Universiteit Leiden

ICT in Business and the Public Sector

Measuring the impact of five factors on success for nearshoring projects

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Date: 07/06/2022

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MASTER'S THESIS

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Abstract

Background

Organizations have been relocating business activity for many years. This began with offshoring, or relocating to lower-wage countries, primarily in Asia. Nearshoring has gradually gained popularity since the early 2000s. In this scenario, organizations relocate work to countries that are closer geographically and/or culturally while also being lower wage countries in the majority of cases. This simple description captures the essence of the nearshoring method well; nearshoring assists organizations in resolving the cost-risk vs. distance conundrum by selecting sites that may not always deliver the greatest cost savings, but are associated with lower risks.

Aim

Work relocation to offshore countries has been widely adopted in the last few decades, but nearshoring is becoming increasingly important. Organizations are attempting to gain a competitive advantage by focusing more on nearshore locations. The study's findings should aid in the decision-making process for nearshoring from a variety of perspectives. The definition of success for nearshoring projects will be broken down into several dimensions, each of which has a different impact on the project's success.

Method

Furthermore, a quantitative survey is used to identify success factors for IT Services transition projects to nearshore locations. In the first section of the survey we ask several questions for demographic information on the person, organization and recent nearshoring project. In the second part we provide 6 dimensions, divided in 28 statements that are measured with a 1-7 Likert scale.

Results

Primarily we visualized all of the data into several tables, charts and diagrams, which give a good first impression of the data. By analyzing the survey results and performing statistical analysis we created a research model that shows the impact of five factors on nearshore project success. We also separated the research model into a buyer and supplier perspective to highlight significant differences of each side on the success.

Conclusion

Based on our findings, we believe that Trust is critical to the success of nearshore projects. The transfer of knowledge and the liaison quality between on-site and nearshore staff also has a significant impact on success. On the other hand, nearshoring expertise has little to no effect on these arrangements and measuring the success of a nearshore project based on a project's suitability is unreliable. Lastly, the data suggests that the COVID-19 pandemic may signal an increase in nearshoring projects worldwide.

Acknowledgements

Foremost, I would like to thank Dr. Christoph Stettina, my first university supervisor, for the (bi-) weekly reviews and excellent supervision. From the beginning to the end of this research project, his professional insight and personal guidance have been invaluable. I appreciate the time you dedicated to assisting me with this project. Additionally, I would like to show my gratitude to Joost Visser, my second university supervisor, who also gave me invaluable and detailed feedback throughout our three extensive meetings. Thank you for your time and assistance throughout this project.

Furthermore, I would like to thank my company supervisor, Menno Olgers, for all the time, effort, and insights that you provided from the beginning to the end. You provided me with the opportunity to conduct this study within Aegon, you were kind enough to share your network in order for me to obtain the results I have now, and I appreciate the time you devoted to our weekly meetings. I hope you enjoyed this journey with me.

In addition, I'd like to thank all research participants for their time and contributions. Without these insightful observations, this research would not have been possible.

Last but not least, I would like to thank my family and friends for their motivation, encouragement and support throughout my research project.

Elias de Beer

The Hague, June 7th 2022

Table of contents

List of figures and tables

List of abbreviations

Abbreviation	Explanation
NSP	Nearshore Service Provider
IT	Information Technology
SSC	Shared Services Center
ITS	IT Services
GTS	Global Technology Services

Glossary

Term	Definition
Skimming	To read the abstract, conclusion and check for relevant models, figures and questionnaires in a research paper
Offshore (offshoring)	Moving work to countries that cost less and are also far away. (Carmel & Abbott, 2006)
Nearshore (nearshoring)	Moving work to countries that cost less but are not too far away. This can be in geographical but also cultural distances. (Carmel & Abbott, 2006)
Outsourcing	The use of external agents to perform one or more organizational activities. (Brooks, 2006)
Captive/in-house	Also called global in-house centres, wherein sourcing firms make products or services using a separate organisational unit. (Zimmermann, Oshri, Lioliou, & Gerbasi, 2018)
Nearshore Service Provider (NSP)	An organisation that provides services to customers from a nearshore location.
Snowball technique	Snowball sampling is where research participants recruiter other participants for a test or study in order to find the desired amount. It is also known as is also known as cold-calling, chain sampling, chain-referral sampling, and referral sampling. (Everitt & Skrondal, 2010) (Levine, 2014)
Shortlist	A limited list of important items or individuals. (Merriam-Webster, n.d.)
Shared Services Center	A shared service is an accountable entity within a multi-unit organization tasked with supplying the business unit, respective divisions and departments with specialized services (finance, HR transactions, IT services, facilities, logistics, sales transactions) on the basis of a service level agreement (SLA) with a costs charge out on basis of some type and system of transfer price. (Strikwerda, 2010)
IT Services	IT services is a general term that incorporates the application of business and technological skills to assist businesses in the creation, management, and optimization of information and business processes, as well as their access to them.

1. Introduction

This chapter provides an introduction to the research by first discussing the background and context, followed by the research problem, research aims, objectives and questions, the scope and lastly the outline.

1.1. Background and context

The relocation of business activity has been applied by organizations for many years. Offshoring focuses on the relocation of business functions from home base to foreign locations. This strategy is classified as a novel managerial practice and dates back to the late 1970s (Roza, Bosch, & Volberda, 2011). In terms of contractual and geographical consequences, a wide range of dynamic and unique offshore scenarios can be distinguished (Jahns, Hartmann, & Bals, 2006). Offshoring, according to Kotabe & Murray (2004), may be divided into three types of contractual arrangements: arm's length relationships, strategic partnerships, and owned subsidiaries overseas. Companies can shift activities to either “offshore” (distant) or "nearshore" locations (Dmitrij Slepniov, 2013).

Since 1995, the terms outsourcing, offshore, and nearshoring have begun to appear in literature. The raw data from the Google Books Ngram Viewer project, version 2, was used to determine their application (see Google, 2012). In *Figure 1*, the terms "outsourcing," "offshoring," and "nearshoring" appear sequentially. The term "outsourcing" reached its peak in 2006, whereas the term "nearshoring" started to appear in English-language books in 2004, according to the data provided. The information from Ngram Viewer was processed by the author in order to compile the chart (Surdea-Blaga, 2019).

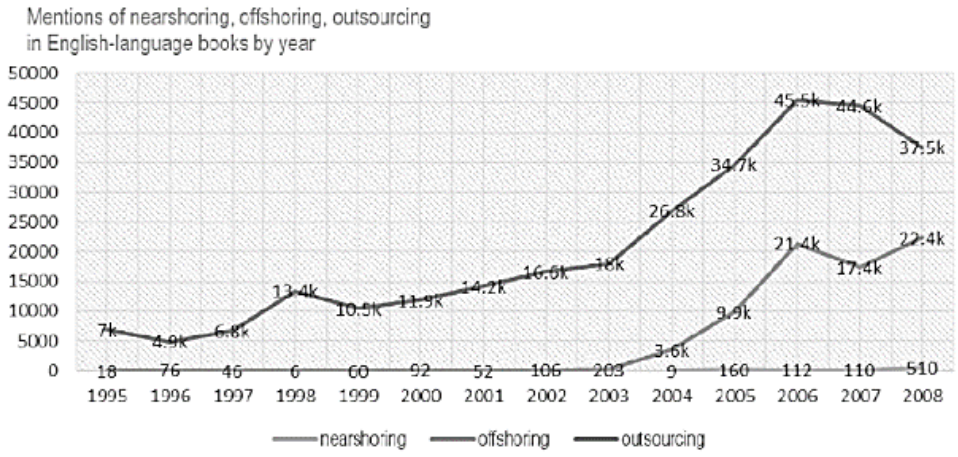

Figure 1: Google Ngram for key terms (Surdea-Blaga, 2019)

According to The Economist (The rise of nearshoring, 2005), nearshoring is the business of relocating activities such as production, research and business processes to countries that are quite cheap and quite close rather than very cheap and far away. This very basic description captures the core of the nearshoring method well; nearshoring assists organizations in resolving the cost-risk vs. distance conundrum by selecting sites that may not always deliver the greatest cost reductions, but are linked with reduced hazards. This definition of nearshoring is supported by a small body of literature (Kvedaraviciene, 2008; Shamis et al., 2005; Kamann and van Nieulande, 2010; Hutzschenreuter et al., 2011). While activities from the United States are increasingly being nearshored to Mexico, Central and Eastern Europe have emerged as favored nearshoring destinations for Western Europe.

According to Deloitte's head of global manufacturing research, Peter Koudal, nearshoring is becoming a more visible trend as part of the effort by global companies to improve the value they get out of their foreign investments (Marsh, 2005).

1.2. Research problem

Offshoring to distant countries has been widely adopted in the last few decades, but nearshoring is a relatively new concept. Instead of offshoring, an increasing number of organizations decide to distribute their work to countries within similar time zones in order to gain a competitive advantage. A study comparing nearshoring and far-shoring discovered that customer perceived quality and purchase intention were significantly higher for nearshoring compared to far-shoring (Annarita Colamatteo, 2021). Several other studies also show whether to do (captive or outsource) offshoring or nearshoring and the risks, benefits and drawbacks of both options (Ruohonen, 2009; Carmel & Abbott 2007; Hahn et al., 2011). Although there has been extensive research on outsourcing and offshore, little has been done on nearshoring in general, let alone when and how to do it.

1.3. Research aim and objectives

This research is intended for managers who plan to initiate a nearshoring project, which is a project that incorporates relocating business activities from an on-site location to a nearshore location. The findings of the study should support in the decision-making process for nearshoring from a variety of perspectives. The success of a nearshoring project will be broken down into several dimensions, each of which has a different impact on the project's success.

1.4. Research scope

To avoid bias, the research focuses on two organizational perspectives. The first perspective is the on-site location of an organisation that is already involved in nearshore transition projects. By obtaining their insights and experience, future projects can be supported in optimally executing these transitions. The other perspective is the perspective is that of nearshore locations that have also had one or more projects in this area. There are two types of nearshore governance modes to consider: outsource and captive (in-house) nearshoring.

According to Contractor et al. (2011) *Table 1* summarizes the four possible outcomes for a business when acquiring the business services it needs to operate in another location. When a foreign country is involved, the phrase "offshoring" is frequently used. Nearshoring limits offshore geographically, with a simple definition being "supplier is close in terms of distance and time zone differences" (Oshri, Kotlarsky, & Willcocks, 2015).

Geographical location/ Sourcing of activities	In-house/ same company	Independent supplier
Same country	Same company/ branch in local country	Domestic outsourcing
Foreign country	Own subsidiary or in a remote location	Offshore outsourcing

Table 1: Outsourcing vs. in-house activities (Surdea-Blaga, 2019)

We focus our research on four dimensions: (1) global positions with experience in relocating business activity to a nearshore location, (2) the nearshore consuming client's perspective, (3) the

nearshore supplier perspective, and (4) our unit of analysis is 'completed nearshore transitioning projects', i.e., not the entire relationship between supplier and consumer along with nearshored work after the project is completed, but only the project of moving business activity from on-site to nearshore.

1.5. Research question

This research study examines determinants of nearshore project success from a supplier and client's perspective. The following research question (RQ) is formulated accordingly and will be answered throughout the research project:

What are dimensions that have an impact on the success of nearshoring projects?

To answer this question, a confirmatory-quantitative research approach is used to facilitate in nearshoring decision-making.

1.6. Research outline

This section aims to demonstrate the process of answering the research question by presenting the research outline. This consists of the following chapters:

- Chapter 2: Describing how and which literature is found, related to the research question;
- Chapter 3: Further investigating the research topic, nearshore project success, and proposing hypotheses;
- Chapter 4: Explaining how the research question is answered by describing the methodology;
- Chapter 5: Presenting the data and descriptive results through tables, graphs and models;
- Chapter 6: Analyzing the data by applying different statistical methods;
- Chapter 7: Revisiting and discussing the research question by discussing the data and findings;
- Chapter 8: Concluding the study by describing the research question and purpose, explaining the key findings, and concluding with a statement.

2. Literature review

This chapter provides the basis of the research project. It consists of a comprehensive literature review of research done in the field of offshore as well as nearshore project success. There is a lot of research available that measures the success of offshoring projects, but since nearshoring is an emerging topic, little research has been conducted. *Paragraph 2.1* of this chapter discusses the data collection method in greater detail. This paragraph describes the methods and techniques used to locate relevant scientific papers. In *paragraph 2.2.,* multiple studies are used to compare various definitions of offshore project success. Additionally, *paragraph 2.3.* expands on the study chosen for this research from an offshore perspective. *Finally, paragraph 2.4*. defines nearshoring and contrasts it with the more generic term of offshoring.

2.1. Literature search

A targeted literature review is conducted by utilizing a variety of different search strings. These search terms were entered into Google Scholar in order to locate the appropriate studies that would provide a solid foundation for my research. Google Scholar acted as a sufficient and centralized resource for locating the accurate findings when using the appropriate keywords. Eventually numerous definitions and synonyms were combined to locate the appropriate literature. This literature discusses the importance of “IT sourcing and IT shoring project success” and the critical or dimensional factors that contribute to the success of those projects. The keywords used in Google Scholar are listed in *Table 2*. These terms were combined with the operators "OR," "AND," and brackets, as in *("Nearshor" OR "Offshor") AND "project success."* Additionally, quantitative research results were filtered to identify previously developed questionnaires, indicators, and statements (with scales, e.g. Likert) that could be replicated in this study. A final search string that produced useful studies included the following: *("impact" OR "success") AND ("nearshoring" OR "IT sourcing") AND ("survey" OR "questionnaire") AND "teams".*

Facets	Keywords
Sourcing or Shoring	(“outsourcing” OR “IT sourcing” OR “outsource); “nearshore”; “nearshoring”; “nearshor”; “offshore”; “offshoring”; “offshor”; (“nearshor” OR “offshor”); “outsource”; “outsourcing”; “outsourc”; “IT outsourcing”; “IT Sourcing”; “captive”; “sourcing strategy”; “sourcing strategies”
Project success	“project success”; “project”; “projects”; “project success model”; “sourcing metrics”; “outsourcing metrics”; “outsourcing KPI’s”; “sourcing KPI’s”; critical success factors for outsourcing; “outsourcing configurations”; “project performance”; “outsourcing project performance”; “project quality”; “outsourcing project quality”; (“impact” OR “success”); “project impact”; “teams”; “team success”; “success”
Quantitative research	“survey”; “indicators”; “quantitative research”; “quantitative study”; “questionnaire”; “Likert scale”

Table 2: Search terms used for different search facets

Using these keywords in conjunction with the various operators (AND, OR and brackets), over 100 papers were skimmed in order to identify relevant articles for this research. Another technique for discovering relevant papers was to employ the snowball technique, which involves scanning referenced papers in studies identified during the preliminary search. The main objective was to find papers that contained elements such as an existing research model and quantitative survey statements that support the dimensions in the model. The keywords searching and snowball technique resulted in a total of 11 results that were prioritized in a Word document by using a variety of criteria, including citations, relevance and quality (such as of existing questions and model). *Figure 2* summarizes the search process.

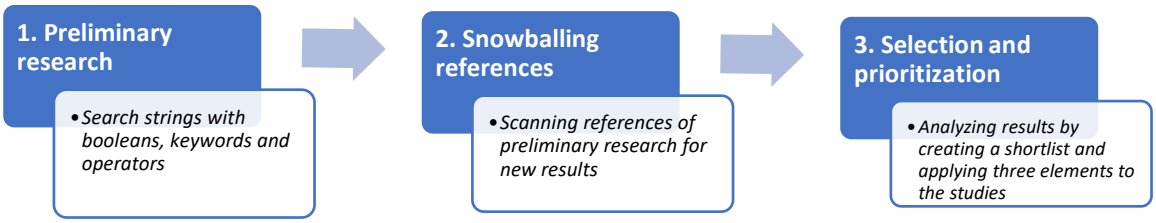

Figure 2: Literature review search process

2.2. Benefits & success of offshore and outsourcing projects

An offshore project is one that involves the relocation of certain processes, tasks, and/or people from on-site to an offshore location. Offshore projects can be done more efficiently if their success is measured. The term "success" can be quantified in a variety of ways. According to Erickson and Ranganathan (2006), "offshore project effectiveness" is determined by six different indicators: *schedule, budget, functionality, quality, objectives and satisfaction*. From a slightly different angle, Grover, Cheon and Teng (1996) examined firms that outsource IT functions, their outsourcing performance and consists of two characteristics that might influence this success: *service quality and partnership*.

Trust is a well-established factor in outsourcing success, or as Lee & Choi (Lee & Choi, 2011) phrase it, "outsourcing benefits." They examined the effect of initial trust, ongoing trust, initial distrust, and ongoing distrust on the benefits of outsourcing. Additionally, they examined the effect of knowledge sharing on these dimensions of trust. Furthermore, this study examined the effect of three minor factors on the outsourcing benefits: project size, project type, and prior relationship. They examined these connections from the perspective of both service receivers and providers. The findings indicate that trust is less important for service recipients than it is for service providers. This is significantly more critical for service providers and results in greater outsourcing benefits. The other relationships examined have a negligible to no effect.

Furthermore, offshore or outsourcing project success can be understood and measured from an expectations fulfilment view (Lacity & Willcocks, 1998), a cost/benefit approach (Wang E. T., 2002), a psychological contract perspective on fulfilled obligations (Christine Koh & Straub, 2004), and a strategic fit view of success (Lee & Shaila M. Miranda, 2004). These various approaches for determining success are applicable to all types of projects, whether they are outsourced or developed internally. (Erickson & Ranganathan, 2006).

Numerous studies define success as the satisfaction of outcomes, which is sometimes calibrated by initial expectations (Balaji and Ahuja 2005, Grover et al. 1996, Dahlberg and Nyrhinen 2006, Wüllenweber et al. 2008). According to Dahlberg and Nyrhinen (2006), satisfaction with outcomes can be divided into four categories: *strategic, economic, technological and social factors*. Additionally, Dahlberg and Nyrhinen's research incorporates overall satisfaction into their definition of success.

Strategic, economic, technological and social outcome factors may also apply to projects but they are not applicable in all cases. For example one might think of projects that completely lack a specific strategic proposition (Westner M. , 2009). Given that a project is by definition an effort constrained by schedule, budget, functionality, and quality (Erickson & Ranganathan, 2006), it makes more sense to operationalize offshore project success using these dimensional elements in conjunction with "overall satisfaction".

Therefore, Westner (2009) defines offshore project success as perceived satisfaction with the overall result of the offshore project, as well as with the time, budget, functionality, and quality aspects. In two separate studies, Westner developed and researched a model for defining offshore project success. Since his research establishes a solid foundation for understanding the determinants of offshore project success through the combination and application of multiple prior models, his model is used as a reference for this thesis. The following sub-chapter will delve deeper into his research model.

2.3. Determinants of offshore project success

Westner's (2009) primary study identifies five dimensions that affect the success of offshore projects. These dimensions were formed through preliminary research on a variety of articles, as discussed in *paragraph 2.2.* According to this research the following five dimensions are positively associated with offshore project success: *offshoring expertise, trust in offshore service provider, project suitability, knowledge transfer and liaison quality.* He put his model into practice and tested the relationships between those five dimensions and offshore project success in the follow-up research he conducted with Strahringer (2010). As illustrated in *Figure 3*, this resulted in a range of correlations between these dimensions.

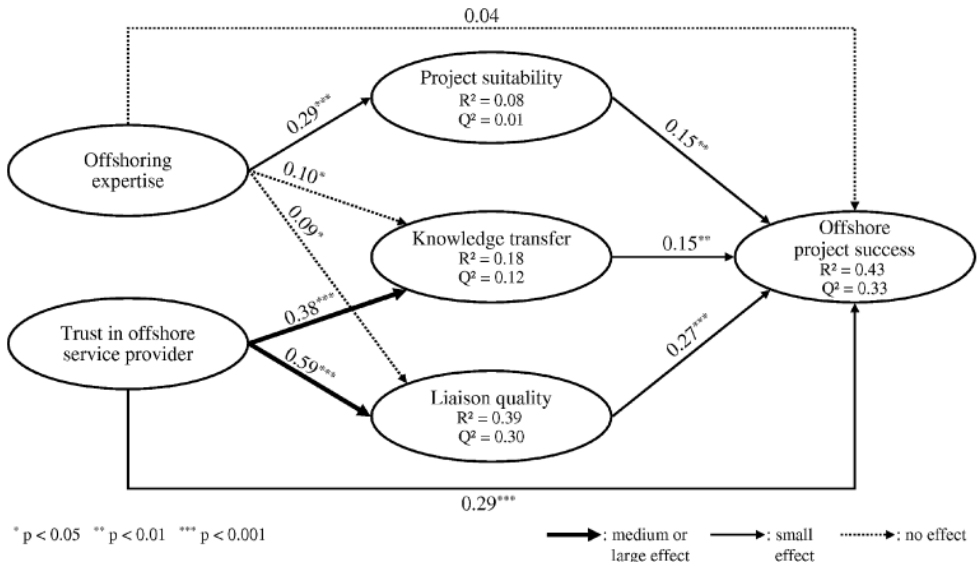

Figure 3: Partial Least Squares (PLS) results for research model (Westner & Strahringer, 2010)

As depicted in *Figure 3*, *offshoring expertise* shows a positive effect on *offshore project success, project suitability, and knowledge transfer*. However, when it comes to *trust*, it has a much greater impact on the related dimensions: *knowledge transfer, liaison quality, and offshore project success*.

2.4. Offshore versus nearshore

According to Hahn et al. (2011), nearshoring is conventionally defined as the relocation of work from the home country to a geographically proximal host country which has a strong economic integration agreement with the home country. On the other hand, offshoring (or farshoring) is defined as the relocation of work from the home country to a non-proximate host country or to one without a strong economic integration agreement with the home country.

Academic research comparing offshore and nearshore outsourcing has emerged in recent years, attributed to the increasing potential for nearshoring of Information Services (IS). From an empirical perspective, Hahn, et al. (2011) say that some firms shore to countries that are very close – geographically, economically and institutionally – while others offshore to more distant and distinct locations. Compared to offshoring, nearshoring provides certain obvious benefits for manufacturing, such as reduced transportation costs and the related ability to capitalize on faster turnaround times in a conventional supply chain involving physical delivery via trucks, rail or ships (Salvador, Forza, & Rungtusanatham, 2002). However, since many services can now be rapidly delivered electronically at very low cost, the traditional advantage of nearshoring—offshoring to locations that are geographically proximate to the home market—appears to be much less salient in the case of services.

From another perspective, nearshore outsourcing of IT software development projects is frequently assumed to result in improved team communication at a higher cost than farshore outsourcing (Looi & Szepan, 2021). The geographic distribution and temporal distance of development sites have a significant impact on quality (Cataldo & Nambiar, 2009). The research of Looi & Szepan (2021) prove this point. According to their research, one of the interviewees reported experiencing decreased efficiency, increased Project Management effort, and increased communication issues after relocating his development team from nearshore to farshore. Thus, it seems the added stress and overhead of temporal distance is an impediment to success. This sentiment was affirmed by other interviewees (Looi & Szepan, 2021).

3. Theoretical Framework

This chapter provides more details on the topic studied by defining what nearshore project success is in *paragraph 3.1.* The subsequent paragraph and sub-paragraphs describe how this is accomplished. *Paragraph 3.2.* presents two models illustrating the five critical success factors for nearshore project success from the buyer/consumer and supplier perspectives. These five success factors, or dimensions, are discussed in greater detail in the following sub-paragraphs.

3.1. Nearshore project success

Unexplored is the approach for determining the success of nearshore projects. As discussed in *paragraph 1.1*, the term "nearshoring" was coined in 2004, making it a relatively new and relatively recent concept. To address this gap, this research identifies the factors that contribute to the success of nearshore projects by building on the work of Westner and Strahringer (2010), who defined the determinants of offshore project success.

Nearshore project success is the dependent construct in the research model. As compared in *paragraph 2.2.* from an offshore perspective it can be measured in many ways, but for this research a similar approach as Westner's preliminary study is used (see *paragraph 2.3.*). So dependent construct, *nearshore project success* is interpreted as the perceived satisfaction with the outcome of the nearshore project in total, including the other sub-dimensions of schedule, budget, functionality and quality.

3.2. Drivers of nearshore project success

The success of nearshore projects is determined through the application of five constructs: two exogenous and three endogenous determinants. *Nearshoring expertise* and *Trust in the NSP* are exogenous determinants, they have an external influence on success. *Project suitability, Knowledge transfer* and *Liaison quality* all have an internal influence on success and are the endogenous determinants. *Figure 4* depicts the research models developed for this study. The model is duplicated because the correlations may be stronger or weaker depending on the perspective: buyer/consumer or supplier.

