A Work Project, presented as part of the requirements for the Award of a Master Degree in Management from the NOVA – School of Business and Economics

# STRATEGIC ORIENTATIONS, GENERIC STRATEGIES, AND EXPORT PERFORMANCE: A META-ANALYSIS

LAURA SCHOLZ, 27642

A Project carried out on the Master in Management Program, under the supervision of

Emanuel Gomes (Advisor)

Marc van Wegberg (Co-Advisor)

**Acknowledgements**

I would like to thank my advisors, Dr. Christopher Schlägel and Dr. Emanuel Gomes for the guidance in the past months. I cannot thank you enough for how much I have learned from you academically. However, I want to especially thank you for taking time for my concerns and supporting me whenever I was encountering obstacles.

I would like to thank Maastricht University and NOVA University for the great education I was able to experience. The program has opened many great opportunities not only in my career but especially in my personal life.

I would like to thank my sisters, Karina and Eva-Maria, for their irreplaceable support. I am grateful to share every memory of my life with you. ☘

I would like to thank my boyfriend Lennard and my dearest friend Stephanie for listening to me and supporting me throughout this incredible journey.

Finally, I would like to thank and dedicate this piece to my parents, Brigitte and Paul Scholz. I could make a list of all the things I want to thank you for, but most importantly, I want to thank you for your unconditional love.

## Abstract

**Purpose** – The current state of research about determinants of export performance is characterized by fragmentation and conceptual confusion leading to a substantial lack of generalizability. The underlying study analyzes strategic orientations as internal determinants of export performance, being mediated by the generic strategy of differentiation. The author's goal is to (1) synthesize existing empirical studies and meta-analytically cumulate the correlations, (2) test whether a firm's generic strategy is a mediator of the relationship between strategic orientations and export performance, and (3) proof empirically that the strategic orientations do not operate in isolation, but rather have joint effects.

**Theory development –** First, the relationship between the strategic orientations and export performance is proposed. Second, the strategic orientations are brought into relation with the generic strategy of differentiation. Third, a positive correlation between differentiation strategy and export performance is suggested. Finally, hypotheses are formulated that propose a direct mediation effect of differentiation in the relation of the strategic orientations and export performance. An explorative question is developed pointing out a possible common effect of the orientations on export performance that shall be tested using Commonality Analysis.

**Methodology** – In order to study the nature of the aforementioned relationships as well as their contingencies the underlying study utilizes bivariate meta-analysis. The inquiry is based upon 126 studies comprising 307,877 independent samples ($N$=307,877). Structural Equation Modeling serves as a tool to test the proposed mediation model for its goodness-of-fit. In order to test for unique and common effects, a Commonality Analysis is conducted.

**Results** – Strategic orientations correlate positively and statistically significantly with export performance as well as differentiation, supporting Hypotheses 1 and 2. The variables with the highest correlation coefficient are technology orientation and entrepreneurial orientation. In support of Hypothesis 3, the differentiation strategy is positively and statistically significantly related to export performance. In the Structural Equation Model, the partial mediation model turns out to have the highest fit, suggesting a partial mediation of differentiation between the strategic orientations and export performance (Hypothesis 4). The Commonality Analysis reveals that the common effects among the strategic orientations and differentiation have higher explanatory power than the unique effects. This result hints at the importance of a simultaneous pursuit of the strategic orientations in practice.

**Discussion** – Practical implications of the findings point out the necessity to shift the view on strategic orientations and hence not looking at them as alternative, but rather as complementary approaches. For theory, this implies that the focus of research must shift towards the joint consideration of the variables. Additionally, the operationalization of technology orientation must be revised since it has a fuzzy content domain, even though it is found to be one of the most influencing variables in the proposed model.

## Table of Contents

## List of Figures

## List of Tables

## List of Abbreviations

EO Entrepreneurial orientation

LO Learning orientation

MO Market orientation

TO Technological orientation

# 1. Introduction

In the face of globalization, businesses encounter the challenge of successfully creating value in an international setting. The most frequently used attempt to market penetration into foreign countries is exporting, as it allows a cost-effective as well as flexible entry mode (Sousa, Martínez-López, & Coelho, 2008; Vendrell-Herrero, Gomes, Mellahi, & Child, 2016). By diminishing their dependency on the domestic markets (Ciravegna, Majano, & Zhan, 2014), firms are enabled to build their competitive advantage on the success in foreign markets (Sapienza, Autio, George, & Zahra, 2006).

Consequently, an emerging measure of an international business' success is its *export performance* (Beleska-Spasova, 2014). Scholars have increasingly focused on identifying the determinants of export performance with the purpose of delivering actionable advice to managers in practice aiming at elevating success outside their national markets. These attempts have covered various possible internal as well as external determinants, for example market orientation and entrepreneurial orientation (Covin & Slevin, 1989; Jaworski & Kohli, 1993; Narver & Slater, 1990). The majority of studies conducted have concluded that these orientations positively impact the performance of businesses in exporting markets. While some researchers have focused on the direct relationship of the determinants with export performance, others have proposed and tested complex models including varying combinations of determinants, moderators and mediators. Consequently, in spite of this scholarly effort, the current state of research in this field is characterized by fragmentation and conceptual confusion leading to a substantial lack of generalizability (Beleska-Spasova, 2014; Sousa et al., 2008; Schlaegel, 2013). Integrative efforts have commonly been limited to qualitative reviews rather than quantitative analyses (Schlaegel, 2013). Hence, the present paper attempts to conceptualize the determinants of export performance and integrate diverse research outcomes in one conclusive model.

In this work, the author takes a resource-based perspective, focusing on firm-internal determinants of export performance. More specifically, the focal point of this analysis are the firm's strategic orientations and its generic strategy. According to Gatignon and Xuereb (1997), strategic orientations are principles that are pursued by a company aiming at elevating the business' performance by altering its strategic actions. Scholars have identified distinct categories of strategic orientations among the various determinants of export performance. The orientations mostly studied in an export context are (1) *entrepreneurial orientation*, pointing at processes towards new market entries, and (2) *market orientation*, referring to an organization's prioritization of its customers (Covin & Slevin, 1989; Jaworski & Kohli, 1993). There are two further strategic orientations that have been rather neglected in the export literature. These are (3) *learning orientation*, defining a firm's approach towards knowledge generation and usage, and (4) *technological orientation*, measuring a company's application of technologies as well as a drive towards developing new ones. Each of these constructs has been studied rather in isolation by several researchers (Beleska-Spasova, 2014; Sousa et al., 2008; Monteiro, Soares, & Rua, 2013; Abiodun, & Kida, 2016; Chantanaphant, Nabi, & Dornberger, 2011). Controversially, strategic orientations do not operate in isolation, but may have a joint effect on export performance (Hakala, 2011). It is the challenge of this analyses to integrate findings and merge the variables and their corresponding effects on export performance.

Advancing these streams of thought, the objective of the following paper is threefold. It is the author's goal to (1) synthesize existing empirical studies and meta-analytically cumulate the correlations, (2) test whether a firm's generic strategy is a mediator of the relationship between strategic orientations and export performance, and (3) proof empirically that the strategic orientations have joint effects.

To fulfill this purpose, the author structures the analysis as follows. First, the author defines the concepts and variables studied in the meta-analysis. Testable hypotheses are advanced and

an explorative question aiming at investigating the joint effect of the strategic orientations on differentiation strategy as well as export performance is specified. Second, methodological approaches are explained in detail, focusing on the literature search, the coding process and inclusion criteria, as well as the analytic procedures. Third, the statistical results are presented with relation to the stated hypotheses. Fourth, the results are discussed, focusing specifically on the interpretation of the Commonality Analysis and its conclusions for future practice. Finally, limitations are stated including future research directions.

## 2. Theoretical Background

Since academic contributions in the research area of export performance are rather fragmented, the present section of the paper approaches to bundle the knowledge about the investigated variables and formulates four central hypotheses as well as one research question.

With the rising importance of the study of the determinants of export performance the work conducted has continuously led to an improved understanding of the concept. The export performance of a firm essentially refers to a firm's success in its export markets. This success may be measured by researchers in financial terms, or in a rather qualitative nature. The categorization of the export performance construct may be found in Table 1.

**Table 1**

*Operationalization of Export Performance*

| Scale | Definition | Authors (e.g.) |
|---|---|---|
| *Financial measures* | - Sales measures, e.g. export sales performance, sales income, export intensity | Diamantopoulos & Schlegelmilch, 1994; Fernandez-Mesa & Alegre, 2015 |
| | - Profit measures, e.g. profit margin | Ellis, 2007 |
| | - Growth measures, e.g. sales growth | Ellis, 2007 |
| *Non-financial measures* | - Perceived success, e.g. "global" assessment of the firm's export success, subjective comparison to competitors | Evangelista, 1994; Ellis, 2007; Sorensen & Madsen, 2012 |
| | - Satisfaction | Ellis, 2007 |
| | - Goal achievement, e.g. performance relative to management objectives | Cavusgil & Zou, 1994 |
| *Composite scales* | - Measures based on a variety of the aforementioned performance measures | Ellis, 2007 |

*Note*: The categorization (column: "Scale") of export performance measures stems from Zou and Stan (1998).

According to Sousa et al. (2008), a total of 40 determinants of export performance can be identified in current literature. These variables contain a majority of internal factors (31

variables), highlighting the importance of firm-internal determinants. Being managerially controllable (Beleska-Spasova, 2014), these internal factors constitute an exciting focus for practioneers. Hence, internally evolving capabilities are the focus of the underlying research, pointing at an approach towards evidence-based strategy (Schlaegel, 2016). The internal determinants the current study focuses upon are strategic orientations and generic strategies.

The strategic orientation most investigated in the context of export performance is market orientation. At the same time, entrepreneurial orientation has played a significant role in theoretical as well as empirical contributions. Rather neglected forms of strategic orientations in the field of export performance are technology and learning orientation. The generic strategy of differentiation has been put into relation with most of the strategic orientations which is why it is investigated as a possible mediator in this study. These variables are further defined in the chapter below, giving theoretical background knowledge before advancing the hypotheses.

### 2.1 Strategic Orientations and Differentiation

*Market orientation (MO).* A firm is considered market oriented if it manages to satisfy customer needs and create superior customer value (Jaworski & Kohli, 1993). Consequently, the theory posits that the key to organizational success is in comprehending the needs of targeted customers. Kohli and Jaworski (1990) as well as Narver and Slater (1990) contributed to the MO literature to a significant extent in the 90s. The two sets of authors also represent two distinct conceptualizations of the MO construct. Kohli and Jaworski (1990) identify three key activities that are associated with MO: (1) market intelligence generation, (2) market intelligence dissemination, and (3) responsiveness to market intelligence. As such, market intelligence generation refers to the capability to not only identify customer's needs but also the ability to analyze and interpret external factors that may influence the target group's preferences. These may include political forces and technological developments (Diamantopoulos, 1993). As a subsequent step, in the process of market intelligence

dissemination, the generated knowledge must be adequately transmitted towards the corresponding departments within the firm. These activities are represented by horizontal as well as vertical information flows and communication (Diamantopoulos & Hart, 1993). Lastly, in referring to the responsiveness towards the gained market intelligence, actions must be taken that reflect the insights gained in the first two steps. Hence, selecting target markets and adapting a product are crucial components of MO (Kohli & Jaworski, 1990; Diamantopoulos & Hart, 1993). Narver and Slater's (1990) operationalization of the concept of MO manifests similarities to the previously mentioned one (Diamantopoulos & Hart, 1993). The authors define the following three dimensions that constitute MO: (1) customer orientation, (2) competitor orientation, and (3) inter-functional coordination. Customer and competitor orientations are both associated with the acquisition as well as the dissemination of knowledge about the target market's customers and relevant competitors. Inter-functional coordination embodies the collaboration among departments to convert the knowledge gained about customers and competitors into superior customer value (Narver & Slater, 1990). Either one of the previously mentioned conceptualizations of MO have been adapted by most researchers in the field of MO. Irrespective of which operationalization was used, several studies have proven a generally positive effect of MO on business performance or export performance (e.g. Kohli & Jaworski, 1990; Narver & Slater, 1990; Rose & Shoham, 2002; Thirkell & Dau, 1998). The principal explanation for the positive effect is in the following: market-orientation enhances recognition and responsiveness to changes in the marketplace which in turn constitute opportunities to create advantages over competitors (Rose & Shoham, 2002).

It is worth mentioning that Cadogan, Sundqvist, Salminen, and Puumalainen (2002) first defined MO specifically in the context of export markets. The term "export market orientation" is closely related to the definition by Kohli and Jaworski (1990), being defined by (1) the market intelligence generation in export operations, (2) its dissemination as well as (3) the

responsiveness towards customers and competitors in export markets (Sousa et al., 2008; Cadogan et al., 2002).

*Entrepreneurial orientation (EO).* According to Covin and Slevin (1991), entrepreneurship is a key success factor for high performing firms in a globalized world. Economic growth has become increasingly driven by entrepreneurial activity (Business Week, 1993). Before the notion of EO was conceptualized, researchers investigated the "entrepreneurial problem" (Miles, Snow, Meyer, & Coleman, 1978). This central strategic problem is concerned with the choice of market penetration. Later on, the emphasis shifted from this central strategic question towards operational activities. As such, it concerned changes in processes that would allow managers to act entrepreneurially (Lumpkin & Dess, 1996). Finally, strategy-making processes internal to a firm resulting in new market entry opportunities were defined as EO (Child, 1972; Van de Ven & Poole, 1995; Lumpkin & Dess, 1996). EO has been operationalized among three dimensions by Miller (1983): (1) innovativeness, (2) risk taking, and (3) proactiveness. As such, an EO is described by the company's engagement in product market innovation, its investments in risky projects and finally, its proactiveness in developing innovations with the aim to enter the market first (Miller, 1983). This definition has been adopted by several researchers subsequently (Covin & Slevin, 1989; Ginsberg, 1985; Naman & Slevin, 1993). Covin and Slevin (1991) have extended the framework by two further dimensions: (4) autonomy, and (5) competitive aggressiveness. Several academics have proven the positive association between EO and firm performance, or export performance (e.g. Wiklund & Shepherd, 2003; Rauch, Wiklund, Lumpkin, & Frese, 2009; Knight & Cavusgil, 2005; Baker & Sinkula, 2009). However, the magnitude of the underlying relationship has not been consistent among studies. Here is where meta-analyses can bundle findings and indicate a reasonable correlation coefficient.

*Learning orientation (LO).* The notion that basic organizational learning processes are necessary for successful business performance has gained attention in the 90s. For example, Day (1994) proposes that the direct result of a firm's superior learning ability is rapid adoption of a firm's internal processes (Lee, Courtney, & O'Keefe, 1992; Sinkula 1994; Fiol & Lyles, 1985). These have the potential to translate, after impacting new product success and profitability, into a sustainable competitive advantage. The construct of LO is composed of (1) the commitment to learning, (2) a firm's organizational culture in terms of willingness to challenge and change the status quo, and (3) its conjunction around a shared future vision (Baker & Sinkula, 1999; Baker, Sinkula & Noordewier, 1997; Lumpkin & Dess, 1996). In 2002, Calantone, Cavusgil, and Zhao defined a fourth dimension contained in the construct of LO: intra-organizational knowledge sharing. Fiol and Lyles (1985) emphasize that the behavioral change following knowledge acquisition is a necessary condition to enable organizational learning. Interestingly, LO is closely related to the concepts of EO and MO. More specifically, it has become widely accepted as an enabler of both EO and MO. This statement is justified by the assumption that both EO and MO are defined as learning constructs (Baker & Sinkula, 2009; Hult & Ketchen, 2001; Slater & Narver, 1995, 1998; Becherer & Maurer, 1997; Covin & Miles, 1999). As such, "EO and MO require organizational systems and values that facilitate higher order learning" (Baker & Sinkula, 2009, p. 447). Upon investigation, the necessity of learning as an underlying mechanism for the dimensions of EO and MO can be identified. Behaviors such as proactiveness, innovativeness, information generation and competitor orientation require a firm to adapt to its environment (Baker & Sinkula, 2002; Slater & Narver, 1995). This adaptation, in turn, is only possible if the firm is open to learning (Day, 1994; Hamel & Prahalad, 1994), e.g. about new technologies, innovations, customers or competitors which generally results in an increased level of productivity (Vendrell-Herrero et al., 2016).

*Technology orientation (TO).* Technologically proficient companies are more prone to engage in the development of new products or services as well as their internal processes (Al-Ansari, Altalib, & Sardoh, 2013). From a customer point of view, the development of technology has led to a preference for technologically superior offers by providers (Zhou, 2007). Hence, there has been increased importance of a firm's "ability and the will to acquire a substantial technological background and use it in the development of new products" (Gatignon & Xuereb, 1997, p.78), referred to as TO. It entails openness to any novel technology trends as well as a focus on research and development (Hortinha, Lages, & Lages, 2011; Slater, Hult, & Okson, 2007; Zhou, Yim, & Tse, 2005). According to Katila and Ahuja (2002), technology-oriented firms are committed to acquire technological knowledge. Consequences of TO within a firm include exploitative, rather moderate, as well as exploratory, hence radical, innovations (Quintana-Garcia & Benavides-Velasco, 2008). The relationship to business performance has not been thoroughly investigated (Al-Ansari et al., 2013). In a few studies, TO has proven to have a positive influence on a firm's performance (Gatignon & Xuereb 1997; Hortinha et al., 2011; Al-Ansari et al., 2013). This conclusion is comprehendible if assuming that the pursuit of TO leads to innovations which in turn bring the firm a competitive edge against competition. TO is the only one variable among the four strategic orientations investigated that is not operationalized through sub-dimensions. Hence, the conceptualization can be defined as rather fuzzy and unspecific.

*Differentiation*. Porter (1985) defined two fundamentally different strategic approaches that a firm may pursue: differentiation and low-cost advantage. Differentiation, often referred to as product differentiation, emphasizes the uniqueness of launched products and marketing efforts that may create a competitive advantage to a firm (Smith, 1956; Porter, 1980; White, 1986). Hence, it goes hand in hand with the products being perceived as superior to potential substitute products on the market (Phillip, Chang, & Buzzell, 1983). There are several pathways

to obtain a differentiated industry-wide recognition. For example, one can seek awareness through product design, brand image, technological advancements or service design (Knight & Cavusgil, 2005). In comparing these strategies, Knight and Cavusgil (2005) have found that especially the differentiation strategy has the potential to lead to higher international performance of globally acting firms, which in turn is enabled due to strong customer brand loyalty as well as low price sensitivity.

