

Communication and Collaboration with a Back Office in India - An Online Survey Study on a Long-Term Virtual Team

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Tutkimuksen tavoitteet

Tukitoimintojen siirtäminen ulkomaille on ollut suosittu ilmiö viime vuosikymmeninä. Tästä on seurannut yrityksille taloudellista hyötyä, mutta virtuaaliympäristössä kommunikoinnissa on ilmennyt ongelmia. Tämän tutkimuksen tavoitteena oli ymmärtää, miten luottamus vaikuttaa kommunikaatioon ja yhteistyöhön Intiaan siirrettyjen tukitoimintojen ja heidän eurooppalaisten kollegoidensa välillä. Lisäksi tutkitaan Romaniassa sijaitsevien asiakasrajapinnassa toimivien tukitoimintojen sekä kommunikaatiotyökalujen tärkeyttä tässä ympäristössä. Olemassa olevat tutkimukset ovat keskittyneet lähinnä väliaikaisiin virtuaali-tiimeihin. Tässä tutkimuksessa tarkastellaan jatkuvassa ja pitkäaikaisessa toiminnassa olevaa virtuaali-tiimiä. Aiemmissä tutkimuksissa kommunikaatioon ja yhteistyöhön vaikuttaviksi osatekijöiksi löydettiin luottamus, teknologia (työkalut), individualismi ja kieli.

Tutkimusmenetelmä

Tutkimusongelmaa testattiin erään suuren kansainvälisen yrityksen kontekstissa, jossa tutkimuskohteena oli yrityksen Euroopan alueen operatiivinen työryhmä. Tutkimus oli kvantitatiivinen ja aineisto kerättiin käyttämällä sähköistä kyselylomaketta. Kysely lähetettiin Intiassa sijaitsevalle tukitoimintotiimille, Romaniassa sijaitsevalle asiakasrajapintatiimille, sekä ympäri Eurooppaa sijaitseville tiimeille pääkonttoreissa. Tutkimukseen valittu populaatio on tyypillinen esimerkki tukitoimintojen järjestämisestä eurooppalaisesta näkökulmasta. Kyselyyn saatiin 195 vastausta, ja vastausaste oli 14,9 %. Aineiston analyysi suoritettiin käyttämällä t-testiä sekä regressioanalyysia.

Tulokset ja päätelmä

Tutkimuksen tulokset näyttivät, että lähempänä sijaitsevien (Romania) toimintojen käyttäminen helpottaa kommunikaatiota etenkin pääkonttoreissa, joista töitä on siirretty tukitoiminnoille. Avain onnistumiseen lienee oikean tasapainon löytämisessä kaukana ja lähellä sijaitsevien tukitoimintojen välillä. Tutkimuksen tulokset tukevat olemassa olevaa kirjallisuutta siltä osin, että luottamuksen puutteen löydettiin vaikuttavan virtuaaliseen työympäristöön, mutta pitkäaikaisessa työympäristössä sen vaikutus vähenee ajan myötä. Kollegoiden tutustuminen toisiinsa assosioitiin myönteisesti luottamukseen. Kielitaidon ei osoitettu vaikuttavan luottamukseen, mutta on huomioitava, että eri tiimeissä ja maissa puhutaan 'erilaisia englanteja'. Työryhmien jäseniltä kysyttäessä miten parantaa kommunikaatiota, saatiin hyvin erilaisia vastauksia sijainnista riippuen. Eurooppalaiset korostivat useammin kasvokkain tapaamisen tärkeyttä. Yhtenä tiiminä yhteisin tavoitein työskentely on suositeltavaa, mutta jokaisen tiimin on paikallisesti löydettävä paras tapa saavuttaa nämä tavoitteet.

Avainsanat virtuaali-tiimit, kommunikaatio, individualismi, luottamus, Intia, ulkomainen liike-toiminta, tukitoiminnot, kvantitatiivinen analyysi, internet kysely

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Objectives of the Study

Farshoring and the use of back offices in other countries is a phenomenon that has grown in recent decades. Despite the obvious economic advantages, there have been problems in communication with the resulting teams in a virtual environment. The objective of this study was to find out how trust affects communication and collaboration between offshore teams involving members in India and Europe. Additionally, the importance of having a nearshore team and using communication tools was a point of interest. Studies on virtual teams so far have been mainly on ad hoc specialist teams. This study aims to fill this research gap by examining a virtual team in an ongoing setting. The components related to communication and collaboration in a long-term virtual team were found to be trust, technology (tools), individualism, and language.

Methodology

The research problem was studied in the context of a single company. The study was quantitative in nature and data was collected with an online survey. The studied setting was an operational team for Europe in a large multinational company. Teams involving back office India, nearshore Romania and front offices around Europe were surveyed. The chosen context is a typical example of a back office setup from a European perspective. 195 responses were gathered and analyzed from the survey, which had a 14,9% response rate. The data was analyzed using statistical tools including t-tests and regression analysis.

Findings and conclusions

Based on the findings in this study nearshoring clearly brings some relief with respect to communication to the people in the countries from which work has been bestshored, and perhaps the key to success is finding the right balance between the level of farshoring and nearshoring.

The findings of the thesis support the existing literature in that lack of trust affects the virtual working environment, but, in an ongoing setting the effect seems to diminish over time. More individualistic people tended to trust their own team over the other team. Additionally, a positive association was found between team members getting to know each other and trust. In the study it was found that language skills are not associated with trust, but it needs to be recognized that 'different Englishes' are spoken in different teams and countries. When asked, teams in different locations expressed very different solutions for improving communication. Working as one team with the help of group goals can be recommended, but teams in different locations need to find the best ways to fulfill these goals.

Keywords virtual teams, communication, individualism, trust, India, nearshore, offshore, outsourcing, quantitative analysis, online survey

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1 INTRODUCTION

The world of business communication is in turmoil with ever increasing needs for effective growth. This implies that growing alone is not sufficient, but that growth has to be managed efficiently. The global economy has demonstrated that efficiencies and cost savings are not necessarily found where the company is based, and resources – physical and intellectual – have been searched from abroad and overseas. In the past decades, more and more has been outsourced and offshored, services in particular.

In order to find cost savings and efficiencies, many companies have ventured into outsourcing and offshoring. These options have led them to find low cost solutions from other countries. India has been the most popular country to which to offshore business functions. The opportunities there have seemed limitless as most of the population speaks good English due to the British colonization. Moreover, there has been growth in educated workforce, which is matching companies' needs with respect to know-how.

These opportunities have been very lucrative to companies and especially ones in the information technology (IT) industry, which have grown accustomed to using the services. However, over the years issues such as physical distance, time difference, language problems, and communication have been discovered in this way of collaboration. What once seemed like a low-cost easy fix has become a more and more complex environment to manage. One of the problem areas is communication – how to get the colleagues who are located in a different country, different time zone, and maybe even a different continent, to understand what you need them to do?

Very often, teams working in different locations do not meet regularly face-to-face or they possibly never meet each other. Most or all of the communication happens virtually, i.e. via phone, e-mail or other computer and/or Internet mediated method. In order to control and measure the communication, tools have been put in place. There are many software available to track communication and turn-around-times for responding questions.

All of these aspects are affecting communication and collaboration. Many people working in a virtual working environment find it frustrating that they do not know the people at ‘the other end of the line’ personally and have difficulties trusting them. Trust is an essential factor in functional virtual teams. Jarvenpaa et al. (2004) found that “[team] member’s trusting beliefs have a direct positive effect on his or her trust in the team and perceptions of team cohesiveness”.

This study aims to look at how communication and collaboration within a virtual team correlates with trust, and find possible solutions to it. Moreover, the setting studied is a typical and a challenging setting for virtual communication with a virtual team with back office and front office teams in different continents.

1.1 Research Method and Introduction to Population

In order to examine communication and collaboration in a global virtual setting, using a quantitative study method was found to be a suitable solution. Additionally, by conducting the research in the context of a single company, the environment becomes easier to understand and examine.

The studied company is a large multinational company (MNC) operating in the IT sector. The company operates globally in all three major geographical regions; Americas, Asia Pacific, and Europe Middle East and Africa (EMEA). Due to the company’s policy, their name cannot be revealed in this paper. The company will be referred to in this study as “Company Alpha”.

Company Alpha has years of experience in the industry and they are very advanced in their operating model. This means that they are looking for efficiencies on a global scale and geographical boundaries are crossed to find the efficiencies. An example, and the topic of study here, is their use of farshoring and nearshoring, also known as “bestshoring”.

The study will use Company Alpha’s Contract Operations teams as an example of a typical setting of using bestshoring. They have farshore operations in many countries and also nearshore activities in the three major geographical regions. The study at hand

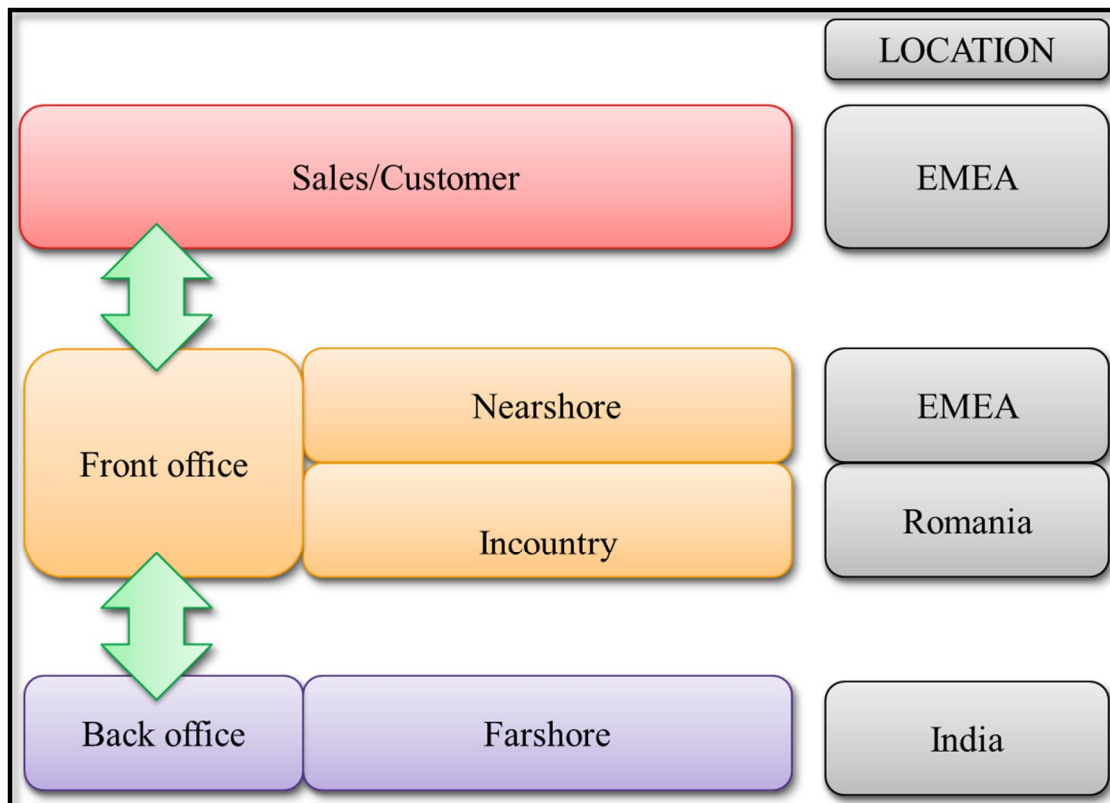
will focus on the setup in EMEA, where the farshoring activities are located in India and nearshoring in Romania. Additionally, there are front office activities in all the EMEA countries. There are two different business units in the company using this setup, and they are both included in the study.

The company culture promotes working from home and many workers that have a home office in their use, use this option weekly. Working from home office refers to either daily working at home because there is no company office located nearby and there is no choice to work at an office, or working from home by personal choice even if there was an office nearby. It is recommended for all employees to work from home at least one day per month.

1.2 Contract Operations

The task of Contract Operations is to administer and renew Service Level Agreements. The tasks largely consist of close cooperation with support sales representatives and sending transactional work on support contracts to the back office via an online communication software. The communication tool measures types of transactions sent as well as the turnaround time to allow analysis.

There are three geographically dispersed teams working together for EMEA; farshore back office team in India; nearshore front office team in Romania; and another front office team whose members are scattered in different European countries. The sites in which the teams operate will not be mentioned in order not to reveal the company's identity. They are also not considered important to the outcome of the study as is explained later on. By definition front office Service Administrators (SA) are in direct contact with sales and customers, and back office teams are only in direct contact with the front office. Figure 1 below shows the setting and flow of communication with arrows.



Source: author.

Figure 1. Contract Operations Communication Flow.

The use of a back office in India began in 2003 and nearshoring in Romania began in 2004 in the business units studied here. In the beginning of the setup frequent face-to-face meetings and trainings were held to accommodate smooth knowledge transfer. Once the use of especially the back office team became routine, traveling was reduced substantially, and any training and communication started happening exclusively via tools or online live trainings, and meetings. On occasion, management team members travel to location, but SAs do not, excluding the need of training for new special processes.

In addition to communicating via tools (in order to record and measure the number of requests sent to the back office), the SAs in all teams communicate with each other via phone, chat, VoI (Voice over Internet) and e-mail. However, communication via these tools is discouraged as they do not leave a trace in the communication tool. To ensure all Service Administrators receive the same level of training and information, all

trainings and team meetings are held online using a virtual meeting application for sharing and teleconference lines for audio. The virtual meeting application used accommodates uploading presentations in the room, sharing desktop, questions room, chat room and other communication functions while in a meeting. The application does not support video conferencing.

The trainings and meetings are hosted by the Contract Operations management team members and business process owners, and the trainings and materials are always in English only. There is no limitation on the language to be used in local, country specific trainings. All training documentation is stored online for future reference. Local language skills are needed in communication to the customers, but all internal communication happens in English, which is also the official communication language of the company.

1.3 Definitions

For the reader to understand the terms used in this thesis in the correct context, definitions are in order. The terms used such as ‘shoring’ and ‘sourcing’ have not yet become established and many new expressions still emerge. The terms used here; farshore/farshoring, nearshore/nearshoring, bestshore/bestshoring, back office, and front office thus need defining.

In literature it was surprisingly difficult to find definitions for these terms. It seems that many assume that they are self-explanatory, and do not need defining. For clarity, I have collected here the definitions found that fit the scenario in this paper.

Trampel (2004, p.1) remarks that offshoring is often defined as “the outsourcing of highly-qualified services into low wage countries”. There are many terms used interchangeably with offshoring, such as bestshoring. Many terms have been invented since offshoring started to have several forms. The term farshoring refers to the first way of offshoring, mainly to India in the context of this industry. Later on, when difficulties arose with moving business to farshore locations, nearshoring appeared. Carmel & Abbott (2006, p.1) write that “a nearshore destination is associated with relatively easy travel, similar time zones, and closeness in culture and/or language”. In

this study the farshore team is located in India and nearshore team in Romania. The reasoning for this is that in the nearshore team the language capabilities needed for EMEA countries are easily available in Romania at a lower cost than in the individual countries locally. India is used mostly in non-customer-facing situations as a pure back office.

Bestshoring, as the third term used in this study, is finding the optimal place to locate the services. This means finding a balance between what services can be handled by the farshore activities and which ones are best suited for nearshore activities. Finding the right balance should bring the best efficiencies and cost savings to a company. Out of the terms used here, only offshore has made it to the Oxford English Dictionary, so it can be assumed that the definitions are new and still evolving.

Front office (FO) is defined by BusinessDictionary.com (2012) as “...service departments that come in direct contact with the customers, and liaise with the back-office (administrative) departments to maintain a two-way flow of information”. The definition of back office (BO) was explained very case sensitively in the literature. For the purposes of this study it is defined as a service department handling transactional work and not having direct contact to customers. The transactions are sent to them from the front office, and include tasks such as changes to contracts, invoicing details, bookings, etc.

The FO team is divided into two groups in this study; 1) the FO Romania team, and 2) the FO in-country team. The difference between the two teams is that the FO Romania team is the nearshore team with no face-to-face contact with customers and they are located in Romania. They communicate with both sales and BO only virtually. FO in-country team members are located “in countries”, e.g. SAs administering French customers’ contracts are located in France, and have the possibility to converse with their customers and sales representatives face-to-face. They too communicate with the BO only virtually.

Regional terms used in Company Alpha must also be defined as the study is not only looking at front office vs. back office, but also regional attributes. The regions (or sub-

regions in relation to the EMEA region) are created based on business size, not necessarily cultural aspects. The regions included in EMEA are listed below in [Table 1](#).

Table 1. EMEA Sub-Regions.

| Region | Countries |
|---|---|
| GE (General Europe) | Sweden, Norway, Finland, Denmark, Belgium, Luxemburg, the Netherlands, Switzerland, Austria, Estonia, Latvia, Lithuania |
| France | France |
| Iberia | Spain, Portugal |
| Italy | Italy |
| UK&I | United Kingdom, Ireland |
| Germany | Germany |
| CEE (Central and Eastern Europe) | Poland, Czech Republic, Slovakia, Hungary, Romania, Bulgaria, Slovenia, Croatia, Bosnia-Herzegovina, Serbia, Kosovo, Albania, Montenegro, Macedonia, CIS (Armenia, Azerbaijan, Belarus, Kazakhstan, Kyrgyzstan, Moldova, Russia, Tajikistan, Uzbekistan) and Russia |
| MEM (Middle East, Mediterranean and Africa) | Middle Eastern countries, the African continent including South Africa, as well as Greece and Turkey. |

1.4 Research Problem and Question

The research problem expressed in this study is one relating to communication and collaboration in a virtual environment. In the case of Company Alpha it was noticed by management that although the teams had been working together for several years, there were still issues in collaborating on a regular basis.

The study was commissioned by the company, but at the same time the study helps many companies who are working in the same setting. Offshore and/or back office teams in India relieve much of daily transactional work from the front office and allow them to concentrate on communication with sales and customers. However, some issues persist.

Most of the negative feedback management receives on the collaboration is related to communication. The usual issues are understanding and internalizing process changes and also applying the given knowledge in practice. Many times it is perceived that the back office and front office SAs do not seem to trust and understand each other. Several tools have been implemented between the front office and back office to streamline communication and ensure requests are provided in the same format, but these have not seemed to improve the situation significantly.

The issues found can be summarized in the following research question:

Research question:

Does trust affect communication and collaboration between offshore teams in India and European counterparts?

Sub questions:

Does the use of a nearshore team affect communication?

How does the use of tools affect trust?

1.5 Limitations

The author has worked in the company as a Service Administrator and later on as a Business Process Manager in one of the business units on EMEA level, which could be seen as a limitation and possible source of bias. However, the counterargument is that due to the extensive knowledge on the setting and processes, the author has a unique possibility to carry out the research. If a researcher lacking such company-specific experience were to take on this task, it would have been virtually impossible for him or her to understand the setting the team is operating in.

The results of the study are applicable for the specific setting explained earlier. The results cannot be transferred to any back office located in any other country than India, or front office located outside EMEA. However, as this setting is very typical, the results should apply to many cases.

1.6 Thesis Outline

The thesis has been structured so that introduction will be followed by a literature review (*Chapter 2*), which covers literature on virtual teams and communication. In *Chapter 3*, the methodology of a quantitative study and online survey are explored, in addition to the method of analysis.

