# **Public Support for International Business:**

# An Empirical Study on the Determinants of Trade Mission Effectiveness



### **Master Thesis**

MSc Business Administration Track: International Management Name: Daniel Wild First Supervisor: Dr. H.J.M. Ruël Second Supervisor: Dr. Harry van der Kaap Date: 31.01.2013

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#### Abbreviations (alphabetic order)

- BEP = Business exchange partners
- BK = Business knowledge
- CD = Commercial Diplomacy
- CE = Corporate Entrepreneurship
- CS = Creating style
- CoSi = Cognitive style indicator
- DV = Dependent variable
- EDUC = Education
- EHC = Entrepreneurial human capital
- EPS = Export promotion services
- EO = Entrepreneurial orientation
- FDI = Foreign direct investment
- GEK = General export knowledge
- IE = International experience
- INDEXP = Industry experience
- IK = Institutional knowledge
- IV = Independent variable
- KS = Knowing style
- NC = Number of clients
- NCP = Number of cooperation partners
- NPC = Number of public contacts
- NQ = Number of quotes
- ORGWORKEDFOR = Organizations worked for
- PRIORWORK = Prior work experience
- PS = Planning style
- SME = Small and medium enterprises
- TM = Trade mission
- TMCWORKEXP = Trade mission country work experience

# Abstract

The present study examines empirically the determinants of oversea trade mission (TM) effectiveness. As a commercial diplomacy (CD) service TMs lend public support to domestic firms on the matter of entering foreign markets. A review of the pertinent empirical literature, investigating the influences of trade mission benefits and use for international private business activities, uncovered that this type of support has mainly been investigated before the background of export promotion, which focuses primarily on how the organizing public agencies can enhance the use of this service for firms. The perspective taken in this study is that of CD which views trade mission outcomes to be dependent on a process of co-creation between the service provider and the client stressing the importance of clients to be sufficiently prepared. Further, besides the use of firm level determinants of TM effectiveness, the uncovered paucity of prior research about individual level determinants led to the adoption of a multilevel approach to determine TM effectiveness. Effective use of TMs, as the used outcome measure, was operationalized as the identification of business opportunities through identifying business exchange partners in the targeted markets. Within TM research the identification of these partners is viewed as pre-sales activities leading to financial outcomes in the long-run. Moreover, the selected type of outcome measure is not only based in CD, which views TMs as networking activities, but it fits well with (international) entrepreneurship research, which is focused on the identification and exploitation of business opportunities. Suggestions made in prior TM studies that entrepreneurial participants in the missions might be more effective in their use of TMs was incorporated in the study by choosing entrepreneurial orientation (EO) dimensions on the firm level and cognitive style dimensions of firm representatives on the individual level.

The firm and individual level determinants were defined in terms of business opportunity identification via the pre-sales activities of identifying direct and indirect business exchange partners. The firm level determinants are international knowledge in terms of general export knowledge (GEK) and EO. On the individual level prior knowledge in terms of general human capital in the form of education (EDUC), work experience (PRIORWORK), organizations worked for (ORGWORKEDFOR), industry experience (INDEXP), entrepreneur-specific human capital (EHC) and international experience of firm representatives were selected. Further, a representative's experiential knowledge of the markets, targeted by the respective TMs, was assessed by their knowledge about the business (BK) and institutional environment (IK), and their work experiences of the representatives, as being indicative of their preparedness to engage in the co-creation process for TM effectiveness is assessed through via the cognitive style dimensions knowing (KS), planning (PS) and creating style (CS).

The TM effectiveness measures, i.e. identified business exchange partners, were divided into direct business partners, i.e. other businesses and clients, and indirect business partners, i.e. contacts to public figures and institutions. Of the two, only the outcome measure for the indirect business exchange partners provided the necessary basis for applying a multilevel approach for analysis. The performed regression analysis revealed that international knowledge of firms increased the TM effectiveness, but EO was not related. The individual level determinants added to the explained effectiveness in the form of an individual's PS, but human capital determinants PRIORWORK and ORGWORKEDFOR decreased the effectiveness.

The results further indicate that entrepreneurial firms and individuals are not more effective in making use of TMs despite their suggested superiority in engaging in the co-creation process of TM outcomes. Also, the adding of individual level determinants enhanced the prediction of TM effectiveness to a great extend proving their importance for future research on the matter of TMs and CD services demanding high participation in the service outcomes by clients. At the end of the study implications for practice, i.e. increasing TM effectiveness, and suggestions for future research are discussed.

# 1. Introduction

CD is becoming an increasingly more important and powerful governmental measure to support SMEs in their internationalization endeavor by addressing information asymmetries and other market failures in today's interconnected competitive market environment (Kostecki & Naray, 2007). A special focus on small and medium enterprises (SME) is set by national economic ministries to boost exports, since they often represent highly entrepreneurial, innovative and upcoming domestic industries that are sought after globally. Therefore, special policies and agencies, offering a wide range of services, are set up to enhance domestic firms' international competitiveness and also to benefit national economies as a whole (e.g. employment and tax base) (BMWI, 2013a; GOVNL, 2013).

While the importance of entrepreneurial firms and SMEs is an ever increasing factor in economic development and renewal within the industrialized countries, SMEs do face special barriers to internationalization caused by resource problems in the form of financial and informational bottlenecks (Hauser & Werner, 2010; Spence, 2003). One public instrument to address these problems comes in the form of commercial diplomacy. Studies carried out in the past on CD in general and other services conducted by government agencies that act as business support programs like trade promotion, TMs, workshops, seminars, and other related issues of intelligences, which are also associated with CD (when conducted within a host country), have developed frameworks with regards to the role of CD/business support for economies (Kostecki & Naray, 2007). Further, CD's quality, and effectiveness in enhancing firm performance and national export levels are foci of contemporary literature (Gençtürk & Kotabe, 2001; Lederman, Olarreaga, & Payton, 2009; Rose, 2007; Wilkinson & Brouthers, 2006). CD can thus be viewed as activities conducted by state representatives and institutions in view of business promotion between the host country - in which domestic firms want to do - and the domestic firm's home country (Kostecki & Naray, 2007).

Kostecki & Naray (2007) identified different types of commercial diplomats: generalist, business promoter, and bureaucrat. Their qualitative study showed that business promoters, commercial diplomats with business experience, were seen to be the most suitable when it comes to the business support side of CD. But it is yet unclear what kind of managerial type is most suitable to "play" the commercial diplomats counterpart. An investigation would not only provide a clearer picture about the co-creation of CD outcome, but could also function as a more precise delineation of factors enhancing the effectiveness of CD services. An investigation about personnel/human capital factors from a firm perspective influencing CD effectiveness might shed further light on the matter of CD effectiveness. The effectiveness of CD is partly determined by firm preparedness due to the nature of the service process, which is characterized by co-creation (Rüel & Zuidema, 2012).

### 1.1 Trade missions

TMs are a special type of CD service enabling firms to acquire relevant foreign market knowledge abroad. More specifically, the purpose of trade missions has been described as to offer firms an opportunity to acquire experiential knowledge (Seringhaus, 1987; Seringhaus & Rosson, 1990; Hibbert, 1990), which has been determined as a crucial factor for a firm's export activities and internationalization process (Eriksson, Johanson, Majkgard, & Sharma, 1997; Hadley & Wilson, 2003; Johanson & Vahlne, 1977). This special type of service offers domestic firms the opportunity to engage in networking activities in foreign markets to develop their business internationally (Kostecki & Naray, 2007), which over the long-run influences firm performance positively (Spence, 2003). Thus, trade missions do have the primary function of getting firms acquainted with foreign markets and

enable them to learn about the business and institutional environment, for example, by attending special workshops and meeting with local businesses and officials (Wilkinson, et al., 2009). These activities in turn can lead to realized business opportunities in the future. Further, firm involvement in the service outcome of TMs is highly required (Seringhaus, 1987).

Moreover, it is suggested that one of the reasons of why smaller exporters value trade missions lies in the programs fit with an entrepreneurial orientation of management by facilitating the gathering of market-specific knowledge through informal means (Spence, 2003). In addition trade missions perform an important market-entry function for SMEs that are unfamiliar with a specific target market or region (Kostecki & Naray, 2007) and can speed up the export expansion process of new and established export firms considerably (Denis & Depelteau, 1985). Due to these reasons indicating the importance of TMs as a CD service, TMs are chosen to be the research context for this study.

Besides these arguments, TMs are often accompanied by elected high official or diplomats highlighting their standing out among CD services and also an intensified public interest in terms of their success and benefits. Studies conducted in the past within the academic fields of export assistance, export/trade promotion, and commercial diplomacy describe the rationale behind the offering of such assistance, from a public sector perspective, as to improve domestic growth in terms of employment and tax base (Kostecki & Naray, 2007). Furthermore, taking a more global perspective, governments acknowledge that in order for their respective domestic companies to be competitive in a globalized world, they must be supported or else there is the threat of declining industries.

Based on the co-creation nature of and importance of TMs as a CD service for promoting national industries abroad, the central research question is formulated as...

# "What organizational and individual factors determine trade mission effectiveness from a firm perspective?"

#### 1.2 Purpose of the study

The purpose of the present study is divided into three parts. In order to facilitate the advancement of the field of CD research, a literature review, as presented in chapter 2, will give an overview regarding empirical studies incorporating TMs for the purpose of identifying research gaps. Based on the main gaps uncovered from the review, hypotheses are developed in chapter 3, which link determinants of TM effectiveness with TM effectiveness measures. Furthermore, it will be investigated if the determinants can be incorporated into an empirically validated research model.

Several objectives can thus be listed as:

- 1. To give an overview of existing empirical studies investigating TMs.
- 2. To detect research gaps in TM research by considering a service co-creation perspective of CD.
- 3. To derive and validate a research model focusing on determinants of TM effectiveness.

# 2. Literature Review

By reviewing the purpose of trade missions one has to account for the perspectives taken in studies investigating this type of export/trade promotion program. Two points are noteworthy in this regard, namely, the rationale behind the program offerings from the organizing actors, and the benefits domestic businesses can receive by making use of them. Since the promotion of home country firms through CD, in order to create socially beneficial international ventures, raises questions about the effectiveness of this business service before the background of spending state resources some of the following reviewed studies have investigated trade promotion or export promotion programs incorporating TMs in order to suggest improvements of the various programs. In most cases the main recipient of this critique are the state actors, which presents a very one-sided story when considering the co-creation process of CD service, especially those carried out abroad like trade missions. Hence, a new perspective could be taken by focusing more on determinants of TM effectiveness from a firm and individual manager level perspective.

#### 2.1 Review approach

The approach chosen for reviewing the literature on TMs is that of a "scoping review". The purpose of a scoping review is to map out the topic of interest to determine "what is already known" about "it" in order to determine knowledge gaps that can provide impetus for future research (Jesson, Matheson, & Lacey, 2011). Although the aim and score of this type of review is to acquire a broad understanding of the field and to be able to paint the "big picture", there is no prescribed systematic approach. Therefore, it is up to the reviewer to determine the manner of the review. The present review will borrow from systematic review approaches in that the review plan, identification of studies, selection of studies, quality assessment of studies, analysis and synthesis of studies will underlie predetermined criteria to ensure a replicable and transparent review process (Jesson et al., 2011).

#### Searching the literature

The search strategy to identify relevant literature follows a protocol which was chosen to include studies empirically investigating TMs outside the field of commercial diplomacy. This was necessary due to the fact that studies taking a commercial diplomacy perspective, from which the research question was derived, have published virtually nothing specific about TMs. TMs have been predominately studied within the domain of export literature – especially under the subfields of export promotion/assistance and export information. Very often, these studies treat trade missions as part of higher level constructs, i.e. national export promotion systems.

From the initial literature key words were compiled to search several digital databases for relevant articles. The databases used were Web of Knowledge (WOK), Scopus, and Google Scholar. Key words included "trade mission", "export promotion", "trade promotion", and "export assistance". The wider scope of the last three key words acknowledges that TMs are often examined within the context of the overall schemes of public support for domestic firms engaged in international/export markets (see table 1). Since digital databases restrict key word searches by scanning titles, abstract, and the key words provided by the authors, the wider scope is necessary in order to obtain results not including trade missions in the search. For the key words "export promotion", "trade promotion" used in the Scopus database, which yielded a plethora of results, several results based on the field of

literature they belonged to had to be excluded due to their irrelevancy, leaving only articles belonging to the fields of: Economics/Econometrics/Finance, Social Sciences, Business/Management/ Accounting, Environmental Sciences, and Psychology for the key word "export promotion"; Economics/Econometrics/Finance, Business/Management/Accounting, and Social Sciences.<sup>1</sup>

Besides using the databases, back-referencing from the articles found was also conducted to identify more relevant articles (for more details on the review results obtained from the databases see appendix A). Thus, 26 articles were identified that empirically investigate TMs directly or indirectly (i.e. TMs as part and not as part of aggregate measures).





#### Review criteria

The review criteria chosen included: purpose of the research; level of analysis; methodological approach; disciplinary perspective, and conclusion section. Since the research question stated in the introductory section focuses on TM outcomes and how they are influenced by organizational and individual factors. An additional selected criterion is TM outcome measures to determine dependent variables. Table 2 presents the corresponding concept matrix, and Table 3 gives a more detailed overview about the analysis level and the units.

The following chapters 2.2 to 2.5 will give an overview about the studies investigating TMs empirically, based on the selected review criteria. In tables 2 and 3 detailed information about the reviewed articles is given. In addition, chapters 2.2 to 2.5 have been structured to subsume studies into common categories that represent similar theoretical perspectives and constructs. Chapter 2.6 is summing up all the outcome measures used for TMs. And finally, chapter 2.7 gives a brief discussion about the main gaps within the literature on TMs.

<sup>&</sup>lt;sup>1</sup> Note that the thematic classifications of articles are the one listed in Scopus. Furthermore, the google scholar search for the first key term resulted in over 4660 results with many results including newspaper articles and other non-scientific material. For this reason the first two key terms were used jointly, which meant that the number of search results was reduced to a more manageable size for inspection (i.e. 397).

### **Table 2 Literature overview**

	Purpose <sup>2</sup>	Level of Analysis	Units of Analysis	Methodology	Disciplinary Perspective(s)	Conclusion	Trade mission outcome measure
Denis&Depelteau (1985)	Investigate export expansion process	Firm (SME); Canada	-Comparing NEWs vs. EXPs Firms not exporting before period of analysis vs. firms that had	Empirical: Cross- sectional survey research; quantitative	Export information sources	TMs usage decreases with expansion speed and prior experiential knowledge	-
Seringhaus (1987)	Investigates use of trade mission and foreign market entry	Firm (SME); Canada	-Comparing exporting companies who use trade missions vs. exporters who don't use trade missions for foreign market entry -Control group non- exporters	Empirical: Cross- sectional survey research; quantitative	Experiential knowledge; Foreign market entry	TM-users are more systematic in market research, planning, and entry preparation. TM users are more sensible towards market entry problems.	Export marketing practices; Experiential learning
Seringhaus & Botschen (1991)	Comparison of export promotion systems	Firm (SME); Canada, Austria	-Comparing exporting firms perceived usefulness of two export assistance systems	Empirical: Cross- sectional survey research; quantitative	Export promotion	Public/Private mix of EPS system perceived as more useful by exporting companies	-
Naidu & Rao (1993)	Investigate firm export needs	Firm (SME); US	-Firms in different stages of internationalization; four stages (from non- exporters to regular exporters)	Empirical: Cross- sectional survey research; quantitative	Export promotion; Internationalization process <sup>3</sup>	EPS system effectiveness can be improved by targeting firms in different internationalization stages	-
Singer & Czinkota (1994)	Investigate factors influencing EPS effectiveness	Firm (SME/larger firms); US	- Comparing less experienced with more experienced exporters	Empirical: Cross- sectional survey research; quantitative	Export promotion, Export performance	Managements' commitment and persistence is more important for export promotion than either the firms' export stage or the services used by a firm	Preparatory market entry activities; export performance

<sup>&</sup>lt;sup>2</sup> EPS = export promotion services <sup>3</sup> Internationalization process or stages/degree of internationalization and export involvement are used interchangeably.

Crick (1997)	Investigates awareness of, use of, and perceptions about EPS	Firm (SME); UK	-Comparing UK SME managers of firms in different internationalization stages.	Empirical: Cross- sectional survey research; qualitative- quantitative, i.e. exploratory interviews informing questionnaire	Export promotion; Export involvement	Using stage models shows differences in management' awareness, use and perceptions about EPS	Value, i.e. reliability and availability
Moini (1998)	Investigates impact of EPS on firm export activity and performance	Firm (SME); US	-Comparing needs for export assistance of firms in different stages of internationalization; four stages (from non- exporters to regular exporters; see Naidu & Rao, 1993) - Individual differences on decision-maker characteristics; education, age.	Empirical: Cross- sectional survey research; quantitative	Export promotion; Export Involvement	Degree of internationalization moderates awareness and expected benefits from EPS. Managers education is positively associated with EPS benefits.	Expect benefits
Wilkinson & Brouthers (2000a)	Investigate EPS influence on states' exports	State; US	-Exporting firms	Empirical: Cross- sectional secondary analysis of survey data; quantitative	Export promotion	Trade shows are positively related to state exports, and TMs are not. TMs are negatively associated with high-tech growth exports. Foreign offices and objective market knowledge services are also negatively related with exports	State exports; high-tech exports
Wilkinson & Brouthers (2000b)	Investigate influence of trade missions and trade shows on foreign direct investment and exports	State; US	-Comparing US states that are low/high on FDI <sup>4</sup> with regards to the usage of state trade missions to attract inward FDI	Empirical: Cross- sectional secondary analysis of survey data; quantitative	Export promotion; FDI	Higher relative FDI levels of a state moderate inward FDI attraction by using TMs, and export promotion by using trade shows	Inward FDI attraction

<sup>&</sup>lt;sup>4</sup> FDI = Foreign direct investment.

Gençtürk & Kotabe (2001)	Investigate influence of export marketing involvement and use of EPS on export performance	Firm; US	-Comparing performance implications of firms across export involvement. -Stimuli and barriers for export involvement vary depending on stages; different organizational and managerial characteristics are observed	Empirical: Cross- sectional survey research; quantitative	Export promotion; Export performance; Export Involvement	Export involvement moderates the associations between greater use of EPS and export sales growth, export profitability, and relative competitive position of exporters	Export performance: sales growth /market share; profitability; export competences
Spence & Crick (2001)	Investigate differences in trade mission usage for export markets	Firm; UK	-Comparing new exporters with experienced exporters concerning their usage of trade missions - Investigation of early market entry stages between both firm groups -Differences in activities prior and after trade missions are scrutinized	Empirical: Longitudinal survey research (repeated measures); quantitative	Export promotion; Foreign market entry	Firms that have no prior experience in a single foreign market display different objectives when using TMs for market entry than experience firms. Experienced firms use TMs to strengthen their presence in networks established prior to TM participation. Inexperienced firms use TMs to establish their market presence via agents, business networks, and acquisition of market knowledge	Market knowledge; Export performance
Silverman et al. (2002)	Investigate export assistance needs of a single industry	Firm ; US	-Comparing assistance needs of exporting firms and gives recommendations for improving export assistance services	Empirical: Cross- sectional survey research; quantitative	Export promotion	EPS may not only be targeted at exporters in different export stages, but also towards specific industry contexts	Perceived value for exporting
Schuler et al. (2002)	Investigate influence of international experience and corporate political activity on trade mission participation	Firm; US	-Comparing firms corporate political activities and international experience in connection with the participation in trade missions	Empirical: Cross- sectional; secondary analysis of data from databases; quantitative	Corporate political activity	Firms with high levels of international experience are six times more likely to be selected for TMs. Firms using political activities tactics are more likely to be picked for TMs.	-

Spence (2003)	Investigates influence of firm characteristics and firm behavior in export market on intermediate and long-term trade mission outcomes	Firm, Individual; UK	-Longitudinal assessment of exporters benefits from trade missions	Empirical: Longitudinal survey research (repeated measures); quantitative	Experiential knowledge; Export promotion	Firm's Knowledge stock acquired prior to TM participation contributes to TM outcomes.TM outcomes contribute to the generation of incremental sales in foreign markets by enhancing the relationship-building process between business partners.	Relationship-building outcomes; Experiential knowledge; Export performance
Spence & Crick (2004)	Investigate influence of trade mission participation on export practices and perceived benefits and satisfaction with trade mission activities/ dimensions	Firm; UK	-Comparing differences between firms that are new exporters and those that experienced exporters to specific foreign market -Investigating differences between objective and experiential knowledge acquisition between new and experienced exporters	Empirical: Cross- sectional survey research; qualitative- quantitative, i.e. in- depth interviews corroborating questionnaire results	Experiential knowledge; Foreign market entry	TM participation and the acquisition on objective and experiential knowledge prior to TM participation benefits exporters, especially exporters which are new to a single foreign market.	Export marketing practices via experiential learning; Perceived benefits and satisfaction
Francis & Collins- Dodd (2004)	Investigate the influence of EPS on export competences and activities	Firm (SME); Canada	-Assessing benefits from export promotion including trade missions -Exporters are segmented by export involvement. Four stages (from pre- exporters to majority exporters)	Empirical: Cross- sectional survey research; qualitative- quantitative, i.e. in- depth interviews informing questionnaire	Export promotion; export involvement	Greater use of EPS is associated with firms' export and export expansion strategies, and enhances marketing competencies. Exporters in early and intermediate stages of export involvement gain the most by using EPS, and high levels of involvement are associated with no impact of EPS	General/Export marketing competencies

Wilkinson & Brouthers (2006)	Investigate influence of trade missions/shows on export performance	Firm (SME); US	-Analyzes the impact of export promotion programs (incl. trade missions) on export firms' export performance	Empirical: Cross- sectional survey research; quantitative	Resource based view; export promotion	EPS increase exporters' satisfaction with export performance. Via the enhancement of firm resources for identifying business partners. TMs' impact is not significant	Export performance
Beeman et al. (2007)	Investigate influence of trade missions on export performance	Firm; US	-Effect of export promotion programs (incl. trade missions) on export firms' export performance	Empirical: Cross- sectional survey research; quantitative	Export promotion	SMEs benefit the most from TMs in terms of employment growth over the long-run	Employment growth level
Cassey (2007)	Investigates relationship between trade missions and export destination	State exports; US	-Investigates the relationship between state trade missions and the destinations; missions are targeted to export destinations with which there is already a higher quantity of export compared to markets with lower export quantities.	Empirical: Cross- sectional secondary data analysis; quantitative	Export promotion; export performance	TMs are targeted towards foreign countries to which relatively high levels of export volume exists	Exports to export destinations
Wilkinson et al. (2009)	Investigate effects of trade shows and trade missions on export performance	Firm (SME); US	- Investigates the effects of exporting SMEs usage of trade missions in connection with long- term export growth	Empirical: Cross- sectional survey research; qualitative- quantitative, i.e. in- depth interviews corroborating questionnaire results	Export promotion; export performance	Greater use of trade shows is associated with immediate export measures. Greater use of TMs is associated with long-term growth in export sales	Export performance
Martincus & Carballo (2010)	Investigate effects of EPS on export performance	Firm; Colombia	-Comparing exporters' use of different export promotion services consisting of single services and service bundles (incl. trade missions) and the influences of these service configurations on export performance	Empirical: Cross- sectional secondary data analysis; quantitative	Export promotion; export performance	The use of greater EPS is associated with higher export performance. Experiential services like TMs are more effective when combined with objective knowledge services. The effects are strongest when new markets are entered or new products are introduced	Export performance