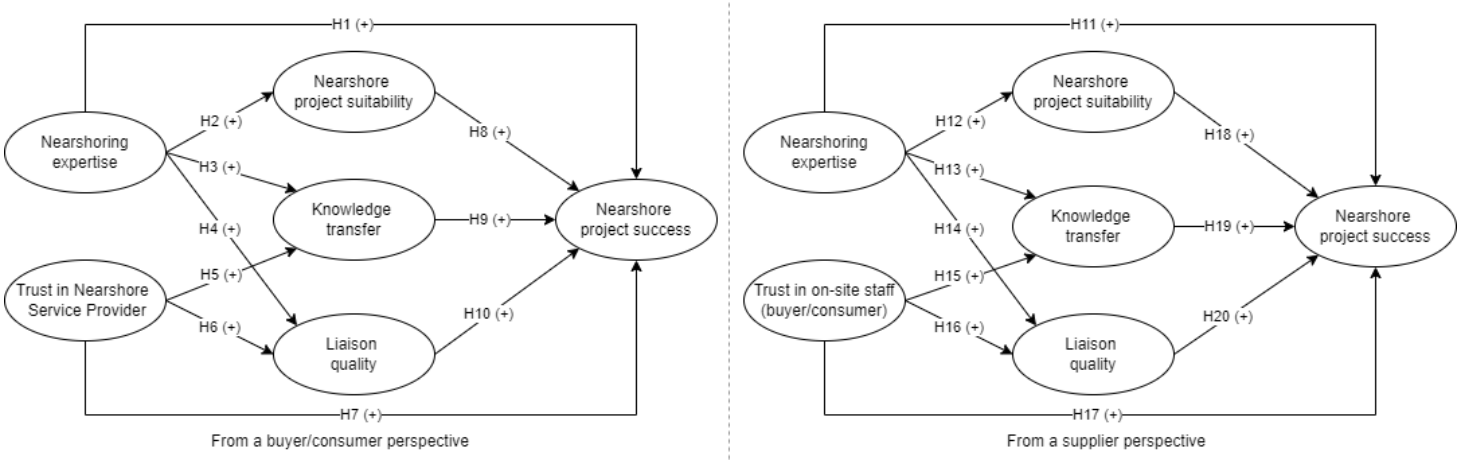

Figure 4: Research models

3.2.1. Nearshoring expertise

Westner defines *expertise* as “a certain degree of individual or organizational experience in managing or conducting offshoring in a more efficient and thus successful manner.” This definition of expertise can also be applied to conducting nearshoring, so the actual definition of *nearshoring expertise* will be: “a certain degree of individual or organizational experience in managing or conducting nearshoring in a more efficient and thus successful manner.” In organizational research this is commonly referred to as “learning curve effects” or “experience curve effects” (Day & Montgomery, 1983) (Ghemawat, 1985).

Delivery in a nearshore environment can introduce numerous challenges for all parties involved. Individuals as well as organizations can benefit from the best practices and experiences gained during previous engagements. As a result, they are better able to deal with nearshore-specific challenges. The beneficial effect of expertise on the diverse activities of the nearshore and offshore process, as well as on its project success, has been extensively researched. Carmel and Agarwal (2002) developed a maturity model for companies engaging in offshoring and give recommendations on how to progress along this maturity curve. This model is also applicable to organizations that engage in nearshoring, since in this study the definition of nearshoring was not introduced yet. In this paper it can be perceived as a subset of offshoring. This also applies to Kaiser and Hawk's (2004) eight-year study of offshore outsourcing alliances. Their study describes the progression of the alliance towards a more favorable co-sourcing model, for the buyer/client as well as the supplier. Similarly, Mirani (2006) demonstrates how increasing expertise results in a shift in the offshoring relationship from relatively straightforward to more complex arrangements.

Increased organizational and individual expertise enables organizations to overcome potential nearshoring challenges and thus increases the likelihood of project success. Thus, expertise benefits all three mediating constructs, as it is more likely that a company will select projects that are best suited for nearshoring based on past experiences. Additionally, the organization and individuals understand how to manage knowledge transfer and enhance the quality of their relationships based on their expertise.

The following hypotheses are formulated for the dimension "nearshoring expertise":

Hypothesis 1 (H1): ITS1 nearshoring expertise is positively and directly associated with nearshore project success from a buyer/consumer perspective.
Hypothesis 2 (H2): ITS nearshoring expertise is positively associated with project suitability from a buyer/consumer perspective.
Hypothesis 3 (H3): ITS nearshoring expertise is positively associated with knowledge transfer from a buyer/consumer perspective.
Hypothesis 4 (H4): ITS nearshoring expertise is positively associated with liaison quality from a buyer/consumer perspective.
Hypothesis 11 (H11): ITS nearshoring expertise is positively and directly associated with nearshore project success from a supplier perspective.
Hypothesis 12 (H12): ITS nearshoring expertise is positively associated with project suitability from a supplier perspective.

1 ITS = Information Technology Services, see *Glossary* for more details

Hypothesis 13 (H13): ITS nearshoring expertise is positively associated with knowledge transfer from a supplier perspective.
Hypothesis 14 (H14): ITS nearshoring expertise is positively associated with liaison quality from a supplier perspective.

3.2.2. Trust

We define trust as the "expectation that an actor (1) will fulfill responsibilities [...], (2) will behave predictably, and (3) will act and bargain fairly in the presence of the prospect of opportunism" (Zaheer, McEvily, & Perrone, 1998). Thus, trust might take on two distinct forms: interpersonal or interorganizational trust. Interpersonal trust is the belief that individuals have in their opposite member. The term "inter-organizational trust" refers to the confidence placed in a partner organization by members of a focal organization (Lee et al. 2008, Zaheer et al. 1998).

Throughout a nearshoring project, trust can be perceived differently depending on the user's perspective. In this study trust is looked at from two different perspectives: Nearshore Service Provider (NSP) and on-site staff. A Nearshore Service Provider is a provider of nearshore services, this could be a supplier and/or an inhouse nearshore location. By on-site staff we mean the receiver of nearshore services, this is the buyer-side and/or on-site inhouse location.

Trust is critical in an IT Services nearshoring environment because it enables and is a prerequisite for not only knowledge transfer but also team cooperation in general. Thus, trust increases an arrangement's maneuverability beyond the terms of the contract. Individuals and organizations that trust one another are more likely to collaborate and make extra effort when necessary (Lee, Huynh, & Hirschheim, 2008).

Although there has been little research on the role of trust in IT Services nearshoring, much can be said from a slightly different perspective. Trust has long been recognized as an important arrangement feature in Information Systems (IS) outsourcing research. Increased trust appears to have a positive impact on the client-vendor relationship (Grover et al. 1996, Lee and Kim 1999, Winkler et al. 2008). Recent empirical studies show that trust is positively related to the extent of knowledge sharing (Lee, Huynh, & Hirschheim, 2008) and that trust, as mediated by cooperative learning, has a significant beneficial effect on knowledge transfer (Park, Im, & Kim, 2011). According to IS offshoring studies, trust is a critical success factor for the contact between the offshore consumer and provider (Jennex & Adelakun, 2003). In a case study, Kaiser and Hawk (2004) confirm this and view the establishment of trust as a recommended practice for effective outsourcing because it allows collaboration between on-and offshore staff. As a result, offshore labor becomes productive quickly, and projects progress more quickly. Winkler et al. (2008) show that while pursuing specific goals, trust has a positive effect on the degree of closeness between an offshore customer and a service provider. Rottman (2008) demonstrates how trust increases employees' willingness to share and contribute, facilitating knowledge transfer within an outsourcing arrangement.

Trust appears to influence knowledge transfer because people who trust one another are more likely to share their knowledge. This is especially true when dealing with implicit, or persistent, knowledge. Furthermore, trust encourages and facilitates cooperation and communication, as well as improves the quality of liaison among team members.

The following hypotheses are formulated for the dimension "Trust in NSP":

Hypothesis 5 (H5): Trust in NSP is positively associated with liaison quality.
Hypothesis 6 (H6): Trust in NSP is positively associated with knowledge transfer.

The following hypotheses are formulated for the dimension "Trust in on-site staff":

Hypothesis 15 (H15): Trust in on-site staff is positively associated with liaison quality.
Hypothesis 16 (H16): Trust in on-site staff is positively associated with knowledge transfer.

Additionally to the indirect effects on nearshoring project success, you could also hypothesize a direct impact. However, due to the model's lack of theoretical support, we proceed with caution regarding its direct influence on model success and subsequent interpretation of results:

Hypothesis 7 (H7): Trust in NSP is positively and directly associated with nearshore project success.
Hypothesis 17 (H17): Trust in on-site staff is positively and directly associated with nearshore project success.

3.2.3. Nearshore project suitability

We define nearshoring suitability as the capacity of a project's features and task characteristics to be delivered in a dispersed, intercultural environment, i.e., in a nearshoring scenario.

Prior to engaging in an ITS nearshoring contract, one of the initial steps is to identify prospective project candidates for nearshoring. Once discovered, these nearshoring possibilities serve as the fundamental items for further ITS nearshoring implementations. As a result of research and practice, identifying prospective project applicants is a critical first step in pursuing an ITS nearshoring endeavor (Aron and Singh 2005, Chua and Pan 2006, Kumar and Palvia 2002).

According to research in IT outsourcing, there is a link between the functions being outsourced and the success of the arrangement (Fisher, Hirscheim, & Jacobs, 2008). They suggest focusing on routine and non-core tasks. From a slightly different perspective to nearshoring, according to Stratman (2008) successful offshoring is typically associated with well-understood, standardized non-core service processes. Stringfellow, Teagarden, and Nie (2008) demonstrate that offshoring complex, loosely defined, and non-standardized tasks requiring complex judgments and implicit knowledge is more difficult. If a project or task exhibits certain qualities, offshoring incurs additional expenditures, which may jeopardize project success.

Westner (2008) conducted a qualitative pre-study with 47 German near- and offshoring experts from various companies to confirm the validity of the correlation between project suitability and project success and to determine the appropriate evaluation criteria. These experts confirmed in their interviews that the characteristics of a project and its suitability for near- and offshoring have a significant impact on the subsequent success of the project. Numerous criteria were mentioned during these interviews, including the size of the project, its duration, the operating language used, the degree of codification, and the business's specificity. When projects are of a certain size and duration, the project language is English, the degree of codification is high, and the degree of business specificity or required domain knowledge is low, it takes less time and effort to fully productively utilize staff on the near-/offshore service provider side.

The following hypothesis is formulated for the dimension "Nearshore project suitability":

Hypothesis 8 (H8): Nearshore project suitability is positively associated with nearshore project success from a buyer/consumer perspective.

Given the fact that the above-mentioned interviews were conducted from the perspective of the buyer, hardly anything can be said from the supplier perspective that is backed up by research. As a result, we proceed cautiously in terms of its impact on model success and subsequent interpretation of results from a supplier standpoint:

Hypothesis 18 (H18): Nearshore project suitability is positively associated with nearshore project success from a supplier perspective.

3.2.4. Knowledge transfer

We define knowledge in accordance with Davenport and Prusak (1998) and Lee, Huynh, and Hirschheim (2008) as "a fluid mix of experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information" (Davenport & Prusak, 1998). Knowledge transfer occurs as a result of (1) systematic knowledge exchange between individuals and organizations (Chua & Pan, 2006) (Wang, Tong, & Koh, 2004) and (2) the ability to absorb, apply, and utilize knowledge in project delivery (Orlikowski, 2002) (Oshri, Kotlarsky, & Willcocks, 2015).

To experience the economic benefits of nearshoring, its employees must effectively replace more expensive on-site employees (Chua & Pan, 2008). As a result, all explicit and implicit knowledge pertinent to the project must be transferred to nearshore staff. This knowledge transfer occurs at the start of a nearshoring project but continues throughout the duration of the project. Similarly, industry-accepted and research-proposed nearshoring process models recognize knowledge transfer as a distinct activity (Bugajska 2007, Oshri et al. 2015, Voigt, Novak and Schwabe 2007).

Applying this perspective highlights the critical nature of knowledge transfer, which has been addressed in research. In these studies, the term "offshoring" refers to the process of offshoring to any location abroad, including nearshore locations. Chua and Pan (2008) analyze how a financial institution transferred knowledge inside a captive offshoring arrangement and emphasize the critical nature of knowledge transfer for successful service delivery in a case study. Another case study, from the service provider perspective, by Oshri et al. (2015) examines best practices for managing dispersed knowledge across on- and offshore sites, recognizing that knowledge transfer is a critical component of successful offshoring. Ganesh and Moitra (2004) previously identified knowledge transfer and the OSP's absorbent capacity as critical success factors for effective service transition in the context of business process outsourcing. Rottman and Lacity (2008) identify optimal practices for successful offshoring of IT work. The majority of these best practices are inextricably tied to facilitating and ensuring the smooth transfer of information. Lastly, in one of the few recent empirical-confirmatory studies, Lee et al. (2008) study IT outsourcing arrangements between Korean enterprises and discover considerable support for the hypothesis that knowledge sharing is associated with outsourcing success.

Thus, if knowledge transfer is successful, (1) nearshore staff is more productive because they have the necessary know-how to complete project tasks, and (2) on-site staff may be replaced as originally planned because they no longer possess exclusive knowledge.

The following hypotheses are formulated for the dimension "Knowledge transfer":

Hypothesis 9 (H9): Knowledge transfer is positively associated with nearshore project success from a buyer/consumer perspective.
Hypothesis 19 (H19): Knowledge transfer is positively associated with nearshore project success from a supplier perspective.

3.2.5. Liaison quality

We define liaison quality as the degree of connectivity between on-site and NSP staff with the objective of achieving specified goals, in this case, the project objectives (Winkler, Dibbern, & Heinzl, 2008). The relationship between staff members should be mutually beneficial and incorporate closeness (Xu & Yao, 2006).

Erickson and Ranganathan (2006) emphasize the importance of clearly defined roles, responsibilities, communication mechanisms, and mechanisms for resolving conflict in managing global virtual teams. Rottman (2008) recognizes the importance of liaison quality to success and recommends developing personal connections between supplier and consumer staff, such as through regular site visits and face-to-face meetings. Additionally, he proposes integrating near- and offshore staff with on-site staff and coordinating employee training with internal training efforts. Similarly, Heeks et al. (2001) discover that a high degree of congruence between supplier and consumer increases the likelihood of a project's schedule and budget success. They suggest building bridging relationships between involved team members and utilizing "straddlers," or dedicated individuals who are in charge of facilitating and moderating interactions between on-site and near-/offshore staff. Levina and Vaast (2008) state that the quality of the liaison mitigates the negative effects of distance, thereby improving performance. They identify effective on-site middle managers, frequent communication, constructive communication, and efficient technology use as practices that can help improve the liaison quality. Other research confirms these findings, highlighting the positive effect of liaison quality on the performance of liaison engineers and personal relationships (Kobitzsch, Rombach, & Feldmann, 2001), the facilitation of informal communication (Herbsleb & Mockus, 2003), the presence of expert intermediaries, and supplier presence on-site (Carmel & Nicholson, 2005).

Attaining acceptable levels of liaison in a nearshore or offshore project setting appears to be difficult due to the detrimental effects of cultural and physical distance. However, liaison between on-site and nearshore staff is vital for collaboration, working efficiency, and productivity.

The following hypotheses are formulated for the dimension "Liaison quality":

Hypothesis 10 (H10): Liaison quality is positively associated with nearshore project success from a buyer/consumer perspective.
Hypothesis 20 (H20): Liaison quality is positively associated with nearshore project success from a supplier perspective.

4. Methodology

This chapter explains how the research question will be answered. It starts in *paragraph 4.1* by presenting the research question, the research method chosen, and the reasoning for that choice. The Unit of Analysis is then introduced in *paragraph 4.2.* This is the group of people being studied. Finally, in *paragraph 4.3*, the research survey is expanded upon by detailing its contents and demonstrating how the survey is distributed in order to collect responses.

4.1. Research Method

Data can be gathered in one of two ways: quantitative or qualitative research. The method used should be in line with the conceptual framework and its propositions (Hak, 2011). As stated in *paragraph 1.5*, this study will answer one research question. This study examines five critical success factors for nearshore projects from the perspective of both the supplier and the client. Accordingly, the following research question (RQ) is formulated:

What are dimensions that have an impact on the success of nearshoring projects?

To address these questions and to aid in nearshoring decision-making, a confirmatory-quantitative research approach is used. Additionally, a research model that incorporates these nearshoring success factors is used to validate and visualize the correlations between all dimensions of nearshoring project success. The model's hypotheses are tested quantitatively, and the results are presented in the following chapters. To collect pertinent data, a quantitative research survey is conducted. By conducting a survey, it is possible to collect data on all dimensions presented in the research model (see *paragraph 3.2.*) in a consistent manner. The study is quantitative in nature, allowing the findings to be generalized to the general population. Surveys are commonly used in this type of research, as demonstrated by Chow and Cao (2008).

4.2. Unit of Analysis

Each study has a distinct target audience, also known as the unit of analysis. The study's unit of analysis is the group of people/organizations being analyzed (Cohen, Manion, & Morrison, 2000). It is crucial to keep this group in mind, as well as its limitations, prior to or during the survey's development. The unit of analysis in this study is divided into two categories: (1) individuals who have engaged in at least one (nearly) finalized IT Services nearshore transition project as a receiver of nearshore services and (2) individuals who have engaged in at least one (nearly) finalized IT Services nearshore transition project as a provider of nearshore services. Two questions were asked during the first part of the survey to verify the respondents' suitability.

4.3. Survey

The survey was designed in a structured manner using the Survey Design Overview steps (Verhoeven, 2019) and the tool Qualtrics. We were able to create a concise survey for respondents and later for data analysis by following the iterative steps shown in *Figure 5*. The two major parts of the survey that were created can be described as (1) the demographical data used for descriptive statistics and (2) the data used for inferential statistics.

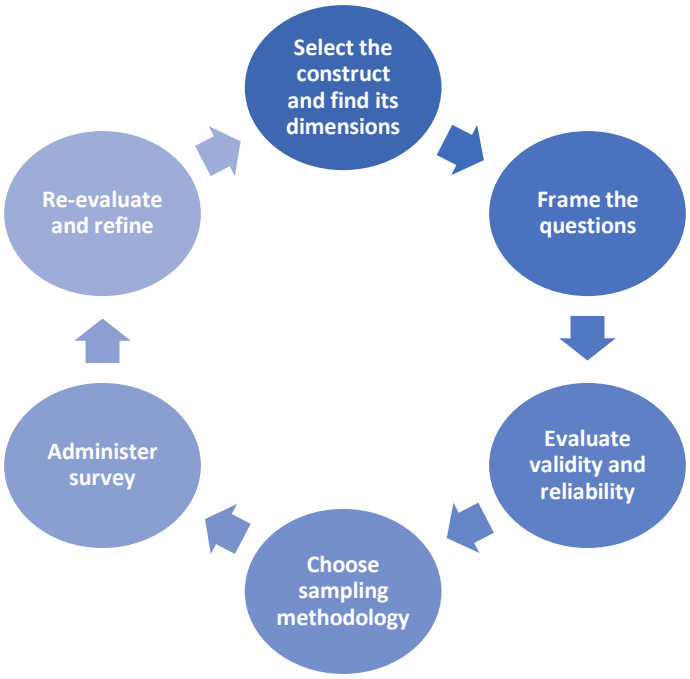

Figure 5: Design Survey Overview (Verhoeven, 2019)

The survey's general overview was created by starting with the step "Select the construct and find its dimensions." Subsequent, the following steps were taken to frame, evaluate, and refine these questions and response options. Additionally, reviewing other research surveys facilitated in the development of a strong questionnaire. Mainly two references were used during the survey development. A prior study by Westner (2010) was used in creating reliable survey statements. The results including references is shown in *Appendix A*. Westner's (2010) study was also used for the creation of several descriptive questions. Additional descriptive questions were created with assistance with another survey: "State of Agile in Procurement & Supply 2022" by Christina Reet[2] (2022).

4.3.1. Survey Design

The survey consists of four sections: Introduction, Demographics, Statements and Final thoughts. Each of these parts will be explained in this paragraph and the full survey can be found in *Appendix B*.

4.3.1.1. Survey Design – Introduction

The first section is the landing page. This page is kept brief and concise to prevent the participant from abandoning the survey due to having to read too much text. The research topic is introduced first, followed by the survey expectations, which include the duration of the survey, its anonymity, and the use of results. The page concludes with a listing of the researchers' names and titles.

4.3.1.2. Survey Design – Demographics

The second section of the survey is dedicated to gathering demographic information. This will help to support the research findings by providing more context on the types of survey respondents. The

2 Christina Reet works for the organization Agile Business Consortium, member of Professional Associations Research Network (PARN)

first part of this section asks respondents questions about their organization's size, industry, and years of experience in near-/offshoring, followed by two verification questions about the respondent's suitability for the survey. The second section delves deeper into the respondent's most recent IT Services nearshore transition project, asking 9 to 11 questions about his or her experience. The number of questions varies according to the type of respondent. If the respondent is a recipient of nearshoring services, two questions are asked about the respondent's intention(s) and reason(s) for nearshoring. Additionally, this question decides how the statements are presented to the respondent.

4.3.1.3. Survey Design – Statements

The third section of the survey is about the five determinants of nearshoring project success as elaborated on in *Chapter 3*. Depending on which side the respondent represents (receiver or supplier of nearshore services), this section will be presented accordingly. Experiences of receivers could differ from suppliers, which makes it important to analyze the results of these determinants separately from one other. This section consists of six topics related to nearshoring success: *Nearshoring expertise*, *Trust in NSP* or *on-site staff*, *Project suitability*, *Knowledge transfer*, *Liaison quality* and *Nearshore project success*. The model's dimensions were latent, which meant they couldn't be measured directly. As a result, we developed a set of measurement indicators to operationalize each construct, reusing or adapting existing indicators from previous studies as needed. All constructs were measured reflectively and are based on Westner and Strahringer's research (2010). An overview of the measurement statements is presented in *Appendix A*. We used a 7-point Likert scale to assess each statement. These interval measures varied from 1 (*completely disagree, not important, or not satisfied at all*) to 7 (*completely agree, very important, or very satisfied*).

4.3.1.4. Survey Design – Final thoughts

This final section of the survey asks for additional feedback on the survey/research in general. Responses to this (optional) question could be used to verify the survey's consistency, identify possible missing pieces, and identify interesting items for future works. In addition, if respondents want to receive the research findings, they can leave their email address on this page.

4.3.2. Survey Distribution

The survey is conducted in co-operation with Aegon GTS, an in-house Global Technology Service Center of Aegon, located in Budapest. This enables a substantial network of relevant individuals to participate in this study. Besides that, other sources are also used to distribute the survey and collect a large number of responses. Relevant LinkedIn groups, connections and other people on LinkedIn with experience in nearshoring projects are contacted to gather responses. Finally, responses are collected via mailing and personal (virtual) contact using Microsoft Teams and LinkedIn.

The survey was distributed exclusively in English and utilized a variety of self-created textual and banner templates. It was available for a period of 6 weeks, starting February 21st and ending April 1st 2022.

5. Data and descriptive results

In this chapter we present the demographics and descriptive results that describe the context of the dataset that will be further analyzed in *Chapter 6*. In *paragraph 5.1.* we describe how the data is collected, including the amount of responses and sample size. Furthermore, in *paragraph 5.2.* the sample characteristics are presented by showing tables, graphs and diagrams of the data collected.

5.1. Data and Sample size

The survey was developed for a very specific audience. Despite this, the various methods of distribution, particularly the personal contact approach, yielded a large number of survey respondents. For personal targeting on LinkedIn, 625 global individuals were messaged, and 15 nearshoring experts were contacted via MS Teams. In addition, for six consecutive weeks, a public post was published in seven relevant LinkedIn groups. All responses were anonymous, making it impossible to determine where they originated from. Including all distribution methods, 145 respondents started taking the survey, for an approximate response rate of 23%. After cleaning the data, 92 valid responses remained, resulting in a completion rate of 63%. Data cleaning was conducted by removing invalid responses based on the following criteria: incomplete survey response, answered "no" to both Q4 and Q5, and/or illogical on-site to nearshore combination (distance considered offshore instead of nearshore) (see *Appendix B*). In the analysis, 92 responses represent the final sample size. The data was exported from the Qualtrics environment into Excel. Excel and JASP, a statistical analysis tool, were used for additional analysis and modeling. Due to the nature of this survey, no information regarding non-respondents is available; therefore, non-response bias cannot be determined in this context.

5.2. Sample characteristics

For the descriptive analysis, in many cases the results are divided into two groups: buyer and supplier side. This separation is important, because it is estimated that depending on the perspective, the influence on nearshoring project success can be very different. So the answer to the hypotheses and research question can be much different based on the perspective.

Perspective	Frequency	Percent
Buyer-side / On-site inhouse	35	38%
Supplier-side / Inhouse nearshore location	57	62%
Total	92	100%

Table 3: Amount of Buyer- and Supplier-side respondents

As seen in *Table 3,* 38% of respondents to the survey have responded from the Buyer-side / On-site inhouse (receiver of nearshoring services). The other 62% has responded from the Supplier-side / Inhouse nearshore location (provider of nearshoring services).

5.2.1. Organization size

Study participants came from various organization sizes. The organization sizes listed are based on the 'company sizes' listed in Westner & Strahringer's quantitative research (2010). The majority (42%) came from small organizations (<1.001 employees). As seen in *Table 4,* 19% of the responses is from mid-size organizations (1.001 to 5.000 employees), 23% from large organizations (5.001 to 25.000 organizations) and 16% from very large organizations (>25.000 employees).

Organization size	Total count	Buyer-side count	Supplier-side count
<1.001 employees	39 (42%)	11 (32%)	28 (49%)
1.001 to 5.000 employees	17 (19%)	5 (14%)	12 (21%)
5.001 to 25.000 employees	21 (23%)	13 (37%)	8 (14%)
>25.000 employees	15 (16%)	6 (17%)	9 (16%)

Table 4: Count of responses by organization size

5.2.2. Industry type

As for the industry, respondents came from numerous different industries. The industries listed are based on the industries listed in Westner & Strahringer's quantitative research (2010). The majority of responses came from three industries: Information Technology (49%), Banking & Insurance (15%) and Consulting (11%). Other industries participants came from were Telecommunications (7%), Manufacturing (3%), Transportation (2%) and other industries that were only mentioned once as shown in *Figure 6*.