Chapter 4 looks into the findings from the research in detail and in *Chapter 5* a full analysis and suggestions based on the findings are provided. Finally, in *Chapter 6*, the conclusions are provided with a summary of key findings and suggestions for future research.

2 LITERATURE REVIEW

The issues in communicating with farshore employees are far from a new topic. India's use in farshoring has grown rapidly in the past years and keeps on growing. There are several studies on the Indian culture and even the specific regions in it as such a substantial and diverse population cannot be generalized by one set of cultural norms. Also the issues of geographically dispersed teams have been studied in the past decades.

The literature to be used can be divided into to three main topics: virtual teams, the role of trust and cross-cultural communication. All of these issues affect the communication and collaboration under these circumstances and will be presented separately in this chapter. In an environment where the employer offers several tools for communication, with some of them compulsory, the tools aspect cannot be ruled out of the study. In today's business world it is all about efficiency, and companies also strive for effective communication. In the studied company also efficiency is key in communication as speedy and accurate communication means faster service to customers.

To tie all the aspects together language also has an important role in communication. In this case the company's official language is English, which is widely spoken in Europe and India, but is the official language of only a fraction of the countries.

The literature review will first look at virtual teams in general, then move to language and cultural aspects, trust, and finally to technology in communication and collaboration. Lastly, a research gap will be presented.

2.1 Virtual Teams

Nohria and Eccles stated in 1992 (pp. 304-305) that "...you cannot build network organizations on electronic networks alone... If so,we will probably need an entirely new sociology organization". This statement has since been disputed in practice and a number of studies (see [Table 2](#)). Different kinds of global teams are common nowadays bringing together experts from around the world.

Several studies on virtual teams have been conducted since the late 1980s and early 1990s when they first came to being. Below in [Table 2](#) are listed some of the most studied topics regarding virtual teams and examples of papers.

Table 2. Main Research Areas on Virtual Teams.

| Research Area | Examples of Studies |
|---|---|
| Trust | Jarvenpaa & Leidner, 1999; Sarker et al., 2011 |
| Effectiveness | Berry, 2011; Duarte & Snyder, 2001 |
| Subsidiary role | Monteiro et al., 2007 |
| Language and communication | Grosse, 2002 |
| Tools and technologies | Eppler & Sukowski, 2000 |
| Learning | Ubell, 2010 |
| Spatial and temporal characteristics | O'Leary et al., 2007 |
| Leadership/management | Kayworth, & Leidner, 2001 |
| Collectivism vs. Individualism | Kim, 1994; Triandis, 1995; Hofstede, 1980 |

The role of trust is widely considered the most significant influence to virtual teams' functionality and is studied in more detail in *Chapter 3.2*. The study of effectiveness in virtual teams is much related to how teams are organized and especially on their processes (Berry, 2011).

Both Berry (2011), and Duarte & Snyder (2001) find the choice of technologies imperative for communication and effectiveness. Processes, which enable efficiencies, refer commonly to clear definitions of effective work completion and what technologies are used, general team norms and expectations, and documentation systems (Duarte & Snyder, 2001). Although effectiveness is a very interesting topic to measure and study for companies, this study is concentrated on communication and collaboration. Logically, better communication results also in better efficiencies in a virtual

environment; however, as the focus is communication, this paper will concentrate only on the use of tools and technologies from this perspective. Effectiveness is partially a result of good communication and hence will not be addressed explicitly in this study.

As all communication happens via different tools, the tools are examined as their own section (2.4) after the Virtual Teams literature. Tools themselves have surprisingly not been a large source of study in relation to virtual teams' functionality, though Information System studies have contributed to tool design.

Subsidiary role, and leadership and management studies are closely related as they both study vertical, i.e. top-down, communication. In order to answer the research question set forth in this paper, the vertical communication studies are not particularly applicable as the main emphasis here is on horizontal communication between employees working on the same hierarchical level. Leadership and management theories become important when putting the findings from this paper into action by managers, but will not be considered a part of the theoretical framework.

Similarly to vertical communication, learning theories are more applicable when implementing the suggestions coming out of this paper. Communication is imperative in learning; however, a person's skill to learn is not essential to their capability to communicate.

Spatial and temporal characteristics are constantly in the core of a virtual team. O'Leary et al. (2007) list some outcomes that these aspects affect: 1) spontaneous face-to-face communication, 2) real-time problem solving and, 3) team coordination. For the purposes of this study these characteristics are considered as underlying and always present characteristics of a virtual team. The teams studied here are spread across 4 time zones, with the furthest ones having 4,5 hours of time difference (Greenwich Mean Time and India Standard Time). To overcome this, the back office team in India is working during European hours eliminating the temporal issue, which is very common in similar settings. The spatial characteristic is strongly present, but will not be included as a theoretical aspect as such, because the author believes it is something constant in virtual teams and not a subject of study as such here. Spatial effects are always present

for virtual teams and they are seen as an underlying prerequisite in order to use the term virtual team.

Individualism vs. collectivism is a dimension of culture found by Hofstede first in his famous book on culture's consequences in 1980. This dimension has been the most studied of Hofstede's four cultural dimensions (e.g. Kim, 1994; Triandis, 1995). The individualism vs. collectivism dimension was brought to the virtual environment only recently and has shown some interesting results. The spatial aspects and local cultures would be far too wide of a concept to investigate for the purposes of this study, as this would require understanding of all European countries' cultural background, and also India's, which is as rich with cultural differences as Europe. This issue can be overcome by investigating each individual's personal sense of individualism or collectivism.

Similarly to above statements on not investigating each included country's cultural backgrounds, investigating all languages spoken in the included countries would widen the scope of the study to be too broad. Very commonly virtual teams in this kind of setting have a working language: English. One of the reasons why India is such a popular farshoring country is, in addition to low expenses, language. English is widely spoken in India and Indian firms can offer wide services in it. English has also become a commonly acknowledged global language for business and practically all communication between back office and front office in this kind of setting happens in English. Hence in this study the aspect of English language is factored in as most people in the setting speak it as their mother tongue and thus cannot be ignored. Language, and individualism and collectivism will be explored in *Chapter 3.3*.

2.1.1. Virtual Team Definition

A typical definition of a virtual team (or geographically dispersed team) would describe it as temporary, reliant on electronic communication, having members spread around different countries and time-zones and culturally diverse (Jarvenpaa & Leidner, 1999; Powell et al., 2004). The temporary aspect of the team can be disputed. Powell et al. (2004) mention that virtual teams are often assembled on an 'as needed basis' to answer specific customer or project needs. However, in practice virtual team can be seen more

and more often in an ongoing setting, where teams and employees operate in a virtual environment on a daily basis.

The term 'team' is usually referred to as a small group of employees working together with a common goal. According to Cohen & Baily (1997, p. 241) there are four different kinds of teams in organizations: "1) work teams, 2) parallel teams, 3) project teams, and 4) management teams". Work teams are presented as what is usually understood when discussing teams. According to Cohen (1991) their membership is typically stable, usually full-time, and well defined, and they exist both in manufacturing and service settings. The work team definition fits to the subject of this study as the members of team are long-term (as opposed to project based) and work on an operational, not managerial, level.

For the purposes of this paper a virtual team is defined thus as a team whose members are geographically dispersed, located in several time zones and joined by technologies to achieve one or more organizational task (DeSanctis & Poole, 1997; Jarvenpaa & Leidner, 1999). Although most studies are on virtual teams arranged for a short and limited period of time, this study aims to look at working in a virtual team on an ongoing basis.

2.2 Role of Trust in Virtual Teams

Working in virtual, geographically dispersed teams has inspired many studies. The most studied aspects are building trust in the teams and team performance. The notion of trust in terms of time has been studied by Järvenpää et al. (2004). In their work it can be seen that there is an interdependence between trust and the situation's structure. Another interesting finding is that in IT-enabled relationships trust plays an important role. Many communication problems resulting from tools can be overlooked if there is significant trust between discussants.

Trust is defined by Schoorman et al. (2007, p. 347) as "willingness to be vulnerable to another party". It has also been seen traditionally as an individual's judgment of past behavior (Wilson et al., 2006). Wilson et al. (2006, p.17) also argue that "trust in distributed groups develops in the same way as it does in co-located groups – with one

important exception. It takes longer for trust to develop in computer-mediated groups because it requires more time for members of those groups to exchange social information”.

In virtual teams the members are not able to meet face-to-face on a daily basis and thus do not have a sense of their colleagues’ working habits. This means that they are not able to monitor or control the other party’s work. These may sound more like tasks for management, but in a team it is important for members to observe what amount of effort the other party is putting in the task and hear interaction between members of the team. (Wilson et al., 2006)

2.3 Language and Culture

Both language and culture affect how virtual teams work. English is a common working language in MNCs and all members of a virtual team are expected to speak and understand it. Languages can be learned and employees can improve on their language skills, where the companies can also support them.

Culture, on the other hand, is something that individuals are raised with and what they learn culturally is not something which is easily influenced. People who have lived in different cultures are more aware of the effect of culture, but even with awareness of cultural behavior, individuals may not be able to change their behavior and values.

2.3.1 Language

Hindi is the official language of India, and there are 22 major languages which are recognized in Indian constitutional law. In addition to the languages there are 844 different dialects. English is also widely spoken in India and it is the main medium in higher education, which ensures a large number of highly educated people with English language skills. Due to the high English language capabilities, India is very popular for outsourcing contracts as opposed to other low-cost Asian countries. (Country Analysis Report: India, 2011)

In Europe, most countries have one to three official languages and there are 23 official languages in the European Union (European Commission, 2012). This study will not

attempt to investigate all the local languages spoken by the SAs as their mother tongue. Only the English language capabilities of the teams will be investigated, as this is the only language used for communication between the teams.

Charles & Marschan-Piekkari (2002) studied the horizontal communication between subsidiaries. They found two main problem categories in their study: “1) problems caused by absence of a common language, and 2) comprehension problems caused by inadequate knowledge of the shared language...” (Charles & Marschan-Piekkari, 2002, p. 15). This paper is studying a setup where a common language (English) has been defined, and is actively used by the involved teams, hence the first problem is ruled out. However, the second problem found is applicable to this study as well. If a common communication language is chosen, it is important that all members of the teams have adequate knowledge of it. The study found that language capabilities affected the understanding of written documents, where translations could cause a problem, and also spoken language, especially on the phone, seemed to be difficult.

In oral communication the biggest issues are in understanding different accents (Charles & Marschan-Piekkari, 2002). Whether oral or written English, they emphasize that understanding British or American English differences is not enough, but also “World Englishes” must be taken into account. They suggest that employees should participate in trainings that bring the employees from different parts of the world together, and share the different English language aspects. A key takeaway from the study is that native English speakers suffer from the same problems and should be included in trainings on common communication language.

The study is a good reference for this paper, as it was conducted in Kone, which is a large and mature MNC. This means that the assumption cannot be made that a company that has been established for a longer time would somehow automatically have these issues fixed during time. The bottom line in the study was that to improve international horizontal communication, effort should be made to help people talk to each other and interact, and English language and communication training should be provided to all.

As mentioned earlier, when discussing trust, Wilson et al. (2006) argued that building trust takes a longer time in a computer-mediated environment as sharing social aspects of their personal lives takes more time than in a face-to-face environment. Exchanging social information naturally happens via communication and for that a common language is needed. Therefore it can be argued that, by enhancing language skills by encouraging more personal communication between employees, there will be natural exchange of social information at the same time, which will in turn improve trust. To simplify, better language skills are expected to have a positive effect on trust.

2.3.2 Individualism vs. Collectivism

Working in teams with people from several different countries, cultures and backgrounds means that there are many different types of people sending and receiving messages. How they perceive the messages is highly dependent on their personal and cultural values (in addition to language skills). Also their group behavior may be much different. This is an important aspect when comparing European – commonly seen as individualistic – and Indian – commonly seen as collectivistic – cultures.

There are four main dimensions where countries' cultures differ as defined by Hofstede (1980); Power Distance, Uncertainty Avoidance, Individualism, and Masculinity. The dimension of Individualism (i.e. individualism vs. collectivism (I/C)) is often seen as the most important one (e.g. Triandis, 2004), and is a widely used dimension in virtual teams' studies due to its perceived relationship to trust (Jarvenpaa & Leidner, 1999). Jarvenpaa & Leidner (1999, p. 794) find that “individuals from individualistic cultures might be more ready to trust others than individuals from collectivist cultures in computer-mediated communication environments”.

Hofstede & Hofstede (2005, p. 76) define the dimension in the following way:

Individualism pertains to societies in which the ties between individuals are loose: everyone is expected to look after himself or herself and his or her immediate family. Collectivism as its opposite pertains to societies in which people from birth onward are integrated into strong, cohesive in-groups, which throughout people's lifetimes continue to protect them in exchange for unquestioning loyalty.

Table 3 below shows the individualism index (IDV) for European countries and India. The IDV shows a country's position in relation to others with respect to this cultural dimension. The higher the IDV score, the higher the individualism in the country and the lower the score to more collectivist the culture of the country. From the scores can clearly be seen that many European countries rank considerably higher with respect to individualism than India. (Hofstede & Hofstede, 2005)

Table 3. Individualism Index (IDV) for European Countries and Regions, and India.

| Country/ Region | IDV Score | Rank (out of 74) |
|--------------------|--------------|---------------------|
| Great Britain | 89 | 3 |
| Hungary | 80 | 4-6 |
| Netherlands | 80 | 4-6 |
| Belgium/Flemish | 78 | 8 |
| Italy | 76 | 9 |
| Denmark | 74 | 10 |
| Belgium/Walloon | 72 | 12 |
| France | 71 | 13-14 |
| Sweden | 71 | 13-14 |
| Ireland | 70 | 15 |
| Norway | 69 | 16-17 |
| Switzerland/German | 69 | 16-17 |
| Germany | 67 | 19 |
| Switzerland/French | 64 | 20 |
| Finland | 63 | 21 |
| Estonia | 60 | 22-24 |
| Luxemburg | 60 | 22-24 |

| Country/ Region | IDV Score | Rank (out of 74) |
|--------------------|--------------|---------------------|
| Poland | 60 | 22-24 |
| Malta | 59 | 25 |
| Czech Rep. | 58 | 26 |
| Austria | 55 | 27 |
| Israel | 54 | 28 |
| Slovakia | 52 | 29 |
| Spain | 51 | 30 |
| India | 48 | 31 |
| Turkey | 37 | 41 |
| Greece | 35 | 43 |
| Croatia | 33 | 44 |
| Bulgaria | 30 | 46-48 |
| Romania | 30 | 46-48 |
| Portugal | 27 | 49-51 |
| Slovenia | 27 | 49-51 |
| Serbia | 25 | 53-54 |

Source: Hofstede, 1980; Hofstede & Hofstede, 2005, pp.78-79

Based on the results from Hofstede's study in 1980 it can be generalized that Western European countries and regions tend to score high on individualism, India is slightly

above average (place 31 out of 74), and Eastern European countries score rather high on collectivism. However, as this study was done before the Soviet Union collapsed or the EU was in full effect, the economic and cultural climate in the Eastern European countries may have changed drastically. Additionally, India's economy has grown immensely since the 1980's and a more individualistic approach may be raising its head there also.

The results from 1980 give a useful reference point though they may vary on individual level. Hofstede (1980, p. 153) also points out that "the degree of individualism in organizations obviously will depend on many other factors besides a societal norm: we can expect effects of employee educational level and of the organization's own history and subculture".

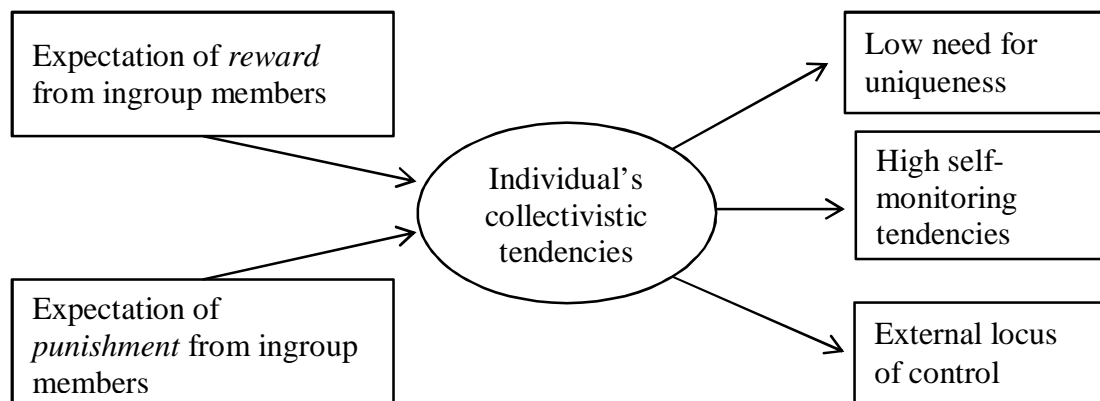
After Hofstede's work many researchers have come out with claims that the IDV is not as clear cut and easy to define. Researchers have found that collectivism can be approached from the self-perspective, meaning that different persons' IDV may differ from their country's IDV. A person's individualism or collectivism can be much different from that of the culture in which they live. In virtual teams there are people who have worked in a virtual and international environment, and hence in the context of this study the premise is that the people are affected by their local, working and personal cultures. (Yamaguchi, 1994)

Yamaguchi (1994, p. 178) defines a person's collectivism as "the tendency to give priority to the collective self over the private self, especially when the two are in conflict". In working life people are bound by their group goals, team goals, and personal goals given to them. Management works towards a team fulfilling their group and team goals, but it must be the individual who drives to manage personal goals. In a virtual working environment, from the point of view of communication, a person's capability to assert themselves is most important. Horizontal communication happens usually on a colleague-to-colleague level, as opposed to vertical communication, which happens on top-down or from trainer or manager level. In a horizontal communication, and in the setting tested in this paper, it is the individuals who communicate using

provided communication tools. Hence it can be justified that a person's collectivism is important to measure.

A person's collectivism can be described with its antecedents and consequences as had been done by Yamaguchi (1994) in Source: Yamaguchi, 1994, p. 180.

Figure 2. This illustrates that collectivistic tendencies are driven by expectation and reward from ingroup members and they consequentially affect the person's need for uniqueness, locus of control and sensitivity to ingroup members.



Source: Yamaguchi, 1994, p. 180.

Figure 2. Hypothesized Antecedents and Consequences of Persons' Collectivism.

Collectivism is generally seen to be high in developing countries, to which India and many of the Eastern European countries included in this study belong. As mentioned before, due to economic changes and the notion that affluent societies tend to be more individualistic, some countries generally thought of being of collectivistic culture may now have shifted closer to individualistic culture. This has not, however, been proven thus far. Moreover, the population studied in the paper is office workers in a multinational company, who do not have particularly low levels of income in their societies. In addition to local culture and affluence, it can also be argued that the company culture may affect a person's collectivism. The company that the sample population works for is an U.S. multinational. The U.S. is top on Hofstede's global Individualism Index, which also gives an indication that personal collectivism may be

different from the country numbers assigned (Hofstede, 1980). Based on these justifications, it is seen reasonable to consider the personal sense of collectivism to determine how different teams work in an international and virtual setting.

