Buying an intangible goods with a tangible service: the evaluation of services in the B2B oil sector.

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Executive Summary

This thesis paper on the topic of comparing the psychological diffusions in B2B purchasers with regard to purchasing remote services using the internet from international sources for the oil and gas industry. The paper is a reflection of comprehensive research under academic jurisdiction. Thus it only serves specific purposes of academic interest in the matter of studying psychological diffusions that B2B purchasers experience when they are to buy remote services for the enterprise from international locations utilizing the internet connectivity. We have structured the paper into a number of sections which included the initial description of the research topic, problem formulation and topic relevance. It was followed by a descriptive overview of the service provision and the service purchasing provision of the oil and gas industry since very little information is mostly known to us about it. The discussion holds the view that the industry has developed its very own mechanism of supply chain and value chain system and its purchasers maintain a complex relationship with those infrastructural systems for their service purchase. It also revealed that while there is literally no psychological differences between a purchaser from oil and gas industry and from another industry; the development of monitoring, evaluation, controlling, organizing and purchase planning in the oil and gas sector purchaser remain predominated by these factors considerations. So, it can be said that the industrial service buying characteristics greatly influence the purchasing process as well as the purchasers' psychology. The next chapter discussed the literature review, which was originally aimed at gaining a theoretic understanding of the psychological factors. Upon subsequent review analysis of different scholarly journals, reports, and white papers from various online and library sources that were prescreened for their relevance and scholarly nature; our understanding concluded that in the development of remote service using the internet for oil and gas industry from international sources can be a harder reality. Purchasers are neither confident on the mechanism, nor they can trust the service. The psychological diffusions, as theoretically analyzed, was not only contributed by the nature of the industry but also by practical reality of international trading, commerce, laws, regulations and monetary systems and current paradigm of online based service delivery. This is what we have learned

from the literature review and incorporated the learning into the research questionnaire design. The next section followed was the research methodology where we described the sampling technique, the data collection method, and the data analysis. We have also included the ethical consideration disclosure. There were thousands of fuel stations, gas stations, vehicle repairing shops, transport and logistic companies with vehicle fleets and custom consumer level gas and oil suppliers. And they were located discreetly. So, we randomly picked 36 samples for our survey from Italy and its neighboring countries. The feedback on the questionnaire was all gathered, compiled and coded for further analysis. We carried two tiers of analysis; mathematical and statistical. For simple arithmetical analysis, we utilized percentage distribution and presented the same in different graphs. And for statistical analysis, we have used multiple tools including the Correlation, Regression, z-Test, t-Test and p-Value and Descriptive statistics. The purpose was to show that the findings and the relevant interpretations were valid statistically. From the analysis and subsequent interpretative explanations, it became apparent that it is a challenging task for the purchasers. And the purchasers not only want to trust the service delivery but also want to remain as confident on the system. In the We have also seen from the literature review that there are some cognitive aspirations to such thoughts. Organizations use their procurement to reflect their learning too. In some cases, these oil and gas industry enterprises have automated their internal processes, with the software system and reporting and documentation. They also have their facility security system running on such services. But for their main product line, they are greatly having low confidence and trust. These enterprises explained that here supply of the resources are happening round the clock. Only in exceptional cases, these can be interrupted. But such interruptions, too, pose a high risk of environmental and economic disaster. More importantly, the economic risk is very high. So, what the marketers should do in this context? The paper found an answer for the question.

1.0 Introduction

1.1 Problem formulation

With the growing talk and adaptation of cloud technology, businesses have particularly loomed in offering their services in various forms like software, database, infrastructure, and platform. This change is rapidly modernizing the business practices, not keeping the marketing untouched. Remote access through internet or cloud has now enabled elderly care at home a very much convenient practice. Instances of telemarketing, telemedicine and tele-medicare have opened a new frontier to providing customers with customized and personalized services. While precision is there with internet based service provisions, businesses that continued to operate in diverse industries have become interested in providing services using the same forms and formats. There is certainly cost consideration and capabilities possession consideration ordinarily require enterprises to have a large customer base to support the investment cost. Changes are not only impacting the current regime of marketing practices; emerging technologies, especially the internet of things (IoT) have also called to open a new book as Marketing 2.0 to ensure more value delivery to the customers. (Sorensen, 2010) (Gubbi, et al., 2013)

Providing customer service at more personal level staying remote is now a priority for marketers and businesses. Even, the OEMs are after the heavier adoption of the same. Businesses have realized the limitations of physical entity based approaches of traditional marketing is not just a sure thing but marketing has to remain cost sensitive. Advertising a product with thousands of people coverage and eventually getting zero sales lead is no longer a marketing practice. Rather, businesses are changing, being dynamic, real-time based, real data based and more fitting to customer needs in more appropriate manner. The advantages are countless; the resources are used more efficiently and effectively for targeted results. (Kumar, et al., 2013)

The traditional view of marketing mix components like product, price, promotion and place have been replaced by precision, personalization, and practicality. A B2B customer is more into Googling his needs than asking for price quotation or negotiating the sale. He is more into product, service hunt for himself and for the organization. He would gather results, compare, communicate with vendors and place the order to customize the items for himself. The result is incredible – the product reaches his door the next day. When the buying behavior have greatly changed with internet adoption, globally, and customers certainly know they are a click away to get the right product at the right price with the right quality and on the right time; why would he be taking the face value of a marketer and the relationship, so seriously? (Deeter-Schmelz, et al., 2001)

This particular change has serious implications for the service marketers and provider industries. The changes in buying behavior and customers self-empowering habit are growing and intensifying. The challenge is now for the service marketers. They need to provide ultra-specific results to ultra-specific problems, talk about the problems, not just the solutions and to spread the marketing message across wider internet platforms. Price is no longer a point of consideration for customers. They are more willing to be confident in their purchasing decision. Marketers now need to build clouds for every single customer they have. (Anon., 1996)

With the rise of IoT, fast spreading conceptualization of 2nd Marketing Revolution; it is the time that we see the future coming to be a reality for oil, gas and energy sectors customer service from the international perspective. As there is very little literature available at the moment, conducting

a comprehensive research on the matter will help both the practitioners and academicians to gain an insightful understanding of the trending future turning to be a reality; ideally highlighting ways to adopt forward to cope with the changing marketing terrain of branding, its value and implications.

1.2 Aim and purpose

For long, branding, the brand name has uniquely managed to hold and capture customer notions and perceptions. This truth is applicable for both the consumer products and business products. Whenever a customer wanted to buy a product, his ultimate focus remained on the brand identity. If a brand is reputed and globally recognized it is certain that the customer will be gaining invaluable customer services along with the product. The same remained true for companies that provided services, instead of customers. People look for service providers with a good level of trust, service rating and performance history as their brand oriented perceptions. Consumers and buyers attitude still get greatly influenced by their brand perception. People are more into buying a branded product from the brand's own stores at online that a secondary option. Chinese OEMs are also strongly coming afoot with their partners in selling the same quality products at cheaper prices by private label right sellers but the market has rarely acted to their expectations. (Gao, et al., 2003)

People are still into having their products from authentic brand sources. Why? It is the augmented services that cover the post-purchase product experience. A promise, a strong sense of reliability and trust that replaced price with confidence. Thus, the purpose of the study is to analyze the effects of changes happening to service marketing on international scopes, particularly on machine tools and equipment industries of the oil sector, as internet based marketing approaches are overtaking traditional service marketing practices. It is certain that remote access of service have added a new chapter to service marketing and the internet has

greatly reduced international border barriers and took customers, particularly industrial customers search for solutions on the web closer to their vendors and suppliers and OEM providers from the offshore regions. Thus the research will compare the service provisions of businesses on the internet and the real world for the said industry. The topic of the thesis is to compare the psychological diffusions in the remote access based service buying in the B2B oil sector on international perspectives. With such a topic, the paper will aim at examining and comparing the psychological diffusions that B2B oil sector procurement managers are facing to buy remote access based services from online and offline marketers. Thus, the research paper has few core components like the service buying provision in the B2B oil sector, the psychological diffusions in remote access based service buying from both the online and offline marketers and from international sources.