Head & Ries (2010)	Investigate relationship between trade increases and trade missions	Country; Canada	-Comparing bilateral trade flows between Canada and its trade partners and the influence of trade missions on the trade volumes	Empirical: Cross- sectional secondary data analysis; quantitative	Export promotion; trade	TMs are not associated with bilateral trade flows	Bilateral trade flows
Hauser & Werner (2010)	Investigate participation rate for trade missions of small firms and their preparedness	Firm (Small firms); Germany	-Comparing small vs. non-small firms on their usage levels of export promotion services (trade missions as part of an aggregate measure) and which internal firm factors determine usage (levels)	Empirical: Cross- sectional survey research; quantitative	Export Promotion; RBV	Small firms make significantly less use of EPS due to the lack of internal firm resources, the same that are meant to be enhanced by using EPS	-
Freixanet (2011)	Investigates influence of EPS on export performance and firm resources	Firm; Spain	-Comparing firms in different internationalization stages to determine what kind of export programs are used in which stage and their impact on intermediate and final outcome measures. -TMs only clearly categorized within the study for measuring use/awareness index.	Empirical: Cross- sectional survey research; qualitative- quantitative, i.e. in- depth interviews informing questionnaire	Export promotion; export involvement	Direct promotion services like TMs are positively associated with export diversification independently of export involvement. Especially firms in early export stages benefit from these services in terms of the creation of a sales network within a single market	Export performance; Market knowledge
Leonidou et al. (2011)	Investigate the influence of EPS on export performance via export resources/capabilities	Firm; UK	- Comparing smaller vs. larger firms and export- experienced vs. export- inexperienced firms. No clear sample description given, i.e. cut-off points not specified, but on average firms can be categorized as SMEs	Empirical: Cross- sectional survey research; qualitative- quantitative, i.e. in- depth interviews informing questionnaire	Export promotion; RBV	EPS impact export performance via the enhancement of firms' export resources and capabilities. The impact is stronger for smaller firms	Export related resources and capabilities

Durmuşoğlu et al. (2012)	Investigate effects of EPS on export performance	Firm; Turkey	-Comparing users and non-users of export promotion programs among exporting SMEs	Empirical: Cross- sectional survey research; quantitative	Export promotion; RBV	Export performance is improved by firms making use of EPS. The achievement of financial, stakeholder relationship, strategic, and organizational learning goals are affected. TM impact is only significant for organizational learning, i.e. improving export resources and	Organizational learning via experiential knowledge
						capabilities	

## Table 3 Program and Industry level

	Industry	Public program level		Industry	Public program level
Denis&Depelteau (1985)	Manufacturing (wood, metal, food)	Not specified (but Canada has regional/national agencies offering TMs).	Spence (2003)	Manufacturing, service	National
Seringhaus (1987)	Manufacturing (machinery, electric/electronic products) Raw material (metal fabrication)	Not specified (but Canada has regional/national agencies offering TMs).	Spence & Crick (2004)	Manufacturing, service	National
Seringhaus & Botschen (1991)	-	Mixed	Francis & Dott (2004)	High-tech sectors	National
Naidu & Rao (1993)	Manufacturing	Sub-national	Wilkinson & Brouthers (2006)	Manufacturing	Sub-national
Singer & Czinkota (1994)	Manufacturing, service; agricultural and foods	Sub-national	Beeman et al. (2007)	Not specified	Sub-national; private program
Crick (1997)	Manufacturing	Not specified	Cassey (2007)	Not	Sub-national
Moini (1998)	Manufacturing	Sub-national	Wilkinson et al. (2009)	Manufacturing	Sub-national
Wilkinson & Brouthers (2000a)	Manufacturing	Sub-national	Martincus & Carballo (2011)		National
Wilkinson & Brouthers (2000b)	-	Sub-national	Head & Ries (2010)		National
Gençtürk & Kotabe (2001)	Manufacturing	Sub-national	Hauser & Werner (2011)	Manufacturing, service, other	National, federal
Spence & Crick (2001)	Manufacturing, service	National	Freixanet (2011)	Manufacturing	unclear
Silverman et al. (2002)	Environmental industry	Sub-national	Leonidou et al. (2011)	Manufacturing	National
Schuler et al. (2002)	Mixed (Publicly traded firms)	National	Durmuşoğlu et al. (2012)	Manufacturing	National

#### 2.2 Export information sources and experiential knowledge

Studies investigating firms' acquisition of information and knowledge relevant for exporting in connection with TMs focus on the export expansion process (Denis & Depelteau, 1985), foreign market entry (Seringhaus, 1987), the enhancement of resources and capabilities for exporting (Durmuşoğlu, Apfelthaler, Nayir, Alvarez, & Mughan, 2012; Francis & Collins-Dodd, 2004; Freixanet, 2011; Leonidou, Palihawadana, & Theodosiou, 2011; Spence & Crick, 2004), and the preparedness (Spence, 2003) of firms to use TMs effectively.

#### Export expansion

Denis & Depelteau (1985) investigate export expansion profiles of new and experienced exporters and how they make use of TMs for acquiring crucial export knowledge. Their analysis shows that not only are TMs used more by new exporters over a five year period, but also differences in export expansion speed within both groups were significantly associated with using TMs. They conclude their results by stating that the value of experiential knowledge gained via the participation in TMs seems to be crucial for the export expansion process of firms. Although the value for firms to participate in TMs seems evident, it has to be noted that experienced exporters make less use of TMs to facilitate their export expansion, indicating that the experiential knowledge of experienced exporters gained prior to TM participations make TMs less valuable for this exporter group. Thus, TMs seem to be more valuable for firms starting their export expansion process, especially for those exhibiting a fast approach to expand their exporting activities into new foreign markets.

#### Foreign market entry

Another line of research is concerned with a more specific phase of export expansion, i.e. foreign market entry preparation (Seringhaus, 1987). Seringhaus (1987) investigates firms' foreign market entry approaches and the role TMs play in acquiring the necessary market knowledge for entry. The results of his study indicate that those firms making use of TMs show a more proactive and systematic approach towards foreign market entry than firms that had never used any TMs for market entry in the past. The systematic nature of the market entry preparation was discovered by comparing TM-user firms' and non-user firms' export marketing practices, which thus indicates a possible influence of TMs on firms' export capabilities. The distinction between experiential knowledge facilitating services and objective knowledge services is determined as the former requiring the participation of the firm in the service as opposed to the latter, which does not so. TM-user firms are also found to be aware of and make more use of other experiential knowledge facilitating EPS (e.g. trade fairs). Also, they seem to be more sensitive towards perceived problems

facilitating EPS (e.g. trade fairs). Also, they seem to be more sensitive towards perceived problems and decision associated with market entry.<sup>5</sup> This indicates that management orientation, rather than the use of TMs by firms, is one key factor in explaining the different patterns in foreign market entry approaches. Thus, TMs can be viewed as a platform for firms to acquire foreign market knowledge, but the cross-sectional nature makes the direction of the relationships between TM participation and enhancement of firm capabilities indiscernible. Despite this criticism, Seringhaus notes that TMs

<sup>&</sup>lt;sup>5</sup> Entry decisions included Profit Expectation; interest of management; market visits; market opportunity analysis; market Information via public sources; marketing cost support from government; marketing know-how; and financial resources. Entry problems encompass competition, market entry costs, distance of markets, representation, the testing of products and market standards, reliability of available market data, language concerns, and differences in business practices.

benefit firms' market entry preparation, via the experiential learning that takes places, which has been determined as a key explanatory factor for a firm's internationalization process (Johanson & Vahlne, 1977). Arguing in the same vein, Spence & Crick (2004) find that firm's intentions in making use of TMs indicates that new and experienced exporters employ them primarily in a singular fashion, i.e. one-time use for entering a specific market.

#### Export resources and capabilities

Based on the set of articles used in this review, studies that focus on TM and export promotion services' (EPS) effectiveness, in terms of augmenting/enhancing firms' export related resources and capabilities, represent the bigger part of research investigating the application of TMs by firms and the influence of gained experiential knowledge on firms. As theoretical lenses for analysis of EPS/TM effects on firms, these studies are often employing stage models of export or international involvement (Francis & Collins-Dodd, 2004; Freixanet, 2011; Spence & Crick, 2004; Hauser & Werner, 2010). The only other applied methods for segmenting firms have been firm size (Leonidou et al., 2011), and the differences between firms with no experience in a single foreign market targeted by TM and those firms having already conducted business transactions within the same market (Spence & Crick, 2004). Durmuşoğlu et al. (2012) are not segmenting firms per se, but focus solely on manufacturing SMEs as the sample frame of their study. Very often, the rationale taken explicitly (Durmuşoğlu et al., 2012; Freixanet, 2011; Hauser & Werner, 2010; Leonidou et al., 2011) and sometimes implicitly (Francis & Collins-Dodd, 2004; Seringhaus, 1987; Spence & Crick, 2004) behind the assumed EPS or TM influence on firms is that of the resource-based view (RBV).<sup>6</sup> In the light of this theoretical view, EPS and TMs are seen as an external resource to the firm enhancing its export resources and capabilities in order to be more competitive and profitable.

Differences in terms of TM efficacy, caused by firm size, can be described as smaller firms having a more limited resource bases available, lower competitiveness caused by a lack of scale economics, and a more limited risk-taking attitude caused by information access problems (Leonidou et al., 2011; Hauser & Werner, 2010). Taking firms size as a moderating variable behind usage of EPS, Hauser & Werner (2010) provide evidence of why smaller firms make less use of EPS than larger firms. In their view it is the lack of specialized in-house resources (i.e. existence of a department or employee(s) specialized in export) for exporting that should be augmented or enhanced by EPS that hinder smaller firms to make a more effective usage of EPS. The specialized resources were operationalized as the existence of an employee or department specialized in exports. Thus, the building-up of export related resources might be contingent upon a minimal level of already existent resources (Hauser & Werner, 2010).

Stage models segmenting firms on their international or export involvement have been found in the review of export promotion studies by Freixanet (2011), and also in other studies (Crick, 1997), to be

<sup>&</sup>lt;sup>6</sup> The RBV's core message is that – taking an inside-out perspective of the firm (i.e. the firm is not a mere reactor in terms of environmental contingencies, but can be active in shaping it's environment) – by acquiring valuable, rare, inimitable, and non-substitutable resources and capabilities, together with an existent organizational entity that is able to incorporate and deploy these resources, a firm can achieve sustained competitive advantage (Kraaijenbrink, Spender, & Groen, 2010).

the most widely used methods and crucial factor for segmenting firms using EPS. The application of such models shows different approaches in terms of definitions and number of stages.

Within the studies at hand four to five stages have been used. The Stage models are for one concerned with the differences found in firms' export activities whether they are not exporting at all or getting ready to export; whether they are sporadically engaged in exporting; whether their involvement in exporting is of an active nature; whether the majority of sales is derived from export activities (Francis & Collins-Dodd, 2004).<sup>7</sup> Freixanet (2011) on the other hand applies a five stage model which distinguishes firms export involvement on four variables: Export volume, number of staff employed in international business, existence of permanent branch offices/subsidiaries overseas, and existence of production subsidiaries abroad. The criteria chosen resulted in five stages: Starting/Passive exporters; Regular exporters with little structure; Regular exporters with production units abroad.

The advantage of the latter stage model over the former one is that firms were not able to self-assign themselves into stages based on sparse description, but had been categorized into stages based on clear criteria derived ex ante. In addition, advanced forms of engagements in foreign markets are included, i.e. FDI through production units, which have been used elsewhere as a proxy for a firm's stock of experiential knowledge about foreign markets (Eriksson et al., 1997).

Within the category of studies at hand - EPS and TMs enhancing firm resources and capabilities - the effects of TMs are measured either directly (Spence & Crick, 2004), or taking TMs as part of a construct with related services, i.e. services that facilitate experiential learning like trade shows (Leonidou et al., 2011). Further, the full effects of EPS schemes and single EPS services, including TMs, are examined on a firm level as well (Durmuşoğlu et al., 2012).

The influence of TMs on firms' export resources and capabilities is evident on a firms search skills in identifying business opportunities, specifically when it comes to searching for new customers abroad via the opportunity to acquire experiential knowledge in foreign markets (Spence & Crick, 2004; Francis & Collins-Dodd, 2004; Freixanet, 2011; Leonidou et al., 2011; Durmuşoğlu et al. 2012); and on a firm's general marketing competences (Francis & Collins-Dodd, 2004). These influences are moderated by a firm's prior business experience within a specific foreign market targeted by a TM (Spence & Crick, 2004) and by a firm's general level of export activities (Francis & Collins-Dodd, 2004). The enhancement of business identification capabilities through experiential knowledge corresponds well with the study of Spence (2003), who found positive effects of firms' knowledge characteristics, i.e. stock of prior experiential knowledge, on TM relationship-building outcomes, e.g. established business contacts abroad. Besides these found associations, a firm's relationship-building and innovative capabilities are also positively associated with TMs. Moreover, particularly affected export resources seem to include special managerial resources, production and R&D resources, and intellectual resources (Leonidou et al., 2011).

<sup>&</sup>lt;sup>7</sup> In more detail firms are differentiated as being (1) at the pre-exporting stage with no export experience; (2) sporadic exporters with limited experience, who still need help in making exporting a permanent activity, i.e. develop export competence via training and information and giving assistance in partner search and opportunity recognition; (3) active exporters that are able to plan their international expansion effectively, but are still in need for market information and contacts to expand into new markets and make sense of different business environments; (4) majority exporters which are very competent and have a well-founded commitment to exporting.

#### Firm preparedness

Studies focusing on antecedent factors related to TMs have investigated their influence on TM outcomes (Spence, 2003; Spence & Crick, 2001) and TM participation (Schuler, Schnietz, & Baggett, 2002).

The study conducted by Spence (2003) is one of the most encompassing studies on TMs. The approach is twofold. In a first step variables are uncovered influencing TM outcome measures, which can be regarded as firm preparedness towards making use of TMs. The variables include firms' structural and knowledge characteristics. Besides firm variables market characteristics are also tested, but are found to be not influential, which indicates that exporter firms are able to adapt to different market environments with relative ease. The second step of the study is to take repeated measures – after 6, 12, and 24 months – on firms' engagement in the foreign markets in order to capture TM outcome measures.

A firm's knowledge characteristics, i.e. general export knowledge, objective export knowledge, and market specific export knowledge, are found to be as most influential on predicting TM outcomes. In more detail, the factors influencing TM outcomes can be viewed as firm preparedness since they represent activities or outcomes of activities like foreign market entry, which helps a firm in building up experiential knowledge. Thus, Spence (2003) finds that previous experiential knowledge acquired via export diversification from having entered various foreign markets is the most influential factor influencing TM outcomes. Spence & Crick (2004) share the view that prior experiential knowledge influences TM outcomes by enhancing firms' search for business opportunities obtained by joining TMs. Furthermore, the presence of this knowledge stock points towards the facilitation of export skills via the acquired experiential knowledge, which supports the TM participants` search in finding relevant market knowledge, i.e. establishing relevant business contacts. Another positive association was found in-between export diversification, meetings with firms in the target market arranged prior to TM participation, and leads obtained from TM participation. Quotes have also been associated with export diversification and target market language proficiency, which points again towards firms' prior exposure to activities in foreign markets as a determining factor on TM outcomes (Spence, 2003).

Measures like contacts, leads, quotes are viewed as relationship-building outcomes that are also immediate TM outcome measures. In addition to it, the relationship-building outcomes can also be viewed as proxy for acquiring experiential knowledge about the TM market by gathering direct market experience. These measures were also found to influence export performance, since they represent important pre-sales activities. Besides experiential knowledge, the acquisition of objective knowledge about a foreign market targeted by a TM, prior to participation, is also influential on relationship-building outcomes as well as on long-term measures of export performance like sales (Spence & Crick, 2001; Spence, 2003).

The firms investigated are also tested on the cumulative effects of their relationship-building outcomes together with the cumulative effects of their TM follow-up activities. These activities included follow-up visits to a foreign market and follow-up with customers and agents within the same market. Their effect on export performance was repeatedly measured over 6, 12, and 24 months. The ensuing cumulative effects were found to influence the competences acquired by firms in terms of specific market knowledge and export process skills in the target market, which yielded

export performance effects in terms of sales 6 and 12 months after the TMs took place (Spence, 2003).

Another line of research examines antecedents to firms' participation in TMs. Schuler et al. (2002) find that firms' participation in U.S. TMs, at a national level, is dependent on firms' prior international experience in foreign markets and their used political tactics. Thus, firms displaying high levels of international experience are six times more likely to be granted permission to join TMs than firms with low levels of international experience. Moreover, firms applying multiple political activities aimed at governmental actors, such as making soft money donations, employing governmental affairs staff, making use of lobbyists and political consultants, are also associated with TM participation. Firms, on the other hand, which only use one or none political tactics are three times less likely to be picked for TMs. Therefore, corporate political activities can be regarded as mediating the likelihood of a firm's TM participation in a national U.S. context (Schuler et al., 2002).

#### 2.3 Perceptional studies

#### Firms' general perceptions of EPS

Perceptional studies are mainly concerned with measures of usefulness of (Seringhaus & Botschen, 1991), satisfaction with (Spence & Crick, 2004), value of, importance of, and received/expected benefits derived from EPS (Naidu & Rao, 1993; Moini, 1998; Silverman et al., 2002; Spence & Crick, 2004). Further, Crick (1997) examined firms' awareness levels of EPS, and more specific value dimensions such as availability and reliability of EPS, along with firms' frequency of use of such services.

Most of the employed measures are rather vague and do not yield much insight on specific outcomes of such services, and are also not giving much advice for EPS providers how to improve specific services. Segmentation approaches adopted in order to uncover effects on firms or their perceptions about EPS, use stage models of export involvement (Naidu & Rao, 1993; Crick, 1997; Moini, 1998; Silverman et al., 2002), and the simple differentiation among experienced and non-experienced firms with regards to a specific target markets (Spence & Crick, 2004). Although the export involvement stages of Silverman et al. (2002) are determined ex ante, the cut-off points are rather arbitrary along the lines of export revenues of previous years, without taking into account firms' FDI.<sup>8</sup> Silverman et al.'s model stands thus partly in contrast to other models that base their models on previous studies' findings (Crick, 1997; Moini, 1998; Naidu & Rao, 1993).<sup>9</sup> Crick's eight stage model of export involvement is different from the two previous ones in that firms' self-selected themselves into stages. This brings with it the risk of biased results for categorizing exporters in discrete stages, which

<sup>&</sup>lt;sup>8</sup> Segmentation criteria were as follows: Marginal exporters displayed less than 1 % of revenues from exports; moderate exporters showed export revenues to amount in-between 1-10 % of overall revenue; and heavy exporters generated more than 10 % of their revenues from exports.

<sup>&</sup>lt;sup>9</sup> Differentiates between non-exporters; partially interested exporting firms (export/sales ratio of 10 % or less, and has had a decrease or stagnation of exports over the last five years); growing exporters (export/sales ratio of 10 % or less, and has had an export volume increase compared to 5 years ago); and regular exporters (current export/sales ratio of more than 10 %, and has had an export volume increase compared to 5 years ago)

is not controlled for by checking, for example, if export related measures of firms like export sales or export diversification corroborate the self-selection method results.<sup>10</sup>

The study of Seringhaus & Botschen (1991) compares the usefulness of Canadian and Austrian EPS schemes, which include TMs, from a company perspective. Firms rated EPS schemes provided by a mix of public/private organizations (Austria) higher than schemes provided solely by public actors (Canada). This might be interpreted as an indication that the private part in the mixed schemes brings forth schemes that are more receptive to business needs, and thus might have had an influence on the schemes content. Such deliberations resonate with the developed typology for commercial diplomats by Kostecki & Narray (2007), which describes commercial diplomats with an outlook on business – the business promoter – as more effective in delivering services to the business community. These diplomats higher effectiveness in addressing business needs is partly also derived from their past occupational activities within the private sector.

Study results show that the relationship between value placed on EPS and export involvement is "ushaped", i.e. marginal and heavy exporters indicated the most value derived from EPS (Silverman et al., 2002). Crick (1997) finds that this relationship is different when controlled for specific value dimensions. Although, Crick's eight exporter stages showed significant differences no clear evolution of the relationship between exporter stages and availability of EPS in general is apparent. This stands in contrast to results published by Moini (1998), who found that the expected benefits from EPS in general are diminishing with a firm's progression in export involvement, which is also positively associated with managers' education and numbers of foreign market trips per year.

The differences in perceived value/benefits might have been caused by the different segmentation methods applied or by the unclarity of the relationship investigated in Moini's study, which mixes perceptual measurement results concerning expected and received benefits, i.e. respondent firms are those that have actually used EPS and those that didn't. The same critique applies partly to the findings of Crick's study, which includes the value perceptions of firms in early exporter stages that virtually make no use of any EPS. Furthermore, Moini (1998) tests the value placed on EPS in general unlike Crick and Silverman et al...

#### Firms' perceptions of TMs

Crick (1997), Silverman et al. (2002) and Moini (1998) discerned that the value placed on TMs and expected benefits from them perceived by firms varied with the degree of firms' export involvement. The relationship between value placed on TMs and export involvement is, like the ratings of EPS, also "u-shaped", i.e. marginal and heavy exporters indicated the most value derived from EPS (Silverman et al., 2002). Crick (1997) finds that this relationship is different when controlled for specific value dimensions. Thus, the higher the export involvement of a firm, the higher the availability ratings for TMs, and an "u-shaped" relationship existed for the value dimension availability.

Again, differences in perceived value/benefits might have been caused by the different segmentation methods applied or by a lack of clarity concerning the relationship investigated. The latter part of this critique is aimed at Crick (1997), whose findings include the value perceptions of firms in early exporter stages (as defined by the study) that virtually make no use of any EPS.

<sup>&</sup>lt;sup>10</sup> The stages are discriminated by differentiating on firms' export intentions, their current intentions regarding exploration of export opportunities, and their ratio of export sales/domestic sales.

Within the evaluation of EPS by firms, the relative value placed on TMs range from lowest to highest value compared to other services - investigated and controlled for by exporter stage (Crick, 1997; Silverman et al., 2002). More specific measurements with regards to TMs are out forth by Spence & Crick (2004) that are dealing with perceived specific benefits by firms after having taken part in TMs by rank-ordering. This shows that new exporters favored the more tangible benefits that could be provided by TMs higher than experienced exporters, such as administrative efficiency and financial benefits. On the other hand, already experienced exporters within the same market targeted by a TM seem to use TMs for another purpose, which is indicated by the value they place on the prestige, credibility, and visibility, and closely thereafter on the support gained from the other TM group members. Moreover, the benefits gained from market visits via TMs vis-à-vis benefits gained from individual firm visits, reveals that firms perceive TMs to be superior, compared to single firm trips, by providing them lighter administrative burdens and more comprehensive market knowledge (Spence & Crick, 2004).