### 2.2 Hypotheses Development and Exploratory Research Question

The author proposes a conceptual model based on four central hypotheses regarding the relationship between the strategic orientations explained above, the differentiation strategy as well as the dependent variable, export performance (see Figure 1 below).

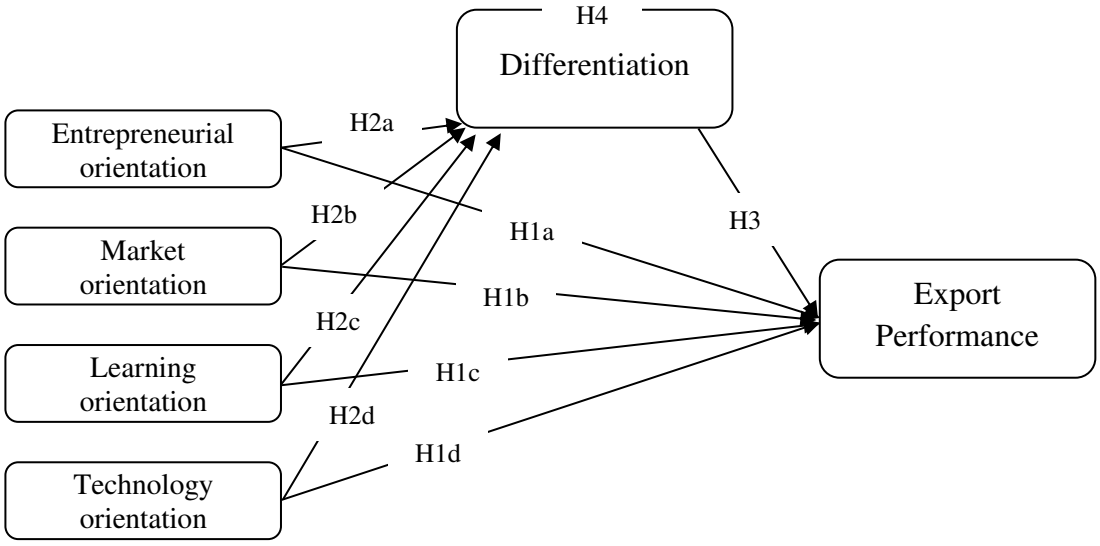


*Figure 1.* Conceptual Study Framework
*Note*: H4 indicates the mediation effect of differentiation for all the four strategic orientations.

*Strategic orientations and export performance.* Taking the resource-based view, it is assumed that a unique set of resources internal to the firm may lead to a sustainable competitive advantage. This pre-assumption holds if, and only if, the resources are valuable, rare, inimitable and organized to exploit (Barney, 1995). These criteria represent requirements that need to be subsequently fulfilled in order for a firm to sustain its competitive advantage. The framework by Barney is referred to as "VRIO"-framework. Resources can be either property-based or

knowledge based (Galunic & Rodan, 1998). As opposed to property-based resources, or tangible input resources, knowledge-based resources are distinct through their intangibility and resulting inimitability. According to Wiklund and Shepherd (2003), knowledge has the highest potential of becoming a source of sustainable competitive advantage because it is valuable, rare and difficult to imitate. However, to achieve a sustainable advantage, resources must be organized adequately internally to postulate value-creating strategies (Wiklund & Sheperd, 2003). This assumption draws upon the theory of dynamic capabilities by Eisenhardt and Martin (2000). A firm-level construct that has the potential to lead the firm to a sustainable competitive advantage it its strategic orientations, which are the fundament of how a firm is organized (e.g. Wernerfelt, 1984; Barney, 1991; Peteraf, 1993; Sousa, Martinez-Lopez, & Coelho, 2008; Wiklund & Shepherd, 2003). Hence, the author proposes that strategic orientations constitute knowledge-based resources that translate into a sustainable competitive advantage due to their fulfillment of the VRIO-criteria. Consequently, the basis of the first hypotheses (Hypotheses 1a-d) is the premise that the strategic orientation of a firm is positively associated with export performance.

More precisely, several researchers such as Covin and Slevin (1989), Miller (1983), Lumpkin and Dess (1996) as well as Wiklund and Shepherd (2003) have proven empirically that EO is a significant predictor of a business' success in domestic markets. In an exporting context, an entrepreneurial posture is especially desirable because a foreign market is characterized by higher complexity and riskiness (Balabanis & Katsikea, 2003). Proactiveness and the willingness to take risks will consequently lead to the possible acquisition of a first-mover advantage (Balabanis & Katsikea, 2003). Thus, in export markets the pursuit of an EO is expected to positively influence the exporter's performance (Knight & Cavusgil; Slevin & Covin, 1990; Hernandez-Perlines, 2016). The resulting hypothesis is:

*Hypothesis 1a: The EO of a firm is positively associated with export performance.*

The positive relationship between MO and business performance stems from the superior value that is created for buyers. The reason is that companies are more sensitive to their external environments and react upon information gathered in the marketplace (Jaworski & Kohli, 1993; Narver & Slater, 1990). The same reasoning holds true for the export markets since MO results in market intelligence for the export operations (Cadogan, Diamantopoulos, & Siguaw, 2002) and will thus lead to export success (Cadogan, Diamantopoulos, & De Mortanges, 1999). Rose and Shoham (2002) have investigated a positive correlation with change in export sales, export profits as well as change in export profits. Hence the author postulates the following relationship:

*Hypothesis 1b: The MO of a firm is positively associated with export performance.*

Due to the fact that LO has been found to have a positive effect on organizational behavior, it therewith impacts the performance positively (Slater & Narver, 1995). This assumption is related to the learning-by-export effect. The theory suggests that by acting in foreign markets, a firm's knowledge base increases (Van Biesebroeck, 2005; Vendrell-Herrero et al., 2016). According to Wheeler, Ibeh, and Dimitratos (2008) this in turn effects the firm's export competitiveness (Vendrell-Herrero et al., 2016). However, to this day the function of LO within the export venture of the firm has been tested only rarely in an empirical manner (Souchon, Sy-Changco, & Dewsnap, 2012). In an export context, it is assumed that fast adaption to prior unknown information in a novel market has even greater importance. The company must be willing to adapt internal processes according to the external environment (Baker & Sinkula, 2002). As such, adaptive learning facilitates the development of incremental as well as disruptive innovations (Baker & Sinkula, 2002). In 2016, Abiodun and Mahmood have tested a positive relationship between LO and export performance. Hence, the following hypothesis is developed:

*Hypothesis 1c: The LO of a firm is positively associated with export performance.*

In the pursuit of innovation, a solid TO within a firm is essential (Gatignon & Xuereb, 1997; Hortinha et al., 2011; Al-Ansari et al., 2013). Technology-oriented firm put forth a relatively high amount of effort into research and development. Furthermore, firms with a strong TO are more inclined to integrate novel technologies into the product catalogue (Slater, Hult, & Olson, 2007; Hortinha et al., 2011). Hence, TO has a positive impact on innovation performance as well as business performance overall (Al-Ansari et al., 2013). It is proposed, that given the factors mentioned above, a solid TO within the firm will facilitate performance improvement not only in domestic markets but also in export markets. Hence, the resulting hypothesis proposes as follows:

*Hypothesis 1d: The TO of a firm is positively associated with export performance.*

*Strategic orientations and differentiation.* Differentiation can be achieved by ownership and development of knowledge-based resources (Wiklund & Shepherd, 2003), which in this case refers to distinctive strategic orientations. Some of the strategic orientations investigated have been explicitly put into relation with the generic strategy of differentiation defined by Porter (1990). Results underline the premise that strategic orientations positively affect the firm's differentiation strategy. If resources are intangible, they become hard to imitate and facilitate a unique status in the market that distinguishes a firm from its competitors. Hence, the author postulates that the strategic orientation of a firm is positively associated with differentiation.

Firms pursing an EO are more likely to set themselves apart from competitors due to product uniqueness (Hartsfiled, Johnson, & Knight, 2008). Proactiveness and riskiness allows firms to enter into new markets quickly and gain a first-mover advantage. Innovativeness has the potential to establish a sustainable competitive advantage since it gives firms the opportunity to continue to stay ahead of competition in the future. Several scholars such as Man and Wafa (2009) and Abdolvand, Heidarzadeh, and Kuzegar (2012) have empirically proven

the significant positive relationship between components of the resource-based view and the generic strategy of differentiation. Hence, the author proposes the following relationship:

*Hypothesis 2a: The EO of a firm is positively associated with differentiation.*

Differentiation cannot only be achieved by product uniqueness but also through leveraging a firm's brand image, its customer service or design (Hartsfiled, Johnson, & Knight, 2008). This form of differentiation may be achieved especially through a strong MO. Narver and Slater (1990) put forward that market-oriented companies perform better because of the superior product design skills and the advanced effectiveness of marketing activities (Baker & Sinkula, 2002; Abdolvand et al., 2012). More than any other generic strategy, differentiation is built upon the delivery of superior products to customers. Hence, if a firm pursues a competitor orientation, it can benchmark itself with the competition and create these superior product designs. On top of that, a focus on customers serves as an impulse for novel product or marketing ideas that generate value in the eyes of the customers. Due to these reasons, it is assumed that:

*Hypothesis 2b: The MO of a firm is positively associated with differentiation.*

According to Dickson (1996) as well as Hunt and Morgan (1996), organizational learning is a key factor in the firm's competitive position. Since learning processes are highly complex and can therefore hardly be imitated, they are prone to provide the organization with a substantial benefit. This benefit arises through the ability to constantly improve and adjust to environmental changes (Lages, Silva, & Styles, 2009). Morgan, Kaleka, and Katsikeas (2004) have supported the hypothesis that organizational learning is positively related to a competitive advantage based on product design and innovativeness. As such, the following hypothesis is stated:

*Hypothesis 2c: The LO of a firm is positively associated with differentiation.*

With an emphasis on research and development, technology-oriented firms can gain competitive advantage. Chen, Chen and Zhou (2014) very specifically identify TO as a key antecedent of a firm's differentiation advantage. Radical innovations oftentimes are drivers of differentiation advantages (Hortinha et al., 2011). Interestingly, TO is an antecedent of radical innovations and can therefore create a competitive edge through creating product uniqueness. It can be assumed that the focus on technological development may deliver a technology-oriented company not only product advancements but also superior internal processes (i.e. technologies for information exchange). Hence, it is postulated that:

*Hypothesis 2d: The TO of a firm is positively associated with differentiation.*

*Differentiation and export performance.* Generally speaking, a differentiation strategy encounters the possession of goods that are in some kind unique to the products sold elsewhere in the market. Several researchers have brought the generic strategy of differentiation in relation to a superior performance in export markets (Brooks, 2006; Calantone & Knight, 2000; Baldauf Cravens, & Wagner, 2000; Brouthers, O'Donnell, & Hadjimarcou, 2005; Abdolvand, Heidarzadeh, & Kuzegar, 2012). Findings suggest that an important mediator of this relationship is the external environment, or more concrete the market firms target (Boehe & Cruz, 2010). The findings suggest the pursuit of a cost leadership strategy if companies from developing countries export into developed countries. The positive relation between differentiation and export performance is only supported when companies transfer goods between two developing countries (Aulakh, Katobe, & Teegen, 2000). In studying export performance, Aulakh et al. (2000) have discovered that innovation differentiation and corporate social responsibility differentiation are more important predictors than quality differentiation. While Baldauf et al. (2000) also found that a differentiation strategy increases export effectiveness, their research suggests a negative relationship between differentiation and export intensity and number of sales. Even though findings are mixed and might depend on the precise

definition of the generic strategy pursued as well as the definition of export performance, the author proposes a positive relation between differentiation an export performance. This conclusion is reasoned primarily with the high margins achieved through uniqueness, an improved brand image and resulting customer loyalty as well as being able to stand out from the crowd of competitors. Consequently, the relationship hypothesized is:

*Hypothesis 3: Differentiation is positively associated with export performance.*

*Differentiation as a mediator between strategic orientations and export performance.* In 2012, Abdolvand et al. first investigated the relation between the strategic orientations EO and MO being mediated by the differentiation strategy of a firm. The researchers proved empirically that the competitive strategy of a business mediates the relation between MO and EO. The possible mediation of the differentiation strategy has neither been tested in relation of TO to export performance nor in the relation of LO to export performance. Based on the arguments and the relations proposed above, however, the author is confident in hypothesizing that in general, the differentiation strategy mediates each of these relationships. Hence, for the four strategic orientations the following hypothesis is specified:

*Hypothesis 4: A differentiation strategy mediates the association between the (a) EO and export performance, (b) MO and export performance, (c) LO and export performance as well as (d) TO and export performance.*

*The unique and common effects of the strategic orientations.* The challenge in academic research has been the multidimensionality of the diverse strategic orientations, the diffused operationalization of variables as well as the isolated study of each dimension by itself. With regards to the high collinearity of the variables that has been tested previously (Rose & Shoham, 2002), the question remains whether there is any advantage for firms stemming from the adoption of several strategic orientations at the same time. Given the fact that many of these

strategic orientations are tightly linked, a simultaneous adoption is a plausible approach. For example, EO may be related to technological innovativeness (referring to TO). Also, MO and LO are proposed to reinforce each other by Day (1994) due to mutually reinforcing outside-in (MO) and inside-out (LO) learning processes.

Expressed more precisely, the question is whether there are only unique effects resulting from the implementation of certain strategic orientations or whether any additional value may be created for firms that conjointly emphasize several orientations (common or joint effect). In statistical terms, this means that the explained variance is decomposed into $2^k - 1$ components of variance explained, k being the number of dimensions investigated. Looking at four strategic orientations, the decomposition would mean to investigate not only the four unique effects, but also 11 common effects ($2^4 - 1 = 15$ (= 4 unique effects + 11 common effects); Schlaegel, 2017). 11 common effects because of six possible combinations of different pairs of dimensions (EO-MO, EO-TO, EO-LO, MO-TO, MO-LO, LO-TO), four common effects of pairs of three (EO-MO-TO, EO-LO-TO, EO-MO-LO, MO-LO-TO) and one common effect of all orientations conclusively (EO-MO-LO-TO). This concept is illustrated in the Figure 2 below.

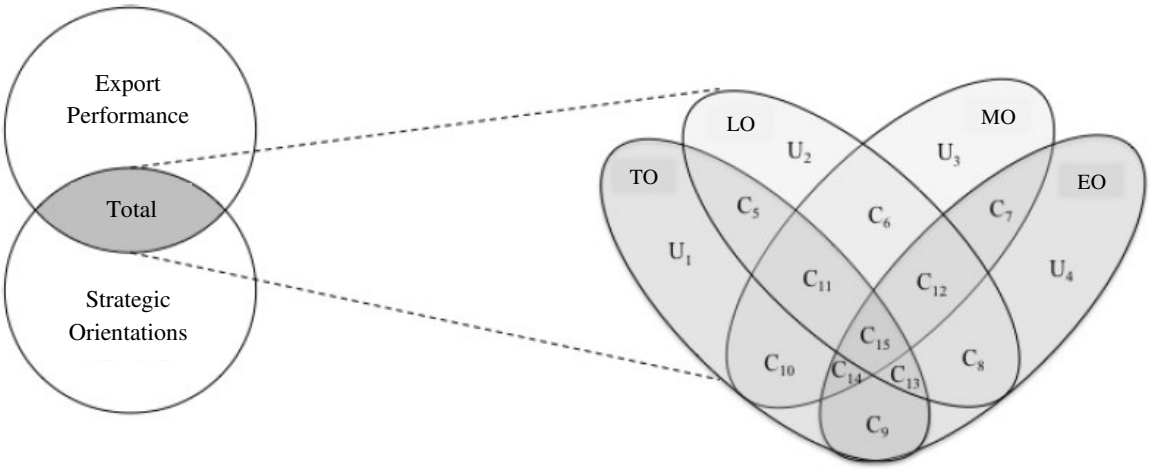


*Figure 2*. Partitioning the Export Performance's Variance
Note: Figure withdrawn and adjusted from Schlaegel, Sarstedt, & Reichel (2017).
U1,2,3,4= unique effects of TO, LO, MO, and EO on export performance;
C5,6,7,8,9,10 = first order commonalities of TO-LO, LO-MO, MO-EO, EO-LO, TO-EO, and TO-MO;
C11, 12, 13, 14 = second order commonalities of TO-LO-MO, LO-MO-EO, EO-LO-TO, and MO-EO-TO;
C15 = third order commonality of LO-TO-MO-EO.

On the one hand, unique effects describe the explained variance in export performance by each of the dimensions included. That means, that the change in one dimension leads to a specified variance in the dependent variable, export performance. Joint effects, on the other hand, lead to a change in the outcome variable only if the variables sharing significant common effects are altered simultaneously. Hence, if EO and MO have a specified direct effect on export performance, their joint existence would add the common effect on top of both unique effects. In order to investigate these mechanisms, the author formulates an explorative research question and conducts a Commonality Analysis in addition to the meta-analysis.

*Research question 1: Do common effects of strategic orientations explain the variance in differentiation or export performance beyond the unique effects of the individual variables?*

# 3. Methodology

The current research stance of the antecedents of export performance faces challenges of fragmentation in literature and results, conceptual confusion and lack of generalizability. Meta-analyses enable for the joint consideration of individually studied effects, reduce the limitations of isolated research studies and facilitate the identification of comprehensive moderators. In an effort to respond to the call of academics to consolidate findings, dissolve conceptual confusion and allow generalizability, the underlying study uses a bivariate meta-analysis. The results are complemented by a Structured Equation Model that tests the mediation effect of differentiation in the relationship of the strategic orientations and export performance. Finally, a Commonality Analysis is conducted to shed light on the research question in an explorative approach.

## 3.1 Literature Search and Sample

The first stage in the meta-analytic process is the identification of relevant published and unpublished studies to be included in the analysis (Ellis, 2010). The literature search was conducted in a four-step procedure. Applicable studies were searched in the time frame of the first conceptualization of the independent variables until the year 2017. First, review articles (e.g. Rauch et al., 2009; Sousa et al., 2008) as well as existing meta-analyses (e.g. Schlaegel & Koenig, 2013; Baunack, 2014; Schmezko, 2014; Scholz, 2013) were consulted to identify academic contributions to be included in the analysis. Second, correlational studies of at least one set of the studied variables were identified via keyword search in electronic databases. The author mainly used the databases *Google Scholar*, *Scopus*, *Ebsco*, and the Maastricht University online library to access published studies. Keywords used to search for papers of interest are summarized in Table 2 below.