Based on above if we put up the aims and objectives of the study, we get followings:

Aims to include

- Comparing the psychological diffusions in service consumption between on-site and online

- Exploring the scopes of more service provision in the downstream of oil and gas industry

- Identifying the key factors causing the psychological diffusions in B2B oil and gas industry for remote access based service consumption from international perspectives

- Providing an academic base to the B2B oil and gas industry service providers for future research.

In light of the aims of the research, the objectives entail

- Reviewing the B2B service buying provision

- Gaining deeper understanding of the functioning of the B2B oil and gas industry

- Reviewing the B2B service consumption paradigm

- Comparing the key factors causing psychological diffusion for remote access based service consumption of B2B oil and gas industry from cross-border perspectives

- Recommending marketing practitioners of B2B oil and gas service on improving their performance utilizing technological advancement more intensely

1.3 Relevance

With regard to brand perception, individual customer's behavior get greatly moderated. A key reason for such purchasing behavior moderation is reasoned from the brand's naming, its quality representation, performance guarantee, trust, and perception. Marketers for long have spread their branding information in a manner that they helped consumers to shape their emotions associated with the product, or service or the solution. Brands got uniquely interpreted at the customers emotional and psychological value levels. Contemporary branding became a representation of these issues in the mixed manner where none can alienate one aspect from the other rather prefers to accept it as a whole. This is the solution, not just a product or a service. Customers get lulled by the branding effect for the solution. This is why customers do not look for price, they want to be confident, and that's why they go for brand. With such unique height of importance in terms of the appeal branding creates, it is needless to say that marketers have remained in a puzzling state with growing intensification of internet usage in product or service purpose. The matter became intricate further when organizational operational goals and procurement policies and strategies continued to dominate, influence the B2B purchasers.

2.0 Oil and gas industry's B2B buying

2.1 Upstream and downstream

The oil and gas industry operations are divided into three specific groups of services, these are known as the upstream, midstream and the downstream services. The more a service is closely located with the consumers the more it is in the downstream of services. Oil miners firstly explore oil well – the oil that gets soaked from the oil fields are crude oils which need refining. The gasses also come from the same well and they too get eventually separated from the production line and transferred through the pipeline to different places for commercial usage. In the refinery, the crude oils are purified into different types of oil products. Once converted these oils are moved to different intermediate storage points and terminal depots. Some of them are directly transferred to airfield systems and LPG storage plants. From these points, oil moves to a bulk customers storage unit. These can be intermediaries of the value chain system and retail dealers, distributors. Lastly at the retail level, the customer buys it. (Torpey, 2013)

In this setting, upstream services are related to identification, depositing, drilling of wells and recovering of raw materials from underground. This specific segment is deeply related with rig operations, machinery rental, and extraction chemical supply. The midstream operation usually links up the upstream with the downstream. It mostly takes take of the storage and transportation function through pipelines and pressure gathering systems. The downstream services include further refining and marketing like turning the crude oil into gasoline, fuel oils, petroleum based products. Our thesis will particularly look into the downstream of the oil industry. (Investopedia, 2015)

Though we are putting the specific focus on the oil sector, gas comes as it's by product and so the industry has to deal with both the oil and gas markets. However, the value chain for oil and the gas are not same. The oil value chain consists of exploration, production, transportation, refining and marketing. The gas value chain comprises of exploration, production, processing, transportation and marketing. In the gas, there is no refining. For oil, companies use technology to find new oil resources and then bring the oil to the surface of the earth using natural and artificial methods. Then these oils get transported to refiners through pipes, tankers, trucks, and other systems. In the refinery, the oil gets refined and converted to finished products which are then distributed and sold to markets. The oil value chain differs with gas value chain as after bringing up the gas on the surface, it is only pressure controlled as the treatment to be supplied to the market or to distributors. (Ghildiyal, 2010)

2.2 Service scope

Now at this point, we shall be having a detail look at the provisions of service in the downstream of the oil sector. Firstly we need to look at the downstream challenges that B2B oil and gas industry faces. According to (Bhardwaj, 2013) the scope for service buying on B2B context is very high in the oil and gas sector because the downstream of the industry includes activities of crude supply trading, refining, product distribution, marketing and retailing. Here lots of remote access based services have a great scope in functional, operational and strategic levels. Undoubtedly these scopes one can review by analyzing the challenges that the industry is facing. Namely these challenges include business structural issues to fulfill joint venture commitments, global optimization of the refining capacity, internal communication and corporate control and governance, distribution of oil and gas products, occupational health and safety concerns, supply chain, manpower and capital machinery, refining capabilities, change and continual improvement projects and pricing and costing of related product and services. (Bureau Veritas, 2012)

In most cases, the oil and gas industry value chain and supply chains are constructed on the basis of seamless supply and flow of the product. Here pricing and cost of services are of a great impacting factor for the commercial viability of the enterprise. Virtualization of these needed services and maintenance, deployment and overall management can greatly help firms to reduce their costing and to influence their pricing. (Kuehne & Nagel, 2009) As for service provision in the oil and gas industry, there is scope for product engineering, application development, and maintenance, infrastructure services, BPO services and consulting and system integration. These broadly call for work and asset management, wireless networking, content management, engineering and automation, customer care and billing, trading and pipelines, supply chain management and mobile and GIS applications. Within work and asset management, there is scope for asset information, capture, storage, reporting, forecasting and asset locations services, work order scheduling, asset tracking and automation and optimization of business processes. For wireless networks, there are remote infrastructure and access management, industrial Ethernet, Wi-Fi, alarm management, reporting, wireless gateways designs and plant information management systems. Under content management, there are service provisions for intranet portals, document management, images generation, contact processing, workflow management, compliance issues and digitization. The engineering and automation involve PLM/PDM, MES integration with ERP, digital oil field services, laboratory management, process optimization and control and maintenance and upstream data computation. Customer care and billing involves customer interaction center, profiling of customers, e-commerce, CRM, pricing, market research and analysis, billing of external services, invoicing and payment process. Trading and pipelines involve regulatory reporting, risk analysis, front and back office integration. The supply chain management provision calls for design, procurement, planning, building of facilities and their

utilization, SCM visibility, process analysis, route planning, and optimization. The mobile and GIS applications include geospatial applications development, mapping services, fleet telemetry, GPs tracking of vehicles, geofencing and mobile CRM. (HCL Tech, 2015)

Across the oil and gas industry value chain, there are three levels of services provisions. For refining, trading and supply, commercial fuel and specialties, lubricants and at retail level there is the need of specialized services. For performance improvement and for market insight development in organization and capability, margins and working capital, supply chain and trading channel, branding, marketing, pricing development; there is the need for operational optimization services. Considering the major accidental risks, assessments and prevention there is also further service requirement from strategic delivery perspectives. Whenever an oil field generates lubricant, a great portion of its goes to the industrial market and the remaining to the transport market. In transport market, these lubricants enter through either direct channel or through distributors' channel. For both of these entry modes, the market actors are the same, auto specialist, forecourts, independent workshops, light servicing, mass merchandisers, and OEM authentic workshops, off road transport an on road transport.