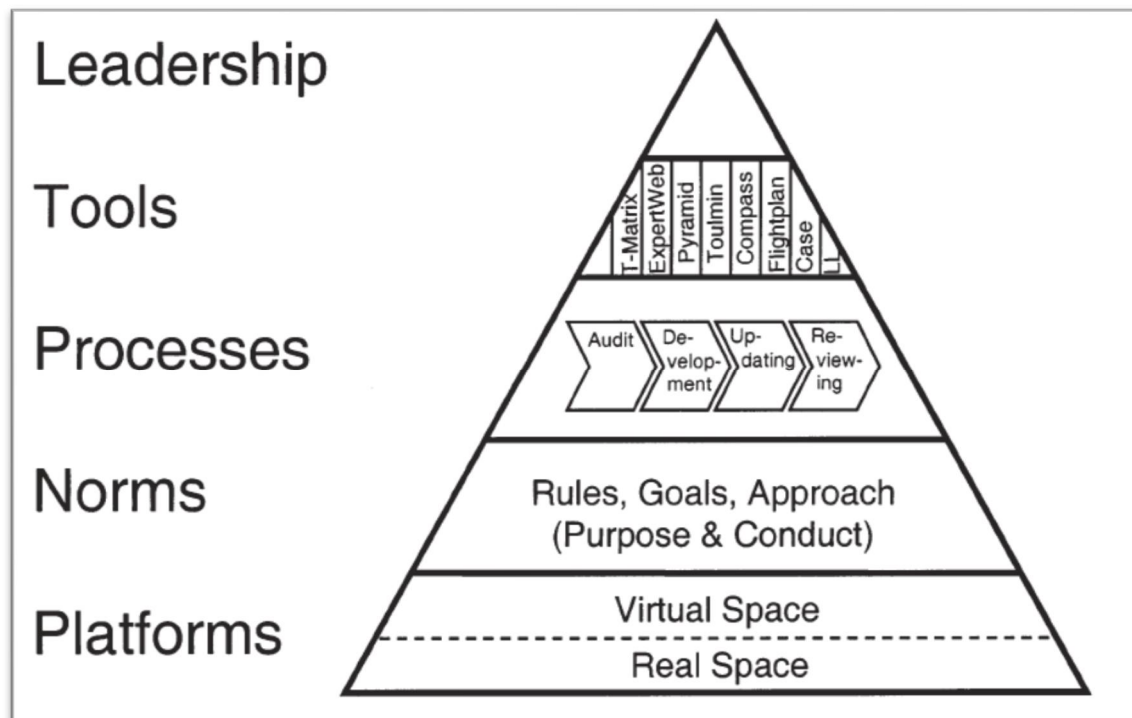
Understanding if the antecedents described in [Figure 2](#) (reward and punishment from the ingroup) really correlate with the studied population can give us an indication on how communication and especially collaboration can be improved in a virtual environment.

2.4 Technology for Communication and Collaboration

The use of collaboration tools has been much studied in regards to decision making and specific tools, such as wikis or blogs (see for example, Eppler & Sukowski, 2000; Grosse, 2002). Their effect on virtual teams is a crucial one, as due to spatial settings, any kind of communication is mediated by technology.

In their study Eppler & Sukowski (2000) look into teams' knowledge management. They find the key parts to knowledge management are platforms, norms, processes, tools, and leadership (see [Source: Eppler & Sukowski, 2000, p.335](#)

Figure 3 below). Here it can be seen that tools rank higher than processes, norms and platforms and are only second to leadership. The tools studied in the paper were mainly on knowledge management as the studied teams were expert teams. However, it can be argued that the same setting applies to an operational team as here too "...[the tools'] main goal is to make knowledge in its various forms more transparent for every team member" (Eppler & Sukowski, 2000, p. 337). Also in an operational team tools are used to provide transparency and as means for better measurement and metrics.



Source: Eppler & Sukowski, 2000, p.335

Figure 3. The Conceptual Framework for Team Knowledge Management.

2.4.1 Communication Tools

Grosse (2002) lists five different communication channels for virtual teams from which management should choose from the most efficient ones for different purposes: e-mail, phone, fax, videoconference, and face-to-face. For the purposes of this study, the list needs some alterations due to company specific preferences and new possibilities provided by technology. In practice fax is no longer a popular communication channel although many offices still have readiness to use it. Additionally, video conferencing possibilities are limited. Options that need to be added to the list are virtual conferencing via the Internet, Voice over Internet (VoI), and instant messaging. Virtual conferencing means sharing presentations or desktop sharing online via a virtual technology. VoI refers to audio transmitted via the Internet, which is practically the same as telephoning, but using a different medium. Instant messaging (also referred to as chat) is a tool through which individuals can have a conversation with one or more

counterparts online without audio or e-mail involved. Instant messaging is mostly used for quick ad hoc checks between two people and the conversations are primarily not saved.

For the purposes of this study the list of communication channels is altered to:

- E-mail
- Telephone or VoI
- Chat
- Virtual conferencing
- Face-to-face

In addition to these main communication channels, there are several commonly used tools that support direct communication between team members:

- Share points (online storage of documents)
- Websites (any online site built for the team's own purposes)
- Blogs (so called online diaries)
- Wikis (an online encyclopedia, which is written by the users themselves)
- Social media (e.g. Facebook, Twitter)

Grosse's study (2002) shows several means of overcoming the difficulties of communicating in a virtual team. The following are listed as the main opportunities and challenges (Grosse ,2002, p. 31):

- Build trust and understanding
- Understand how diversity strengthens a team
- Understand pros and cons of intercultural teams
- Develop a network of good relationship
- Balance distance work with face-to-face time
- Show respect for other cultures and languages
- Overcome cultural differences
- Break down language barriers

- Be open to learning about other cultures
- Understand cultural values and beliefs, communication styles
- Understand approaches to decision-making, problem-solving, and conflict resolution
- Use appropriate communication channels
- Check for understanding

Grosse found that knowing and understanding people on an individual level is important regardless if the people are located in the same country or not. Her main findings in regards to tools were that e-mail was the most popular tool for communication in virtual teams, and that meeting face-to-face is an effective way to build trust and confidence and it is recommended at least in the beginning of a project. After an initial face-to-face meeting to get to know each other, virtual communication is likely to be more effective.

Grosse's findings are applicable to this study to some extent. As mentioned earlier, the setup studied in this paper is not a short-term virtual team, but a team working in a virtual setting on an ongoing basis. No studies were found how the use of tools affects an ongoing virtual team. The recommendation of teams getting together face-to-face at the beginning of a project for a short-term virtual team can be interpreted in a way for ongoing teams; it may be beneficial to provide face-to-face meeting opportunity to newcomers in the teams. This way the new members of the teams could get an understanding of the other team's working habits and a culture from the start.

Berry (2011) finds that many issues which virtual teams have, such as lack of sharing information or weak shared understanding, are overcome in time. Though Berry's study is concentrated on the effectiveness of virtual teams, it provides many insights to the functionality and communication of a virtual team. The study finds that face-to-face meetings are not necessary and in some cases not having them can be even found beneficial, as this cuts down the social interaction and encourages a more task-oriented environment.

All in all, the studies on using tools in a virtual environment show that they have an important effect on how virtual teams communicate and collaborate. The existing

research suggests that the tools and especially the ability to meet face-to-face also affect trust in virtual teams to some extent and are thus tested in this study to find out which tools support the back office – front office communication best.

2.5 Research Gap

This study aims to address two clear gaps in the current literature. Firstly, studies so far on virtual teams concentrate on teams that are put together for a specific task, which can also be seen in the traditional definition of a virtual team which includes the notion that virtual teams are only temporary (e.g. Jarvenpaa & Leidner, 1999). The temporary nature of virtual teams can be argued as many teams established for ongoing tasks are nowadays present. Lack of research on ongoing teams may also be a result of difficulties accessing such data. Especially in multinational companies virtual teams put together for an indefinite time period and with an ongoing nature seem to be more common.

Secondly, in addition to virtual team studies being on ad hoc teams, they are also mainly on expert teams or executive level. The most studied group is a team of experts put together for a specific task, after which the team is expected to dissolve, as has been demonstrated in the literary review. In these cases the team members have a specific goal they need to reach in a certain limited time, which arguably affects their working habits. Executive level research, on the other hand, includes always a top-down and business management aspect. No studies on teams on operational level could be found. The reason for this may be the ease of studying teams put together for a specific task as their lifespan is clearly defined and it sets a more concrete frame to the study.

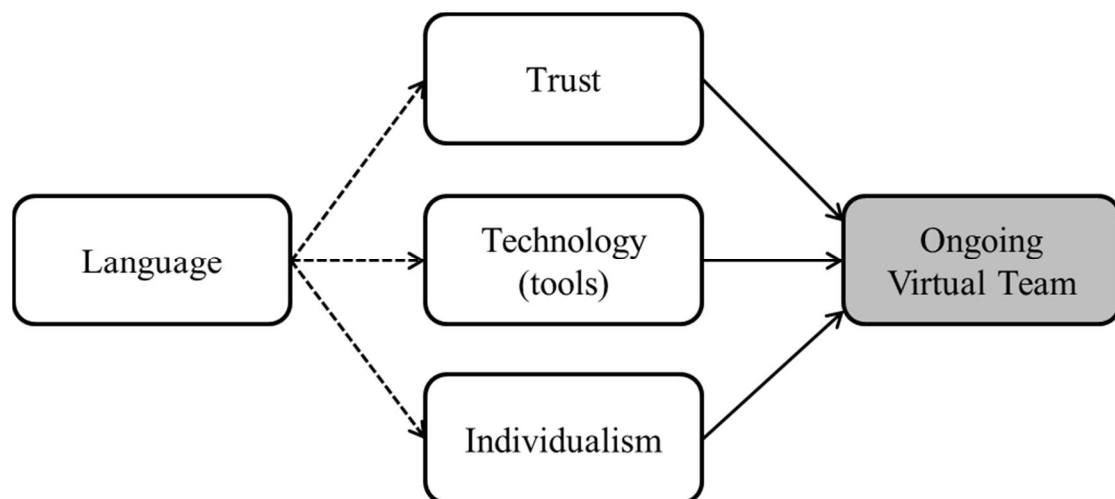
This study aims to fill the defined research gaps by studying an operational team, which is not functional for a limited time only (i.e. is working on an ongoing basis), and works together as a back office and front office. As the need for virtual teams grows in different levels of organizations, it is important that this aspect is studied. India is a popular country to farshore operations to, and hence the setting is applicable and of interest to multiple companies. As a new point of view, this thesis aims to provide a

look on comparing several countries' communication ways to the Indian, from the perspective of operations.

2.6 Theoretical Framework

As discussed in the earlier *Chapters 2.1 through 2.5*, the main aspects affecting the work of an ongoing virtual team were trust, language, culture and tools. In [Figure 4](#) below, the interrelations are shown as found in literature, so that trust, individualism, and technology affect the ongoing virtual team and language has an impact on them all. The framework leaves out managerial aspects as the aim is to only study the interrelation of colleagues on the same level of the organization. Additionally, temporal aspect is omitted from the model as it is not seen as an issue because the team in India works the same hours as their colleagues in Europe taking out the factor of people being present on the job at different times. Even though this aspect affects any kind of virtual team and also the ones studied here, it is considered out of scope in this study.

Figure 4. Theoretical Framework.



Technology, individualism and trust are the main factors, which influence ongoing virtual teams. Individualism is a studied (see e.g. Jarvenpaa & Leidner, 1999; Yamaguchi, 1994) aspect of virtual teams and has proven to be an integral part of virtual team studies.

Trust and individualism are by far the most studied aspects of virtual team work and they have been hypothesized to have an impact on team work regardless of the type of virtual team. Trust especially can be seen as a key element in virtual teams. The aspect of tools is the least studied of the four areas, but since it plays an integral part in mediating the communication between virtual team members in an ongoing team, it cannot be overlooked as a force affecting the daily communication.

Language ties all the factors together. The chosen common language enables the members of an ongoing virtual team to communicate with each other and make their message understood by other members. Without a common language, a virtual team could not function and thus it touches all areas of virtual communication. It is not enough to have a common language, but there also needs to be a common way of using it. In the case of English there are many different dialects spoken and common ground in using the language is important in a team.

As there has been little research on ongoing/long-term virtual teams, there is no other model to which this could be directly compared. This model differs from previously tested models in such a way that it combines several factors influencing a virtual team and emphasizes the ongoing characteristic of the setting.

3 METHODOLOGY

This study is a combination of theoretical findings and most importantly a quantitative study. As the topic of the thesis was suggested by a company, the balance of company project work and an academic work walks a fine line. However, the most important aspect is the academic validity of the study, which then attempts to fill the company's needs.

The role of existing theory in this research is essential, but not the entire basis of the study. In the literature review (*Chapter 2*) existing theories were studied and their validity will be tested in the research, i.e. the study has a deductive approach. However, due to geographically dispersed virtual teams and horizontal communication in them being a relatively new subject for research the data collected in the research will hopefully result to some inductive theory.

By combining both deductive and inductive approaches the thesis can be said to have an abductive approach. Dubois & Gadde (2002) describe this as systematic combining, which is "a process where theoretical framework, empirical fieldwork, and case analysis evolve simultaneously". According to them the method is principally useful when new theory development is in question.

3.1 Quantitative Study in the Context of a Single Company

The population studied in this paper is workers located in Europe and their colleagues in a back office in India. The people working in this kind of set-up range from employees in small and medium size enterprises to multinational companies. Including all affected people into the study is virtually (pun intended) impossible. Hence a quantitative method was chosen to reach all affected. A single company's employees working in a certain setting were chosen to represent the population as the setting gives an opportunity to examine people in similar setting.

Keeping the existing studies in mind, the currently studied team should be in good shape regarding trust; communication between farshore and local and nearshore teams is monitored regularly and controlled by the management team. As the teams have

existed for some years now, there has been plenty of time for building trust. Yet, in practice, there seem to be instances where trust seems to be lacking. One possible reason for this is the high movement of employees in the team in India, there is not enough time to get to know the team members personally. Another possible reason is the use of tools; in order to be able to provide sufficient metrics and controls for tasks, communication happens mainly via a tool and not on the phone or chat. This seems to result in generalizations and stereotypical thinking in the teams towards the other teams in different locations.

The choice of studying this company was due to the author's work history and an interest from her former employer to such a study. In this case the author's in-depth knowledge of the setting is of crucial value. A company of Company Alpha's magnitude is a suitable subject for study for the topic as it has many employees spread around the globe and all employees are affected by virtual communication and work.

3.2 Unit of Analysis and Empirical Units

The unit of analysis in the thesis is the worker working in a virtual environment. The unit of analysis is studied from several angles in this paper, mainly language capabilities, sense of individualism vs. collectivism, use of communication tools and trust. All of the listed are different angles of studying the subject and aim to give a broad analysis of it.

The empirical units of analysis are workers in the back office and front office, as the main objective of the study is to find out about communication between the two groups. The split is done based on their geographical location and relations within the groups. However, when conducting the survey, all administrators regardless of their location took the exact same survey.

The front office can, and for the purposes of this study will, be split into sub-groups of nearshore team in Romania and teams located in countries. The reason for splitting front offices SAs located in European countries into two groups is two-fold. Firstly, the nearshore team in Romania provides services to all countries in Europe and they are a large group on their own. The team also has to converse with many different countries sales and SAs, not only their own and India. The SAs located in countries handling only

their own country's administration are usually only working with colleagues in their own country in addition to the back office in India.

Secondly, the in-country teams have been in place for a longer time and many of the SAs have experienced working without a back office and may thus have a different kind of attitude and expectations towards the back office team. The in-country set-up is different in different business units also, so it is imperative that they are separated in the study.

3.3 Primary Data Source

As the primary and main data source for this research, the method of online survey was chosen. Qualitative face-to-face interviews were ruled out as a data collection method as the sample size is quite large and time restraints would not have allowed to gather enough replies to show distinctions. Also the fact that the author was in the management team could result in biased replies as respondents would possibly not be 100% honest in the fear of affecting management's opinion on them. Additionally, the cost of travel limits this option. Phone interviews may have been a workable solution, but due to time-constraints the survey was chosen. As the survey is anonymous, and the employees' identities are protected, it can be assumed that the respondents have given direct and honest answers.

3.4 Online Survey Construction

The respondents for the survey were chosen based on their position in the team. All surveyed people were on the same employee level and communicate with each other as equals. Services administrators from all EMEA countries (including the Romanian nearshore team) and the Indian farshore team received the survey. All Western and Central European countries were included. Out of Eastern Europe there are not operations in all countries, so the survey was conducted where there are respondents located. In total, the survey was sent to approximately 1400 people.

The online survey used took a direct approach, which means that "the purpose of the project is known to the participants" (Malhotra and Birks, 2007, p. 181). This is

important for two reasons; 1) the respondents need to be explained the reason behind the survey to raise their interest to it, and 2) the questions in the survey make the aim of the study obvious to the respondents so there is no reason for to conceal it.

The respondents' anonymity is highly important. In online surveys the perceived anonymity is generally higher as there is no direct contact between the interviewer and interviewee. The interviewer bias is also eliminated in the sense that in an online survey takes away the personal feeling from the interview. Additionally, the fact that the author had worked with the respondents made it highly important to emphasize anonymity. (Malhotra and Birks, 2007)

As responses were collected via an online survey a structured data collection was used with fixed-response alternative questions. According to Malhotra and Birks (2007, p. 266) the benefits of this format are its simplicity in administration, data consistency (as responses are limited), and simplicity in coding, analyzing and interpreting. They continue to list the major drawbacks of this type of study being "loss of validity for certain types of data such as beliefs and feelings" and being able to word the questions suitably.

The **structured questions** portion in the survey has the main emphasis. Questions in this part cover three different types of questions with predetermined replies; 1) multiple-choice questions, 2) dichotomous questions (yes/no questions), and 3) scales. Multiple choice questions are used when the answer choices are known. To avoid position bias, all possible choices have been attempted to cover and additionally, an 'other' possibility has been added to provide the respondent a chance for typing their response. Dichotomous questions are a minority and used for questions such as 'Gender: Male/Female'. (Malhotra and Birks, 2007)

Scaling was found to be the most suitable question type for the majority of the questions. This enables multiple types of data analysis, which is needed in order to get the kind of answers studied here. The survey questions are mostly rating questions, where a 1-7 scale is used in all rating questions. The same 1-7 scale is kept throughout the study so that respondents get used to it, as changing the scale within the survey may have been

confusing to them. The seven-point scale was chosen as it gives some more information than the five-point Likert scale. As there is an odd number of choices a neutral '4' is also available to respondents. In the survey only the end-values, i.e. one and seven, were given written definitions and numbers from two to six were left for the respondent to decide how they fit in the response.

By adding some **unstructured questions** (i.e. open-ended questions) to the end of the survey, the aim was to minimize the loss of information on beliefs and feelings. Although the coding and analysis of this type of questions is more time consuming, the author believes they are necessary to the study. Adding unstructured questions in the end gives the respondent a chance to express things that may have been overlooked in the structured portion of the survey, or about which they feel otherwise strongly. According to Malhotra and Birks (2007, p. 381) "unstructured questions have a much less biasing influence on response than structured questions".

3.4.1 Question Wording

Question wording is of great importance in a survey. Unless worded properly, questions can be left unanswered by respondents or in a worse case they will be misunderstood. Malhotra and Birks (2007) provide several guidelines that should be followed when creating questions, for example, defining the issue; using ordinary and unambiguous words; avoiding leading questions and implicit alternatives or assumptions, generalizations; and using positive and negative statements. An additional thought to be kept in mind is that the same survey is responded to mostly by people whose first language is not English. The survey will go out only in English as it is the official language of the company and the language used to communicate by the team members. Also special words, terms and abbreviations used by the team need to be used in the questions to make them feel familiar to the respondents.