#### Perceptional studies incorporating firm needs

Research investigating firm needs, to be addressed by EPS to further their export development, focuses on identifying critical success factors for exporting contingent upon firms' exporter stages, and reports firms' perceptions towards single EPS in terms of importance and value levels (Naidu & Rao, 1993; Silverman et al., 2002). The rationale for the segmentation method is the same as in the above-mentioned studies dealing with EPS enhancing firms' export resources and capabilities. Thus, exporters differ for example in international experience, resources for exporting, managerial commitment and outlook, and so do require different service offerings contingent on their internationalization/exporter stage (Naidu & Rao, 1993). Like the aforementioned perceptional studies, these studies also show that there are differences among exporter stages in association with the used perceptional measures aimed at assessing EPS from a firm perspective. Furthermore, firms in different export stages were distinct with regards to perceived critical factors associated with exporting, i.e. factors critical towards export success/expansion (Silverman et al., 2002; Naidu & Rao, 1993).

Although Naidu & Rao only asked firms on what kind of services they would like to see offered, and thus no direct relationships involving TMs or other EPS were tested, respondent firms' needs in different stages in connection with what kind of programs they want to be offered can give EPS providers an indication about how to assist their clients` export endeavors more effectively. Rank-ordered results of desired services indicate that, besides eleven other services, TMs are relatively low in importance and are rated on rank eight and nine for non-exporters and export intending firms, and on rank eleven for both sporadic and regular exporters (Naidu & Rao, 1993). The low value of TMs is also demonstrated in other studies (Silverman, Castaldi, & Sengupta, 2002). Because of that, Silverman et al.'s results support Naidu & Rao's findings in that TMs were the least or among the least valued EPS by firms (Silverman et al., 2002). But, unlike Naidu & Rao, Silverman et al. treated the participation in TMs on the same level as factors that they had firms rate on to be critical to export success like alliances overseas, financial resources, export staff, and knowledge about foreign markets. Among these six factors TMs were the least valued, and alliances with foreign businesses were valued the most. But it has to be noted that to compare TMs with export success factors like the engagement in alliances overseas seems to be somewhat at odds with each other, since TMs are

seen as a vehicle through which contacts to potential business partners can be established. Therefore, it is questionable to compare TM with such factors since they might be an inducing factor to alliance-building, i.e. initial contacts can be established. Further, another factor is aimed at the importance of acquiring target market knowledge, which one might very well regard as an outcome of TMs. As the Spence and Crick (2004) study showed group market visits in the form of TMs are valued higher than single firm visits to foreign markets, because they provided firms with superior market knowledge. It appears that the Silverman et al. (2002) study is at odds with the Spence and Crick (2004) study due to the mixing of TMs with the afore-mentioned export success factors. All in all, the comparison of export success factors needs a closer look in order to compare factors that are more sensible to compare with each other. Thus, one should keep in mind the statement of Seringhaus that TMs are a hands-on approach in export marketing, meaning the acquisition of market knowledge about a single foreign market to prepare or further business activities within the same market, which yield long-term export outcomes (Seringhaus, 1987; Seringhaus; 1990; Wilkinson et al., 2009; Durmuşoğlu et al. 2012).

#### 2.4 Export outcome/Export objective

Export performance outcome studies focus on the investigation of TM effects on firms' export performance (Singer & Czinkota, 1994; Gençtürk & Kotabe, 2001; Spence, 2003; Wilkinson & Brouthers, 2006; Beeman et al., 2007; Wilkinson et al., 2009; Martincus & Carballo, 2010; Freixanet, 2011; Leondiou et al., 2011) and on export levels of sub-national and national entities (Schuler et al., 2002; Cassey, 2007; Head & Ries, 2010). Within these studies, there is no consensus if there are effects on performance measures. One possibility explaining the disagreement is due to some studies' approaches to measure the overall impacts of EPS schemes or special groups of services (experiential knowledge services vs. objective knowledge services). Thus, TM effects might have been masked by the influence of other services as part of the same aggregated construct.

#### Effects of aggregated EPS and TMs

Studies using aggregated measures of EPS schemes, including TMs, and groups of experiential knowledge facilitating services (trade shows and fairs, and TMs) report influences on firms' export diversification (Martincus & Carballo, 2010; Freixanet, 2011), but not on intermediate economic impact measures like export sales, export sales growth, and export intensity (export/total sales ratio) etc. (Freixanet, 2011; Singer & Czinkota, 1994; Gençtürk & Kotabe, 2001; Leonidou et al., 2011; Durmuşoğlu et al., 2012). Impacts on economic measures are only present, for example, when controlled for the quantity of EPS used by a firm (Singer & Czinkota, 1994; Martincus & Carballo, 2010). Furthermore, when controlled for joint effects of EPS and export involvement, a firm's export profitability, i.e. profit contribution of export sales relative to domestic sales, is positively associated with higher stages of involvement and firm's making more use of EPS (Genctürk & Kotabe, 2001). Hence, the notion of Martincus & Carballos' "...bundled services work better (Martincus & Carballo, 2010, p. 1751)" is supported by these conducted studies. This means that objective knowledge facilitating services providing basic information about a countries economy, politics, and culture etc. enhance a firms' acquisition or creation of experiential knowledge by using them in tandem with experiential knowledge services like TMs. Hence, the more services are bundled by firms, the greater the association with total export sales, exports per country, and exports per product. In addition, the effects of EPS, especially the effects of more bundled EPS, are strongest when exporters expand into new markets (exports per country) due to the greater informational need (Martincus & Carballo, 2010).

#### TM effects on export performance

A variety of different analysis levels exists on how TMs have an effect on export performance measures, and export performance studies linked with TMs have been conducted on a state and country level, and on the level of the firm.

Studies investigating direct effects of TMs report mixed results of these programs to influence economic measures on a state and country level. For example, TMs are not associated with US state's export growth for high-tech exports (Wilkinson & Brouthers, 2000a) but seem to have an significant impact when used for inward FDI promotion (Wilkinson & Brouthers, 2000b). On a related note, Cassey (2007) found that US states' TMs are targeted towards export destinations for which relatively higher export levels are found, which points towards TMs possible influence on bilateral trade flows. This view is contested by findings showing that TMs are not a vehicle for increasing bilateral trade flows between Canada and its trading partners (Head & Ries, 2010).

Studies focusing solely on TMs effects on firms show that TMs are not influential on intermediate economic export measures (Seringhaus, 1987; Wilkinson & Brouthers, 2006; Wilkinson et al., 2009; Durmuşoğlu et al. 2012), but are effective in increasing long-term export sales and growth levels, and also exporting firms' employment levels (Beeman, Rosebrock, & Tran, 2007; Spence, 2003; Wilkinson, Brouthers, Salazar, & McNally, 2009).

#### 2.5 Methodology and level/units of analysis

From table 2 and 3 it can be seen that studies testing TM influences on firm variables are predominately cross-sectional, with two exceptions (Spence & Crick, 2001; Spence, 2003) taking longitudinal approaches (i.e. repeated measures). This means of course shortcomings in most of the 21 studies ability to make causal inferences about TM or EPS effects on firm outcomes.

The units of analysis are evenly distributed between SMEs and larger firms. The industry contexts of these firms are rather broad with manufacturing, high-tech sectors. Only two out of the 21 studies do not determine the industry dimension any further. Moreover, only a few studies (Spence & Crick, 2001; Spence, 2003; Freixanet, 2011) provide corroborating evidence by combining quantitative results, gathered through surveys, with qualitative results obtained from interviews. Although Freixanet (2011) uses triangulation of data sources, his efforts were rather minuscule compared to the plethora of measures employed in his work, since only a very small part of variables are affected (by the combination of secondary data obtained from export databases with primary data gathered by interviewing managers). Only a small number of studies mix analysis levels, which is the case in terms of combining individual and firm levels (Crick, 1997; Moini, 1998; Gençtürk & Kotabe, 2001). Although, one might very well argue that Crick (1997) only uses individuals as respondents, because the differences among managers' perceptions about various EPS are discerned based on firms' exporter stages and no data is gathered on variables measuring or describing any actual individual level construct.

In order to discern the impact of EPS/TM on exporters more accurately, only a few studies employ control groups. Compared are firms that are not using EPS/TMs to enter potential foreign market

destinations with firms that do use them (Freixanet, 2011; Durmuşoğlu et al. 2012) and non-exporting firms (Seringhaus, 1987).

Another line of research focuses on TM and EPS effects on trade flows and investment attraction (i.e. exports and inward FDI) on a sub-national (e.g. US state) or national level. Their research design is also cross-sectional bringing with it the same internal validity problems as studies focusing on a firm level. Furthermore, an obvious threat biasing the found associations within these studies is that the proposed effects on country or country state measures are subjected to a plethora of other influence factors, which makes spuriousness (third variable influence) an even bigger possibility.

With regards to the studies' national contexts most of the studies, 21 out of 26, are carried out in the US, Canada, and the UK. The rest of the literature is dispersed in this regard, with national contexts such as Austria, Colombia, Germany, Spain, and Turkey. This highlights the need to synthesize and replicate study findings within country context other than those countries belonging to the Anglo-Saxon sphere.

From this preview recap on methodological issues it is obvious that many of the proposed TM effects on firm or country measures are in need to be investigated taking longitudinal approaches to establish the internal validity claims made so often based on inadequate research designs. Further, control groups need to be used to be able to detect effects of EPS in a more reliable manner. For example, Freixanet (2011) opted for using control groups, i.e. firms that do not use EPS and are engaged internationally, within each of the five predetermined exporter stages to control for EPS effects on outcome measures. Possible triangulation efforts by combining results obtained by making use of different data sources, data gathering instruments, and analysis techniques could enhance the reliability of the measured effects further.

#### 2.6 TM outcome measures

As is apparent form the previous sections 2.2 to 2.4, the overall body of studies investigating TMs employ a wide variety of outcome measures. Thus, in the following the need for summing-up and categorizing outcome measures is addressed in order to develop the means for future investigations about TM efficacy.

From the reviewed articles three main dimensions of measures are created: (1) Financial measures, e.g. like sales, profits etc... (2) Nonfinancial measures pertaining to export markets, e.g. export diversification in terms of number of markets and products; and pre-sales activities, e.g. contacts, quotes, leads. (3) Generic subjective measures like perceived value, benefits and satisfaction in general derived from TMs; and satisfaction with export performance.

#### Financial measures

Economic/financial measures encompass firm outcomes and higher aggregated outcome measures like those of sub-national state and national state export volumes.

Firm level financial measures include export sales (Spence, 2003; Martincus & Carballlo, 2010; Freixanet, 2011); export sales growth (Freixanet, 2011); export intensity, i.e. ratio measure for export sales' share of total sales (Freixanet, 2011); export share growth, i.e. ratio of past and current export share of total sales (Gençtürk & Kotabe, 2001); average exports per product and country (Martincus

& Carballo, 2010); and employment growth over a three year period (Beeman et al., 2007). Moreover, economic measures are used to investigate TM influences' on general or sector specific export volumes of entire regions, i.e. federal states or regions (sub-national) of a country or a country in its entirety (Wilkinson & Brouthers, 2000a; Wilkinson & Brouthers, 2000b; Cassey, 2007). In addition to the examination of TM effects on export volumes, effects on bilateral trade flows between countries are investigated as well (Head & Ries, 2010).

#### Non-financial measures

Firm measures of the non-financial category pertain to two types: (1) Number of export markets, i.e. export diversification (the number of export markets/areas served) (Martincus & Carballo, 2010; Freixanet, 2011; Leonidou et al., 2011); and products exported overall and per country (Martincus & Carballo, 2010). (2) Pre-sales activities including the number of contacts, quotes, and leads obtained by firms during and after TM participation, which are also seen as a proxy for a firm's increase in market competence (Spence, 2003; Spence & Crick, 2004).

#### Generic subjective measures

Generic subjective measures, from a firm perspective, encompass general measures like expected benefits and value; perceived general value and specific value dimensions like reliability and availability; and perceived usefulness and satisfaction derived from TMs (Naidu & Rao, 1993; Crick, 1997; Moini, 1998; Silverman et al., 2002; Spence & Crick, 2004). Moreover, specific benefits are assessed by Spence & Crick (2004), who examine TM effects in terms of increasing a firm's cultural, market and competitive knowledge; providing organizational help; enabling the establishment of key contacts and the quality of contact; the establishment of earlier business contacts and receiving of orders; and lighter financial burdens.

A number of studies use subjective measures to specifically investigate TM effects on export performance, and also the effects on firms' export resources and capabilities. The employed measurement instruments are predominately psychometric scales of an ordinal measurement level (Seringhaus, 1987; Naidu & Rao, 1993; Crick, 1997; Moini, 1998; Gençtürk & Kotabe, 2001; Silverman et al., 2002; Spence, 2003; Spence & Crick, 2004; Wilkinson & Brouthers, 2006; Leonidou et al., 2011; Durmuşoğlu et al. 2012), but also dichotomous outcome formats are used (Singer & Czinkota, 1994). Psychometric outcome measures operationalizing export performance of the firm as export profitability relative to profits derived from domestic and total sales (Freixanet, 2011; Genctürk & Kotabe, 2001; Leonidou et al., 2011); the enhancement of the competitive position (Genctürk & Kotabe, 2001); increase in acquired competence (Spence, 2003); and perceptional measures concerning sales growth, overseas market share (Wilkinson & Brouthers, 2006; Wilkinson et al., 2009; Leondiou et al., 2011), number of countries exporting to, and overall export performance in general (Wilkinson & Brouthers, 2006; Wilkinson et al., 2009). Opting for a selection of subjective measures of export performance is a feasible alternative to objective financial performance measures, because it is the managers responsible who set the export objectives and should thus be more able to give information about TM efficacy towards a firm's export performance. Furthermore, objective and subjective export performance measures have been found to be strongly correlated (Francis & Collins-Dodd, 2004; Wilkinson & Brouthers, 2006).

Export resource and capability variables of a psychometric nature are operationalized as market entry preparation (Seringhaus, 1987) and international planning activities (Leonidou et al., 2011); general marketing practices/competences and export marketing practices/competences (Seringhaus, 1987; Francis & Collins-Dodd, 2004); capability to identify and develop new customers/contacts and identify/acquire important market information (Durmuşoğlu et al. 2012; Francis & Collins-Dodd, 2004). Furthermore, Leonidou et al., (2011) take special managerial resources pertaining to managers interests, attitudes, skills, and experience towards exporting; production - and R&D resources pertaining to export capacity, patents, and proprietary technical knowledge; and Intellectual resources pertaining to various types of foreign market knowledge (regulation, business practices, market demand) as TM outcomes measures. Besides resource outcome measures, capabilities related to exporting were measured by defining them as business identification capabilities with items like the localization and analysis of potential foreign markets; relationshipbuilding capabilities presented through understanding overseas customer requirement, acquiring a reliable foreign market representation, the establishment of ties with foreign businesses; and innovation capabilities defined as the ability to adopt ways and ideas related to production processes, and developing new or innovative goods for foreign markets (Leonidou et al., 2011).

Dichotomous outcome formats have been used for TM effects on pre-exporting activities with items of decision to export, planning activities, key contacts in export markets, and export channels. Moreover, export performance occurrences were measured by the items starting to export, furthering exports of current products in current markets, and the export of new products and to new countries (Singer & Czinkota, 1994).

#### 2.7 Main gaps in research

#### Analysis level

Already in 1987 Seringhaus noted that different EPS require different levels of firm involvement. Before the background of trade missions to attract or enhance the export activities of especially SMEs it is surprising that mainly other than controlling for previous market engagement in a specific country or controlling for exporter stages of firms, no study addresses individual factors in a comprehensive way. This is the more surprising, when considering that in a lot of cases single managers act as the sole firm representatives on TMs. Moreover, as was already stated in the introduction part, the developed typology by Kostecki & Naray concerning the effectiveness of commercial diplomat types offers reason to investigate individual factors of managers that might increase the effective usage of TMs.

Gray (1997) is to the knowledge of the author one of the few scholars that has taken up an approach focusing on an individual level and developed a segmentation method of individuals, e.g. managers or decision-makers making use of EPS schemes in general. He argues that individual characteristics in terms of managers' attitudes and skills towards international markets call into question EPS schemes focus on firm needs and that managers' profiles do make a difference towards firm internationalization and corporate performance. This approach could also help to control for exporting firms that have recently hired inexperienced managers to handle their international

business and vice versa. Thus, in order to helping firms to recognize and exploit international market opportunities more effectively government bodies should readdress their focus from firm needs towards individuals' needs, which could also help to improve client firms participation in and satisfaction with EPS (Gray, 1997). Although Gray recognizes the importance to improve EPS schemes by focusing on decision-makers he also makes no distinction between service participation levels of clients and offers, like the many other studies reviewed in this study, a rather incomplete picture about the nature of the services offered and how they can be improved. Before the background of a more holistic depiction of the process of EPS use, the interplay between public service providers and the private actors, who want to take advantage of EPS, should be made more explicit in order to, not only, improve EPS effectiveness, but also to inform private actors more accurately about conditions leading to a more effective use of EPS. Since the enhancement of firms' international opportunity recognition is frequently mentioned as an EPS and TM outcome, there is also the question about what kind of decision-maker has a higher capability to identify those opportunities and what internal and external environment factors influence this process.

In the context of trade missions in which the managers become acquainted with the business and institutional environment of a foreign market the question presents itself in how far different direct outcomes of trade missions like business opportunity recognition are influenced by the manager's human capital profile.

The literature on entrepreneurship stresses the importance of an entrepreneur's capabilities for business opportunity recognition and pursuit, which are positively related (Ucbasaran, Westhead, & Wright, 2008). Especially interesting in this regarding is the literature on corporate entrepreneurship or intrapreneurship which "...captures the identification and exploitation of opportunities within incumbent organizations...(De Jong et al., 2011,p. 3)." Corporate entrepreneurship presents thus one road to explain why some individuals are more successful in engaging in activities that explore and exploit business opportunities than others. Moreover, human capital factors like educational attainment, job occupation, age and prior knowledge are seen as determining factors for corporate entrepreneurship (De Jong et al., 2011). Human capital factors seems thus to be important in determining TM effectiveness. This means that differences in-between managerial/employee profiles do matter prior of actually creating business ventures or conducting business activities with companies abroad. A human capital perspective might thus provide a lens helping to identify the most suitable individuals to send on trade missions.

#### **Opportunity identification**

One frequently reoccurring topic of the reviewed articles is the impact that TMs and related services do have on firms' abilities to identify business opportunities abroad, but little attention has been given towards conditions in terms of a firm's, or individual for that matter, pre-existing resources and capabilities conducive towards opportunity identification. The insufficiency in terms of pre-existing export resources to make effective use of EPS/TMs has been shown to be of concern for effective business support provided by export promotion agencies (Hauser & Werner, 2010). Thus, a firm's resource assimilation or augmentation in terms of foreign business and institutional knowledge and related intelligence matters, provided by public actors, is contingent upon prior resources and capabilities.

As was shown by Spence (2003) if the identified opportunities during TMs can be exploited over the long-term, acquired market competence and export performance, i.e. export sales, is influenced positively. Although outcome measures have been developed measuring pre-sales activities of exporters abroad and associations between TMs and related export resources and capabilities, no study investigated opportunity recognition grounded in theories dealing with processes of opportunity identification and exploitation. Moreover, what predictive factors work on the firm or individual level have only be investigated in terms of prior export experience of firms and managers. This represents a significant gap since TMs are considered to be a service requiring a high degree of participation. Further, by enabling firm's and their representatives to conduct important networking activities (Kostecki & Naray, 2007), which also enable the gathering of experiential knowledge towards the targeted country market and the long-term improvement of financial export, preparedness to contribute to service outcomes should be assessed before a broad background of opportunity identification.

#### Service co-creation

From a general CD perspective, Rüel and Zuidema (2012) point out the importance of preparedness of the service takers to maximize the value and effectiveness of CD. As a CD service, TMs require a rather high level of co-creation, which means that the client firm and its respective representative(s) should be included as a contributor to TM effectiveness/outcomes. This co-creation logic is based on Bitner et al. (1997), who distinguishes service outcomes by the required degree of the client's involvement, ranging from passive to active behaviors. Moreover, taking a co-creation perspective, focusing on firm preparedness should also take into account necessary skills and knowledge of firms prior to TM participation (Rüel & Zuidema, 2012). These have been found to influence client firms' abilities to carry out networking activities or establish relationships with prospective business partners positively, which in turn influence the acquisition of future export related competences and ultimately financial outcomes (Spence, 2003).

The accounting for necessary background knowledge of client firms seems also to be one of the main differences between a CD perspective and perspectives adopted by the export promotion literature, which constantly address public service providers to - and give advice on how to - improve their offered services predominately based on firm needs. This approach neglects the co-creation dimension of experiential knowledge facilitating services like TMs and also trade shows.

Thus, in order to give a clearer picture about the processes leading to service outcomes and outcomes relating to firms identification of prospective business partners, the next chapter will incorporate insights from the entrepreneurship literature which, as one of its central concepts, deals with the identification, evaluation, and exploitation of business opportunities. By doing so, this study proposes to view TMs not simply to enhance export resources and capabilities, which in turn influence the identification of business opportunities, but to view managers' and firms' stocks of resources and capabilities as necessary precondition for identifying business opportunities surrounding firms' participation in TMs. This also echoes research conducted by Hauser & Werner (2010) who argue that resource stricken small firms might not be able to use EPS effectively due to missing resources. Interestingly, they argue further that the supposed enhancement of resources and capabilities by using EPS can't take place because it is exactly these resources that are needed to

integrate further resources. Thus, based on the need for client firms to exhibit a high participatory behavior when engaging in TMs, this study proposes to look at firm resources that help the client firm to recognize opportunities in foreign markets. Moreover, since it is the individual decision-maker of firms that participate in TMs, their skills and personal traits should be incorporated as well within a framework of opportunity identification. This is even more important when considering Bitner et al.'s reminder that different required levels of participation of customers in the service delivery process do make a difference in service outcomes.

## 3. Theory development

Based on the main research gaps found, the following sections will generate hypotheses with regards to determining TM effectiveness measures as business opportunities identified. Therefore, entrepreneurship theories with a special focus on entrepreneurship within incumbent firms and within an international context are consulted. The research model developed for the present study, incorporating the hypotheses, is thereafter presented in figure 2.

#### **3.1 Business opportunities**

According to Chandra, Styles & Wilkinson (2009) there is no agreed upon definition of entrepreneurship, but a central theme can be recognized around the concept of opportunity as a central element in more recent approaches to entrepreneurship that focus on the processes of how opportunities are discovered and acted upon by organizations and individuals.