2.3 B2B service buying in oil and gas industry

As the paper is based on e-commerce, remote access; if we look at the contemporary practices of service provisions in light on internet and the internet-enabled technologies we can see that almost every aspects of these service areas are manageable with remote access systems. This will eliminate the provision for having a man down on the work site to put things back on track. Currently, there are few technological platforms that have already made notable marks for the oil and gas industry which include Big Data, Real Time enterprise, real time analytics, enterprise mobility, enterprise information management, application integration, cloud solutions and 3D visualizations. With all these technologies oil and gas companies can effectively manage their application lifecycle, IT infrastructure, IT portfolio, services, strategies and governance. Be it for information technology, finance, human resources or capital spending, integrated digital oilfield operation, hydrocarbon supply chain or operational integrity; there is undoubtedly great scope ahead. (Devold, 2013) Based on the structure of service practices, it is certain that this particular B2B exchange offers the biggest industry on the planet that follows the most linear line of operation from manufacturers to wholesalers to suppliers. Here the selling to intermediaries often ends up as selling to the customers. The customers are limited and the product range is smaller, too. For many industries the B2B exchanges have already taken the form of a virtual marketplace beyond borders however for oil and gas sector, though there is no formal marketplace but the idea is still open. Specifically when the B2B oil and gas industry operators are looking for services there are certainly some credible provisions, as discussed in the previous section, that justify the scope for having B2B service in the oil and gas industry from international perspectives. If internet can be utilized, specifically from the OEM providers or branded service providers; then the scope can easily be widen. There are currently very limited level of such operation but this can grow further. Taking a deeper look at the B2B exchanges we can see that

there are two ranges, horizontal and vertical. Horizontal services are generic in nature and vertical services are more specialized. When the service is provided remotely using internet or other technological platforms defined earlier; it not only cuts the transaction costs but creates even larger opportunity for the venture's growth. Thus, the B2B market benefits both the buyers and sellers of the service. The customer gets preferential price to the market price, builds on relationship and have the service provider to develop knack for solving complex and critical issues. Contrary the service provider, even when on remote access using internet technologies will enjoy having control over the customer issues and can exploit the full spectrum of possibilities to add value for the B2B customer's customers. (Ghandi & Lin, 2014)

So, when value for the customers becomes the primary consideration for the B2B customers in the oil and gas industry sector, they define it in terms of overall cost of doing business and overall level of quality. Overall cost of doing business is implied with information to justify the cost, the ongoing business costs and the actual price. The idea of overall quality conceptualizes reputation, products, services and transactions. Of these sub-impact factors the services and transactions are further subjective functioning of multiple factors. For example, transactions are direct outcome of delivery, invoicing and the ordering process. The services are subjective outcome of variables like customer service, environmental support, training and technical supports. (Chima, 2007)

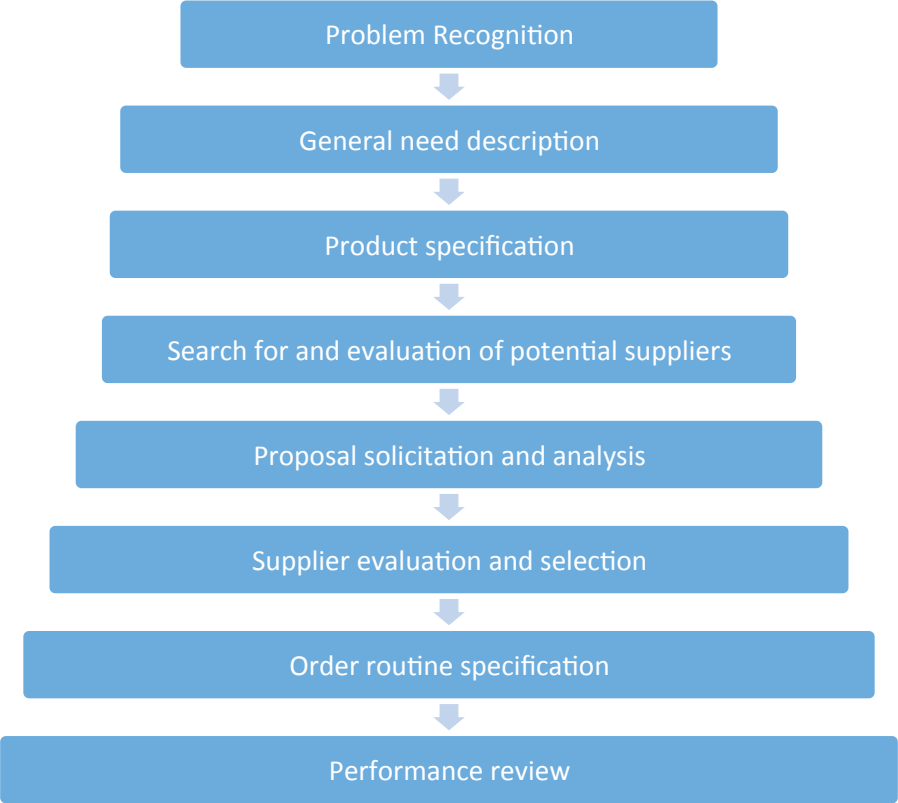## 2.4 Oil and gas industry service market and buying characteristics

Undoubtedly the B2B market differ widely from the consumer market and these differences are primarily evident in 5 tiers. These are the complexities of product and services, demand's diversity, customer limitations, volumes per customer and the customer relationships impact. Companies will always involve more people, more time, more money and technical

specifications and economic considerations aside the risk matters to decide about the brand implications on the company. These implications include

- Every brand has its own risk impact assessed on the business and difficulties of dealing when they are to be used in relation to complex structure of services

- B2B customers are less elastic

- B2B customer's priorities are always on functional benefits

- When risk is high or market is unpredictable, B2B customers tend to go for impulsive buying

It is understandable that brand's B2B and B2C relevance will differ widely however given the implications it is also true that copying or replicating functional benefits are also easier. Substitution effects, price war and use or knowledge complexities can always make the functional benefits capitalization a threat for every B2B brands. Another important aspect of the B2B market is that only three elements work here, which are mechanism to support data exchange, set of the marketing processes and set of institutions to perform the market processes. Without information and information system of gathering, storing and redistributing the information, the market system cannot become efficient and its physical infrastructure can also break down. As for market process B2B oil and gas industry need to consider the trade as well as the context. The trade implies for activities between the buyers and sellers with search, authentication, pricing, payment and logistics while context refers to activities that support the trading process through influence, risk management, dispute resolution, representation, regulation. However, the most important element in the process is the institutions which is comprised of principles like buyers and sellers, the agents like brokers and traders and the supporting cast members like bankers, insurers, and shippers. As people are creatures of habit the B2B cannot go for such habituation rather in B2B cases money does not mean success always

and prioritizing the new service features would ordinarily take long to realize its implications in adding value for the end customers. Service, the structure of exchange, benefits, value addition are all important in B2B oil and gas industry. At this point we need to review the B2B purchase decision process. It is different from consumers purchase decision process and is more specialized. Ordinarily the B2B purchase decision steps are below:

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│         Problem Recognition              │
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┌─────────────────────────────────────────┐
│       General need description           │
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┌─────────────────────────────────────────┐
│        Product specification             │
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┌─────────────────────────────────────────┐
│ Search for and evaluation of potential   │
│              suppliers                   │
└─────────────────────────────────────────┘
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┌─────────────────────────────────────────┐
│     Proposal solicitation and analysis   │
└─────────────────────────────────────────┘
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│     Supplier evaluation and selection    │
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┌─────────────────────────────────────────┐
│       Order routine specification        │
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┌─────────────────────────────────────────┐
│          Performance review              │
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The corporate buying center has to recognize the need by recognizing the problem. It is not necessary that the problem always has to be related with improving efficiency or increasing the production volume. CSR or green practices, for example, too can be a problem. So, the problem once recognized has to be noted for its detail description. This is part of basic procurement process which guides the product specification development. Once product specifications are produced, the search for the characteristics begins and potential suppliers are identified. Suppliers are asked to submit proposal and the proposals are then evaluated. The evaluation is

again based on the key corporate issue that company is facing and how the probable solution is going to incrementally impact its future performance. Once that is finalized, the supplier gets identified. In course of this process, the companies can come to know more about the product to buy from its suppliers. Then the company has to set its requirement to design the consumption ordering system. It ends with recording the performance evaluation.

Now the key question remains, where is the emotional link working in this system to benefit B2B brands? The information gathering process, the specification development, supplier evaluation entails dealing with handful of information, data, personal exchanges and interactions. The emotional link starts to build at this phase. The effect is short listed supplier results and selection of suppliers. This indicates that the previously discussed preference to functional benefits will be suppressed with other benefits or branding elements like brand stories.