To ensure the clarity of the survey pilot-testing has been done. Before launching a few colleagues in the company have been asked to take the survey and provide their feedback on the understandability of the questions and the flow of the questionnaire. Additionally, a few managers provided feedback on the questions, mainly from the

point of view how their employees would understand the questions. Some also suggested alterations to the setup, which was not possible due to predefined question sets, such as the Yamaguchi (1994) Collectivism Scale.

3.4.2 Survey Structure

The survey is constructed of sections for each area covered in the literature review. The full survey can be found in Appendix 1. Six sections are used to separate the areas of a) Demographics, b) Language, c) Collectivism and Individualism, d) Use of Tools, e) Trust, and f) a Feedback and Comments section. No questions have been left out from the Appendix 1 version, but some have been slightly altered (marked in *italics*) only to ensure that the Company Alpha's identity will not be revealed.

Section A on demographics includes very general and standard questions to the respondent. No sensitive data is gathered as it was not found useful in this study. Placing the questions in the beginning of the survey was found by test respondents to be the most natural place so that respondents can be sure from the start that the survey is meant for their group. Open-ended questions for feedback and comments were placed last (Section F) to ensure respondents being able to provide written feedback in addition to closed questions. Having them in the end of the questionnaire ensures they know that it is their last chance to provide feedback.

Section B with questions on language was designed to provide easy to answer questions in the beginning to make respondents feel comfortable with the survey.. In order to study the language capabilities of the back office and front office teams, they are asked in the online survey to estimate their language skills. In order to find out if having lived in an English speaking country, or studying British/American English has any effect, these questions are included in the survey.

Section C of the survey includes the Yamaguchi (1994) Collectivism Scale, which has been developed to measure a person's collectivistic tendencies. The Collectivism Scale includes 10 items with which it attempts to "measure collectivism among individuals" (p. 180). The items are in the form of statements, for which the respondent needs to answer on a one to seven scale ranging from 'Strongly Disagree' to 'Strongly Agree'.

All the statements refer to ‘my group’ and their goals and the more positively (the larger the number they give it) the higher their personal collectivism. Yamaguchi has tested the Collectivism Scale in numerous studies and found it reliable in all. Though Yamaguchi used a five-point Likert scale in his study, a seven-point scale was chosen here to provide richer data. (Yamaguchi, 1994)

Section D comprises of questions on the use of different communication tools. All different tools used by the teams are included and for each the respondent is asked how often each tool is used and how efficient and important the tool is found. Again, a seven-point scale is used for responses.

Section E includes questions about trust between the teams. The questions are adapted from Järvenpää & Leidner (1999); Erdem and Ozen (2000); Chatman (1991); and Jehn and Mannix (2001). There have been many survey studies on the topic of trust and a combination of the existing surveys was found well suited for this study. One important adaptation is to ask the same questions from the respondent how they find trust in their ‘own team’ and then the ‘other team’. The attempt is to identify any systematic differences in how these two are answered.

All questions in the survey were compulsory to answer except for the open-ended questions. The respondents should not have been able to move forward in the survey without answering every single question. However, due to bug in the survey tool, some questions in the Use of Tools section were skipped by respondents. This will be taken into account in the analysis section in *Chapter 4*.

3.5 Survey Logistics

The online tool used for the survey was called Survey Monkey. This tool was chosen due to its ease of use and because it has been approved as a survey provider by Company Alpha’s IT department. In order to ensure sufficient encryption of responses, the Survey Monkey license Select was used, which ensures enhanced security with SSL/HTTPS included.

It has been of great importance to Company Alpha that their personnel's sensitive information does not leak out of the company. To ensure that the conducted survey has been up to company policies and sufficiently secured, several internal company approvals were required. These were obtained from EMEA V.P. Human Resources, and Human Resources of the nearshore and offshore offices. Many approvals were obtained with a condition that the German Workers' Council approves the survey, which it did. The Workers' Council goes through a vigorous screening process ensuring that no sensitive or inappropriate data is gathered from employees.

In addition to security of survey responses, anonymity was important. No prize was raffled for respondents, and even no e-mail addresses were gathered in the survey. Lastly, having employees respond on a purely voluntary basis was emphasized as the company cannot force their employees to take surveys.

As no ready and reliable distribution list was available to reach the intended target group of respondents, the chosen method to reach the respondents was through their managers. A preliminary notice was sent to all team managers on 20 August 2012 to inform them of the upcoming survey and to provide them and opportunity to reach out to the author in case of questions. No queries were received other than comments on managers being eager to see the results of the survey.

For survey distribution a generic e-mail letter was drafted to be distributed to the managers who would then forward the e-mail to their teams. The letter included information such as survey link, time the survey was open, obtained approvals, anonymity of the survey and the fact that it was conducted on voluntary basis for a Master's thesis study by the author.

The survey was sent to approximately 1300 Service Administrators in total as is demonstrated in [Table 4](#). The exact number of people receiving the survey is difficult to determine due to the fluctuation in work force and information on when and how managers forwarded the survey invite. The numbers for the smaller business unit of the two, Business Unit B, were possible to define due to the team's smaller size. An additional issue with calculating the sample frame is the uncertainty if all managers did

indeed send the survey notification to their teams. This uncertainty was found acceptable and would have been addressed in more detail only if not enough responses had not been received.

Table 4. Sampling Frame Size per Business Unit and Team.

| Business Unit | In-country SAs | Nearshore SAs | Back office SAs | Total |
|----------------------|-----------------------|----------------------|------------------------|--------------|
| Business Unit A | Appr. 500 | Appr. 300 | 350-400 | ~1200 |
| Business Unit B | 16 | 37 | 59 | 112 |
| Total | ~516 | ~337 | ~459 | ~1312 |

The survey was open 27 August – 7 September 2012. During this time one reminder was sent to manager on 03 September 2012 in order to make sure they had forwarded the mail to their teams and they could encourage them to complete the survey. After collecting first results from the survey tool, one team was noticed not to have provided answers. After investigation it was found that they had not received the survey link and due to this the survey was reopened for the period of 10 – 13 September 2012 to allow them to participate.

3.6 Analysis Methods

The most typical way of analyzing quantitative data is by using statistical tools. In this study, analysis was done by using Microsoft Office Excel 2010 for data scrutiny and IBM SPSS Statistics 20 for statistical analysis.

The responses from the survey in sections A through E are closed questions and their answers are either on nominal or ordinal scale. The demographics questions (section A) include only nominal data, i.e. data where each predetermined response is assigned a number (Malhotra & Birks, 2007, p. 294). Questions in sections Use of Tools (section C), Trust (section D), and Collectivism and Individualism (section E) have only ordinal scale question. Ordinal scale is “a ranking scale in which numbers are assigned to objects to indicate the relative extent to which some characteristic is possessed” (Malhotra & Birks, 2007, p. 295). The data from the Language section (B) provides responses on both nominal and ordinal scale.

In order to identify systematic differences between the front and back office teams, t-tests, and regression analysis were undertaken. The t-test was used to compare the means of two teams' attributes. The regression analysis was used to combine several attributes and find how they combine to predict particular outcomes. The analysis is covered in the next Chapter.

4 FINDINGS

In this section are provided all the findings from the online survey. All sections of the survey will be analyzed. First, the sample is described after which the analysis is presented. All sections of the survey are analyzed separately and the factors found most important are included in multiple regression analyses (see *Chapter 4.6* for multiple regression analyses).

4.1 Demographics

The survey was sent to approximately 1300 people. In the three weeks the survey was open 278 responses were received. This results in an approximate 21 % response rate. Out of the 278 responses 25 were disregarded immediately as they were incomplete.

Due to some issues with the survey tool, although all questions were marked as compulsory to reply to, some respondents had been able to skip questions in two sections: “Use of Tools” and “Trust”. In [Table 5](#) below is illustrated the responses received. The incomplete responses were cases where filling in the survey was interrupted by the respondent and thus responses could not be used in the study.

Table 5. Amount of Survey Responses.

| | Incomplete | Tools and/or Trust incomplete | Full responses | Total |
|------------------|-------------------|--------------------------------------|-----------------------|--------------|
| Responses | 25 | 58 | 195 | 278 |

Where the Tools and/or Trust sections were incomplete, the responses could be used to some extent. However, as omitting these responses provides a sufficient sample of N=195 with sufficient responses from each team (as can be seen from [Table 6](#)) only N=195 will be used for analysis. For business unit B there are much less replies from FO in-country and Romania, which can be explained by the size the population. The response rate from Business Unit B in total was 48,2%, whereas the same for Business Unit A was only 11,8%. This does not make it possible to compare teams per business

unit on a regional level, but nonetheless a business unit comparison is available when looking at the all the teams together with 54 vs. 140 responses.

Table 6. Split per Business Unit and Back Office vs. Front Office and Response Rates.

| Business Unit | Back Office India | <i>Resp. rate %</i> | Front Office in-cntry | <i>Resp. rate %</i> | Front Office Romania | <i>Resp. rate %</i> | Total | <i>Resp. rate %</i> |
|----------------------|--------------------------|---------------------|------------------------------|---------------------|-----------------------------|---------------------|--------------|---------------------|
| Business Unit A | 40 | 10,0 | 73 | 14,6 | 28 | 9,3 | 141 | 11,8 |
| Business Unit B | 39 | 66,1 | 7 | 43,8 | 8 | 21,6 | 54 | 48,2 |
| Total | 79 | 17,2 | 80 | 15,5 | 36 | 10,7 | 195 | 14,9 |

The study at hand is on horizontal communication and thus in the survey form the respondents' role was asked. The aim of the question was to identify if any respondents would respond from a vertical communication perspective. As can be seen from [Table 7](#), 11 respondents replied "Other". The supervisor role always includes also hands-on service administration work and after examining the responses, they have been decided to leave in as the supervisor role is only within their own team – there are no front office agents working as direct managers to back office staff or vice versa, and hence no conflict is seen. Similarly to the supervisor position, also any team lead, BPA (Business Process Analyst), trainer, specialist were left in as they all communicate with back office/front office on horizontal level. Finally, the three managers who took the survey were also left into the sample. This is due to the fact that as with supervisors, there are no SA (Services Administrator) managers across the front office – back office boundary. After scrutinizing the responses they were not omitted keeping in mind the horizontal communication with the back office. Hence no responses have been omitted based on role.

Table 7. Role Distribution.

| Response choices | Services Admin | Supervisor | Manager | Team Lead | BPA/controller/trainer/specialist | N | % |
|-------------------------------|----------------|------------|----------|-----------|-----------------------------------|------------|-------------|
| Services administrator | 149 | - | - | - | - | 149 | 76,4 |
| Manager | - | - | 3 | - | - | 3 | 1,5 |
| Other (please specify) | 11 | - | - | 4 | 25 | 40 | 20,5 |
| Supervisor | - | 3 | - | - | - | 3 | 1,5 |
| Total | 160 | 3 | 3 | 4 | 25 | 195 | 100 |

Out of the 195 responses included in the analysis 97 provided written replies for the two open-ended questions in the end of the survey. Additionally, there were no responses where all questions in one section would have been answered with the same response. This enhances the reliability of the sample, as it indicates that respondents did not only click through the survey, but made an effort to answer the questions suitably.

Regional analysis was not possible due to a low number of responses from each region. The question on region could not be provided to SAs from Business Unit B as there are so few per country as can be seen in Table 8 below. Additionally some respondents indicated ‘EMEA’ as their region, possibly due to not wanting to reveal their region to preserve anonymity. Thus the only regional analysis can be done based on teams, i.e. BO India vs. FO Romania vs. FO in-country. This is somewhat of a disappointment and limiting to the study, however it does allow an analysis comparing the different teams. See the regional distribution of responses in Table 8 below.

Table 8. Regional Analysis.

| BU/Region | N | % |
|------------------------|------------|-------------|
| Business Unit B | 54 | 27,7 |
| FO in-country | 7 | 3,6 |
| FO Romania | 8 | 4,1 |
| BO India | 39 | 20,0 |
| Business Unit A | 141 | 72,3 |
| France | 0 | 0,0 |
| Germany | 5 | 2,6 |
| GE | 24 | 12,3 |
| Italy | 8 | 4,1 |
| Spain | 9 | 3,1 |
| UK&I | 7 | 2,6 |
| CEE | 20 | 10,3 |
| MEM | 3 | 1,5 |
| EMEA | 3 | 1,5 |
| FO Romania | 29 | 14,9 |
| BO India | 38 | 19,5 |
| Total | 195 | 100 |

Table 9 shows the gender distribution of the sample. The ratio of females to males was expected, with more than two thirds of the respondents being female, as this coincides with the author's experience in the teams. No real data is available on the population's gender distribution from the company.

Table 9. Gender Distribution.

| Gender | N | % |
|--------------------|------------|--------------|
| Female | 136 | 69,7 |
| Male | 59 | 30,3 |
| Grand Total | 195 | 100,0 |

The age distribution, as can be seen in Figure 5, is somewhat skewed so that the age group of 21 – 30 is most represented. However, as in the farshore and nearshore teams it is usual that young people are hired, an analysis per team is in place.

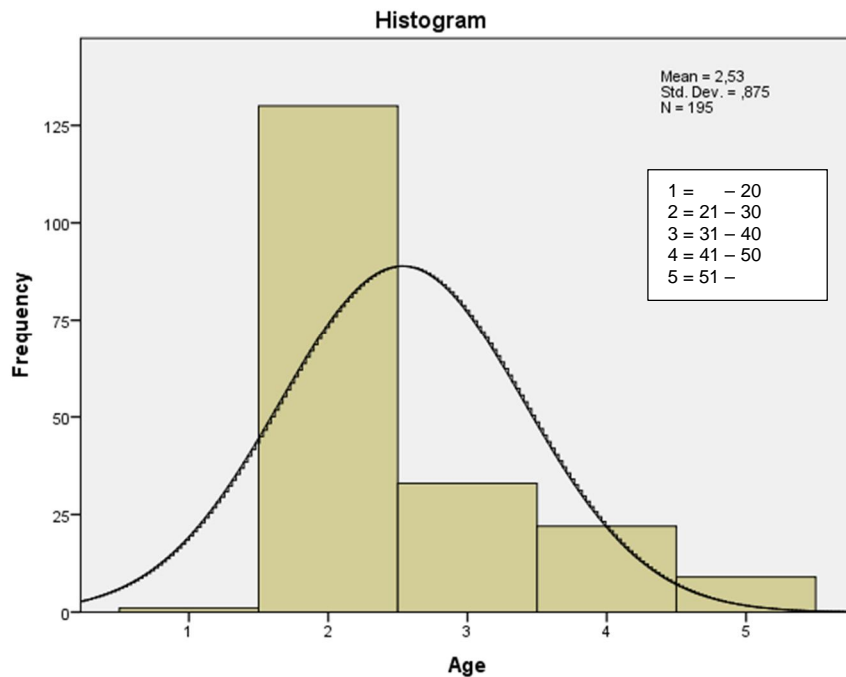


Figure 5. Age Distribution Histogram.

Distribution of age seems to follow normal distribution only in the in-country team, as could be expected (see [Figure 6](#)). The farshore and nearshore teams show a much younger population, where in the nearshore team all respondents are between 20 and 40 years of age, similarly in the farshore team, where only one respondent is 41 – 50 years old. This distribution supports the author’s assumption of younger people being hired to the farshore and nearshore teams. This seems to correspond to the actual state and the data appears as representative of the teams.

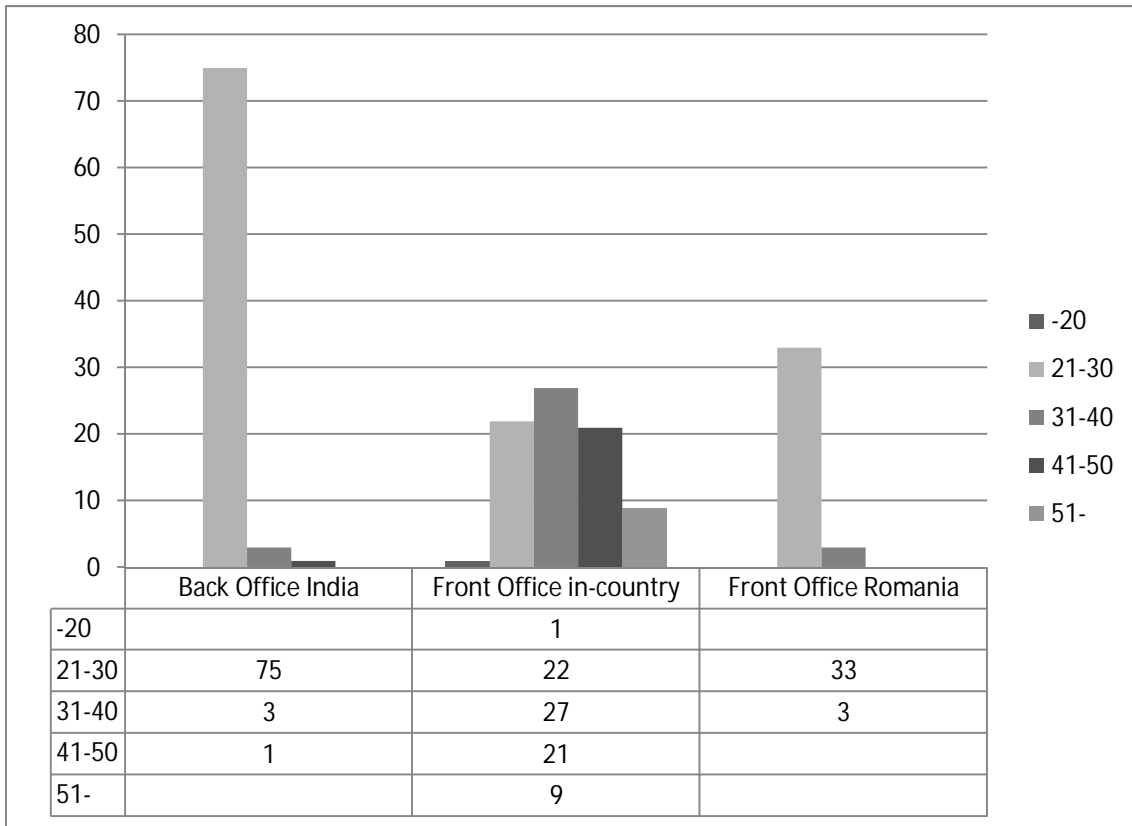


Figure 6. Age Distribution per Team.

67% of the sample is 30 years old or younger, which can be expected to be reflected in the work experience (here measured by how many years worked at Company Alpha). In [Figure 7](#) it can be clearly seen how age and experience relate with the farshore and nearshore teams showing the fewest years of experience in their teams. The nearshore team's lack of experience can be expected based on the fact that the function in Romania has existed only for four years. The setup in India is a few years older, which is reflected in the data. However, it is also noteworthy that half of the sample size from the farshore team has two years or less experience in Company Alpha. This coincides with the author's experience that there is high turnover in the workforce. Based on t-test there is a significant difference between the average age groups in the BO India team and FO Romania vs. FO in-country team (both $p < 0,010$).