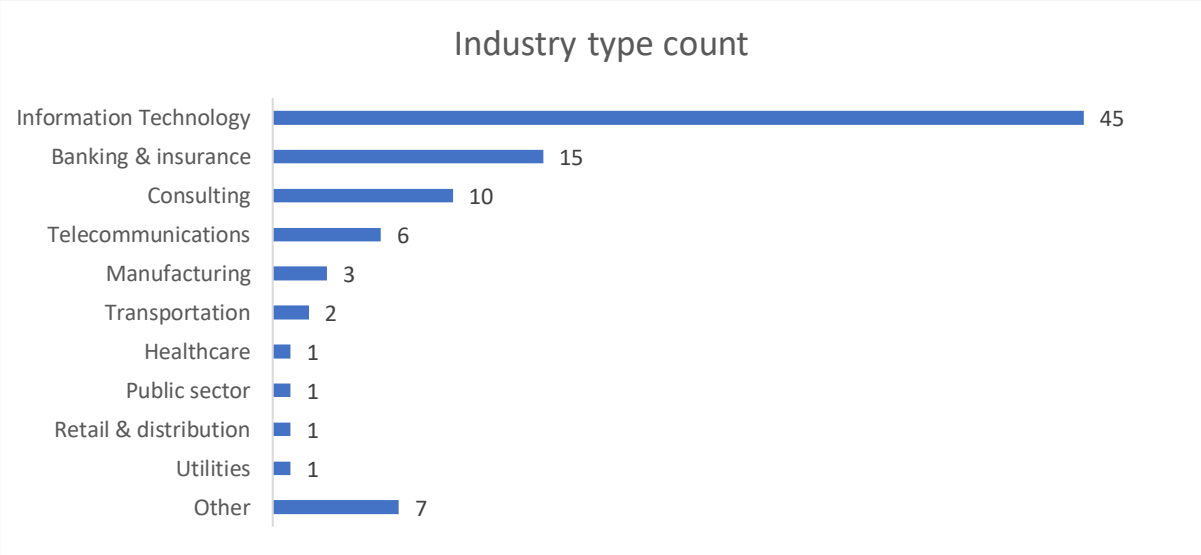

Figure 6: Industry types

5.2.3. Experience in off-/nearshoring

Most respondents have 3 or more years in off-/nearshoring. In total, 4% of the respondents had less than 1 year of experience in off-/nearshoring and 6% of the respondents had 1 to 2 years of experience. As shown in *Table 5*, 27% has 3 to 5 years, 22% has 6 to 9 years and 41% has more than 10 years of off-/nearshoring experience. If you separate the respondent's perspectives (buyer-supplier) you can see that most buyer-side respondents (40%) have 3 to 5 years of experience and most supplier-side respondents (53%) have more than 10 years of experience. This makes sense, because if you represent the supplier-side you need to have more experience in order to provide good off-/nearshoring services for your receivers. As a buyer it is understandable to have less experience in this field and that is also why you move your services towards an off-/nearshore location.

Experience in off-/nearshoring	Total count	Buyer-side count	Supplier-side count
<1 year	4 (4%)	2 (5%)	2 (4%)
1 to 2 years	5 (6%)	2 (6%)	3 (5%)
3 to 5 years	25 (27%)	14 (40%)	11 (19%)
6 to 9 years	20 (22%)	9 (26%)	11 (19%)
>10 years	38 (41%)	8 (23%)	30 (53%)

Table 5: Count of responses by Experience in off-/nearshoring

5.2.4. Nearshore transition projects

After the general characteristics of the respondent, more specific questions about the nearshoring project were asked to get more data on the type of nearshoring projects that are related to this sample.

5.2.4.1. On-site country

Retrieving more project-related data started by asking for the on-site country. Nearshoring project experiences from all over Europe and America were shared. Five countries were mentioned most of the time: Germany (24%), Netherlands (16%), United States of America (13%), United Kingdom (10%) and Switzerland (9%). *Figure 7* shows all on-site countries that are involved and the amount of responses. In *Appendix C* you can see a heatmap of how the countries are globally distributed. In this map you can easily see that on-site countries mainly reside in North America and Western Europe.

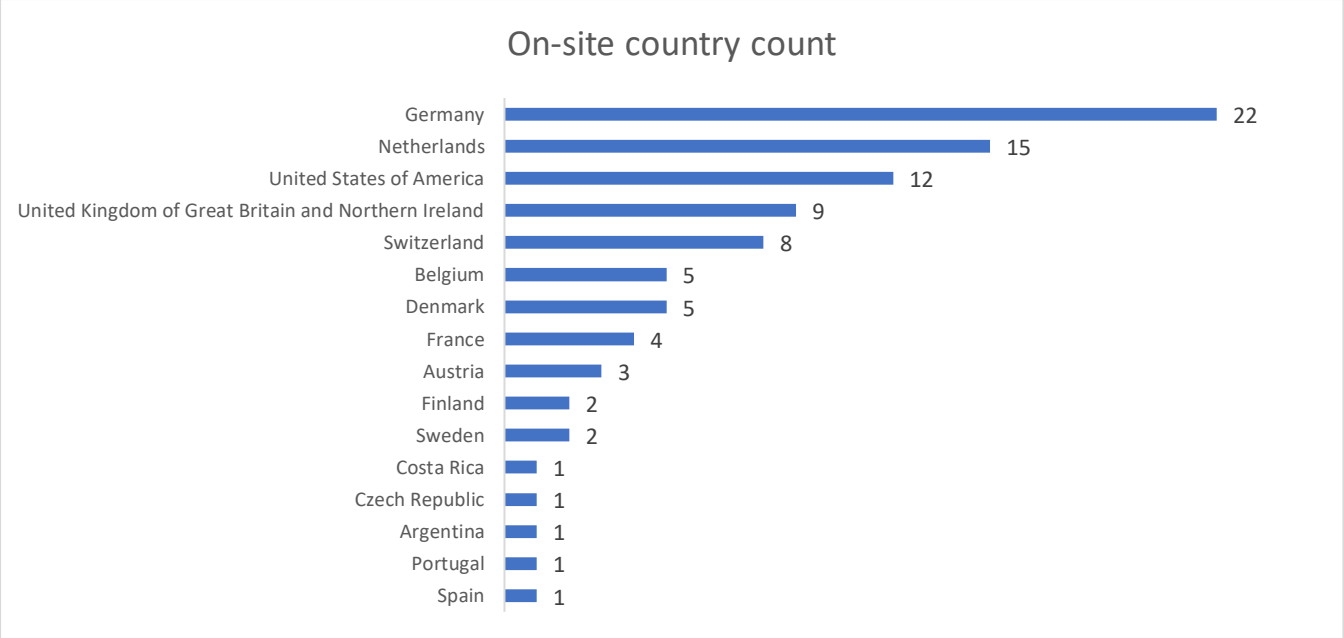

Figure 7: Count of responses by On-site country

5.2.4.2. Nearshore country

A lot of different Nearshore countries that are related to this research sample were mentioned. The majority of responses came from five countries: Poland (16%), Hungary (13%), Portugal (9%), Romania (9%) and Bulgaria (8%). *Figure 8* shows all Nearshore countries that are involved and the amount of responses. In *Appendix D* you can see a heatmap of how the countries are globally distributed. In this map you can easily see that on-site countries mainly reside in South & East Europe, North Africa and Latin & South America.

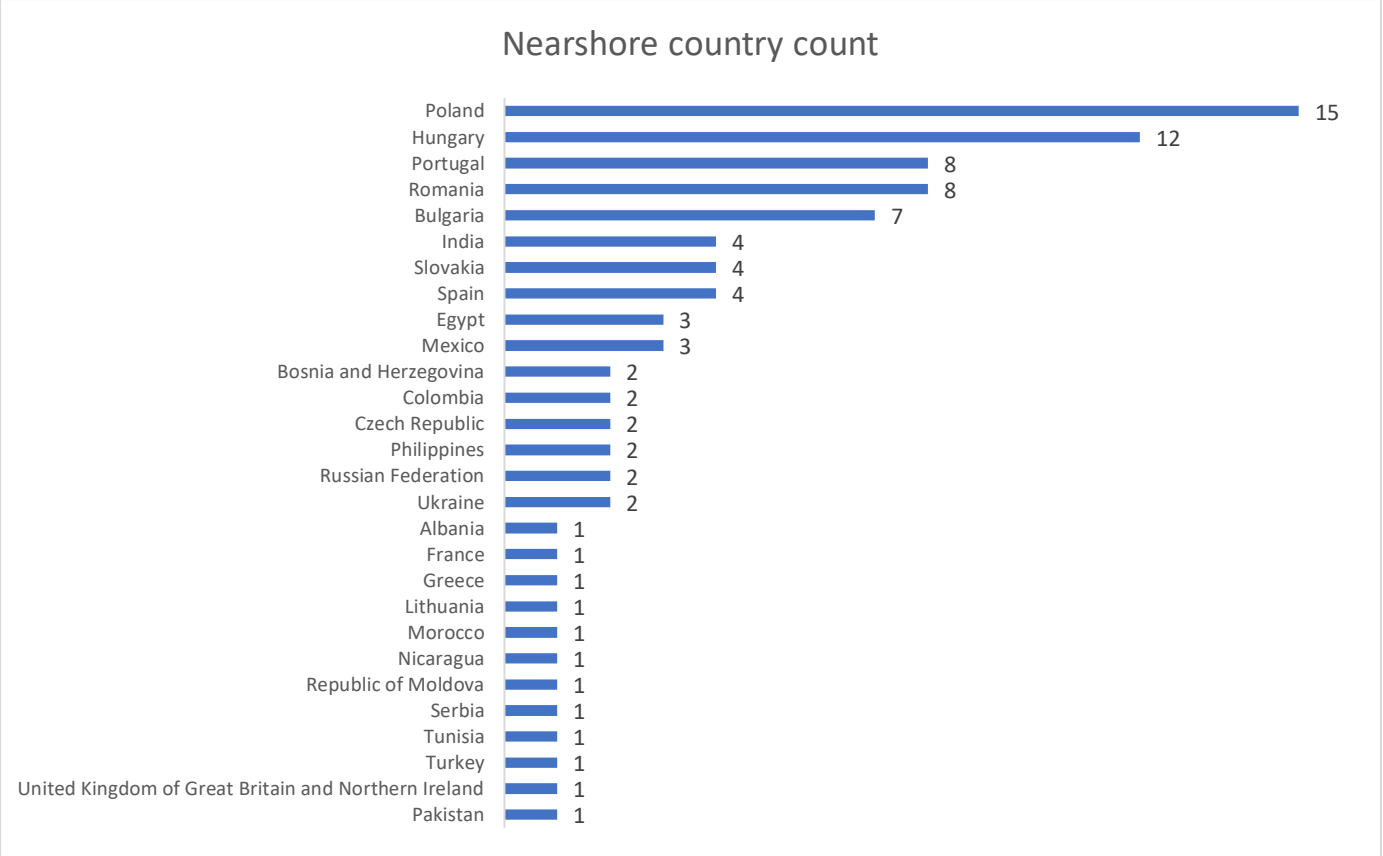

Figure 8: Count of responses by Nearshore country

5.2.4.3. Year of project finish

Based on the responses, most nearshore transition projects, finished between 2017 and 2023. This is shown in *Figure 9* and will be called the 'peak zone'. This indicates that recent projects are used for this study. You can also see that the responses range from 2007 to 2030, but only with a maximum of 3 responses outside of this 'peak zone'. Projects after 2022 are expected to finish in the years mentioned, so they are still in-progress.

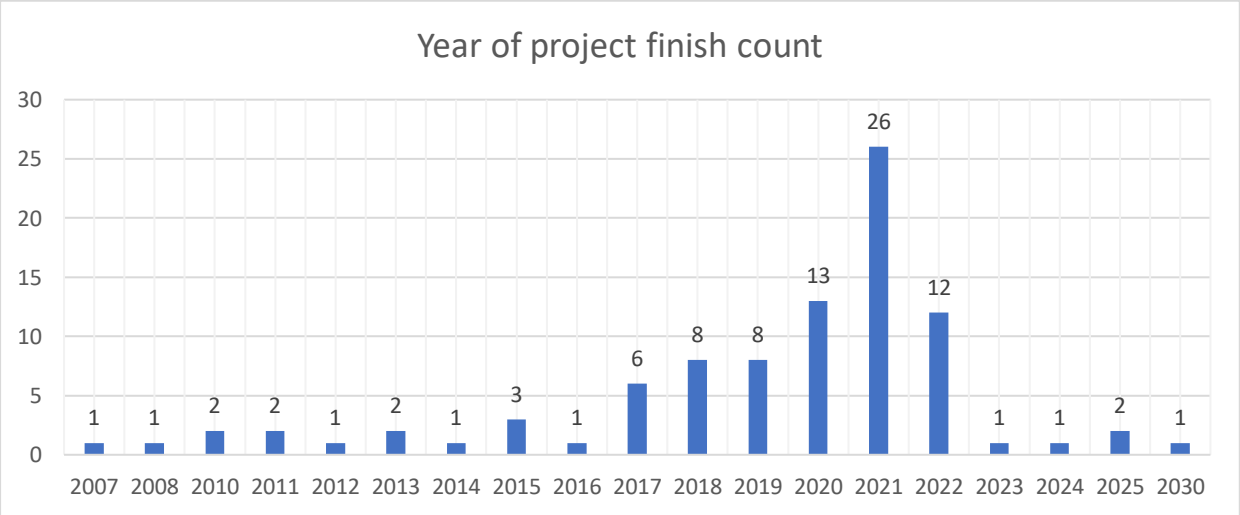

Figure 9: Count of responses by year of project finish

5.2.4.4. Project roles

Next to the year the project finished, the role of the respondent is also identified. These various roles are based on the survey "State of Agile in Procurement & Supply 2022" by Christina Reet (2022). As illustrated in *Table 6*, respondents mainly adapted nearshoring project roles as: Leadership / Management / Board of Directors or similar (31%), IT / Technical / Developer (24%) and Business Unit Management (13%). Other roles mentioned were Project Management (13%), Contract / Commercial Management (5%) and Procurement / Supply Management (5%). The other 13% adapted roles that were later specified, but these roles were only mentioned once. As you also can see in *Table 6*, the roles as Business Unit Management and Contract / Commercial Management were mainly taken from the Supplier-side.

Project roles	Total count	Buyer-side count	Supplier-side count
Leadership / Management / Board of Directors or similar	28 (31%)	12 (34%)	16 (28%)
IT / Technical / Developer	22 (24%)	10 (29%)	12 (21%)
Business Unit Management	12 (13%)	2 (6%)	10 (18%)
Project Management	8 (9%)	5 (14%)	3 (5%)
Contract / Commercial Management	5 (5%)	0 (0%)	5 (9%)
Procurement / Supply Management	5 (5%)	3 (8,5%)	2 (3%)
Other	12 (13%)	3 (8,5%)	9 (16%)

Table 6: Count of responses by project role

5.2.4.5. Sourcing types

Next up the respondents were asked if the buyer/supplier relationship is kept in-house (captive) or distributed to a third party (outsourcing). Based on the whole sample, most respondents have a third party (outsourcing) relationship between the buyer and supplier, but as you can see in *Table 7*, from a buyer perspective most respondents have an in-house (captive) relationship with their provider of IT Services.

Sourcing type	Total count	Buyer-side count	Supplier-side count
Third party (outsourcing)	36 (63%)	12 (34%)	36 (63%)
In-house (captive)	21 (37%)	23 (66%)	21 (37%)

Table 7: Count of responses by sourcing type

5.2.4.6. IT Services types

Also the type(s) of IT Services that are nearshored in these projects were identified. These IT Services types listed are based on the survey "State of Agile in Procurement & Supply 2022" by Christina Reet (2022) and interviews with nearshoring experts. The three major nearshored IT Services are: Application services (30%), Systems operations (17%) and End-user support (15%). The other types of IT Services are: Administrative services (10%), Networks / telecommunications management (6%), System planning & management (6%) and Procurement services (3%). The remaining 13% was considered as miscellaneous types of IT Services (identified as 'other' in *Figure 10*).

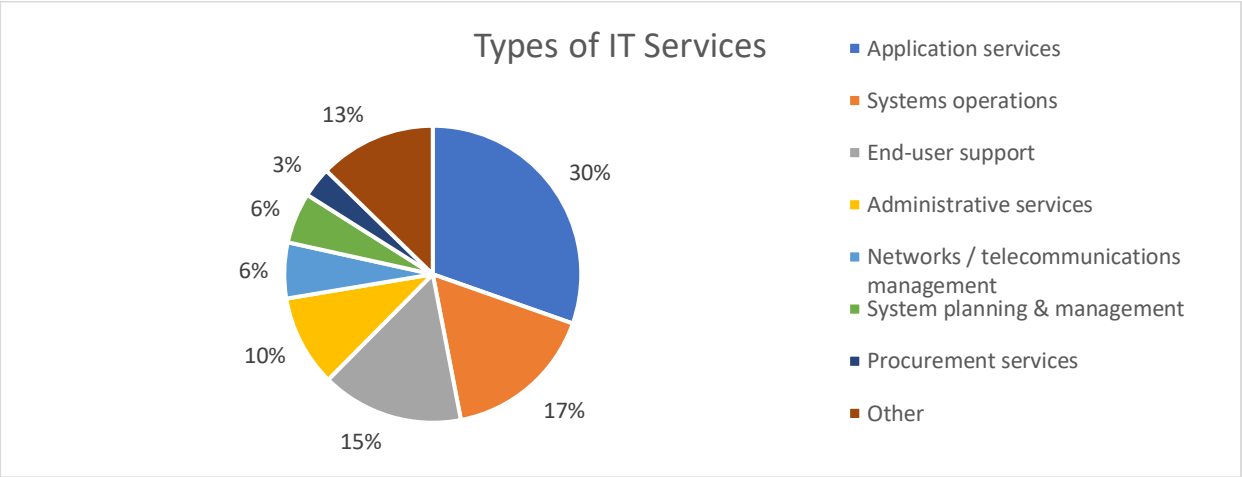

Figure 10: Types of IT Services

5.2.4.7. Project/Product Management Methods

Throughout the nearshore transition projects different Project/Product Management (PM) Methods were used. As shown in *Figure 11,* most respondents (58%) used Agile Project/Product Management (e.g. Scrum, Kanban, etc.) as their PM Method. Only 19% used Traditional Project Management (e.g. PRINCE2, PMBoK, etc.) and 15% used both or a combination, such as PRINCE2 Agile, as their PM Method. Lastly, the leftover 8% didn't use any PM Method during the transition.

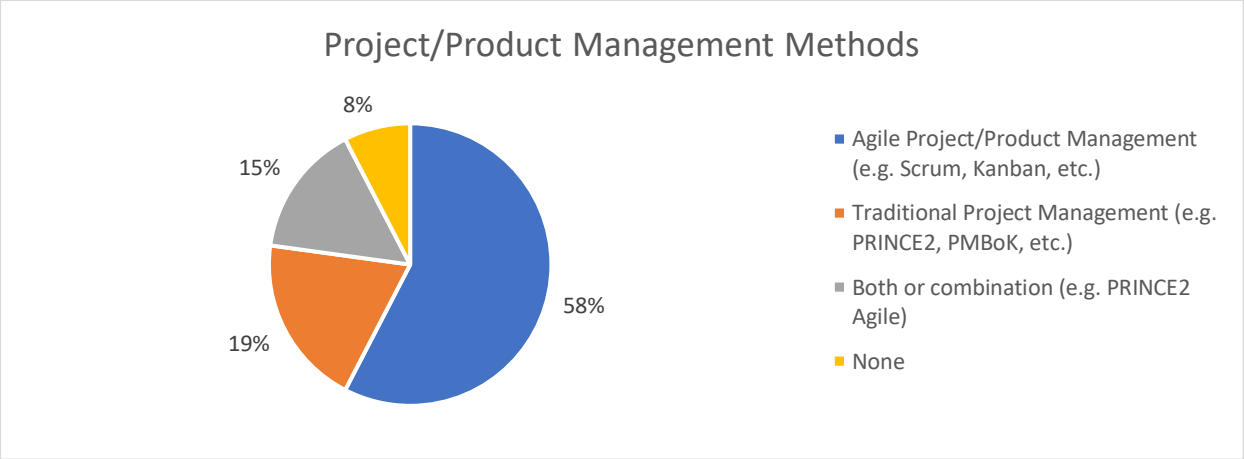

Figure 11: Project/Product Management Methods

5.2.4.8. Sourcing model options

For collecting data about the sourcing models, this dimension and the corresponding options in Fouad et al. (2021) their research were used. Sourcing model can be defined as the level of team governance and responsibility distribution between client and vendor. Additionally, one more option was added (Managed Delivery), which resulted in the following four options:

- Managed Service
  - When a vendor takes complete end-to-end responsibility
- Project execution and delivery/Managed Delivery
  - When a vendor takes execution responsibility for the project and its staff
- Managed Capacity

    - The client requests a certain quantity of person-days who are partially managed by the vendor
- Staff Augmentation/Unmanaged Capacity
    - When individuals are sourced without steering from vendor's side (nearshore location)

The results of this survey questions were quite balanced as shown in *Figure 12*.

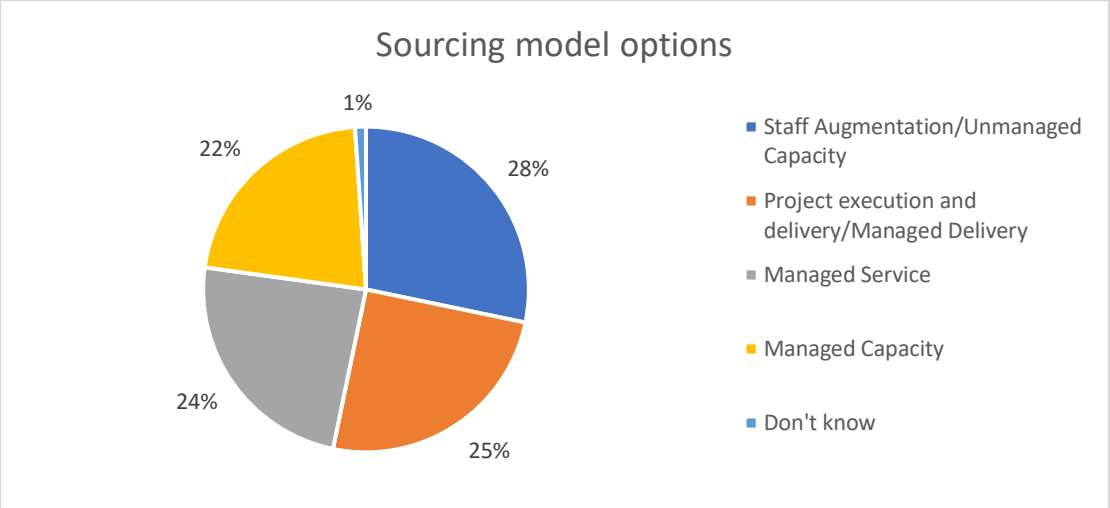

Figure 12: Sourcing model options

5.2.4.9. Nearshoring intentions

By nearshoring intentions, we mean the reason(s) to shift work to a nearshore location. These various intentions for nearshoring are based on the survey "State of Agile in Procurement & Supply 2022" by Christina Reet (2022) and interviews with nearshoring experts. Based on the sample data, the main reason was to reduce costs (33%), as shown in *Figure 13*. Also more access to skills/capabilities (21%) was a key factor in shifting work to a nearshore location. Other intentions were: Limited capacity or capacity shortage (11%), Focus on core capabilities (8%), Risk reduction (7%), Improvement of service quality (6%), Innovation (6%), business alignment improvement (4%), Complexity reduction (2%), Stakeholder management improvement (1%) and Team morale improvement (1%).

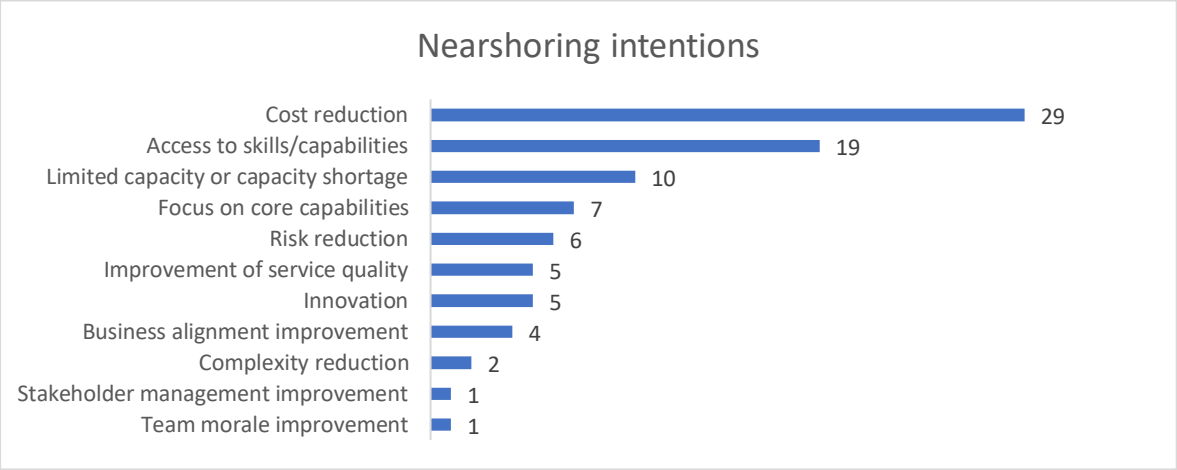

Figure 13: Nearshoring intentions

5.2.4.10. Nearshoring reasons

By nearshoring reasons, we mean the reasons to shift work to a specific geographical location. These various reasons for nearshoring are based on the survey "State of Agile in Procurement & Supply 2022" by Christina Reet (2022) and interviews with nearshoring experts. Based on the sample data, the three main reasons were more Access to skills/capabilities (27%), having Similar timezones (22%) and having a good or better Cultural understanding (17%). Other reasons were: Common language (9%), (Geo-)political stability (8%), Risk reduction (6%), Company politics (2%) and Cost reduction (2%). The remaining 7% was considered as miscellaneous reasons for nearshoring to a specific geographical location (identified as 'other' in *Figure 14*).