**Table 2**

*Keyword Search*

| Variable | Words used in the literature search |
|---|---|
| **Export performance** | "export performance"; "export intensity"; "export"; "export marketing performance"; "exporting" |
| **Market orientation** | "market orientation"; "export market orientation"; "market intelligence generation", "market intelligence dissemination" and "responsiveness to market intelligence"; "customer orientation", "competitor orientation", and "inter-functional coordination" |
| **Entrepreneurial orientation** | "entrepreneurial orientation"; "international entrepreneurial orientation"; "entrepreneurship"; "innovativeness", "risk-taking", and "proactiveness" |
| **Technology orientation** | "technology orientation"; "technological orientation" |
| **Learning orientation** | "learning orientation"; "shared vision", "openmindedness", and "commitment to learning" |
| **Differentiation** | "differentiation"; "product differentiation"; "differentiation strategy"; "generic strategy of differentiation"; "differentiation capability" |

*Note:* The keyword search for the independent variables was conducted in combination with the dependent variable export performance, ensuring the comparability among measurements.

Third, to obtain unpublished studies, such as dissertations or conference papers, an unstructured search using Google was conducted. This step was performed to prevent a possible publication bias (Rothstein, Sutton, & Borenstein, 2006). Finally, the reference lists of obtained studies in the first three steps were scanned for further relevant correlational studies to be included. The literature search has been conducted solely in English due to the author's limited language skills as well as time and resource constraints. In case identified studies were not available online the authors of the studies at hand were contacted via email. All in all, the key word search resulted in the identification of more than 450 papers out of which the author investigated and screened a total of approximately 270 studies (see Table 3). These studies were sorted out on the basis of the inclusion criteria described in the following paragraph.

### 3.2 Inclusion Criteria and Coding

To finally calculate the mean effect size and conduct the meta-analysis, studies applying to the criteria were selected (Ellis, 2010). Consequently, strict inclusion criteria were put in place. Six inclusion criteria were set for the meta-analysis. First, the dependent variable described in the study must be export performance or else differentiation in an export context, being operationalized as commonly described in prior research. The validity of the meta-analysis is guaranteed by comparing the specific concepts of export performance and differentiation being measured similarly among studies (Ellis, 2010). Second, the source must be a quantitative empirical study that includes correlation coefficients as output variables (e.g. Pearson correlation coefficient, $R^2$s, beta coefficients; Ellis, 2010). Alternatively, measures are identified that can be converted into correlation coefficients, such as odds ratio or Glass's deltas (Ellis, 2010). Third, in order to satisfy the assumption of independence, each existing data set can only be included once. As such, if several studies make use of the same database, only the study containing most information is included. Fourth, solely the studies that use primary data as opposed to secondary data are consulted. In case primary data was obtained from different countries, this data was disaggregated and treated as separate sets of samples for the following coding process. Fifth, if studies are to be included that investigate correlations between variables other than export performance, the subjects included in the study must be defined in an export context. As such, if works were found that study the relationship of differentiation and EO, then an exporting activity of the companies included must be explicitly mentioned, otherwise the studies were excluded. An exemption from this rule was made for the relationship between TO and differentiation since there was only a very limited number of studies found that were conducted in an export context. Finally, the strategic orientations must be operationalized in common ways as identified in the literature review. A study is included if, and only if, at least two of the identified sub-concepts are investigated (e.g. for EO at least two variables from (1) innovativeness, (2) proactiveness, or (3) riskiness). In that case, the mean of

the measures of reliability as well as the correlations are calculated and included. Under the subject of the stated inclusion criteria the underlying analysis comprises a total of 126 studies (126 independent samples, *N*= 307,877). Remaining studies from the screening process were mostly qualitative in nature and thus not relevant (see Table 3).

**Table 3**

*Number of Identified Studies in Each Step*

| | **Number of studies** |
|---|---|
| Keyword search | 460 |
| Studies screened | 270 |
| After applying inclusion criteria | 126 |

To convert the obtained raw study data into a database serving for the purpose of conducting the meta-analysis, the selected studies were coded. The aim of coding subjects for sample characteristics (i.e. sample size, construct measurements) is to detect possible moderators. The following information was coded: (1) author(s), (2) journal, (3) dependent variable – typically "export performance" or similar measures (see Table 1), (4) measurement of the dependent variable, (5) independent variable, (6) measurement of the independent variable, (7) Cronbach's alpha for each variable included (if given), (8) year of data collection (if not given, the publication date was subtracted by 3 years in order to obtain the year of data collection), (9) sample size, (10) country of study, (11) industrial sector, (12) firm size, (13) response rate, (14) unit of analysis (either exporting firm or export venture), and (15) the correlations determined. A summary of the coded studies is included in Table 4.

**Table 4**

*Studies Included in the Meta-Analysis*

| Study | Year | *N* | Country | Industry | Firm size | Variables included |
|---|---|---|---|---|---|---|
| Abdolvand, Heidarzadeh, & Kuzegar, 2012 | 2009 | 91 | Iran | single | SML | EO, MO, Diff |
| Abiodun, 2016 | 2013 | 457 | Nigeria | multiple | SME | EO, LO |
| Ahimbisibwe & Abaho, 2013 | 2010 | 195 | Uganda | multiple | SME | EO |
| Ahimbisibwe, Ntayi, & Ngoma, 2013 | 2010 | 56 | Uganda | single | SME | EO |
| Alotaibi & Zhang, 2017 | 2013 | 175 | Saudi Arabia | multiple | SML | MO |
| Argouslidis & Indounas, 2010 | 2005 | 243 | UK | single | SML | MO |
| Armario, Armario, & Ruiz, 2008 | 2005 | 112 | Spain | multiple | SME | MO |
| Aulakh, Kotabe, & Teegen, 2000 | 1996 | 196 | Brazil, Chile, Mexico | multiple | SML | Diff |
| Balabanis & Katsikea, 2003 | 2000 | 82 | UK | multiple | SML | EO |
| Boso, 2010 | 2009 | 212 | UK | multiple | SML | EO, MO |
| Boso, Cadogan, & Story, 2012 | 2009 | 212 | UK | multiple | SML | EO, MO |
| Boso, Cadogan, & Story, 2013 | 2010 | 164 | Ghana | multiple | SME | MO |
| Boso, Cadogan, Story, & Kaponde, 2011 | 2008 | 164 | Ghana | multiple | SME | EO, MO |
| Brouthers, Nakos, & Dimitratos, 2014 | 2011 | 162 | USA, UK | multiple | ML | EO |
| Cadogan, Boso, Story, & Adeola, 2016 | 2013 | 212 | UK | multiple | SML | EO, MO |
| Cadogan, Cui, & Li, 2003 | 2000 | 137 | Hong Kong | multiple | SME | MO |
| Cadogan, Diamantopoulos, & De Mortanges, 1999 | 1996 | 198 | UK | multiple | SML | MO |
| Cadogan, Diamantopoulos, & De Mortanges, 1999 | 1996 | 103 | Netherlands | multiple | SML | MO |
| Cadogan, Diamantopoulos, & Siguaw, 2002 | 1999 | 206 | USA | multiple | SML | MO |
| Cadogan, Kuilalainen, & Sundqvist, 2009 | 2006 | 783 | Finland | multiple | SML | MO |
| Cadogan, Sundqvist, Salminen, & Puumalainen, 2002 | 1999 | 783 | Finland | multiple | SML | MO |
| Calabro, Campopiano, Basco, & Pukall, 2016 | 2013 | 113 | Germany | multiple | SME | EO |
| Celec, Globocnik, & Kruse, 2014 | 2010 | 102 | Slovenia | multiple | SME | EO, MO |
| Chen, Chen, & Zhou, 2014 | 2011 | 156 | China | single | ML | TO, Diff |
| Chen, 2012 | 2009 | 105 | New Zealand | multiple | SME | Diff |

| | | | | | | |
|---|---|---|---|---|---|---|
| Chung, 2012 | 2009 | 100 | New Zealand | multiple | SML | MO |
| Crespo, Simões, & Fontes, 2012 | 2011 | 416 | Portugal | multiple | SML | EO |
| Diamantopoulos & Kakkos, 2007 | 2004 | 171 | UK | multiple | SML | MO |
| Dodd, 2005 | 2002 | 115 | Australia | multiple | SML | MO |
| Ellis, 2007 | 2004 | 345 | Taiwan | multiple | SME | MO |
| Emöke-Szidonia, 2015 | 2013 | 122 | Romania | multiple | SME | EO |
| Etchebarne, Geldres, & García-Cruz, 2010 | 2007 | 88 | Chile | multiple | SML | EO |
| Eusebio, Llonch Andreu, & Pilar López Belbeze, 2007 | 1998 | 133 | Spain, Italy | single | SME | Diff |
| Fernandez-Mesa & Alegre, 2015 | 2011 | 150 | Spain, Italy | single | SME | EO |
| Francis & Collins-Dodd, 2000 | 2000 | 88 | Canada | multiple | SME | EO |
| Fuchs, 2009 | 2009 | 146 | Germany | multiple | SME | MO |
| Fung, Gao, Lu, & Mano, 2008 | 2005 | 203853 | China | multiple | SML | Diff |
| Gao, Murray, Kotabe, & Lu, 2010 | 2007 | 74576 | China | multiple | SML | Diff |
| Gatignon & Xuereb, 1997 | 1994 | 393 | USA | multiple | SML | TO, Diff |
| Gilaninia, Monsef, & Mosaddegh, 2013 | 2010 | 75 | Iran | single | SML | TO |
| Gnizy & Shoham, 2014 | 2010 | 103 | USA | multiple | SML | EO, MO |
| Greenman, 2004 | 2001 | 65 | USA | single | SML | EO, MO, LO |
| Hartsfield, Johnson, & Knight, 2008 | 2006 | 195 | USA | multiple | SML | EO, Diff |
| He & Wei, 2011 | 2008 | 230 | China | multiple | SML | MO |
| He, Brouthers, & Filatochev, 2013 | 2008 | 214 | China | multiple | SML | MO |
| Hernandez-Perlines, Moreno-Garcia, & Yanez-Araque, 2016 | 2014 | 174 | Spain | multiple | SME | EO, Diff |
| Hoang, 2015 | 2012 | 142 | Taiwan | single | SME | MO |
| Holterman, 2012 | 2009 | 60 | Netherlands | single | SME | EO |
| Hortinha, Lages, & Lages, 2011 | 2009 | 170 | Portugal | single | SME | TO |
| Hortinha, Lages, & Lages, 2011 | 2009 | 193 | Portugal | single | SML | TO, Diff |
| Hughes, Martin, Morgan, & Robson, 2010 | 2007 | 260 | Mexico | single | SME | Diff |
| Ismail, 2011 | 2008 | 228 | Malaysia | multiple | SME | MO |
| Jalali, 2012 | 2009 | 154 | Iran | single | SME | EO |
| Jin, Jung, & Jeong, 2017 | 2014 | 401 | Korea | single | SME | EO |

| | | | | | | |
|---|---|---|---|---|---|---|
| Johansen & Knight, 2010 | 2008 | 359 | USA | multiple | SML | EO, MO |
| Karelakis, Mattas, & Chryssochoidis, 2008 | 2005 | 110 | Greece | single | SML | Diff |
| Kazem & van der Heijden, 2006 | 2005 | 18 | Egypt | single | SME | EO |
| Kim & Jeong, 2013 | 2010 | 144 | South Korea | single | SML | MO |
| Kim-Soon, Mostafa, Mohammed, & Ahmad, 2015 | 2012 | 223 | Malaysia | single | SME | MO |
| Knight & Cavusgil, 2004 | 2001 | 203 | USA | single | SME | EO, Diff |
| Knight, 2001 | 1999 | 268 | USA | multiple | SME | EO, MO |
| Kropp, Lindsay, & Shoham, 2006 | 2003 | 539 | South Africa | multiple | SME | EO, MO, LO |
| Kuivalainen, Sundqvist, & Servais, 2008 | 2005 | 1075 | Finland, New Zealand | multiple | SML | MO |
| Kumulu, 2014 | 2012 | 271 | Turkey | multiple | SME | Diff |
| Kwon & Hu, 2000 | 1997 | 341 | Korea | single | SME | MO |
| Kwon, 2010 | 2007 | 152 | China | single | SML | MO |
| Kwon, 2010 | 2007 | 16 | India | single | SML | MO |
| Lai, Li, Wang, & Zhao, 2008 | 2005 | 105 | China | single | SML | TO, Diff |
| Lages, Silva, & Styles, 2009 | 2006 | 112 | Portugal | multiple | SML | LO, Diff |
| Leitner & Güldenberg, 2010 | 2003 | 100 | Austria | multiple | SME | Diff |
| Lengeler, Sousa, & Marques, 2013 | 2013 | 197 | Brazil | multiple | SML | MO |
| Leonidou, Palihawadana, & Theodosiou, 2011 | 2008 | 223 | UK | multiple | SML | Diff |
| Li & Cavusgil, 2000 | 1997 | 172 | USA | single | SML | MO |
| Lin, Huang, & Peng, 2014 | 2011 | 244 | Taiwan | single | SML | MO |
| Ling-yee & Ogunmokun, 2001 (a) | 1998 | 111 | China | multiple | SME | Diff |
| Ling-yee & Ogunmokun, 2001 (b) | 1996 | 118 | China | multiple | SME | Diff |
| Lisboa, Skarmeas, & Lages, 2011 | 2008 | 252 | Portugal | single | SME | EO, Diff |
| Lisboa, Skarmeas, & Lages, 2011 | 2008 | 262 | Portugal | multiple | SME | MO |
| Lisboa, Skarmeas, & Lages, 2013 | 2010 | 267 | Portugal | single | SME | MO |
| Mac & Evangelista, 2016 | 2013 | 128 | China | multiple | SML | MO |
| MacPherson, 2000 | 1997 | 173 | USA | single | SME | MO |
| Makri, Theodosiou, Katsikea, & Avlonitis, 2013 | 2010 | 168 | Greece | multiple | SML | MO |
| Martin & Javalgi, 2016 | 2013 | 260 | Mexico | single | SML | EO |

| | | | | | | |
|---|---|---|---|---|---|---|
| Mavrogiannis, Bourlakis, Dawson, & Ness, 2008 | 2002 | 103 | Greece | single | SML | EO |
| Miocevic & Crnjak-Karanovic, 2011 | 2009 | 125 | Croatia | single | SME | MO |
| Miocevic, 2013 | 2010 | 117 | Croatia | single | SME | MO |
| Moen, 2002 | 2009 | 219 | UK | single | SML | MO |
| Monteiro, Soarez, & Rua, 2017 | 2011 | 265 | Portugal | multiple | SML | EO |
| Morgan, Kaleka, & Katsikeas, 2004 | 2001 | 287 | Global | multiple | SML | Diff |
| Murray, Gao, & Kotabe, 2010 | 2007 | 491 | Asia, USA, EU | multiple | SML | MO, Diff |
| Murray, Gao, & Kotabe, 2011 | 2002 | 468 | China | multiple | SML | MO, Diff |
| Murray, Gao, Kotabe, & Zhou, 2007 | 2004 | 240 | China | multiple | SML | MO |
| Murray, Gao, Kotabe, & Zhou, 2007 | 2004 | 251 | Asia, USA, EU | multiple | SML | MO |
| Mutulu & Aksoy, 2014 | 2011 | 33 | Turkey | single | SME | EO |
| Navarro-Garcia, Arenas-Gaitan, & Rondan-Cataluna, 2014 | 2011 | 212 | Spain | multiple | SML | MO |
| Nguyen, Barrett, & Nguyen, 2007 | 2004 | 283 | Vietnam | multiple | SML | MO |
| Nguyen, Barrett, & Nguyen, 2007 | 2003 | 144 | Vietnam | multiple | SML | MO |
| O'Cass & Ngo, 2011 | 2008 | 300 | Australia | multiple | SML | EO, MO |
| O'Cass & Ngo, 2011 | 2008 | 259 | Vietnam | multiple | SML | EO, MO |
| Pansuwong, 2009 | 2007 | 202 | Thailand | single | SME | EO |
| Patel & D'Souza, 2009 | 2007 | 270 | USA | multiple | SME | EO |
| Pett & Wolff, 2003 | 2000 | 149 | USA | multiple | SME | Diff |
| Prasad, Ramamurthy, & Naidu, 2001 | 1998 | 381 | USA | multiple | SME | MO |
| Racela, Chaikittisilpa, & Thoumrungroje, 2007 | 2004 | 279 | Thailand | multiple | SML | MO |
| Ray, Gubbi, & Chittoor, 2007 | 2004 | 550 | India | single | SML | Diff |
| Rose & Shoham, 2002 | 1999 | 124 | Israel | multiple | SML | MO |
| Roxas & Chadee, 2011 | 2007 | 175 | Phillippines | multiple | SME | EO |
| Salavou, 2005 | 1997 | 150 | Greece | single | SME | TO, Diff |
| Salavou & Halikias, 2009 | 2006 | 101 | Greece | multiple | SML | Diff |
| Schilke, Reimann, & Thomas, 2009 | 2006 | 489 | USA | multiple | SML | Diff |
| Simões, 2012 | 2010 | 52 | Portugal | multiple | SML | Diff |
| Sinkovics, Sinkovics, & Jean, 2013 | 2010 | 115 | UK | multiple | SME | EO, MO |
| Skarmeas, Lisboa, & Saridakis, 2016 | 2013 | 265 | Portugal | single | SME | EO |

| | | | | | | |
|---|---|---|---|---|---|---|
| Solberg & Olsson, 2010 | 2007 | 80 | Norway | single | SME | TO |
| Sorensen & Madsen, 2012 | 2009 | 249 | Denmark | single | SML | MO |
| Souchon, Sy-Changco, & Dewsnap, 2012 | 2009 | 354 | Phillippines | multiple | SML | LO |
| Sousa & Bradley, 2009 | 2006 | 287 | UK, Portugal | single | SME | TO |
| Sundqvist, Kyläheiko, Kuivalainen, & Cadogan, 2012 | 2009 | 783 | Finland | single | SML | EO |
| Tantong et al., 2010 | 2007 | 252 | Thailand | single | SML | MO |
| Thirkell & Dau, 1998 | 1993 | 213 | New Zealand | single | SME | MO, Diff |
| Ussahawanitchakit, 2007 | 2004 | 165 | Thailand | single | SML | EO, LO |
| Yan, He, & Cheng, 2017 | 2013 | 230 | China | single | SML | MO |
| Zehir, Köle, & Yildiz, 2015 | 2012 | 474 | Turkey | single | SME | MO |
| Zhang, 2005 | 2002 | 51 | USA | single | SML | EO, LO |
| Zhang, 2005 | 2002 | 106 | China | single | SML | EO |
| Zhang & Zhu, 2015 | 2012 | 220 | China | single | SML | MO, TO |

*Note: N* = total sample size per study, Year = year of data collection, UK = United Kingdom, USA = United States of America, SME = small and medium sized enterprises, SML = small, medium and large enterprises, ML = medium and large enterprises, MO = market orientation, EO = entrepreneurial orientation, TO = technology orientation, LO = learning orientation, Diff = differentiation

### 3.3 Analytic Procedures

#### 3.3.1 Meta-Analytic Procedures

To conduct the meta-analysis, and thereby evaluate Hypothesis 1-3, the various measures of effect sizes had to be converted into a common metric. The author has utilized the Pearson's correlation coefficient (Pearson's *r*) to report effect sizes (Ellis, 2010). The studies selected either reported Pearson's *r* or regression coefficients ($\beta$ = beta). Therefore, the values extracted from regression analyses had to be converted into correlation coefficients using the procedure introduced by Peterson and Brown (2005). The values of negative betas equal the Pearson's correlation coefficient. In case betas were positive, the value 0.05 needed to be added ($r = \beta + 0.05$). To avoid the effect of "*inflated N's*", for studies that included several measures of the dependent variable (see Table 1) or separate coefficients for each sub-concept of the dependent variables (see Table 5) the average effect was determined and coded.