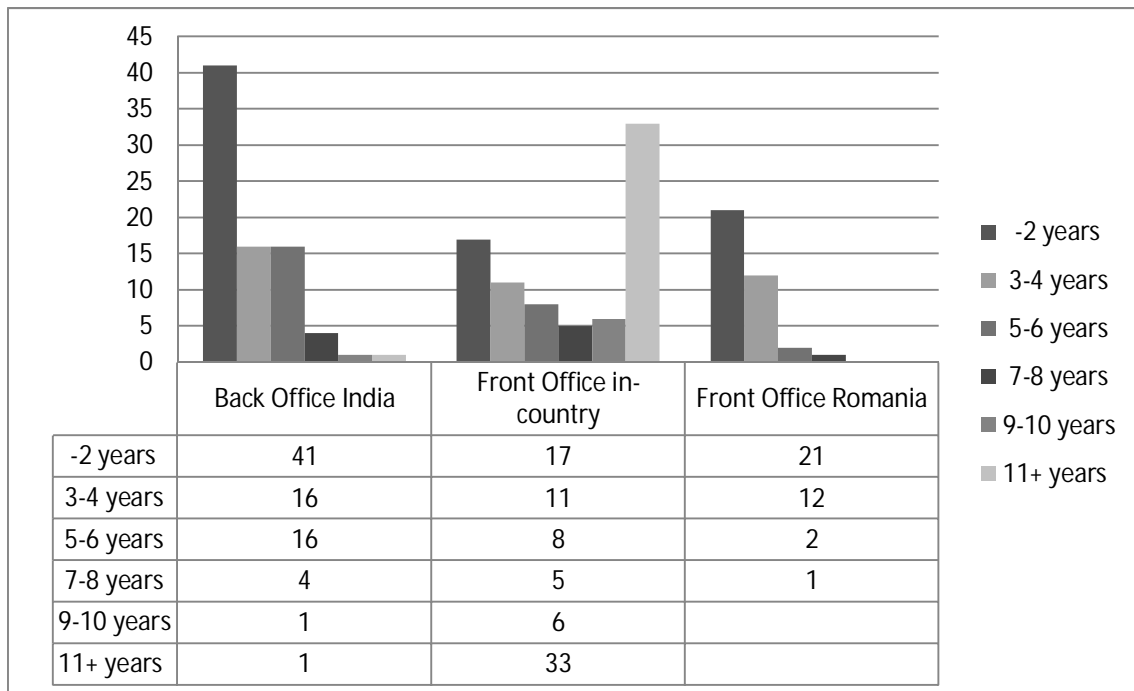


Figure 7. Years of Experience Working in Company Alpha.

Significant differences in the means of working experience in the company were found between the FO in-country and Romania teams ($p < 0,001$) and FO in-country and BO India teams ($p < 0,001$). No significant difference was found in the means of experience of FO Romania and BO India teams. Comparing the FO teams' experience as a whole to the BO team's also there significant difference was found ($p < 0,001$).

4.2 Language

In section B of the survey, the respondents were asked about their English language capabilities, comfortability level of speaking it and if they had studied British or American English. The majority (54,4%) had studied British English and 11,3% had studied both as can be seen in Table 10 below.

Table 10. Studied English per Team.

| | British | | American | | Both | | Neither | | Total | |
|---------------|------------|-------------|-----------|-------------|-----------|-------------|-----------|-------------|------------|--------------|
| | # | % | # | % | # | % | # | % | # | % |
| BO India | 42 | 53,2 | 13 | 16,5 | 2 | 2,5 | 22 | 27,8 | 79 | 100,0 |
| FO Romania | 16 | 43,2 | 6 | 16,2 | 9 | 24,3 | 6 | 16,2 | 37 | 100,0 |
| FO in-country | 48 | 60,8 | 8 | 10,1 | 11 | 13,9 | 12 | 15,2 | 79 | 100,0 |
| Total | 106 | 54,4 | 27 | 13,8 | 22 | 11,3 | 40 | 20,5 | 195 | 100,0 |

An analysis was done based on question 11 creating a new measure consisting of mean of each respondent's replies regarding their English speaking, writing and understanding capabilities. Similarly to the age distribution, the FO in-country team's sample had a normal distribution, whereas the BO India and FO Romania teams' samples were skewed. The variable mean is shown for each team in Table 11 below.

Table 11. English Language Capabilities.

| | N | Mean | Median | SD | Min. | Max |
|----------------------|----------|-------------|---------------|-----------|-------------|------------|
| BO India | 78 | | | | | |
| Speaking | | 5,46 | 5,00 | 0,86 | 3 | 8 |
| Writing | | 5,73 | 6,00 | 0,83 | 4 | 8 |
| Understanding | | 5,86 | 6,00 | 0,91 | 3 | 8 |
| Average of all three | | 5,68 | 5,67 | 0,80 | 4 | 8 |
| FO All | 114 | | | | | |
| Speaking | | 5,96 | 6,00 | 1,23 | 2 | 8 |
| Writing | | 6,12 | 6,00 | 1,08 | 2 | 8 |
| Understanding | | 6,22 | 6,00 | 1,12 | 2 | 8 |
| Average of all three | | 6,10 | 6,00 | 1,21 | 2 | 8 |
| FO Romania | 36 | | | | | |
| Speaking | | 6,39 | 7,00 | 0,80 | 5 | 8 |
| Writing | | 6,44 | 7,00 | 0,74 | 5 | 8 |
| Understanding | | 6,61 | 7,00 | 0,65 | 5 | 8 |
| Average of all three | | 6,44 | 6,67 | 0,70 | 5 | 8 |
| FO in-country | 78 | | | | | |
| Speaking | | 5,76 | 6,00 | 1,34 | 2 | 8 |
| Writing | | 5,97 | 6,00 | 1,18 | 2 | 8 |
| Understanding | | 6,04 | 6,00 | 1,24 | 2 | 8 |
| Average of all three | | 5,92 | 6,00 | 1,21 | 2 | 8 |

Examining the means shows a heightened result for the FO Romania team. Another noteworthy observation is that in the FO Romania team all respondents estimated their English language capabilities to be at least 5 – Good on all choices. A t-test comparing the means of different teams' language capabilities can be found in [Table 12](#).

Table 12. Language Capabilities' T-test Significance.

| | T-test. Significance | | | |
|------------------|----------------------|----------------------|-------------------|------------------------------|
| | FO vs. BO | FO in-country vs. BO | FO Romania vs. BO | FO Romania vs. FO in-country |
| Speaking | 0,001***† | 0,091*† | 0,000*** | 0,004***† |
| Writing | 0,008*** | 0,139 | 0,000*** | 0,030** |
| Understanding | 0,015** | 0,274 | 0,000*** | 0,002***† |
| Av. of all three | 0,003***† | 0,128 | 0,000*** | 0,004***† |

*** $p < 0,01$

** $p < 0,05$

* $p < 0,10$

† t-test undertaken not assuming equal variances

Significant differences can be found comparing all groups. Comparing FO in-country and the back office teams, only English speaking capabilities show a significant difference ($p < 0,10$). Otherwise these two teams' means do not differ significantly. The FO has significantly higher English language capabilities as a whole and the FO Romania team especially shows stronger English skills than the other teams.

Having lived in an English speaking country seems to have a significant association with how respondents perceive their English language capability. 18,5% (36) respondents indicate they had lived in an English speaking country for at least three months. Their mean of English language capabilities was 6,45 (on a seven-point scale) whereas the respondents who had not lived in an English speaking country had a mean of 5,80. All comparing results were found highly significant ($p < 0,05$), whether the comparison was done on specific language skills or a combination mean of all three (see Table 13). Similarly there were significant findings relating to having lived in an English speaking country and how comfortable the respondents were speaking English ($p < 0,005$).

Table 13. Lived in an English Speaking Country to English Knowledge T-test.

| | Lived in English speaking country? | N | Mean | SD | t-test Sig. |
|------------------|---|----------|-------------|-----------|--------------------|
| Speaking | Yes | 36 | 6,39 | 1,15 | 0,000*** |
| | No | 159 | 5,60 | 1,06 | |
| Writing | Yes | 34 | 6,53 | 1,05 | 0,000*** |
| | No | 158 | 5,84 | 0,96 | |
| Understanding | Yes | 34 | 6,56 | 1,05 | 0,002*** |
| | No | 159 | 5,96 | 1,02 | |
| Av. of all three | Yes | 36 | 6,45 | 1,06 | 0,000*** |
| | No | 159 | 5,80 | 0,96 | |

*** $p < 0,01$

** $p < 0,05$

* $p < 0,10$

All t-tests undertaken assuming equal variances

In conclusion, the language skills in the teams can be considered good. None of the respondent rated their capabilities as ‘very weak’ and only 2 consider some of their skills to be ‘weak’ (both respondents from the Italy region). The FO team in Romania scored the highest with all respondents ranking their English capabilities in all three categories at least ‘good’. Out of all the respondents 173 (88,7%) rated their English language capabilities in all three categories as ‘good’ or better, and 107 (54,9%) as ‘very good’ or better.

4.3 Collectivism and Individualism

Yamaguchi’s (1994, p. 182) research indicated that a one-factor solution can be used for the results. Hence, the I/C (individualism/collectivism) analysis is done based on a mean for each respondent on the responses they gave for the ten statements regarding personal-level individualism/collectivism (I/C). Additionally, an analysis is done based on each statement separately. A separate analysis will also test the applicability of the scale to this particular setting.

In order to find outliers the answers and their means were plotted one-by-one. Three responses came up as potential outliers, but none had a substantial impact on the model and hence the observations were left in the analysis. Some respondents had been able to

skip questions in the survey and thus the sample for some statements in this section is smaller than N = 195.

In Table 14 can be seen the t-test results of the I/C scale comparing the means of the responses from the FO and the BO. The overall mean does not produce a significant difference between the two, but some of the individual questions do (IC3, IC4, IC7, IC9 and IC10).

Table 14. T-test Results of I/C Scale.

| Team FO vs. BO | | N | Mean | SD | T-test Sig. |
|--|----|-----|------|------|-------------|
| IC1 Sacrifice my self-interest for my group | BO | 79 | 4,77 | 1,75 | 0,286† |
| | FO | 115 | 4,52 | 1,35 | |
| IC2 Act as my group members prefer | BO | 78 | 4,51 | 1,61 | 0,326 |
| | FO | 115 | 4,29 | 1,53 | |
| IC3 Stick with group through difficulties | BO | 79 | 5,52 | 1,53 | 0,066*† |
| | FO | 115 | 5,89 | 1,04 | |
| IC4 Maintain harmony in my group | BO | 79 | 5,49 | 1,25 | 0,023***† |
| | FO | 116 | 5,87 | 0,98 | |
| IC5 Respect majority's wish | BO | 79 | 5,73 | 1,52 | 0,760† |
| | FO | 116 | 5,79 | 0,96 | |
| IC6 Support group whether right or wrong | BO | 79 | 4,49 | 1,88 | 0,737† |
| | FO | 115 | 4,41 | 1,47 | |
| IC7 Respect decisions by group | BO | 78 | 5,97 | 1,25 | 0,080*† |
| | FO | 116 | 5,67 | 1,04 | |
| IC8 Remain in group, even when dissatisfied | BO | 77 | 5,22 | 1,59 | 0,471 |
| | FO | 115 | 5,06 | 1,45 | |
| IC9 Avoid arguments in group, even when disagree | BO | 78 | 5,03 | 1,52 | 0,000*** |
| | FO | 116 | 3,99 | 1,71 | |
| IC10 Make effort to avoid disagreements | BO | 79 | 5,65 | 1,30 | 0,003*** |
| | FO | 116 | 5,01 | 1,53 | |
| Mean_IC_ALL10 | BO | 79 | 5,24 | 1,02 | 0,168† |
| | FO | 116 | 5,05 | 0,81 | |

*** p < 0,01

** p < 0,05

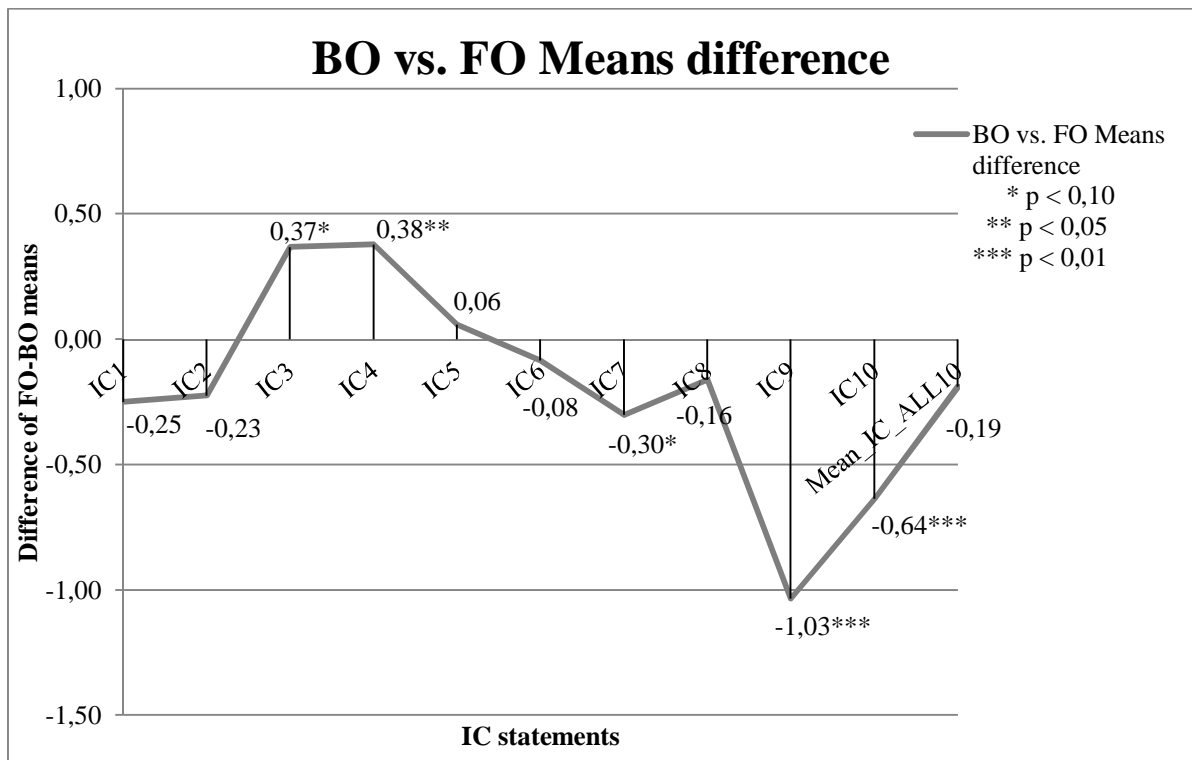
* p < 0,10

† t-test undertaken not assuming equal variances

Figure 8 below shows the means' difference as FO mean minus the BO mean for each statement and also the difference of the means for all 10. The smaller the difference, the

less the FO respondent has agreed with the statement than to BO respondent. For example, for statement IC9 the means' difference is -1,03, ($p < 0,01$) which means that FO respondents are significantly less inclined to avoid arguments in a group, even when they disagree.

Figure 8. BO and FO I/C Statements Means' Differences.



Due to a low response rate and the fact that regional information could not be asked from the Business Unit B in-country SAs, there are not enough data points from different regions to compare the I/C scale per region. The number of responses per region can be found in [Table 8](#). Only CEE and GE regions produced a satisfactory amount of data points (20 and 24 respectfully) for a regional analysis. The rest of the regions each have 0 – 9 data points. Grouping does not seem meaningful, as countries that are usually not associated to each other culturally would need to be grouped. Hence a regional analysis is not undertaken.

However, an analysis comparing FO in-country, FO Romania and BO India teams is possible. In [Table 15](#) below can be found the descriptive statistics per each team, and

their t-test results comparing the means of all the I/C questions' mean to that of the BO team. The comparison shows first the mean of the whole FO team, and then the means FO Romania and FO in-country teams to BO team.

The only significant finding ($p < 0,10$) can be found between BO India and FO in-country. Interestingly, the results indicate that the mean I/C scores in BO India and FO Romania do not show a significant difference. Also comparing the means of the two FO teams, there is no significant difference (0,199 two-tailed t-test).

Table 15. I/C Scale Mean Descriptives and T-test against BO.

| | N | Mean | Median | SD | Min. | Max | T-test vs. BO Sig. |
|----------------------|-----|------|--------|-------|------|-----|--------------------|
| BO India | 79 | | | | | | |
| Mean_IC_ALL10 | | 5,24 | 5,30 | 1,017 | 2 | 7 | - |
| FO All | 116 | | | | | | |
| Mean_IC_ALL10 | | 5,05 | 5,00 | 0,807 | 3 | 7 | 0,168† |
| FO Romania | 37 | | | | | | |
| Mean_IC_ALL10 | | 5,19 | 5,20 | 0,796 | 3 | 7 | 0,780† |
| FO in-country | 79 | | | | | | |
| Mean_IC_ALL10 | | 4,98 | 5,00 | 0,808 | 3 | 7 | 0,082* |

* $p < 0,10$

† t-test undertaken not assuming equal variances

These results also partially coincide with Hofstede's Individualism Index (IDV). Country IDV scores are presented in [Table 3](#). Most Western European countries (here FO in-country SAs' countries) score high on individualism (ranks 2nd – 30th), India ranks as 31st and Romania as 46th – 48th. This can also be interpreted in relation to the teams studied in this paper that out of three teams, FO in-country score the highest, followed by BO India, and FO Romania scores the lowest. In the individual I/C scale tested in this paper (which conversely shows *a higher number for higher collectivistic ranking*), FO in-country has the lowest mean, and it is followed by FO Romania and then BO India. This would seem to indicate that Romania has higher individualism ranking than India, unlike Hofstede (1984) has presented. However, this kind of determination cannot be done based on such a small sample from one company's setting.

Additionally, testing does not show a significant difference between the two, and hence no definitive conclusion can be made on this. Perhaps as more time passes a larger difference can be seen, or possibly a rise in individualism in both countries, but not yet in this study. Interestingly the BO Romania team's results do not significantly differ from either of the other teams, which may indicate that they are close on the I/C scale to both team. The t-test shows that the means of the FO in-country and BO India team's differ significantly ($p < 0,10$), so that the FO in-country team's mean is significantly lower in collectivism.

4.4 Use of Tools

Tool usage was assessed in the survey by asking the respondents about 13 different communication tools and how often the respondents use them (five predetermined choices), and how efficient and important they find them (seven-point scales). Respondents were also given a chance to identify a communication tool they use other than what was predefined. Only two respondents entered data into this field choosing different communication tools. Hence the responses given in the 'other' field are not included in the analysis.

Table 16 shows the mean, standard deviation, and t-test results comparing the responses related to tool usage ratings from the back office and front office teams. Many significant differences between the averages of FO and BO could be found in how often, on average, the teams use the different tools and how important and/or efficient the respondents find them.

The only tools where no significant ($p > 0,10$) differences were found were chat, websites, and blogs. Chat is used on average by each team at least weekly and its importance and effectiveness is seen significant in both teams on average (means $> 4,5$). Blogs are not used often by either team, and are neither found particularly important nor efficient.