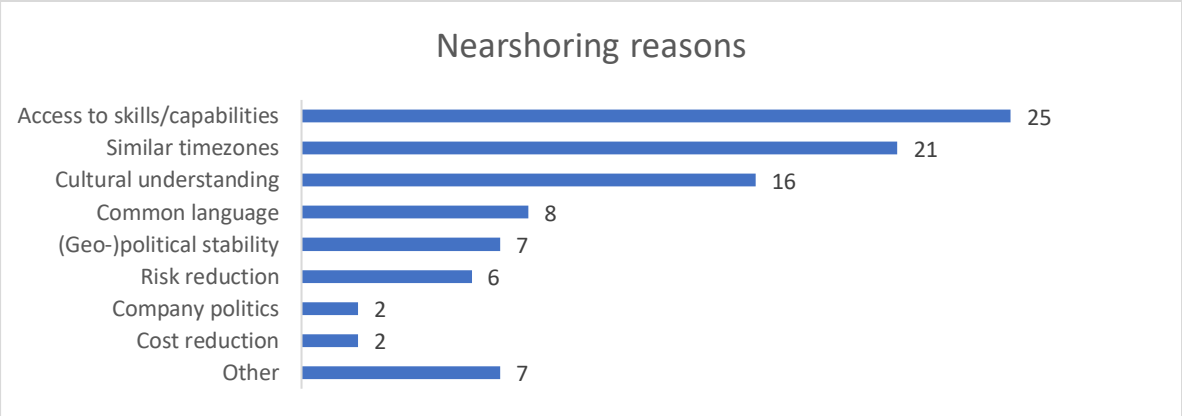

Figure 14: Nearshoring reasons

5.2.5. Survey statements results

The *Nearshore project success* dimension was measured by a 1-7 Likert Scale on satisfaction level. Out of the 92 survey responses, 64 were considered successful. We decided if a project was successful by only selecting results with a *nearshore project success* score of at least "slightly satisfied". *Figure 15* illustrates the level of satisfaction for these successful nearshoring projects. To see the definition of the indicators (such as SUCCESS_1), see *Appendix A*.

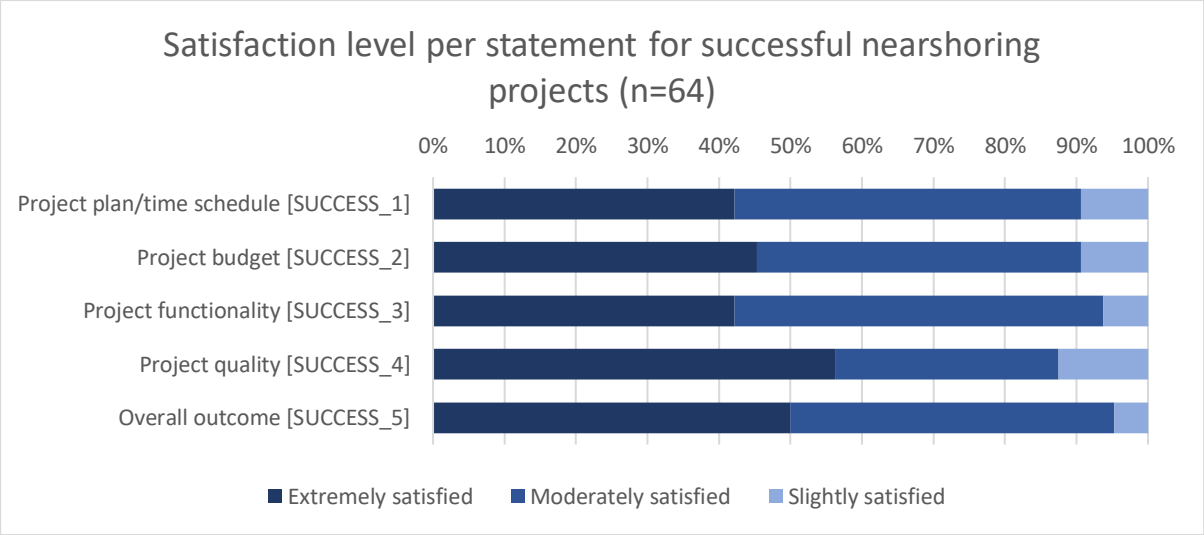

Figure 15: Satisfaction level per statement for successful nearshoring projects (n=64)

From these 64 successful projects, the Agreeableness level is measured for each statement. The results are presented in *Figure 16*. These statements were measured with a 1-7 Likert scale, ranging from “Strongly agree” to “Strongly disagree”. For a full description of the statements, see *Appendix A*.

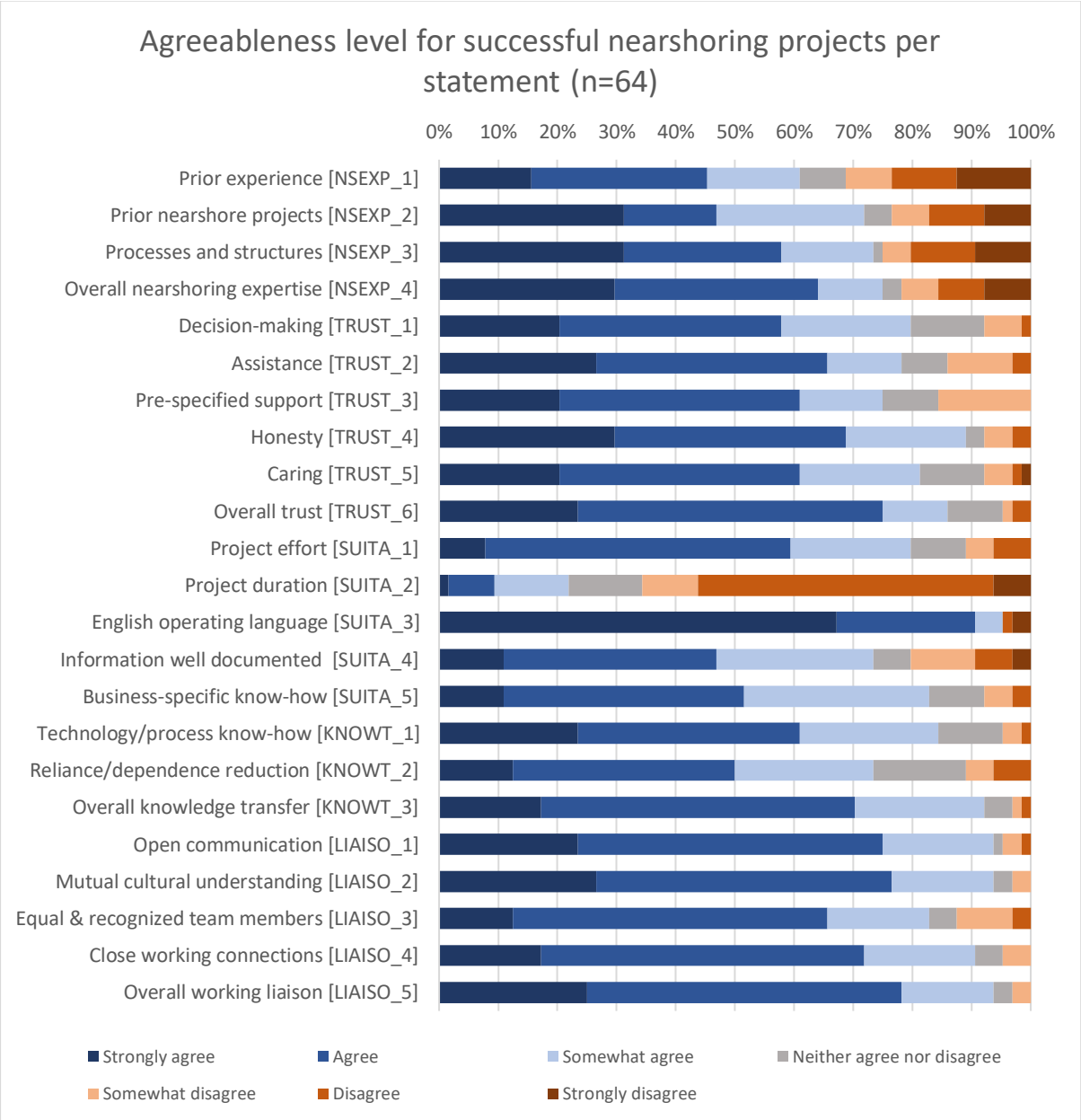

Figure 16: Agreeableness level per statement for successful nearshoring projects (n=64)

In addition, we illustrate the results of the most successful nearshoring projects. These projects are filtered by selecting only those with an "extremely satisfied" response to the last survey statement (SUCCESS 5): "How satisfied was your organization with the overall outcome of our nearshore arrangement?" 32 of the 64 registered nearshoring projects were considered to be most successful. *Figure 17* illustrates the level of satisfaction for these most successful nearshoring projects. To see a full definition of the indicators, visit *Appendix A.*

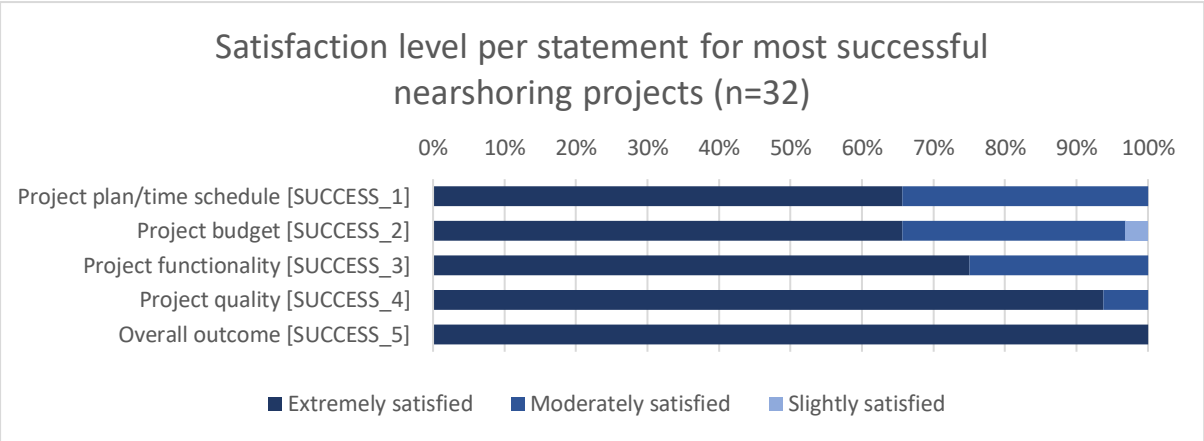

Figure 17: Satisfaction level per statement for successful nearshoring projects (n=32)

From these 32 most successful projects, the Agreeableness level is measured for each statement. The results are presented in *Figure 18*. These statements were measured with a 1-7 Likert scale, ranging from "Strongly agree" to "Strongly disagree".

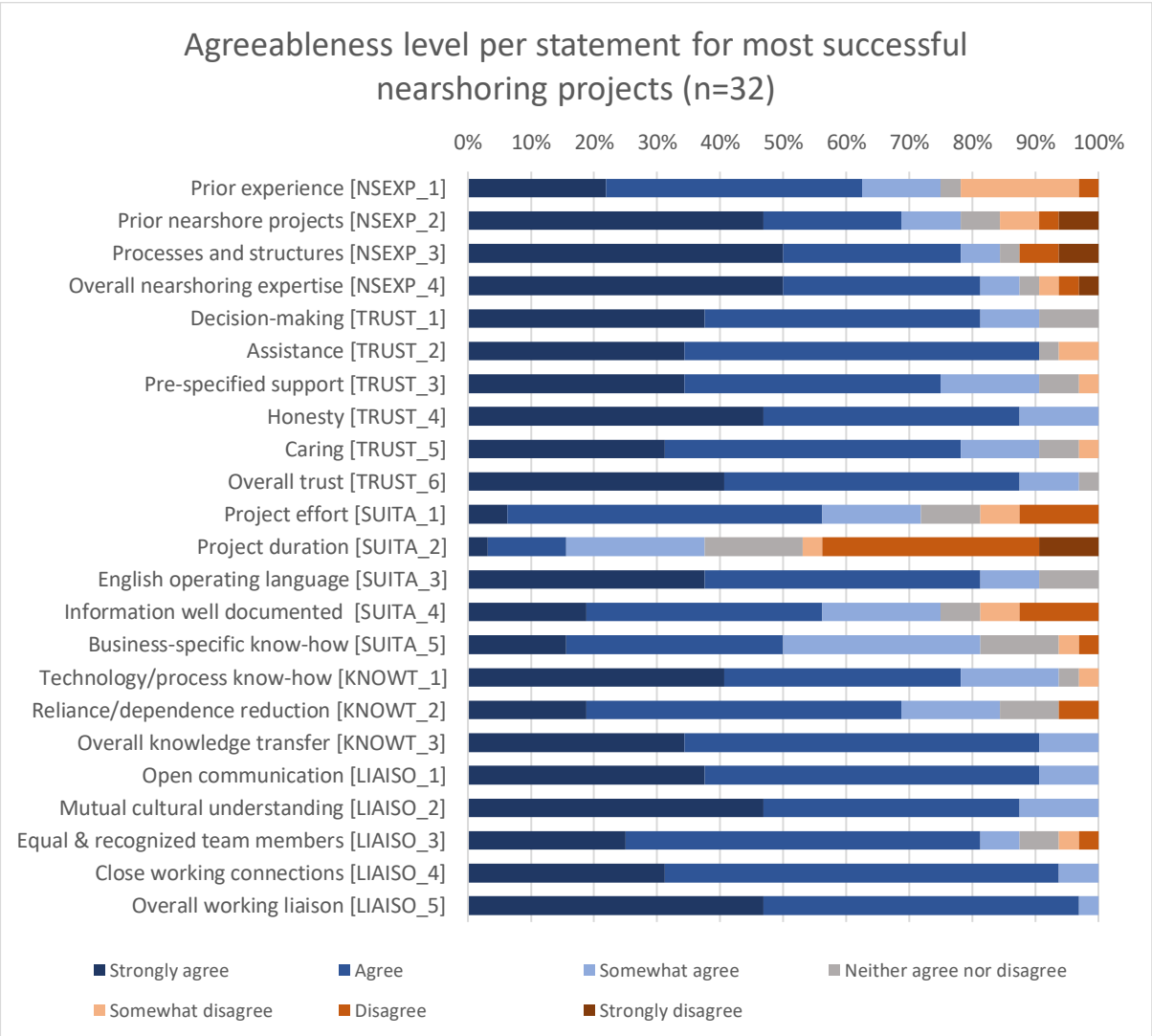

Figure 18: Agreeableness level per statement for most successful nearshoring projects (n=32)

6. Analysis and hypotheses testing

This chapter analyzes the data and puts all of the hypotheses generated in *Chapter 3* to the test. We prepare the data in *paragraph 6.1.* by performing a priori cleaning and applying indicators to the dimensions. Following that, in *paragraph 6.2.*, we present descriptive statistics from the buyer and supplier perspectives. Additionally, in *paragraph 6.3.*, a reliability test is conducted on each of the dimensions to ensure their reliability for the subsequent analyses and hypotheses testing. Finally, in *paragraph 6.4.*, we conduct correlation analyses and, in *paragraph 6.5.*, we test hypotheses using single and multiple regression analyses.

6.1. Data preparation

Before starting the analyses, some priori cleaning and organization was done for the results of the statements (see *paragraph 4.3.1.3.*) in order to perform the right analyses. Throughout the survey respondent's filled in the statements respectively to their perspective as a buyer or a supplier. The data was exported to and cleaned in Excel and subsequently analyzed in JASP. *Table 8* shows the dimensions that were analyzed and the synonyms that were used in the analysis.

Perspective	Dimension	Indicator
Full sample	Nearshoring expertise	NSEXP
	Trust	TRUST
	Project suitability	SUITA
	Knowledge transfer	KNOWT
	Liaison quality	LIAISO
	Nearshore project success	SUCCESS
Buyer perspective (on-site)	Nearshoring expertise	OS_NSEXP
	Trust in Nearshore Service Provider (NSP)	OS_TRUST
	Project suitability	OS_SUITA
	Knowledge transfer	OS_KNOWT
	Liaison quality	OS_LIAISO
	Nearshore project success	OS_SUCCESS
Supplier perspective (NSP)	Nearshoring expertise	NS_NSEXP
	Trust in on-site staff	NS_TRUST
	Project suitability	NS_SUITA
	Knowledge transfer	NS_KNOWT
	Liaison quality	NS_LIAISO
	Nearshore project success	NS_SUCCESS

Table 8: Dimensions with indicators

6.2. Descriptive statistics

For the survey statements a 1-7 Likert-scale was used to determine the level of agreeableness and satisfaction with the dimensions mentioned in *Table 9*. For each dimension 3 to 6 statements were given and the results of these statements were combined to an average measurement level per dimension. *Table 9* presents a summary of the dataset from the buyer perspective (on-site).

	OS_NSEXP	OS_TRUST	OS_SUITA	OS_KNOWT	OS_LIAISO	OS_SUCCESS
Valid	35	35	35	35	35	35
Mode [a]	6.000	6.000	5.000	5.000	6.000	6.000
Median	4.000	6.000	5.000	5.000	6.000	6.000
Mean	4.143	5.543	5.114	5.286	5.543	6.000
Std. Deviation	1.751	1.358	0.583	1.152	1.358	1.213
Minimum	1.000	2.000	4.000	3.000	1.000	2.000
Maximum	7.000	7.000	6.000	7.000	7.000	7.000

[a] *More than one mode exists, only the first is reported*

Table 9: Descriptive statistics from the buyer perspective

The 35 buyer-side results show that the median is very similar to the mean, meaning that there is a reasonably symmetrical distribution. The mode shows the most common number in the sample dataset. 1 being the minimum and 7 being the highest score, you can see that there is a very positive level of agreeableness and satisfaction towards all dimensions. Because the minimum and maximum number for each dimension ranges between 1 and 7, a standard deviation of 0,5 to 1,7 is to be expected.

	NS_NSEXP	NS_TRUST	NS_SUITA	NS_KNOWT	NS_LIAISO	NS_SUCCESS
Valid	57	57	57	57	57	57
Mode	7.000	6.000	5.000	6.000	6.000	6.000
Median	6.000	6.000	5.000	5.000	6.000	6.000
Mean	5.509	5.509	4.860	5.158	5.649	6.000
Std. Deviation	1.571	1.255	0.854	1.192	1.232	1.225
Minimum	1.000	1.000	3.000	1.000	1.000	1.000
Maximum	7.000	7.000	7.000	7.000	7.000	7.000

Table 10: Descriptive statistics from the supplier perspective

As presented in *Table 10*, the 57 supplier-side results also show that the median is very similar to the mean, meaning that there is a reasonably symmetrical distribution. The mode shows the most common number in the sample dataset. By 1 being the minimum and 7 being the highest score, you can see that there is a very positive level of agreeableness and satisfaction towards all dimensions. The nearshoring expertise dimension scored highest, meaning that most supplier-side respondents took part in projects with very experienced team members as well as their company having the right resources to execute nearshore arrangements. Because the minimum and maximum number for each dimension ranges between 1 and 7, a standard deviation of 0,5 to 1,7 is to be expected.

For the descriptive statistics of the whole dataset, see *Appendix E*.

6.3. Reliability testing

Following that, we prepared the data for analysis by conducting an unidimensional reliability test on the dimensions illustrated in *Table 8*. This test is done by identifying Chronbach's Alpha for each individual dimension. The intervals presented in *Table 11* are used to assess the results.

Interval of Chronbach's Alpha (α)	Reliability criteria
0.90 ≤ α ≤ 1	Excellent reliability
0.70 ≤ α < 0.90	High reliability
0.50 ≤ α < 0.70	Moderate reliability
α < 0.50	Low reliability

Table 11: Interval of Chronbach's Alpha reliability (Suyidno, Nur, Yuanita, & Prahani, 2017)

After performing the tests on the full sample, the results showed that the dimension *Project suitability* (SUITA) is not reliable. *Table 12* shows a summary of the results and the full set of results is visible in *Appendix F*.

Dimension	α value (point estimate)	Reliability level
Nearshoring expertise	0.90	Excellent reliability
Trust	0.94	Excellent reliability
Project suitability	0.21	Low reliability
Knowledge transfer	0.75	High reliability
Liaison quality	0.94	Excellent reliability
Nearshore project success	0.91	Excellent reliability

Table 12: Summary of reliability test results (full sample)

From a buyer perspective the results are quite similar, these results also showed that the dimension *Project suitability* (OS_SUITA) is not reliable and in this case Chronbach's Alpha even has a negative value. This means that this dimension negatively correlates with the scale. *Table 13* shows a summary of the results and the full set of results is visible in *Appendix G*. Because the dimension *Project suitability* is below α 0.50, it has a low reliability and therefore will be dropped. Additionally, the Reliability Statistics show that this dimension negatively correlates with the scale.

Dimension	α value (point estimate)	Reliability level
Nearshoring expertise	0.86	High reliability
Trust in Nearshore Service Provider (NSP)	0.94	Excellent reliability
Project suitability	-0.40	Low reliability
Knowledge transfer	0.67	Moderate reliability
Liaison quality	0.95	Excellent reliability
Nearshore project success	0.88	High reliability

Table 13: Summary of reliability test results (buyer perspective)

After performing the tests on the supplier sample, the results were quite similar. The dimension *Project suitability* (NS_SUITA) is not reliable from a supplier perspective. *Table 14* shows a summary of the results and the full set of results are visible in *Appendix H*. Because the dimension *Project suitability* is below α 0.50, it has a low reliability and therefore will be dropped.

Dimension	α value (point estimate)	Reliability level
Nearshoring expertise	0.89	High reliability
Trust in on-site staff	0.94	Excellent reliability
Project suitability	0.40	Low reliability
Knowledge transfer	0.80	High reliability
Liaison quality	0.93	Excellent reliability
Nearshore project success	0.93	Excellent reliability

Table 14: Summary of reliability test results (supplier perspective)

6.4. Correlation analyses

Correlation analyses were conducted using nearshoring expertise, trust, knowledge transfer and liaison quality as independent variables and nearshore project success as dependent variable. Primarily, we investigated the relationship between *Nearshore project success* (SUCCESS), *Nearshoring expertise* (NSEXP), *Trust* (TRUST), *Knowledge transfer* (KNOWT), and *Liaison quality* (LIAISO) from the supplier perspective with a sample size (n) of 92 responses. Thus, we conducted a Pearson's correlation analysis, presented in *Table 15*. The results indicate that all variables correlate significantly with each other ($p < 0.05$).

We found that *Nearshore project success* was at least strongly correlated [$r(90) \geq 0.365$, $p < .001$] with the other variables. Moreover, *Nearshoring expertise* had weak correlations with the *Trust* variable [$r(90) = 0.254$, $p = 0.015$].

Variable		1	2	3	4	5
1. SUCCESS	Pearson's r	—				
	p-value	—				
2. NSEXP	Pearson's r	0.365***	—			
	p-value	< .001	—			
3. TRUST	Pearson's r	0.717***	0.254*	—		
	p-value	< .001	0.015	—		
4. KNOWT	Pearson's r	0.742***	0.368***	0.663***	—	
	p-value	< .001	< .001	< .001	—	
5. LIAISO	Pearson's r	0.753***	0.340***	0.735***	0.635***	—
	p-value	< .001	< .001	< .001	< .001	—

* p < .05, ** p < .01, *** p < .001

Table 15: Pearson's correlations for full sample

Subsequently, we investigated the relationship between *Nearshore project success* (OS_SUCCESS), *Nearshoring expertise* (OS_NSEXP), *Trust in on-site staff* (OS_TRUST), *Knowledge transfer* (OS_KNOWT), and *Liaison quality* (OS_LIAISO) from the supplier perspective with a sample size (n) of 35 responses. Thus, we conducted a Pearson's correlation analysis, visible in *Table 16*. The results indicate that all variables correlate significantly with each other ($p < 0.05$) except for the correlations: *Nearshoring expertise* & *Trust* ($p = 0.168$) and *Nearshoring expertise* & *Liaison quality* ($p = 0.093$).

