187	-,034	-,093	-,159	,099	-,205	+/-
Adaptation of channel structure	-,284	,238	,431	,375	-,262	,290	+

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

As can be seen, there are differences between the industries. For software industry higher product adaptation appears to improve both turnover as well as profitability. Promotion adaptation influence profitability negatively.

For metal industry the promotion adaptation does not increase revenue but reduces profitability. Adaptation of channel structure increases turnover.

Product adaptation in furniture industry influence both revenue and profitability negatively, whereas for the food industry the effect is vis-a-versa. In addition promotion adaptation in furniture industry reduces profitability.

For KIBS adaptation of promotional approach appears to increase turnover but tends to influence profitability negatively. Finally the adaptation of channel structure reduces turnover but gives higher profitability.

4.4.3 Strategic orientations - marketing strategy linear regression

In this part tries to capture and explain how strategic orientations are influencing marketing strategy decisions in both domestic and international context.

Product adaptation

Based on the table 27 there are in total three significant strategic orientations which can explain domestic product adaptation decision (R ,446). The strongest variable is the intelligence generation (Beta ,319), the second variable customer orientation (Beta ,256) and third one interfunctional coordination (Beta ,146).

Table 27. Linear regression analysis, product adaptation (domestic)

Dependent variable	R	R^2	Adj. R^2	Std.Error
Product adaptation	,446	,199	,183	,941

Independent variable	B	Beta	t	Sig.
MO intelligence generation	,306	,319	4,357	,000
MO customer orientation	,284	,256	3,495	,001
MO interfunctional coordination	,161	,146	1,989	,049

Similar relationships with lower explanation rate was found for international product adaptation decision (R ,299) in table 28. The strongest variable being interfunctional coordination (Beta ,231) and the second intelligence generation (Beta ,204).

Table 28. Regression analysis, Product adaptation (international)

Dependent variable	R	R^2	Adj. R^2	Std.Error
Product adaptation	,299	,090	,071	1,109

Independent variable	B	Beta	t	Sig.
MO interfunctional coordination	,246	,231	2,420	,017
MO intelligence generation	,279	,204	2,130	,036

Price adaptation

Price adaptation was modeled the same way using linear regression. No significant variables were found to explain pricing decisions neither for domestic nor international firms.

Promotion adaptation

Promotion adaptation model for domestic firms has a rather good explanation rate (R ,502) again with the same independent variables; intelligence generation (Beta ,390) and interfunctional coordination (Beta ,309), as seen in table 29.

Table 29. Regression analysis, Promotion adaptation (domestic)

Dependent variable	R	R^2	Adj. R^2	Std.Error
Promotion adaptation	,502	,252	,242	1,186

Independent variable	B	Beta	t	Sig.
MO intelligence generation	,490	,390	5,536	,000
MO interfunctional coordination	,446	,309	4,390	,000

For the international companies the promotion adaptation model has even higher explanation rate (R ,561) in table 30, but some new independent variables; interfunctional coordination (Beta ,399), intelligence dissemination (Beta ,334), competitive aggressiveness and competitor orientation (Beta -,228), and proactiveness and innovativeness (Beta ,208).

Table 30. Regression analysis, Promotion adaptation (international)

Dependent variable	R	R^2	Adj. R^2	Std.Error
Promotion adaptation	,561	,315	,287	,994

Independent variable	B	Beta	t	Sig.
MO interfunctional coordination	,435	,399	4,455	,000
MO intelligence dissemination	,421	,334	3,972	,000
EO aggressiveness and MO competitor orientation	-,267	-,228	-2,564	,012
EO proactiveness and innovativeness	,293	,208	2,456	,016

Distribution adaptation

Finally distribution adaptation was also modeled using linear regression. Data was only available for international market.