Prior discussing the matter further, we also need to examine the corporate buying behavior. We have so far discussed the buying decision making process in previous section and when we look at the buying situational behavior we see enterprises are more into new buying, modified rebuying and straight rebuying. Brands importance has a negative relationship as an enterprises buying situation turns more loyal. This means the importance of the brands relevance will remain very high when the enterprises moves in first time buying. However the brand relevance will reduce when the enterprise goes for modified rebuying. Finally when the enterprise goes for straight rebuying it will have least brand relevance. So, there is negative relationship between brand relevance and repeated buying for enterprises. If we consider brand relevance as a pyramid then the buying situations will be placed as below:
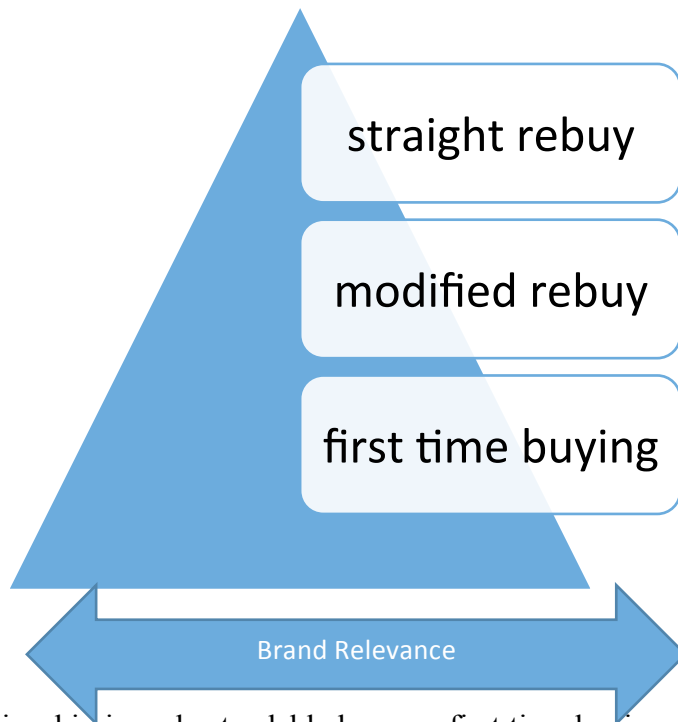
The negative relationship is understandable because first time buying would make the enterprise to match the brand's impact in to its internal functioning from strategic view point. The company will consider uncertainty, supplier strength, risk and future market trends. It will involve more perspectives to consider in the finalization of the buying decision. As for this study, from above we see enterprises are too quick to become emotional if they can match the functional benefits. And they are more into putting their emotion to new tasks.

Purchases of enterprises are usually carried by group of people. The group usually comprise of multiple departmental representation with specialist views, advisory feedback and controller of finance and such. They are the buying centers of companies. They consider the demand situation, the buying and the motivations behind all the arrangements. They can be highly proactive and dynamic or greatly bureaucratic practices based. When the buying center is dynamic and proactive, brands can capitalize on their interpersonal relationships aspects. They know it is the

most crucial center point of all of their communications. Contrary, buying centers put the role under multiple considerations like below:
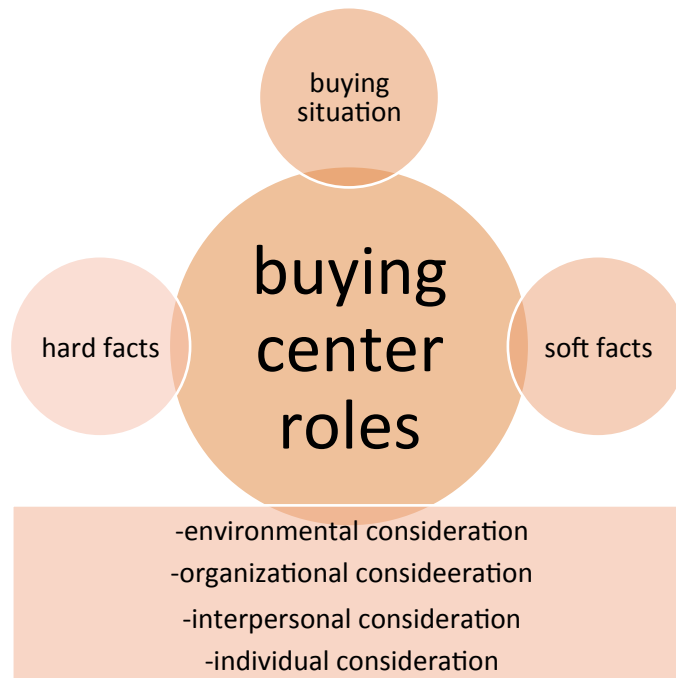
Thus the brand choice gets influenced by several aspects alone within the buying center of enterprises. According to authors Kotler and Pfoertsch (2006) there are three reasons for buying centers such way of functioning – increasing information efficiency, reducing the risk and creating value.

3.0 Literature review

According to (Lucking-Reiley & Spulber, 2001) B2B commerce includes wider range of intercompany transactions including the wholesale and purchases of services, resources, and

technology and capital equipment. It also includes financial transactions that are ordinarily less used in B2C contexts like insurance, commercial credit, bonds and securities. However author (Subramaniam & Shaw, 2002) pointed that the B2B ecommerce for service refers to the substitutions of computer data processing for labor services at the production or economic sites. So both of the authors work combine to make a valid understanding that even though B2B settings require service and there is provision to use internet for the purpose; there are other issues that would be dominating the characteristics of the engagement of the B2B enterprises.

According to authors (Dai & Kauffman, 2001) the advent of internet based e-procurement systems and the B2B electronic markets provide real opportunities for online transactions. Information services and combining the same with economics theory to investigate the motivation of various online business models show that private aggregating and negotiating mechanism are adopted for large quantity business supply purchases while public market mechanism are often remain uncertain and with high variance of demand. Market facilitation, expertise sharing and collaborations are gradually becoming the central attraction. As such the authors claim that the use of engagement model or using newer technology for increasing efficiency and effectiveness of procurement practices would ordinarily stir the same commercial considerations and interests among the B2B customers.

As for authors (Mohamed, et al., 2010) previous generations of B2B ecommerce hubs failed because they selected wrong solutions architectures and it could not match the requirements of the business environment. Businesses require e-commerce solutions to be flexible, innovative. In this relation authors (Peterson, et al., 2005) evaluated the cross regional equivalence of repair service quality for mission critical equipment. They used a five dimensional SERVPERF framework to survey the repair service of mission critical equipment in USA and in Europe. The

findings revealed that service quality in B2B domain is perceived to be same. Such no difference of service quality signifies that the service providers are having acute competition in getting and securing clients. This can be explained through understanding the industrial product service systems.

According to authors (Roy & Cheruvu, 2009) companies are transforming for integrated product and service based ones because they want to achieve better value proposition to tap their revenue generation opportunities and to sustain their customer value. As in B2B context this scope is limited, industrial product service systems based companies face severe competition and cannot compromise on the value they deliver to their customers. But there are challenges, according to (Son & Banbasat, 2007). These challenges are related to efficiency and legitimacy. Both of these factors, efficiency and legitimacy can invariably influence the organizational buyers' initial adoption, level of participation in the B2B e-commerce marketplace. The authors conducts a partial least squares analysis and the result showed that service characteristics, demand uncertainty and market volatility continues for B2B ecommerce for services sector in larger and investment intensive industries. Notably the characteristics noted in Son and Banbasat's work reflect two perspectives of buyer and sellers. They have different motivations for engagement in e-activities of procuring remote access based services for oil and gas industry. (Ford, 1980)

As per (Lancastre & Lages, 2006) the buyers' motivation starts with his or her behavior, which has invaluable attachment with and on the B2B purchasing behavior. Businesses identify a need that requires to be satisfied but the consideration for satisfaction comes with some tensions like responding to the aroused need or eliminating the need or satisfying the need. The end state is the businesses goal. (Lynch & Chernatony, 2007)

According to authors (Spekman & Carraway, 2006) a business that transits from desired and actual state of need fulfillment actually travels through the motivation process. This is where the marketers create products and offers services that makes the customers to travel through the motivation process so that the business as a customer can realize its needed benefits, reducing the tension by satisfying it. In doing so, how the business will behave is influenced solely by the degree of the need because needs develop drives and drives are focused on motivation and goal.