The actual bivariate analysis is conducted in order to draw conclusions about the magnitude, direction as well as the significance of the relationship among the variables studied. The meta-analytic procedure by Hunter and Schmidt (2004) was used since it corrects for two types of errors: sampling and measurement errors. In the process of correcting for the measurement error, the Cronbach's alpha, the internal reliability estimate, was utilized when available (Geyskens, Krishnan, Steenkamp, & Cunha, 2009). Alternatively, the average internal reliability measure was assigned and used as an estimate (Lipsey & Wilson, 2001). The *Q*-statistic as well as the $I^2$, being more appropriate in meta-analyses, were used as measures for the heterogeneity of effect sizes. If Chi-square tests (*Q*-statistic) are significant, the result indicates heterogeneity among groups and a consequent need for a moderator analysis. $I^2$ measures the heterogeneity compared to the total variation in observed effect sizes (Higgins & Thompson, 2002). Hence, the $I^2$ is an indicator ranging from 0 to 1. The closer the measure is

to 1, the greater the heterogeneity of studied effect sizes and a resulting possibility of moderators (for all $I^2$>0.25).

### 3.3.2 Structural Equation Modeling

Since the bivariate meta-analysis does not test for a mediation effect, a complementing technique was applied: Structural Equation Modeling. Structural Equation Models have the power to specify complex path models (Hox & Bechger, 2007) such as the suggested model in Hypotheses 4a-d. The Structural Equation Model implies a sequence or structure based on covariances among the variables studied (Hox & Bechger, 2007). In the case at hand, several different models are calculated and their goodness-of-fit with the underlying data is determined. These values may be compared in order to identify the model with the best fit. This selection process is done by comparing Goodness-of-Fit Indices and Residual Indicators. The Goodness-of-Fit Index used in the underlying procedure is the Comparative Fit Index (CFI). This index produces values between 0 and 1. According to Cangur and Ercan (2015) as well as Schermelleh-Engel and Moosbrugger (2003), a value as of 0.95 is an acceptable measure of fit. The index for the estimation of residuals is the Standardized Root Mean Square Residual (SRMR) which "is an index of the average of standardized residuals between the observed and the hypothesized covariance metrices" (Cangur & Ercan, 2015, p.156; Chen, 2007). For each hypothesized relation between variables, the estimate indicating the strength of the relationship with the dependent variable (Estimate), the standard error (S.E.), the critical ratio (C.R.) and the p-value (P) are determined, indicating the magnitude of covariance, measure of statistical accuracy, and two measures of statistical significance, respectively. The critical ratio is compared to the critical value 1.96 ($z_{\alpha/2}$ = 1.96, indicating a deviation of 2 standard deviations around the mean). Conforming p-values, subsequently, need to be below 0.05 in order to reach a confidence level of 95%.

**Table 5**

*Independent Variables Included in the Meta-Analysis*

| Variable | Definition | Authors |
|---|---|---|
| *Entrepreneurial orientation* | - Innovativeness, risk taking, proactiveness (*adding* autonomy and competitive aggressiveness) | Covin & Slevin, 1989<br>Covin & Slevin, 1991 |
| | - Export product innovativeness, export risk-taking, export market proactiveness, export competitive aggressiveness, autonomous export behaviors | Boso, Cadogan, & Story, 2012 |
| *Market orientation* | - Customer orientation, competitor orientation, and inter-functional coordination | Narver & Slater, 1990 |
| | - Intelligence generation, intelligence dissemination, intelligence responsiveness | Kohli & Jaworski, 1990 |
| | - Export -intelligence generation, -intelligence dissemination, -intelligence responsiveness | Cadogan, 1995, 2002 |
| *Technology orientation* | - Emphasis on product development by using technologies | e.g. Gilaninia, Monsef, & Mosaddegh, 2013 |
| | - Commitment to R&D, the acquisition of new technologies, application of the latest technology | e.g. Gatignon & Xuereb, 1997; Zhou, Yim, & Tse, 2005 |
| *Learning orientation* | - Open-mindedness, commitment to learning, shared vision (*adding* intra-organizational knowledge sharing) | Baker and Sinkula, 1999<br>Calantone, Cavusgil, & Zhao, 2002 |
| *Differentiation* | - Product uniqueness | e.g. Salavou, 2005; Lisboa, Skarmeas, & Lages, 2011 |
| | - Quality or product innovation differentiation (two-way combination) | e.g. Leitner & Güldenberg, 2010<br>Lisboa, Skarmeas, & Lages, 2011 |
| | - Differentiation capability | e.g. Chen, Chen, & Zhou, 2014 |

*Note*: The table contains the definitions of constructs that are included in the meta-analysis. For TO and differentiation the author has limited the number of definitions included to a set of example definitions since the concepts are not commonly operationalized.

### 3.3.3 Commonality Analysis

In order to determine whether the independent variables have joint effects on the dependent variable, a Commonality Analysis was conducted. According to Mood (1969) this analysis (also called element or component analysis; Ray-Mukherjee et al., 2014) is a tool to investigate unique and common effects of several related variables on the dependent variable. In interpreting data, Regression Commonality Analysis uses an approach similar to multiple regression models. However, in case of multicollinearity, it is able to circumvent the errors and misinterpretations (Ray-Mukherjee et al., 2014). Since the independent variables investigated do face the challenge of being collineated, the Commonality Analysis is the most appropriate tool to study the unique as well as common effects on the dependent variable. In multiple regression, $R^2$ describes the variance in the dependent variable explained by the independent variables included in the model. The explaining variables are ranked according to their beta value (Ray-Mukherjee et al., 2014). In Regression Commonality Analysis, $R^2$ is decomposed. The total variance explained can be distinguished into unique and common effects (Pedhazur 1997; Reichwein Zientek &Thompson 2006). As such, $R^2$ is composed of all the unique effects of each independent variable as well as the combination of common effects if other predictor variables are added. Hence, the unique effects are described as the minimum explanatory power of a variable and the total effect (unique and common effects) is equal to the maximum explanatory power of the predictor.

# 4. Results and Analysis

The following paragraph summarizes the results from the analyses conducted. The meta-analytic correlation matrix is depicted in Table 6 while numerical results of the meta-analysis are reported in Table 7. Furthermore, an illustration of the relationships among variables resulting from the bivariate meta-analysis are depicted in Figure 3, 4 and 5, while Figure 6 exemplifies the Structural Equation Model with the best statistical fit (CFI = 0.947).

## 4.1 Results of the Bivariate Meta-Analysis

In order to correct for reliability Cronbach's alphas were reported in the analysis (Geyskens et al., 2009). The sample weighted average correlation coefficient ($r_{uc}$) as well as the sample weighted average reliability adjusted correlation coefficient ($r_c$) were calculated. The focus in the interpretation of results lies upon $r_c$ and its corresponding statistics since it corrects for the reliability of measurements. The 95% confidence intervals as well as *z*-values were analyzed in order to draw conclusions about the statistical significance. The heterogeneity of effect sizes was assessed, using Cochran's *Q* (Cochran, 1954) while the more appropriate measure $I^2$ which does not depend on the number of studies, was included as well (Higgins & Thompson, 2002). The Cochran's *Q* is computed by the weighted sum of squared deviations of each studied effect from the pooled meta-analytic estimation. P-values are obtained (p(*Q*)) that are compared with a $\chi^2$ distribution (degrees of freedom = *K*-1). According to Higgins and Thompson (2002), the power of this test is questionable since it is highly influenced by the number of studies included. For example, if the number of studies is low, as in many meta-analyses, the power is small. Alternatively, the $I^2$ value can be calculated describing the percentage of variation among studies that results from heterogeneity across studies rather than chance ($I^2$ = 100% x $\frac{Q-df}{Q}$ ; Higgins & Thompson, 2002). Negative $I^2$ values are set equal to 0%, indicating no observed variation in outcomes among studies, as opposed to 100% reflecting maximum heterogeneity

among studies. Both the $Q$ as well as the $I^2$ are reported, however using the $I^2$ for the statistical interpretation of results.

The first hypotheses stated that the strategic orientations are positively and statistically significantly related to export performance. For the hypothesized relationship between EO and export performance, 42 studies have been collected ($K$ = 42), reporting 10,349 independent samples ($N$ = 10,349). This magnitude of gathered samples exemplifies high validity of the overall result. In support of Hypothesis 1a, both the sample weighted average correlation coefficient of EO and export performance as well as the sample weighted average reliability adjusted correlation coefficient were found to be positive ($r_{uc}$ = 0.33; $r_c$ = 0.52). According to Cohen (1988) this relationship may be classified as large ($r_c$ = 0.52 > 0.5). The reported $z$-score is 10.15 which significantly exceeds the critical value of 2.576 ($z_{\alpha/2}$ = 2.576) for a 1% significance level, supporting the hypothesis with a statistical confidence of 99%. The test for heterogeneity reveals that there is a significant difference between groups. Hence, effect sizes measured are not independent of the study reporting them ($Q$ = 1,127.48, p($Q$) = 0.0). The $I^2$ is 96.36, indicating that more than 95% of the variance results from heterogeneity across studies. This result reflects that other factors may significantly influence the relationship at hand, demonstrating that a moderation effect is very likely. The analysis of the relationship between MO and export performance indicates a positive and statistically significant effect that is of medium strength ($r_{uc}$ = 0.26; $r_c$ = 0.37). The outcome has high explanatory power due to the elevated count of individual samples ($K$ = 64, $N$ = 17,302). The $z$-value indicates that Hypothesis 1b is supported at a 99% confidence level ($z$ = 14.92). However, a moderation effect is highly likely with regards to the values obtained from the heterogeneity tests ($Q$ = 633.64, p($Q$) = 0.0, $I^2$ = 90.06). In support of Hypothesis 1c, the relationship of TO with export performance is positive and large ($r_{uc}$ = 0.34; $r_c$ = 0.52). The result is statistically significant at a 1% significance level ($z$ = 5.34 > 2.576). For this relationship, only 4 studies were identified ($K$ = 4, $N$ = 545). The Chi-square test for heterogeneity indicates that the groups are dependent from each other and thus a moderation effect is expected ($Q$ = 14.72, p($Q$) = 0.002).

Looking at the $I^2$, it can be concluded that nearly 80% of variance is a result of heterogeneity among studies ($I^2$ = 79.62). For Hypothesis 1d, the outcomes indicate a statistically significant result ($z$-value = 4.8 > 2.576). Hence, the relationship between LO and export performance is positive, but according to Cohen (1988) rather small ($r_{uc}$ = 0.17; $r_c$ = 0.25). Also in this analysis, the number of corresponding studies collected is restricted ($K$ = 5, $N$ = 1,627). The Chi-square test results are significant, indicating moderation effects in this relationship ($Q$ = 12.53, p($Q$) = 0.014). $I^2$ indicates that at least 68.09% of the variance stems from heterogeneity ($I^2$ = 68.09).

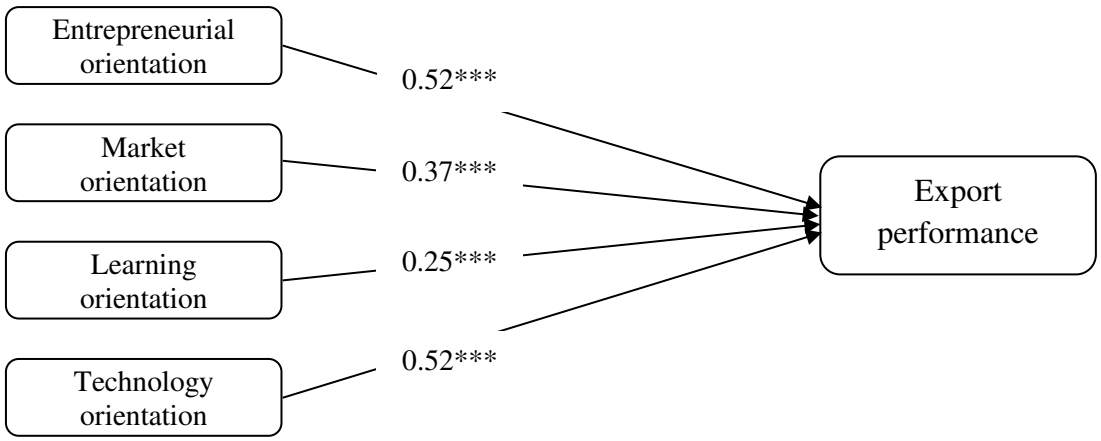


*Figure 3*. Strategic Orientations and Export Performance: Summary of the Findings from Bivariate Meta-Analysis (Hypotheses 1a-d)

*Note:* The numerical values represent the $r_c$, * = significant at 10% level, ** = significant at 5% level, *** = significant at 1% level.

Furthermore, the correlations between the strategic orientations and differentiation strategy were measured, reflecting Hypothesis 2. Both the sample weighted average correlation coefficient as well as the sample weighted average reliability adjusted average correlation coefficient were found to be positive and statistically significant for the relation of EO and differentiation ($r_{uc}$ = 0.35; $r_c$ = 0.54). The correlation coefficient is statistically significant at a 1% significance level ($z$-value = 4.38 > 2.576). However, a moderation effect is likely due to the elevated values of $Q$ ($Q$ = 38.63, p($Q$) = 0.0). The $I^2$ value indicates that more than 90% of the variance is explained by the heterogeneity between groups ($I^2$ = 92.23). The sample size of studies investigating this relationship is 741 ($K$ = 4; $N$ = 741). The relationship between MO and differentiation is positive ($r_{uc}$ = 0.53; $r_c$ = 0.8) and can be statistically supported with a

significance level of 10% (z = 1.83 > 1.645). However, this result must be regarded with care since it is based on solely 2 studies which limits the benefits of meta-analyses ($K$ = 2; $N$ = 582). Also, the $I^2$ value clearly highlights the importance of further investigation of this relationship and possible moderators since more than 99% of the variation is a result of between study heterogeneity ($I^2$ = 99.06). In support of Hypothesis 2c, TO has been reported to be positively and statistically significantly related to differentiation ($r_{uc}$ = 0.47; $r_c$ = 0.87). The result indicates a very strong relation among the variables that is significant at a 1% level ($z$ = 2.77 > 2.576). Adjusting for the reliability measures of studies, this relationship reports the strongest correlation coefficient ($r_c$ = 0.87). However, also in this concern it must be specified that the variance stems from heterogeneity among studies to an extent of 99.3% ($I^2$ = 99.3). These results are based upon the findings of 5 studies ($K$ = 5; $N$ = 997). The relationship of LO and differentiation in an export context was reported only by 1 study identified ($K$ = 1; $N$ = 112). Hence, the results of the meta-analysis are limited to the results obtained in that specific study. The correlation is statistically significant and positive, thus supporting Hypothesis 2d ($r_{uc}$ = 0.41; $r_c$ = 0.62). This result must be regarded with attention since it does not allow for elevation of validity that meta-analyses normally permit.

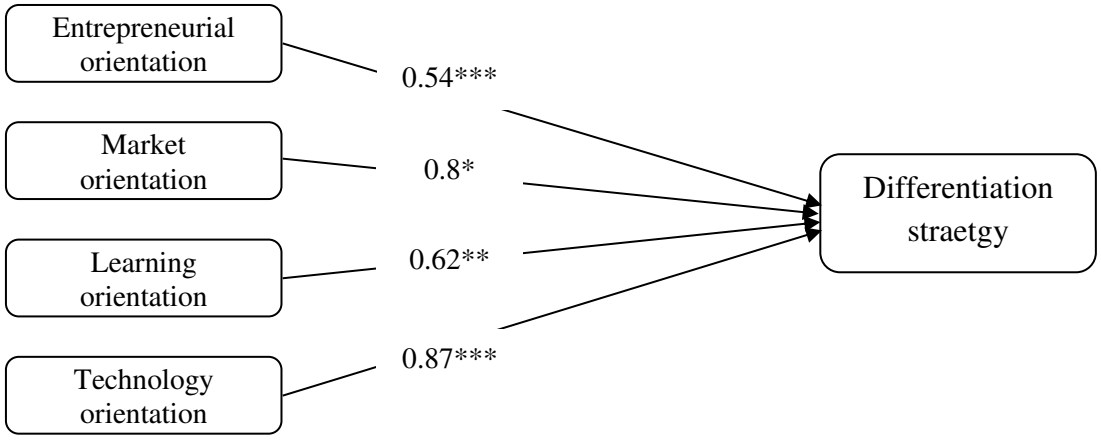


*Figure 4*. Strategic Orientations and Differentiation: Summary of the Findings from Bivariate Meta-Analysis (Hypotheses 2a-d)

*Note:* The numerical values represent the $r_c$, * = significant at 10% level, ** = significant at 5% level, *** = significant at 1% level.

Hypothesis 3 predicted that the generic strategy of differentiation is positively related to export performance. This hypothesis is supported. The correlation between differentiation and export performance is positive and moderate ($r_{uc}$ = 0.26; $r_c$ = 0.41), significant at a 99% confidence level ($z = 6.16 > 2.576$). It must be noted that the $I^2$ value is extremely high, reaching nearly 100% ($I^2 = 99.98$). Hence almost the total of observed variance noted above is a result of the heterogeneity among groups ($N$ = 23; $K$ = 283,081).