Table 31. Regression analysis, Distribution adaptation (international)

Dependent variable	R	R^2	Adj. R^2	Std.Error
Distribution adaptation	,308	,095	,084	2,027

Independent variable	B	Beta	t	Sig.
EO risk-taking	,602	,308	2,952	,004

In table 33 the explanation rate is relatively low (R ,308) and only a single variable, risk-taking (Beta ,308) was significant for the model.

4.4.4 Moderator regression analysis

Moderated multiple regression analysis was used to detect causal moderators, meaning how the marketing strategy adaptation/ standardization would weaken or strengthen the relationship between strategic orientations and business performance. Although the model explanation rates are relatively high, none of the following models was significant.

Table 32. Moderator regression analysis, Operating revenue per employee (log)

Dependent variable	R	R^2	Adj. R^2	Sig.
Operating revenue per employee (log)	,501	,264	,005	,683

Independent variable	B	Beta	t	Sig.
Risk-taking * distribution adaptation	,449	,044	4,70	,003
Intelligence dissemination * Promotion adaptation	-,673	-,077	2,85	,096

Higher distribution adaptation in table 32 enhance the effect of risk-taking on revenue per employee whereas promotion adaptation will diminish the effect of intelligence dissemination on the effective revenue.

Table 33. Moderator regression analysis, Profit/loss per employeee

Dependent variable	R	R^2	Adj. R^2	Sig.
Profit/loss per employeee	,575	,332	,005	,304

Independent variable	B	Beta	T	Sig.
EO proactiveness and innovativeness * Product adaptation	-68,43	-8,81	4,55	,037
MO interfunctional coordination * Promotion adaptation	-28,94	-3,72	3,69	,060
MO intelligence generation * Price adaptation	71,11	7,89	5,79	,019
MO intelligence dissemination * Price adaptation	46,05	5,29	5,22	,026

In table 33 product adaptation will diminish the effect of proactiveness and innovativeness on effective profitability. The same applies to promotion adaptation on interfunctional coordination, whereas price adaptation enhances the effect of both intelligence generation and intelligence dissemination on profit/loss per employee.

Table 34. Moderator regression analysis, Return on assets

Dependent variable	R	R^2	Adj. R^2	Sig.
Return on assets	,539	,291	-,001	,505

Independent variable	B	Beta	T	Sig.
EO proactiveness and innovativeness * Product adaptation	-54,22	-6,99	3,37	,071

Product adaptation will also diminish the effect of proactiveness and innovativeness on return on assets (table 34).

Table 35. Moderator regression analysis, Profit margin

Dependent variable	R	R^2	Adj. R^2	Sig.
Profit margin	,551	,304	,002	,474

Independent variable	B	Beta	T	Sig.
MO intelligence generation * Price adaptation	39,61	4,40	4,01	,050
MO intelligence dissemination * Price adaptation	28,85	3,31	4,37	,041

Price adaptation also enhances the effect of both intelligence generation and intelligence dissemination on profit margin (table 35).

Table 36. Moderator regression analysis, Average growth

Dependent variable	R	R^2	Adj. R^2	Sig.
Average growth	,619	,385	,008	,294

Independent variable	B	Beta	T	Sig.
EO aggressiveness and MO competitor orientation * Price adaptation	-93,54	-10,63	4,32	,043
MO interfunctional coordination * Price adaptation	-170,8	-21,96	10,38	,002
MO interfunctional coordination * Promotion adaptation	115,1	14,81	10,08	,002
MO intelligence generation * Promotion adaptation	126,9	14,08	6,05	,018

In table 36, price adaptation decreases the effect of both aggressiveness and competitor orientation as well as interfunctional coordination whereas promotion adaptation enhances the effect of interfunctional coordination and intelligence generation on average growth.

No significant moderator factors were found for the subjective profitability.

4.4.5 Mediation regression Analysis

Due to the insignificant and low level of correlation, especially between marketing strategy adaptation/standardization and business performance, it was decided not to study the mediation effect.

4.5 Summary of the results

Table 37 summarizes the results of the hypotheses tests of the study.