Table 16. Tools Usage T-test Results Comparing BO and FO.

| Tools | N | Mean | SD | T-test Sig. |
|--------------------------|-----------------|--------------|----------------|-------------|
| E-mail frequency | BO 79 FO 116 | 4,87 5,00 | ,607 0,000 | 0,068* |
| E-mail importance | BO 79 FO 116 | 6,49 6,79 | 1,309 ,552 | 0,058* |
| E-mail efficiency | BO 78 FO 116 | 6,40 6,23 | 1,166 ,936 | 0,278† |
| Telephone frequency | BO 79 FO 115 | 3,91 4,15 | 1,425 1,019 | 0,207 |
| Telephone importance | BO 79 FO 116 | 5,28 6,09 | 2,112 1,201 | 0,002*** |
| Telephone efficiency | BO 79 FO 116 | 5,44 6,24 | 1,966 1,044 | 0,001*** |
| VoI frequency | BO 78 FO 116 | 4,47 4,11 | 1,136 1,249 | 0,038** |
| VoI importance | BO 78 FO 116 | 5,96 5,81 | 1,591 1,577 | 0,515† |
| VoI efficiency | BO 78 FO 116 | 6,01 5,93 | 1,525 1,310 | 0,699 |
| Chat frequency | BO 79 FO 115 | 3,72 3,76 | 1,601 1,582 | 0,880† |
| Chat importance | BO 79 FO 115 | 4,77 5,05 | 2,106 2,147 | 0,370† |
| Chat efficiency | BO 79 FO 114 | 4,85 5,10 | 2,020 1,991 | 0,398† |
| Virtual conf. frequency | BO 79 FO 116 | 2,37 3,22 | 1,351 ,979 | 0,000*** |
| Virtual conf. importance | BO 79 FO 116 | 4,16 5,39 | 2,227 1,419 | 0,000*** |
| Virtual conf. efficiency | BO 79 FO 116 | 4,13 5,43 | 2,084 1,307 | 0,000*** |
| Video conf. frequency | BO 79 FO 116 | 1,42 1,62 | ,826 ,730 | 0,072*† |
| Video conf. importance | BO 79 FO 115 | 3,22 3,71 | 1,998 1,839 | 0,075*† |
| Video conf. efficiency | BO 79 FO 115 | 3,35 4,29 | 1,994 1,786 | 0,001***† |
| Face-to-face frequency | BO 79 FO 115 | 3,48 3,65 | 1,560 1,433 | 0,431† |
| Face-to-face importance | BO 79 FO 116 | 5,14 6,55 | 2,030 1,074 | 0,000*** |
| Face-to-face efficiency | BO 79 FO 115 | 5,19 6,52 | 1,929 1,012 | 0,000*** |

| Tools | N | Mean | SD | T-test Sig. |
|-------------------------------------|-----------------|--------------|----------------|-------------|
| Share point frequency | BO 79 FO 116 | 4,25 4,43 | 1,203 ,962 | 0,275 |
| Share point importance | BO 79 FO 116 | 5,94 5,47 | 1,588 1,596 | 0,048***† |
| Share point efficiency | BO 79 FO 116 | 5,80 5,23 | 1,596 1,617 | 0,017***† |
| Website frequency | BO 79 FO 116 | 3,96 4,24 | 1,454 1,227 | 0,150† |
| Website importance | BO 79 FO 116 | 5,14 5,29 | 2,068 1,663 | 0,582 |
| Website efficiency | BO 79 FO 116 | 5,05 5,05 | 2,012 1,749 | 0,997 |
| Blog frequency | BO 79 FO 116 | 1,72 1,59 | 1,165 ,914 | 0,388 |
| Blog importance | BO 79 FO 116 | 2,58 2,28 | 1,707 1,541 | 0,194† |
| Blog efficiency | BO 79 FO 114 | 2,73 2,45 | 1,802 1,529 | 0,235† |
| Wiki frequency | BO 79 FO 116 | 1,61 1,91 | ,993 1,038 | 0,047***† |
| Wiki importance | BO 79 FO 116 | 2,41 2,88 | 1,772 1,695 | 0,061* |
| Wiki efficiency | BO 79 FO 115 | 2,56 3,03 | 1,700 1,709 | 0,061*† |
| Social media frequency | BO 79 FO 116 | 2,33 2,88 | 1,430 1,632 | 0,014** |
| Social media importance | BO 79 FO 116 | 2,72 2,73 | 1,887 1,810 | 0,967† |
| Social media efficiency | BO 79 FO 116 | 2,96 2,86 | 1,904 1,783 | 0,709† |
| Internal soc. media tool frequency | BO 79 FO 116 | 3,72 3,00 | 1,568 1,492 | 0,001***† |
| Internal soc. media tool importance | BO 79 FO 115 | 4,80 4,20 | 2,157 2,044 | 0,052*† |
| Internal soc. media tool efficiency | BO 79 FO 116 | 4,90 4,03 | 2,023 1,920 | 0,003***† |

*** p < 0,01
** p < 0,05
* p < 0,10
† t-test undertaken not assuming equal variances

Websites are used on average a few times a week in each team and they are rated fairly important and effective (see [Table 16](#) for exact values).

E-mail is used by FO more often than by BO, and they also find it significantly more important. There is no significant difference in the perception of its efficiency, but it is rated high by both teams (FO mean 6,23; BO mean 6,40 on a seven-point scale).

Telephone and VoI (Voice over Internet) are both media for talking without video interface. Telephone has been available as an option for a long time, VoI only for approximately one year before the survey was conducted. Frequency wise, both seem to be used on average a few times a week. Only in VoI there is a significant difference in usage where the BO team uses it more often than the FO team. The importance and efficiency of telephone is significantly higher in the BO team ($p < 0,05$), whereas in VoI there are no significant differences found between the two measures.

In virtual conferencing there are highly significant ($p < 0,01$) differences found in each category. The FO team uses the virtual conferencing significantly more often, averaging at weekly usage, whereas the BO uses it only seldom on average. The FO team also finds the tool significantly more important and efficient than the BO team. Video conferencing is also used significantly ($p < 0,10$) more often in FO than BO. However, both teams' averages are located between responses 'never' and 'seldom' so video conferencing is not in regular use by either team. Both teams average on importance below the neutral point of four, finding it not so important. Efficiency of virtual conferencing is found significantly ($p < 0,01$) more important in the FO. They average slightly above (4,29) the neutral point of four in the scale.

There is no significant difference in the use of share points between the teams; both use them weekly on average. However, the BO team does find them significantly more important and efficient than the FO team (both $p < 0,05$). Use of wikis shows a significant difference between the teams, but both teams average on using them between never and seldom, and importance and efficiency ratings are below the neutral rating (four). Hence, the finding, although significant, is not seen as significant to the study. Similar, though somewhat higher, scores are found for social media. These are not seen important in communication with colleagues on average. The company internal communication tool, shows highly significantly ($p < 0,01$) higher usage in the BO, who

use it on average more than once a week. The BO team also find it significantly more important ($p < 0,10$) and efficient ($p < 0,01$).

Lastly, face-to-face meetings showed no significant difference in the frequency means. On the other hand, its importance and efficiency showed highly significant differences ($p < 0,01$). The FO team values face-to-face meetings' importance and effectiveness higher than the BO team, FO means being 6,55 and 6,52 and BO means 5,14 and 5,19 respectively.

4.5 Trust

As trust has an impact on all aspects of a virtual team, next a comparison is done on how different teams perceive how they trust the other team in relation to their own team. In this analysis the responses to the surveys 'Trust' questions are analyzed using t-test.

In order to get a sense of the perception of trust in 'my team' versus the 'other team', statements comparing these two were presented in the survey's section E. Statements 1 through 16 ask the respondent to rate their own team (BO or FO) and the other team (BO or FO) in turns. Trust between the teams was operationalized by taking the difference in the responses to these questions as is depicted in [Table 17](#). This calculation results in eight measures of trust between the front office and back office.

Table 17. Calculated Trust Values.

| Difference calculations | New Trust Value | Explanation of New Trust Value |
|--------------------------------|------------------------|--|
| E01-E02 | T0102 | The higher the rating the more the respondent thinks that his/her own team has better qualifications for effective team performance than the other team does. |
| E03-E04 | T0304 | The higher the rating the more the respondent thinks that his/her team shares all sources with the members of the other team at all times more than the other team with his/her team does. |
| E05-E06 | T0506 | The higher the rating the more the respondent thinks that his/her team fulfills whatever tasks they take on more successfully than the other team does. |
| E07-E08 | T0708 | The higher the rating the more the respondent trusts his/her team's all members' expertise than the other team's. |
| E09-E10 | T0910 | The higher the rating the more the respondent thinks that his/her team tries to get to know new team member in his/her team more than a new member in the other team. |
| E11-E12 (*reversed) | T1112r | The higher the rating the more the respondent thinks that his/her team has little difficulty communicating among the team than with the other team. |
| E13-E14 (*reversed) | T1314r | The higher the rating the more the respondent thinks that difficulties in his/her team are not caused by lack of understanding of each other's background than they are with the other team. |
| E15-E16 | T1516 | The higher the rating the more the respondent thinks his/her team when working on a request, are more committed to achieving results than the other team. |

** Reversed = values have been reverse in order to have all values indicate a larger number as a more positive perception of my team.*

The 'New Trust Values' comparing the results essentially show the difference of trust a respondent has in his/her own team over the other team. Table 18 below shows the

results comparing the back office and the front office teams' responses, where many highly significant ($p < 0,001$) differences in means can be found.

Table 18. Trust T-test Results – my Team vs. other Team.

| Trust differences (my team vs. other team) | | N | Mean | One Sample T- test Sig. | Std. Deviation | T-test Sig. |
|---|----|-----|------|-------------------------------|-------------------|----------------|
| T0102 | BO | 79 | ,24 | ,004*** | ,720 | 0,000***† |
| | FO | 116 | ,98 | ,000*** | 1,438 | |
| T0304 | BO | 79 | ,46 | ,001*** | 1,207 | ,263 |
| | FO | 116 | ,65 | ,000*** | 1,136 | |
| T0506 | BO | 79 | ,63 | ,000*** | 1,312 | ,113 |
| | FO | 116 | ,93 | ,000*** | 1,263 | |
| T0708 | BO | 79 | ,39 | 0,002** | 1,114 | 0,000***† |
| | FO | 116 | 1,09 | ,000*** | 1,377 | |
| T0910 | BO | 79 | ,82 | ,000*** | 1,647 | 0,000***† |
| | FO | 116 | 2,03 | ,000*** | 1,909 | |
| T1112r | BO | 79 | ,42 | ,008*** | 1,355 | 0,000***† |
| | FO | 116 | 1,34 | ,000*** | 1,582 | |
| T1314r | BO | 79 | -,08 | ,602 | 1,289 | 0,000***† |
| | FO | 116 | ,87 | ,000*** | 1,507 | |
| T1516 | BO | 79 | ,15 | ,096* | ,802 | 0,002***† |
| | FO | 116 | ,64 | ,000*** | 1,315 | |

*** $p < 0,01$

** $p < 0,05$

* $p < 0,10$

† t-test undertaken not assuming equal variances

Most results have a positive average and showing a significant difference to zero, meaning that on average the teams value their own team over the other team in these aspects. Only in T1314r the BO team has a negative average (-0,08), which could indicate that lack of understanding of each other's backgrounds has a higher affect within their own team. However, the difference is very marginal, so no conclusion can be made based on this.

The two measures where no significant differences were found were T0304 (sharing resources with the other team more) and T0506 (fulfilling tasks more successfully than the other team), indicating that there is no difference, on average, in how teams share all sources at all times, and in successful task completion. Where highly significant differences were found, in all cases the FO average is higher, meaning that the FO tends to value their own team more highly than the BO.

The t-test indicates that, compared to the BO team, the FO members find that, on average:

- Their team has better qualifications for effective team performance
- Their team's expertise is more trustworthy
- They get to know new members in their own team better
- They have less difficulty in communication
- Difficulties in their team are not caused by lack of understanding each other's backgrounds
- Their team is more committed to achieving results

The respondents were also asked about trust within their own groups. Table 19 shows the sample means results and t-tests comparing BO and FO. On average both teams scored above neutral and thus can be concluded to experience trust within their own teams positively. Highly significant differences ($p < 0,001$) were found in statements 'the people in my group are friendly', and 'there is no noticeable lack of confidence among those within my group'. The latter statement was asked in a different format with the statement 'we have confidence in one another in my group', which shows no significant difference, thus it remains undetermined if confidence within a group really has significant difference. It may be that respondents have not understood the wording of one of the questions correctly. Hence, the only highly significant difference is found in friendliness of people in my group.

Table 19. Trust T-test Results – my Group Statements.

| Trust differences in My Group | | N | Mean | Std. Deviation | T-test Sig. |
|--|----|-----|------|----------------|-------------|
| Members in my group show a great deal of integrity | BO | 79 | 5,49 | 1,440 | 0,084* |
| | FO | 116 | 5,83 | 1,225 | |
| I can rely on those with whom I work in my group | BO | 79 | 5,35 | 1,387 | 0,018** |
| | FO | 116 | 5,81 | 1,264 | |
| Overall, the people in my group are very trustworthy | BO | 79 | 5,73 | 1,327 | ,278 |
| | FO | 116 | 5,93 | 1,178 | |
| We are usually considerate of one another's feelings in my group | BO | 79 | 5,51 | 1,395 | 0,305† |
| | FO | 116 | 5,70 | 1,081 | |
| The people in my group are friendly | BO | 79 | 5,63 | 1,562 | 0,009***† |
| | FO | 116 | 6,16 | 1,046 | |
| There is team spirit in my group (reversed) | BO | 79 | 4,97 | 2,166 | 0,146† |
| | FO | 116 | 5,41 | 1,784 | |
| There is no noticeable lack of confidence among those within my group (reversed) | BO | 79 | 4,44 | 2,080 | 0,001***† |
| | FO | 116 | 5,40 | 1,673 | |
| We have confidence in one another in my group | BO | 79 | 5,53 | 1,568 | ,926 |
| | FO | 116 | 5,55 | 1,416 | |

*** p < 0,01

** p < 0,05

* p < 0,10

† t-test undertaken not assuming equal variances

Comparisons on trust were also made comparing the BO team to the in-country and nearshore teams separately. The results here indicate similar finding as comparing only BO and FO as a whole with only a few significant differences in the means. When comparing the two FO teams to each other, the only significant difference found was regarding statement T0304 where the observed significance level for the t-test was 0,013, indicating that the nearshore FO team shares resources with the BO team more than the FO team.

4.6 Multiple Regression Analysis

Data from all the sections of the survey have been separately analyzed in *sections 4.1 through 4.5*. In order to find out if the data can collectively explain changes in trust and

answer the research question posed in this study, a multiple linear regression analysis combining the variables is undertaken.

For the regression analysis, the trust statements (T0102 through T1516) were used as the dependent values. Predictors were chosen according to their importance in findings and fit to the theoretical model. From the demographic information, age, education level, gender and experience in Company Alpha were chosen, and from the language section the mean of respondents' rating of their speaking, writing and understanding capabilities. The I/C scale has been included in the form of the mean of all ten statements. Choosing which communication tools to include posed some problems as many were rated highly important and effective. Thus two different regression analyses were made, the first one (Table 20) including oral communication media, and the second one (Table 21) including communication media including written communication. The regression was also done to see differences between the FO nearshore team and the FO in-country team in comparison to the BO.

Table 20. Regression Results with Oral Communication Media (standard error in parenthesis).

| Variable | T0102 | T0304 | T0506 | T0708 | T0910 | T1112r | T1314r | T1516 |
|---|--------------------|--------------------|---------------------|---------------------|--------------------|--------------------|---------------------|-------------------|
| Telephone frequency | -0,029 (0,090) | 0,038 (0,087) | 0,020 (0,097) | -0,144 (0,096) | 0,169 (0,137) | 0,048 (0,115) | 0,113 (0,106) | -0,026 (0,087) |
| Telephone efficiency | 0,016 (0,077) | 0,077 (0,074) | 0,022 (0,082) | 0,052 (0,082) | -0,029 (0,116) | 0,017 (0,097) | -0,030 (0,09) | 0,128* (0,074) |
| VoI frequency | -0,046 (0,093) | 0,017 (0,089) | 0,052 (0,099) | 0,062 (0,098) | 0,098 (0,140) | -0,167 (0,117) | -0,256** (0,109) | -0,006 (0,089) |
| VoI efficiency | -0,036 (0,082) | -0,086 (0,079) | -0,059 (0,088) | 0,013 (0,088) | -0,099 (0,125) | 0,054 (0,105) | 0,128 (0,097) | -0,052 (0,079) |
| Mean_IC_ALL10 | 0,034 (0,103) | -0,185* (0,099) | -0,219** (0,110) | -0,038 (0,109) | -0,274* (0,156) | -0,122 (0,130) | -0,004 (0,121) | 0,015 (0,099) |
| Mean of English speaking, writing and understanding | 0,125 (0,096) | -0,036 (0,093) | 0,011 (0,103) | 0,065 (0,102) | 0,237 (0,145) | 0,071 (0,122) | 0,126 (0,113) | 0,076 (0,092) |
| FO Romania | 0,632** (0,267) | 0,508** (0,257) | 0,304 (0,287) | 0,349 (0,284) | 1,326** (0,404) | 0,628* (0,339) | 0,336 (0,314) | 0,385 (0,256) |
| FO In-country | 0,789** (0,272) | 0,060 (0,262) | 0,458 (0,292) | 1,102*** (0,289) | 0,775* (0,412) | 0,757** (0,345) | 0,767** (0,320) | 0,477* (0,261) |
| Age | -0,192 (0,170) | -0,004 (0,163) | -0,066 (0,182) | 0,038 (0,180) | 0,112 (0,257) | -0,010 (0,215) | 0,165 (0,199) | -0,063 (0,162) |
| Education level | 0,143* (0,084) | 0,071 (0,081) | 0,152* (0,090) | 0,139 (0,089) | -0,041 (0,127) | 0,005 (0,106) | 0,103 (0,098) | 0,091 (0,080) |
| Gender | 0,191 (0,207) | 0,061 (0,199) | 0,069 (0,222) | 0,126 (0,220) | -0,210 (0,313) | -0,266 (0,262) | -0,136 (0,243) | 0,079 (0,198) |
| Experience at Company Alpha | 0,158** (0,072) | -0,042 (0,070) | -0,016 (0,078) | -0,081 (0,077) | -0,025 (0,109) | 0,025 (0,092) | 0,067 (0,085) | 0,017 (0,069) |
| N | 192 | 192 | 192 | 192 | 192 | 192 | 192 | 192 |
| R ² | ,143 | ,082 | ,066 | ,128 | ,141 | ,109 | ,168 | ,082 |
| Adjusted R ² | ,086 | ,021 | ,004 | ,070 | ,084 | ,050 | ,113 | ,021 |
| Max VIF | 2,829 | 2,829 | 2,829 | 2,829 | 2,829 | 2,829 | 2,829 | 2,829 |

*p < 0,10
 **p < 0,05
 ***p < 0,001

The multiple regression analyses done here explain at most 16,8% of the variation in the respective dependent variables ($R^2 = 0,168$ for T1314r oral communication media analysis). This means that the model tested here is applicable to approximately one sixth of similar settings. The models' explanatory powers are not notably high, but are not out of line with similar results in the published literature.

The oral communication regression analysis shows some significant findings. Across the trust questions, the strongest results are found comparing FO Romania and FO in-country to BO. The regression model on oral communication predicts both teams to have higher trust in their own team. Oral communication tools telephone and VoI do not show many significant relations to trust. For telephone, the only significant result ($p < 0,10$) is that the more effective telephone is found as a communication tool, the more committed the other team is found to be to achieve results. For VoI, the only significant result ($p < 0,05$) is regarding T1314r, with a negative coefficient, which shows that the frequency of using VoI relates negatively with the teams understanding each other's backgrounds.