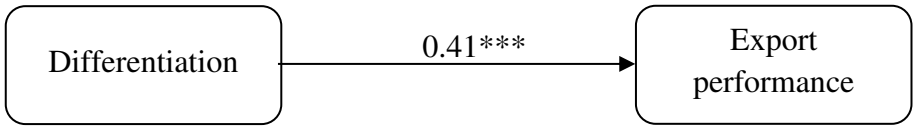


*Figure 5*. Differentiation and Export Performance: Summary of the Findings from Bivariate Meta-Analysis (Hypothesis 3)

*Note:* The numerical values represent the $r_c$, * = significant at 10% level, ** = significant at 5% level, *** = significant at 1% level.

Overall, the analyses support the Hypotheses 1-3 stated. However, the tests of heterogeneity suggest that a moderator analysis is necessary which could not be conducted by the author due to limited time constraints, hence these are incorporated in the suggestions for future research directions.

**Table 6**

*Meta-Analytic Correlation Matrix*

| | TO | LO | MO | EO | Diff | EP |
|---|---|---|---|---|---|---|
| **TO** | (0.81) | - | 1 (220) | - | 5 (997) | 4 (545) |
| **LO** | 0.49 | (0.83) | 2 (604) | 2 (704) | 1 (112) | 5 (1627) |
| **MO** | 0.43 | 0.54 | (0.84) | 9 (1957) | 2 (582) | 64 (17302) |
| **EO** | 0.49 | 0.43 | 0.44 | (0.80) | 4 (741) | 42 (10349) |
| **Diff** | 0.47 | 0.41 | 0.53 | 0.35 | (0.80) | 23 (283081) |
| **EP** | 0.34 | 0.17 | 0.26 | 0.33 | 0.26 | (0.85) |

*Note*: The diagonal depicts the mean reliabilities (Cronbach's alphas). Off-diagonal entries in the lower left-hand corner show the average sample weighted correlations. Off-diagonal entries in the upper right-hand corner contain the number of samples and the total sample sizes (N in parentheses). Harmonic mean $N_{HM}$ = 547.62.

**Table 7**

*Results of the Bivariate Meta-Analysis*

| Group | Relation | *K* | *N* | *r* | 95% interval | z-value | *Q* | p(*Q*) | $I^2$ | *r (c)* | 95% interval | z-value | *Q* | p(*Q*) | $I^2$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SO-EP | EO-EP | 42 | 10,349 | **0.33** | 0.29;0.37 | 13.21 | 263.12 | 0 | 84.42 | **0.52** | 0.45;0.59 | 10.15 | 1,127.48 | 0 | 96.36 |
| | MO-EP | 64 | 17,302 | **0.26** | 0.23;0.29 | 14.96 | 295.86 | 0 | 78.71 | **0.37** | 0.33;0.4 | 14.92 | 633.64 | 0 | 90.06 |
| | TO-EP | 4 | 545 | **0.34** | 0.26;0.41 | 6.83 | 3.83 | 0.28 | 21.72 | **0.52** | 0.38;0.64 | 5.34 | 14.72 | 0.002 | 79.62 |
| | LO-EP | 5 | 1627 | **0.17** | 0.11;0.23 | 4.75 | 6.88 | 0.142 | 41.85 | **0.25** | 0.17;0.33 | 4.8 | 12.53 | 0.014 | 68.09 |
| D-EP | Diff-EP | 23 | 283,081 | **0.26** | 0.2;0.31 | 7.37 | 19,294.41 | 0 | 99.89 | **0.41** | 0.31;0.5 | 6.16 | 112,504.05 | 0 | 99.98 |
| SO-D | EO-Diff | 4 | 741 | **0.35** | 0.26;0.44 | 5.79 | 8.43 | 0.038 | 64.42 | **0.54** | 0.36;0.69 | 4.38 | 38.63 | 0 | 92.23 |
| | MO-Diff | 2 | 582 | **0.53** | 0.13;0.79 | 2.1 | 23.94 | 0 | 95.82 | **0.8** | 0.11;0.97 | 1.83 | 106.77 | 0 | 99.06 |
| | TO-Diff | 5 | 997 | **0.47** | 0.37;0.57 | 6.67 | 17.78 | 0.001 | 77.5 | **0.87** | 0.49;0.97 | 2.77 | 567.92 | 0 | 99.3 |
| | LO-Diff | 1 | 112 | **0.41** | - | - | - | - | - | **0.62** | - | - | - | - | - |
| SO-SO | EO-MO | 9 | 1,957 | **0.46** | 0.3;0.6 | 4.36 | 162.87 | 0 | 95.09 | **0.66** | 0.37;0.84 | 3.22 | 1,463.85 | 0 | 99.45 |
| | EO-TO | - | - | **-** | - | - | - | - | - | **-** | - | - | - | - | - |
| | EO-LO | 2 | 704 | **0.45** | (0.03);0.77 | 1.55 | 49.99 | 0 | 98 | **0.9** | (0.45);1 | 1.24 | 696.33 | 0 | 99.86 |
| | MO-TO | 1 | 220 | **0.53** | - | - | - | - | - | **0.74** | - | - | - | - | - |
| | MO-LO | 2 | 604 | **0.36** | 0.33;0.39 | 17.42 | 0.27 | 0.601 | 0 | **0.5** | 0.42;0.57 | 9.01 | 1.31 | 0.252 | 23.94 |
| | TO-LO | - | - | **-** | - | - | - | - | - | **-** | - | - | - | - | - |

*Note: K* = number of studies, *N* = total sample size, *r* = sample weighted average correlation coefficient, 95% interval = 95% confidence interval, *z*-value = *z*-value that is compared with the critical values of 1.645 (10% significance level), 1.96 (5% significance level), or 2.576 (1% significance level), *Q* = Cohen's *Q*, r(c) = sample weighted average reliability adjusted correlation coefficient

### 4.2 Results of the Structural Equation Model

The following text concerns the fourth hypothesis, investigating the mediation effect of the differentiation strategy between the strategic orientations and export performance. The test is based upon the covariance metrices from Table 6 above. Through Structural Equation Modeling, (1) a full mediation model, (2) a partial mediation model as well as (3) a non-mediation model were tested and compared with each other. The measures of fit (CFIs) were 0.865 (SRMR=0.09), 0.947 (SRMR=0.0458), and 0.926 (SRMR=0.0479), respectively. The Squared Multiple Correlations indicate that the data explain 31.2% of the variability of differentiation estimate around its mean, in all three models tested. For export performance, the value is only 6.8% in the full mediation model, 16.2% in the non-mediation model and 21.5% in the partial mediation model. Hence, according to these indicators, the best fitting model is the partial mediation model, being depicted in Figure 6 below (CFI = 0.947, SRMR = 0.458). Since the complexity of the determinants of export performance is very high and the estimates are statistically significant, there are still important conclusions to be drawn even though the explanatory power of the variability in the data is limited.

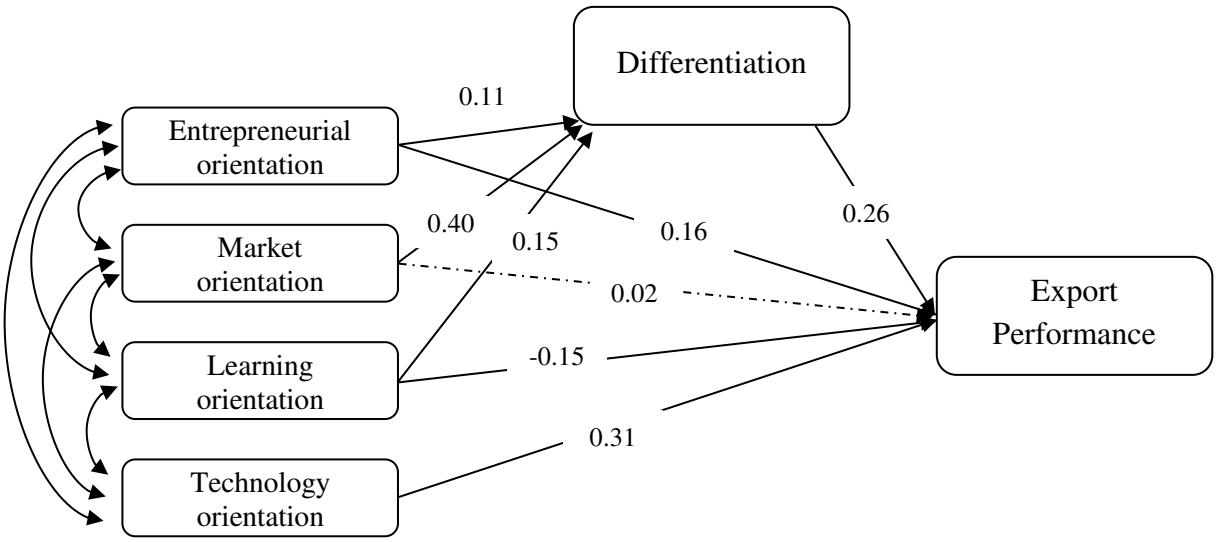


*Figure 6.* Structural Equation Model - Partial Mediation Model (Hypotheses 4a-d)
*Note*: Chi² = 73,51; DF = 1; CFI = 0.947; SRMR = 0.0458. The relation of TO and Differentiation was eliminated to obtain 1 degree of freedom (it was insignificant). Continuous arrows symbolize a confidence level of 95%. Dashed lines symbolize non-significant relationships.

Further investigating the statistical output of the analysis (see Table 8) reveals a few surprising results that need further examination. First of all, what is important to note is that as expected most estimates are positive and statistically significant. In the relationships of the strategic orientations and the dependent variable differentiation, the variance in MO determines the greatest change in differentiation (Estimate = 0.403). EO and LO have a significant impact, too, which totals to 0.11 and 0.145, respectively. The results coincide to a great extent with the indications from the meta-analysis. Also, the covariance of differentiation and export performance is positive and significant, being in agreement with the results retrieved in the previous analysis. In the relationships of the four strategic orientations, however, a few indicators catch attention. EO and TO are significant determinants, being positively related to export performance. However, MO shows a very low magnitude in the relationship, and statistically insignificant p-value whereas LO seems to have a statistically significant negative impact on export performance. These indications are surprising because they are contradictive to the meta-analytic results.

**Table 8**

*Regression Weights*

| DV | IV | Estimate | S.E. | C.R. | p |
|---|---|---|---|---|---|
| Diff | EO | ,110 | ,034 | 3,263 | ,001 |
| Diff | MO | ,403 | ,036 | 11,124 | *** |
| Diff | LO | ,145 | ,036 | 4,016 | *** |
| EP | Diff | ,225 | ,038 | 5,870 | *** |
| EP | EO | ,157 | ,039 | 4,055 | *** |
| EP | MO | ,022 | ,043 | ,523 | ,601 |
| EP | LO | -,151 | ,041 | -3,693 | *** |
| EP | TO | ,305 | ,039 | 7,748 | *** |

*Note:* DV = dependent variable, IV = independent variable, S.E. = standard error, C.R. = critical ratio, p = p-value, TO = technological orientation, EO = entrepreneurial orientation, MO = market orientation, LO = learning orientation, Diff = differentiation, EP = export performance

If estimates or regression coefficients change, by either becoming negative or insignificant multicollinearity may be an issue (Grewal, Cote, & Baumgartner, 2004). Consequently, a stepwise approach for the partial mediation model was conducted in an effort to identify reasons

for the unexpected output. To test under which circumstances LO becomes negative, several combinations of variables were tested in the partial mediation model. The mediation model with LO as a sole independent variable is significant and positive (Estimate = 0.076, p-value = 0.041). In combination with MO, the estimate for LO is still positive, but insignificant (Estimate = 0.012, p-value = 0.760). EO and LO as sole determinants result in a negative estimate for LO that is insignificant, however (Estimate = -0.020, p-value = 0.605). If both EO and MO are integrated in the partial mediation model with LO, LO is negative, too, and insignificant (Estimate = -0.053, p-value = 0.195). A model combining LO and TO, leads to LO being negative and significant (Estimate = -0.126, p-value = 0.001). In summary, these findings indicate that there must exist multicollinearity among LO with all the other strategic orientations, especially between LO and TO.

To identify the reasons for the insignificance of MO, four more models were calculated. If EO is tested alongside MO, then MO is significant (Estimate = 0.082; p-value = 0.045). Adding TO as a third independent variable turns MO insignificant, also indicating a high multicollinearity among MO and TO (Estimate = -0.016, p-value = 0.703). Only testing TO with MO also results in an insignificant estimate (Estimate = 0.005, p-value = 0.915). If MO is tested in a model with EO and LO, MO is still positive and significant (Estimate = 0.102; p-value = 0.02). Hence, TO and MO are further investigated for possible multicollinearity.

To identify the root cause of these outcomes, the items measuring both EO, MO, LO and TO are inspected with respect to their content domain. Researchers strive to cover all aspects of the subject measured by their content domain. At the same time, if content domains of diverse variables interfere, multicollinearity is an issue. It is expected by the author, that several items must overlap to some extent creating the problem of multicollinearity. The study of the items used to measure the strategic orientations has yielded to several findings.

First, LO and its sub-concepts and items were compared to MO, EO, and TO. Interestingly, even though the effect of TO seems to be the highest one, the biggest overlap in content domain was identified with MO. The fourth dimension of LO, intra-organizational knowledge sharing, defined by Calantone et al. (2002) overlaps to a great extent with the sub-concepts of MO (inter-functional coordination or intelligence dissemination and responsiveness). The items measuring inter-functional coordination or intelligence dissemination in MO contain matters of interdepartmental meetings, information sharing, dissemination of data, and resource sharing (Narver & Slater, 1990; Kohli & Jaworski, 1993). Similarly, the items measured in LO refer to organizational conversation, sharing of lessons learned, and an emphasis of top management on knowledge sharing (Calantone et al., 2002). Second, TO was investigated in further detail, as it seems to be the one variable that creates most dependence to other variables of strategic orientations. The author has noted the various different conceptualizations and operationalizations of TO. Gatignon and Xuereb (1997) measure TO with two items in their surveys: "Our SBU uses sophisticated technologies in its new product development" and "Our new products are always at the state of the art of the technology" (p.89). Zhou, Yim, and Tse (2005) as well as Hortinha et al. (2011) use a four-item measure covering similar aspects as Gatignon and Xuereb (1997); while Sousa and Bradley (2009) measured TO by asking respondents to "indicate the degree of technology orientation of the product on a five-point scale" (p.688). Halac (2015) includes the sub-concept of "commitment to learning" into the measurement of TO, being a measure for LO. Hence, the little agreement among researchers about the measurement of TO leads to low overall face validity of the construct. Therefore, its content domain may be inflated. For example, some definitions of TO intersect with the operationalizations of MO and LO. TO comprises the development of technological innovation on the basis of research conducted (Zhou et al., 2005; Hortinha et al., 2011). This notion implies that a firm does market-oriented research, which is an essential component of MO. If it subsequently responds to the acquired knowledge translating it into a new technological

innovation it comprises large parts of the definitions of LO as well as EO. This short investigation permits to draw the conclusion that the content domain of TO may overlap with the other strategic orientations due to its fuzzy conceptualization. This obstacle may be one further component of the reason for multicollinearity. All in all, it can be captured that multicollinearity is an issue that may be kept in mind when investigating the diverse strategic orientations. It shall be mentioned that part of the reason for the dominance of TO may stem from the powerful relation between TO and export performance ($r_c$ = 0.52). At the same time, LO has a rather small effect ($r_c$ = 0.17) and the correlation between TO and LO is 0.49, indicating a high dependence of the two constructs. Similar arguments count for the insignificance of MO. Hence, in the full model only EO is still significant and positive, because it is the second most powerful measure after TO.

To correct for multicollinearity, a second-order model was calculated, resulting in lower squared multiple correlations (differentiation = 0.301, export performance = 0.150). This finding contains an important conclusion for research. Even though the model tested may be more precise, eliminating the effects of multicollinearity automatically also decreases the explanatory power of the model.

### 4.3 Results of the Commonality Analysis

In the following paragraph the results of the Commonality Analyses for both export performance and differentiation are described (see Table 9 for results of the analysis).

*Export performance*. The Commonality Analysis with export performance as a dependent variable reflects the findings that have been reported by the meta-analysis. Hence, with a Beta of 0.215, TO exerts the strongest influence on export performance. EO is the second strongest predictor with a Beta value of 0.2 (see Table 9). Interestingly, for all variables the unique effects are rather small (below 3%, cumulative 7.1%), whereas the common effects are significantly higher (between 2% and 9% of total variance explained, cumulative 31.8%).

**Table 9**

*Results of the Commonality Analysis*

| *Commonality Analysis for Export Performance* | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **b** | **Beta** | **r** | **rs** | **rs²** | **Unique** | **Common** | **GenDom** | **Pratt** | **RLW** |
| **TO** | 0.215 | 0.215 | 0.34 | 0.832 | 0.693 | 0.028 | 0.088 | 0.057 | 0.073 | 0.057 |
| **LO** | -0.105 | -0.105 | 0.17 | 0.416 | 0.173 | 0.007 | 0.022 | 0.008 | -0.018 | 0.007 |
| **MO** | 0.092 | 0.092 | 0.26 | 0.637 | 0.405 | 0.005 | 0.063 | 0.023 | 0.024 | 0.023 |
| **EO** | 0.200 | 0.200 | 0.33 | 0.808 | 0.653 | 0.027 | 0.082 | 0.055 | 0.066 | 0.055 |
| **Diff** | 0.083 | 0.083 | 0.26 | 0.637 | 0.405 | 0.004 | 0.063 | 0.024 | 0.022 | 0.025 |
| Total | | | | | 2.329 | **0.071** | **0.318** | 0.167 | 0.167 | 0.167 |
| *Commonality Analysis for Differentiation Strategy* | | | | | | | | | | |
| **TO** | 0.264 | 0.264 | 0.47 | 0.787 | 0.619 | 0.045 | 0.176 | 0.105 | 0.124 | 0.106 |
| **LO** | 0.071 | 0.071 | 0.41 | 0.686 | 0.471 | 0.003 | 0.165 | 0.059 | 0.029 | 0.058 |
| **MO** | 0.365 | 0.365 | 0.53 | 0.887 | 0.787 | 0.086 | 0.195 | 0.155 | 0.194 | 0.154 |
| **EO** | 0.030 | 0.030 | 0.35 | 0.586 | 0.343 | 0.001 | 0.122 | 0.038 | 0.010 | 0.038 |
| Total | | | | | 2.220 | **0.135** | **0.658** | 0.357 | 0.357 | 0.356 |

*Note:* b/Beta = beta weights, r = correlation coefficient, rs = structure coefficient, rs² = squared structure coefficient, Unique = unique effect, Common = absolute common effect, GenDom = general dominance, Pratt = Pratt's measure, RLW = relative weights

Table 10 below indicates the detailed unique and common effects for each combination of variables in explaining export performance.