Table 37. Summary of the results

H	Description	Result
H_{1a}	There is a positive relationship between market orientation and performance	Partially supported
H_{1b}	The relationship is stronger for subjective than objective performance	Not supported
H_{1c}	The relationship is stronger for revenue- than cost-based performance	Partially supported
H_{1d}	There is a positive relationship between learning orientation and performance	Not supported
H_{1e}	The relationship is weaker than market orientation and performance	Supported
H_{1f}	Combined LO+MO relationship to performance is stronger than separate ones	Not supported
H_{1g}	There is a positive relationship between entrepreneurial orientation and performance	Partially supported
H_{1h}	The relationship is weaker than market orientation and performance	Not supported
H_{1i}	Combined EO+MO relationship to performance is stronger than separate ones	Partially supported
H_{2a}	There is a positive relationship between market orientation and learning orientation	Supported
H_{2b}	There is a positive relationship between market orientation and entrepreneurial orientation	Supported
H_{2b}	There is a positive relationship between learning orientation and entrepreneurial orientation	Supported
H_{3a}	There is a positive relationship between product adaptation and revenue-based performance but negative with cost-based performance	Not supported
H_{3b}	There is a positive relationship between price adaptation and revenue-based performance but negative with cost-based performance	Partially supported
H_{3c}	There is a positive relationship between promotion adaptation and revenue-based performance but negative with cost-based performance	Not supported
H_{3d}	There is a positive relationship between distribution adaptation and revenue-based performance but negative with cost-based performance	Partially supported
H_{4a}	Although product is known to be the most standardized element, for small and medium-sized enterprises with low level of global market penetration and participation, product is expected to be mainly adapted.	Supported
H_{4b}	Pricing elements will exhibit the lowest degree of standardization among the marketing mix elements	Not supported
H_{4c}	Promotion will be standardized to a higher degree than pricing.	Supported
H_{4d}	Distribution most standardized for SME's	Supported
H_{4e}	Higher adaptation level increases adaptation on other items (correlation)	Partially
H_{5a}	Higher level of learning orientation increases marketing strategy adaptation	Not supported
H_{5b}	Higher level of entrepreneurial orientation increases marketing strategy adaptation	Partially supported
H_{5c}	Higher level of market orientation increases marketing strategy adaptation	Partially supported
H_6	Marketing strategy will moderate strategic orientation performance relationship	Partially supported
H_7	Marketing strategy will mediate strategic orientation performance relationship	Dropped

5 Discussion

The thesis aims at contributing to the international marketing research by investigating the relationship between different strategic orientation dimensions and marketing mix standardization/adaptation, and their influence on different concepts of business performance. In this final chapter the results of the study and their implications to theory and practice are discussed. Further, the limitations of the study and suggestions for future research are presented.

5.1 Discussion of the results

As prior literature has demonstrated, a positive relationship between market orientation and business performance was expected. Further on entrepreneurial orientation are shown to associate positively with performance but learning orientation not.

The relationship between marketing strategy and performance assumes that a particular strategy (adaptation or standardization) enhances performance, while the other inhibits it. This however seems theoretically and pragmatically inappropriate.

As Cadogan (2012) points out, business performance is often used as single composite although a clear difference between revenue, profitability, and growth related measures exist. In this study each performance component is studied separately which makes interpretation challenging.

In this study market orientation dimensions, customer orientation and interfunctional coordination, are positively associated with revenue and profitability related performance, whereas negatively with growth. High level of intelligence generation and dissemination influences negatively especially profitability related performance. Above tendencies are not stronger for subjective performance, and neither clearly stronger for revenue based performance.

Slightly surprisingly learning orientation correlates negatively with most of the business performance measures, except with subjective profitability in international context. This could be explained by the high level of learning orientation in the sample data, meaning that too high level of learning orientation would start to decrease the performance measures, as suggested by Cadogan et al. (2009). At least the data is suggesting that combining learning orientation with market orientation, would give reduced level of business performance.