Two types of opportunities can be distinguished based upon their degree of innovation. Entrepreneurial opportunities are those that are radical in terms of innovativeness and can be defined by viewing them as situations characterized by the introduction of new services, goods, raw materials, markets and organizing methods through newly formed means, ends or means-ends relationships. More incremental innovations are found in opportunities that involve the modification of means-ends relationships, of products and services that are already in existence and offered in markets of the same type. Examples encompass adjustments of marketing and pricing strategies or outsourcing production units or the acquisition of unexpectedly cheap supplies in order to economize costs (Chandra et al., 2009; Lumpkin & Dess, 1996). In the case of entering new markets, or a firm's internationalizing towards new geographical markets, several authors stress that entrepreneurship is not solely confined towards the formation of truly new ventures and business start-ups, but also incumbent organizations can act in entrepreneurial ways (Davidsson, 2004; Lumpkin & Dess, 1996). This is supported by the observations of Lumpkin & Dess that new entry characterizes the essential act of entrepreneurship and it can defined as the "entering [of] new or established markets with new or existing goods or services. New entry is the act of launching a new venture, either by a start-up firm, through an existing firm, or via 'internal corporate venturing' (Lumpkin & Dess, 1996, p.136)." Furthermore, in a special issue on international entrepreneurship Styles & Gray (2006) emphasized a present lack of studies addressing the issue of incumbent and well-established companies, which should be included in the field of international entrepreneurship. They go on and note that when "Schumpeter (1934) wrote about creating market disequilibrium through disruptive innovations new products, new production methods, new markets and new materials or sources of supply or new organizational structures he mentioned nothing about the size and age of firms (Styles & Gray, 2006, p. 464)."

This view is also shared in the international entrepreneurship literature which suggests international entrepreneurship to be "a combination of innovative, proactive, and risk-seeking behavior that crosses national borders and is intended to create value in organizations (Oviatt & McDougall, 2000, as cited in, Oviatt & McDougall, 2005, p.539)" and that "international entrepreneurship has evolved from a focus on new ventures to include corporate entrepreneurship (Oviatt & McDougall, 2005, p. 539)". Hence, the levels of analysis range from individual, group to organization.

Although the individual entrepreneur is responsible for decisions concerning internationalization and the exploitation of opportunities, the exploitation of said opportunities are carried out through either newly formed or existing organizations possessing capabilities transforming opportunities into market outcomes (Oyson & Whitaker, 2010). Thus, Oyson & Whitaker (2010) emphasize the importance of the entrepreneur-firm-opportunity-nexus as opposed to studies focusing on the entrepreneur-opportunity or firm-opportunity nexus. This study adopts this multi-level approach to study TM participants' engagement in foreign markets by examining individual factors and firm factors influencing the opportunity discovery and exploitation during TMs. Also, in adopting such a view a more holistic approach is chosen to account for a more accurate picture of how firms might increase TM effectiveness.

But what are the opportunities that can be identified by TM participants within foreign business trips? In chapter 2.6 (TM outcomes) various outcome measures have been operationalized to capture TM effectiveness from a firm perspective. The one that resonates with international entrepreneurship definitions of opportunities within established organizations is Spence's (2003) presales activity outcome measure, because it captures future business exchange relationships between market actors. In addition, the international opportunities can be defined more precisely than the above mentioned definitions of opportunity recognition as "synonymous with the identification of potential exchange partners (Ellis, 2008, p.3)." For example, a perceived opportunity to satisfy an unmet market need in a foreign market can only be exploited after suitable business partners like a distributor or agent within the market have been found (Ellis, 2008).

### 3.2 Opportunity recognition

Two main routes to opportunity recognition have been suggested. For one, opportunities are discovered and are only known after they have been discovered. Thus, opportunities can't be actively searched for, because one does not know what to search for. But the discovery of opportunities can be enhanced by the possession of prior knowledge, relevant skills, and alertness as well as networks of contacts and relations. Another perspective claims that the identification of opportunities is undertaken by making use of a systematic and rational process resembling formal strategic planning, which has an underlying purpose (e.g. declining sales, or seeking profits and market share). This kind of search is more targeted because the individual carrying the search is cognizant towards the information that is missing (Chandra et al., 2009).
Three factors have been made out in prior studies that impact on opportunity identification: Prior knowledge, entrepreneurial orientation and international network structure (Oviatt & McDougall, 2005; Chandra et al., 2009).

Oyson & Whitaker (2010) contend that previous entrepreneurship studies either focus on individualopportunity or firm-opportunity nexus. Their developed typology stresses the importance of the interplay between individuals and the firms, because opportunities as identified by individuals can only be exploited through an existing organization. Thus, four different types of opportunity formation have been created, and are presented in the following typology (figure 1). Opportunity formations are determined along the dimensions of absent/present firm capability and market opportunities.

# **Figure 1 Opportunity nexuses**

		Market Opportunities		
		Current	New	
	Current	1	3	
		Opportunity Discovery	Opportunity	
Firm Conchility			Construction	
Firm Capability	New	2	4	
		Opportunity	<b>Opportunity Creation</b>	
		Development		

Source: Oyson & Whitaker (2010)

Of interest in this study are quadrant 1 and 2 of the above figure, since the firms participating in TMs know that market opportunities are out there through the public service providers hosting these networking events and providing market research to attract domestic firms to join in. The question then is in how far present and absent firm capabilities influence the exploitation of these market opportunities, which must be identified during TMs by the participants? Similar approaches that account for exploited opportunities after the fact, i.e. actually accounting for export performance of firms, have been chosen within the exporting literature, which suggests that managerial and firm factors as main determinants to export venturing and export success (Gençtürk & Kotabe, 2001; Ibeh, 2003). In the case of the firm Ibeh (2003) contends that an entrepreneurial strategic posture is especially important for SMEs to be successful internationally. Furthermore, Gray's (1997) examination of export managers and them being the target of export assistance providers showed that the more international experienced managers are predominately employed at the firms exhibiting higher levels of international involvement. This indicates that there is a certain personorganization fit, which further indicates that there are favorable combinations of decision-makers and firms for the identification and exploitation of business opportunities.

In the following two paragraphs hypothesis will be developed in order to examine individual and firm level influences on opportunity identification and exploitation before the context of firms using TMs in order to expand internationally and enter new markets. In chapter 3.3 hypotheses concerning firm level determinants of TM effectiveness, i.e. business opportunity identification, are presented. Chapter 3.4 will focus on the individual level determinants of TM effectiveness.

# 3.3 Firm level determinants of opportunity identification

# Entrepreneurial orientation

Entrepreneurial activities within incumbent organizations can be subsumed under the term corporate entrepreneurship (CE). CE can play a significant role in organizational change and renewal and is regarded as a firm-level and top-down process initiated by business owners and general managers in order to engage in and foster new ventures, innovations and strategic renewal (Sharma & Chrisman, 1999). According to a study conducted by Rausch et al. (2009) the construct of entrepreneurial orientation (EO) has been developed into the predominately used label for corporate entrepreneurship. A related but slightly different concept is intrapreneurship by which initiative from below in the organization, i.e. employee or worker initiative is seen as the driving force for opportunity identification and exploitation (De Jong & Wennekers, 2008). From the definitions provided above it can be seen that EO measures are assessed at the firm level.

Entrepreneurial orientation has three dimensions: innovativeness, proactiveness and risk-taking. An entrepreneurial organization is one that "engages in product-market innovation, undertakes somewhat risky ventures, and is first to come up with proactive innovations (...). A nonentrepreneurial firm is one that innovates very little, is highly risk averse, and imitates the moves of competitors instead of leading the way. We can tentatively view entrepreneurship as a composite weighting of these three variables" (Miller, 1983, as cited in, De Jong et al., 2011). Covin and Slevin (1988) offer a similar definition of EO which focuses more on the top management team and that it is them as key decision-makers that set the tone for the level of business-related risk, innovativeness and change, and competitive stance towards competitors the firm is exhibiting. Moreover, the concept of EO stands for the policies and practices that provide the foundation for entrepreneurial decisions and actions, which highlights its function as an organization's strategy-making process (Lumpkin & Dess, 1996; Rauch, Wiklund, Lumpkin, & Frese, 2009). Through this process an organization is able to effect its purpose, uphold its vision and establish competitive advantages (Rauch et al., 2009). Others have suggested that the EO dimensions do not co-vary with each other to represent one construct, but are rather independent of each other. Further, it is suggested for example that firms pursuing imitative strategies rather than innovative ones could still be considered to exhibit an entrepreneurial orientation since imitative strategies do not hinder them to take a proactive and risk-taking stance or display other forms of processes and behaviors associated with entrepreneurship (Lyon, Lumpkin, & Dess, 2000). Therefore, it is suggested that:

H1: A firm's entrepreneurial orientation in terms of proactivity, innovativeness and risk-taking is positively related to the identification of business opportunities.

#### International network structure

As a foreign networking activity, TMs can be viewed as helping firms and decision-makers to alleviate environmental uncertainty and help them to interpret relevant market information about complex external phenomena. It is further suggested that networking in foreign markets for the purpose of uncertainty reduction is positively associated with export performance (Babakus, Yavas, & Haahti, 2006). Due to one of TMs main functions to be a networking event it is proposed that a firm's prior networking experience should enhance its ability to engage successfully in TMs to gather market knowledge and exploit business opportunities more effectively. In fact Babakus et al. (2006) contend that especially for SMEs the support of SMEs' exporting activities can be substantially enhanced by export promotion measures, like TMs, to facilitate foreign networking activities and export performance.

There is evidence that prior foreign market engagements of a firm influence its foreign market activities. Reid (1981) and Eriksson et al., (1997) suggest that extra-organizational linkages of a firm facilitate additional information and contacts with foreign sources influencing the decision-makers ability to discriminate and evaluate foreign market information and the market's potential for the firm. Moreover, Reid expects these factors to also cause systematically different patterns in behavior and attitudes between managers when it comes to foreign market activities. Also a firm's previous foreign market engagements, as a valuable source of experiential knowledge, have been shown to influence the adjustment of internal firm processes positively (Eriksson et al., 1997). This is due to the fact that the developed foreign networks can offer many possibilities for vicarious learning via the involved network actors connected to the firm, who can be seen as various sources of knowledge. A number of studies proliferated evidence on the acquisition of international knowledge via these network relationships. However, it is not yet clear if this kind of knowledge is being converted directly into experience and learning (Hadley & Wilson, 2003). In addition, a firm's location within an international network can aid the firm in fostering relationships which, in turn, might facilitate connections to different network actors (Hadley & Wilson, 2003).

The spill-over of knowledge and creation of new knowledge in the course of interaction between two market actors set to engage in future exchange activities is also strongly suggested by the original creators, Johanson and Vahlne, of the IP model (internationalization process). They argue that "when a focal firm and another firm are mutually committed to future business with each other, they have a basis not only for learning about and from each other, but also for creating new knowledge through interaction. In this way, they develop opportunities for new business. Moreover, if the partner firm also is committed to other relationships, the focal firm becomes indirectly linked to a wider network of interconnected firms, who are committed to each other and, to some extent, have a shared knowledge capital. In this way, the relationship provides a bridge into a new knowledge world and the opportunities created in the relationship have a wider significance than just business with the partner firm (Johanson & Vahlne, 2006, p. 168)." Furthermore they propose "that building the relationship is a costly, time-consuming and uncertain process. We believe that this, in addition to other reasons discussed in the earlier IP [internationalization process] writings, is one important reason why it takes time to internationalize with high long-term performance (Johanson & Vahlne, 2006, p. 168)."

Within the context of TMs the findings of Spence (2003) show that firm characteristics such as higher levels of general experiential knowledge (e.g. export diversification as number of countries exporting to) are positively associated with pre-sales activities. As stated before the pre-sales activities measures can be regarded as opportunity recognition outcomes and mark an important step towards opportunity exploitation (Ellis, 2008). Thus, it is propped that:

H2: A firm's international experience is positively related to the identification of business opportunities.

#### 3.4 Individual level determinants of opportunity identification

The important role of the individual or entrepreneur within the process of opportunity discovery is highlighted by Shane & Venkataraman (2000). In their definition the tendency of some individuals to be better at identifying particular opportunities is influenced by (1) prior informational resources possessed by individuals and (2) their cognitive properties recognizing the information's value and exploiting or acting on it. Research has provided evidence on the function of prior knowledge acquired through education and work experience to influence the individual opportunity identification process (Shane, 2000). The cognitive properties to act on new information and to combine it with prior knowledge have been explored extensively within the field of cognitive style research. Cognitive style describes predominant modes of information processing in individuals. In theory then entrepreneurs can be distinguished from non-entrepreneurs by cognitive style characteristics (Cools & Van den Broeck, 2007; Corbett, 2005).

#### Prior Knowledge

Prior knowledge impacts on opportunity recognition positively and helps to explain why some individuals identify opportunities and others don't (Shane, 2000). Studies that have investigated the role of an entrepreneur's human capital in opportunity identification give further proof of the role prior knowledge plays in the identification of opportunities (Shepherd & DeTienne, 2005; Ucbasaran, Westhead, & Wright, 2008). General human capital, e.g. prior education, and entrepreneur-specific human capital, e.g. business ownership and capabilities in the form of managerial and entrepreneurial capabilities cause variation in the number of identified and pursued opportunities (Ucbasaran et al., 2008). These factors enhance the integration and accumulation of new knowledge, which means that individuals are equipped with a larger opportunity set. For instance, an individual's previous years of education influences the chance of identifying opportunities positively (Shepherd & DeTienne, 2005).

Other definitions of prior knowledge distinguish between two types of knowledge, i.e. objective and experiential knowledge. Objective knowledge can be regarded as acts of standardized ways in which information collected and transferred (e.g. market research), while experiential knowledge can be regarded as market-specific, tacit and non-transferable between individuals or firms. Experiential knowledge reduces risks associated with internationalization and can function as a vehicle which enables the individual or firm to acquire knowledge from internal and external sources and of opportunities for combining them (Eriksson et al., 1997). Of the two knowledge types, experiential knowledge is considered to be of higher value than the objective type, because it allows for "... direct knowing, immediate understanding, learning without conscious use of reasoning, or making a choice without formal analysis (Hadley & Wilson, 2003, p. 699)." The experiential knowledge needed to compete in international markets can be further defined as foreign business and institutional knowledge. The former pertains to experiential knowledge of clients, markets and competitors and the latter to experiential knowledge of government, and regulatory, cognitive, and cultural dimensions of institutions (Eriksson et al., 1997). The importance of former relationships of individuals within foreign markets a firm wants to enter has been acknowledged by Loan & Bell (2006) who offer insight on the importance of individual manager experiences with the target market. They found that one quarter out of the 137 foreign market entries under study were facilitated by managers' previous occupation or stay of residence within a specific market.

Further, the role of key decision-makers, i.e. senior international marketing managers - in terms of their attitudes, skills, and knowledge with regards to international business - has also been found to be highly correlated with firm performance in foreign markets (Gray, 1997). Therefore, the following hypotheses are formulated:

H3: A TM participant's prior knowledge in terms of (a) general human capital, (b) entrepreneurspecific human capital, and (c) market-specific experiential knowledge is positively related to the identification of business opportunities.

# International Experience

One of the early studies investigating managers' international orientation and its influence on a firm's export sales increase over a three year period revealed that almost 60 per cent of the change in sales could be attributed to personality and socio-demographic variables rather than firm variables (Dichtl, Koeglmayr, & Mueller, 1990). Furthermore, in a study conducted by Acedo & Jones (2007) examining managers' cognition in relation towards internationalization speed as relevant to international entrepreneurship it was found that managers with higher levels of international orientation exhibit higher levels of proactiveness and lower level of risk perception towards international business. In addition, Ellis & Pecotich (2001) assert that decision-makers with a greater number of cosmopolitan ties in foreign markets have a better base for export success, and Reid (1981) and (Gray, 1997) lists international experience of decision-makers as a key determinant of firm export entry and export performance. Thus, it is proposed that:

H4: A TM participant's international experience is positively related to the identification of business opportunities.

# Cognitive style

Based on the insights of the proposed process of opportunity discovery by Shane & Venkataraman (2000), Mitchell et al., (2003) contend that knowledge about an individual's style of information processing and cognition can offer valuable insights for the field of entrepreneurship. Similar suggestions to that of Mitchell et al. have been made by Corbett (2005) who gives the process perspective credit for aiding in better understanding the process of entrepreneurship by explaining how an individual's mental built-up is connected to his ability to identify and exploit opportunities. On the other hand, the predominant focus on entrepreneurial attributes necessary for the entrepreneurial process within this stream of research has led to a void on the matter of learning or how these attributes come into being (Corbett, 2005). This has led to an interest of recent entrepreneurship studies in cognitive research (Corbett, 2005; Corbett & Hmieleski, 2007; Isaga, 2012) which focuses partly on individual cognitive styles or learning styles and how these cause preferences for perceiving and processing information (Cools & Van den Broeck, 2007). However, as Corbett (2005) states, within the literature of opportunity identification there is a saturation of studies highlighting the roles of experience, creativity, knowledge, and cognition; and these studies are addressing the way in which information is stored and used in order to facilitate the pursuit of opportunities. Consequently, there is a need to look at the transformation process of information and the various ways in which it is acquired or learned, also before the background of viewing entrepreneurship as a process.

How entrepreneurs process and organize acquired information and based on their observations form decisions and conclusions is what can be called cognitive styles (Isaga, 2012).<sup>11</sup> Within the field of psychology, cognitive style is widely accepted to be a crucial determining factor for individual behavior (Brigham, De Castro, & Shepherd, 2007). Cognitive style can be defined as a habitual mode of preferred learning, which does not preclude that individuals make only use of one mode, but rather a certain disposition of an individual to tend more to one mode than to other modes is established (Kolb, 1984). Thus, it is has been proposed by Jung that every individual is inclined towards different learning mechanisms and that an individual person's mind in tandem with the disordered environment (through interaction) is one of the reasons why one can find such a considerable variability in the process of learning (Jung, 1977, as cited in, Kolb, 1984). Further, the "outer circumstances and inner disposition frequently favor the one mechanism, and restrict or hinder the other; whereby a predominance of one mechanism permanently dominates; not of course, that the other can never be completely suppressed, inasmuch as it also is an integral factor in psychic activity (Jung, 1977, as cited in, Kolb, 1984, p. 61)."

Armstrong, Cools and Sadler-Smith (2012) define cognitive styles as "consistent individual differences in how individuals perceive, think, solve problems, learn, take decisions and relate to others (Armstrong et al., 2012, p. 238)." In a review of previous definitions used to define cognitive style constructs and related measurement scales, Cools and Van den Broeck (2007) determined that the entirety of cognitive style definitions in general imply how individuals process and organize information and come to make decisions and conclusions on the basis of their observations. Cognitive approaches have been used extensively within studies of the industrial, work and organizational psychology domains and are gaining more and more prominence within the field of business and management (Armstrong et al., 2012). In the context of management and organization studies research has demonstrated that (1) an individual favors decision-making processes which show consistency with his/her cognitive style; (2) cognitive style influences the fit between a person and an organization (person-organization fit) (Armstrong et al, 2012; Brigham et al., 2007). Moreover, cognitive styles can also be regarded as indicative measures of entrepreneurial attitudes (Cools & Van den Broeck, 2007) and behavior (Kolb, 1984). There is also evidence on the influence of styles of directing managers or business owners on firm performance of SMEs (Isaga, 2012; Sadler-Smith, 2004). For example, Allinson, Chell & Hayes (2000) observed owner managers who are successful in opportunity exploitation for firm growth showed a higher degree of an intuitive cognitive style as compared to managers in general. They also observed that there were no differences in style between owner managers when compared to senior and executive managers, but differences existed when compared with middle managers.

A recently developed measurement scale of cognitive style is Cools and Van den Broecks' cognitive style indicator (CoSi). This instrument has been found reliable and valid in that it shows convergence with other style instruments that are popular in their use. Furthermore, divergent validity to

<sup>&</sup>lt;sup>11</sup> Cognition, i.e. activities of thinking, knowing and processing information; style, i.e. preferred way of doing things (Isaga, 2012).

dissimilar scales and criterion-validity indicating the level of correspondence with other accepted measures is established as well.<sup>12</sup> The underlying definition of cognitive style for this instrument is defined as "the way people perceive stimuli and how they use this information to guide their behavior (i.e. thinking, feeling, actions) (Cools & Van den Broeck, 2007, p. 360)." Three dimensions are differentiated by the CoSi: knowing, planning, and creating style. It is suggested that style differences reflect preferences in work environment (structured vs. unstructured), orientation towards details and facts, and orientation towards creativity and experimentation.

Knowing Style	Planning Style	Creating Style
People with a knowing style look	Planners like to organize and	People with a creating style tend to
for facts and data. They want to	control and prefer a well-	be creative and like
know exactly the way things are	structured work environment.	experimentation. They see
and tend to retain many facts and	They attach importance to	problems as opportunities and
details. They like complex	preparation and planning to reach	challenges, and they like
problems if they can find a clear	their objectives.	uncertainty and freedom.
and rational solution.		

#### Table 4 Description of three dimensions of the cognitive style indicator

Source: Cools & Van den Broeck (2007, p. 363)

Further, it is proposed that a higher propensity towards knowing and planning styles influence the development of entrepreneurship in a negative way. This means that a predisposition of individuals towards these two styles causes them to regard entrepreneurship and venturing as high risk activities and, in turn, perceive higher levels of uncertainty. In contrast, individuals making use of a creating style view entrepreneurship as positive (Isaga, 2012). For example, studies conducted by Isaga (2012) and Armstrong and Hird (2009) investigating cognitive styles in an entrepreneurial context suggest creative style types to be a determining factor of individual performance and business outcomes. Thus, the preferred mode of cognitive style influences an individual's opportunity process, which has implications for new venture creation either at the outset of starting an entirely new venture or within incumbent organizations. However, Cools and Van den Broeck (2007) state that there is the actual need to investigate the possibility of moderating effects of task type on the cognitive style-cognition relation. Despite the fact that individuals prefer one cognitive style over others their actual behavior is not solely determined by style but also by demands arising out of specific situations and tasks.

When we try and apply the cognitive style concept to the setting of TMs, which demand high degrees of participation for service co-creation and is depicted as a rather unstructured task environment for firm representatives in the sense that it is different from the internal environment of their firms, it can be argued that a creating style should be superior to the two other style dimensions. Moreover, the enhancement of a firm's knowledge about foreign market institutions by TMs leads to the suggestion that more creative individuals preferring unstructured situations will report more

<sup>&</sup>lt;sup>12</sup> Criterion validity was assessed by looking at work characteristics which showed that people choose professions emphasizing their dominant cognitive style. This can also be indicative for a person-organization fit since selection and recruitment practices can create cognitive climates within organizations (Cools & Van den Broeck, 2007).

favorable accounts about the enhancement of a firm's foreign market knowledge. Since the identified exchange partners during and after TMs are themselves a conduit through which a firm can acquire market competence (Spence, 2003), it is further reasoned that a creating style leads to a higher number of identified exchange partners. This argument is further strengthened by the fact that the predominance of a creative style indicates that an individual prefers the assimilation of information through relating to other individuals and a hands-on-approach. Hence it is proposed that:

H5: (a) Cognitive style is positively related to the identification of business opportunities, and (b) creating style is stronger positively related to the identification of business opportunities than knowing and planning style.