We found that *Nearshore project success* had weak correlation [r(33) = 0.402, p = 0.017] with *Nearshoring expertise* whereas other variables were at least strongly correlated [r(55) > 0.679, p < 0.001]. Moreover, *Nearshoring expertise* had weak correlations with every other variable including the *Nearshore project success* [r(33) < 0.489, p < 0.288]. On overall, aside from *Nearshoring expertise*, every variable correlated at least strongly [r(33) > 0.518, p ≤ .001] with each other.

Variable		1	2	3	4	5
1. OS_SUCCESS	Pearson's r	—				
	p-value	—				
2. OS_NSEXP	Pearson's r	0.402*	—			
	p-value	0.017	—			
3. OS_TRUST	Pearson's r	0.697***	0.239	—		
	p-value	< .001	0.168	—		
4. OS_KNOWT	Pearson's r	0.737***	0.489**	0.593***	—	
	p-value	< .001	0.003	< .001	—	
5. OS_LIAISO	Pearson's r	0.679***	0.288	0.665***	0.518**	—
	p-value	< .001	0.093	< .001	0.001	—

* p < .05, ** p < .01, *** p < .001

Table 16: Pearson's Correlations for buyer-side

Finally, we investigated the relationship between *Nearshore project success* (NS_SUCCESS), *Nearshoring expertise* (NS_NSEXP), *Trust in on-site staff* (NS_TRUST), *Knowledge transfer* (NS_KNOWT), and *Liaison quality* (NS_LIAISO) from the supplier perspective with a sample size (n) of 57 responses. Thus, we conducted a Pearson's correlation analysis, visible in *Table 17*. The results indicate that all variables correlate significantly with each other (p < 0.05).

We found that *Nearshore project success* had the weakest correlation [r(55) = 0.390, p = 0.003] with *Nearshoring expertise* whereas other variables were at least strongly correlated [r(55) > 0.732, p < .001]. Moreover, *Nearshoring expertise* had weak correlations with every other variable including the *Nearshore project success* [r(55) < 0.398, p < 0.019]. On overall, aside from *Nearshoring expertise*, every variable correlated at least strongly [r(55) > 0.7091, p < .001] with each other.

Variable		1	2	3	4	5
1. NS_SUCCESS	Pearson's r	—				
	p-value	—				
2. NS_NSEXP	Pearson's r	0.390**	—			
	p-value	0.003	—			
3. NS_TRUST	Pearson's r	0.732***	0.310*	—		
	p-value	< .001	0.019	—		
4. NS_KNOWT	Pearson's r	0.746***	0.376**	0.709***	—	
	p-value	< .001	0.004	< .001	—	
5. NS_LIAISO	Pearson's r	0.805***	0.398**	0.787***	0.719***	—
	p-value	< .001	0.002	< .001	< .001	—

* p < .05, ** p < .01, *** p < .001

Table 17: Pearson's Correlations for supplier-side

6.5. Hypotheses testing

We conducted both single and multiple linear regression analyses with *Nearshoring expertise*, T*rust*, *Knowledge transfer*, and *Liaison quality* as independent variables and *Nearshoring project success* as the dependent variable. In *paragraph 3.2.*, we created two models to predict the success of nearshore projects based on *Nearshoring expertise*, *Trust*, *Project suitability*, *Knowledge transfer*, and *Liaison quality*. Due to unreliability, the dimension *Project suitability* is removed. In this regard, we developed a multiple linear regression model with Nearshore project success as the outcome and the aforementioned variables as predictors. Primarily, the entire sample is analyzed and a key model is constructed. This is followed by two distinct analyses, one from the buyer's perspective and one from the supplier's perspective.

6.5.1. Full sample analysis

The main research model that is developed is displayed in *Figure 19*. This model depicts all of the dimensions' correlating values. The beta (β) value, denoted by a number between 0 and 1, is used to quantify the effect sizes between dimensions. The p-value (probability) is indicated with 0 and 3 stars right after the beta (β) value.

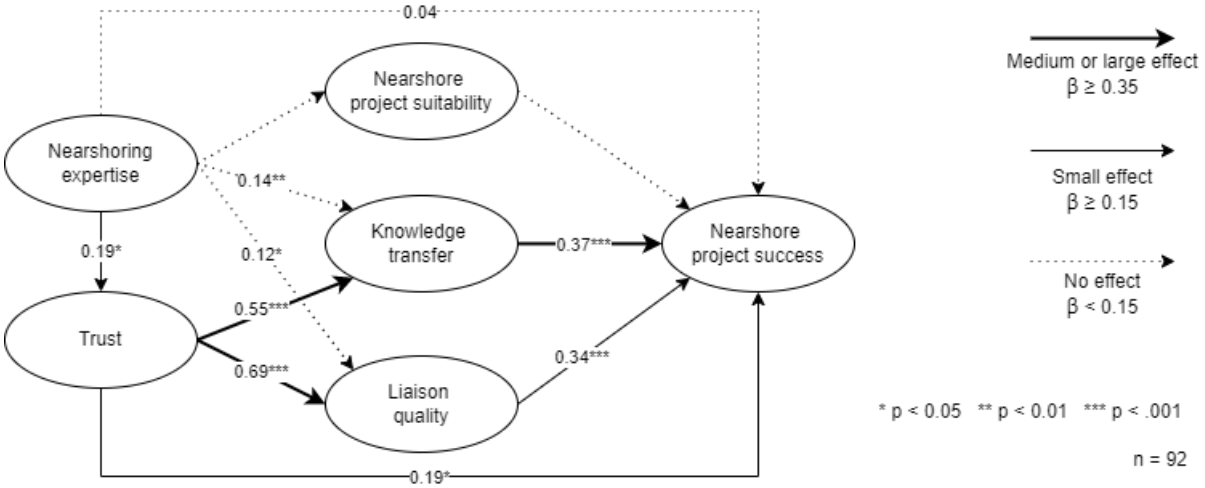

Figure 19: Resulting research model (full data sample)

The resulting model significantly [F(4, 87) = 51.04, p < .001] predicted and explained 68.7% (Adj R^2= 0.687) of the variance in the outcome variable. For all details of the model see *Appendix I*. Investigation of the coefficients yielded the following results:

- Intercept has a significant and positive (β = 0.906, p = 0.016) relationship with *Nearshore project success*.
- *Trust* has a significant and positive (β = 0.191, p = 0.033) relationship with *Nearshore project success*.
- *Knowledge transfer* has a significant and positive (β = 0.372, p < .001) relationship with *Nearshore project success*.
- *Liaison quality* has a significant and positive (β = 0.338, p < .001) relationship with *Nearshore project success*.

However, *Nearshoring expertise* was not found to have a significant relationship with *Nearshore project success*. Investigation of the standardized coefficient betas indicates that *Knowledge transfer*

(std β = 0.359) has a stronger effect on the model than *Liaison quality* (std β = 0.355) and *Trust* (std β = 0.203). For more information see *Table 18*.

The regression equation is $\hat{Y}$ = 0.906 + (0.191**Trust*) + (0.372**Knowledge transfer*) + (0.338**Liaison quality*)

	Unstandardized β	Standard Error	Standardized β	t	p
Intercept	0.906	0.367		2.468	0.016
NSEXP	0.041	0.044	0.060	0.939	0.350
TRUST	0.191	0.088	0.203	2.170	0.033
KNOWT	0.372	0.087	0.359	4.280	< .001
LIAISO	0.338	0.087	0.355	3.877	< .001

Table 18: Coefficients for Multiple Linear Regression on Nearshore project success (Full sample)

Subsequently, we created two more multiple linear regression models to test hypotheses between Nearshoring expertise, Trust, Knowledge transfer and Liaison quality. Results on *Knowledge transfer* are presented in *Table 19* and results on *Liaison quality* in *Table 20*.

The first resulting model significantly [F(89, 2) = 41.396, p < .001] predicted and explained 47.0% (Adj R^2= 0.470) of the variance in the outcome variable. For all details of the model see *Appendix I*. Investigation of the coefficients yielded the following results:

- Intercept has a significant and positive (β = 1.440, p = .001) relationship with *Knowledge transfer*.
- *Nearshoring expertise* has a significant and positive (β = 0.142, p = .008) relationship with *Knowledge transfer*.
- *Trust* has a significant and positive (β = 0.554, p < .001) relationship with *Knowledge transfer*.

Investigation of the standardized coefficient betas indicates that *Trust* (std β = 0.609) has a stronger effect on the model than *Nearshoring expertise* (std β = 0.213). For more information see *Table 19*.

The regression equation is $\hat{Y}$ = 1.440 + (0.142**Nearshoring expertise*) + (0.554**Trust*)

	Unstandardized β	Standard Error	Standardized β	t	p
Intercept	1.440	0.425		3.386	0.001
NSEXP	0.142	0.052	0.213	2.702	0.008
TRUST	0.554	0.072	0.609	7.717	< .001

Table 19: Coefficients for Multiple Linear Regression on Knowledge Transfer (full sample)

The second resulting model significantly [F(2, 89) = 57.792, p < .001] predicted and explained 55.5% (Adj R^2= 0.555) of the variance in the outcome variable. For all details of the model see *Appendix I*. Investigation of the coefficients yielded the following results:

- Intercept has a significant and positive (β = 1.229, p = .005) relationship with *Liaison quality.*
- *Nearshoring expertise* has a significant and positive (β = 0.119, p = .026) relationship with *Liaison quality.*
- *Trust* has a significant and positive (β = 0.686, p < .001) relationship with *Liaison quality.*

Investigation of the standardized coefficient betas indicates that *Trust* (std β = 0.693) has a stronger effect on the model than *Nearshoring expertise* (std β = 0.164). For more information see *Table 20*.

The regression equation is $\hat{Y}$ = 1.229 + (0.119**Nearshoring expertise*) + (0.686**Trust*)

	Unstandardized β	Standard Error	Standardized β	t	p
Intercept	1.229	0.424		2.900	0.005
NSEXP	0.119	0.052	0.164	2.271	0.026
TRUST	0.686	0.072	0.693	9.587	< .001

Table 20: Coefficients for Multiple Linear Regression on Liaison quality (full sample)

Additionally, we created a single linear regression model to test the effect of *Nearshoring expertise* on *Trust*. The resulting model significantly [F(1, 90) = 6.213, p < 0.015] predicted and explained 5.4% (Adj R^2= 0.054) of the variance in the outcome variable. For all details of the model see *Appendix I*. Investigation of the coefficients yielded the following results:

- Intercept has a significant and positive (β = 4.596, p = < .001) relationship with *Trust*.
- *Nearshoring expertise* has a significant and positive (β = 0.186, p < 0.015) relationship with *Trust in on-site staff*.

The regression equation is $\hat{Y}$ = 4.596 + (0.186**Trust*)

	Unstandardized β	Standard Error	Standardized β	t	p
Intercept	4.596	0.394		11.671	< .001
NSEXP	0.186	0.074	0.254	2.493	0.015

Table 21: Coefficients for Single Linear Regression on Trust (full sample)

6.5.2. Buyer perspective analysis

The second research model that is developed is displayed in *Figure 20*. This model depicts all of the dimensions' correlating values from a buyer perspective. The beta (β) value, denoted by a number between 0 and 1, is used to quantify the effect sizes between dimensions. The p-value (probability) is indicated with 0 and 3 stars right after the beta (β) value.

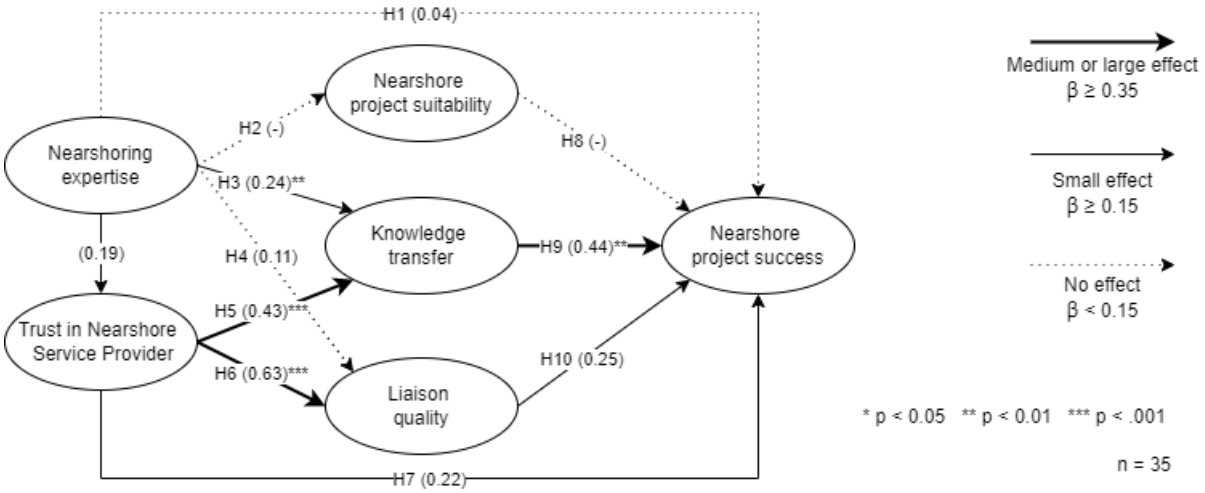

Figure 20: Resulting research model (buyer perspective)

The resulting model significantly [F(4, 30) = 16.97, p < .001] predicted and explained 65.3% (Adj R^2= 0.653) of the variance in the outcome variable. For all details of the model see *Appendix J*. Investigation of the coefficients yielded the following results:

- *Knowledge transfer* has a significant and positive (β = 0.436, p = 0.007) relationship with *Nearshore project success*.

However, *Trust*, *Liaison quality* and *Nearshoring expertise* were not found to have a significant relationship with *Nearshore project success*. For more information see *Table 22*.

The regression equation is $\hat{Y}$ = 0.436**Knowledge transfer*

	Unstandardized β	Standard Error	Standardized β	t	p
Intercept	0.900	0.632		1.424	0.165
OS_NSEXP	0.040	0.081	0.058	0.500	0.620
OS_TRUST	0.223	0.132	0.250	1.690	0.101
OS_KNOWT	0.436	0.149	0.414	2.922	0.007
OS_LIAISO	0.251	0.124	0.281	2.022	0.052

Table 22: Coefficients for Multiple Linear Regression on Nearshore project success (buyer perspective)

These results conclude the following hypotheses to the research model in *Figure 4*:

- **H1** is rejected and the null hypothesis retained as *Nearshoring expertise* does not have a significant relationship (β = 0.040, p = 0.620) with *Nearshore project success*.
- **H7** is rejected and the null hypothesis retained as *Trust in NSP* does not have a significant relationship (β = 0.223, p = 0.101) with *Nearshore project success*.
- **H8** is rejected and the null hypothesis retained as *Nearshore project suitability* has been dropped due to unreliability.
- **H9** is accepted and the null hypothesis is rejected as the *Knowledge trans*fer has a significant and positive (β = 0.436, p = 0.007) relationship with *Nearshore project success*.
- **H10** is rejected and the null hypothesis retained as *Liaison quality* does not have a significant relationship (β = 0.251, p = 0.052) with *Nearshore project success*.

Subsequently, we created two more multiple linear regression models to test hypotheses between *Nearshoring expertise*, *Trust in on-site staff*, *Knowledge transfer* and *Liaison quality*. Results on Knowledge transfer are presented in *Table 23* and results on Liaison quality in *Table 24*.

The first resulting model significantly [F(2, 32) = 14.795, p < .001] predicted and explained 44.8% (Adj R^2= 0.448) of the variance in the outcome variable. For all details of the model see *Appendix J*. Investigation of the coefficients yielded the following results:

- Intercept has a significant and positive (β = 1.903, p = .006) relationship with *Knowledge transfer*.
- *Nearshoring expertise* has a significant and positive (β = 0.243, p = .008) relationship with *Knowledge transfer*.
- *Trust in NSP* has a significant and positive (β = 0.429, p < .001) relationship with *Knowledge transfer*.

Investigation of the standardized coefficient betas indicates that *Trust in NSP* (std β = 0.506) has a stronger effect on the model than *Nearshoring expertise* (std β = 0.369). For more information see *Table 23*.

The regression equation is $\hat{Y}$ = 1.903 + (0.243**Nearshoring expertise*) + (0.429**Trust in NSP*)

	Unstandardized β	Standard Error	Standardized β	t	p
Intercept	1.903	0.652		2.921	0.006
OS_NSEXP	0.243	0.086	0.369	2.810	0.008
OS_TRUST	0.429	0.111	0.506	3.853	< .001

Table 23: Coefficients for Multiple Linear Regression on Knowledge Transfer (buyer perspective)

The second resulting model significantly [F(2, 32) = 13.628, p < .001] predicted and explained 42.6% (Adj R^2= 0.426) of the variance in the outcome variable. For all details of the model see *Appendix J*. Investigation of the coefficients yielded the following results:

- *Trust in NSP* has a significant and positive (β = 0.632, p < .001) relationship with *Liaison quality*.

The relationship between *Nearshoring expertise* and *Liaison quality* is not significant (β = 0.106, p = 0.313). For more information see *Table 24*.

The regression equation is $\hat{Y}$ = 0.632**Trust in NSP*

	Unstandardized β	Standard Error	Standardized β	t	p
Intercept	1.598	0.783		2.041	0.050
OS_NSEXP	0.106	0.104	0.137	1.026	0.313
OS_TRUST	0.632	0.134	0.632	4.727	< .001

Table 24: Coefficients for Multiple Linear Regression on Liaison quality (buyer perspective)

These results conclude the following hypotheses to the research model in *Figure 4*:
H2 is rejected and the null hypothesis retained as *Nearshore project suitability* has been dropped due to unreliability.
H3 is accepted and the null hypothesis is rejected as *Nearshoring expertise* has a significant and positive (β = 0.243, p = .008) relationship with *Knowledge transfer*.
H4 is rejected and the null hypothesis retained as *Nearshoring expertise* does not have a significant relationship (β = 0.106, p = 0.313) with *Liaison quality*.
H5 is accepted and the null hypothesis is rejected as the *Trust in on-site staff* has a significant and positive (β = 0.429, p < .001) relationship with *Knowledge transfer*.
H6 is accepted and the null hypothesis is rejected as the *Trust in on-site staff* has a significant and positive (β = 0.632, p < .001) relationship with *Liaison quality*.

Additionally, we created a single linear regression model to test the effect of *Nearshoring expertise* on *Trust in NSP*. The results are presented in *Table 25*. Investigation of the coefficients yielded the following results:

- Intercept has a significant and positive (β = 4.777, p = < .001) relationship with *Trust in NSP*.

The results also indicate that the relationship between *Nearshoring expertise* and *Trust in NSP* is not significant (β = 0.308, p = 0.168). For all details of the model see *Appendix J*.

The regression equation is $\hat{Y}$ = 4.777

	Unstandardized β	Standard Error	Standardized β	t	p
Intercept	4.777	0.588		8.120	< .001
OS_NSEXP	0.185	0.131	0.239	1.411	0.168

Table 25: Coefficients for Single Linear Regression on Trust in NSP (buyer perspective)

6.5.3. Supplier perspective analysis

The final research model that is developed is displayed in *Figure 21*. This model depicts all of the dimensions' correlating values from a supplier perspective. The beta (β) value, denoted by a number between 0 and 1, is used to quantify the effect sizes between dimensions. The p-value (probability) is indicated with 0 and 3 stars right after the beta (β) value.

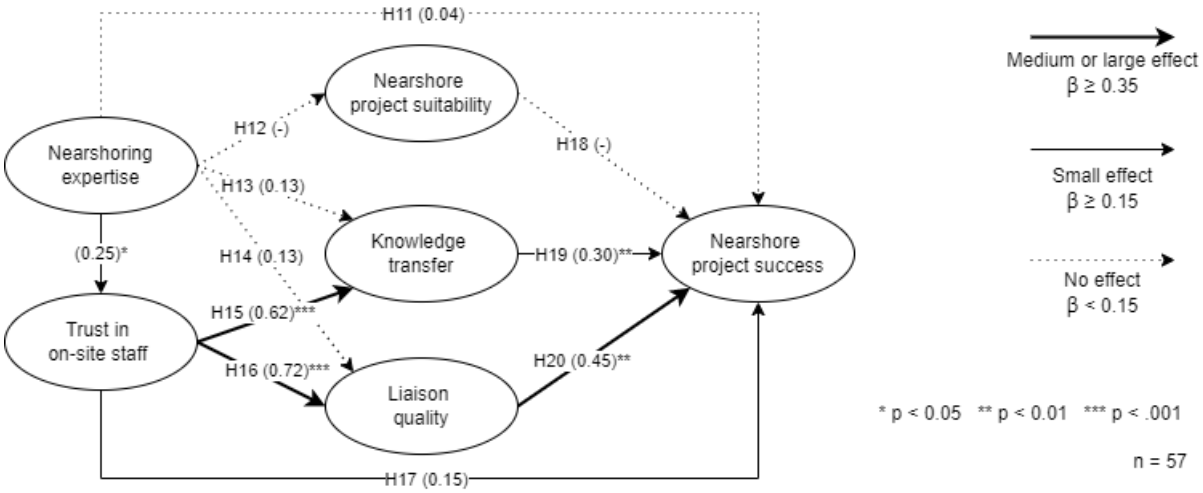

Figure 21: Resulting research model (supplier perspective)

The resulting model significantly [F(4, 52) = 32.59, p < .001] predicted and explained 69.3% (Adj R^2= 0.693) of the variance in the outcome variable. For all details of the model see *Appendix K*. Investigation of the coefficients yielded the following results:

- *Knowledge transfer* has a significant and positive (β = 0.301, p = 0.013) relationship with *Nearshore project success*.
- *Liaison quality* has a significant and positive (β = 0.454, p = 0.001) relationship with *Nearshore project success*.

However, *Trust* and *Nearshoring expertise* were not found to have a significant relationship with *Nearshore project success*. Investigation of the standardized coefficient betas indicates that Liaison quality (std β = 0.457) has a stronger effect on the model than *Knowledge transfer* (std β = 0.293). For more information see *Table 26*.

The regression equation is $\hat{Y}$ = (0.301**Knowledge transfer*) + (0.454**Liaison quality*)

	Unstandardized β	Standard Error	Standardized β	t	p
Intercept	0.863	0.477		1.807	0.076
NS_NSEXP	0.040	0.064	0.052	0.634	0.529
NS_TRUST	0.145	0.124	0.149	1.165	0.249
NS_KNOWT	0.301	0.118	0.293	2.560	0.013
NS_LIAISO	0.454	0.131	0.457	3.463	0.001

Table 26: Coefficients for Multiple Linear Regression on Nearshore project success (supplier perspective)

These results conclude the following hypotheses to the research model in *Figure 4*:

- **H11** is rejected and the null hypothesis retained as *Nearshoring expertise* does not have a significant relationship (β = 0.040, p = 0.529) with *Nearshore project success*.
- **H17** is rejected and the null hypothesis retained as *Trust in On-site staff* does not have a significant relationship (β = 0.145, p = 0.249) with *Nearshore project success*.
- **H18** is rejected and the null hypothesis retained as *Nearshore project suitability* has been dropped due to unreliability.

- **H19** is accepted and the null hypothesis is rejected as the *Knowledge trans*fer has a significant and positive (β = 0.301, p = 0.013) relationship with *Nearshore project success*.
- **H20** is accepted and the null hypothesis is rejected as the *Liaison quality* has a significant and positive (β = 0.454, p = 0.001) relationship with the *Nearshore project success*.

Subsequently, we created two more multiple linear regression models to test hypotheses between *Nearshoring expertise*, *Trust in on-site staff*, *Knowledge transfer* and *Liaison quality*. Results on *Knowledge transfer* are presented in *Table 27* and results on *Liaison quality* in *Table 28*.

The first resulting model significantly [F(2, 54) = 30.412, p < .001] predicted and explained 51.2% (Adj R^2= 0.512) of the variance in the outcome variable. For all details of the model see *Appendix K*. Investigation of the coefficients yielded the following results:

- *Trust in on-site staff* has a significant and positive (β = 0.623, p < .001) relationship with *Knowledge transfer*.

The relationship between *Nearshoring expertise* and *Knowledge transfer* is not significant (β = 0.131, p = 0.084). For more information see *Table 27*.

	Unstandardized β	Standard Error	Standardized β	t	p
Intercept	1.007	0.560		1.799	0.078
NS_NSEXP	0.131	0.074	0.173	0.758	0.084
NS_TRUST	0.623	0.093	0.656	6.679	< .001

Table 27: Coefficients for Multiple Linear Regression on Knowledge Transfer (supplier perspective)

The second resulting model significantly [F(2, 54) = 49.292, p < 0.001] predicted and explained 63.3% (Adj R^2= 0.633) of the variance in the outcome variable. For all details of the model see *Appendix K*. Investigation of the coefficients yielded the following results:

- *Trust in on-site staff* has a significant and positive (β = 0.721, p < .001) relationship with *Liaison quality*.

The relationship between *Nearshoring expertise* and *Liaison quality* is not significant (β = 0.134, p = 0.050). For more information see *Table 28*.

The regression equation is $\hat{Y}$ = 0.721**Trust in NSP*

	Unstandardized β	Standard Error	Standardized β	t	p
Intercept	0.942	0.502		1.877	0.066
NS_NSEXP	0.134	0.067	0.171	2.004	0.050
NS_TRUST	0.721	0.084	0.734	8.624	< .001

Table 28: Coefficients for Multiple Linear Regression on Liaison quality (supplier perspective)

These results conclude the following hypotheses to the research model in *Figure 4*:
H12 is rejected and the null hypothesis retained as *Nearshore project suitability* has been dropped due to unreliability.