As per authors (Doney, et al., 2007) goals are external objects towards which organizational motivation is directed. Service providers need to understand which of these organizational needs need to be satisfied by convincing the purchasing manager. Service providers need to provide the best service provision and assortments so that the buying center or purchase manager can achieve his or her organizational goals. But deep inside these needs organizational requirements and expectations vary. (Berthon, et al., 2003)

According to (Tellefsen, 2002) there are organizational biogenic needs, its psychogenic needs, utilitarian and hedonic ones. Organizational biogenic needs are basic in nature, they have elementary role in maintaining the organizational procedure and processes while the organizational psychogenic needs are more affiliated with its craving for status, power and affiliation. These psychogenic organization needs are secondary in nature. They can arise due to organizational culture and cultural practices, (Zahay & Peltier, 2008). Contrary organization's utilitarian needs are more focused on their functional and practical benefits while the hedonic needs are vision based one which have experiential need, shares organization's collective emotional fantasies. (Brown, et al., 2011)

According to (Brown, et al., 2011) organizations want to acquire to accomplish to exhibit to dominate to play for affiliation, for order, for recognition, for difference, for autonomy and for

aggression. Organizations needs therefore have a survivor perspective, a sustainer perspective and a belonger perspective that regulate their inner and outer directed behavior in integrated manner. Organization's outer directed needs transforms from emulators to achievers and inner directed needs transform from self-actuating to experiential and experiential to societally conscious ones. Thus, in B2B settings such motivation stands for the rationalization and estimation of the value of the reward that the organization or its purchasing manager or its procurement manager is likely to obtain by giving the needed effort for it. (Son & Benbasat, 2007)

The person responsible for dealing the organizational purchase, as per (Purchase, et al., 2009) therefore have his or her subconscious and conscious minds active between different motivational motives like primary, secondary, rational, emotional, conscious and dormant. Thus, needs stand for perceived lacking of something which can be fulfilled specific satisfier wants. Every person as referred by authors (Srinivas & Ragatz, 2004) needs to understand how the service is going to fulfill his or her need, otherwise they will not buy it. So, on online settings a key purpose of the B2B service providers is to activate the needs of these oil and gas companies to direct their wants. But to achieve this, marketers of remote service cannot constantly expose the buying decision makers with marketing communication pieces and materials, as referred in the works of (Chakraborty, et al., 2003) because it is human nature that people usually do not passively accept marketing communications but they actively re-negotiate the marketing communication message's subjectivity and objectivity in their own terms.

According to (Keh & Xie, 2009) when companies engage with consumers to show how their service benefits their needs in functional or symbolic manner, the buyers and consumers motivation starts to directly transform into concrete actions. Symbolic consumption refers to the

consumer tendency of relying and focusing on the meanings of the goods or services that are attached to them beyond their physical properties. The consumer finds them important because the product or service is important to others for a specific meaning constructed by others around the product or service, (Lam, et al., 2004).

Now the fact is, according to (White & Yanamandram, 2007), what a business consumes as a service reflects the personality of the business. Personality is the collection of individual characteristics that make a person or a business unique and it control the response and relationship of a business or persons with its external environment. According to (Luarn & Lin, 2003) analyzing personality can take different forms like studying the trait and factors, typology, psychoanalysis and the psychographics. In psychographic approaches organizational lifestyles are segmented, based on numbers of demographic variables. Traits and attributes of individual and organization that helps predict and explain its behavior are regarded as the personality of the organization or the consumer. Different qualities combine together in forming the personality like judging – perceptive, thinking – feeling, extrovert – introvert and sensing – intuitive. In relation to these personality concepts, the business firms that have clear self-concept remained the most successful in ensuring consistent results, (La, et al., 2009).

Enterprises self-concept is its own idea and feeling about itself and enterprises buy products or services to contribute to its self-concept. Such self-concept combines actual self, ideal self, social self, possible self and the extended self. When the consumption becomes symbolic, as described in above, the self-conception directly lands on the branding concept, (White & Yanamandram, 2006). The self-concept is again depended one number of other aspects like gender and perception. Perception is known as the process by which physical sensations are selected, organized and interpreted. The eventual interpretation of the stimulus allows it to be assigned

meaning. The perceptual process according to (Lemke, et al., 2011) starts with the exposure to the stimuli where stimuli combines sights, sounds, smells, tastes and textures which are received through sensory receptors that create or cause sensation for seeking attention and when attention is developed people start to interpret it, apply meaning to it as a response and the end of the response application human perception builds. Marketers have to ensure that these stimulus can be exposed properly by placing key marketing communication materials in the appropriate places, (Ramaseshan, et al., 2013) . When these stimulus are appropriately exposed with right kind of marketing communication material they will help organizations to develop the right kind of perception of the service to buy. If the enterprise have the right attitude then it will end up buying the service. (Coleman, et al., 2011)

Authors (Singh & Koshy, 2011) explains that organizational attitude is defined in many ways like a learned tendency to respond to an object in a consistently favorable or unfavorable way. Attitude is also defined as a learned disposition to respond in a consistently favorable or unfavorable manner in relation to some object. So, we see attitude has a deeper relevance with knowledge and organizational learning and the cognitive component of the enterprises. Thus, as per (Caceres & Paparoidamis, 2007) organizational attitude can be held for any brand, service, ideas, persons and behaviors. The enterprise attitude finds its root back in organizational beliefs, attributes, benefits, salient features and opinion. Beliefs in enterprise are non-evaluative judgments or ratings for a service and its benefits. Attribute stands for the specific characteristics of the service while benefit stands for the outcomes or consequences that the enterprise want to realize or that follow from each of the attribute. Salient beliefs are ones used to make a judgement and opinion is the vocalized expression of attitude. Attitude functions as utilitarian, ego defense, value expressiveness and as knowledge. Attitude thus have three dimensions in it,

behavior, cognition and effectiveness; (Pavlou, 2002). Beliefs affect behavior in cognitive information processing. Beliefs behavior affect attitude in behavioral learning process and affected behavior impacts beliefs of attitude in hedonic consumption. Attitude follows three models, multi-attribute model, theory of reasoned action and theory of planned behavior implied (Barry & Weinstein, 2009). The multi-attribute model capitalized on relative advantage to strengthen the services perceived linkage and add a new attribute. The theory of reasoned action says that beliefs that behavior leads to salient consequences and evaluation of salient consequences combine in attitude towards behavior. Then beliefs that relate others thinking to perform the behavior and the motivation to comply with relevant others combine to form subjective norm of behavior. Now both the attitude towards behavior and the subjective norm about behavior combine together in relevant weighing for importance which then transforms into intention to perform the behavior and as a result the behavior is performed. As per author (Kennedy & Deeter-Schmelz, 2001) the theory of planned behavior beliefs about expected outcome and causal beliefs combine to effect the attitude to behavior, likelihood, evaluation of the outcome which is also influenced by the impressions of positivity and negativity that is developed through personal norms and past experiences. Besides there is the subjective norm and likelihood of them holding a normative belief, perceived control, control availability and power knowledge. All these influence organizational behavioral intention.

According to (Steward, et al., 2010) the intention is further influenced by the lack of needs, finance, difficulties in finding, and change in circumstance to shape the enterprise behavior. According to the cognitive dissonance theory expectations result in actual experience where actual experience is the combination of consonance of experiences according to the expectation and the dissonance of experiences falling short of expectations. Dissonance then impacts in four

ways like the enterprise ignore the dissonant information, or it distorts the dissonance information or plays down the importance of the issue and or change the behavior of the situation. Such dissonance are not only functional factors of the above, they are also subjective of the environment of the enterprise, implied (Hadjikhani & LaPlaca, 2013). Enterprise environments are of two types, micro and macro environments. Macro environment stands for all those elements that are common to all the firms of the industry, like climate, economy, politics and geography. These factors dictate what the enterprise need to buy and what they are about to buy. Secondly, the micro environment are those factors and elements that affect only individual enterprise like service provider, his skills, payment terms, service delivery model and such. These factors influence decision making at purchase points.