Entrepreneurial orientation proactiveness and innovativeness give mixed and insignificant low level explanation rates, meaning that there is no clear evidence. Higher level of risk-taking however increases growth, significantly on international companies, and reduces profitability measures. Risk-taking appears to slightly improve turnover per employee. Entrepreneurial autonomy and entrepreneurial aggressiveness combined with competitor orientation both give positive low level correlation between all business performance measures. Therefor it appears that entrepreneurial orientation combined with market orientation gives higher level of business performance.

When studying all strategic orientations in relation to each other, it was found that all strategic orientation dimensions (summated scales) correlated positively and significantly with each other, indicating multicollinearity issues.

For the marketing strategy adaptation/standardization it could not be proved that either adaptation or standardization is better in terms of business performance. For product and pricing the result was mixed at insignificant low level of explanation rate. Adaptation of promotional approach in tendency reduced profitability but increased sales and growth. It is important to notice that there were remarkable variation on the explanation rate and direction between the industries, meaning that higher adaptation was shown to be more profitable for software, food and KIBS

industries, whereas higher standardization was more beneficial for furniture industry.

Although it was expected that either learning orientation and entrepreneurial orientation in combination with market orientation would result in better business performance, it could not be proved for learning orientation. Entrepreneurial orientation dimensions were showing clear tendencies as discussed above.

Marketing strategy adaptation/standardization was found to moderate strategic orientation – performance relationship. Both higher promotion and price adaptation either enhanced or diminished the strength of SO business performance relationship on high level, whereas distribution adaptation strengthens and product adaptation reduces related relationships.

Due to the insignificant and lower correlation level between marketing strategy adaptation/standardization and business performance, compared to strategic orientations and business performance, the meditation analysis was dropped. Based on the values, no meditation effect was expected.

Of the control parameters, age explains partially the difference in revenue per employee, meaning that older companies have higher revenue levels and these at higher efficiency. Different industries were also find to explain differences in revenue per employee but mainly explaining differences in marketing strategy adaptation/standardization and business performance. Although differences between domestic and international companies exist, the differences were found to be relatively low.

5.2 Answering research questions

One critical indication in this study is that the business performance measure shall consist of both objective and subjective measures. These measures shall also include both revenue, profitability and growth related items. It is risky to combine those as they all represent different concepts, and thus the interpretation of the result gets very complicated.

The relationship between strategic orientations and business performance exists, and is shown to be positive. However, this study also shows that different strategic orientations and their dimensions behave differently, even contradictory. The thesis give further support for the assumption that the relationship between SO's and performance is not linear but starts to decrease at certain level of the strategic orientation.

It is known that higher marketing strategy standardization reduces related costs but the same time, especially in international markets, market demand defines the level of adaptation required. Both adaptation and standardization are known to improve business performance. In general it could be expected that higher adaptation helps in increasing sales, thus revenue, but increased cost would reduce profitability. As adaptation and standardization are often conflicting factors, more detailed understanding, conceptualization and measurement scales are needed.

In this study it has been shown that marketing strategy adaptation/ standardization moderates the relationship between strategic orientations and performance. Though there are many strategic dimensions and business performance variables, and thus the tendencies are not clear.

In general the differences between domestic and international companies were surprisingly low.

5.3 Implications

Managerial implications

This study has illustrated the variety and complexity of issues that the research are covers. The findings suggest that the strategic orientations have significant effects on business performance, and if appropriately managed, those will provide valuable opportunities for small and medium size enterprises.

The findings also suggest that still in this age of global markets, cultural characteristics remain significant shapers of consumer behavior, meaning that local practices and attitudes still need to be accommodated when implementing marketing strategies.

The theory suggest that all of the strategic orientation dimensions are expected to improve the performance of a firm. It is though important to understand which strategic orientation dimension influence which performance parameter. The same applies both for adaptation and standardization. The main implication for managers is to understand to what extent any strategic orientation dimension or marketing strategy adaptation (or standardization) will enhance the performance and when does the related additional cost start to reduce it.