H13 is rejected and the null hypothesis retained as *Nearshoring expertise* does not have a significant relationship (β = 0.131, p = 0.084) with *Knowledge transfer*.
H14 is rejected and the null hypothesis retained as *Nearshoring expertise* does not have a significant relationship (β = 0.134, p = 0.050) with *Liaison quality*.
H15 is accepted and the null hypothesis is rejected as the *Trust in on-site staff* has a significant and positive (β = 0.623, p < .001) relationship with *Knowledge transfer*.
H16 is accepted and the null hypothesis is rejected as the *Trust in on-site staff* has a significant and positive (β = 0.721, p < .001) relationship with *Liaison quality*.

Additionally, we created a single linear regression model to test the effect of *Nearshoring expertise* on *Trust in on-site staff*. The results are presented in *Table 29*. The resulting model significantly [F(1, 55) = 5.850, p < 0.019] predicted and explained 8.0% (Adj R^2= 0.080) of the variance in the outcome variable. For all details of the model see *Appendix K*. Investigation of the coefficients yielded the following results:

- Intercept has a significant and positive (β = 4.144, p = < .001) relationship with *Trust in on-site staff*.
- *Nearshoring expertise* has a significant and positive (β = 0.248, p < 0.019) relationship with *Trust in on-site staff*.

The regression equation is $\hat{Y}$ = 4.144 + (0.248**Trust in on-site staff)*

	Unstandardized β	Standard Error	Standardized β	t	p
Intercept	4.144	0.586		7.068	< .001
NS_NSEXP	0.248	0.102	0.310	2.419	0.019

Table 29: Coefficients for Single Linear Regression on Trust in on-site staff (supplier perspective)

7. Discussion

As part of this discussion chapter, the research question posed in the first chapter of this study will be revisited and answered. The subparagraphs of the discussion chapter will highlight the key findings that contribute to the main research question. The research question that served as the starting point of this research is:

What are dimensions that have an impact on the success of nearshoring projects?

The analysis identifies *Trust*, *Knowledge Transfer*, and *Liaison quality* as critical success criteria for nearshoring projects. As described in *paragraph 6.5.1.*, this might forecast around 65 percent of the success of nearshore projects. This could lead to greater success, particularly when *Trust* is mediated through *Knowledge transfer* and *Liaison quality*. *Trust* by itself has a limited influence, as it is not very actionable. This variable was examined using five indicators: decision-making, assistance, pre-specified support, honesty, and caring. One could argue that this has a stronger impact on the success of nearshoring projects if it is mediated through knowledge exchange. Also, if *Trust* is mediated through open communication, cultural understanding, equality, and close working relationships, the nearshore project's success is increased. Lastly, *Nearshoring expertise* only has a small indirect effect on *Nearshore project success*. This small effect is mediated through *Knowledge transfer* and *Trust*.

7.1. Trust is crucial to the success of nearshore projects

The resulting research models in *paragraph 6.4.* show that trust is a critical factor in the success of nearshore projects. The effect sizes are medium to large when mediated by knowledge transfer (β = 0.55) and liaison quality (β = 0.69), and there is also a small direct effect on success.

According to Westner's (2010) research model, the dimension *Trust* has a significant, but slightly smaller, impact on the success of *offshore* projects via *knowledge transfer* (β = 0.38) and *liaison quality* (β = 0.59). *Trust* has a slight direct effect (β = 0.19 & β = 0.29) on the success of near-/offshore projects in all cases. The data in *Figure 18* suggests that the strongest components of trust are good decision-making and honesty. Our data indicates that this should be the foundation of trust in a nearshoring arrangement. Also providing assistance without exception, providing pre-specified support and caring for each other are important components of trust, as indicated in *Figure 18*. According to Park and Kim (2011), higher levels of trust appear to positively influence the connection between buyer and provider. Recent empirical-confirmatory research indicates that trust is positively associated to the extent of information sharing and that trust, as mediated by cooperative learning, has a significant positive influence on knowledge transfer (Park, Im, & Kim, 2011). Welter and Alex (2011) researched trust in different cultures and they conclude that trust building is facilitated in situations where individuals can draw on collective identities, such as in national symbols and common languages. They also say that trust is built through familiarity with one's another mentality and habits. Western 'identities', in the sense of familiar behavior facilitate the emergence of trust respectively these are requirements for trust to emerge (Welter & Alex, 2011). In an offshore context the cultural distance is larger compared to the cultural distance in a nearshore context, because there are more default similarities in a nearshore cultural context. This explains why it could lead to more success in nearshoring projects.

A great deal has been written about the significance of trust in outsourcing relationships, but we could not find any literature on trust in nearshoring arrangements. Lee and Choi (2011) have

developed a theoretical model of the effects of initial and ongoing trust on outsourcing advantages from the service provider's and service recipient's points of view. The significance of ongoing trust and distrust in assessing the effectiveness of IT outsourcing projects cannot be underestimated. It is essential for success to create an environment that supports sustained positive belief. One approach to achieve this is to establish suitable positive expectations from the beginning of the outsourcing partnership by increasing initial trust and decreasing initial distrust (Lee & Choi, 2011).

The direct effect can be explained by the fact that trust between on-site (buyer-side) and nearshore (supplier-side) employees must grow, which is difficult without any assistance, such as knowledge sharing or collaboration. It has been demonstrated that trust strengthens both communication and relationships among stakeholders, which can often improve project performance (Wu, Liu, Zhao, & Zuo, 2017). This also explains why *trust*, as mediated by *knowledge transfer* and *liaison quality*, has a stronger impact on nearshore project success. When you have more trust in each other, you are more willing to share knowledge and work toward the same goals. Khesal et al. (2013) investigated the impact of trust on knowledge sharing and discovered that knowledge sharing among teams is crucial. Individuals are often afraid of passing on knowledge to others because they fear losing their position within the company. For most knowledge-related processes, such as providing transparent knowledge or utilizing and sharing it, trust is critical. Many people are hesitant to take the risk of sharing knowledge with someone they have no reason to trust.

7.2. Knowledge transfer and liaison are second most important to success

The resulting research models in *paragraph 6.4.* show that *Knowledge transfer* and *liaison quality* also play a major role in the success of nearshoring projects. After trust, they are the most important factors. The effect sizes are small to medium (β = 0.37 & 0.34) towards nearshore project success and have a great impact originated by trust.

Compared to the offshore findings of Westner's (2010) study, our data indicates that these two factors have a significantly greater impact on nearshore project success. For the *liaison quality*, this could be due to cultural distances. In offshore arrangements, the distance is larger, so it's more difficult to maintain a good *liaison quality* in comparison to a nearshore arrangement. One could argue that the stronger effect of knowledge transfer is due to a higher level of trust in nearshoring arrangements, as explained in the previous paragraph. One could imagine that they are higher because of shorter cultural distances and similar rules and regulations (within the European Union).

These two factors are essential to project success because the more knowledge you transfer, the more transparency you will have over the project. When the supplier engages in collaborative activities, trust works as a signal that the recipient firm will not engage in opportunistic misuse of knowledge. For example, if the buyer allows suppliers to allow access to their systems and data, they must be convinced that any learning is connected to the original agreement and not targeted at acquiring capabilities that underpin their competitive advantage. Firms may still engage in such activities in the absence of confidence, but they will aim to minimize the transparency of essential processes and products, hence lowering information transmission (Squire, Cousins, & Brown, 2009). One could imagine that a lack of transparency can lead to increased risks, complications, longer adaptation times, etc. As you can see in *Figure 18*, "technology/process know-how" is crucial to nearly 95% of the most successful nearshoring project from our data and this is only about the type of work that is being transitioned.

While *knowledge transfer* and *liaison quality* have a minor to moderate effect (β = 0.37 & 0.34) on nearshore project success, when they are considered separately, an interesting difference becomes apparent. From the buyer's perspective, *knowledge transfer* (β = 0.44) has a greater impact on success, while from the supplier's perspective, *liaison quality* (β = 0.45) has a greater impact on success. This means that the more effectively and efficiently the buyer-side transfers project-related technology/process knowledge to the supplier-side, the higher the project's success rate can be. One could imagine that if the buyer shares more knowledge with the supplier, such as technology or processes, the supplier will be able to align support in a more successful arrangement. On the other hand, the supplier-side places a premium on *liaison quality*; the more effectively they collaborate with the buyer-side, the higher the project's success rate can be.

7.3. Nearshoring expertise plays a minor role to success

Our data indicates that experience is no defining factor in providing success in nearshoring arrangements. As seen in our resulting research models in *paragraph 6.4.*, the dimension *nearshoring expertise* has no direct effect (β = 0.04) on the success of nearshoring projects.

Nearshoring expertise can help build trust on one side, but in the end trust is the most important factor. The impact of *nearshoring expertise* is small (β = 0.19) when mediated by *trust*. One could imagine that if you can demonstrate prior experience with nearshore arrangements or if the buyer-side organization already has dedicated processes and structures to manage these arrangements, you may be able to gain more trust throughout a project, which could lead to greater success.

The findings for this dimension in our models are quite consistent with those of Westner's previous study (2010). Additionally, in his model (see *figure 3*), there is no effect (β = 0.04) of the dimension *offshoring expertise*, implying that project success is directly unaffected from both a nearshore and an offshore perspective. Studies show that project managers from different national cultures often lead similar projects in a completely different way (Zwikael, Shimizu, & Globerson, 2005). Every organization operates differently, so the execution of nearshore projects differs between organizations as well. Even if the main steps of a nearshoring project are similar, the approach on "how" to do it differs significantly. Nearshoring projects do not require standard processes, structures, or experiences to be successful, and in most situations, these aspects are not even present during transitions. It relies on how the company operates. As seen in *Figure 16*, approximately 20 to 30 percent of respondents disagree with the Nearshoring expertise statement and these projects still lead to success. Current research shows that a one-size-fits-all governance approach for outsourcing projects is not appropriate and a differentiation of outsourcing clients is necessary (Leimeister, 2009).

When we compare the buyer to the supplier perspective, we find that there is a small effect (β = 0.24) on knowledge transfer from the buyer’s perspective. This is due to the fact that if the buyer has a clear description of the nearshoring project's end goal and the tasks that must be completed in order to reach that end goal, the project may be more successful. There is a minimal impact because this situation does not involve applying prior knowledge of nearshoring arrangements ("how" to achieve the desired result). As stated in the previous paragraph, this is undesirable. Additionally, if the on-site location possesses some nearshoring expertise prior to the start of the project, this will contribute to the success of the project. This makes perfect sense, because if the on-site location has some knowledge of nearshoring in terms of experience, projects, and processes for nearshore

arrangements, this can result in a more seamless collaboration between the buyer and supplier sides, as well as better results that contribute to increased success throughout these projects. Also, if the buyer-side has prior nearshoring experience, they can avoid errors made in the past and know what to observe and avoid during the following project(s).

The influence of best practices (expertise in nearshoring) between cultures is minimal to nonexistent because other cultures respond differently to how to execute such a project. Leaders often assume that if a practice was successful in one location, it will also be successful in another, and they wish to reap the benefits of sharing common practices across locations. However, they do not always succeed. Best practices are optimized for a particular place and time and don't necessarily transfer well between cultures (Hinds, 2016). The *nearshoring expertise* dimension describes the strategic side, but if you focus on the operational tasks and the end goal of a project, different cultures will find their best way to achieve it.

7.4. Unreliability of the project suitability dimension

We chose to exclude the dimension "project suitability" for the remainder of the analysis. In *paragraph 6.3.*, we examined the reliability of all six dimensions and discovered that the dimension "project suitability" had a low reliability score ($\alpha = 0.21$) across the entire dataset as well as the buyer and supplier perspective datasets. This dimension even had a negative alpha score ($\alpha = -0.40$) from the buyer's perspective, indicating extremely low reliability.

Westner's (2010) study used a research survey on offshore project success to quantitatively test this dimension and its indicators. While this dimension and their statements are well-developed in Westner's (2008) qualitative study on the factors that influence a project's suitability for offshoring, this study may indicate that this dimension only accounts for instances of offshoring, as he used this dimension to determine success factors for offshore projects in his study.

As illustrated in the resulting models in *paragraph 6.4.*, the effects from and to the dimension "project suitability" are intentionally left blank due to the dimension's unreliability. If we examine the indicators for this dimension more closely (see *Appendix A*), we may conclude that project effort, duration, English operating language, documentation, and business-specific know-how of staff members all have little to no effect on the success of nearshoring projects. The suitability of a project largely depends on the cultural context of a project, e.g. in South and Latin American countries hierarchy is more important than in The United States (Meyer, 2017). Therefore, this could be a reason why this dimension is not so reliable for measuring success.

7.5. 2021 could indicate a push towards nearshoring

Businesses are reorganizing their operations in response to the COVID-19 pandemic. Attracting talent has become easier as a result of the shift toward remote work. Numerous firms began relocating operations to nearshore locations. Although our data is limited, it shows in *Figure 9* that these projects started increasing rapidly during the COVID-19 pandemic. While some firms choose to maintain it in-house and establish a Shared Services Center (SSC) at a less expensive location, others prefer to outsource the work (see *Table 7*). These choices assist them in increasing their performance while also lowering costs. Nearshoring has gained popularity in recent years. According to a Deloitte Global Outsourcing Survey (2020), 87% of IT organizations considered nearshore outsourcing as a cost-cutting measure. This may explain why experts forecast that the worldwide

outsourcing market would expand by $40.16 billion by 2025 (Global Business Process Outsourcing Market 2021-2025, 2020).

7.6. Practical implications & Recommendations

First and foremost, assuming that organizations are open to nearshore arrangements, there must be a very clear strategy for building trust in global buyer and supplier relationships. Research by Ajmal et al. (2017) studied trust in offshore software outsourcing relationships and they put a high value on cultural understanding, credibility, capabilities, pilot project performance and investments for establishing trust. On the other hand in maintaining and strengthening trust in offshore software outsourcing relationships they believe that communication, cultural understanding, capabilities contract conformance, quality, timely delivery, development process, managing expectations, personal relationships and performance are the most important factors (Ajmal, Helo, & Kassem, 2017). One could imagine that these factors also account for nearshore arrangements. As described in the preceding paragraphs of this chapter, the results indicate that trust is closely associated with nearshore project success. The greater the level of trust established between locations prior to and during a project, the higher the success rate of the nearshoring project. By success, we refer to the quality of the project plan/time schedule, project budget, project functionality, project quality, and the final outcome of the nearshore arrangement. In addition, we recommend that the most effective means of establishing trust are knowledge sharing and close cooperation between locations.

Furthermore, we believe that incorporating a clear strategy for fostering knowledge sharing while facilitating a close working relationship will significantly increase project success. A study by Windsor et al. (2010) proposed and tested three categories of core organizational practices that encourage knowledge sharing: strategic, technology and decision making. They also validated these core practices in firms across two distinct national cultures.

The first category, strategic practices, demonstrates that an agile business strategy is strongly associated with knowledge sharing. As indicated in *paragraph 5.2.4.7*, our data also show that Agile Project/Product Management Methods contribute to more successful nearshoring projects. Organizations use an agile strategy to change their business processes in response to consumer needs, thus it is critical to share knowledge about what is done (Windsor, Ryan, & Prybutok, 2010).

The second category is technology practices. The choice of agile collaborative technology tools is significantly related to knowledge sharing. Having the same intranets, extranets, workgroup technologies, and knowledge repositories encourages simultaneous working, the exchange of ideas and expertise, and the potential access to knowledge sources and best practices. Data quality management practices are also vital for improved knowledge sharing. Structured approaches to data management demonstrate that well-established policies for data creation, modification, and access enable knowledge workers access and share knowledge. Data that is inconsistent, out of date, or difficult to obtain is not easily shared or used. Knowledge workers who can rely on the accuracy and quality of data are more likely to synthesize and share it with others (Windsor, Ryan, & Prybutok, 2010).

The third category, decision making, consists of the practice of having well-articulated decision procedures. Well-articulated decision procedures can inform employees regarding the relationship between their activities and organizational goals and objectives. By clearly understanding requirements and the rationale for such requirements, knowledge workers are more likely to act in a

consistent manner and collaborate with others to ensure that the goals and objectives are accomplished (Windsor, Ryan, & Prybutok, 2010).

7.7. Limitations & Threats to validity

We will now discuss the major limitations and threats to the validity of the research. A small sample size bias may exist as a result of the collection and analysis of a small sample. The total sample size was 92 responses when both supplier- and buyer-side responses are included. With only 35 respondents, the buyer-side response group can be considered to be relatively small. This also limits the generalizability of the discoveries for this target group.

We estimate that 20 to 25 percent of the responses from this target group originates from Aegon GTS, because we utilized their internal network for gathering responses. This estimate is based on a comparison between the operational locations of Aegon (the United States, the United Kingdom, Hungary, and the Netherlands) to the on-site and nearshore locations of respondents. Since this group is comprised of employees from the same company, there may be some bias.

Another limitation of this research is that the majority of responses from the survey relate to European on-site and nearshore countries, which could indicate a bias. Asian nearshoring situations are barely registered and about 15-20% of nearshoring situations is registered in North and South America.

According to the survey results, there is a greater bias toward third party relationships (outsourcing). Comparing the "In-house (captive)" sourcing type to the "third party (outsourcing)" sourcing type, *Table 7* reveals that 63 percent of responses are from third party (outsourcing) relationships. This could influence the statement's results differently than a 50-50 sourcing type weight or if only one of the two types was utilized.

For the survey's purposes, mainly numerical and Likert Scale questions were utilized. Although this method has a number of benefits, such as the ability to collect quantitative data for statistical analysis and the fact that all respondents are asked the same questions, it also has a number of disadvantages. Since there is no way to determine whether or not respondents read the introduction and definitions of terms before each question, dishonest or even careless responses are possible. Some of the questions or terms posed to respondents may be challenging to comprehend. Everyone's perspective is skewed if the questionnaire is not fully explained.

Lastly, for this study, we attempted to discover as many papers as possible on nearshoring as opposed to offshoring. However, due to the fact that this is an emerging topic, there has not been a great deal of research on nearshoring alone. Thus, we based a significant portion of our literature review on offshoring where nearshore locations are included in the definition of offshoring, as well as on offshoring literature alone.

8. Conclusion

This chapter will conclude the study by describing the research question and purpose, explaining the key findings, and concluding with a statement. In the final paragraph, several suggestions for future research are provided.

8.1. Conclusion

The purpose of this study is to investigate five variables that influence the success of nearshoring projects and to determine which of these variables has the greatest impact. A quantitative (deductive) survey was conducted to map the various effects of these variables' various strengths. The main research question for this study was: 'What are dimensions that have an impact on the success of nearshoring projects?'. With the support of a survey, 92 individuals provided a valuable set of information. Participants were selected mostly through private channels, such as LinkedIn direct messaging, and through the publication of a weekly post in seven LinkedIn Groups containing a banner with a link to the survey.

Based on our research question, we believe that Trust is critical to the success of nearshore projects. The transfer of knowledge and the liaison quality between on-site and nearshore staff also has a significant impact on success. On the other hand, nearshoring expertise has little to no effect on these arrangements and measuring the success of a nearshore project based on a project's suitability is unreliable. Lastly, the data suggests that the COVID-19 pandemic may signal an increase in nearshoring projects worldwide.

The overall conclusion of this study is that if you place a high value on Trust, share project-related technology/process knowledge between locations, and collaborate closely, you will be able to achieve greater success with your nearshore transition projects.

8.2. Further research

As stated previously, the sample size for this study is 92 responses from a global audience. With only 35 buyer respondents, this may be considered a small sample size, so we recommend, for future research, to target a larger audience, particularly for global research studies. By limiting the generalizability of the discoveries in this manner, you may be able to create new or different insights.

Another suggestion for future research is to attempt to balance the countries or regions used in the research. This could result in less bias towards a certain country, region or culture. This also accounts for other biases, such as different types of sourcing: In-house (captive) versus third party (outsourcing).

Additionally, qualitative research could be used to examine the success of nearshoring projects in a different manner. This prevents asking the same questions and receiving similar responses, so it could generate new insights by getting open-ended and detailed answers.

Since nearshoring is an increasing trend, it is possible that more research will be conducted in the coming years. By applying these new studies to the topic of nearshore project success, you could obtain more concrete data on the subject.

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Appendix A – Overview of statements from previous studies

Dimension	Indicator	Statement	Based on
Nearshoring expertise	OS_NSEXP_1	At the start, most project team members were already experienced in nearshore arrangements.	Carmel and Agarwal 2002, Westner 2009
	OS_NSEXP_2	At the start our company had already performed many projects in nearshore arrangements.	
	OS_NSEXP_3	At the start, our company had dedicated processes and organizational structures in place to plan, manage, and execute nearshore arrangements.	
	OS_NSEXP_4	Overall, we considered our level of nearshoring expertise to be high.	
Trust in Nearshore Service Provider (NSP)	OS_TRUST_1	After starting with the NSP we realized that its staff made good decisions under any circumstances.	Lee et al. 2008
	OS_TRUST_2	After starting with the NSP we realized that its staff was willing to provide assistance without exception.	
	OS_TRUST_3	After starting with the NSP we felt that its staff reliably provided pre-specified support.	
	OS_TRUST_4	After starting with the NSP we felt that its staff was honest.	
	OS_TRUST_5	After starting with the NSP we felt that its staff cared about the on-site staff.	
	OS_TRUST_6	Overall, we felt that we could trust the NSP staff.	
Project suitability	OS_SUITA_1	The nearshored project's effort (in person-months) was rather large.	Westner 2009
	OS_SUITA_2	The nearshored project's duration was short.	
	OS_SUITA_3	The primary operating language of the project was English.	
	OS_SUITA_4	Most of the information and knowledge about the project was well documented.	
	OS_SUITA_5	The project required business-specific know-how of staff members.	
Knowledge transfer	OS_KNOWT_1	The NSP staff had learned a great deal about the project-related technology/process know-how.	Lee et al. 2008, Simonin 1999
	OS_KNOWT_2	The NSP staff reduced its reliance or dependence upon us during the project.	
	OS_KNOWT_3	Overall, we were satisfied with the knowledge transition between us and the NSP staff during the project	
Liaison quality	OS_LIAISO_1	During the project our staff and NSP staff communicated openly.	Erickson and Ranganathan 2006, Xu and Yao 2006
	OS_LIAISO_2	During the project our staff and NSP staff developed a mutual understanding of the respective ethnic and corporate cultures.	
	OS_LIAISO_3	During the project our staff and NSP staff perceived themselves as equal and recognized members of the project team.	
	OS_LIAISO_4	During the project our staff and NSP staff formed close working connections with each other.	

	OS_LIAISO_5	Overall, we were satisfied with the working liaison between our staff and NSP staff.	
Nearshore project success	OS_SUCCESS_1	How satisfied was your organization with the project plan/time schedule.	Erickson and Ranganathan 2006, Grover et al. 1996, Wüllenweber et al. 2008
	OS_SUCCESS_2	How satisfied was your organization with the project budget.	
	OS_SUCCESS_3	How satisfied was your organization with the project functionality.	
	OS_SUCCESS_4	How satisfied was your organization with the project quality.	
	OS_SUCCESS_5	How satisfied was your organization with the overall outcome of our nearshore arrangement.	

Table 30: Measurement instrument for research model (buyer-side)

Dimension	Indicator	Statement	Based on
Nearshoring expertise	NS_NSEXP_1	At the start, most project team members were already experienced in nearshore arrangements.	Carmel and Agarwal 2002, Westner 2009
	NS_NSEXP_2	At the start our company had already performed many projects in nearshore arrangements.	
	NS_NSEXP_3	At the start, our company had dedicated processes and organizational structures in place to plan, manage, and execute nearshore arrangements.	
	NS_NSEXP_4	Overall, we considered our level of nearshoring expertise to be high.	
Trust in on-site staff	NS_TRUST_1	After starting with the on-site staff we realized that they made good decisions under any circumstances.	Lee et al. 2008
	NS_TRUST_2	After starting with the on-site staff we realized that they were willing to provide assistance without exception.	
	NS_TRUST_3	After starting with the on-site staff we felt that they reliably provided pre-specified support.	
	NS_TRUST_4	After starting with the on-site staff we felt that they were honest.	
	NS_TRUST_5	After starting with the on-site staff we felt that they cared about the nearshore staff.	
	NS_TRUST_6	Overall, we felt that we could trust the on-site staff.	
Project suitability	NS_SUITA_1	The nearshored project's effort (in person-months) was rather large.	Westner 2009
	NS_SUITA_2	The nearshored project's duration was short.	
	NS_SUITA_3	The primary operating language of the project was English.	
	NS_SUITA_4	Most of the information and knowledge about the project was well documented.	
	NS_SUITA_5	The project required business-specific know-how of staff members.	
Knowledge transfer	NS_KNOWT_1	The on-site staff had a great deal of expertise of project-related technology/process know-how.	Lee et al. 2008, Simonin 1999
	NS_KNOWT_2	The on-site staff reduced its reliance or dependence upon us during the project.	