**Table 10**

*Details of the Commonality Analysis for Export Performance*

| | Commonality | % Total |
|---|---|---|
| **TO** | 0.028 | **0.168** |
| **LO** | 0.007 | 0.041 |
| **MO** | 0.005 | 0.029 |
| **EO** | 0.027 | **0.164** |
| **Diff** | 0.004 | 0.027 |
| **TO, LO** | -0.005 | -0.030 |
| **TO, MO** | 0.001 | 0.006 |
| **LO, MO** | -0.003 | -0.017 |
| **TO, EO** | 0.023 | **0.138** |
| **LO, EO** | -0.003 | -0.020 |
| **MO, EO** | 0.006 | 0.034 |
| **TO, Diff** | 0.008 | **0.050** |
| **LO, Diff** | -0.001 | -0.004 |
| **MO, Diff** | 0.005 | 0.029 |
| **EO, Diff** | 0.001 | 0.004 |
| **TO, LO, MO** | 0.001 | 0.008 |
| **TO, LO, EO** | 0.002 | 0.010 |
| **TO, MO, EO** | 0.005 | 0.027 |
| **LO, MO, EO** | 0.000 | -0.001 |
| **TO, LO, Diff** | 0.000 | -0.002 |
| **TO, MO, Diff** | 0.005 | 0.032 |
| **LO, MO, Diff** | -0.001 | -0.008 |
| **TO, EO, Diff** | 0.006 | 0.036 |
| **LO, EO, Diff** | 0.000 | 0.001 |
| **MO, EO, Diff** | 0.003 | 0.020 |
| **TO, LO, MO, EO** | 0.006 | 0.038 |
| **TO, LO, MO, Diff** | 0.003 | 0.018 |
| **TO, LO, EO, Diff** | 0.002 | 0.013 |
| **TO, MO, EO, Diff** | 0.010 | **0.061** |
| **LO, MO, EO, Diff** | 0.001 | 0.008 |
| **TO, LO, MO, EO, Diff** | 0.020 | **0.119** |
| Total | **0.167** | 1.0 |

*Note*: TO = technological orientation, LO = learning orientation, MO = market orientation, EO = entrepreneurial orientation, Diff = differentiation, Commonality = absolute common effect, % Total = percentage of $R^2$

The right-hand side of the column indicates the percentage of explanatory power of the corresponding unique or common effect with relation to the total variance explained. These values are focused upon in the interpretation of the results. The results indicate that the unique effects of TO and EO, 16.8% and 16.4% determine the greatest amount of the total variance explained. The most important common effects analyzed are TO and EO (13.8% of the total variance explained, corresponding to 2.3 % common effect), a combination of all strategic orientations as well as the differentiation strategy (11.9% of the total variance explained, corresponding to 2% common effect), a combination of TO, EO, MO, and differentiation (6.1% of the total variance explained, corresponding to 1% common effect) and finally TO and differentiation (5% of the total variance explained, corresponding to 0.8% of common effect). The notion that the common effects are bigger than the unique effects is an indication of their importance for the outcome variable.

*Differentiation strategy.* The results of the Commonality Analysis investigating differentiation as the dependent variable indicate that MO is the predictor with most unique explanatory power (Beta = 0.365), followed by TO (Beta = 0.264). Similar to the results for export performance, it is proven that the common effects are more significant in explaining the total variance of differentiation (between 12% and 20% of the total variance explained, cumulative 65.8%) than the unique effects (below 9% of the total variance explained, cumulative 13.5%). MO has the highest power in affecting the differentiation strategy of a firm (24.0% of the total variance explained, corresponding to 8.6% of unique effect), followed by TO (12.7% of the total variance explained, corresponding to 4.5% of unique effect). The common effect with the highest influence relative to the $R^2$ is the effect of all strategic orientations with 18.8% of the total $R^2$, corresponding to a common effect of 6.7% on differentiation. Next, the combination of TO, LO, and MO has a 4% common effect on differentiation, constituting 11.3% of the total variance explained. With 8% contribution to the

total explained variance, LO and MO have a common effect of 2.8% on the generic strategy of differentiation. With 2.1% commonality, the combinations of TO and MO as well as TO, MO and EO make up the same percentage of the $R^2$ (refer to Table 11 below). The research question stated whether there are significant common effects among the independent variables (and the mediating variable) that add upon the unique effects known. The Commonality Analysis has shed a light on this exploratory attempt, suggesting significantly huge common effects to be produced among the variables under investigation.

**Table 11**

*Details of the Commonality Analysis for Differentiation*

| | Commonality | % Total |
|---|---|---|
| **TO** | 0.045 | **0.127** |
| **LO** | 0.003 | 0.009 |
| **MO** | 0.086 | **0.240** |
| **EO** | 0.001 | 0.002 |
| **TO, LO** | 0.011 | 0.030 |
| **TO, MO** | 0.021 | **0.058** |
| **LO, MO** | 0.028 | **0.080** |
| **TO, EO** | 0.009 | 0.024 |
| **LO, EO** | 0.000 | 0.001 |
| **MO, EO** | 0.007 | 0.020 |
| **TO, LO, MO** | 0.040 | **0.113** |
| **TO, LO, EO** | 0.007 | 0.020 |
| **TO, MO, EO** | 0.021 | **0.058** |
| **LO, MO, EO** | 0.011 | 0.029 |
| **TO, LO, MO, EO** | 0.067 | **0.188** |
| Total | **0.357** | 1.0 |

*Note*: TO = technological orientation, LO = learning orientation, MO = market orientation, EO = entrepreneurial orientation, Commonality = absolute common effect, % Total = percentage of $R^2$

## 5. Discussion

The purpose of the analysis was to (1) synthesize existing empirical studies and meta-analytically cumulate the correlations, (2) test whether a firm's generic strategy is a mediator of the relationship between strategic orientations and export performance, and (3) proof empirically that the strategic orientations have joint effects. By investigating data drawn from 126 studies ($N$ = 307,877) the author was able to make critical findings that are relevant to both theory and practice. Hence, the following paragraphs contain implications for theory, practice as well as future research. Moreover, limitations are reported.

### 5.1 Implications for Theory

First, the theoretical advancement made by the underlying investigation is the consolidation of the fragmented prior research which increases validity, reliability as well as generalizability to the findings. An overview of the different conceptualizations of the variables indicated was given. The most important findings here were that there are several diverse operationalizations for the variables investigated. Especially the concepts of TO and differentiation are not measured equally in the diverse studies. The author hopes that an overview of definitions was conveyed and weaknesses in the concept's measurements were illustrated. The content domains of MO and EO are rather solid. LO overlaps partly with one sub-dimension of MO. And most critically, the content domain of TO has only blurry boundaries. It will be crucial to develop measurement items of TO and differentiation when investigating the relationship of strategic orientations with export performance.

Second, the study has revealed that the determinants investigated are positively related to export performance. TO and EO appear to have the highest correlation with export performance ($r_c$ = 0.52). While EO, along with MO, has been investigated in past export performance research, TO has not been tested widely in an export context. The author hopes that through the findings of the meta-analysis at hand, researchers are made aware of the importance of TO in

this particular stream of research. In general, the attention should be shifted towards newly studied strategic orientations in the context of exporting because these may act as important determinants of export performance. Additionally, the strategic orientations, especially MO, has been proven to be positively correlated with the generic strategy of differentiation, which in turn positively impacts export performance. Hence, the differentiation strategy as well as other generic strategies, e.g. cost leadership and focus strategy (Porter, 1980) might be investigated further in theory. The suggestion that this strategy acts as a mediator is just one tested option here, which could be further detangled and tested, this suggestion is specified in the section about future research directions.

Third, the Structural Equation Model has further revealed that TO is the variable that significantly distorts the estimates of MO and LO in a partial mediation model. Hence, it is mainly responsible for MO becoming insignificant and LO turning negative, indicating high multicollinearity. The strong relation of TO with export performance as well as the multicollinearity proven may also raise the awareness of a lack of conceptualization of this concept and drive researchers to further conceptualize and operationalize the construct. With regards to the issue at hand, researchers must be aware of the matter of multicollinearity among the strategic orientations. If models are tested, that reduce the multicollinearity (i.e. second-order models), however, the explanatory power of the model decreases. Hence, the author has proven that even though the model faces the challenge of multicollinearity it is still the one with highest explanatory power. For research, this implies that the challenge of multicollinearity will be present, if avoided, however, the power of the model may decrease. Hence, the author strongly suggests the allowance of multicollinearity in the models tested.

Fourth, the author went beyond investigating the total effects of the orientations and differentiation, but also decomposed the effects into unique and common effects of the independent variables on export performance. Using Commonality Analysis, the exploratory

section of the underlying work has yielded to a novel finding in the research field on determinants of export performance. This piece of work is the first indication of the importance of studying several strategic orientations simultaneously as their common effect leads to a higher performance in export markets. This outcome shall be taken as an incentive for researches to regard the relationship between export performance and its antecedents from a new perspective. Not only do determinants have unique effects on export performance, but they might as well have a joint effect which will increase the importance of adapting certain strategic orientations at the same time to immensely surge its benefits. The underlying work shall be regarded as the first step in identifying common effects among strategic orientations. For research and theory in the future, this conclusion shall give the incentive to investigate conclusive models of determinants and test for commonalities.

### 5.2 Implications for Practice

The study has revealed the significant importance of the common effects among the strategic orientations and the generic strategy of differentiation towards export performance. In practice, this result has interesting novel implications for managers which can drastically improve a firm's export performance. The results of the threefold analyses have revealed that the isolated approach of engaging in one sole strategic orientation has only limited effect on the firm's export performance. The main conclusion of the results for practice is that strategic orientations should not be regarded as sole determinants, but rather managers should orchestrate the interplay of the distinct types of strategic orientations. In numbers this means that for example the pursuit of a TO and an EO at the same time lead to a significant improvement in export performance. The unique effect of TO contributes to export performance by 2.8%. If a firm at the same time engages in an EO, the effect will not only increase by the unique effect of EO on export performance (2.7%), but also by the common effect of 2.3%, hence totaling to an effect of 7.8%. This effect will grow drastically when engaging in further strategic

orientations. To make this result more actionable for management, a short example is presented by the author resulting in concrete recommendations for managers.

An exporting firm is highly proactive and willing to take risks to pursue the next innovation. Hence, it is oriented entrepreneurially. This posture can essentially become more valuable if the firm communicates with the importers about their inherent needs. The importers, the exporter's clients, are interested in digital, more efficient methods of trade financing in order to make transactions more efficient as well as less paper intense. This customer orientation gives the exporter an idea on how they can best implement their innovativeness and convert it into increased customer value. To be able to identify a method, the firm may benchmark with competition and research on newly developed techniques. To enable the necessary change, groups of employees are sent to learn more about the new method. Some employees are invited by their management to go to a fair about digital trading methods, others are offered a training in technological advances in international trade. In a cross-functional meeting, the staff shares what has been learned. At the fair, employees have learned about blockchain enabling newly developed methods of the letter of credit. Interestingly, the personnel that had the training has learned that this method is supposed to be the most disruptive one in the future, not being implemented by many firms in their industry yet. Spotting the opportunity of creating a competitive advantage, managers agree together with their employees on striving to implement blockchain-enabled letters of credit and communicate this vision throughout the organization. The goal is to implement blockchain into the businesses' processes and make international transactions therefore more efficient. In the past, the process of conducting international trade has been expensive since multiple players as well as much manual labor has been involved. Blockchain can overcome these difficulties since the exporter will be able to upload the letter of credit to a private network among the various participants. By this method, the transaction may be sized down in time from several days to few hours thanks to digital smart contracts and

become more reliable (Global Trade Review, 2016). Consequently, the method is implemented after a few weeks, responding to customer's needs (MO), implementing innovation in technology (EO, TO) and giving employees room to learn about the newly pursued methods (LO), thereby differentiating from its competition.

The above-mentioned example has shown how the interplay of the several investigated strategic orientations may be translated into a much higher export performance success than if only focusing on one strategic orientation. The pursuit of EO guarantees the firm a solid export performance. If combined with MO, by hearing customer's needs and comparing with competition, the firm has the opportunity to increase customer value. By investing in trainings, giving employees the room to learn, and creating a shared vision (LO), the company is able to create a differentiation advantage though their new internal processes. This advantage is very likely to be quite sustainable as it builds up a knowledge-base which will become hard to imitate. By engaging in learning of a modern technology and investing in research and development, also the benefits of a TO are achieved. The firm in the example is expected to enhance the export performance by enjoying the benefits of the common effects.

### 5.3 Limitations

Several limitations need to be addressed that must be considered when interpreting the findings of the underlying meta-analysis. First, the number of studies identified for several of the relationships has been restricted. For example, the relationship of LO and differentiation was based upon one single study, limiting the advantages of meta-analyses. Second, a significant amount of variance among the variables could not be explained because the study did not investigate moderators. Consequently, the inclusion of meaningful moderators may influence the studied relationships. Several moderators have already been identified in prior studies. However, it would be valuable to study moderators in an integrated model. Third, due to a lack of literature for the relationship between TO and differentiation studies foreign to the

export context were included in the analysis. This might reduce the reliability of the underlying results for the relationship as well as its relevance in the context of export performance. Finally, due to resource constraints the literature search has been made on limited channels as well as in a limited time period. This may have resulted in the exclusion of potentially relevant correlational studies. Also, a potential language bias cannot be excluded since literature was only searched in English. Keeping these limitations in mind, however, the results of the analyses conducted in the underlying paper hint towards important future research directions, as outlined below.

### 5.4 Implications for Further Research

The research, analyses and interpretation of results has directed towards paths for future research. First, and maybe most importantly, the joint consideration of strategic orientations must be pursued in the future. The author hopes that the newly acquired knowledge about the importance of common effects among the strategic orientations inspires researchers to start looking at these orientations as complementary mechanisms. If strategic orientations are embedded in the business's strategy and considered simultaneously rather than in an isolated manner, they may have the power to advance the company's strategic capabilities and create sustainable value. Second, as MO and EO have gained increasing attention, the study of TO and LO in the export context is limited. However, the underlying meta-analysis has shown their significant impact on the export performance of a firm. Further investigation may lead to more reliable and robust scientific evidence. Moreover, the overlap of content domains may be explored further and adapted in the conceptualization of strategic orientations to reduce multicollinearity among variables. So, an effort should be made to agree upon a common definition of the concepts studied. This is suggested especially for TO, which is the one variable that lacks a commonly defined conceptualization. Third, in an effort to minimize the unexplained variance, future research could study moderators and consolidate their effects in

one single study. Interesting moderators to be investigated could be (1) study-specific moderators (e.g. publication status, respondent of the survey), firm-specific moderators (e.g. management-specific determinants, organizational structure) as well as industry-specific moderators (e.g. market consolidation, pace of innovations). Finally, the effect of the differentiation strategy may be investigated further as research outcomes are contradictory. The literature review has unfolded that some authors only attribute a positive effect of differentiation strategy on export performance if developing countries trade among each other. The underlying study has suggested otherwise, however lacking a moderator analysis. Hence, a closer investigation of the circumstances under which this relationship is positive may be an interesting future research avenue.

## References

*Studies included in the analysis are marked with an asterisk (*).*


*Abdolvand, M. A., Heidarzadeh, K., & Kuzegar, G. (2012). Assessing the effects of marketing resources on export performance. *Journal of American Science*, 8(10), 134–144.

*Abiodun, T. S. & Kida, M. I. (2016). The impact of strategic learning orientation, entrepreneurial orientation and reconfiguring capabilities on export performance of SMEs in Nigeria. *International Journal of Management Science and Business Administration*, 2(3), 33-42.

*Ahimbisibwe, G. M. & Abaho, E. (2013). Export entrepreneurial orientation and export performance of SMEs in Uganda. *Global Advanced Research Journal of Management and Business Studies*, 2(1), 56–62.

*Ahimbisibwe, G. M., Ntayi, J. M., & Ngoma, M. (2013). Export market orientation, innovation and performance of fruit exporting firms in Uganda. *European Scientific Journal*, ESJ, 9(4).

Al-Ansari, Y., Altalib, M., & Sardoh, M. (2013). Technology orientation, innovation and business performance: A study of Dubai SMEs. *The International Technology Management Review*, 3(1), 1-11.

*Alotaibi, M. B. G. & Zhang, Y. (2017). The relationship between export market orientation and export performance: an empirical study. *Applied Economics*, 49(23), 2253-2258.

*Argouslidis, P. C. & Indounas, K. (2010). Exploring the role of relationship pricing in industrial export settings: Empirical evidence from the UK. *Industrial Marketing Management*, 39(3), 460–472.

*Armario, J. M., Ruiz, D. M., & Armario, E. M. (2008). Market orientation and internationalization in small and medium-sized enterprises. *Journal of Small Business Management*, 46(4), 485–511.

*Aulakh, P. S., Kotabe, M., & Teegen, H. (2000). Export strategies and performance of firms from emerging economies: Evidence from Brazil, Chile, and Mexico. *Academy of Management Journal*, 342-361.

Baker, W. E. & Sinkula, J. M. (1999). The synergistic effect of market orientation and learning orientation on organizational performance. *Journal of the Academy of Marketing Science*, 27(4), 411-427.

Baker, W. E. & Sinkula, J. M. (2002). Market orientation, learning orientation and product innovation: delving into the organization's black box. *Journal of Market-Focused Management*, 5(1), 5-23.

Baker, W. E. & Sinkula, J. M. (2009). The complementary effects of market orientation and entrepreneurial orientation on profitability in small businesses. *Journal of Small Business Management*, 47(4), 443-464.

*Balabanis, G. I. & Katsikea, E. (2003). Being an entrepreneurial exporter: does it pay? *International Business Review*, 12(2), 233–252.

Baldauf, A., Cravens, D. W., & Wagner, U. (2000). Examining determinants of export performance in small open economies. *Journal of World Business*, 35(1), 61-79.

Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99-120.

Barney, J. B. (1995). Looking inside for competitive advantage. *Academy of Management Executive*, Vol. 9, Issue 4, pp. 49-61.