# 4. Constructs

The current section presents the used constructs for testing the abovementioned hypothesis. Appendix B gives a complete overview of these constructs and the operationalization for the used research instrument, i.e. online questionnaire.

# 4.1 Dependent variables

The dependent variables (DV) are based on the suggestions made by Seringhaus (1987) and Spence (2003), who emphasize the importance of pre-sales activities that will lead to sales in the future. By choosing such DVs, it is also considered that TMs do not have an effect on short-term sales, as was shown in studies carried out in the past (Durmuşoğlu et al., 2012; Seringhaus, 1987; Wilkinson & Brouthers, 2006; Wilkinson et al., 2009), but do increase export performance measures over the long-run, and thus effect objectively measurable outcomes. With selecting this type of DVs it is thus also considered the fact that the study's research design is of a cross-sectional nature, and long-term export performance measures like sales are thereby, of course, considered not to be applicable. In the following, these pre-sales activities are considered in terms of entrepreneurial opportunities (Ellis, 2008), which can be defined as the identification of prospective business exchange partners during foreign market entry. It is via these exchange partners that the exploitation of opportunities, i.e. the generation of financial outcomes, can be realized in the future.

The DVs are split up into two main groups: (1) direct business opportunity measures, that indicate the identification of direct business-to-business exchange partners; and (2) indirect measures indicating contacts that can facilitate business exchanges. The chosen single items reflect the identification of business opportunities based on prospective business cooperation partners identified during and after TMs.

For the first category, the variables number of cooperation partners (NCP) and number of clients (NC), which are later on after reliability analysis is performed, collapsed into one measure business exchange partners (BEP). In addition, a third measure includes the number of quotes (NQ) that TM participants receive from other businesses within the TM country.

The second category of measures is selected in the form of number of public contacts identified (NPC) that can facilitate the exploitation of opportunities indirectly by linking businesses partners via

their networks. These networks are considered, from a CD perspective, to facilitate business transaction within the TM/host country (Kostecki & Naray, 2007). In addition, the German export promotion system for example, even includes informational trips to Germany for so-called "Multiplikatoren" who are decision-makers of the public sphere, i.e. politics and industry associations/institutions. These decision-makers can thus facilitate business transactions between the German and their respective domestic business communities (BMWI, 2013b).

The two types of proxy measures, i.e. direct business opportunities and indirect business opportunities, are thus taken for operationalizing the pre-sales activities, which have been used in part by Spence (2003) and are suggested by Ellis (2008) as preconditions for exploiting international entrepreneurial opportunities. In addition, since the network of public persons and institutions is also seen in CD as beneficial for firms' business activities within a host country, these contacts can be regarded as indirect business facilitating contacts (Kostecki & Naray, 2007). The creation and access to existing networks is an important factor in a firm's international expansion, especially for SMEs (Coviello & Munro, 1997).

# 4.2 Independent variables

# Firm level

For the entrepreneurial orientation (EO) construct a cross-culturally validated 8-item measure was a used (Kreiser, Marino, & Weaver, 2002). The construct represents three EO dimensions (innovativeness, proactivity and risk) as opposed to five-dimensional constructs (plus the dimensions of competitive posture and aggressiveness) as proposed by Covin & Slevin (1988). The first dimensions innovativeness is measured by three items assessing top managements stance towards R&D, and introduction and changes of new and existing products. Proactivity of firms is comprised of three items assessing a firm's stance towards its competition in terms of initiation of competitive actions, new product lines and techniques, and aggressiveness towards competition. The third dimension risk is assessed by items determining a firm's proclivity towards risky and highly profitable projects, and a firm's stance and actions taken in the face of turbulent business environments.

As a second determinant for TM effectiveness, international firm experience was elicited. For the international firm experience construct well-proven measures used in previous TM studies are used. Further, the predominant use of TMs by export companies leads to the adoption of measures used within the export promotion literature. TM studies showed that export diversification measures, like number of countries exported to and number of products exported, are determining factors of TM effectiveness (Martincus & Carballo, 2010; Spence, 2003). The export diversification measures are a proxy of a firm's international network, which offers a firm vicarious occasions for learning in an international context, and do thereby also influence as firm's international experience (see chapter 3.3).

In addition, export intensity measures (export sales to overall sales ratio), international firm experience measured in years, and number of employees specialized in international business are selected as well. These measures indicate the dependence of a firm on international business as well as a firms overall experience and the existing resources for international business (employees). The

resource aspect has been highlighted by Hauser & Werner (2010) to influence the effective use of EPS like TMs.

These items (export diversification, export intensity, international firm experience, number of employees specialized in international business), except the export diversification measures number of products exported to, are later on in chapter 6.2.1 combined into one measure named general export knowledge (GEK).<sup>13</sup>

# Individual level

The prior knowledge variables are taken from entrepreneurship research and have been proven to be positively related to opportunity identification. For the basic level of prior knowledge, previous research suggests general human capital variables and entrepreneur-specific human capital as significant predictors of opportunity outcomes (Brüderl, Preisendörfer, & Ziegler, 1992; Shane, 2000; Ucbasaran et al., 2008). Therefore, the overall education (EDUC) is measured in years and includes educational as well as vocational schooling. Besides education, actual work experience prior to TMs of an individual is measured via two items, i.e. the overall number of organizations an individual was employed (ORGWORKEDFOR) and the time in which full-time employment (PRIORWORK) was given. Furthermore, since an individual's more specific previous work experience allows them to be more successful than others to enact opportunities, a TM participant's industry experience (INDEXP), i.e. the same industry in which the respective firm he represents is, is measured in number of years. The importance of entrepreneur-specific human capital (EHC) towards opportunity identification will be measured by a TM participants business ownership, which is comprised of two items, i.e. the number of businesses owned, and years of business ownership.

Following research carried out in the past that examined value differences of TMs, as perceived by TM participants that differ in their prior business experience within the TM country (Spence & Crick, 2004), a trade mission participant's work experience within the TM country is assessed by measuring his/her actual work experience in years within the TM country (TMCWORKEXP).

A more specific assessment of experience is assessed by experiential knowledge about the TM country, prior to the TM itself. Therefore, constructs developed in internationalization research are used. These constructs are based on Eriksson et al.'s (1997) experiential knowledge dimensions business knowledge and institutional knowledge. A further development of these two dimensions by Zhou (2007), who determined their importance for international entrepreneurial ventures, are used in this study, because they can be applied at an individual (i.e. top management) level. The institutional knowledge (IK) dimension is formed of three items, which are reminiscent of Scott's (1995) widely accepted institutional theory, depicting parts of the regulative, normative, and socio-cultural pillars. The first item represents part of the socio-cultural and normative pillar of the TM country, i.e. knowledge about business and laws and knowledge about government agencies. The business knowledge dimension (BK) is depicted by four items and

<sup>&</sup>lt;sup>13</sup> The item export diversification by product was excluded from further analyses to keep the later on developed model parsimonious. Also, the measure proved to be not related to the DVs in later performed regression analysis.

addresses knowledge about client needs, competitors, distribution channels, and effective marketing methods within the TM country.

The international experience (IE) of TM participants indicates the decision-makers personal network, which, as was mentioned in the previous chapter, an important factor for a firm's export. This construct is assessed by applying Zhao and Hsu's (2007) operationalization, which is comprised of two items. Item one measures a participant's experience in an international management position, and item two is measured as the years spent on overseas assignments. This operationalization has also been shown to help explain early foreign market entry of firms, highlighting the importance of managerial international experience for firms.

Cognitive styles of TM participants is assessed by making use of Cools & Van den Broeck's (2007) CoSi dimensions. The advantage in applying their instrument is that, compared to other cognitive styles measures, it is very parsimonious in number of used items. Conventional measures, like the one developed by Kolb (1984) or the in organizational research well-known Myer-Briggs type indicator, for example, use up to over 40 items. Moreover, these other style measures are not readily available in article publications. Recent research conducted on entrepreneurial business owners has also uncovered that the CoSi dimensions creating style (CS), knowing style (KS) and planning style (PS) play a significant role in explaining rapid growth and expansion of firms (Isaga, 2012). The more entrepreneurial individuals, exhibiting a predominance of CS, were the owners of the most successful firms. The used 17 items of the three dimensions can be found in appendix B.

# 4.3 Research model

Since one of the objectives is to develop a research model for determining TM effectiveness, and to verify the same empirically, the above-mentioned firm and individual level variables are incorporated in the model (see figure 2). The model acknowledges the importance of testing, if the adding of individual level variables increases the explained variability in TM effectiveness/outcomes. Thus, research calling for the inclusion of decision-makers' characteristics is adhered to (see chapter 2.7), as suggested by Gray (1997).

The left hand side of the model depicts the main determinants (IVs) of TM effectiveness as described in the previous chapters 3.1, 3.2, 4.1 and 4.2. The right hand side depicts TM effectiveness (DVs) measured as the identification of business opportunities (i.e. direct and indirect business exchange partners)

# Figure 2 Research model

# Firm level



\*Consists of the dimensions innovativeness, proactivity and risk.

# 5. Methodology

This section will explain the research design set up to carry the empirical part of this study to test the proposed hypothesis. Chapter 5.1 will introduce the method of data collection and sampling method, chapter 5.2 the used research instrument and chapter 5.3 the applied data analysis techniques.

# 5.1 Data collection and sample

The study's main objective is to determine what firm and individual level factors predict the most effective use of TMs by firms. Since the theory chapter 3, uncovered many usable empirically tested constructs from previous TM and entrepreneurship research to test TM effectiveness in terms of business opportunities, it was opted to collect data using an online questionnaire. The quantitative

data gathered is subsequently analyzed to verify or falsify the proposed hypotheses. A disadvantage of the data collection method is the lack of in-depth description.

Before the data collection was conducted inquiries were made at several German agencies (Exportinitiative Erneuerbare Energien and various German chambers of foreign trade) and a Dutch agency (Agentchap.nl), responsible for organizing TMs, regarding their cooperation in this project. This was done due to the fact that lists of TMs are confidential and are thus not readily available to the public. Unfortunately, no cooperation was given. Therefore, after having received information from German agencies that documents concerning seminars and related TM events surrounding the German TMs are posted on the respective webpages of the German chambers of foreign trade containing the participant lists of TMs, all German chamber webpages were searched for such lists. The Dutch lists were found by using appropriate online search terms inquiring about TMs, since no documents similar to the German events were posted online. To increase the number of participants in this study, participant lists of Belgian and Irish TMs were also included, because they were posted publicly on the webpages of the respective national agencies.<sup>14</sup> This leads of course to a convenience sampling, which excludes the possibility to conduct random sampling and thus prevents one from making broad generalization based on the study's findings (Babbie, 2010). Overall 505 German TM participants; 444 Belgian; 185 Irish; and 139 Dutch firms participating in TMs were identified that joined missions dating back to October 2011 until the end of November 2012. The questionnaires were sent out twice, i.e. a first request was sent out at the beginning of November 2012 and a second request two weeks later.

# 5.2 Questionnaire

The used questionnaire predetermined the same set of questions asked to the respondent in a fixed order and no interviewee was present. This helps to minimize variation in the usage of the research instrument. Further, to minimize the possibility that the questions posed not be understood by all respondents in the same way, the questionnaire was pretested by German and Dutch business students (Saunders, Lewis, & Thornhill, 2008). Two versions of the questionnaire were created - an English versions pretested by 10 Dutch students and a German version pretested by 10 German students. To boost the response rate the possibility for the respondents was introduced to win one out of five prizes. Appendix C contains the cover letter sent to the TM participants via e-mail asking for their response, it also includes the online questionnaire which was accessed by the respondents via a link in the e-mail

# 5.3 Data analysis techniques

SPSS 20 (PASW) is used as a statistical software tool to carry out the analyses on the gathered data. First, the used multiple item constructs will be factor analyzed (principal component analysis) to increase their construct validity for the used sample. In a second step (after data screening), simple regression analysis is performed on the dependent variables to determine usable predictors for, as a third step, carrying out multiple regression analysis.

<sup>&</sup>lt;sup>14</sup>For the Irish TM directories see <u>http://www.enterprise-ireland.com/en/Source-a-Product-or-Service-from-Ireland/Sector-and-Company-Directories</u>. For the Belgian mission directories see <u>http://www.abh-ace.be/nl/economische\_zendingen/voorbije\_zendingen/</u>.

# 6. Data Analysis

The current chapter will first start with basic information concerning the sample split by TM program (chapter 6.1). The ensuing chapters 6.2 and 6.3 will focus on the reports of the conducted statistical tests – principal component analyses and regression analyses.

# 6.1 Sample

Of the 1273 sent out e-mails to TM participant, 117 provided usable questionnaires for data analysis, which makes for an effective response rate of 9.2 %. There were no significant differences on the dependent variables between responders providing answers to the survey after the first sending and second sending. A more detailed description of the sample profile split by trade mission program (German, Dutch, Belgian and Irish) is provided in appendix D, which also includes TM participants' main reason(s) to join in the respective TMs. The assessment of the main reason(s) is done to see if, among other things, participants regard TMs as networking activities as proposed by the CD literature.

# 6.2 Principal component analysis

Principal component analysis (PCA) is conducted for purposes of data reduction and to see if the used multi-item constructs, developed in previous research, hold for the present sample. In PCA variable subsets that correlate with each other, but are sufficiently distinct or independent to other variable subsets, are combined into factors. These factors represent the underlying processes causing the observed correlations. Since the present PCA is carried out primarily for reasons of data reduction, and no specific hypotheses are tested, the corresponding variables (single-items) used for assessing the constructs do not necessarily need to be normally distributed (Tabachnik & Fidell, 2007). But since normal distributed variables enhance the results of factor analysis, several variables were transformed to improve normality. Log10-transformation was applied exclusively, if transformation was necessary, since it yielded the best results compared to square root and inverse transformations. Transformed variables are recognizable by the added ending \_lg to their respective labels.

# 6.2.1 Principal component analysis of firm variables

# EO dimensions and construct

The following table 8 shows the PCA solutions for the firm variable Entrepreneurial Orientation (EO) and the corresponding dimensions. In a first step orthogonal rotation was used, but omitted since the extracted factors showed large enough correlations with each other to continue with oblique rotation methods. For this reason table 4a shows PCA results based on oblique rotation, i.e. direct oblimin, for the EO dimensions innovativeness, proactiveness and risk. In the second part of the table the factor solution presented for the EO construct is unrotated due to the extraction of only one factor, as was desired.

Factors for the EO dimensions were extracted based on a min. Eigenvalue of 0.7, which yielded the desired three factor solution. A prior analysis run based on a min. Eigenvalue of 1.0 yielded two factors, thus, the min. Eigenvalue was altered to 0.7. The KMO measure was .773, which is

satisfactory for the used listwise sample of N = 117, and the Bartlett's test of sphericity was significant ( $X^2 = 318,997$ ; df = 28; Sig. < 0,0001) indicating sufficiently large correlations to conduct PCA (Field, 2009). The determinant of the correlation matrix is .059 and is thus considerably greater than the critical value of .002. With the exception of the three proactiveness items, all innovativeness and risk items loaded onto the one factor. Consequently the PA3 item was excluded from the following scale construction in order not to contaminate the risk dimension with this item, which also means that the proactivity dimension consists of only two instead of the theoretically suggested three items. Subsequently the three innovativeness items (IN1, IN2, IN3) constitute one dimension with a reliability coefficient of .75; the two risk items (R1, R2) constitute one dimension with a reliability coefficient of .81.

The three dimensions extracted for EO were subsequently analyzed to see if they form on single factor, i.e. the EO construct (table 9). The extraction was based on a min. Eigenvalue of 1.0, which resulted in the desired one factor solution, and thus no further rotation was possible. The KMO measure was .659, which is acceptable for the used listwise sample of N = 117, and the Bartlett's test of sphericity was significant ( $X^2 = 68,240$ ; df = 3; Sig. < 0,0001) indicating sufficiently large correlations to conduct PCA. The determinant of the correlation matrix is .50 and is thus considerably greater than the critical value of .00001 (Field, 2009), which would indicate a problem of singularity. As a result the three EO dimensions constitute the EO construct with a reliability coefficient of .72. The original EO scale, as developed by Kreiser et al. (2002), with a listwise sample of 1067 firms from six countries, had a coefficient of .80.

Item	1	2	3
IN1: R&D Leadership	.828		
IN3: Product Changes	.814		
IN2: New Product Lines	.786		
R2: Environmental Boldness		.874	
PA3: Competitive Posture		.785*	
R1: Risk-taking Proclivity		.615	
PA1: Competitive Actions			943
PA2: New Techniques			791
Eigenvalues	3.575	1.309	.847
Percentage of variance explained (total 71,63)	44.69	16.36	10.59
Cronbach's alpha	.75	.67	.81

#### Table 5 PCA results for EO dimensions

IN = Innovativeness; R = Risk; PA = Proactiveness.

\*Excluded item due to contamination of factors/dimensions.

# Table 6 PCA results for EO

Item	1
Proactiveness	.843
Innovativeness	.787
Risk	.764
Eigenvalues	1.915
Percentage of variance explained	63.82
Cronbach's alpha	.72

#### General export knowledge

In order to simplify the later on in multiple regression developed model, additional PCA was conducted on similar firm variables pertaining to firms' international/export activities. Thus, the variables export intensity, international firm experience, employees responsible for international business, export diversification by country and export diversification by product were factor analyzed (see table 10). Only one factor was extracted, so now rotation was possible. The derived factor was used to aggregate the respective items/variables loading onto it and the new developed construct was named general export knowledge (GEK). An eigenvalue level of min. 1.0 was chosen for the extracted factor, and item loadings below a value of .60 were not used for the GEK construct. The KMO measure is .736, which is satisfactory for the used listwise sample of N = 90, and the Bartlett's Test of Sphericity is significant ( $X^2 = 144,706$ ; df = 10; Sig. < 0,0001) indicating sufficiently large correlations to conduct PCA. The determinant of the correlation matrix is .188 and is therefore considerably greater than the critical value of .00001, which would indicate a problem of singularity. After the item export diversification by country was excluded, the remaining items form one construct with a reliability coefficient of .63. Although, the value of .63 is below the recommended threshold of .70 (Field, 2009) the corresponding GEK construct will be employed in later analysis.

# Table 7 PCA results for GEK

Item	1
Export diversification by country_lg	.851
International firm experience	.804
Employees specialized in international business_lg	.779
Export intensity	.760
Export diversification by product_lg	.489*
Eigenvalues	2.796
Percentage of variance explained	55.93
Cronbach's alpha	.63

Only pattern matrix loadings are displayed. Loadings below .40 are suppressed.

\*Excluded item due to loading below .60

## 6.2.2 Principal component analysis of individual variables

#### Business knowledge and institutional knowledge

Table 11 shows the PCA results for the two experiential knowledge constructs. Prior research suggests that the business knowledge construct consists of four items (BK1, BK2, BK3, BK4) and the institutional knowledge construct of three items (IK1, IK2, IK3). A first analysis run with orthogonal rotation suggests that oblique rotation, due to factor correlations, is more appropriate. The PCA was thus conducted with direct oblimin rotation. Based on a min. eigenvalue of 0.7 the desired two factors were extracted, since an eigenvalue level of min. 1.0 produced only one factor on which all items loaded onto. The KMO measure was .861, which is satisfactory for the used listwise sample of N = 117, and the Bartlett's test of sphericity was significant ( $X^2 = 537,91$ ; df = 21; Sig. < 0.0001) indicating sufficiently large correlations to conduct PCA. The determinant of the correlation matrix was 0.009 and is thus considerably greater than 0.00001, which would indicate a problem of singularity. Subsequently, three out of the four business knowledge (BK) items were thus used to constitute one construct with a reliability coefficient of .84; all three institutional knowledge (IK) items constitute one construct with a reliability coefficient of .87. The original construct regarded BK and IK as part of a general higher order construct named foreign market knowledge, which included another dimension of knowledge named internationalization knowledge, and had a coefficient of .947 (Zhou, 2007). Since the alpha values are above .80 the internal consistency of the scale are very good.

Item	1	2
IK1: Knowledge about language and norms	.936	
IK2: Knowledge about business laws and regulations	.898	
IK3: Knowledge about government agencies	.785	
BK4: Knowledge about effective marketing	.628*	
BK2: Knowledge about clients		.925
BK1: Knowledge about competitors		.901
BK3: Knowledge about distribution channels		.616
Eigenvalues	4.568	.816
Percentage of variance explained (total 76.92)	65.26	11.66
Cronbach's alpha	.87	.84

#### Table 8 PCA results for business and institutional knowledge dimensions

Only pattern matrix loadings are displayed. Loadings below .40 are suppressed.

\*Excluded item due to contamination of factors/dimensions.

#### **Cognitive Style**

The results for the PCA conducted for the cognitive style items are presented in table 12. Based on an Eigenvalue of 1,0 four factors were extracted. The KMO measure was .717, which is satisfactory for the used listwise sample of N = 116, and the Bartlett's test of sphericity was significant ( $X^2 = 681,269$ ; df = 136; Sig. < 0.0001). The determinant of the correlation matrix was 0.00001 and is thus

considerably greater than the critical value of 0.0001 which would indicate a problem of singularity. As can be seen form the table output four planning style items (P4, P6, P5, P3) load onto the first factor and constitute one construct with a reliability coefficient of .76. Three of the seven creating style items load sufficiently onto the extracted second factor (C1, C3, C2) with a reliability coefficient of .75. The third extracted factor is comprised of three out of four knowing style factors used in this analysis (K4, K1, K2) with a reliability coefficient of .62.<sup>15</sup> The last fourth factor (C7, C6, C5) is the remains of the apparently split up creating style dimension with a reliability coefficient of .69. Due to the greater amount of variance explained and the superior reliability, the first split of the creating style dimension (C1, C3, C2) is used to stand as proxy for the creating style and is consequently used later on for regression analysis. A matter of concern is the relatively low internal consistency of the knowing style scale as indicated by an alpha value below .62, but this not a problem for the other two dimensions. Previous research by Cools and van den Broeck (2007) reported values above .70 across three different studies for all three style dimensions (i.e. nine alpha values).

Item	l	1	2	3	4
P4:	I prefer clear structures to do my job	.791			
P6:	I make definite engagements, and I follow up meticulously.	.763			
P5:	I prefer well-prepared meetings with a clear agenda and strict time management	.747			
P3:	I like detailed action plans	.613			
C1:	I like to contribute to innovative solutions		.809		
C3:	I am motivated by ongoing innovation.		.779		
C2:	I prefer to look for creative solutions.		.731		
C4:	l like much variety in my life.		.496*		
P7:	A good task is a well prepared task.		.446*		
K4:	I study each problem until I understand the underlying logic.			.805	
K1:	I want to have a full understanding of all problems.			.682	
K2:	I like to analyze problems.			.670	
P1:	Developing a clear plan is very important to me			.586*	
P2:	I always want to know what should be done when.			.516*	
C7:	I try to avoid routine.				.859
C6:	I like to extend boundaries.				.681
C5:	New ideas attract me more than existing solutions.				.681
Eige	nvalues				
Perc	entage of variance explained (total 58.90)	24.465	17.625	8.731	8.086
Cror	ibach's alpha	.76	.75	.62	.69

### Table 9 PCA results for cognitive style dimensions

Only pattern matrix loadings are displayed. Loadings below .40 are suppressed. \*Items are excluded due to loadings below .60.