	NS_KNOWT_3	Overall, we were satisfied with the knowledge transition between us and the on-site staff during the project.	
Liaison quality	NS_LIAISO_1	During the project our staff and on-site staff communicated openly.	Erickson and Ranganathan 2006, Xu and Yao 2006
	NS_LIAISO_2	During the project our staff and on-site staff developed a mutual understanding of the respective ethnic and corporate cultures.	
	NS_LIAISO_3	During the project our staff and on-site staff perceived themselves as equal and recognized members of the project team.	
	NS_LIAISO_4	During the project our staff and on-site staff formed close working connections with each other.	
	NS_LIAISO_5	Overall, we were satisfied with the working liaison between our staff and on-site staff.	
Nearshore project success	NS_SUCCESS_1	How satisfied was your organization with the project plan/time schedule.	Erickson and Ranganathan 2006, Grover et al. 1996, Wüllenweber et al. 2008
	NS_SUCCESS_2	How satisfied was your organization with the project budget.	
	NS_SUCCESS_3	How satisfied was your organization with the project functionality.	
	NS_SUCCESS_4	How satisfied was your organization with the project quality.	
	NS_SUCCESS_5	How satisfied was your organization with the overall outcome of our nearshore arrangement.	

Table 31: Measurement instrument for research model (supplier-side)

Appendix B – Survey design

Start of Block: Page 1 - Introduction

Intro landing page
Dear Participant,

This survey identifies **success factors for nearshoring transition projects of IT Services**. By completing this survey you contribute to research that supports in improving future nearshore transitions.

The survey takes **approximately** 10 minutes to finish. Your response to this questionnaire will be fully anonymous, no personal data is requested. All responses will only be used in aggregated form and your personal results will not be released to anyone.

Elias de Beer
Master student ICT in Business at Leiden University

Dr. Christoph J. Stettina
Professor at Leiden University

End of Block: Page 1 - Introduction

Start of Block: Page 2 - Demographics

Q1 - Country
What is the size of your organization in terms of employees?

- Less than 1001 employees
- 1001 to 5000 employees
- 5001 to 25.000 employees
- More than 25.000 employees

Q2 - Industry
Which of the following sectors best describes the industry you primarily work in?

▼ Banking & insurance ... Other

Q3 - Years of exp
How many years of experience in near-/offshoring do you have?

- Less than 1 year
- 1 to 2 years
- 3 to 5 years
- 6 to 9 years
- More than 10 years

Q4.1 - Involvement
Have you ever been involved as a buyer/supplier in a nearshoring project?

- Yes
- No

Q5 - NS engagement
Have you engaged in at least one (nearly) finalized IT Services nearshore transition project?
A nearshore transition project is a focused on relocating people, processes and/or technology from on-site to a nearshore location.

- Yes
- No

Page Break

Intro 2nd part
This is the second part of the survey.

Now think of one **specific recent IT Services nearshore transition project** and respond to the following questions based on your own experience.

This type of project is about relocating the client's IT Services to a nearshore location. It can be moved to a third party (outsourced) or kept in-house.

Page Break

This is the second part of the survey.

Now think of **one specific recent IT Services nearshore transition project** and respond to the following questions based on your own experience.

Q6 - OS country
Which country does the work **originate from**?
Choose the "customer" country; on-site location

▼ Albania ... Uruguay

Q7 - NS country
Which country is the work **nearshored to**?
Choose the "vendor" country; nearshore location

▼ Albania ... Uruguay

Q8 - Year of finish
In which **year** did the nearshore transition project **finish**?
The year of the work becoming operational on the nearshore location.

_____

Q9 - Managerial pos
Which option best describes your role during the project?

- Business Unit Management
- Contract / Commercial Management
- Leadership / Management / Board of Directors or similar
- Legal
- IT / Technical / Developer
- Procurement / Supply Management
- Project Management
- Other (please specify): _____

Q10 - Sourcing type
Which type of sourcing applies to the buyer/supplier relationship?

- In-house (captive); *Captive sourcing is the process of establishing and operating from a dedicated facility to perform your own work*
- Third party (outsourcing); *Outsourcing is the process of delegating this work to a third-party organization*

Q11 - Perspective
Which side did you mostly represent during the project?

- Buyer-side / On-site inhouse (receiver of nearshore services)
- Supplier side / Inhouse nearshore location (provider of nearshore services)

Page Break

Q12 - IT Services
Which type of IT Services were relocated during this project?
Multiple answers possible

- Administrative services
- Application services
- End-user support
- Networks / telecommunications management
- Procurement services
- System planning & management
- Systems operations
- Other (please specify): _____

Q13 - PM method

What project/product management method was used throughout the project?

- Traditional Project Management (e.g. PRINCE2, PMBoK, etc.)
- Agile Project/Product Management (e.g. Scrum, Kanban, etc.)
- Both or combination (e.g. PRINCE2 Agile)
- None

Q14 - Sourcing model

Which sourcing model applies to the nearshored team?

The level of team governance and responsibility distribution between client (on-site) and vendor (nearshore).

- Managed Service; *When a vendor takes complete end-to-end responsibility*
- Project execution and delivery/Managed Delivery; *When a vendor takes execution responsibility for the project and its staff*
- Managed Capacity; *The client requests a certain quantity of person-days who are partially managed by the vendor*
- Staff Augmentation/Unmanaged Capacity; *Is used when individuals are sourced without steering from vendor's side (nearshore location)*
- Don't know

Display This Question:

If Which side did you mostly represent during the project? = Buyer-side / On-site inhouse (receiver of nearshore services)

Q15.1 - Intention

What were the reasons to execute this project **in a nearshore location**?

Multiple answers possible

- Access to skills/capabilities
- Business alignment improvement
- Complexity reduction
- Cost reduction
- Focus on core capabilities
- Improvement of service quality
- Innovation
- Limited capacity or capacity shortage
- Risk reduction
- Stakeholder management improvement
- Team morale improvement
- Other (please specify): _____

Display This Question:

If Which side did you mostly represent during the project? = Buyer-side / On-site inhouse (receiver of nearshore services)

Q15.2 - NS reasons

What were the reasons to execute this project **to this specific geographical location**?

Multiple answers possible

- Access to skills/capabilities
- Common language
- Company politics
- Cost reduction
- Cultural understanding
- (Geo-)political stability
- Risk reduction
- Similar timezones
- Other (please specify): _____

End of Block: Page 2 - Demographics

Start of Block: Page 3 - Statements for on-site experts (buyer)

Display This Question:

If Which side did you mostly represent during the project? = Buyer-side / On-site inhouse (receiver of nearshore services)

Intro for on-site

This is the final part of the survey.

It consists of 6 topics related to nearshoring success: *Nearshoring expertise, Trust in Nearshore Service Provider (NSP), Project suitability, Knowledge transfer, Liaison quality and Nearshore project success.*

This section compares the relationship between on-site and nearshore staff. The **buyer/consumer is on-site** staff, they wished to nearshore their people, processes and/or technology. The **(in-house or external) supplier is nearshore** staff, they are supplier of people, processes and/or technology in a nearby country of the consumer.

Please answer the following statements regarding the same nearshore transition project that you were involved in, based on your own experience.

Page Break

Display This Question:

If Which side did you mostly represent during the project? = Buyer-side / On-site inhouse (receiver of nearshore services)

S1-S4 - OS NSEXP

Nearshoring expertise

"Our company" = on-site company (buyer/consumer)

"We" = on-site staff

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
At the start, most project team members were already experienced in nearshore arrangements.	○	○	○	○	○	○	○
At the start our company had already performed many projects in nearshore arrangements.	○	○	○	○	○	○	○
At the start, our company had dedicated processes and organizational structures in place to plan, manage, and execute nearshore arrangements.	○	○	○	○	○	○	○
Overall, we considered our level of nearshoring expertise to be high.	○	○	○	○	○	○	○

Display This Question:

If Which side did you mostly represent during the project? = Buyer-side / On-site inhouse (receiver of nearshore services)

S5-S10 - OS TRUST

Trust in Nearshore Service Provider (NSP)

A Nearshore Service Provider can be in-house or outsource

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
After starting with the NSP we realized that its staff made good decisions under any circumstances.	○	○	○	○	○	○	○
After starting with the NSP we realized that its staff was willing to provide assistance without exception.	○	○	○	○	○	○	○
After starting with the NSP we felt that its staff reliably provided pre-specified support.	○	○	○	○	○	○	○
After starting with the NSP we felt that its staff was honest.	○	○	○	○	○	○	○
After starting with the NSP we felt that its staff cared about the on-site staff.	○	○	○	○	○	○	○
Overall, we felt that we could trust the NSP staff.	○	○	○	○	○	○	○

Page Break

Display This Question:

If Which side did you mostly represent during the project? = Buyer-side / On-site inhouse (receiver of nearshore services)

S11-S15 - OS SUITA

Project suitability

Measuring the readiness level of the nearshore transition project

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
The nearshored project's effort (in person-months) was rather large.	○	○	○	○	○	○	○
The nearshored project's duration was short.	○	○	○	○	○	○	○
The primary operating language of the project was English.	○	○	○	○	○	○	○
Most of the information and knowledge about the project was well documented.	○	○	○	○	○	○	○
The project required business-specific know-how of staff members.	○	○	○	○	○	○	○

Display This Question:

If Which side did you mostly represent during the project? = Buyer-side / On-site inhouse (receiver of nearshore services)

S16-S18 - OS KNOWT

Knowledge transfer

From on-site to nearshore

**NSP = Nearshore Service Provider (in-house/external)*

"We"/"us" = on-site staff

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
The NSP* staff had learned a great deal about the project-related technology/process know-how.	○	○	○	○	○	○	○
The NSP staff reduced its reliance or dependence upon us during the project.	○	○	○	○	○	○	○
Overall, we were satisfied with the knowledge transition between us and the NSP staff during the project	○	○	○	○	○	○	○

Page Break

Display This Question:

If Which side did you mostly represent during the project? = Buyer-side / On-site inhouse (receiver of nearshore services)

S19-S23 - OS LIAISO

Liaison quality

From on-site to nearshore

"We"/"our staff" = on-site staff

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
During the project our staff and NSP staff communicated openly.	○	○	○	○	○	○	○
During the project our staff and NSP staff developed a mutual understanding of the respective ethnic and corporate cultures.	○	○	○	○	○	○	○
During the project our staff and NSP staff perceived themselves as equal and recognized members of the project team.	○	○	○	○	○	○	○
During the project our staff and NSP staff formed close working connections with each other.	○	○	○	○	○	○	○
Overall, we were satisfied with the working liaison between our staff and NSP staff.	○	○	○	○	○	○	○

Display This Question:

If Which side did you mostly represent during the project? = Buyer-side / On-site inhouse (receiver of nearshore services)

S24-S28 - OS SUCCESS

Nearshore project success

Measuring the level of nearshore transition project success

	Extremely dissatisfied	Moderately dissatisfied	Slightly dissatisfied	Neither satisfied nor dissatisfied	Slightly satisfied	Moderately satisfied	Extremely satisfied	Don't know
How satisfied was your organization with the project plan/time schedule.	○	○	○	○	○	○	○	○
How satisfied was your organization with the project budget.	○	○	○	○	○	○	○	○
How satisfied was your organization with the project functionality.	○	○	○	○	○	○	○	○
How satisfied was your organization with the project quality.	○	○	○	○	○	○	○	○
How satisfied was your organization with the overall outcome of our nearshore arrangement.	○	○	○	○	○	○	○	○

End of Block: Page 3 - Statements for on-site experts (buyer)

Start of Block: Page 4 - Statements for nearshore experts (supplier)

Display This Question:

If Which side did you mostly represent during the project? = Supplier side / Inhouse nearshore location (provider of nearshore services)

Intro for nearshore

This is the final part of the survey.

It consists of 6 topics related to nearshoring success: *Nearshoring expertise, Trust in on-site staff, Project suitability, Knowledge transfer, Liaison quality and Nearshore project success.*

This section compares the relationship between on-site and nearshore staff. The **buyer/consumer is on-site** staff, they wished to nearshore their people, processes and/or technology. The **(in-house or external) supplier is nearshore** staff, they are supplier of people, processes and/or technology in a nearby country of the consumer.

Please answer the following statements regarding the same nearshore transition project that you were involved in, based on your own experience.

Page Break

Display This Question:

If Which side did you mostly represent during the project? = Supplier side / Inhouse nearshore location (provider of nearshore services)

S1-S4 - NS NSEXP

Nearshoring expertise

"Our company"/"we" = (in-house or external) Nearshore Service Provider

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
At the start, most project team members were already experienced in nearshore arrangements.	○	○	○	○	○	○	○
At the start our company had already performed many projects in nearshore arrangements.	○	○	○	○	○	○	○
At the start, our company had dedicated processes and organizational structures in place to plan, manage, and execute nearshore arrangements.	○	○	○	○	○	○	○
Overall, we considered our level of nearshoring expertise to be high.	○	○	○	○	○	○	○

Display This Question:

If Which side did you mostly represent during the project? = Supplier side / Inhouse nearshore location (provider of nearshore services)

S5-S10 - NS TRUST

Trust in on-site staff

"We" = (in-house or external) Nearshore Service Provider

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
After starting with the on-site staff we realized that they made good decisions under any circumstances.	○	○	○	○	○	○	○
After starting with the on-site staff we realized that they were willing to provide assistance without exception.	○	○	○	○	○	○	○
After starting with the on-site staff we felt that they reliably provided pre-specified support.	○	○	○	○	○	○	○
After starting with the on-site staff we felt that they were honest.	○	○	○	○	○	○	○
After starting with the on-site staff we felt that they cared about the nearshore staff.	○	○	○	○	○	○	○
Overall, we felt that we could trust the on-site staff.	○	○	○	○	○	○	○

Page Break

Display This Question:

If Which side did you mostly represent during the project? = Supplier side / Inhouse nearshore location (provider of nearshore services)

S11-S15 - NS SUITA

Project suitability

Measuring the readiness level of the nearshore transition project

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
The nearshored project's effort (in person-months) was rather large.	○	○	○	○	○	○	○
The nearshored project's duration was short.	○	○	○	○	○	○	○
The primary operating language of the project was English.	○	○	○	○	○	○	○
Most of the information and knowledge about the project was well documented.	○	○	○	○	○	○	○
The project required business-specific know-how of staff members.	○	○	○	○	○	○	○

Display This Question:

If Which side did you mostly represent during the project? = Supplier side / Inhouse nearshore location (provider of nearshore services)

S16-S18 - NS KNOWT

Knowledge transfer

From nearshore to on-site

"We"/"us" = (in-house or external) Nearshore Service Provider

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
The on-site staff had a great deal of expertise of project-related technology/process know-how.	○	○	○	○	○	○	○
The on-site staff reduced its reliance or dependence upon us during the project.	○	○	○	○	○	○	○
Overall, we were satisfied with the knowledge transition between us and the on-site staff during the project.	○	○	○	○	○	○	○

Page Break

Display This Question:

If Which side did you mostly represent during the project? = Supplier side / Inhouse nearshore location (provider of nearshore services)

S19-S23 - NS LIAISO

Liaison quality

From nearshore to on-site

"We"/"our staff" = (in-house or external) Nearshore Service Provider

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
During the project our staff and on-site staff communicated openly.	○	○	○	○	○	○	○
During the project our staff and on-site staff developed a mutual understanding of the respective ethnic and corporate cultures.	○	○	○	○	○	○	○
During the project our staff and on-site staff perceived themselves as equal and recognized members of the project team.	○	○	○	○	○	○	○
During the project our staff and on-site staff formed close working connections with each other.	○	○	○	○	○	○	○
Overall, we were satisfied with the working liaison between our staff and on-site staff.	○	○	○	○	○	○	○

Display This Question:

If Which side did you mostly represent during the project? = Supplier side / Inhouse nearshore location (provider of nearshore services)

S24-S28 - NS SUCCESS

Nearshore project success

Measuring the level of nearshore transition project success

	Extremely dissatisfied	Moderately dissatisfied	Slightly dissatisfied	Neither satisfied nor dissatisfied	Slightly satisfied	Moderately satisfied	Extremely satisfied	Don't know
How satisfied was your organization with the project plan/time schedule.	○	○	○	○	○	○	○	○
How satisfied was your organization with the project budget.	○	○	○	○	○	○	○	○
How satisfied was your organization with the project functionality.	○	○	○	○	○	○	○	○
How satisfied was your organization with the project quality.	○	○	○	○	○	○	○	○
How satisfied was your organization with the overall outcome of our nearshore arrangement.	○	○	○	○	○	○	○	○

End of Block: Page 4 - Statements for nearshore experts (supplier)

Start of Block: Page 5 - Final thoughts

Final thoughts
Final thoughts

Do you have additional comments for the survey/research in general?

_____

_____

_____

_____

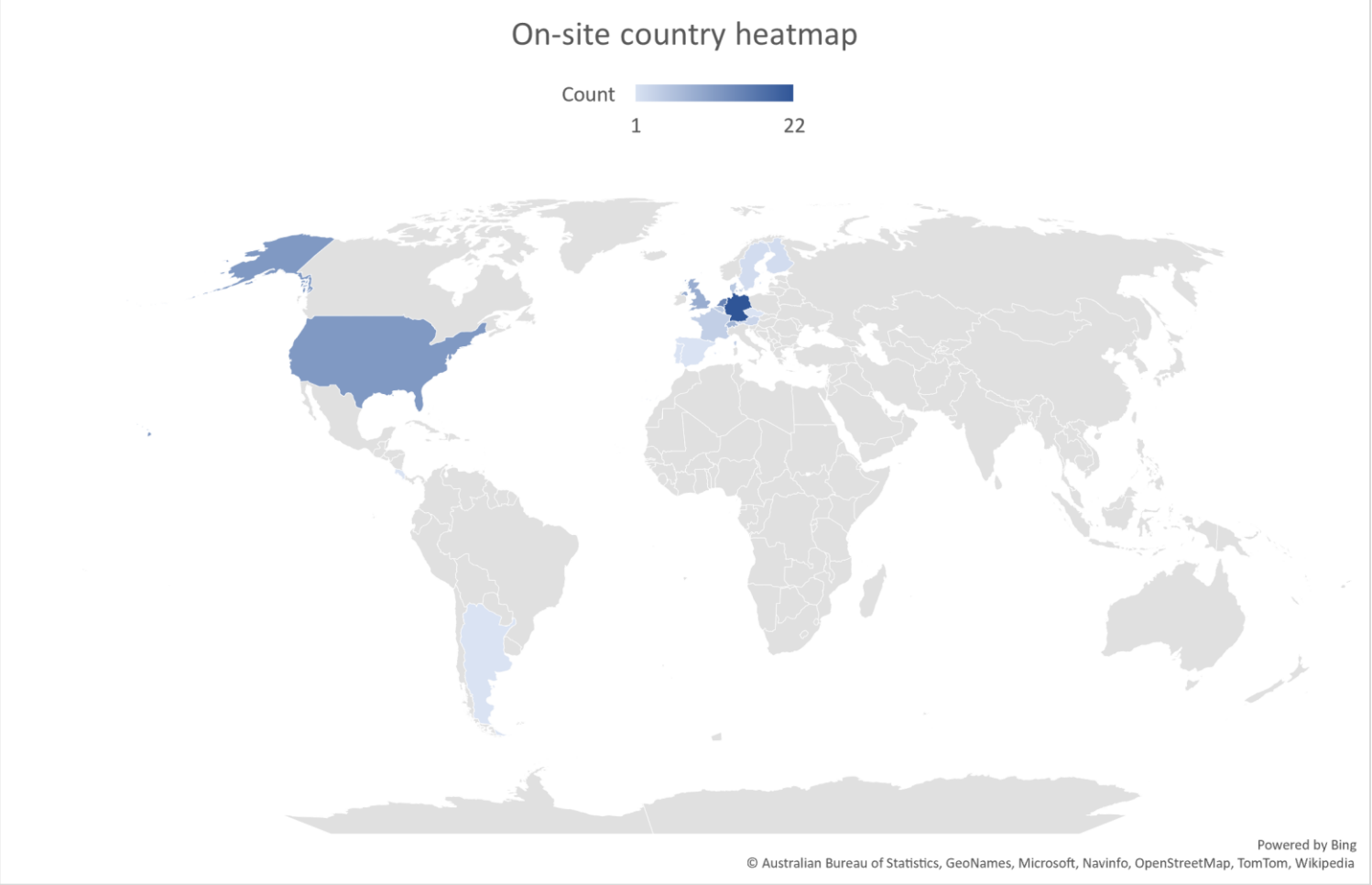
_____

E-mail address
If you would like to receive the research results, please write your e-mail address below.
This is only for sending results, not for analysis

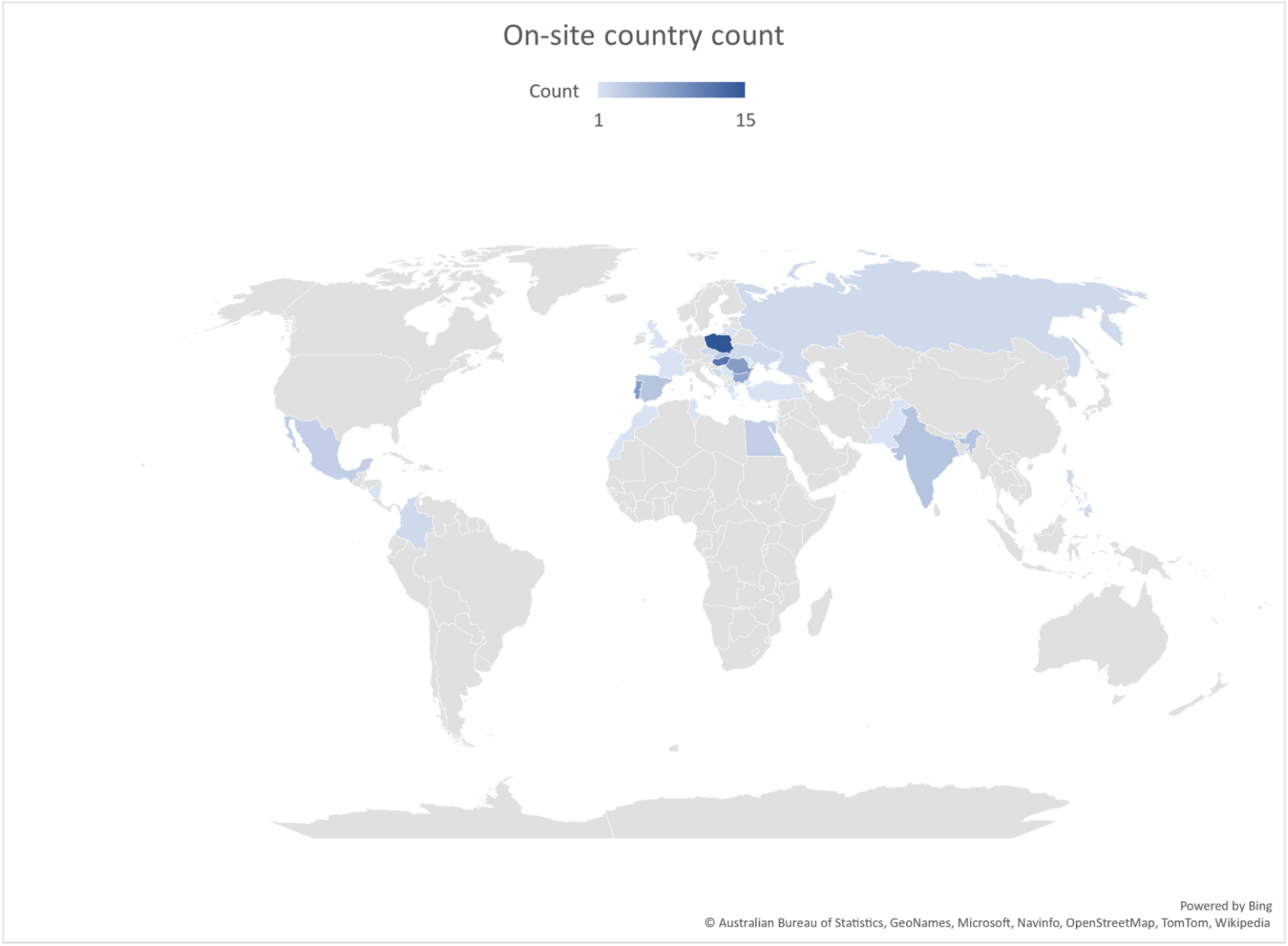
_____

End of Block: Page 5 - Final thoughts

Appendix C – Heatmap of respondents on-site global distribution



Appendix D – Heatmap of respondents nearshore global distribution



Appendix E – Descriptive statistics (full sample)

Descriptive Statistics

Descriptive Statistics

	NSEXP	TRUST	SUITA	KNOWT	LIAISO	SUCCESS
Valid	92	92	92	92	92	92
Mode	6.000	6.000	5.000	6.000	6.000	6.000
Median	5.000	6.000	5.000	5.000	6.000	6.000
Mean	4.989	5.522	4.957	5.207	5.609	6.000
Std. Deviation	1.763	1.288	0.769	1.172	1.275	1.213
Minimum	1.000	1.000	3.000	1.000	1.000	1.000
Maximum	7.000	7.000	7.000	7.000	7.000	7.000

Appendix F – Undimensional Reliability test results (Full sample)

Unidimensional Reliability [NSEXP]

Frequentist Scale Reliability Statistics

Estimate	Cronbach's α	mean	sd
Point estimate	0.895	19.696	6.944
95% CI lower bound	0.853	18.277	6.065
95% CI upper bound	0.927	21.115	8.123

Frequentist Individual Item Reliability Statistics

	If item dropped		
Item	Cronbach's α	mean	sd
NSEXP_1	0.929	4.587	1.962
NSEXP_2	0.845	4.978	1.972
NSEXP_3	0.851	5.022	2.075
NSEXP_4	0.825	5.109	1.947

Unidimensional Reliability [TRUST]

Frequentist Scale Reliability Statistics

Estimate	Cronbach's α	mean	sd
Point estimate	0.938	32.315	7.477
95% CI lower bound	0.914	30.787	6.531
95% CI upper bound	0.955	33.843	8.747

Frequentist Individual Item Reliability Statistics

	If item dropped		
Item	Cronbach's α	mean	sd
TRUST_1	0.932	5.163	1.455
TRUST_2	0.921	5.359	1.523
TRUST_3	0.933	5.185	1.452
TRUST_4	0.915	5.598	1.367
TRUST_5	0.925	5.380	1.489
TRUST_6	0.929	5.630	1.264

Unidimensional Reliability [SUITA]

Frequentist Scale Reliability Statistics

Estimate	Cronbach's α	mean	sd
Point estimate	0.211	24.707	3.645
95% CI lower bound	-0.070	23.962	3.184
95% CI upper bound	0.431	25.451	4.264

Frequentist Scale Reliability Statistics

Estimate	Cronbach's α	mean	sd

Note. The following item correlated negatively with the scale: SUITA_2.