Baunack, C. (2014). *Market orientation and innovation as strategic drivers of international firm performance: A meta-analytic synthesis.* Master's thesis. Otto-von-Guericke Universität Magdeburg, Magdeburg, Germany.

Becherer, R. C. & Maurer, J. G. (1997). The moderating effect of environmental variables on the entrepreneurial and marketing orientation of entrepreneur-led firms. *Entrepreneurship: Theory and Practice*, 22(1), 47-59.

Beleska-Spasova, E. (2014). Determinants and measures of export performance: Comprehensive literature review. *Journal of Contemporary Economic and Business Issues*, 1(1), 63-74.

Boehe, D. M. & Cruz, L. B. (2010). Corporate social responsibility, product differentiation strategy and export performance. *Journal of Business Ethics*, 91(2), 325-346.

Boselie, P., Dietz, G., & Boon, C. (2005). Commonalities and contradictions in HRM and performance research. *Human Resource Management Journal*, 15(3), 67-94.

*Boso, N. (2010). *Export entrepreneurial-oriented behavior and export performance*. Dissertation. Loughborough University, Loughborough.

*Boso, N., Cadogan, J. W., & Story, V. M. (2012). Complementary effect of entrepreneurial and market orientations on export new product success under differing levels of competitive intensity and financial capital. *International Business Review*, 21(4), 667–681.

*Boso, N., Cadogan, J. W., & Story, V. M. (2013). Entrepreneurial orientation and market orientation as drivers of product innovation success: A study of exporters from a developing economy. *International Small Business Journal*, 31(1), 57–81.

*Boso, N., Cadogan, J. W., Story, V. M., & Kaponde, V. P. P. (2011). *The antecedents and consequences of product innovation success: a study of international new ventures from*

*a developing economy*. Presented at the United States Association for Small Business and Entrepreneurship (USASBE) Conference, Hilton Head, South Carolina.

Brooks, E. L. (2006). Why don't firms export more? Product quality and Colombian plants. *Journal of Development Economics*, 80(1), 160-178.

Brouthers, L. E., O'Donnell, E., & Hadjimarcou, J. (2005). Generic product strategies for emerging market exports into triad nation markets: A mimetic isomorphism approach. *Journal of Management Studies*, 42(1), 225-245.

Business Week. 1993. *Enterprise*. [Special issue].

*Cadogan, J. W., Boso, N., Story, V. M., & Adeola, O. (2016). Export strategic orientation–performance relationship: Examination of its enabling and disenabling boundary conditions. *Journal of Business Research*, 69(11), 5046-5052.

*Cadogan, J. W., Cui, C. C., & Li, E. K. Y. (2003). Export market-oriented behavior and export performance: The moderating roles of competitive intensity and technological turbulence. *International Marketing Review*, 20(5), 493–513.

Cadogan, J. W., Diamantopoulos, A., & De Mortanges, C. P. (1999). A measure of export market orientation: scale development and cross-cultural validation. *Journal of International Business Studies*, 30(4), 689-707.

*Cadogan, J. W., Diamantopoulos, A., & Siguaw, J. A. (2002). Export market-oriented activities: Their antecedents and performance consequences. *Journal of International Business Studies*, 33(3), 615–626.

*Cadogan, J. W., Kuivalainen, O., & Sundqvist, S. (2009). Export market-oriented behavior and export performance: Quadratic and moderating effects under differing degrees of darket dynamism and internationalization. *Journal of International Marketing*, 17(4), 71–89.

*Cadogan, J. W., Sundqvist, S., Salminen, R. T., & Puumalainen, K. (2002). Market-oriented behavior: Comparing service with product exporters. *European Journal of Marketing*, 36(9/10), 1076–1102.

*Calabro, A., Campopiano, G., Basco, R., & Pukall, T. (2016). Governance structure and internationalization of family-controlled firms: The mediating role of international entrepreneurial orientation. *European Management Journal*, 30, 1e11.

Calantone, R. J., Cavusgil, S. T., & Zhao, Y. (2002). Learning orientation, firm innovation capability, and firm performance. *Industrial Marketing Management*, 31(6), 515-524.

Calantone, R. & Knight, G. (2000). The critical role of product quality in the international performance of industrial firms. *Industrial Marketing Management*, 29(6), 493-506.

Cangur, S. & Ercan, I. (2015). Comparison of model fit indices used in structural equation modeling under multivariate normality. *Journal of Modern Applied Statistical Methods*, 14(1), 14.

*Celec, R., Globocnik, D., & Kruse, P. (2014). Resources, capabilities, export performance and the moderating role of entrepreneurial orientation in the context of SMEs. *European Journal of International Management*, 8(4), 440-464.

Chantanaphant, J., Nabi, M. N. U., & Dornberger, U. (2011). *Impact of technological capability on the export performance of SMEs in Thailand*. Dissertation. University of Leipzig, Leipzig, Germany.

*Chen, K. (2012). *Organisational learning, competitive strategy and export performance*. Master's thesis. Massey University, Auckland, New Zealand

*Chen, X., Chen, A. X., & Zhou, K. Z. (2014). Strategic orientation, foreign parent control, and differentiation capability building of international joint ventures in an emerging market. *Journal of International Marketing*, 22(3), 30-49.

Chen, Y., Tang, G., Jin, J., Xie, Q., & Li, J. (2014). CEOs' transformational leadership and product innovation performance: The roles of corporate entrepreneurship and technology orientation. *Journal of Product Innovation Management*, 31(S1), 2-17.

*Chung, H. F. L. (2012). Export market orientation, managerial ties, and performance. *International Marketing Review*, 29(4), 403–423.

Ciravegna, L., Majano, S. B., & Zhan, G. (2014). The inception of internationalization of small and medium enterprises: The role of activeness and networks. *Journal of Business Research*, 67(6), 1081-1089.

Cochran, W. G. (1954). The combination of estimates from different experiments. *Biometrics*, 10(1), 101-129.

Cohen, G. (1988). Auxiliary problem principle extended to variational inequalities. *Journal of Optimization Theory and Applications*, 59(2), 325-333.

Conner, K. R. & Prahalad, C. K. (1996). A resource-based theory of the firm: Knowledge versus opportunism. *Organization Science*, 7(5), 477-501.

Covin, J. G. & Miles, M. P. (1999). Corporate entrepreneurship and the pursuit of competitive advantage. *Entrepreneurship: Theory and Practice*, 23(3), 47-47.

Covin, J. G. & Slevin, D. P. (1989). Strategic management of small firms in hostile and benign environments. *Strategic Management Journal*, 10(1), 75-87.

Covin, J. G. & Slevin, D. P. (1991). A conceptual model of entrepreneurship as firm behavior. *Entrepreneurship: Critical Perspectives on Business and Management*, 3, 5-28.

*Crespo, N. F., Simões, V. C., & Fontes, M. (2012). *From resources to international performance of new ventures: Are innovation and flexibility strategies the puzzle's missing pieces?* Proceedings of the 8th Iberian International Business Conference, Las Palmas de Gran Canaria, Spain, 1–22.

Day, G. S. (1994). The capabilities of market-driven organizations. *The Journal of Marketing*, 37-52.

Dhanaraj, C. & Beamish, P. W. (2003). A resource-based approach to the study of export performance. *Journal of Small Business Management*, 41(3), 242-261.

Diamantopoulos, A. & Hart, S. (1993). Linking market orientation and company performance: preliminary evidence on Kohli and Jaworski's framework. *Journal of Strategic Marketing*, 1(2), 93-121.

*Diamantopoulos, A. & Kakkos, N. (2007). Managerial assessments of export performance: Conceptual framework and empirical illustration. *Journal of International Marketing*, 15(3), 1–31.

Diamantopoulos, A. & Schlegelmilch, B. B. (1994). Linking export manpower to export performance: a canonical regression analysis of European and US data. *Advances in International Marketing*, 6, 161-181.

Dickson, P. R. (1996). The static and dynamic mechanics of competition: a comment on Hunt and Morgan's comparative advantage theory. *The Journal of Marketing*, 102-106.

Dimitratos, P., Lioukas, S., & Carter, S. (2004). The relationship between entrepreneurship and international performance: The importance of domestic environment. *International Business Review*, 13, 19–41.

*Dodd, C. (2005). *Export Market Orientation and Export Performance: An Analysis of Australian Exporters*. Presented at the ANZMAC 2005 Conference, Perth, Australia.

Eisenhardt, K. M. & Martin, J. A. (2000). Dynamic capabilities: What are they? *Strategic Management Journal*, 1105-1121.

*Ellis, P. D. (2007). Distance, dependence and diversity of markets: effects on market orientation. *Journal of International Business Studies*, 38(3), 374–386.

Ellis, P. D. (2010). The essential guide to effect sizes: Statistical power, meta-analysis, and the interpretation of research results. *Cambridge University Press*, 97-108.

*Emőke–Szidónia, F. (2015). International entrepreneurial orientation and performance of Romanian small and medium-sized firms: empirical assessment of direct and environment moderated relations. *Procedia Economics and Finance*, 32, 186-193.

*Etchebarne, M. S., Geldres, V. V., & García-Cruz, R. (2010). The impact of entrepreneurial orientation on firms export performance. *Esic Market*, 665-691.

*Eusebio, R., Llonch Andreu, J., & Pilar López Belbeze, M. (2007). Internal key factors in export performance: a comparative analysis in the Italian and Spanish textile-clothing sector (part 1). *Journal of Fashion Marketing and Management: An International Journal*, 11(1), 9-23.

*Fernández-Mesa, A. & Alegre, J. (2015). Entrepreneurial orientation and export intensity: Examining the interplay of organizational learning and innovation. *International Business Review*, 24(1), 148-156.

Fiol, C. M. & Lyles, M. A. (1985). Organizational learning. *Academy of Management Review*, 10(4), 803-813.

*Francis, J. & Collins-Dodd, C. (2000). The impact of firms' export orientation on the export performance of high-tech small and medium-sized enterprises. *Journal of International Marketing*, 8(3), 84–103.

*Fuchs, M. (2009). Export Performance and managerial capabilities in German SMEs. *Internationale Unternehmungen und das Management ausländischer Tochtergesellschaften*, 209-228.

*Fung, H.-G., Gao, G. Y., Lu, J., & Mano, H. (2008). Impact of competitive position on export propensity and intensity. *The Chinese Economy*, 51–67.

Galunic, D. C. & Rodan, S. (1998). Resource recombinations in the firm: Knowledge structures and the potential for Schumpeterian innovation. *Strategic Management Journal*, 1193-1201.

*Gao, G. Y., Murray, J. Y., Kotabe, M., & Lu, J. (2010). A “strategy tripod” perspective on export behaviors: Evidence from domestic and foreign firms based in an emerging economy. *Journal of International Business Studies*, 41(3), 377-396.

*Gatignon, H. & Xuereb, J. M. (1997). Strategic orientation of the firm and new product performance. *Journal of Marketing Research*, 77-90.

Geyskens, I., Krishnan, R., Steenkamp, J. B. E., & Cunha, P. V. (2009). A review and evaluation of meta-analysis practices in management research. *Journal of Management*, 35(2), 393-419.

*Gilaninia, S., Monsef, S. M. S., & Mosaddegh, L. (2013). Effective factors on export performance. *Singaporean Journal of Business, Economics and Management Studies*, 1(11), 8-12.

Ginsberg, A. (1985). *Measuring changes in entrepreneurial orientation following industry deregulation: The development of a diagnostic instrument*. Proceedings of the International Council of Small Business (Vol. 50, p. 57)

Global Trade Review. (2016). Banks bring blockchain innovation to letters of credit. Retrieved November 28th, 2017 from www.gtreview.com/news/asia/banks-blockchain-innovation-letters-of-credit/.

*Gnizy, I. & Shoham, A. (2014). Uncovering the influence of the international marketing function in international firms. *International Marketing Review*, 31(1), 51-78.

*Greenman, J. (2004). *The effects of learning, entrepreneurial, and market orientations on the international performance of the service firm*. Dissertation. Florida State University, Florida, U.S.A.

Grewal, R., Cote, J. A., & Baumgartner, H. (2004). Multicollinearity and measurement error in structural equation models: Implications for theory testing. *Marketing Science*, 23(4), 519-529.

Halac, D. S. (2015). Multidimensional construct of technology orientation. *Procedia-Social and Behavioral Sciences*, 195, 1057-1065.

*Hartsfield, S., Johansen, D., & Knight, G. A. (2008). Entrepreneurial orientation, strategy, and marketing capabilities in the performance of born-global firms. *International Business Research*, *Teaching and Practice*, 2(1), 12–38.

*He, X., Brouthers, K. D., & Filatotchev, I. (2013). Resource-based and institutional perspectives on export channel selection and export performance. *Journal of Managemen*t, 39(1), 27-47.

*He, X. & Wei, Y. (2011). Linking market orientation to international market selection and international performance. *International Business Review*, 20, 535–546.

Hernández-Perlines, F. (2016). Entrepreneurial orientation in hotel industry: multi-group analysis of quality certification. *Journal of Business Research*, 69(10), 4714-4724.

*Hernández-Perlines, F., Moreno-García, J., & Yañez-Araque, B. (2016). The mediating role of competitive strategy in international entrepreneurial orientation. *Journal of Business Research*, 69(11), 5383-5389.

Higgins, J. & Thompson, S. G. (2002). Quantifying heterogeneity in a meta-analysis. *Statistics in Medicine*, 21(11), 1539-1558.

*Hoang, B. P. (2015). Relationship of export market orientation, selected export strategy, and export performance: An empirical study. *Global Journal of Management and Business Research*.

*Holterman, P. (2011). *Entrepreneurial orientation as moderators for export performance*. Master's thesis. University of Twente, Twente, The Netherlands.

*Hortinha, P., Lages, C., & Filipe Lages, L. (2011). The trade-off between customer and technology orientations: impact on innovation capabilities and export performance. *Journal of International Marketing*, 19(3), 36-58.

Hox, J. J. & Bechger, T. M. (2007). An introduction to structural equation modeling. *Family Science Review*, 11, 354-373.

*Hughes, M., Martin, S. L., Morgan, R. E., & Robson, M. (2010). Realizing product-market advantage in high-technology international new ventures: The mediating role of ambidextrous innovation. *Journal of International Marketing*, 18(4), 1–21.

Hult, G. T. M. & Ketchen, D. J. (2001). Does market orientation matter? A test of the relationship between positional advantage and performance. *Strategic Management Journal*, 22(9), 899-906.

Hunt, S. D. & Morgan, R. M. (1996). The resource-advantage theory of competition: dynamics, path dependencies, and evolutionary dimensions. *The Journal of Marketing*, 107-114.

Hunter, J. E. & Schmidt, F. L. (2004). *Methods of meta-analysis: Correcting for error and bias in research findings*. Sage, Newbury Park, USA.

*Ismail, D. (2011). *Role of trust in SMEs export performance*. Presented at the International Conference on Management, Economics and Social Sciences, Bangkok, Thailand.

*Jalali, S. H. (2012). *Appraising the role of strategy implementation in export performance: A case from Middle East*. Editorial Note 201, 5(2), 281.

Jaworski, B. J. & Kohli, A. K. (1993). Market orientation: antecedents and consequences. *The Journal of Marketing*, 53-70.

*Jin, B., Jung, S., & Jeong, S. W. (2017). Dimensional effects of Korean SME's entrepreneurial orientation on internationalization and performance: the mediating role of marketing capability. *International Entrepreneurship and Management Journal*, 1-21.

*Johansen, D. & Knight, G. A. (2010). Entrepreneurial and market-oriented SME's fit to international environments, dynamic capabilities and competencies. *International Business: Research, Teaching and Practice*, 4(1), 38-55.

*Karelakis, C., Mattas, K., & Chryssochoidis, G. (2008). Greek wine firms: Determinants of export performance. *Agribusiness*, 275-297.

Katila, R. & Ahuja, G. (2002). Something old, something new: A longitudinal study of search behavior and new product introduction. *Academy of Management Journal*, 45(6), 1183-1194.

*Kazem, A. & Van der Heijden, B. (2006). Exporting firms' strategic choices the case of egyptian SMEs in the food industry. *Sam Advanced Management Journal*, 21–33.

*Kim, E. & Jeong, I. (2013). *Export market orientation and export performance in SMEs: The role of international experience.* Proceeding of the AIB 2013 Annual Meeting, Istanbul, Turkey, 1–28.

*Kim-Soon, N., Mostafa, M. R., Mohammed, A. A. E., & Ahmad, A. R. (2015). Export market orientation and organizational knowledge enhance export market performance. *International Business Research*, 8(12), 80.

*Knight, G. A. (2001). Entrepreneurship and strategy in the international SME. *Journal of International Management*, 7(3), 155–171.

*Knight, G. A. & Cavusgil, S. T. (2004). Innovation, organizational capabilities, and the born-global firm. *Journal of International Business Studies*, 35(2), 124–141.

Knight, G. A. & Cavusgil, S. T. (2005). A taxonomy of born-global firms. *Management International Review*, 15-35.

*Kropp, F., Lindsay, N. J., & Shoham, A. (2006). Entrepreneurial, market, and learning orientations and international entrepreneurial business venture performance in South African firms. *International Marketing Review*, 23(5), 504–523.

*Kuivalainen, O., Sundqvist, S., & Servais, P. (2007). Firms' degree of born-globalness, international entrepreneurial orientation and export performance. *Journal of World Business*, 42(3), 253–267.

*Kumlu, Ö. (2014). The effect of intangible resources and competitive strategies on the export performance of small and medium sized enterprises. *Procedia-Social and Behavioral Sciences*, 150, 24-34.

*Kwon, Y.-C. (2010). Market orientation of Korean MNC subsidiaries and their performance in the Chinese and Indian markets. *International Marketing Review*, 27(2), 179–199.

*Kwon, Y.-C. & Hu, M. Y. (2000), Market orientation among small Korean exporters. *International Business Review*, 9(1), 61–75.

*Lai, F., Li, D., Wang, Q., & Zhao, X. (2008). The information technology capability of third-party logistics providers: a resource-based view and empirical evidence from China. *Journal of Supply Chain Management*, 44(3), 22-38.

*Lages, L. F., Silva, G., & Styles, C. (2009). Relationship capabilities, quality, and innovation as determinants of export performance. *Journal of International Marketing*, 17(4), 47-70.

Lee, S., Courtney, J. F., & O'keefe, R. M. (1992). A system for organizational learning using cognitive maps. *Omega*, 20(1), 23-36.