The I/C results are associated negatively and significantly to three different trust measures. The higher the I/C score, the more it negatively relates to the feeling of sharing sources with the other team, trusting the other team fulfilling their tasks, and getting to know new members in the other team. To summarize, the more collectivistic a person is, the less likely he or she is to trust the other team with respect to these aspects.

Out of the demographic factors considered in the model age and gender do not show any significant relations to trust. Education, however, shows a positive association ($p < 0,10$) with T0102 and T0506, i.e. seeing their own team having better qualifications to effective team performance, and their team being more successful to take on any tasks. The experience in Company Alpha also has a significant association ($p < 0,05$) with seeing one's own team having better qualifications to effective team performance (T0102).

Doing multiple regression analysis including only written communication media shows very similar results (see [Table 21](#)) and significances for the same predictors. Regarding the tools, frequency of using e-mail show significant results, which correlate positively with T0506 and T0910, i.e. confidence of one's own team fulfilling tasks more successfully than the other team, and getting to know people in the other team.

Table 21. Regression Results with Written Communication Media (standard error in parenthesis).

| | T0102 | T0304 | T0506 | T0708 | T0910 | T1112r | T1314r | T1516 |
|--|--------------------|--------------------|--------------------|---------------------|--------------------|--------------------|--------------------|--------------------|
| E-mail frequency | 0,169 (0,254) | 0,273 (0,244) | 0,557** (0,269) | 0,224 (0,268) | 1,225** (0,371) | 0,094 (0,323) | -0,184 (0,304) | 0,099 (0,242) |
| E-mail efficiency | -0,051 (0,098) | 0,103 (0,094) | -0,002 (0,104) | 0,137 (0,104) | 0,073 (0,144) | -0,213* (0,125) | -0,013 (0,118) | 0,171* (0,094) |
| Chat frequency | 0,082 (0,089) | 0,120 (0,085) | 0,053 (0,094) | 0,078 (0,094) | -0,011 (0,130) | 0,114 (0,113) | 0,115 (0,106) | 0,070 (0,085) |
| Chat efficiency | -0,099 (0,070) | -0,098 (0,068) | -0,088 (0,075) | -0,143* (0,074) | -0,168 (0,103) | -0,070 (0,089) | -0,087 (0,084) | -0,093 (0,067) |
| Mean_IC_ALL10 | 0,063 (0,103) | -0,182* (0,099) | -0,203* (0,109) | -0,029 (0,109) | -0,246 (0,151) | -0,060 (0,131) | 0,040 (0,123) | 0,022 (0,098) |
| Mean of English speaking, writing and understanding FO Romania | 0,131 (0,095) | -0,046 (0,092) | 0,019 (0,101) | 0,098 (0,101) | 0,299** (0,139) | 0,068 (0,121) | 0,176 (0,114) | 0,088 (0,091) |
| FO In-country | 0,866** (0,260) | 0,116 (0,250) | 0,442 (0,275) | 1,115*** (0,275) | 0,697* (0,380) | 0,868** (0,330) | 0,957** (0,311) | 0,620** (0,248) |
| Age | -0,251 (0,160) | -0,062 (0,154) | -0,107 (0,170) | 0,001 (0,169) | 0,045 (0,234) | -0,108 (0,204) | 0,122 (0,192) | -0,120 (0,153) |
| Education level | 0,142* (0,082) | 0,065 (0,079) | 0,145* (0,087) | 0,155* (0,087) | -0,052 (0,120) | -0,032 (0,104) | 0,071 (0,098) | 0,083 (0,078) |
| Gender | 0,205 (0,208) | 0,012 (0,199) | 0,010 (0,220) | 0,101 (0,219) | -0,218 (0,303) | -0,318 (0,264) | -0,141 (0,248) | 0,066 (0,198) |
| Experience at Company Alpha | 0,169** (0,070) | -0,012 (0,067) | -0,003 (0,074) | -0,066 (0,074) | 0,002 (0,102) | 0,023 (0,089) | 0,055 (0,083) | 0,039 (0,067) |
| N | 191 | 191 | 191 | 191 | 191 | 191 | 191 | 191 |
| R ² | ,157 | ,099 | ,096 | ,155 | ,214 | ,119 | ,154 | ,095 |
| Adjusted R ² | ,101 | ,038 | ,035 | ,098 | ,161 | ,060 | ,097 | ,035 |
| Max VIF | 2,664 | 2,664 | 2,664 | 2,664 | 2,664 | 2,664 | 2,664 | 2,664 |

The multiple regression analyses done here explain up to 21,4% of the variation ($R^2 = 0,214$ for T0910 written communication media analysis). The models' explanatory powers are not very high, but are not out of line with similar results in the published literature.

4.7 Feedback and Comments

At the end of the survey two open questions were asked on biggest *issues* with virtual communication within the group, and how communication and team work could be *improved*. Both of the questions were optional to answer and the format for replies was free text.

To the first open-ended question on issues in communication, 90 comments were received. Some responses listed up to four issues. When counting each separately, a total of 117 issues were written by the respondents. To the second question on improvement suggestions a total of 92 answers were written. Here also many provided more than one suggestion (up to five suggestions per respondent), resulting into 123 suggestions in total.

In order to provide an analysis of the responses, each answer was categorized by the author to provide easier analysis. The categories of issues can be seen in Table 22 below, out of which some will be brought up here. Any responses for which at least one other similar response was found were put into categories. Comments for which no similar responses were found are put in category 'Miscellaneous'.

Table 22. Categorized Answers for Issues in Virtual Communication Question.

| Issues Categories | Back Office India | Front Office in-country | Front Office Romania | Total |
|---|--------------------------|--------------------------------|-----------------------------|--------------|
| No issues | 22 | 2 | 2 | 26 |
| No issues + positive feedback | 2 | | | 2 |
| Miscellaneous* | 9 | 6 | 5 | 20 |
| Misunderstandings | 2 | 7 | 1 | 10 |
| Lack of face-to-face | 2 | 4 | 3 | 9 |
| Language | 2 | 5 | 1 | 8 |
| Technical issues/difficulties | 3 | 2 | 1 | 6 |
| Cultural differences | | 5 | | 5 |
| Different goals in different teams | | 4 | | 4 |
| Lack of personal communication | | 4 | | 4 |
| Lack of trust | 1 | 1 | 1 | 3 |
| Sharing knowledge/expertise | | 3 | | 3 |
| TAT | 1 | 2 | | 3 |
| Isolation/Feeling disengaged | 1 | 2 | | 3 |
| Changes in personnel | | 1 | 1 | 2 |
| No team spirit | | 2 | | 2 |
| No video | | 1 | 1 | 2 |
| Writing inefficient compared to talking | 1 | | 1 | 2 |
| Virtual meetings unorganized | 1 | 1 | | 2 |
| Total | 47 | 52 | 17 | 116 |

**Miscellaneous includes all comments which could not be combined to any other category*

The highest category found were respondents stating that they have no issues in virtual communication. Out of the respondents providing comments to this section as many as 31% found no issues, with two respondents providing positive feedback. Interestingly, 86% of the responses stating no issues in virtual communication came from the BO. They stated

“I don't find any kind of issues, in fact it's very useful” (BO SA)

“It's much interactive like face to face... To my knowledge there is no big issues in my area of work.. Actually it was very useful to take our business further.”
(BO SA)

Misunderstandings were experienced frustrating by many respondents, especially in the front office. One comment provides insight to the problem: *“Politeness and not losing the face are important in BO team. This might result in misunderstanding between the teams on what is agreed and will be done.”*. Another respondent found that *“mostly you do not know the person you are dealing with and this can cause misunderstandings.”* (FO Service Admin). Not knowing colleagues (lack of personal communication/four mentions) was noticed by many other respondents also.

Lack of personal communication was often tied with comments on lack of face-to-face meetings. Not meeting face-to-face was mentioned by nine respondents, and noted by members in all the three teams. Representative issues mentioned by the respondents were:

“we do not see each other” (FO SA)

“It is also more difficult to build good solid relationships with little or no face to face communication” (FO SA)

“Not having a presenter in front of you makes it difficult to acquire the info provided by him/her.” (FO SA)

“the face2face which is more effective, is missing. mostly you do not know the person you are dealing with and this can cause misunderstandings. this can consume much more time sometimes” (FO SA)

“Understanding certain business conditions without effective face to face encounters and business events” (BO SA)

Although language was not found to influence the regression model, it is mentioned as an issue by members of all teams. The comments from the FO Service Admins mostly referred to the English language skills of the BO Service Admins:

“The biggest issue is the fact that the colleagues from BO don’t speak English well, they don’t understand our request even when we write them email.”

“-video would help -I need to either learn Indian English or I would enjoy seeing better English from our colleagues in our communication sessions.”

“Culture issue / Language issue (even we do speak American/English-English, we don’t understand Indian-English)”

In the survey respondents rated only their own English language capabilities. Had there been, for example, an English language examination provided by a third party to rate capabilities, results may have been different. In the open answers it becomes evident that the respondents in the front office have difficulty understanding the English spoken by their colleagues in India.

The second highest category in virtual communication issues was ‘miscellaneous’, under which are listed issues that did not associate with any other issue listed. The miscellaneous issues include comments such as *“Timezone discrepancies” (FO SA)*, *“Information can be lost” (FO SA)*, *“Big bureaucracy, waste of time to request things we can do ourselves. Recheck and corrections take more time than doing things by myself” (FO SA)*, and many comments that did not seem to relate to virtual communication indicating that the respondent had misunderstood the question or had other frustrations in communication than the virtual aspect of it.

All in all, out of the issues listed some findings come up as the most interesting ones. 51,1% of the comments from the BO team stated that they had no issues with virtual communication. The largest number of comments from the BO respondents in one category was three comments on technical issues. The FO admins either in Romania nearshore or in-country did not show a similar heterogeneity in their responses. Altogether there were 69 comments from the FO SAs, and the most popular categories were ‘misunderstandings’ (11,6%), ‘lack of face-to-face’ (10,1%), and ‘language’ 8,7%. In the front office there clearly was more discontent in the virtual communication environment and communication was found as the biggest issue.

The respondents were also asked to provide suggestions on how to improved communication and team work. In Table 23 are the answers put into categories. A total of 93 responses was received and here again several respondents have provided more than one suggestion in their replies; a total of 125 individual improvement suggestions was given. Some responses where the suggestion itself was not clear or it did not include an actual suggestion, merely a comment, have been put into category 'miscellaneous'. All other suggestions per category are included in Table 23 in order to capture all ideas.

Table 23. Categorized Answers for Improvement Suggestions.

| Improvements Categories | Back Office India | Front Office in-country | Front Office Romania | Total |
|---|--------------------------|--------------------------------|-----------------------------|--------------|
| Regular face-to-face meetings | | 11 | 2 | 13 |
| Communication training | 6 | 2 | 2 | 10 |
| Knowledge sharing | 4 | 2 | 2 | 8 |
| Miscellaneous | 5 | 2 | 1 | 8 |
| Regular meetings | 7 | 1 | | 8 |
| Use only English in communication | 6 | | | 6 |
| Recognition/prizes | 4 | | 1 | 5 |
| More team work | 4 | | | 4 |
| Align BO and FO goals | | 2 | 1 | 3 |
| Better communication tools | | 2 | 1 | 3 |
| Get to know each other personally | 1 | 1 | 1 | 3 |
| Joint activity | 2 | 1 | | 3 |
| More oral communication | 3 | | | 3 |
| Take individuals into account | 1 | 2 | | 3 |
| Video communication tools | 1 | 1 | 1 | 3 |
| More interactive/practical trainings | 3 | | | 3 |
| Improve shared understanding | 2 | 1 | | 3 |
| Dedicated BO team | | 2 | | 2 |
| Education on what other team is doing | 1 | | 1 | 2 |
| Enhance process knowledge | 2 | | | 2 |
| Equal opportunities | 2 | | | 2 |
| Take responsibility of actions | | 2 | | 2 |
| Build trust & understanding | 1 | 1 | | 2 |
| Training/workshop on culture | | 2 | | 2 |
| Case study on communication | 1 | | | 1 |
| Cross training | 1 | | | 1 |
| Effective team meetings | 1 | | | 1 |
| External customer focus in BO | | 1 | | 1 |
| Give and receive progress updates | 1 | | | 1 |
| Keep up performance to build trust | 1 | | | 1 |
| Learning about the other team | | | 1 | 1 |
| Less change of personnel in BO | | 1 | | 1 |
| More engagement from BO | | 1 | | 1 |
| More external customer focus | | 1 | | 1 |
| No change needed | 1 | | | 1 |
| OK to be wrong | | 1 | | 1 |
| Overall refresh trainings | | 1 | | 1 |
| Personal contribution | 1 | | | 1 |
| Respect all opinions | | 1 | | 1 |
| Set realistic expectations | | 1 | | 1 |
| Shorter TATs | | 1 | | 1 |
| Solve problems and disputes | 1 | | | 1 |
| Take suggestions from other team into account | 1 | | | 1 |
| Team building | | | 1 | 1 |
| Team outings | 1 | | | 1 |
| Get to know and understand each other | | 1 | | 1 |
| Total | 65 | 45 | 15 | 125 |

The two most popular improvement suggestions were regular face-to-face meetings and communication training. Interestingly, no one from the BO team suggested face-to-face meetings, and the majority of these responses came from FO in-country SAs. Communication training was suggested by all teams. Below are some examples of improvement suggestions in these categories

“From past experience, during the F2F meetings a lot of issues surface and are solved or at least discussed in details; people are more open in F2F meeting vs. all the virtual communication ways – so having regular F2F meetings is very important for such teams” (FO SA)

“We would like to meet personally some key persons from BO, this would improve the level of trust among the working group.” (FO SA)

“In most of the MNC'S they conduct trainings across all the employees in the organisation to develop their communication as well as their skills. The communication training will help the employees to get the top level positions in the organisation. To develop the team work the management can divide into different groups and suggest the teams to achieve and need to inform them if they achieve they will be rewarded well. This creates a good team work improvement.” (BO SA)

“Communication can be improved through L&D [learning & development] programmes and the team work can be improved by sharing knowledge with each other's in a team.” (BO SA)

The single most popular suggestion made by FO SAs was regular face-to-face meetings (21,7%). The most popular suggestion from the BO was regular meetings (10,8%), followed closely by communication trainings and use of only English in communication (each 9,2% of all BO suggestions). Examples of suggestions to have regular meetings:

“I suggest that oral communication would be much better when compare to email or sharepoint communication. By having frequent call with the

front office it would be more helpful in terms of understanding from their point of view and quickest way to address anything.” (BO SA)

“Quarterly calls with all the FO's and BO's to check on procedures, policies, and process flow.” (BO SA)

“Regular team meeting and hundle [sic]has to be conducted and updates has to be communicate to the team on regular bases.” (BO SA)

Regular meeting suggestions seem to not only relate to getting to know people, but more to knowing processes and procedures, and understanding the other’s business needs.

The use of only English in communication was provided as a suggestion by only the BO SAs. From the responses (see two examples below), it can be concluded that the comments were mainly on communication at the local office.

“Everyone should be speak in English in floor” (BO SA)

“People should communicate with the business languages even in cafeteria” (BO SA)

Out of the offices considered here, the Indian office seems to have the most language diversity in their employees. The stereotypical assumption often made that all Indians speak good English can be a fatal one, if the underlying language context is not understood. The mother tongue of the respondents was not surveyed in this study, but it could have shown interesting results from the teams.

The open questions responses show quite clearly that the BO and FO teams have mostly differing ideas on how the situation could be improved. There are also several suggestions that are shared by both teams, but differences can be found. For example the BO team suggestions include use of only English in communication, more team work, more oral communication, equal opportunities, whereas the FO team emphasizes dedicated BO team, taking responsibility of actions, aligning BO and FO goals, and better communication tools. The discrepancies can be a result of discussions in teams or

results of individuals' findings. They can also be a result of cultural differences and a different way of viewing working life. Either way, the suggestions show the myriad of different opportunities to improve the situation and that many employees, especially in the FO, find the current situation frustrating and nonfunctional.

5 ANALYSIS AND SUGGESTIONS

In this section the key findings from *Chapter 4* will be analyzed and discussed. Firstly, the findings will be summarized and tied to the literature. Secondly, suggestions based on them will be provided.

5.1 Analysis of Results

The findings in *Chapter 4* indicate several significant differences between the back office and the front office teams. In this chapter they will be discussed first in terms of general findings, and then in relation to the theoretical framework proposed in this paper.

The demographics of the teams differ significantly so that the BO team in India and FO team in Romania have significantly younger employees than the FO in-country teams. Relating with this result, there are significantly more experienced SAs in the FO in-country team.

Language. The best self-perceived language skills were found in the FO Romania team. Highly significant differences were found comparing the teams, with the only exception being the comparison of FO in-country team and BO India team not showing any significant difference. The scores of the FO teams combined were significantly higher than BO team's, which shows that the FO team has better English capabilities in all measured aspects (speaking, writing, understanding, and a mean of the three measures).

The self-assessed language proficiency levels are seemingly good in all teams when looking at the means. However, there is a significant difference between the teams. Following some suggestions made by Charles & Marschan-Piekkari (2002) one way would be putting together a training of the "different Englishes" or "World Englishes" spoken in the teams. A very general way is to encourage any kind of communication across language barriers in order to have an opportunity for improving communication.

Individualism vs. collectivism. Although the assessed countries could be assumed to have highly significant differences in their perception of their individualism or collectivism, comparing the averages of all the responses, showed significant difference

only between the FO in-country and the BO teams. The FO Romania team or the FO team as a whole did not have significantly different ratings. In this setting, it can be argued that the company's organizational culture has an important effect on the results.

The fact that some individual questions of the scale showed significant differences needs a closer look. The statements where FO showed significantly higher results were IC3 (Stick with my group even through difficulties), and IC4 (Maintain harmony in my group). The statements where the BO team showed significantly higher results were IC7 (Respect decisions by my group), IC9 (Avoid arguments in group, even when strongly disagree with other members), and IC10 (Make effort to avoid disagreements with my group members). It is important to draw the reader's attention to these results as they are different from what could be expected intuitively and based on literature, such as Hofstede's study (1980). Based on the results there is no real difference in the way the BO and FO teams experience their sense of individuality or collectivity.

As mentioned in *Chapter 2.3.2* on individualism and collectivism, Yamaguchi (1994, p. 187) predicts based on his study that "because collectivists give more weight to group goals than to personal goals, they should conform to the group's opinion to a greater extent than noncollectivists". **This finding and the results in this study indicate that the teams would be expected to respond positively to group goals.** Both BO and FO teams have high means as the mean of all the statements in the I/C scale (5,24 and 5,05 respectfully on a seven-point scale).

Tools. The means of communication most frequently used by the teams were e-mail, telephone, VoI, chat, face-to-face, share points, and websites. All of these media were used at least once a week, most at least several times a week on average (see [Table 16](#) for means and significance values). These seven media also all averaged higher than neutral in importance (higher than four on a scale from one to seven). Additionally the company's own social interaction tool got above neutral average on importance.

From the results it can be concluded that oral communication is valued by both teams, but not used as frequently as other tools. Similarly, face-to-face communication does not happen often, but is valued highly by both teams in importance and efficiency,

though significantly more by the front office teams. Virtual conferencing is used more often by the front office teams and they also find it significantly more effective and important ($p < 0,001$) than the back office team. It would seem that the more this means is used, the more effective it is found by its users.