<sup>&</sup>lt;sup>15</sup> A mistake in the sent out questionnaire prevented the use of the K3 item.

As a last point it has to be noted that as a rule of thumb an appropriate sample size for conducting PCA is in general N = 300, but since all the solutions contain several high loading items (<.80) even sample sizes between 50 and 100 cases can be considered adequate (Tabachnik & Fidell, 2007), and so the PCA results within this study are treated as valid. Thus, in the following data analysis section simple and multiple regression results are presented that are based in part on the verified constructs from the previously conducted PCA.

# 6.3 Regression analysis

Sequential regression analysis is conducted in order to determine if the proposed hypotheses made in chapter three are valid, and to see if the inclusion of individual variables (IVs) – besides firm variables – adds to the prediction of TM effectiveness (i.e. business opportunity identification via contacts). This type of regression is especially suited to test explicit hypotheses and research models in that each variable's unique contribution to predicting the outcome in the dependent variable (DV) can be controlled for by the researcher by stepwise/blockwise entry of single/similar variables (Tabachnik & Fidell, 2007).

In a first step it was determined if the proposed IVs and DVs are normally distributed. The two firm level IVs, GEK and EO, were not normally distributed and had to be transformed by applying logarithmic transformation (log10), which yielded better results than square root and inverse transformations. Of the ten individual level IVs, six had to be transformed, or are aggregates of transformed items, to improve their distribution and reduce the influence of outliers. Among these variables are: the number of organizations worked for (ORGWORKEDFOR); industry experience (INDEXP); international experience (IE); entrepreneur-specific human capital (EHC); and trade mission country work experience (TMCWORKEXP). In appendix E the descriptives of the used independent and dependent variables are presented, from which it can be deduced that most of the IVs are fairly normal distributed. No outliers are present for the IVs. The ensuing appendix subsection, presenting the DVs, shows that they are roughly normal distributed. A preliminary screening of the DVs showed that for the variable number public contacts (NPC) one case exhibited a z-score of 4.33 and appears graphically disconnected which indicates the presence of a possible outlier. All other DVs showed no outliers.

Before the actual multiple regression is performed in section 6.2.3., section 6.2.1. presents simple regression results in order to determine which IVs and DVs to use for multiple regression. In addition, section 6.2.2. checks for the influence of control variables on the performed regressions.

# 6.3.1 Simple regression results

# Regressions on dependent variable business exchange partners and construct items

Within appendix F simple regression coefficients are displayed too determine which predictors are suitable on which outcome variables. The results for the DV business exchange partners (BEP) reveals that only one IV is suitable for prediction, i.e. TMCWORKEXP\_lg, which has a significant negative coefficient (B = -.262; SE = .125; t = -2.098; p < .05). No residual has a z-score > 3. Since the reliability coefficient for the (BEP) construct was below .60, further simple regressions were performed on the two constituting variables number cooperation partners (NCP) and number clients (NC). This analysis

revealed that the individual level variable EHC\_lg is the only significant predictor for the variable NCP and for NC two individual level variables, TMCWORKEXP\_lg (B = -.311; SE .137; t = -2.265; p < .05) and knowing style (KS) (B = .100; SE = .052; t = 1.909; p < .10), have significant coefficients. Thus, multiple regression is later on only performed on the variable NC.

### Regressions on dependent variable number of quotes

Moving on to the next variable number of quotes (NQ) the analysis uncovered no significant predictors. Appendix F also shows that no coefficient was significant with or without including cases with large standardized residuals above a z-score > 3.

### Regressions on dependent variable number public contacts

For the variable number of public contacts several significant predictors in simple regression have been found. The firm level construct GEK\_lg has a significantly large coefficient (B = .646; SE = .236; t = 2.735; p < .01). Of the proposed individual level IVs two human capital variables, PRIORWORK (B = .012; SE = .004; t = -3.047; p < .01) and ORGWORKED\_lg (B = -.605; SE = .185; t = -3.273; p < .01). Two of the three cognitive style dimensions, KS (B = .171; SE = .074; t = 2.305; p < .05) and PS (B = .175; SE = .068; t = 2.557; p < .05), are found to be significant predictors. For all significant predictors the significance levels stay below p < .05 when the outlier is excluded in the simple regressions.<sup>16</sup> Consequently, the results obtain from regressing the various predictors on NPC make up the second DV for which multiple regression can be performed.

# 6.3.2 Control variables

Several control variables were used to assess their influence on the DVs that had significant relationships with several of the IVs. Thus, it was assessed if firm age and firm size were significant. Furthermore, dummy coding was applied to the variables mentioned in the following paragraph.

It was checked if the distinction between service and non-service companies and the representation of companies by a single person or by a team influence the TM outcomes. Furthermore, it was checked if the presence of high ranking (elected) officials (e.g. high-ranking diplomats or ministers) or public figures was influential. In addition, since we also included firms that partook in TMs of up to 13 months prior to receiving the survey, three categories were created (4-6 months, 7-9 months, 10-13 months) and taking firms belonging to the 3 months category as baseline (majority of cases). Also, dummy coding was performed for TM program by creating three categories (Dutch, Belgian, Irish) and taking participants of the German programs as baseline (majority of cases).

The only significant influence was detected on the DV NPC when controlled for by the dummy variable TM program. All the other control variables were not significant at p < .05 and consequently not controlled for in the following multiple regression analysis.

<sup>&</sup>lt;sup>16</sup> Standardized residual scores for the outlier case number 65, with a log value of 2.00, take the values of z = 3.285 for GEK\_lg; for PRIORWORK z = 3.273; for ORGWORKED\_lg z = 3.011; for KS z = 3.646; and for PS z = 4.118. Furthermore, in an open question segment the respective company representative indicated the particular importance of establishing relationships with public agencies and people for their business activities. Thus, although the case seems to be disconnected from the sample it can be argued to view the case as part of the respective sample.

# 6.3.3 Multiple regression

### Assumptions

There are several issues that have to be considered when conducting regression analysis, which pertain to the ratio of cases to the IVs, normality, linearity, and homoscedasticity of residuals, outliers, multicollinearity and singularity (Tabachnik & Fidell, 2007). It is already evident from the previous chapter 6.2.1 and appendix E that normality of the IVs and DVs is given. With regards to the ratio of cases to IVs the recommended min. sample size criterion of N = 104 + number of IVs is not met by the multiple regressions performed on NC (listwise N = 45) and NPC (listwise N = 65).

### Multiple regression on number of public contacts

The sequential regression applied to determine the validity of the suggested hypotheses shows that in a stepwise procedure 4 models can be generated. A p < .001 criterion was used for Mahalabonis distance in order to determine the presence of multivariate outliers. The critical Mahalabonis value is thus 26.125 (df = 8; p <.001). The largest value is 16.277, and therefore no outliers were identified among the ten largest cases. The standardized residual plot (Appendix G) is fairly rectangular shaped and the same univariate outlier for NPC from the preliminary screening mentioned above, case number 65 is identified with a z-score of 3.019. This case is not in the list of possible multivariate outliers. Therefore, it will not be excluded from analysis. All partial residual plots look quiet homoscedastic.

Table 13 displays the unstandardized and standardized regression coefficients and intercept, R and R<sup>2</sup>, and adjusted R<sup>2</sup> for entry of the respective control variables IVs at each step. The Pearson correlations are displayed in table 14. Except for model 1 all R were significantly different from 0 using a p < .05 criterion – a p < .1 criterion is used for model 1. After model 4, including all IVs, R<sup>2</sup> = .465 (F (8, 58) = 6.089; p <.01). The adjusted R<sup>2</sup> of .389 leads to the conclusion that more than one third of the variability in NPC is predicted by a firm's general export knowledge (GEK\_lg); and individual factors, i.e. prior work experience (PRIORWORK), the number of organizations worked for (ORGWORKED\_lg) and planning style (PS). If corrected for the increment in adjusted R<sup>2</sup> caused by the categories of the dummy variable TM program, adjusted R<sup>2</sup> decreases to .316.

After the first step, including only the dummy variables,  $R^2 = .116$  ( $F_{inc} = 2.680$ ; p < .10). After step 2, with entering the firm variable GEK\_lg added to prediction,  $R^2 = .149$  ( $F_{inc} = 6.468$ ; p < .05). The addition of GEK\_lg led to a significant increment of  $R^2$ . After step 3, with entering individual human capital variables PRIORWORK and ORGWORKED\_lg,  $R^2 = .348$  ( $F_{inc} = 6.478$ ; p < .01). The addition of individual variables PRIORWORK and ORGWORKEDFOR\_lg led to a significant increment of  $R^2$ . After step 4, with entering the individual cognitive style variables (KS) and PS added to prediction of the firm variable and individual human capital variables,  $R^2 = .465$  ( $F_{inc} = 6.134$ ; p < .01). The addition of the cognitive style variables, of which only PS added significantly to prediction, led to a significant increment of  $R^2$ .

Therefore, the observed pattern suggests that over a third of the variability in NPC is predicted by a mix of firm and individual variables, i.e. GEK\_lg, PRIORWORK, ORGWORKEDFOR\_lg, and PS. The GEK\_lg construct adds strongly to the prediction, although the p value is barely significant in the final

model; ORGWORKEDFOR\_lg adds also strongly to prediction; PRIORWORK adds only minor to prediction; PS adds strongly to prediction; and KS adds no further prediction.

		NPC						
		unstandardized	standardized	Std. Error	Sig.	Ν		
Model 1	Constant	.561		.072				
	Dutch	.133**	.314	.057	.02	65	R	.341
	Belgian	024	078	.041	.55	65	R²	.116
	Irish	.023	.091	.034	.49	65	Adj. R²	.073
							F Change	2.680
							Sig. F Change	< 10 %
Model 2	Constant	.437		.085				
	Dutch	.070	.166	.060	.24	65	R	.450
	Belgian	066	214	.043	.12	65	R²	.202
	Irish	.010	.040	.033	.75	65	Adj. R²	.149
	GEK_lg	.658**	.332	.259	.01	65	F Change	6.468
							Sig. F Change	< 5 %
Model 3	Constant	.908		.158				
	Dutch	.021	.049	.057	.71	65	R	.590
	Belgian	050	160	.041	.22	65	R <sup>2</sup>	.348
	Irish	.035	.138	.033	.28	65	Adj. R²	.281
	GEK_lg	.565**	.285	.249	.02	65	F Change	6.478
	PRIORWORK	010**	302	.004	.00	65	Sig. F Change	<1%
	ORGWORKED_lg	403*	254	.206	.05	65		
Model 4	Constant	.016		.308				
	Dutch	.073	.171	.060	.23	65	R	.682
	Belgian	011	036	.042	.79	65	R²	.465
	Irish	.041	.159	.032	.20	65	Adj. R²	.389
	GEK_lg	.396*	.200	.238	.09	65	F Change	6.134
	PRIORWORK	012***	340	.004	.00	65	Sig. F Change	<1%
	ORGWORKED_lg	358*	225	.190	.06	65		
	кѕ	.047	.077	.073	.52	65		
	PS	.197***	.345	.066	.00	65		

# Table 10 Multiple regression; regressed on number of public contacts

Significance levels: \*p < .1; \*\*p<.05; \*\*\*p<.01; firm level variables are shaded blue, and individual level variables are shaded green.

## Table 11 Correlation matrix

	GEK_lg	PRIORWORK	ORGWORKED_lg	PS	NPC
GEK_lg	1				
PRIORWORK	009	1			
ORGWORKED_lg	272**	.180*	1		
PS	.002	.144	065	1	
NPC	.326***	358***	381***	.307***	1

Significance levels: \*p < .1; \*\*p< .05; \*\*\*p<.01

#### Multiple regression on number of clients

Sequential regression performed on the dependent variable suggests that only one model can be generated in a stepwise procedure. The critical value for the Mahalabonis distance to detect multivariate outliers is 13.816 (df = 2; p < .001). The analysis shows that the largest case's distance measure was 7.007, well below the limit. The residual plot (Appendix G) on the dependent variable seems to be fairly rectangular shaped. Partial plots indicate a probable issue with the residuals of the plot for trade mission country work experience (TMCWORKEXP\_lg).

The following table 15 displays the multiple regression results for the regression of TMCWORKEXP\_lg and knowing style (KS) regressed on number of clients (NC). Unstandardized and standardized regression coefficients and intercept, R and R<sup>2</sup>, and adjusted R<sup>2</sup> are displayed at each step. No control variables had to be used and no univariate outliers were detected. Only model 1 was significantly different from 0 using a criterion of p < .05. R<sup>2</sup> = .099 (F (1.43) = 4.708, p < .05) for model 1, including only TMCWORKEXP\_lg. The adjusted R<sup>2</sup> leads to the conclusion that 7.8 % of the variability in number of clients is predicted by TMCWORKEXP\_lg. The Pearson correlation coefficient between TMCWORKEXP\_lg and NC is r = -.323 (p < .05).

After step 1, with TMCWORKEXP\_lg in the equation,  $R^2 = .078$  ( $F_{inc} = 4.708$ ; p < .05). After step 2, with KS added to prediction of number of clients by TMCWORKEXP\_lg,  $R^2 = .110$  ( $F_{inc} = .547$ , p > .10). Hence, addition of KS did not reliably improve  $R^2$ . These results suggest that 7.8 % in the variability in NC is predicted by the individual level TMCWORKEXP\_lg.

Table 12 Multiple regression; regressed on num	ber of clients
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		<b>NC</b> unstandardiz ed	standardized	Std. Error	Sig.	N		
Model 1	Constant	.674		.059				
	TMCWORKEXP_lg	308**	314	.142	.04	45	R	.314
						45	R <sup>2</sup>	.099
							Adj. R²	.078
							F Change	4.708
							Sig. F Change	< 5 %
Model 2	Constant	.510		.230				
	TMCWORKEXP_lg	302	308	.143	.04	45	R	.332
	KS	.043	.108	.058	.46	45	R <sup>2</sup>	.110
							Adj. R²	.068
							F Change	.547
							Sig. F Change	> 10 %

Significance levels: \*p < .1; \*\*p< .05; \*\*\*p<.01; firm level variables are shaded blue, and individual level variables are shaded green.

# 7. Results

The analysis reports of chapter 6 revealed that the validity of the proposed hypotheses and research model for most of the proposed and tested hypotheses and respective relationships between IVs and DVs is in question. The following table 13 gives a rundown on the confirmation of hypotheses, considering the used firm and individual level determinants, and TM effectiveness measures in the form of identified business opportunities.

# **Table 13 Confirmation of hypotheses**

		BEP	NCP	NC	NQ	NPC
H1:	A firm's entrepreneurial orientation in terms of proactivity, innovativeness and risk- taking is positively related to the identification of business opportunities.	n.c.	n.c.	n.c.	n.c.	n.c.
H2:	A firm's international experience is positively related to the identification of business opportunities.	n.c.	n.c.	n.c.	n.c.	confirmed

H3a:	A TM participant's prior knowledge in terms of general human capital is positively related to the identification of business opportunities.	n.c.	n.c.	n.c.	n.c.	n.c.
H3b:	A TM participant's entrepreneur-specific human capital is positively related to the identification of business opportunities.	n.c.	n.c.	n.c.	n.c.	n.c.
H3c:	A TM participant's market-specific experiential knowledge is positively related to the identification of business opportunities.	n.c.	n.c.	n.c.	n.c.	n.c.
H4:	A TM participant's international experience is positively related to the identification of business opportunities.	n.c.	n.c.	n.c.	n.c.	n.c.
H5a:	Cognitive style is positively related to the identification of business opportunities.	n.c.	n.c.	confirmed	n.c.	confirmed
H5b:	Creating style is stronger positively related to the identification of business opportunities than knowing and planning style.	n.c.	n.c.	n.c.	n.c.	n.c.

n.c. = not confirmed.

## **Results for hypothesis 1**

In order to determine if entrepreneurial posture of firms influences TM outcomes, it was observed that an entrepreneurial orientation (EO) does not lead to an increase in identified business opportunities. Thus, for both indirect and direct measures (BEP, NCP, NC, NQ, NPC) no significant relationships were found. A further analysis on the EO of firms showed that they exhibit indeed – on average – a tendency towards an entrepreneurial posture (appendix E, E: 2 includes an one-sample t-test, testing the mean EO of the sample against the mid-point of the EO scale).

## Results for hypothesis 2

The hypothesis 2 predicted an increase in opportunity measures by a firm's general export knowledge (GEK). The simple and multiple regression analysis revealed that hypothesis 2 can be confirmed when applied to the indirect business opportunity measure NPC. For all direct opportunity measures (BEP, NCP, NC, NQ) no significant relationships were found, and hypothesis 2 is therefore not confirmed.

### Results for hypotheses 3a, 3b, and 3c

The assessed relationships between the general human capital IVs EDUC, PRIORWORK, ORGWORKEDFOR and INDEXP and the DVs BEP, NCP, NC and NQ, indicating identified opportunities with direct business-to-business contacts, have shown to be not significantly related. When one looks to the relationships assessing their influence on indirect business opportunity measures, the relationships become even significantly negative in-between PRIORWORK, ORGWORKEDFOR and the NPC measure. A similar pattern can be observed for the entrepreneur-specific human capital variable EHC and all the DVs, which also means that no indication was found that business owner managers are superior or have different results than regular managers in terms of identifying more business exchange partners through networking. Furthermore, the proposition that managers with prior work experience within the TM country (TMCWORKEXP) would identify more direct and indirect business opportunity measures NC a strong significantly negative relationship was observed with TMCWORKEXP.

Thus, hypotheses 3a, 3b and 3c were all not confirmed based on the observed simple and multiple regression results between the corresponding IVs and DVs.

#### Results for hypothesis 4

The international experience (IE) of TM participants was predicted to be positively related with identified business opportunities. The observed relationship between the IE measure and the direct and indirect opportunity measures (BEP, NC, NCP, NQ, NPC) were all non-significant leading also to the rejection of hypothesis 4.

#### Results for hypothesis 5 a and 5b

Both hypotheses were examined and no significant relationships were found for the direct business opportunity measures (BEP, NCP, NQ). Only the knowing style (KS) dimension was found to be related positively to NC in simple regression, but did not hold up in adding to the prediction when

used in multiple regression. Thus, the suggested positive relationship between cognitive style and the identification of direct business opportunities is overall only partially accepted for the relationship between the IV KS and DV NC.

The proposition that the style of information processing of an individual TM participant will be positively related to the identification of business opportunities is partially accepted by the analyses carried out. But, the predicted stronger relationship between creating style (CS) and identified business opportunities, as opposed to relationships between KS, or planning style (PS), and the opportunity measures was rejected. This might indicate that TMs are much more of a structured and planned activity than assumed, and that during the actual duration of the TM, participants exhibiting a predominance for creating style are not superior in identifying more opportunities. For example, by comparing the means of the three CoSi dimensions KS, PS and CS, by using a paired-sample t-test, it is shown that the predominant mode among the participants with a significant higher mean is the CS (see appendix E, E: 4 includes a paired sample t-test of the participants' cognitive style characteristics). Furthermore, business owner (managers), i.e. entrepreneurs, exhibited a predominance in CS compared to non-business owners (appendix E, E: 5 includes an independent sample t-test presenting the differences between business owners versus non-business owners). The observed relationships between the CoSi dimensions and the DVs indicates only that a PS, and in part KS (only in simple regression), are significantly influential on indirect business opportunity measures (NPC).

# Results for the research model

As for the in figure 2 depicted research model, only for one DV the use of multiple regression for generating a model testing the influence of individual and firm level determinants on TM effectiveness, (in terms of identifying direct and indirect business opportunities via exchange partners) was possible. The indirect business opportunity measures number of public contacts (NPC) showed sufficient significant simple regression coefficients on both firm and individual level, so that a model could be generated using multiple regression. The actual observed model in its final form (model 4) does reproduce the proposed hypotheses and research model not to their full extend. Only the hypotheses 1 and 5a are reproduced within the model.

Beginning with the firm level variable general export knowledge (GEK) it was observed that through all steps in the analysis, the firm level determinant's positive relationship persists. The later on added general human capital variables (PRIORWORK, ORGWORKEDFOR) used within the model, were negatively related to NPC throughout the model steps and thus related contrary as proposed by hypothesis 3a. In the final step, the inclusion of the cognitive style dimensions KS and PS did not only substantially increase the explained variability of the model for the PS dimension, but PS was also positively related to NPC. Thus, of the hypotheses concerning cognitive style influences on the outcome measure, only hypothesis 5a could be investigated and was confirmed by the model.

As a final remark on the model it can be said that the general idea to examine if a combination of firm and individual level determinants results in a stronger model for predicting TM effectiveness in terms of business opportunity identification, as opposed to the more conventional approaches of using only firm variables, was proven to be of value. The inclusion of individual level determinants

yielded significant and large increases in the explained variability in the DV by NPC for the empirically developed and observed model for the present study.

# 8. Conclusion

The current and final chapter will discuss the study findings and further ascertain in how far the central research question has been answered. The study's limitations are discussed, and more importantly, a discussion of the findings will point towards more practical advice on how to possibly improve TMs. And lastly, future research directions based on the present study are suggested.

As was presented in chapter 7, it is shown that the proposed determinants for direct business opportunities (BEP, NCP, NC, NQ) were not found to be determining factors. Only one determinant, the market-specific experiential knowledge of individuals (TMCWORKEXP), was related to the outcome measures NC; and this relationship was found to be negative, opposite to the hypothesized relationship.

The analysis regarding the identification of indirect business opportunities via the identification of public contacts (NPC), on the other hand, revealed that firm level and individual level determinants do have joint effects on the outcome measure. The positive effects of international/export knowledge of a firm on the selected TM outcome measures NPC is in line with prior research, indicating that internationally experienced firms with a greater international network can utilize TMs to a greater extend. The negatively related individual level human capital determinants (PRIORWORK, ORGWORKEDFOR) point towards the possibility that individuals with more work experience in years and across more organizations can assess the compatibility of potential business partners in more depth, and thus eliminate a greater number of business exchange partners before actual business transactions are conducted. Further, it has been elicited that cognitive styles of individuals do play an important role in the networking activities in foreign markets. It appears that a structured approach to networking within a TM context works best on an individual level.

Prior TM research stresses the importance of firm level determinants on TM outcomes (Spence, 2003; Rüel & Zuidema, 2012). These are often examined in terms of prior firm knowledge or exposure to international markets. The findings of the present study confirm this view for a part of the used outcome measures, i.e. the facilitation of prospective business activities via public contacts within the targeted market. The present study adds to the existing literature on TMs in terms of adding individual level determinants next to firm level determinants of TM effectiveness (i.e. business opportunities identified). Based on part of the findings it can be deduced that the mix in analysis level adds valuable additional insights about TM effectiveness. The individual level determinants were found to be even more important – explaining more variability in the TM effectiveness measures – than the firm level determinants. Furthermore, the mix in analysis levels is new in TM research, but has already been applied within export promotion research (see for example Gray, 1997; Gençtürk & Kotabe, 2001).