*Leitner, K.-H. & Güldenberg, S. (2010). Generic strategies and firm performance in SMEs: a longitudinal study of Austrian SMEs. *Small Bus Econ*, 169-189.

*Lengler, J. F., Sousa, C. M., & Marques, C. (2013). Exploring the linear and quadratic effects of customer and competitor orientation on export performance. *International Marketing Review*, 30(5), 440-468.

*Leonidou, L. C., Palihawadana, D., & Theodosiou, M. (2011). National export-promotion programs as drivers of organizational resources and capabilities: Effects on strategy, competitive advantage, and performance. *Journal of International Marketing*, 19(2), 1–29.

*Li, T. & Cavusgil, S. T. (2000). Decomposing the effects of market knowledge competence in new product export: A dimensionality analysis. *European Journal of Marketing*, 34(1/2), 57–80.

*Lin, K. H., Huang, K. F., & Peng, Y. P. (2014). Impact of export market orientation on export performance: A relational perspective. *Baltic Journal of Management*, 9(4), 403-425.

*Ling-Yee, L. & Ogunmokun, G. O. (2001a). Effect of export financing resources and supply-chain skills on export competitive advantages: implications for superior export performance. *Journal of World Business*, 36(3), 260-279.

*Ling-yee, L. & Ogunmokun, G. O. (2001b). The influence of interfirm relational capabilities on export advantage and performance: an empirical analysis. *International Business Review*, 399-420.

Lipsey, M.W. & Wilson, D. B. (2001). *Practical meta-analysis*. Sage, Newbury Park, USA.

*Lisboa, A., Skarmeas, D., & Lages, C. (2011a). Entrepreneurial orientation, exploitative and explorative capabilities, and performance outcomes in export markets: A resource-based approach. *Industrial Marketing Management*, 40(8), 1274–1284.

*Lisboa, A., Skarmeas, D., & Lages, C. (2011b). Innovative capabilities: Their drivers and effects on current and future performance. *Journal of Business Research*, 64(11), 1157–1161.

*Lisboa, A., Skarmeas, D., & Lages, C. (2013). Export market exploitation and exploration and performance: Linear, moderated, complementary and non-linear effects. *International Marketing Review*, 30(3), 211–230.

Lumpkin, G. T. & Dess, G. G. (1996). Clarifying the entrepreneurial orientation construct and linking it to performance. *Academy of Management Review*, 21(1), 135-172.

*Mac, L. & Evangelista, F. (2016). The relative impact of market orientation and entrepreneurship on export performance: Do We Really Know Enough? *Journal of Global Marketing*, 29(5), 266-281.

*MacPherson, A. (2000). The role of international design orientation and market intelligence in the export performance of US machine tool companies. *R&D Management*, 30(2), 167–176.

*Makri, K., Theodosiou, M., Katsikea, E., & Avlonitis, G. J. (2013). *An empirical investigation of the antecedents and performance outcomes of export innovativeness*. Presented at the Academy of International Business Conference, Istanbul, Turkey.

Man, M.M.K. & Wafa, S.A. (2009). The relationship between innovativeness, strategy types, environment and the export performance of small and medium sized enterprises (SMEs) of Malaysian manufacturing sector. *The Business Review*, 13(2).

*Martin, S. L. & Javalgi, R. R. G. (2016). Entrepreneurial orientation, marketing capabilities and performance: the moderating role of competitive intensity on Latin American International new ventures. *Journal of Business Research*, 69(6), 2040-2051.

*Mavrogiannis, M., Bourlakis, M. A., Dawson, P. J., & Ness, M. R. (2008). Assessing export performance in the Greek food and beverage industry: An integrated structural equation model approach. *British Food Journal*, 110(7), 638-654.

Miles, R. E., Snow, C. C., Meyer, A. D., & Coleman, H. J. (1978). Organizational strategy, structure, and process. *Academy of Management Review*, 3(3), 546-562.

Miller, D. (1983). The correlates of entrepreneurship in three types of firms. *Management Science*, 29(7), 770-791.

*Miocevic, D. (2013). *The interplay between dynamic capabilities and entrepreneurial processes and their impact on the SME exporters' performance improvement during recession.* Presented at the AIB 2013 Annual Meeting, Istanbul, Turkey.

*Miocevic, D. & Crnjak-Karanovic, B. (2011). Cognitive and information-based capabilities in the internationalization of small and medium-sized enterprises: The ease of Croatian exporters. *Journal of Small Business Management*, 49(4), 537–557.

*Moen, Ø. (2002). The Born Globals: A new generation of small European exporters. *International Marketing Review*, 19(2), 156–175.

*Monteiro, A. P., Soares, A. M., & Rua, O. M. L. (2013, September). *Linking entrepreneurial orientation to export performance: the role of intangible resources and dynamic capabilities.* 6th Annual Conference of the EuroMed Academy of Business: Confronting Contemporary Business Challenges through Management Innovation, 1554-1567.

Mood, A. M. (1969). Macro-analysis of the American educational system. *Operations Research*, 17(5), 770-784.

*Morgan, N. A., Kaleka, A., & Katsikeas, C. S. (2004). Antecedents of export venture performance: A theoretical model and empirical assessment. *Journal of Marketing*, 68(1), 90–108.

*Murray, J. Y., Gao, G. Y., & Kotabe, M. (2011). Market orientation and performance of export ventures: the process through marketing capabilities and competitive advantage. *Journal of the Academy of Marketing Science*, 39(2), 252–269.

*Murray, J. Y., Gao, G. Y., Kotabe, M., & Zhou, N. (2007). Assessing measurement invariance of export market orientation: A study of Chinese and non-Chinese firms in China. *Journal of International Marketing*, 15(4), 41–62.

*Mutlu, H. M. & Aksoy, H. (2014). Strategic orientations, firm capabilities, and export performance: An empirical analysis in Turkey. *International Journal of Economic Practices and Theories*, 4(2), 214-221.

*Nakos, G., Brouthers, K. D., & Dimitratos, P. (2014). International alliances with competitors and non-competitors: The disparate impact on SME international performance. *Strategic Entrepreneurship Journal*, 8(2), 167-182.

Naman, J. L. & Slevin, D. P. (1993). Entrepreneurship and the concept of fit: A model and empirical tests. *Strategic Management Journal*, 14(2), 137-153.

Narver, J. C. & Slater, S. F. (1990). The effect of a market orientation on business profitability. *Journal of Marketing*, 54(4), 20.

*Navarro-García, A., Arenas-Gaitán, J., & Rondán-Cataluña, F. J. (2014). External environment and the moderating role of export market orientation. *Journal of Business Research*, 67(5), 740-745.

*Nguyen, T. T., Barrett, N. J., & Nguyen, T. D. (2006). The role of market and learning orientations in relationship quality: Evidence from Vietnamese exporters and their foreign importers. *International Marketing Research*, 107-133.

*O'Cass, A. & Ngo, L. V. (2011). Winning through innovation and marketing: Lessons from Australia and Vietnam. *Industrial Marketing Management*, 40(8), 1319–1329.

*Pansuwong, W. (2009). *Entrepreneurial strategic orientation and export performance of Thai small and medium-sized enterprises*. Dissertation. Swinburne University of Technology, Australia.

*Patel, P. C. & D'Souza, R. D. (2009). Leveraging entrepreneurial orientation to enhance SME export performance. *Small Business Research Summary*, no. 337, 1–29.

Pedhazur, E.J. (1982). *Multiple regression in behavioral research: Explanation and prediction*. Harcourt Brace Jovanovish College Publishers.

Peteraf, M. A. (1993). The cornerstones of competitive advantage: A resource-based view. *Strategic Management Journal*, 14(3), 179-191.

Peterson, R. A. & Brown, S. P. (2005). On the use of beta coefficients in meta-analysis. *Journal of Applied Psychology*, 90(1), 175.

*Pett, T. L. & Wolff, J. A. (2003). Firm characteristics and managerial perceptions of NAFTA: An assessment of export implications for US SMEs. *Journal of Small Business Management*, 41(2), 117-132.

Phillips, L. W., Chang, D. R., & Buzzell, R. D. (1983). Product quality, cost position and business performance: a test of some key hypotheses. *The Journal of Marketing*, 26-43.

Porter, M. E. (1980). Competitive strategy: Techniques for analyzing industries and competition. *New York*, 300.

Porter, M. E. (1985). Technology and competitive advantage. *Journal of Business Strategy*, 5(3), 60-78.

Porter, M. E. (1990). The competitive advantage of nations. *Harvard Business Review*, 68(2), 73-93.

Prahalad, C. K. & Hamel, G. (1994). Strategy as a field of study: Why search for a new paradigm? *Strategic Management Journal*, 15(S2), 5-16.

*Prasad, V. K., Ramamurthy, K., & Naidu, G. M. (2001). The influence of internet-marketing integration on marketing competencies and export performance. *Journal of International Marketing*, 9(4), 82-110.

Quintana-García, C. & Benavides-Velasco, C. A. (2008). Innovative competence, exploration and exploitation: The influence of technological diversification. *Research Policy*, 37(3), 492-507.

*Racela, O. C., Chaikittisilpa, C., & Thoumrungroje, A. (2007). Market orientation, international business relationships and perceived export performance. *International Marketing Review*, 24(2), 144–163.

Rauch, A., Wiklund, J., Lumpkin, G. T., & Frese, M. (2009). Entrepreneurial orientation and business performance: An assessment of past research and suggestions for the future. *Entrepreneurship Theory and Practice*, 33(3), 761-787.

Ray-Mukherjee, J., Nimon, K., Mukherjee, S., Morris, D. W., Slotow, R., & Hamer, M. (2014). Using commonality analysis in multiple regressions: a tool to decompose regression effects in the face of multicollinearity. *Methods in Ecology and Evolution*, 5(4), 320-328.

*Ray, S., Gubbi, S., & Chittoor, R. (2007). *Do Emerging Economy Firms Need Ambidextrous Strategies for Internationalization?* Working Paper Series. Indian Institute of Management Calcutta.

Reichwein Zientek, L. & Thompson, B. (2006). Commonality analysis: Partitioning variance to facilitate better understanding of data. *Journal of Early Intervention*, 28(4), 299-307.

*Rose, G. M. & Shoham, A. (2002). Export performance and market orientation: establishing an empirical link. *Journal of Business Research*, 55(3), 217–225.

Rothstein, H. R., Sutton, A. J., & Borenstein, M. (2006). *Publication bias in meta-analysis: Prevention, assessment and adjustments*. John Wiley & Sons.

*Roxas, H. B. & Chadee, D. (2011). A resource-based view of small export firms social capital in a Southeast Asian country. *Asian Academy of Management Journal*, 16(2), 1–28.

*Salavou, H. E. & Halikias, J. (2009). Strategy types of exporting firms: a view on the basis of competitive advantage. *European Business Review*, 21(2), 144-158.

Sapienza, H. J., Autio, E., George, G., & Zahra, S. A. (2006). A capabilities perspective on the effects of early internationalization on firm survival and growth. *Academy of Management Review,* 31(4), 914-933.

*Schilke, O., Reimann, M., & Thomas, J. S. (2009). When does international marketing standardization matter to firm performance? *Journal of International Marketing*, 17(4), 24-46.

Schlaegel, C. (2013, January). Understanding the Determinants of Export Performance: A Meta-Analysis. *Academy of Management Proceedings*, 1, 10725.

Schlaegel, C. (2016). *Evidence-based business strategy.* ST 2016. Seminar. Otto-von-Guericke Universität Magdeburg, Magdeburg, Germany.

Schlaegel, C. (n.d.). *Identifying boundary conditions via meta-analysis: Moderator analysis*. Presentation. Otto-von-Guericke Universität Magdeburg, Magdeburg, Germany.

Schlaegel, C. & Koenig, M. (2014). Determinants of entrepreneurial intent: a meta-analytic test and integration of competing models. *Entrepreneurship Theory and Practice*, 38(2), 291-332.

Schmezko, M. (2014). *Firm Characteristics, Business Strategy, and Export Performance: A Meta-Analytical Review.* Master's Thesis. Otto-von-Guericke Universität Magdeburg, Magdeburg, Germany.

Scholz, M. (2013). *Strategic Orientation, Firm Strategy, and International Firm Performance: A Meta-Analytic Review.* Master's thesis. Otto-von-Guericke Universität Magdeburg, Magdeburg, Germany.

*Sinkovics, N., Sinkovics, R. R., & Jean, R.-J. (2013). The internet as an alternative path to internationalization? *International Marketing Review*, 30(2), 130–155.

Sinkula, J. M. (1994). Market information processing and organizational learning. *The Journal of Marketing*, 35-45.

Sinkula, J. M., Baker, W. E., & Noordewier, T. (1997). A framework for market-based organizational learning: Linking values, knowledge, and behavior. *Journal of the Academy of Marketing Science*, 25(4), 305-318.

*Skarmeas, D., Lisboa, A., & Saridakis, C. (2016). Export performance as a function of market learning capabilities and intrapreneurship: SEM and FsQCA findings. *Journal of Business Research*, 69(11), 5342-5347.

Slater, S. F., Hult, G. T. M., & Olson, E. M. (2007). On the importance of matching strategic behavior and target market selection to business strategy in high-tech markets. *Journal of the Academy of Marketing Science*, 35(1), 5-17.

Slater, S. F. & Narver, J. C. (1995). Market orientation and the learning organization. *The Journal of Marketing*, 63-74.

Slater, S. F. & Narver, J. C. (1998). Customer-led and market-oriented: Let's not confuse the two. *Strategic Management Journal*, 1001-1006.

Slevin, D. & Covin, J. G. (1990). Juggling the entrepreneurial style and organisational structure. *Sloan Management Review*, 31(43), 5.

Smith, W. R. (1956). Product differentiation and market segmentation as alternative marketing strategies. *Journal of Marketing*, 21(1), 3-8.

*Solberg, C. A. & Olsson, U. H. (2010). Management orientation and export performance: the case of Norwegian ICT companies. *Baltic Journal of Management*, 5(1), 28–50.

*Sørensen, H. E. & Madsen, T. K. (2012). Strategic orientations and export market success of manufacturing firms: The role of market portfolio diversity. *International Marketing Review*, 29(4), 424–441.

*Souchon, A. L., Sy-Changco, J. A., & Dewsnap, B. (2012). Learning orientation in export functions: impact on export growth. *International Marketing Review*, 29(2), 175–202.

*Sousa, C. M., & Bradley, F. (2009). Effects of export assistance and distributor support on the performance of SMEs: The case of Portuguese export ventures. *International Small Business Journal*, 27(6), 681-701.

Sousa, C. M., Martínez-López, F. J., & Coelho, F. (2008). The determinants of export performance: A review of the research in the literature between 1998 and 2005. *International Journal of Management Reviews*, 10(4), 343-374.

*Sundqvist, S., Kyläheiko, K., Kuivalainen, O., & Cadogan, J. W. (2012). Kirznerian and Schumpeterian entrepreneurial-oriented behavior in turbulent export markets. *International Marketing Review*, 29(2), 203–219.

*Tantong, P., Karande, K., Nair, A., & Singhapakdi, A. (2010). The Effect of Product Adaptation and Market Orientation on Export Performance: A Survey of Thai Managers. *The Journal of Marketing Theory and Practice*, 18(2), 155–170.

*Thirkell, P. C. & Dau, R. (1998). Export performance: success determinants for New Zealand manufacturing exporters. *European Journal of Marketing*, 32(9/10), 813–829.

*Ussahawanitchakit, P. (2007). Innovation Capability and Export Performance: An Empirical Study of Textile Businesses in Thailand. *Journal of International Business Strategy*, 7(1).

Van Biesebroeck, J. (2005). Exporting raises productivity in sub-Saharan African manufacturing firms. *Journal of International Economics*, 67(2), 373-391.

Van de Ven, A. H. & Poole, M. S. (1995). Explaining development and change in organizations. *Academy of Management Review*, 20(3), 510-540.

Vendrell-Herrero, F., Gomes, E., Mellahi, K., & Child, J. (2016). Building international business bridges in geographically isolated areas: the role of foreign market focus and outward looking competences in Latin American SMEs. *Journal of World Business*.

Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic MJnagement journal*, 5(2), 171-180.

Wheeler, C., Ibeh, K., & Dimitratos, P. (2008). UK export performance research: review and implications. *International Small Business Journal*, 26(2), 207-239.

Wiklund, J. & Shepherd, D. (2003). Knowledge-based resources, entrepreneurial orientation, and the performance of small and medium-sized businesses. *Strategic Management Journal*, 24(13), 1307-1314.

White, R. E. (1986). Generic business strategies, organizational context and performance: An empirical investigation. *Strategic Management Journal*, 7(3), 217-231.

*Yan, H., He, X., & Cheng, B. (2017). Managerial ties, market orientation, and export performance: Chinese firms experience. *Management and Organization Review*, 1-28.

*Zehir, C., Köle, M., & Yıldız, H. (2015). The mediating role of innovation capability on market orientation and export performance: An implementation on SMEs in Turkey. *Procedia-Social and Behavioral Sciences*, 207, 700-708.

*Zhang, M. (2005). *Information technology capability, organizational culture, and export performance*. Dissertation. Washington State University, Washington, U.S.A.

*Zhang, J. & Zhu, M. (2016). Market orientation, product innovation and export performance: evidence from Chinese manufacturers. *Journal of Strategic Marketing*, 24(5), 377-397.

Zhou, K. Z. & Li, C. B. (2007). How does strategic orientation matter in Chinese firms? *Asia Pacific Journal of Management*, 24(4), 447-466.

Zhou, K. Z., Yim, C. K., & Tse, D. K. (2005). The effects of strategic orientations on technology-and market-based breakthrough innovations. *Journal of Marketing*, 69(2), 42-60.

**Official Statement of Original Thesis**

By signing this statement, I hereby acknowledge the submitted thesis, titled "*Strategic Orientations, Generic Strategies, and Export Performance: A Meta-Analysis*" to be produced independently by me, without external help.

Wherever I paraphrase or cite literally, a reference to the original source (journal, book, report, internet, etc.) is given.

By signing this statement, I explicitly declare that I am aware of the fraud sanctions as stated in the Education and Examination Regulations (EERs) of the SBE.

| | |
|---|---|
| Place: | Lotte |
| Date: | January 3rd, 2018 |
| Name: | Laura Scholz |
| Study program: | Double Degree Program NOVA – Maastricht University |
| Assignment: | Master's Thesis |
| ID number: | UM – 6053112<br>NOVA – 27642 |

Signature: Laura Scholz