Research implications

This study has aimed at developing a more comprehensive understanding on the consequence of specific strategic orientation dimensions on different business performance measures. Thereby the study has provided both the need for studying and understanding the relationships separately.

The study has demonstrated difficulties in performance measures for small and medium scale enterprises. Several company internal factors may influence SME performance assessment, making measures possibly unreliable, and partially explaining higher variation in explanation rates in SME research.

The study has further demonstrated the need for appropriate measurement scales for marketing strategy adaptation/standardization constructs, so that different aspects on the topic could be better clarified and understood.

The results in general confirm the need for understanding the form of relationship between strategic orientations, marketing strategy adaptation/ standardization, and business performance, as it appears not to be linear.

5.4 Reliability and validity

Concerning the reliability and validity of this study, generalizability of the findings into a larger population is a critical concern.

The empirical data of this study were collected from one respondent in each sample firm. This method of using single respondent self-reported data poses the problem of potential bias in the data. The use of single respondents means that the data are essentially based on the perceptions of the respondents.

The reliance on this method in the study was motivated by two main factors. First, the respondents needed to have overall knowledge of the firm's operations as well as in-depth knowledge of the firm's key customer relationship.

The questionnaire was carefully designed with several rounds of revision and tested with a pilot sample. Further, questionnaire items were formulated to measure tangible matters rather than opinions, whenever possible.

Validity, in general, refers to the extent to which the study actually tests the phenomenon it is assumed to examine or the extent to which a measurement operation measures what it is intended to measure. In the present study, previously validated measures were adopted whenever possible to help ensure their validity. However, single questions for marketing strategy adaptation/standardization were used. In addition

adaptation of channel structure was taken from another scale, showing clearly different levels and explanation rates, when compared with the adaptation of product, price and promotion.

5.5 Limitations and suggestions for future research

Several limitations exist in terms of the generalizability and interpretation of the results. First the study was made for single country (Finland) SME context, at particular point of time, and representing only a small proportion of the overall economy.

Secondly several industries were included both from domestic and international context, making the number of samples per group relatively small. Therefore some analysis were conducted combining the different groups. As have been seen in the analysis the different firms behaved quite differently, making the interpretation of the results more challenging.

Although research has made significant progress toward understanding the relationship between strategic orientations and business performance, multiple dimensions are typically combined to a single composite score, making the interpretation challenging. This applies as well for the performance measures as more knowledge is needed in understanding how different strategic orientations operate on different performance parameters.

Further the adaptation/standardization discussion shall be brought on a new level, where the related parameters are clearly conceptualized for current global situation and sound measurement scales created, so that also differences between industries could be explained. Especially important is to understand the point where adaptation related costs will overcome its benefits.

6 Conclusions

Small businesses are important to most economies; therefore, investigation of their performance is a worthwhile scholarly effort. Consistent with previous research, it was found that some of the strategic orientation dimensions correlate with revenue based performance measures, some with profitability and some with growth, thus affecting small business performance.

Marketing strategy adaptation/standardization was found to moderate the way different strategic orientation dimensions associate with business performance but not to explain performance as such. Further the findings brought new insights to the importance of understanding different strategic orientation dimensions as well as performance criteria.

I would encourage researchers to further examine the complex and contingent role of adaptation/standardization in relation to business performance and to develop a more complete understanding of the phenomenon.

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Appendix

Questionnaire

Learning orientation:

LO_01   Managers agree that our company's ability to learn is the key to our competitive advantage

LO_02   The sense around here is that employee learning is an investment, not an expense

LO_03   Learning in my organization is seen as a key commodity necessary to guarantee organizational survival

LO_04   Managers encourage employees to "think outside of the box"

LO_05   Original ideas are highly valued in this organization

Entrepreneur orientation:

EO_01   In dealing with its competitors, my firm typically initiates actions which competitors then respond to.