Another novelty of the present study concerns the introduction of entrepreneurship theories to CD research in general. By doing so, extensive theoretical argumentations have been introduced of why entrepreneurial individuals and firms in combination should – in theory – be more effective in using

TMs based on the used measures. Previous research has hinted at the possibility that entrepreneurial firms might report more favorable accounts of TM outcomes due to preferring more informal means in exploring foreign markets (Spence, 2003). Further, research on TMs and EPS regards the identification of business opportunities and the building of networks in foreign markets to be important outcome measures, but provided little sound theoretical basis of how opportunities are actually found, and what determines an effective search (Durmuşoğlu et al., 2012; Freixanet, 2011).

Unfortunately, it has been shown that hypotheses predicting entrepreneurial firms, exhibiting a greater propensity towards risk, innovativeness and proactivity, will be more effective in their usage of TMs are in fact not.

With regards to the individual level approach to entrepreneurship, the preference to approach the exploration of foreign markets by informal and practical hands-on means was translated within the present study to cognitive style research. More specifically, the creating style dimension as being the predominant information processing type of an entrepreneur was thought to lead to more business opportunities identified. Also, since business owners showed a clear predominance in creating style it is thus deduced that this group was not able to be more effective in the search for direct and indirect business exchange partners (see appendix E, E 5). The entrepreneur-specific human capital of these business owners was also not found to be predictive, thereby giving further argument of entrepreneurial individuals as being not more effective. The entrepreneurial measures applied on both level of analyses have thus been found to be not related with TM effectiveness.

# 8.1 Discussion

The findings of this study point towards the possibility that TMs might be too structured in the facilitation of business-to-business networking activities within foreign markets. An indication for this is the firm representatives' predominance of the creating style, which stands proxy for preferences in more informal approaches to information processing/learning, and firms' entrepreneurial orientation, as not being related significantly to the chosen outcome measures.

Considering the conducted assessment of firm and individual level entrepreneurial postures, it can be deduced that suggestions with regards to entrepreneurial firms and individual to be more effective in exploring foreign markets are questioned by the present study findings. Despite these results, a definitive statement of entrepreneurial postures to be of little influence would be premature considering that, especially with regards to the individual level, many more measures of entrepreneurial postures and traits are available. Moreover, the fact that planning style has been seen to be of more importance in identifying indirect business opportunities shows that the school of thought stressing that opportunities are found by a deliberate and rational search approach seems to apply to the identification of opportunities within a TM context (Chandra et al., 2009). This more systematic approach to finding opportunities is reminiscent of prior TM research results that stress the differences in how TM-users differ from non-TM users in terms of entering new foreign markets. Specifically, TM users are more systematic and structured in their approach to prepare for market entry (Seringhaus, 1987).

The ineffectiveness in identifying opportunities might also be the case for individuals representing firms that entered the markets of the respective TM countries prior to the TMs, since they indicated to use the TMs to strengthen already ongoing business activities within the markets. Although, this is

less much clear, since the value of TMs decreases for TM participants already experienced within the market (Spence & Crick, 2004) and they might already have established a business network that is rather extensive and thereby minimizing the benefits to use TMs.

As important for practice and organizers of TMs it has to be noted that especially the identification of direct business exchange partners (BEP, NCP, NC, and NQ) does seem to be underlying some restrictions of the TM programs, which do not allow for much individual initiatives of TM participants. For example, if match-making services are used by TM participants, the networking activity, more precisely the identification of suitable business partners, is largely left to the service providers of TMs and thereby also communicating that the service outcome of TMs is rather a one-sided story in which the service taker does not need to engage to the extent to which he should. The results regarding the networking activities aimed at public contacts conveys a similar picture which seems to demand a planned and structured approach, as implied by the influence of the CoSi dimension PS on NPC, to identify contacts.

This calls, not only, for the inclusion of an assessment of the influence of other service offerings as part of the superordinate service TM, but also, for an assessment of the communication efforts made by TM organizers directed towards the service takers about their role in the service co-creation process. Similar approaches to assess the effectiveness of other experiential knowledge facilitating CD services, like trade shows, could possibly shed further light on the matter service co-creation to determine the effective use of these service and CD effectiveness in general. This could not only give valuable indications of how to improve CD in order to strengthen domestic industries that have to compete in today's globalized world, but based on these improvement also justify the expenses of CD, since public funds are allocated towards it.

# 8.2. Limitations

Obvious limitations to this study can be found in the research design, especially the sampling procedure, which was based on convenience sampling, prohibits to generalize the findings beyond the used sample. Another design drawback is the restricted sample size for the carried out multiple regression analyses – below 104 + IVs. Thus, reducing the accuracy of the observed relationships by the threat by a lack of statistical conclusion validity (Shadish, Cook, & Campbell, 2002).

The used DVs might mask the circumstance that some participants might set restrictions towards the number of direct business exchange partners, meaning that for example depending on firm size an increase in identified direct business exchange partners might be limited to an optimal number. An inclusion of more subjective outcome measures, e.g. indicating success in identifying sufficient business opportunities (business exchange partners) could perhaps have given an indication if such a problem was really present. However, the firm size variable was not found to be influential on the respective DVs in simple regression analyses. Furthermore, the non-significance of most of the relationships between the chosen IVs and direct business opportunity measures also might have been influenced by the market sizes within the respective countries targeted by the TMs. But, market characteristics were not significant in previous research (Spence, 2003).

## 8.3 Future research

Although the direct proxy measures, as used in this study, for business opportunities have been shown not to be related with the elicited determinants, this must not mean that they are unsuitable for future research. Several issues might be considered, as described in the following paragraphs.

A possibility for future studies could control for the preparatory work that has been put into TM participation, as was done by Spence (2003), which could not be achieved within this study due to the inclusion of TMs that dated back up to 13 months prior to conducting the survey. Detailed information about proxy measures, such as email and fax contacts etc. (Spence, 2003), indicating how much preparatory work went into preparing the respective TMs, would certainly be hard to recall for TM participants joining in TMs up to year prior to the carried out survey.

Future research could also include subjective outcome measures to determine TM effectiveness, which have been used by some the studies reviewed in chapter 2. Since they have been shown to be highly correlated with objective measures, and judgments about success/effective use might not be accurately displayed by using only quantitative indications. Another possibility presents itself in assessing the influence of TMs themselves on the identification of business opportunities (exchange partners), while comparing the TM participants to firms that enter the same markets without being aided by TMs. Differences in level in exchange partners identified might thus give evidence to TMs facilitating an effective search and faster market entry.<sup>17</sup>

To further assess the influence of determinants based in entrepreneurship theories, personality trait measure other than cognitive style might be used. For example, the entrepreneurial orientation measure as used in this study can also be assessed from an individual level. Measures might be chosen to include locus of control, tolerance for ambiguity, entrepreneurial alertness, which all are measures that help in explaining of why certain individuals are more successful than others. These measures do also influence firm level variables, like firm growth, and are especially influential during a start-up phase of a business (Ibeh, 2003). The reasoning behind this is that the faster the growth the more intensive the networking activities might be carried out and more cooperation partners are sought in a shorter period of time. Another interesting path for future research could be the investigation of social ties of individuals within TM countries, especially of business owner managers due to their wide-ranging influence on their firm, and if and how they utilize TMs for entering foreign markets alongside their social network within the respective TM countries.

<sup>&</sup>lt;sup>17</sup> One of this study's participants (number 17), for example, indicated that the aid of the TM program aided them greatly in finding exchange partners faster as compared to finding them without making use of the CD-service TM (see appendix D, D 4).

# Appendix A: Review results

Key word	WOK	Scopus	Google Scholar	Back-referencing
Trade mission	Spence (2003)	Seringhaus (1987) Wilkinson & Brouthers (2000b) Wilkinson & Brouthers (2006) Wilkinson et al. (2009) Head & Ries (2010)	Denis & Depleteau (1985) Spence & Crick (2001) Schuler et al. (2002) Spence & Crick (2004) Beeman et al. (2007) Cassey (2007)	Singer & Czinkota (1994)
Export promotion	Seringhaus & Botschen (1991) Wilkinson & Brouthers (2000a) Martincus & Carballo (2010) Leonidou et al. (2011)	Gençtürk & Kotabe (2001) Francis & Collins-Dodd (2004) Freixanet (2011) Durmuşoğlu et al. (2012)		
Trade promotion			Hauser & Werner (2010)	
Export assistance	Naidu & Rao (1993) Moini (1998)	Silverman et al. (2002)	Crick (1997)	

# Appendix B: Construct items

Construct and/or variable	Dimension	Item/indicator	As in the questionnaire	Type, attributes, and level
General Human Capital Based on (Brüderl et al., 1992); Ucbasaran et al.	General Education	Number of years of education including university and apprenticeship	Please indicate the years of schooling that you received in your life including study time at an university, if applicable:	Ratio measurement level Numbers
(2008); Shane (2000)	Overall work experience	Number of organizations worked in the past full- time:	Please indicate the number of organizations you have worked for during your life full-time:	Ratio measurement level Numbers
		Number of years of full- time work:	Please indicate how many years in your life you have already worked full-time	Ratio measurement level Numbers
	Industry specific experience	Number of years worked within the industry of company	Please indicate how many years you are working up until now within the industry of your current company	Ratio measurement level Numbers
Entrepreneur- specific human capital Based on Ucbasaran et al. (2008)	Business Ownership	Businesses in which respondent was prior minority/majority business owner:	Please indicate the total number of businesses in which you had prior minority or majority business ownership, either as a business founder or a purchaser:	Ratio measurement level Numbers
		Number of years of majority/minority business ownership	Please indicate the total number of years up until now in which you have owned a business either as a majority or a minority owner	
Market-specific experiential knowledge Adopted from Eriksson et al. (1997); Spence & Crick, (2004); Zhou (2007)	Business knowledge	Knowledge about competitors	How would you rate your own knowledge about the competitors within the target country of the trade mission relative to other managers of your company's main competition	Interval measurement level 1-5 Likert scale (1 = much worse than competitors, 2 = worse than competitors, 3= the same, 4 = better
		Knowledge about the	How would you rate your own knowledge about the	than competitors, 5 = much better than

	needs of clients/customers Knowledge about distribution channels	customers/clients' needs within the target country of the trade mission relative to other managers of your company's main competition How would you rate your own knowledge about the distribution channels within the target country of the trade mission relative to other managers of your company's main	competitors)
	Knowledge about effective marketing	competition How would you rate your own knowledge about effective marketing methods within the target country relative to other managers of your company's main competition	
Institutional knowledge	Knowledge about language and norms	How would you rate your own knowledge about the language and norms within the target country relative to other managers of your company's main competition	
	Knowledge about business laws and regulations	How would you rate your own knowledge about the laws and regulations within the target country relative to other managers of your company's main competition	
	Knowledge about governement agencies	How would you rate your own knowledge about the government agencies within the target country relative to other managers of your company's main competition	
Trade mission country work	Same as left	Please indicate if you already had prior work experience within the	Ratio measurement level

	experience		country of the last trade mission before you went on the mission.	Number of years
International Experience Adopted from Zhao & Hsu (2007)	Same as left	Experience in years in international function Years spent on overseas assignments	Your total accumulated experience in international functions or in function that included international responsibilities Your total accumulated time spent on overseas assignments	Interval measurement level 1 if < 1 year, 2 if 1-3 years, 3 if 4-6 years, 4 if 7-9 years, 5 if > 9 years):
Cognitive Style Adopted from Cools & Van den Broeck (2006)	Knowing Style	I want to have a full understanding of all problems. I like to analyze problems. I study each problem until I understand the underlying logic.	Please indicate in how far you agree with the following statements	Interval measurement level 1-5 Likert scale (1 = strongly disagree, 2 = disagree, 3= neutral, 4 = agree, 5 = strongly agree
	Planning Style	Developing a clear plan is very important to me.I always want to know what should be done when.I like detailed action plans.I prefer clear structures to do my job.I prefer well-prepared meetings with a clear agenda and strict time management.I make definite engagements, and I follow up meticulously.A good task is a well prepared task.		
	Creating Style	I like to contribute to innovative solutions. I prefer to look for creative solutions.		
		I am motivated by ongoing		7

		innovation.		
		I like much variety in my life.		
		New ideas attract me more		
		than existing solutions.		
		I like to extend boundaries.	_	
		I try to avoid routine.		
Entrepreneurial	Innovation	1. In general, the top		Interval
Orientation		managers of my company		measurement level
Adopted from		favor		Semantic differential scale:
Kreiser et al. (2002)				differential scale:
		A strong emphasis on the	A strong emphasis on R&D	1 = agree with left
		marketing of tried and true products or services	technological leadership, and innovations	statement, 5 agree
		products of services		with right statement. 2-4 for
		2. How many new lines of		rating in-between.
		products or services has		
		your company marketed during the past 3 years?		
		No new lines of products or	Very many new lines of	
		services	products or services	
		Changes in product or	Changes in product or	
		service lines have been	service have usually been	
		mostly of minor nature	quite dramatic	
	Proactivity	3. In dealing with its		
		competitors, my company .		
			Tunically initiates a stirus t	
		Typically responds to	Typically initiates actions to which competitors then	
		actions which competitors Initiate	respond	
		Is very seldom the first	Is very often the first business to introduce new	
		business to introduce new products or services,	products or services,	
		administrative techniques,	administrative techniques,	
		operating technologies, etc.	operating technologies,	
			etc.	
		Typically seeks to avoid	Typically adopts a very	
		competitive clashes.	competitive, undo-the-	
		preferring a "live-and-let	competitors" posture	
	I		1	
		live" posture		
---	--	--	---	---
	Risk	4. In general, the top managers of my company have		
		A strong proclivity for low risk projects (with normal and certain rates of return)	A strong proclivity for high risk projects (with chances of very high returns)	
		5. In general, the top managers of my company believe that		
		Owing to the nature of the environment, it is best to explore it gradually via cautious incremental behavior	Owing to the nature of the environment, bold, wide- ranging acts are necessary to achieve the firm's objectives	
International Experience / General Export Knowledge Based on Spence	Export diversification	Number of countries the company exports/sells product to	Please indicate to how many countries your company currently exports or sells its products/services to	Ratio measurement level Numbers
(2003) & Martincus & Carballo (2010)		Number of products the company exports/ sells abroad	Please indicate the number of products your company currently exports/sells abroad	
	Export Intensity	Export intensity, i.e. export sales/overall sales ratio	Please indicate the proportion of your company's overall sales, which is accounted for by international business or exporting activities	Interval measurement level 1 if < 5 %; 2 if 5-10 %; 3 if 10-25 %; 4 if 25-50 %; 5 if > 50- 75 %; 6 if 75-100 %
	International Firm experience	Same as left	Please indicate for how many years your company has already been active in international markets	Interval measurement level 1 if 0-4 yrs, 2 if 5-9 yrs, 3 if 10-14 yrs, 4 if 15-20 yrs, 5 if > 20 yrs
	Number of employees specialized in export / international business	Same as left	Please indicate how many of your company's employees were dedicated towards international business or exporting	Interval measurement level 1 if 0-1, 2 if 2-5, 3 if 6-10, 4 if 11-20, 5 if

			activities	21-50, 6 if > 50
Business Opportunity Variables Based on Spence (2003); Ellis (2008)	Number of cooperation partners	Same as left	Please indicate the number of potential cooperation partners, like distributors and agents that were identified during and in the wake of the trade mission.	Ratio measurement level Numbers
	Number of clients	Same as left	Please indicate the number of potential customers/clients that were identified during and in the wake of the trade mission.	
	Number of quotes	Same as left	Please indicate the number of quotes that were obtained during and in the wake of the trade mission	
	Number public contacts	Same as left	Please indicate the number of contacts to public agencies and persons relevant for your company's business operations that were identified during and in the wake of the trade mission	
Control Variables	High-profile trade mission	Presence of a diplomat or elected high official at meetings/negotiations	Please indicate if an elected official or diplomat was present at meetings or negotiations or other activities during the trade mission in which business contacts were initiated/further developed	Dichotomous outcome measure 1 = Yes 2 = No
	Nationality of participant	Same nationality as the trade mission country	Are you of the same nationality as the country targeted by the trade mission?	Dichotomous outcome measure 1 = Yes 2 = No
	Work experience in target market	same as left	Have you worked before within the country the trade mission was targeting?	Dichotomous outcome measure 1 = Yes 2 = No

Firm activities in target market	Same as left	Has your company already undertaken business activities, i.e. export or set up a subsidiary, within the target country before the trade mission took place?	Dichotomous outcome measure 1 = Yes 2 = No
Firm size	Number of employees	Please indicate the size of your firm in terms of number of employees	Ratio measurement level Numbers
Existence of a specialized department	Same as left	Does your company have a department, which main focus of activities is towards international business or exporting?	Dichotomous outcome measure 1 = Yes 2 = No
Export/International human capital resources	Number of employees specialized in international business or exporting activities.	Please indicate how many of your company's employees` main responsibilities are dedicated towards international business or exporting activities.	Ratio measurement level Numbers
Firm type	<ol> <li>Service</li> <li>Manufacturing/ Engineering and Construction</li> </ol>	Please try to assign your company's main area of activities to one of the two following categories: 1. Service 2. Manufacturing/ Engineering and Construction	Nominal measurement level Categories

# Appendix C: Questionnaire Description research project International Trade Missions

Dear Sir or Madam,

The project is being carried out at the University of Twente (Enschede, Netherlands) as part of a thesis project (MSc.). The theoretical & empirical foci of the project are on the influence of individual and organizational factors towards the effective utilization of public/governmental support measures by private domestic companies, engaged in foreign business activities (e.g. export).

For this reason an online-survey was compiled targeting domestic companies that took part in Trade Missions under the sponsorship of their respective national governments and related/organizing agencies. The identification of companies was conducted by making use of publicly accessible material via online search. The collected contact data, including the data collected by the online-survey, will be treated in the strictest confidence (i.e. no third parties will have access).

The above-mentioned individual influence factors refer to human capital, international orientation, general knowledge with regards to institutions within the target countries of the Missions, and general learning style preferences of partaking managers / company representatives. The organizational influence factors refer to entrepreneurial orientation and international market diversification of the partaking companies. The constructs used for measuring Trade Mission efficacy (results measures) concern the overall number of identified potential cooperation partners within the markets targeted by the Missions. These include: distributors, agents / sales representatives, customers / client contacts, and contacts to public institutions / persons which are deemed important for the planned business activities of the companies within the target markets.

We hope that the provided information to the project will give you a clear picture about the study's background.

Kind Regards

Dr. H.J.M. Ruel Daniel Wild

University of Tw School of Management and Governance Department of Finance and Accounting

Dear survey participant,

First of all, thank you for participating in the survey at hand.

The questionnaire should take you only about 15 to 20 minutes to complete. Please answer the questions by choosing between the options given within the survey. The information provided by you will be treated in the strictest confidence. You will notice that no question will ask you to state your name and address, or the name and address of your company.

We thank you for your help!

#### Best Regards

Dr. H.J.M. Ruel

Daniel Wild

Research project manager e-mail: d.wild@student.utwente.nl phone: 0031626713785

Please note that in the following survey the term "trade mission" refers to the Dutch term 'Economische missie" or "Handelsmissie".

- . 1. Please state the date of the last time that you participated in a trade mission, hosted or sponsored by the Dutch government, within the prior 12 months. Ŧ
- · 2. Please indicate which foreign country was targeted by the last trade mission you participated in.
- · 3. Please indicate if an elected Dutch official, or diplomat, or public person (e.g. queen, prince) was present at meetings or negotiations or other activities during your last trade mission, in which business contacts were initiated/further developed.
  - Yes

No

- · 4. Please indicate if you represented your company as a single person, or if you were part of a team representing your company, at the last trade mission you participated in. Single person

  - Team member
- . 5. Please state your company's main reason(s) for participating in the last trade mission.

- 6. Please state your job title/position within your company (at the time of the last trade mission).
- . 7. Pease indicate your age at the time of the last trade mission.

۲	20-24 years
۲	25-29 years
۲	30-34 years
۲	35-39 years
۲	40-44 years
۲	45-49 years
۲	50-54 years
_	

- 55-59 years
- 60-64 years
- > 65 years
- 8. Please indicate the years of educational (from elementary school onwards) and vocational training that you received in your life (at the time of the last trade mission). Including the time you studied at a university or similar institution (if applicable).
- 9. Please indicate how many years in your life you have already worked full-time (at the time of the last trade mission).
- 10. Please indicate the number of organizations that you have already worked for in full-time, including the current one (at the time of the last trade mission).
- 11. Please indicate how many years you have already worked within the industry of your current company (at the time of the last trade mission).
- 12. Please indicate the number of years of your international work experience (at the time of the last trade mission).

			4-6 years		> 9 years	None
Your total accumulated time spent on overseas assignments.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
Your total accumulated experience in international functions or in a function that included international responsibilities.	$\bigcirc$	$\bigcirc$	$\bigcirc$	0	0	$\bigcirc$

- 13. Please indicate the total number of companies, including the current one, in which you had prior minority or majority business ownership (at the time of the last trade mission). Either as a business founder or a purchaser.
- 14. Please indicate the total number of years in which you have owned a business (at the time of the last trade mission). Including the current company.
- 15. Are you of the same nationality as the country targeted by the last trade mission you participated in?
  - Yes
  - No
- 16. Please indicate if you already had prior work experience within the country of the last trade mission before you went on the mission.
  - No work experience
  - < 1 year</p>
  - 1-3 years
  - 4-8 years
  - 7-9 years
  - >10 years
- 17. Please indicate if your company already undertook business activities within the target market before the trade mission took place. Either through exporting activities or the setting up of a subsidiary.
  - Yes
  - No

#### 18. Please indicate how well you were informed about the market aspects mentioned below, relative to the managers of your company's main competition (before you went on the last trade mission).

competition (before	you went on	ule last trau	e 1111551	onj.	
	much worse than main competitors	worse than main competitors	the same	better than main competitors	much better than main competitors
How would you rate your own knowledge about the competitors within the target country of the trade mission relative to other managers of your company's main competition. How would you rate	0	0	0	0	0
your own knowledge about the customers/clients' needs within the target country of the trade mission relative to other managers of your company's main competition.	0	0	0	0	0
How would you rate your own knowledge about effective marketing methods within the target country relative to other managers of your company's main competition.	0	0	۲	0	0
How would you rate your own knowledge about the language and norms within the target country relative to other managers of your company's main competition.	0	0	0	0	0

How would you rate your own knowledge about the laws and regulations within the target country relative to other managers of your company's main competition.	0	0	0	0
How would you rate your own knowledge about the government agencies within the target country relative to other managers of your company's main competition	0	0	0	0

#### • 19. Please indicate your agreement with the following statements.

	strongly disagree	disagree	neutral	agree	strongly agree
I want to have a full understanding of all problems.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I like to analyze problems.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I study each problem until I understand the underlying logic.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
Developing a clear plan is very important to me.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I always want to know what should be done when.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I like detailed action plans.	$\odot$	$\odot$	$\odot$	$\odot$	$\odot$
I prefer clear structures to do my job.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I prefer well-prepared meetings with a clear agenda and strict time management.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I make definite engagements, and I follow up thoroughly.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
A good task is a well prepared task.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I like to contribute to innovative solutions.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I prefer to look for creative solutions.	$\bigcirc$	$\odot$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I am motivated by ongoing innovation.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I like much variety in my life.	$\odot$	$\odot$	$\odot$	$\odot$	$\bigcirc$
New ideas attract me more than existing solutions.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I like to extend boundaries.	$\odot$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I try to avoid routine.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\odot$

For the following questions (20.-24.) please indicate the orientation of your company, choosing between two opposite statements.