As we are to compare the psychological dissonance we need to give the micro environment deeper look. According to (Gronroos, 1984) micro environmental elements based on their role, influence and effect can be categorized into five key aspects like environmental stimuli, holistic environment, moderator, internal processor and the behavior. Enterprises environmental stimuli include wider array of considerations like novelty, expectation, commonality, familiarity, fantasy and interest. It also puts consideration on complexity like complete range of services, variety of services, up-to-date service provision, restrictions, movement, privacy and alike matters. Then the holistic environment means sensory perception of the environmental stimuli and moderator stands for the measurement of the emotional state. As the emotional measurement completes it develops the internal response either favorable or non-favorable. Based on the favorability status the behavior turns approach based or avoidance based. According to (Blocker, et al., 2012) social class, subculture and culture are all components of macro environmental factors while micro environmental factors include colleagues, casual acquaintances, and social interactions. The

influence of culture is so natural and immediate that enterprises usually takes the effect as granted. Unless the organization gets engaged with another organization or a person from another organization with a different culture, it is rarely visible. Organizational culture determines enterprise behavior, (Goles, et al., 2009). It is the accumulation of shared meaning, rituals, norms and traditions though it is very complex process with knowledge, belief, art, law, custom and capabilities and habits. They sum up together to influence organizational beliefs, values and customers to direct its buying or consuming behavior.

Culture is the lens through which enterprises try to view their service they are to buy and unless the service has some sorts of cultural implications the enterprise will remain alien to it. It has very powerful effect on enterprises consumer behavior. It influences the organization's customs, beliefs, myths, rituals, food selection, sacred consumption and religion and such. In enterprise context author (Kennedy, 1983) explained culture is comprehensive, shared, transmissible and evolving and dynamic. Enterprises high degree of uncertainty avoidance, collectivism, short term orientation, masculinity-femininity, decentralization of power, individualism, power centralization are all aspects that gets influenced by the macro cultural perspectives. With these the enterprise also embody the brand communities and consumer tribes as its subculture for any product or service the organization looks to buy. These subcultures within the enterprise gets developed based on the occupational prestige, the income level, the educational attainment, the family background and the place of residence. These subculture groups within enterprises function as reference groups. A group at its most basic definition is defined as two or more enterprises shared set of norms that establish a relationship between them to make them behave interdependently. But a group becomes a reference group when the enterprise from either a purchaser or buyer perspective uses the group as a source of information, beliefs, attitudes,

values and behavior. Authors (LaPlaca & de Silva, 2016) referred that the service buyer or purchaser enterprise may belong to that group or aspire to join it in the future as the organization's social perspectives are assumed to be a frame of reference for its actions. Within the reference groups, there are two types, primary aspirational ones and the secondary dissociative ones; formal automatic ones and informal virtual ones.

With their variations of types these reference groups help organizations to socialize, get a self-concept, stay conformed in terms of complying with norms and accepting shared values and to carry a social comparison. But their way of functioning to influence organizations is not always same, rather the reference groups use different referencing mechanism to influence the purchasing decision of remote service. These include normative compliance, value expressive influence and informational influence; direct or indirectly. Normative compliance occurs when the enterprise buys more of the service than it originally requires and becomes a member to the service club it purchased. The value expressive influence of the reference group occurs when they force the enterprise to buy a specific brand or particular service in order to enhance their image and to admire the enterprise for using the brand.

Lastly the informational group influences the enterprise by constantly supplying all required information, data and opinion. Contrary to how the reference group interacts with the enterprise in influencing the purchase decision, the enterprise also behaves purposefully based on its necessity of the service and its public and private disclosure; implied (Vize, et al., 2013). When the enterprise's necessity is private in nature and the reference group influence is weak; the selection of service becomes weak. But when necessity is private but the service is of luxury nature, the reference groups' influence becomes strong to the enterprise. Similarly the enterprise accounts necessity, luxury, and public considerations to pay impetus on the reference group

influences. The influential influences are again of five types based on their characteristics like demography, social activity, general attitude, personality and lifestyle and service related; to the enterprise. Few are trendsetters and few are experts to enterprise. Then there is enterprise's internal system of collective decision making where influencers, gatekeepers, deciders, buyers, preparers, users, maintainers and disposers have different degree of influence and roles to play to the matter of buying remote service. All these factors as per (Libai, et al., 2010) combine together to construct the linear sequential model of B2B decision making where need recognition is synonymous to motivational involvement and information search is mostly based on social perceptions and evaluation of alternatives is subjective outcome of attitudinal learning. At the end the B2B purchaser moves for purchase which is just a situation.

Author (Son, et al., 2006)said involvement, replenishment, extension, impulse influence the decision making paradigm. The involvement can be separate categorically for product, message response, endurance and ego. When purchase is done and the buyer is into the situation his buying decision still continues on its own continuum. This involves routine response behavior to limited problem solving to extensive problem solving. Habitual buying behaviors see lower consumer involvement, frequent purchasing, service knowledge or provider familiarization and little of actions like thought and search, explained (Walsh, et al., 2008). Contrary, author (Brown & Lam, 2008) referred that the extended problem solving follow infrequent purchasing, higher consumer involvement, unfamiliarity with service and brands, extensive though, search and time. Whenever assortment depletes, income changes it will affect change in actual state and create gap to turn into need. Whenever aspirations changes, it results in change in desired state and identifies gap to shape need. Thus, in both the desired and the actual states, needs composition remains different and it affects how the enterprise is going to behave on its service requirements

and buying arrangements; (Cho & Chang, 2008). Now the enterprise continues its look up through involvement, nature of problem analysis, extent of information search, risk perception, and cost perception. When all these goes in changing the behavior, enterprises only deal with one consideration, the trust. (Wind & Thomas, 1980)

4.0 Research Methodology

For every research project, determining the appropriate methodology is very important because unless the methodology is appropriate in terms of designing the research, the result of the research would not be empirical one. The result will not provide a solution to the research problem. This will eventually mean that the whole of the research project have been wasted. It will not only fail to provide a base to carry further work but also it will be an academic loss. Therefore, in conducting the research utmost care have been rendered. As per the research proposal, we are describing the sampling, research questions, data collection, data analysis, limitations and maintained ethical standards to conduct the research.

4.1 Sampling

In determining the sample population and size, the research is designed to use purposive sampling technique. The purposive sampling is a non probability sampling technique where samples are selected based on their characteristics in relation to the research objective. Here we tried to review the population size but there is no clear data on the number of population. Furthermore the research required feedback from international perspective which also limited the scope. The topic of the research required the sample population to be a B2B entity and to be from the oil and gas value chain. Therefore probability sampling were not used. Furthermore, it was also considered that given the deadline for completing the thesis work, it would also be ideal to go for purposive sampling. With purposive sampling it was easier to relate with respondents who pre-qualify to the screening checklist of the sample. All these sample population are either representing petrol station business or automobile repairing garages, large scale transportation fleet operator, gas stations and supplier of oil and gas products to consumer markets. A few of them are also representing fleet operation logistic business with direct internal oil feeding station on site while others are engaged in gas drilling, oil exploration and oil supply line business.

Selecting the sample population was not easy so a Google Map search and online Directory search was carried. Priority was given to those businesses that are closely located. The resulting selection included samples from Italy, United Kingdom, Germany, Portugal and Spain. An initial of 48 subjects were identified. The identification was based on language preference, communication access and business characteristics and industrial representation. They were either called over telephone or emailed to seek their consent about participating in the proposed research survey. After several repeated communication only 36 businesses agreed to take part in the survey provided that their identity would remain undisclosed. This process also involved getting reference and contacts from others approached for participation in the survey.

4.2 Data collection

A 25 points questionnaire that was developed and tested earlier was send to the 36 sample population by email with a deadline to submit the answer. However, many of the sample could not live up to the expectation and caused delay. On some instances and as few filled in questionnaire kept coming in, they were reviewed. Where it was necessary to ask a question, respondents were personally visited to provide the explanation. All the samples were provided with the institution provided letter explaining the purpose of the research and encouraged to take part in the survey. Further, it must be mentioned here that all the 48 samples selected initially were on the basis of fulfilling their business characteristics criteria but the finally select 36 were by large different as many of them were originally referred by other samples who agreed to take part in the survey. They helped the process by referring new contacts. So, I must take the opportunity to thank them all who contributed by exploring new contacts. In collecting the data it was realized that few respondents found the questionnaire to be repetitive while others found the statements matching and combining to be difficult for them to select. All the collected responses were gathered for manual and individual screening. We accepted filled questionnaires with 'no

comments' answer for 3 to 4 questions only and thus we can say that the collected data reflects highest participation.