Frequentist Individual Item Reliability Statistics

	If item dropped		
Item	Cronbach's α	mean	sd
SUITA_1	0.303	5.098	1.318
SUITA_2	0.455	3.261	1.575
SUITA_3	0.021	6.065	1.715
SUITA_4	-0.201	4.837	1.633
SUITA_5	0.068	5.446	1.103

Unidimensional Reliability [KNOWT]

Frequentist Scale Reliability Statistics

Estimate	Cronbach's α	mean	sd
Point estimate	0.754	15.739	3.505
95% CI lower bound	0.650	15.023	3.061
95% CI upper bound	0.832	16.455	4.100

Frequentist Individual Item Reliability Statistics

	If item dropped		
Item	Cronbach's α	mean	sd
KNOWT_1	0.589	5.315	1.406
KNOWT_2	0.795	4.967	1.478
KNOWT_3	0.619	5.457	1.394

Unidimensional Reliability [LIAISO]

Frequentist Scale Reliability Statistics

Estimate	Cronbach's α	mean	sd
Point estimate	0.938	27.717	6.068
95% CI lower bound	0.915	26.477	5.300
95% CI upper bound	0.956	28.957	7.098

Frequentist Individual Item Reliability Statistics

	If item dropped		
Item	Cronbach's α	mean	sd
LIAISO_1	0.921	5.630	1.340
LIAISO_2	0.918	5.717	1.287
LIAISO_3	0.940	5.283	1.424

Frequentist Individual Item Reliability Statistics

Item	If item dropped Cronbach's α	mean	sd
LIAISO_4	0.924	5.457	1.304
LIAISO_5	0.917	5.630	1.412

Unidimensional Reliability [SUCCESS]

Frequentist Scale Reliability Statistics

Estimate	Cronbach's α	mean	sd
Point estimate	0.911	28.957	6.530
95% CI lower bound	0.877	27.622	5.703
95% CI upper bound	0.937	30.291	7.638

Note. Of the observations, pairwise complete cases were used.

Frequentist Individual Item Reliability Statistics

Item	If item dropped Cronbach's α	mean	sd
SUCCESS_1	0.900	5.879	1.397
SUCCESS_2	0.915	5.884	1.305
SUCCESS_3	0.885	6.000	1.291
SUCCESS_4	0.878	6.033	1.394
SUCCESS_5	0.874	6.000	1.430

Appendix G – Undimensional Reliability test results (Supplier perspective)

Unidimensional Reliability [NS_NSEXP]

Frequentist Scale Reliability Statistics

Estimate	Cronbach's α	mean	sd
Point estimate	0.889	5.430	1.570
95% CI lower bound	0.828	5.022	1.325
95% CI upper bound	0.931	5.837	1.926

Frequentist Individual Item Reliability Statistics

Item	If item dropped Cronbach's α	mean	sd
NS_NSEXP_1	0.931	5.088	1.776
NS_NSEXP_2	0.835	5.509	1.824
NS_NSEXP_3	0.819	5.474	1.872
NS_NSEXP_4	0.828	5.649	1.778

Unidimensional Reliability [NS_TRUST]

Frequentist Scale Reliability Statistics

Estimate	Cronbach's α	mean	sd
Point estimate	0.939	5.365	1.254
95% CI lower bound	0.910	5.040	1.058
95% CI upper bound	0.960	5.691	1.538

Frequentist Individual Item Reliability Statistics

Item	If item dropped Cronbach's α	mean	sd
NS_TRUST_1	0.929	5.263	1.458
NS_TRUST_2	0.923	5.298	1.535
NS_TRUST_3	0.933	5.246	1.467
NS_TRUST_4	0.917	5.509	1.428
NS_TRUST_5	0.924	5.281	1.424
NS_TRUST_6	0.939	5.596	1.266

Unidimensional Reliability [NS_SUITA]

Frequentist Scale Reliability Statistics

Estimate	Cronbach's α	mean	sd
Point estimate	0.391	4.881	0.808
95% CI lower bound	0.119	4.671	0.682

Frequentist Scale Reliability Statistics

Estimate	Cronbach's α	mean	sd
95% CI upper bound	0.594	5.090	0.991

Note. The following item correlated negatively with the scale: NS_SUITA_2.

Frequentist Individual Item Reliability Statistics

	If item dropped		
Item	Cronbach's α	mean	sd
NS_SUITA_1	0.462	5.105	1.319
NS_SUITA_2	0.554	3.123	1.402
NS_SUITA_3	0.175	5.947	1.931
NS_SUITA_4	0.019	4.789	1.623
NS_SUITA_5	0.262	5.439	1.069

Unidimensional Reliability [NS_KNOWT]

Frequentist Scale Reliability Statistics

Estimate	Cronbach's α	mean	sd
Point estimate	0.798	5.205	1.215
95% CI lower bound	0.683	4.889	1.025
95% CI upper bound	0.876	5.520	1.490

Frequentist Individual Item Reliability Statistics

	If item dropped		
Item	Cronbach's α	mean	sd
NS_KNOWT_1	0.685	5.228	1.452
NS_KNOWT_2	0.813	4.930	1.498
NS_KNOWT_3	0.674	5.456	1.364

Unidimensional Reliability [NS_LIAISO]

Frequentist Scale Reliability Statistics

Estimate	Cronbach's α	mean	sd
Point estimate	0.932	5.582	1.153
95% CI lower bound	0.897	5.283	0.973
95% CI upper bound	0.957	5.882	1.414

Frequentist Individual Item Reliability Statistics

	If item dropped		
Item	Cronbach's α	mean	sd
NS_LIAISO_1	0.912	5.667	1.314
NS_LIAISO_2	0.911	5.772	1.239
NS_LIAISO_3	0.933	5.316	1.378

Frequentist Individual Item Reliability Statistics

Item	If item dropped Cronbach's α	mean	sd
NS_LIAISO_4	0.918	5.474	1.212
NS_LIAISO_5	0.907	5.684	1.352

Unidimensional Reliability [NS_SUCCESS]

Frequentist Scale Reliability Statistics

Estimate	Cronbach's α	mean	sd
Point estimate	0.930	5.991	1.163
95% CI lower bound	0.894	5.689	0.982
95% CI upper bound	0.955	6.293	1.427

Note. Of the observations, pairwise complete cases were used.

Frequentist Individual Item Reliability Statistics

Item	If item dropped Cronbach's α	mean	sd
NS_SUCCESS_1	0.918	5.947	1.329
NS_SUCCESS_2	0.932	5.722	1.497
NS_SUCCESS_3	0.916	6.035	1.239
NS_SUCCESS_4	0.907	6.161	1.262
NS_SUCCESS_5	0.898	6.054	1.327

Appendix H – Undimensional Reliability test results (Buyer perspective)

Unidimensional Reliability [OS_TRUST]

Frequentist Scale Reliability Statistics

Estimate	Cronbach's α	mean	sd
Point estimate	0.938	5.419	1.251
95% CI lower bound	0.894	5.004	1.012
95% CI upper bound	0.966	5.834	1.640

Frequentist Individual Item Reliability Statistics

Item	If item dropped Cronbach's α	mean	sd
OS_TRUST_1	0.939	5.000	1.455
OS_TRUST_2	0.923	5.457	1.521
OS_TRUST_3	0.935	5.086	1.442
OS_TRUST_4	0.916	5.743	1.268
OS_TRUST_5	0.931	5.543	1.597
OS_TRUST_6	0.915	5.686	1.278

Unidimensional Reliability [OS_SUITA]

Frequentist Scale Reliability Statistics

Estimate	Cronbach's α	mean	sd
Point estimate	-0.400	5.040	0.576
95% CI lower bound	-1.358	4.849	0.466
95% CI upper bound	0.216	5.231	0.754

Note. The following items correlated negatively with the scale: OS_SUITA_2, OS_SUITA_3, OS_SUITA_5.

Frequentist Individual Item Reliability Statistics

Item	If item dropped Cronbach's α	mean	sd
OS_SUITA_1	-0.204	5.086	1.337
OS_SUITA_2	0.156	3.486	1.821
OS_SUITA_3	-0.270	6.257	1.291
OS_SUITA_4	-0.902	4.914	1.669
OS_SUITA_5	-0.578	5.457	1.172

Unidimensional Reliability [OS_KNOWT]

Frequentist Scale Reliability Statistics

Estimate	Cronbach's α	mean	sd
Point estimate	0.668	5.314	1.102
95% CI lower bound	0.403	4.949	0.892
95% CI upper bound	0.825	5.680	1.444

Frequentist Individual Item Reliability Statistics

Item	If item dropped Cronbach's α	mean	sd
OS_KNOWT_1	0.406	5.457	1.336
OS_KNOWT_2	0.769	5.029	1.465
OS_KNOWT_3	0.504	5.457	1.462

Unidimensional Reliability [OS_LIAISO]

Frequentist Scale Reliability Statistics

Estimate	Cronbach's α	mean	sd
Point estimate	0.947	5.480	1.321
95% CI lower bound	0.909	5.042	1.069
95% CI upper bound	0.970	5.918	1.731

Frequentist Individual Item Reliability Statistics

Item	If item dropped Cronbach's α	mean	sd
OS_LIAISO_1	0.933	5.571	1.399
OS_LIAISO_2	0.927	5.629	1.374
OS_LIAISO_3	0.948	5.229	1.516
OS_LIAISO_4	0.933	5.429	1.461
OS_LIAISO_5	0.930	5.543	1.521

Unidimensional Reliability [OS_LIAISO]

Frequentist Scale Reliability Statistics

Estimate	Cronbach's α	mean	sd
Point estimate	0.947	5.480	1.321
95% CI lower bound	0.909	5.042	1.069
95% CI upper bound	0.970	5.918	1.731

Frequentist Individual Item Reliability Statistics

Item	If item dropped Cronbach's α	mean	sd
OS_LIAISO_1	0.933	5.571	1.399
OS_LIAISO_2	0.927	5.629	1.374
OS_LIAISO_3	0.948	5.229	1.516
OS_LIAISO_4	0.933	5.429	1.461
OS_LIAISO_5	0.930	5.543	1.521

Unidimensional Reliability [OS_SUCCESS]

Frequentist Scale Reliability Statistics

Estimate	Cronbach's α	mean	sd
Point estimate	0.883	5.924	1.224
95% CI lower bound	0.811	5.519	0.990
95% CI upper bound	0.931	6.330	1.604

Note. Of the observations, pairwise complete cases were used.

Frequentist Individual Item Reliability Statistics

Item	If item dropped Cronbach's α	mean	sd
OS_SUCCESS_1	0.878	5.765	1.519
OS_SUCCESS_2	0.892	6.156	0.847
OS_SUCCESS_3	0.837	5.941	1.391
OS_SUCCESS_4	0.825	5.824	1.585
OS_SUCCESS_5	0.841	5.909	1.608

Appendix I – Linear regression analysis results (full sample)

Multiple Linear Regression on SUCCESS

Model Summary - SUCCESS

Model	R	R^2	Adjusted R^2	RMSE
H_o	0.000	0.000	0.000	1.213
H_1	0.837	0.701	0.687	0.678

ANOVA

Model		Sum of Squares	df	Mean Square	F	p
H_1	Regression	93.959	4	23.490	51.038	< .001
	Residual	40.041	87	0.460		
	Total	134.000	91			

Note. The intercept model is omitted, as no meaningful information can be shown.

Coefficients

Model		Unstandardized	Standard Error	Standardized	t	p
H_o	(Intercept)	6.000	0.127		47.426	< .001
H_1	(Intercept)	0.906	0.367		2.468	0.016
	NSEXP	0.041	0.044	0.060	0.939	0.350
	TRUST	0.191	0.088	0.203	2.170	0.033
	KNOWT	0.372	0.087	0.359	4.280	< .001
	LIAISO	0.338	0.087	0.355	3.877	< .001

Descriptives

	N	Mean	SD	SE
SUCCESS	92	6.000	1.213	0.127
NSEXP	92	4.989	1.763	0.184
TRUST	92	5.522	1.288	0.134
KNOWT	92	5.207	1.172	0.122
LIAISO	92	5.609	1.275	0.133

Multiple Linear Regression on KNOWT

Model Summary - KNOWT

Model	R	R^2	Adjusted R^2	RMSE
H_o	0.000	0.000	0.000	1.172
H_1	0.694	0.482	0.470	0.853

ANOVA

Model		Sum of Squares	df	Mean Square	F	p
H_1	Regression	60.278	2	30.139	41.396	< .001

ANOVA

Model		Sum of Squares	df	Mean Square	F	p
	Residual	64.798	89	0.728		
	Total	125.076	91			

Note. The intercept model is omitted, as no meaningful information can be shown.

Coefficients

Model		Unstandardized	Standard Error	Standardized	t	p
H_o	(Intercept)	5.207	0.122		42.597	< .001
H_1	(Intercept)	1.440	0.425		3.386	0.001
	NSEXP	0.142	0.052	0.213	2.702	0.008
	TRUST	0.554	0.072	0.609	7.717	< .001

Descriptives

	N	Mean	SD	SE
KNOWT	92	5.207	1.172	0.122
NSEXP	92	4.989	1.763	0.184
TRUST	92	5.522	1.288	0.134

Multiple Linear Regression on LIAISO

Model Summary - LIAISO

Model	R	R^2	Adjusted R^2	RMSE
H_o	0.000	0.000	0.000	1.275
H_1	0.752	0.565	0.555	0.850

ANOVA

Model		Sum of Squares	df	Mean Square	F	p
H_1	Regression	83.567	2	41.783	57.792	< .001
	Residual	64.346	89	0.723		
	Total	147.913	91			

Note. The intercept model is omitted, as no meaningful information can be shown.

Coefficients

Model		Unstandardized	Standard Error	Standardized	t	p
H_o	(Intercept)	5.609	0.133		42.196	< .001
H_1	(Intercept)	1.229	0.424		2.900	0.005
	NSEXP	0.119	0.052	0.164	2.271	0.026
	TRUST	0.686	0.072	0.693	9.587	< .001

Descriptives

	N	Mean	SD	SE
LIAISO	92	5.609	1.275	0.133

Descriptives

	N	Mean	SD	SE
NSEXP	92	4.989	1.763	0.184
TRUST	92	5.522	1.288	0.134

Single Linear Regression on TRUST

Model Summary - TRUST

Model	R	R^2	Adjusted R^2	RMSE
H_o	0.000	0.000	0.000	1.288
H_1	0.254	0.065	0.054	1.253

ANOVA

Model		Sum of Squares	df	Mean Square	F	p
H_1	Regression	9.748	1	9.748	6.213	0.015
	Residual	141.209	90	1.569		
	Total	150.957	91			

Note. The intercept model is omitted, as no meaningful information can be shown.

Coefficients

Model		Unstandardized	Standard Error	Standardized	t	p
H_o	(Intercept)	5.522	0.134		41.121	< .001
H_1	(Intercept)	4.596	0.394		11.671	< .001
	NSEXP	0.186	0.074	0.254	2.493	0.015

Descriptives

	N	Mean	SD	SE
TRUST	92	5.522	1.288	0.134
NSEXP	92	4.989	1.763	0.184

Appendix J – Linear regression analysis results (Buyer perspective)

Multiple Linear Regression on OS_SUCCESS

Model Summary - OS_SUCCESS

Model	R	R^2	Adjusted R^2	RMSE
H_o	0.000	0.000	0.000	1.213
H_1	0.833	0.693	0.653	0.715

ANOVA

Model		Sum of Squares	df	Mean Square	F	p
H_1	Regression	34.672	4	8.668	16.965	< .001
	Residual	15.328	30	0.511		
	Total	50.000	34			

Note. The intercept model is omitted, as no meaningful information can be shown.

Coefficients

Model		Unstandardized	Standard Error	Standardized	t	p
H_o	(Intercept)	6.000	0.205		29.271	< .001
H_1	(Intercept)	0.900	0.632		1.424	0.165
	OS_NSEXP	0.040	0.081	0.058	0.500	0.620
	OS_TRUST	0.223	0.132	0.250	1.690	0.101
	OS_KNOWT	0.436	0.149	0.414	2.922	0.007
	OS_LIAISO	0.251	0.124	0.281	2.022	0.052

Descriptives

	N	Mean	SD	SE
OS_SUCCESS	35	6.000	1.213	0.205
OS_NSEXP	35	4.143	1.751	0.296
OS_TRUST	35	5.543	1.358	0.230
OS_KNOWT	35	5.286	1.152	0.195
OS_LIAISO	35	5.543	1.358	0.230

Multiple Linear Regression on OS_KNOWT

Model Summary - OS_KNOWT

Model	R	R^2	Adjusted R^2	RMSE
H_o	0.000	0.000	0.000	1.152
H_1	0.693	0.480	0.448	0.856

ANOVA

Model		Sum of Squares	df	Mean Square	F	p
H_1	Regression	21.688	2	10.844	14.795	< .001

ANOVA

Model		Sum of Squares	df	Mean Square	F	p
	Residual	23.455	32	0.733		
	Total	45.143	34			

Note. The intercept model is omitted, as no meaningful information can be shown.

Coefficients

Model		Unstandardized	Standard Error	Standardized	t	p
H_o	(Intercept)	5.286	0.195		27.138	< .001
H_1	(Intercept)	1.903	0.652		2.921	0.006
	OS_NSEXP	0.243	0.086	0.369	2.810	0.008
	OS_TRUST	0.429	0.111	0.506	3.853	< .001

Descriptives

	N	Mean	SD	SE
OS_KNOWT	35	5.286	1.152	0.195
OS_NSEXP	35	4.143	1.751	0.296
OS_TRUST	35	5.543	1.358	0.230

Multiple Linear Regression on OS_LIAISO

Model Summary - OS_LIAISO

Model	R	R^2	Adjusted R^2	RMSE
H_o	0.000	0.000	0.000	1.358
H_1	0.678	0.460	0.426	1.029

ANOVA

Model		Sum of Squares	df	Mean Square	F	p
H_1	Regression	28.833	2	14.417	13.628	< .001
	Residual	33.852	32	1.058		
	Total	62.686	34			

Note. The intercept model is omitted, as no meaningful information can be shown.

Coefficients

Model		Unstandardized	Standard Error	Standardized	t	p
H_o	(Intercept)	5.543	0.230		24.150	< .001
H_1	(Intercept)	1.598	0.783		2.041	0.050
	OS_NSEXP	0.106	0.104	0.137	1.026	0.313
	OS_TRUST	0.632	0.134	0.632	4.727	< .001

Descriptives

	N	Mean	SD	SE
OS_LIAISO	35	5.543	1.358	0.230

Descriptives

	N	Mean	SD	SE
OS_NSEXP	35	4.143	1.751	0.296
OS_TRUST	35	5.543	1.358	0.230

Single Linear Regression on OS_TRUST

Model Summary - OS_TRUST

Model	R	R^2	Adjusted R^2	RMSE
H_o	0.000	0.000	0.000	1.358
H_1	0.239	0.057	0.028	1.338

ANOVA

Model		Sum of Squares	df	Mean Square	F	p
H_1	Regression	3.567	1	3.567	1.991	0.168
	Residual	59.119	33	1.791		
	Total	62.686	34			

Note. The intercept model is omitted, as no meaningful information can be shown.

Coefficients

Model		Unstandardized	Standard Error	Standardized	t	p
H_o	(Intercept)	5.543	0.230		24.150	< .001
H_1	(Intercept)	4.777	0.588		8.120	< .001
	OS_NSEXP	0.185	0.131	0.239	1.411	0.168

Descriptives

	N	Mean	SD	SE
OS_TRUST	35	5.543	1.358	0.230
OS_NSEXP	35	4.143	1.751	0.296

Appendix K – Linear regression analysis results (Supplier perspective)

Multiple Linear Regression on NS_SUCCESS

Model Summary - NS_SUCCESS

Model	R	R^2	Adjusted R^2	RMSE
H_o	0.000	0.000	0.000	1.225
H_1	0.845	0.715	0.693	0.679

ANOVA

Model		Sum of Squares	df	Mean Square	F	p
H_1	Regression	60.047	4	15.012	32.590	< .001
	Residual	23.953	52	0.461		
	Total	84.000	56			

Note. The intercept model is omitted, as no meaningful information can be shown.

Coefficients

Model		Unstandardized	Standard Error	Standardized	t	p
H_o	(Intercept)	6.000	0.162		36.986	< .001
H_1	(Intercept)	0.863	0.477		1.807	0.076
	NS_NSEXP	0.040	0.064	0.052	0.634	0.529
	NS_TRUST	0.145	0.124	0.149	1.165	0.249
	NS_KNOWT	0.301	0.118	0.293	2.560	0.013
	NS_LIAISO	0.454	0.131	0.457	3.463	0.001

Descriptives

	N	Mean	SD	SE
NS_SUCCESS	57	6.000	1.225	0.162
NS_NSEXP	57	5.509	1.571	0.208
NS_TRUST	57	5.509	1.255	0.166
NS_KNOWT	57	5.158	1.192	0.158
NS_LIAISO	57	5.649	1.232	0.163

Multiple Linear Regression on NS_KNOWT

Model Summary - NS_KNOWT

Model	R	R^2	Adjusted R^2	RMSE
H_o	0.000	0.000	0.000	1.192
H_1	0.728	0.530	0.512	0.832

ANOVA

Model		Sum of Squares	df	Mean Square	F	p
H_1	Regression	42.154	2	21.077	30.412	< .001

ANOVA

Model		Sum of Squares	df	Mean Square	F	p
	Residual	37.425	54	0.693		
	Total	79.579	56			

Note. The intercept model is omitted, as no meaningful information can be shown.

Coefficients

Model		Unstandardized	Standard Error	Standardized	t	p
H_o	(Intercept)	5.158	0.158		32.667	< .001
H_1	(Intercept)	1.007	0.560		1.799	0.078
	NS_NSEXP	0.131	0.074	0.173	1.758	0.084
	NS_TRUST	0.623	0.093	0.656	6.679	< .001

Descriptives

	N	Mean	SD	SE
NS_KNOWT	57	5.158	1.192	0.158
NS_NSEXP	57	5.509	1.571	0.208
NS_TRUST	57	5.509	1.255	0.166

Multiple Linear Regression on NS_LIAISO

Model Summary - NS_LIAISO

Model	R	R^2	Adjusted R^2	RMSE
H_o	0.000	0.000	0.000	1.232
H_1	0.804	0.646	0.633	0.746

ANOVA

Model		Sum of Squares	df	Mean Square	F	p
H_1	Regression	54.907	2	27.453	49.292	< .001
	Residual	30.076	54	0.557		
	Total	84.982	56			

Note. The intercept model is omitted, as no meaningful information can be shown.

Coefficients

Model		Unstandardized	Standard Error	Standardized	t	p
H_o	(Intercept)	5.649	0.163		34.622	< .001
H_1	(Intercept)	0.942	0.502		1.877	0.066
	NS_NSEXP	0.134	0.067	0.171	2.004	0.050
	NS_TRUST	0.721	0.084	0.734	8.624	< .001

Descriptives

	N	Mean	SD	SE
NS_LIAISO	57	5.649	1.232	0.163

Descriptives

	N	Mean	SD	SE
NS_NSEXP	57	5.509	1.571	0.208
NS_TRUST	57	5.509	1.255	0.166

Single Linear Regression on NS_TRUST

Model Summary - NS_TRUST

Model	R	R^2	Adjusted R^2	RMSE
H_o	0.000	0.000	0.000	1.255
H_1	0.310	0.096	0.080	1.204

ANOVA

Model		Sum of Squares	df	Mean Square	F	p
H_1	Regression	8.483	1	8.483	5.850	0.019
	Residual	79.762	55	1.450		
	Total	88.246	56			

Note. The intercept model is omitted, as no meaningful information can be shown.

Coefficients

Model		Unstandardized	Standard Error	Standardized	t	p
H_o	(Intercept)	5.509	0.166		33.131	< .001
H_1	(Intercept)	4.144	0.586		7.068	< .001
	NS_NSEXP	0.248	0.102	0.310	2.419	0.019

Descriptives

	N	Mean	SD	SE
NS_TRUST	57	5.509	1.255	0.166
NS_NSEXP	57	5.509	1.571	0.208

Appendix L – Dataset

Research Project Survey Data - Elias -