EO_02   In dealing with its competitors, my firm is very often the first business to introduce new products/services, administrative techniques, operating technologies, etc.

EO_03   In general, the top managers of my firm have a strong tendency to be ahead of others in introducing novel ideas or products.

EO_04   In general, the top managers of my firm favor a strong emphasis on R&D, technological leadership, and innovations

EO_05   We have very many new lines of products/services (marketed in the past 5 years)

EO_06   Changes in product or service lines have usually been quite dramatic

EO_07   A strong proclivity for high risk projects (with chances of very high returns)

EO_08   Owing to the nature of the operational environment, bold and wide-ranging acts are necessary to achieve the firm's objectives

EO_09   When confronted with decisions involving uncertainty, my firm typically adopts a bold posture in order to maximize the probability of exploiting opportunities

EO_10   My firm typically adopts a very competitive "undo-the-competitors" posture

EO_11   My firm is very aggressive and intensely competitive

EO_12   We develop independent work units such as "skunkworks" to enhance creative thinking

EO_13   We develop effective ways to allow employees and project teams access to the needed resources to try their new ideas

EO_14   Efforts to create autonomy via actions such as bending rules and bypassing procedures and budgets

EO_15   Implementing necessary structural changes such as forming small autonomous groups to stimulate new ideas

Market orientation:

MO_01   Importance of customer commitment

MO_02   Importance of creating customer value

MO_03   Importance of understanding customer needs

MO_04   Importance of customer satisfaction objectives

MO_05   Importance of measuring customer satisfaction

MO_06   Importance of after-sales services

MO_07   Importance of salespeople sharing competitor information

MO_08   Importance of responding rapidly to competitors' actions

MO_09   Importance of top managers discussing competitors' strategies

MO_10   Importance of inter-functional customer calls

MO_11   Importance of information share among functions

MO_12   Importance of functional integration in strategy

MO_13   Importance of all functions contributing to customer value

MO_27   We frequently collect and evaluate general macroeconomic information (e.g., interest rate, exchange rate, gross domestic product, industry growth rate, inflation rate)

MO_28   We maintain contacts with officials of government and regulatory bodies (e.g., ministries and parliament) in order to collect and evaluate pertinent information

MO_29   We frequently collect and evaluate information concerning general social trends (e.g. environmental consciousness, emerging lifestyles) that might affect our business

MO_30   We frequently spend time with our suppliers to learn more about various aspects of their business

MO_31   We have cross-functional meetings very often to discuss market trends and developments (e.g., customers, competition, suppliers)

MO_32   We regularly have interdepartmental meetings to update our knowledge of regulatory requirements

MO_33   Technical people spend a lot of time sharing information about technology for new products with other departments

MO_34   Market information spreads quickly through all levels in our company

Market strategy:

STR_21   Product adaptation

STR_23   Adaptation of pricing

STR_25   Adaptation of promotional approach

INT_01   We develop similar channel structure for distributing any product in different country markets

Subjective performance:

GO_Sat05   How well did your company reach its growth objectives in year 2005
GO_Sat06   How well did your company reach its growth objectives in year 2006
GO_Sat07   How well did your company reach its growth objectives in year 2007

Objective performance:

OR_TO05   Operating Revenue / Turnover th EUR 2005
OR_TO06   Operating Revenue / Turnover th EUR 2006
OR_TO07   Operating Revenue / Turnover th EUR 2007
PL_05   Profit (loss) before tax th EUR 2005
PL_06   Profit (loss) before tax th EUR 2006
PL_07   Profit (loss) before tax th EUR 2007
PMA_05   Profit margin (%) 2005
PMA_06   Profit margin (%) 2006
PMA_07   Profit margin (%) 2007
RTA_05   Return on total assets (%) 2005
RTA_06   Return on total assets (%) 2006
RTA_07   Return on total assets (%) 2007
EMP_05   Employees 2005
EMP_06   Employees 2006
EMP_07   Employees 2007