4.3 Research questions

Developing the research questions for the questionnaire of the survey was quite a challenging task since the topic of the research is challenging. The topic was to compare the psychological diffusions in buying remote access based services for the B2B oil sector using internet on international perspectives. So, here the psychological diffusions were not only about the organization but also about the person dealing the buying process. The research questions have to be selected in such manner that it can reflect both the organizational psychological diffusion and the personal psychological diffusion of the person involved in the process. The research questions also have to show the differences and relations between the individual buying behavior as well as the organizational buying behavior. It also have the objective of measuring and assessing the understanding of the participants about remote access using internet on international perspectives. So, the designed questionnaire included numbers of questions on similar topics which are apparently repetitive but continued to serve different purposes. Furthermore, in designing the questions caution has been applied to make them self-validating and cross checking based. In the questionnaire we used close ended questions with options for the respondents to choose. However, in many questions we used numbers of options across other options when the objective of the question was to weight the relationship between different factors. Then some of the questions in the questionnaire used rating scales. And in most of the questions of the questionnaire the respondents had to answer for both the online and offline options. Such design of the question provided a clearer base for comparing the psychological diffusions at individual and organizational level. The research questions are presented below:

Name:

Age

Sex:

Q1 Have you ever considered buying remote services for your business using internet? Yes/No

Q2 To buy services for your business which is your most preferred medium? Online / offline

Q3 In buying a service, from both the online and offline medium, rank the role played by each according to their importance to you?

Online	Primary decision maker	Influencer	Corporate buying center	Large scale stakeholder
Offline	Primary decision maker	Influencer	Corporate buying center	Large scale stakeholder

Q4 In case you are to buy service using online across international border, for which aspect will you be buying the service for your business? Energy / Construction / IT / Machine and equipment / Industrial manufacturing / Process

Q5 For which of the below categories you are more likely to buy online remote services? Engineering / Operations / Purchasing /Administration / Business intelligence

Q6 Rank the considerations below that influence you the most while buying service for your business across online and offline mediums.

Considerations	Online	Offline
Unique benefits of competitors suppliers		
Economic value of the service in the marketplace		
Safety and environmental benefits		
How the supply chain resonate in target audience		
Verifiable reference of service quality		

Required time		
ROI calculation		
Impact on life cycle of the business		
Operating cost		
Efficiency improvement		
Impact on customer service		
Contracted maintenance support		
Flexibility with financing		

Q7 Of below B2B marketing communication practices, to what degree are you inclined to each aspects, when the platforms are different like online and offline and you are tasked to commission remote access based service to your business.

Communication practices	Online	Offline
Technical data sheets		
Supplier portal		
CAD drawings		
Brochures		
Case studies		
Service animation		
White papers		
Industry magazine		
Email marketing		

Q8 Rank the role of followings in terms of their influence on your purchasing decision of service for the business, across both the online and offline decision making spectrum.

Influencer	Online	Offline
Formal and informal contacts in the industry		
OEM representatives		
Distributors		
Manufacturers trading representatives		
Tradeshows		

Q9 Referred to the influencers from the previous question, attribute the influencers key significance in the decision making process, at every step, for both the online and offline considerations.

		Service identification	Criteria creation	Search	Evaluation	Test and selection	Procurement
Offline	Formal and informal contacts in the industry						
	OEM representative						
	Distributors						
	Manufacturers trading representative						
	Tradeshows						
online	Formal and informal contacts in the industry						
	OEM representative						
	Distributors						
	Manufacturers trading representative						
	Tradeshows						

Q10 Rank below considerations based on their importance in effecting your buying decision; for areas for factors.

	Energy, utility	Construction, HVAC	IT	Equipment	Manufacturing system	Process	Intelligence
Service quality							
Price							
Evidence of customer satisfaction							
Service considerations like contract, aftermarket support							
Evidence of timely delivery							
Evidence of service availability							
Proof of							

financial stability						

Q11 Have you ever bought any service from online that is remote access based for your business for following conditions?

- Companies based in Italy | Yes / No / Don't know

- Companies based in Europe | Yes / No / Don't know

- Companies from outside Europe | Yes / No / Don't know

Q12 Based on your buying experience, how would you rate below where 1 is low and 5 is high

- Companies based in Italy

- Companies based in Europe

- Companies from outside Europe

Q13 In below we have presented numbers of statements, use the 1 to 5 rating scale to denote your agreement and disagreement where 1 is disagreement and 5 is agreement.

- Online remote service buying is not safe in B2B contents

- As a purchaser of service, there is a risk to not to see the servicing going on on-site

- It is risky to give internal system access to third parties for the sake of service

- The offered service may differ from the delivered service

- Delivery of remote service all dependent on the service provider

- Delivery time is more sensitive consideration

- Direct dealing with service provider is safe in B2B contexts

- As a purchaser, as long service is delivered and issues are addressed, I am safe

- Onsite service providers cannot get access to confidential system or such

- Service scope can change based on inspection findings, can require more effort from the provider on the site

- Onsite service delivery is more controllable and customization

- Remotely integrated service means, problems are fixed even before I come to know

Q14 In below we have recorded numbers of statements together, where you need to rate your agreement and disagreement on a 1 to 5 scale for both online and offline service buying.

-Uncertainty with protection of confidential and sensitive data

-Uncertainty with security of information communication system,

-Non-clarity of contract terms, conditions, applicable law and jurisdiction

-Uncertainty with dispute settlements

-Uncertainty with payment settlement

-Insufficiency of contract closure information

-Insufficiency on company identity, legal registration, address

-Insufficiency on the nature of withdrawal from the contract

-Insufficiency of information on service guarantee

-Insufficiency of information on service characteristics

-Insufficiency of information service standardization and certification

-Insufficiency of information on service availability and delivery time

-Insufficiency of information on additional service charges, costing basis

-Insufficiency of information on service language, currency and taxation

-Insufficiency of information on performance guarantee

Q15 In below we have put two combinations for each categories representing fulfillment capabilities, inventory visibility and convenience of service; select one of the considerations from each combination that as a B2B work relation purchase is the most important consideration for you?

Delivery next day | Clear indication of service delivery

Realtime inventory information availability | Viewing in-store service assortments

Self-service of buyer account | Service provider locator

Downloading service information sheet | Buying service – ordered – realized

Service delivery scheduling | Service recommendation

Q16 How important are following when making a business purchase online? Please rank.

- Looking up service information across channels

- Buying from OEM

-Return policy

-Same day service delivery

-Transaction visibility

- Reservation policy

-Account sharing details

- Buying services online

Q17 To what extent do you agree or disagree with the following statements regarding you work related purchases? I buy again from the same supplier if I find they have

- - Lowest price consistency

- - Excellent customer service

- - Offer the broadest selection of services

- - Most credible source of service details and information

- - Easy to use website

- - Fastest delivery

Q18 Of the below rank the feature functions that you like your suppliers to offer?

-Enhanced search functionality on their website

-Showing ratings and review of services

-Improved personalization of the service recommendations

-Integration with your backend finance, accounting, ERP systems

-Merchandising of relevant services

Q19 In relation to Q18, when you are selling the products or services to you customer, which of the following technology initiatives will your priority?

-Enhanced search functionality on website

-Improved personalization of product or service recommendation

-Access to website using mobile or having mobile app

-Merchandising of relevant product or service

-Integration with back end ERP, accounting, finance systems

Q20 Rank the following technology platforms that your business planned for investment to support its sustainability, profit maximization and growth?

-e-Commerce platform

-Order management system

-Data and analytics

-Customer relationship management

-Point of service

-Enterprise resource planning

-Product information management

-Custom solutions by internal IT

-Mobile point of service

-Third party outsourced services

Q21 Both as a buyer and as a seller, which of the following purchasing options you are using in work related purchases and offering?