Select the button on the left hand side, if you agree with the statement on the left side. Select the button on the right side, if you agree with the statement on the right side. Select the buttons inbetween the two outer most buttons depending on your best estimate on an intermediate position between the two statements.





- 25. Please try to assign your company's main area of activities to one of the two following categories.
  - Manufacturing / Mechanical Engineering and Construction
  - Service
- 26. Please state in which industry sector your company is active. If your company is active in more than one industry sector, please state the sector that was relevant for the last trade mission.

- 27. Please indicate the size of your firm in terms of number of employees (at the time of the last trade mission).
  - 0-49
  - 0 50-99
  - 0 100-299
  - 0 300-499
  - 500-1000
  - Over 1000
- 28. Please indicate how many of your company's employees were specifically dedicated to international business or exporting activities (at the time of the last trade mission).
  - 0-1
  - 0 2-5
  - 6-10
  - 0 11-20
  - 0 21-50
  - Over 50
  - Over 50
- 29. Please indicate if your company has a department, whose main focus of activities lies towards international business or exporting activities (at the time of the last trade mission)?
  - Yes
  - No No
- 30. Please indicate the total annual turnover of your company (at the time of the last trade mission).
  - Less than € 1 million
  - € 1 million to less than € 2.5 million
  - € 2.5 million to less than € 5 million
  - € 5 million to less than € 10 million
  - €10 million to less than € 50 million
  - Over € 50 million
- 31. Please indicate the proportion of your company's annual overall sales, which is accounted for by international business or export activities (at the time of the last trade mission).
  - Less than 5 %
  - 5 % to less than 10 %
  - 10 % to less than 25 %
  - 25 % to less than 50 %
  - 50 % to less than 75 %
  - between 75 % and 100 %
- 32. Please indicate in how many countries your company's products or services were marketed abroad (at the time of the last trade mission); either through exporting or the selling of products via your company's own foreign subsidiaries.
- 33. Please indicate the number of your company's products that were marketed abroad (at the time of the last trade mission); either through exporting or the selling of products via your company's own foreign subsidiaries.

- 34. Please indicate the age of your company (at the time of the last trade mission).
  - O to 4 years
- 5 to 9 years
- 10 to 14 years
- 15 to 20 years
- 0.0.00
- Over 20 years
- 35. Please indicate for how many years your company has already been active in international markets (at the time of the last trade mission).
  - 0 to 4 years
  - 5 to 9 years
  - 10 to 14 years
  - 15 to 20 years
  - Over 20 years
- 36. Please indicate the number of potential cooperation partners like distributors and agents that were identified during and in the wake of the last trade mission.
- 37. Please indicate the number of potential customers/clients or leads that were identified during and in the wake of the last trade mission.
- 38. Please indicate the number of price quotations that were requested from your company during and in the wake of the last trade mission.
- 39. Please indicate the number of contacts to public/governmental agencies and persons (relevant for your company's business operations within the target market of the trade mission) that were identified during and in the wake of the last trade mission.

If you do have any comments on the questionaire in general or on any question in particular please write them down using the space provided below. You can skip this field if you do not have any comments.

Thank you for answering all the questions! If you want to participate in the raffle mentioned at the beginning, you may answer the following three questions (optional). Otherwise please skip the three remaining questions, but do not aboard the questionaire prematurely, thank you.

If you want to participate in the raffle please indicate the price you want to receive in case of winning.

- I would like to receive a 25 EUR certificate from Amazon.com
- I would like to donate 25 EUR to a charity of my choice

If you decided to donate your price, in case of winning, please state a charity of your choice.

If you do not want to have your price donated, please state an email adress in order to contact you in case of winning a certificate.

You have arrived at the end of the survey. Please click the button "complete questionnaire" below to complete the survey. Thank you.

Complete questionnaire

# Appendix D: Sample profile of participating firms and representatives

The following tables present general sample descriptives on the trade mission programs, participating firms and firm representatives.

A breakdown of the surveyed TM participants shows (table 1) that most of them took part in TMs to European countries (42,8 %)<sup>18</sup> followed by missions to the Americas (20,6 %). Most of the firms that made use of TMs were SMEs (below 299 employees). Further, many of the participants (53; or 45,7 %) exhibit high level of export dependence often exceeding a rate of more than 50 % of annual turnover. It is also shown that many of the firms are established businesses (80; or 68,4 %) exceeding a firm age of 10 years. Moreover, nearly half of them (52; or 44,4 %) exist already more than 20 years in business (table 2). The majority of the individual decision-makers, representing their respective companies, do have ample international experience in general (83; 76,2 % over 4 years), and also ample experience in an international management position (54; 52 % over 4years) (table 3). An open question within the questionnaire asked respondents to provide their main reason(s) for joining in trade missions (see table D). The majority of respondents indicated that the main reason is the identification of clients and business partners and also, but mentioned less frequently to public officials and institutions (networking), followed by market research and creating awareness of their company and products within the targeted TM countries. The TMs were also used for enhancing already ongoing business operations within the countries, indicating that not only were the TMs used by firm for new market entry, but also by firms already present in the respective markets (see table 4).

Destination of trade missions by region	Number of respondents	Percentage of total sample	German	Dutch	Belgian	Irish
Western Europe	14	12,0 %	12	2		
Eastern Europe	36	30,8 %	23		11	2
Northern America	12	10,3 %	8	4		
Southern America	12	10,3 %	5		1	6
East Asia	15	12,8 %	1		8	6
South East Asia	6	5,1 %	4		2	
Central Asia	2	1,7 %	2			
Gulf states	10	8,5 %	1	8		1
Africa	10	8,5 %	3	5		2
Total	117	100 %	59	19	22	17

#### D 1: Trade missions by destination and program

<sup>&</sup>lt;sup>18</sup> All proportions in the following tables are based on the actual number of respondents per category.

# D 2: Firm characteristics (N = 117)

	Number of	German	Dutch	Belgian	Irish
	respondents				
Age*					
1-4 years	20	10	4	3	3
5-9 years	16	7	1	5	3
10-14 years	15	11	1	1	2
15-20 years	13	7	1	3	2
Over 20 years	52	23	20	10	7
Number employees					
0-49	56	30	11	9	6
50-99	24	16	2	4	2
100-299	22	10	2	3	6
300-499	2	1	-	-	1
500-1000	3	1	-	1	1
Over 1000	10	1	3	5	1
Total annual sales					
Less than € 1 Mio.	31	16	4	6	5
€ 1 mio. to less than € 2.5 mio.	9	7	-	-	2
€ 2.5 mio. to less than € 5 mio.	10	8	2	-	-
€ 5 mio. to less than € 10 mio.	19	12	4	2	1
€ 10 mio. to less than € 50 mio.	24	10	3	7	4
Over € 50 mio.	24	6	6	7	5
Export intensity					
Less than 5 %	22	16	2	1	3
5% to less than 10%	17	11	3	3	-
10% to less than 25%	9	7	-	-	2
25% to less than 50%	16	12	1	2	1
50% to less than 75%	13	6	3	2	2
75% to less than 100%	40	7	10	14	9

\* 1 respondent did not answer this question (N = 116).

	Number of respondents	German	Dutch	Belgian	Irish
International management experience					
< 1 year	34	18	5	7	4
1-3 years	16	11	2	2	1
4-6 years	21	8	3	5	5
7-9 years	4	2	1	-	1
> 9 years	29	10	7	7	5
Total	104*	49	18	21	16
Time spent on Overseas					
Assignments					
< 1 year	11	6	2	2	1
1-3 years	15	11	3	-	1
4-6 years	17	10	1	4	2
7-9 years	9	6	-	2	1
> 9 years	57	18	13	14	12
Total	109**	51	19	22	17
Position					
Business Owners	66	32	8	13	13
Manager position	51	27	11	9	4
Total	117	59	19	22	17

# D 3: Individual characteristics (N = 117)

\* 13 respondents indicated no international management experience; \*\*8 respondents indicated to have no international experience whatsoever.

# D 4: Reasons for joining in trade missions

German missions*	
1	Exploration of market
2	Establish new business relationships - export
3	Strengthening of already existing contacts to clients in market. Establish new contacts
4	Make new contacts to sales agents
5	Exploration of business opportunities within Bulgaria; contacts with potential clients
6	Marktexploration; Networking
7	First introduction to Turkish market
8	Expansion

9	Development of the market and acquisition of new customers
10	Exploration of market potential; Establishing contacts in general; Searching for foreign
	representatives
11	Search for agents in Ireland
12	Business contacts
13	Market development and exploration
14	Market research; establish contacts
15	Further development of customer base and cooperation partner base in Brazil
16	Market exploration
17	Finding contacts in a targeted manner; without using the foreign trade chamber the acquisition
	of these contacts would have taken far longer.
18	Assessment of the market and establish contacts to interesting partner firms
19	After intensive market analyses, we discovered that there were quite a few interesting market,
	which have a high demand for our products (gas fermentation / biogas plant operating with
	liquid manure)
20	Expand business activities and into new markets
21	Indonesia is an upcoming state with interesting possibilities
22	Setting up of export business
23	Positive experiences with prior trade missions
24	Expansion within the market
25	No special reasons. Out of pure interest towards new contacts, also within the group
26	Business expansion within Baltic countries
27	Acquiring business partners and clients within the target market
28	Acquisition of new customers; establish contacts; market intelligence
29	Offering our own products and services for energy optimization to the local industry
30	Acquisition of customers; New business contacts
31	Acquisiton of customers
32	Strengthening / Establishing export relations
33	Exploration of market structure and acquisition of potential clients
34	New markets
35	Promotion
36	Market exploration
37	Market exploration; Identification of potentially interested parties
38	B2B contacts; boost market development
39	Gather experiences in trade mission, because we never participated before; Because the trade
	mission targeted our industry, we hope for concrete contacts and business transactions within
	the market
40	Interest in market development in Turkey
41	Assessment of possible activities; Establish contacts to potential end-customers, machinery and
	equipment suppliers
42	Market entry
43	Development of new markets
44	Market analysis
45	Received invitation
46	Presentation of the company and product; Identify interested parties

	-
47	Heighten the level of awareness of our products; new business contacts
48	Interests linked with the country and receiving of orders
49	Reach market customers; Identify potential cooperation partners
50	Establish contacts
51	Exploration of new markets to set up future sales and distribution within the country
52	Promotion of our products linked to the search for a distribution partners
53	Networking and identification of contacts abroad
54	Export of planning services within the field of energy efficiency
55	Learn about market potential
56	Establish contacts to architects, planners and possible manufacturers; heighten the level of
	awareness of our systems within the market
57	Gathering of market intelligence; establish contacts to local players
58	To develop business contacts
59	Increasing the sales volume and market opportunities in Middle East and Turkish Republics
Dutch missions	
60	1. Business intelligence: a. Business intelligence on specific projects. b. Scouting for new
	opportunities. 2. Understanding of political climate. 3. Identification of contact persons.
61	Establishing new contacts at government and CEO level. Secondly market research
62	Hosting Dutch delegation in Basrah, Iraq
63	New business, sales, contracts
64	Exploring of potential market opportunities
65	Combination with side-event that was organised alongside the trade mission
66	Economic developments within the country and future projects
67	Business opportunities in water
68	We were looking to find new markets for our product
69	Exploration of business opportunities plus promoting Dutch logistics sector in general
70	Business Development; fining new leads, potential customers
71	- Was in our home town: Durban
	- During conference
	- Right focus on development of infrastructure
	- Be involved in SA [South African]-Dutch contacts
72	To investigate the possibilities to make a startup with a new company
73	To get new business contacts and identify opportunities
74	Participated to find potential customers as well as potential investors
75	Establishing of more business contact in the country
76	Meet & Greet with Romanian Bakery Entrepreneurs and Meet & Greet with potential
	agents/sales representatives
77	Offering logistics services to Oil & Gas market in Israel
78	For expanding our sales in this area for the next WC [Soccer World Championship].
Belgian missions	
79	New clients
80	Getting introduced to new potential customers
81	increase the business
	1

82	Turkey is following the former DDIC countries and evolving register. New hyperses are structured
82	Turkey is following the former BRIC countries and evolving rapidly. New business opportunities are to be searched for on the short term.
83	Get to know the market better
84	Presenting the company; discussions with Chinese trade partners
85	Networking; initial contacts for business
86	Starting prospection in Turkey
87	Access to officials during the mission
88	Finding new business partners
89	Networking + officialising our existing business contacts; presentation during the two Life Science
	Seminaries.
90	Legal service regarding EU law and related issues especially EU accession and membership
91	We are looking for new distributors for our products
92	Searching for Agents or distributors because we are already selling in Japan
93	Present company to find export options.
94	developing new contacts and staying in touch with existing contacts
95	investment opportunities, starting a subsidiary
96	To have the support of Belgian government for our relation with public authorities and
	administration
97	Looking for local business partners
Irish missions*	Obtain high level contact with public bodies
98	Company is growing fast and we won't expand our client base as well as our integration partners
	as we are a pure product vendor not engaging in system integrations we need to broaden our
	network.
99	Early stage market investigation
100	Political, business and diplomatic relationship building China
101	Trinity Biotech do Brasil is a Brazilian subsidiary of an Irish company; recently established in the
	country and it would be important to create a business network
102	Business development
103	To negotiate a technology transfer agreement
104	Introduction to local companies and exposure to the new market
105	Turkey is a target international market for our company
106	Interest in expanding our business in Brazil
107	Boost sales
108	To visit a customer and to make new contacts
109	the trade mission coincided with a return trip to Brazil
110	Increase presence within the Brazilian market through media coverage.
111	Exposure to Chinese Government officials and also to network with other participating delegates
112	To gain business oppertunities
113	Strengthen commercial relationships in Brazil
113	Our company, Chinaportal, specializes in trade with China and I wanted my team in China to
±17	meet the Irish Government representative
115	Develop business contacts and support the initiative of the Irish development agency
	tot answer this question.

\* 1 respondent did not answer this question.

# Appendix E: Descriptives for independent and dependent variables

Firm level independent variables



## E 1: Descriptives Firm varialbes

Descriptives						
Variable	Mean	St. Dev.	Min.	Max.	Ν	
GEK_lg	.26	.183	0.00	.60	117	
EO	3.35	.761	1.00	5.00	117	

## E 2: One sample t-test on EO (tested against value of 3, i.e. mid-point of the EO scale)

Mean	St. Dev.	Std. Error	df	Sig. (2- tailed)	95 % Cor Interval	nfidence	Ν
				-	Lower	Upper	
3.35	.761	.07031	116	.0001	.2107	.4892	117

#### Individual level independent variables













#### E 3: Individual level variable descriptives

Descriptives						
Variable	Mean	St. Dev.	Min.	Max.	N	
EDUC	17.04	3.749	7	25	112	
PRIORWORK	21.40	11.064	2	41	115	
ORGWORKED_lg	.535	.251	.00	1.115	116	
INDEXP_lg	.872	.470	.00	1.60	114	
TMCWORKEXP_lg	.347	.247	.00	.70	63	
EHC_lg	.485	.299	.00	1.06	66	
ВК	3.188	.818	1.00	5.00	117	
IK	2.920	.830	1.00	5.00	117	
KS	3.727	.636	2.00	5.00	116	
PS	3.704	.672	2.00	5.00	116	
CS	4.221	.554	2.67	5.00	116	

# E 4: Paired sample t-test for cognitive style dimensions of participants

Pair	Mean	St. Dev.	Std. Error	t	df	Sig. (2- tailed)	95 % Confidence Interval		Ν
							Lower	Upper	
KS – PS	.022	.765	.0709	.314	115	.754	118	.163	116
CS – KS	.494	.811	.0753	6.563	115	.0001	.345	.643	116
CS – PS	.517	.828	.0768	6.721	115	.0001	.364	.669	116

# E 5: Independent sample t-test between business owners (N = 65)\* and non-business owners (N = 51) for cognitive style dimensions (KS, PS, CS)

	Group	Mean	St.	Std.		Group	St.	St.	Std.
			Dev.	Error			Dev.	Error	Error
KS	Business	3.661	.710	.088	CS	Business	4.333	.489	.489
K2		3.001	.710	.088	CS		4.555	.489	.489
	owners					owners			
	New	2.04.0	524	072		N	4.070	602	602
	Non-	3.810	.521	.073		Non-	4.078	.602	.602
	business					business			
	owners					owners			
PS	Business	3.673	.691	.085					
	owners								
	Non-	3.745	.650	.091					
	business								
	owners								

Diff	Differences between groups		df	Sig. (2- tailed)	Mean Difference	95 % Confide	
						Interva	
						Lower	Upper
KS	Equal variance assumed	-1.254	114	.212	1489	384	.0863
	Equal variance not assumed	-1.301	113.6	.196		375	.0779
PS	Equal variance assumed	571	114	.569	0720	322	.178
	Equal variance not assumed	575	95.3	.566		320	-176
CS	Equal variance assumed	2.515	114	.013	.2549	.0541	.456
	Equal variance not assumed	2.453	110.2	.016		.048	.461

#### Dependent variables





## E 6: Dependent level variable descriptives

Descriptives					
Variable	Mean	St. Dev.	Min.	Max.	Ν
Business Exchange Partners_lg	.606	.258	.30	1.41	102
Nmbr of Quotes_lg	.729	.358	.30	1.70	61
Nmbr of Public Contacts_lg	.630	.375	.30	2.00	65
Nmbr Cooperation Partners_lg	.629	.316	.30	.30	74
Nmbr Clients_lg	.616	.284	1.48	.149	86

# **Appendix F: Simple regressions**

Coefficients for simple regressions; regressed on trade mission outcome variables Nmbr Business Partners, Nmbr Quotes and Nmbr Public Contacts

	Nmbr Business Partners_lg		0				Nmbr Quotes_lg					Nmbr Public Contacts_lg					
	unstandardized	Sig.	Ν	Outlier-free	Sig.	Ν	unstandardized	Sig.	Ν	Outlier-free	Sig. N	unstandardized	Sig.	Ν	Outlier-free	Sig.	Ν
Firm Level																	
GEK_lg	0.170	0.232	102	0.127	0.354	101	-0.328	0.206	61	-		0.646***	0.008	65	0.482**	0.032	64
EO_lg	-0.178	0.405	102	-0.185	0.366	101	-0.103	0.150	61	-		0.484	0.219	65	0.216	0.550	64
Individual Level																	
EDUC	-0.010	0.129	97	010	0.133	96	0.010	0.417	57	-		0.008	0.566	62	-0.001	0.929	61
PRIORWORK	-0.002	0.445	100	-0.001	0.803	99	0.002	0.722	59	-		-0.012***	0.003	65	-0.010**	0.014	64
ORGWORKED_lg	-0.002	0.986	101	0.007	0.940	100	0.062	0.728	60	-		-0.605***	0.002	65	-0.435**	0.017	64
INDEXP_lg	-0.016	0.772	99	-0.002	0.977	98	-0.114	0.260	59	-		-0.102	0.336	64	-0.077	0.421	63
EHC_lg	-0.146	0.167	60	-	-	-	-0.128	0.503	35	-		0.198	0.115	39	-	-	-
	0.000			0.01.4			0.022					0.026			0.022		
ВК	-0.008	0.809	102	-0.014	0.638	101	-0.032	0.563	61	-		0.026	0.655	65	0.022	0.666	64
к	-0.023	0.448	102	-0.023	0.448	101	0.000	0.997	61	-		-0.055	0.371	65	-0.056	0.313	64
TMCWORKEXP_lg	-0.262**	0.041	53	-	-	-	0.219	0.459	28	-		-0.038	0.435	38	-0.006	0.891	37
IE_lg	0.050	0.641	96	-	-	-	-0.023	0.907	57	-		-0.083	0.670	63	-0.049	0.779	62
KS	0.049	0.234	101	-	-	-	0.066	0.409	60	-		0.171**	0.024	65	0.156**	0.022	64
PS	0.055	0.156	101	0.050	0.184	100	0.120	0.150	60	-		.175***	0.013	65	0.210***	0.001	64
CS	-0.039	0.436	101	-	-	-	-0.105	0.232	60	-		-0.027	0.769	65	-0.064	0.434	64

Significance levels: \*p < .1; \*\*p< .05; \*\*\*p<.01. Firm level variables are shaded blue, and individual level variables are shaded green. Ending \_lg indicates logarithmic variables.

## Coefficients for simple regressions; regressed on trade mission outcome variables Nmbr Cooperation Partners and Nmbr Clients

	Nmbr Cooperation Partners						Nmbr Clients					
	unstandardized	Sig.	Ν	Outlier-free	Sig.	Ν	unstandardized	Sig.	Ν	Outlier-free	Sig.	Ν
Firm Level												
GEK_lg	.291	.143	74	-	-	-	.087	.622	86	.081	.610	84
EO_lg	036	.902	74	-	-	-	263	.309	86	268	.244	84
Individual Level												
EDUC	011	.235	71	-	-	-	009	.247	81	010	.171	79
PRIORWORK	002	.586	73	-	-	-	003	.339	84	001	.761	82
ORGWORKED_lg	063	.661	73	-	-	-	.007	.560	85	.132	.206	83
INDEXP_lg	.023	.765	72	-	-	-	090	.192	84	101	.126	83
EHC_lg	249*	.098	45	-	-	-	119	.336	51	098	.372	50
вк	.026	.582	74	-	-	-	001	.989	86	017	.634	84
к	.050	.253	74	-	-	-	028	.455	86	049	.149	84
TMCWORKEXP_lg	288	.206	31	-	-	-	311**	.028	46	-	-	-
IE_lg	.135	.391	68	-	-	-	.010	.934	82	008	.946	80
ĸs	.035	.560	74	-	-	-	.100*	.060	85	-	-	-
PS	,022	0,701	74	-	-	-	,069	,169	85	,062	0,192	84
CS	,004	0,954	73	-	-	-	-,064	,295	85	-	-	-

Significance levels: \*p < .1; \*\*p<.05; \*\*\*p<.01. Firm level variables are shaded blue, and individual level variables are shaded green. Ending \_lg indicates logarithmic variables.

# Appendix G: Multiple regression output

Standardized residuals plot for number of public contacts



#### Partial regression plots for number of public contacts











Standardized residuals plot for number of clients









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