Blogs, wikis and social media are all used infrequently in communication between the teams. As their importance is found to be low, encouraging to increase their use is not recommended based on these results. Use of social media is generally seen as a personal choice, and could be frowned upon if use was insisted by the employer.

Trust. Responses on trust show that the FO respondents have significantly higher trust in their own team. This is in conflict with Jarvenpaa & Leidner's (1999, p. 794) assessment that "individuals from individualistic cultures might be more ready to trust others than individuals from collectivist cultures in computer-mediated communication environments". Based on those findings the expectation would have been that FO employees would be more ready to trust others. At least when comparing trust between 'my team' and 'other team' FO does not show high readiness to trust. However, measuring individual sense of individualism or collectivism did not show clear results of difference and thus there is no evidence found to support Jarvenpaa & Leidner's assessment.

Multiple regression. The model portrayed based on literature stating that language, personal individualism/collectivism, and use of tools have an effect on trust in ongoing virtual teams was tested with a multiple regression analysis. Two different sets of analyses were done with oral and written communication tools. In both models language skills showed no high importance in the models. Thus it can be concluded that language skills in this setting do not affect the trust between the teams. Considering applicability to other settings, it must be taken into account that all respondents in the study reported quite high language skills. There is a possibility of differing results had there been more respondents with poor English language skills.

The personal individualism/collectivism aspect did show some negative effect to the model. The results showed a negative association between a high sense of personal

collectivism and trusting one's own team more than the other. **Simply put, individualistic people tended to trust their own team more than the other team.** When comparing the BO and FO teams no significant results were found on which are more collectivistic or individualistic as teams. Comparing the two different FO teams to BO showed a heightened sense of collectivism in the BO team versus the FO in-country team. In the communication between these two teams it can be said that based on the model, the FO in-country team shows a more individualistic mindset and trust their own team more than they trust the BO team. The same cannot be said about the FO Romania team, who showed no significant difference in sense of personal collectivism compared to the BO.

Use of tools showed little meaningful results in the regression analysis. However, both models did show highly significant differences in trust between the two FO teams and the BO team. Both FO teams showed positive association with trusting their own team more than the BO team. This was visible in all trust aspects, except thinking that their own team fulfills tasks more successfully than the other team.

The most applicable trust measure (T0910) of teams' members getting to know new members of the teams was found to fit the data with $R^2 = 21,4\%$. **Hence it can be argued that there is a positive association between team members getting to know each other and trust.**

Although the regression models did not show a model that would be highly applicable for most similar cases, parts of the analysis provided useful knowledge of the studied set. The model shows discrepancies between the trust in the BO and FO teams. Trust can be concluded to be a factor in communication and collaboration between the BO and FO teams.

Open-ended questions. Many respondents provided comments on the issues in virtual communication and improvement suggestions to them. There were interesting differences between the responses from the BO and the FO teams. The most notable ones were that approximately half (51%) of BO SAs stated that they found no issues in the communication between the teams, and their highest category of mentioned issues

were technical ones. FO SAs on the other hand emphasized language problems, misunderstandings lack of face-to-face meetings, different goals, and lack of personal communication, with only four comments (6%) stating there were no issues. The difference in the answers to the open-ended questions was astonishing in the sense that one team seemed to suffer a lot from communication issues, where the other team did not really see that many issues.

When it came to improvement suggestions, both BO and FO SAs had plenty of suggestions. Again, FO SAs were most keen on regular face-to-face meetings, whereas the BO SAs emphasized communication training, knowledge sharing, recognition, and regular meetings in general. From the discrepancy in also the different kinds of improvement suggestions given by the teams, in addition to the differences in communication issues, it can be concluded that the FO and BO teams experience the communication very differently.

5.2 Suggestions

Based on the analysis and feedback given by the respondents some suggestions for improvement are provided in this section.

Relating to language issues, communication in general was raised as a problem in the study and trainings were suggested as a solution to communication issues. In an ongoing virtual team environment it may be worthwhile to institute compulsory communication training for all, including native English speakers. Casual communication should also be encouraged in order to the employees to get to know each other on a personal level and to build trust. Even though individuals deem their English language capabilities good, it does not seem to mean that their English is understandable to others. The open questions in this study showed that language inabilities and misunderstandings because of them persist. Thus language training, similarly as suggested in the study by Charles & Marschan-Piekkari (2002), can be recommended. This would enable employees to more easily understand each other.

Based on feedback from the survey, for the team in India, an important suggestion is that English is spoken at the office at all times. This does not affect virtual

communication per se, but does affect the working environment and using only one language at the office supports all employees having a shared knowledge and understanding.

Findings also indicate that the teams would probably respond positively to group goals. When all teams are working towards common goals, it may be easier for them to cooperate and understand what their colleagues' motivation is. Common goals can also build a sense of team feeling and enhance trust.

On the communication side several suggestions can be derived from the findings. Firstly, oral communication was seen as both effective and important. On the downside, oral communication is difficult to track in terms of documenting the conversations and their actual impact. Difficulties can also derive from issues in understanding different English accents. In practical terms, more oral communication could be introduced to the teams, but it should not be used solely.

Secondly, more virtual conferencing is suggested for the BO team to raise their sense of its efficiency and importance. At the moment the BO team does not see it as useful a means of communication as the FO teams do. One way to improve the experience could be to include video conferencing. Both teams found video conferencing both important and efficient, but use it only seldom. Video conferencing can help in getting the audience engaged and bringing a sense of presence to participants in the call.

Even though blogs, wikis and social media were all found little used or unimportant for communication between the teams, at least the social media aspect should not be belittled entirely. Social media is not a safe way of communicating any company internal information, and it is a good result from the study that the teams are not doing this. However, referring to the comments in the open questions section, people are finding the personal contact to their colleagues insufficient. Social media, e.g. Facebook, is a good way to get to know people and what they are like in their personal lives.

Joining a social media network and an individual's activity in them is a purely personal choice, and cannot be encouraged by a company. Some companies have of late banned social media usage during work time, for example not allowing employees to access

social media websites. Keeping this in mind, as a recommendation, access to social media from work computers should not be considered to be limited.

Based on the analysis and especially the open-ended question, it seems clear that the BO and FO teams need to take some different actions to improve communication and trust. The FO SAs seem to suffer from distrust to their colleagues in the BO and for them travel to location should be allowed, if requested. Meeting face-to-face at least once can have a tremendous impact on communication on the long run. This could also help them feel more comfortable to communicate afterwards via technology.

Improvements that would be same for both teams would include common goals, communication training, regular meetings, and better knowledge sharing. All of these are suggestions by the respondents, and they are also fairly easy to implement with low cost. Making excellent communication a common goal for all could be a start for better communication and trust.

6 CONCLUSIONS

So does it really matter if you trust your colleague at the other end of the line? In an ongoing virtual team the findings are two-fold; some are highly affected by lack of trust, but many carry on with business as usual without being bothered of such things.

In this study no all-embracing solutions were found to virtual communication issues. Lack of trust continues to affect the virtual working environment, but in an ongoing setting the effect seems to diminish over time. Trust issues can probably never be fully excluded in a virtual working environment, as it is characteristic for people not to trust what or who they do not know. Luckily, there are many things that can be done to ease the feeling of distrust.

Based on the findings in this study, offshoring and outsourcing are still efficient ways to find the right people for the right job globally. Nearshoring clearly brings a relief in communication to the people in the countries from which work has been bestshored, and perhaps the key to success is finding the right balance between the level of farshoring and nearshoring.

6.1 Key Findings

Key findings from the study are multiple. On the differences between the BO and FO teams it is noteworthy to mention that communication issues can arise solely because the employees in offshore and nearshore locations are younger and less experienced than their colleagues in local offices. The age gap and knowledge-level can affect distrust.

Language is an issue, even though respondents rate themselves fairly high. In the study it was found that language skills do not affect trust, but it needs to be recognized that 'different Englishes' are spoken in different teams and countries. It should never be assumed that the English people speak in different countries is an easy way for efficient communication nor that native speakers would be understood perfectly.

On personal sense of individualism, some significant differences between the in-country and BO were found, but the Romanian nearshore team did not significantly differ from either. Small differences in the personal sense of individualism should be seen as a positive finding as this helps team members relate to each other with more ease. It was also found that individualistic individuals trusted their own team more than the other team.

When respondents were asked about issues and solutions, it was found that BO and FO had very different point of views on what the problems were and what could be done to improve communication. It should be noted that there are some solutions that are applicable for both teams, but there should also be team specific improvement plans.

6.2 Suggestions for Future Research

Virtual teams will continue to exist in many shapes and forms. They are no longer only expert teams put together for a single task, but ongoing teams are becoming more popular. To continue on the path of studying ongoing virtual teams, many questions are still unanswered. Possible future studies, which arose as open questions in this study would include finding the right mix of using farshore and nearshore services, and studying which are the best tools for communication that are measurable. As this study was limited to the EMEA and India combination, similar ones should be conducted also in the America and Asia regions (for example using back offices in Costa Rica or even India from their point of view).

The field of research on virtual teams is still very open and as virtual working habits develop and hopefully improve, the research opportunities are limitless. New technologies will change the working environment and research on any new technologies would be useful for both ad hoc and ongoing virtual teams. Also comparing research on ad hoc and ongoing teams would be welcome to see if there are differences in how they perform and if one form is superior to the other.

6.3 Reflection

Studying farshoring and nearshoring begs the question ‘why move the work to another country, why not keep it at home?’ Keeping it all local would not result in communication problem, at least not the virtual kind.

This may sound like the easy solution, but history and companies constantly seeking new efficient ways to do business have shown that globalization, and therefore also virtual communication, is here to stay. From the author’s experience and point of view this is a great thing and international communication should be encouraged.

Virtual teams which are set up for an ongoing purpose are more and more popular and they enable best possible efficiencies. Investing in communication, which may seem like a soft value to number driven leaders and businesses, is a long-term investment for the company. Virtual communication and trust between teams will continue to be important for efficient working and creating a trustful environment supported by the right tools, make employees more comfortable in their work. So, until teleportation is available for virtual teams to use, communication needs taking care of and it is each employee’s responsibility to make it as good as possible.

References

Berry, G.R. 2011, "Enhancing Effectiveness on Virtual Teams", *Journal of Business Communication*, vol. 48, no. 2, pp. 186-206.

Business Dictionary (2012), *BusinessDictionary.com - Search results for front office*.
Web site from:
<http://www.businessdictionary.com/search.php?q=front+office&cx=002109824679542468969%3Antvpz2hrzm0&cof=FORID%3A9&ie=UTF-8> [Accessed: October 21, 2012].

Carmel, E., & Abbott, P. 2006. Configurations of global software development: offshore versus nearshore. In *Proceedings of the 2006 international workshop on Global software development for the practitioner* (pp. 3-7). ACM.

Charles, M. & Marschan-Piekkari, R. 2002, "Language Training for Enhanced Horizontal Communication: A Challenge for MNCs", *Business Communication Quarterly*, vol. 65, no. 2, pp. 9-29.

Chatman, J. 1991, Matching people and organizations: selection and socialization in public accounting firms. *Administrative Science Quarterly*, 36: 459-484.

Cohen, S.G. 1991. "New approaches to teams and teamwork" Pp. 194-226 in J.R. Galbraith, E. E. Lawler, & Associates (Eds.), *Organizing for the future: The new logic for managing complex organizations*. San Francisco: Jossey-Bass.

Cohen, S.G. and Bailey, D.E. 1997. "What Makes Teams Work: Group Effectiveness Research from the Shop Floor to the Executive Suite", *Journal of Management*, vol. 23, no. 3, pp. 239-290.

"Country Analysis Report: India", 2011, *India Country Profile*, , pp. 1-106.

DeSanctis, G. and Poole, M.S. 1997, "Transitions in Teamwork in New Organizational Forms," *Advances in Group Processes*, Vol. 14, pp. 157-176.

Duarte, D. L., & Snyder, N. T. (2001). "Mastering virtual teams: Strategies, Tools, and Techniques that succeed" (2nd ed). San Francisco, CA: Jossey-Bass.

Dubois, A. & Gadde, L.E. (2002), "Systematic combining: and abductive approach to case research", *Journal of Business Research*, vol. 55, pp. 553-560.

Eppler, M.J. & Sukowski, O. 2000, "Managing Team Knowledge: Core Processes, Tools and Enabling Factors", *European Management Journal*, vol. 18, no. 3, pp. 334-341.

Erdem, F., and Ozen, J. 2000, Trust and distrust in teamwork: unconditional trust or optimal trust for performance? Paper presented at the 8th national management and organization congress, May, Nevsehir, Turkey.

European Commission (2012), *European Commission: EU languages and language policy*. [Online] Available from: European Commission, Web site: http://ec.europa.eu/languages/languages-of-europe/index_en.htm [Accessed: February 12, 2012].

Grosse, C.U. 2002, "Managing Communication within Virtual Intercultural Teams", *Business Communication Quarterly*, vol. 65, no. 4, pp. 22-38.

Hofstede, G. 1980, *Culture's consequences International differences in Work-Related Values*, 1st ed, Sage, Newbury Park (CA).

Hofstede, G. & Hofstede, G. J. 2005, *Cultures and organizations Software of the mind*, 2nd ed, McGraw-Hill, New York.

Jarvenpaa, S.L. & Leidner, D.E. 1999, "Communication and Trust in Global Virtual Teams", *Organization Science*, vol. 10, no. 6, pp. 791-815.

Jarvenpaa, S.L., Shaw, T.R. & Staples, D.S. 2004, "Toward Contextualized Theories of Trust: The Role of Trust in Global Virtual Teams", *Information Systems Research*, vol. 15, no. 3, pp. 250-264.

- Jehn, K.A. and Mannix, E.A. 2001, The dynamic nature of conflict: a longitudinal study of intragroup conflict and group performance. *Academy of Management Journal*, 44 (2): 238-251.
- Kayworth, T.R. & Leidner D.E. 2001, "Leadership Effectiveness in Global Virtual Teams", *Journal of Management Information Systems*, vol. 18, no. 3, pp. 7-40.
- Kim, U. (ed) 1994, *Individualism and Collectivism: Theory, Method and Applications*, NIAS Books, Copenhagen.
- Malhotra, N. K. & Birks, D. F. (2007), *Marketing Research: An Applied Approach*, 3rd ed, Financial Times Press, London.
- Monteiro, L.F., Arvidsson, N. & Birkinshaw, J. 2007, *Intra-Firm Knowledge Flows: Explaining Subsidiary Isolation and its Performance Implications*, Academy of Management.
- Nohria, N. and Eccles, R.G., 1992, Face-to-face: making network organizations work. N. Nohria, R. G. Eccles, eds. *Network and Organizations*. Harvard Business School Press, Boston, MA. pp. 288-308.
- O'Leary, M.B. & Cummings, J.N. 2007, "The Spatial, Temporal, and Configurational Characteristics of Geographic Dispersion in Teams", *MIS Quarterly*, vol. 31, no. 3, pp. 433-452.
- Powell, A., Piccoli, G. & Ives, B. "Virtual Teams: A Review of Current Literature and Directions for Future Research", *The DATA BASE for Advances in Information Systems*, Winter 2004, Vol. 35, issue 1pp. 6 - 36.
- Sarker, S., Ajuja, M., Sarker, S. & Kirkeby, S. 2011, "The Role of Communication and Trust in Global Virtual Teams: A Social Network Perspective", *Journal of Management Information Systems*, vol. 28, no. 1, pp. 273-309.
- Schoorman, F.D., Mayer, R.C. & Davis, J.H. 2007, "An Integrative Model of Organizational Trust: Past, Present, and Future", *Academy of Management Review*, vol. 32, no. 2, pp. 344-354.

Trampel, J. 2004, *To offshore or nearshore IT services?—an investigation using transaction cost theory*. No. 0406001. EconWPA.

Triandis, H.C. 1995, *Individualism and Collectivism*, Westview Press, Oxford.

Triandis, H.C. 2004, "The many dimensions of culture", *Academy of Management Executive*, vol. 18, no. 1, pp. 88-93.

Ubell, R. 2010, "Virtual TEAM Learning", *T+D*, vol. 64, no. 8, pp. 52-57.

Wilson, J.M., Straus, S.G. & McEvily, B. 2006, "All in due time: The development of trust in computer-mediated and face-to-face teams", *Organizational Behavior & Human Decision Processes*, vol. 99, no. 1, pp. 16-33.

Yamaguchi, S. 1994, "Collectivism among the Japanese: a perspective from the self" in Kim, et al., *Individualism and Collectivism: Theory, Method and Applications* Sage Publications, California, pp. 175-188.

APPENDIX 1 – Online Survey

Section A. Demographics

In this section (1/6), please provide information about yourself.

1. Business Group:

Business Unit A → move to Q2

Business Unit B → move to Q3

2. Choose your Region:

GE

CEE

France

MEM

Italy

Romania

Spain

India

UK&I

Other (please specify)

Germany

3. Team:

Back Office India

Front Office Romania

Front Office in-country

4. Gender:

Female

Male

5. Age:

-20

21-30

31-40

41-50

51-

6. What is the highest level of education you have attained?

Some secondary education

Completed secondary education

Some university education

Completed undergraduate degree

Completed graduate degree

Completed PH.D/Doctoral degree

Other (please specify) _____

7. How many countries' contracts do you work on?

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10+

8. Role:

- Services administrator*
- Supervisor
- Manager
- Other (please specify) _____

9. For how many years have you worked *in this company*?

- 0-2
- 3-4
- 5-6
- 7-8
- 9-10
- 11+ years

10. Approximately how often do you work at home office?

- Practically never
- One day per month
- One day per week
- 2-4 days per week
- I only work from home office

Section B. Language

In this section (2/6), please provide information on your English language capabilities.

11. How would you assess your English-language capabilities?

| | Very weak | Weak | Moderate | Average | Good | Very good | Excellent | Mother tongue |
|---------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Speaking | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Writing | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Understanding | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

12. Have you lived in an English speaking country for at least three months?

- Yes
- No

| | | | | | | | |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 9. I avoid arguments within my group, even when I strongly disagree with other members. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. I make an effort to avoid disagreements with my group members. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Section D. Use of Tools

In this section (4/6), please rate each tool on each of the three aspects (extent of use, importance, and effectiveness) relative how you use them in communication with *Company Alpha* colleagues.

17. Tools

| | How often do you use each of the following technologies/tools for communication?* | How important do you find the tool for communication?* | How effective do you find the tool?* |
|---|--|--|--|
| E-mail | Never/ Seldom/ About once a week/ Few times a week/ Daily | 1=Not Important 2 3 4 5 6 7= Extremely Important | 1=Not Effective 2 3 4 5 6 7= Extremely Effective |
| Telephone | | | |
| VoI (Voice over Internet, e.g. Office Communicator) | | | |
| Chat | | | |
| Virtual conferencing | | | |
| Video conferencing | | | |
| Face-to-face | | | |
| Share point | | | |
| Websites | | | |
| Blogs | | | |
| Wikis | | | |
| Social media (e.g. Facebook, Twitter) | | | |
| <i>Internal social media type tool</i> | | | |
| Other (please specify) | | | |

* For each listed tool three dropdown menus were presented for each question

Section F. Feedback and comments

In this section (6/6), you are welcome to provide optional written feedback on the following two questions.

19. What do you see as the biggest issues in virtual communication within Contract Operations?

20. What can be done to improve communication and team work?
Please comment from your own and/or management perspective.