-Use of credit card

-Payment via payable invoicing

-Using online payment system

-Purchasing through e-procurement portals

Q22 In a scale of 1 to 5 where 1 is strong disagreement and 5 is full agreement, how much do you agree or disagree with the following statements? The business should

-Offer support for variety of channels

-Help serve in multilingual and multinational audiences

-Support cross sell, upsell and substitute sells

-Provide flexible price list and catalogs

-Provide user account management

-Provide reporting tools, analytics, intelligence support

-Provide product or service customization

-Provide flexible budgeting and spending capabilities

-Support personalization of purchases

-Single view of inventory across all locations

-Multiple sites

-Multiple versions of product catalogs

-Sales agent enablement tools

-Branch, store, distributor locator

-Drop ship fulfillment

-Value chain and supply chain partners' multisite capability

-Print on demand catalog

-In branch or in-store pick up

Q23 In your opinion what are the top barriers preventing your organization from fully implementing remote access based service buying? Rank as appropriate.

-Difficulties in integrating back office technology

-Difficulties in sharing customer data and analytics

-Limited distribution partners

-Conflicts between stakeholders in supply chain and value chain

-Limited staff skills

-Employee and management resistance

-Difficulties in implementation

Q24 If you are to integrate remote service using internet, which will it be in your business?

-Automated pricing optimization

-Personalized recommendation

-Wearable computing distribution

-Sensors for shipments

-Automation

-Shopping analysis

Q25 How much likely you are to go for online remote access based service buying for your business? Rank from 1 to 5 where 1 is least and 5 is high.

All the emailed questionnaire had a due date of one week for the respondents to fill in and send back. Very few respondents complied with the due date requirement and the remaining responded after repeated phone call and emailing. Respondents having difficulties in understanding the questions, or their objectives; were attended personally. Thus, all the 36 respondents' feedback are collected in ten days' time. All the gathered data are then compiled into Microsoft Excel for further processing. Since no coding was used as the questionnaire was made descriptive; they were directly input into MS Excel system. All the gather data thus helped to measure the attitude of psychological diffusions. Thus, the entire data collection step was completed.

4.4 Data analysis
After receiving all the filled in questionnaire analyzing the data is the most important part of any research. If the analysis is wrong then it can return wrong result. And if the analytical tools are not appropriate for the analysis then it will also not serve the research purpose. Based on this realization, we have designed the analysis into two parts. As we used ordinal feedback in the research questionnaire survey, we required to use specific tools. So, firstly we carried arithmetical analysis mostly based on percentage distribution and their graphical representation. However, we also required to show the relationships, the linearity, the tendencies of the respondents feedback. So in the second part of the analysis we included statistical tools, too. These included numbers of them like descriptive statistics, correlation, p value, t-Test, z-Test and

regression analysis. The descriptive statistics is provided to deliver as much statistical information on the used data sets as possible including their mean, median, mode, standard deviation, variance and range. The descriptive statistics also reflect data validity and relevance. The correlation is calculated to show how two variables are closely related with each other. The score closer to zero means the data set or the samples are having no relationship or approximation with each other. The p-value determined to estimate how the results from a specific datasets can probably return an extreme result for the analysis, assuming the hypothesis to be true. When correlation is calculated, the p-value helps to determine the correlation result's significance. We have applied the same. The t-test is carried between two hypothetical assumptions whether the respondents would opt for remote access based service buying or not. It returns results from two combinations and relates the differences significance. While the previous statistical tools have returned a result, the z-test like the descriptive statistics is an analysis to determine the two different populations means, variances and sample with a normal distribution. We also carried z-test to the data sets. For few of the questions, the arithmetical analysis was satisfying to draw a conclusion but for others, mostly the likert scale based responses this was not possible. Again, we cannot use the likert scale based responses to most of the conventional statistical tools. So, we had to code them. So, we compiled all those responses and run their relationship analysis. All the analysis were carried through utilizing advanced statistical and arithmetical tools. These included MS Excel, SOCSCISTATISTICS, Vassarstats and WolframAlpha. They were inserted into tabular form and their analysis is taken as graphical output. All the graphs and relevant charts are appended in the analysis section. We used percentage distribution, weighted average for the arithmetical analysis. In some cases were the question was about comparing relation we used matrix. The rating scales are too compared for

their weighted average which compared responses for both online and offline settings. Thus all the data analysis were carried systematically.

4.5 Limitations

However, in conducting the research, certain limitations were experienced. This is mostly with sampling because all these respondents were discretely located including some in foreign countries within the European Union. Communicating with those foreign respondents about the research project and motivating them to take part in the survey was quite challenging due to heavy language barrier. We also have to mention that many of these responses were perceived to be responses from proper understanding of the subject of the questions. So, they were solely the responses from these respondents. For explaining and helping respondents with difficulties in understanding the question, rationale have been fully utilized. So, apart from these limitations, the research has fulfilled all its obligations.

4.6 Ethical considerations

Then for ethical issues we have cited all the references that were used in preparing the thesis paper. All authors, as well as sources were systematically referenced as in-text. All the references are presented at the end of the thesis under the bibliography section. No works are abruptly taken. Utmost care have been ensured to avoid reference and citation mash ups. All are contextually linked. Furthermore, extreme caution have been ensured to make the work free from plagiarism. In conducting the research, collecting the data, determining the sampling and analyzing the data and interpreting the findings all logically appropriate procedures have been applied and ensured. Given the sincerity rendered for the work, it can be said that the work represents the highest degree of research ethics.

5.0 Discussion and analysis

5.1 Arithmetical analysis

In our first question to the respondents we asked them whether they have ever considered buying remote services using internet within and beyond the border. All the respondents attended the question and according to the gathered responses we have below pie chart. As per the chart, only 33% respondents said to have considered buying remote service using internet while the remaining 67% respondents said they have never considered buying the remote service using the internet within and beyond the border.
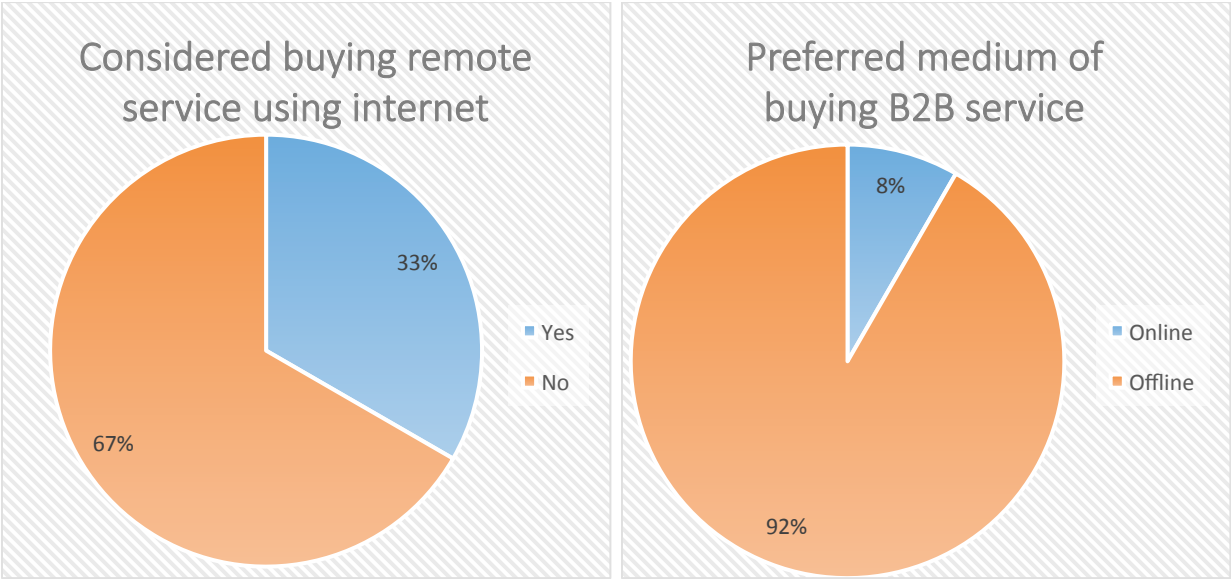
In our second question we have asked the respondents about their preferred medium of buying B2B services. There is high level of homogeneity in the gather responses. 92% of the respondents said they prefer offline media while only 8% of the respondents said they are after other media, including the online media.

Importances of different role players in B2B serving buying decision making

	Primary deci. Maker	Influencer	Buying center	Large stakeholder
online	39%	25%	11%	25%
offline	25%	19%	25%	31%
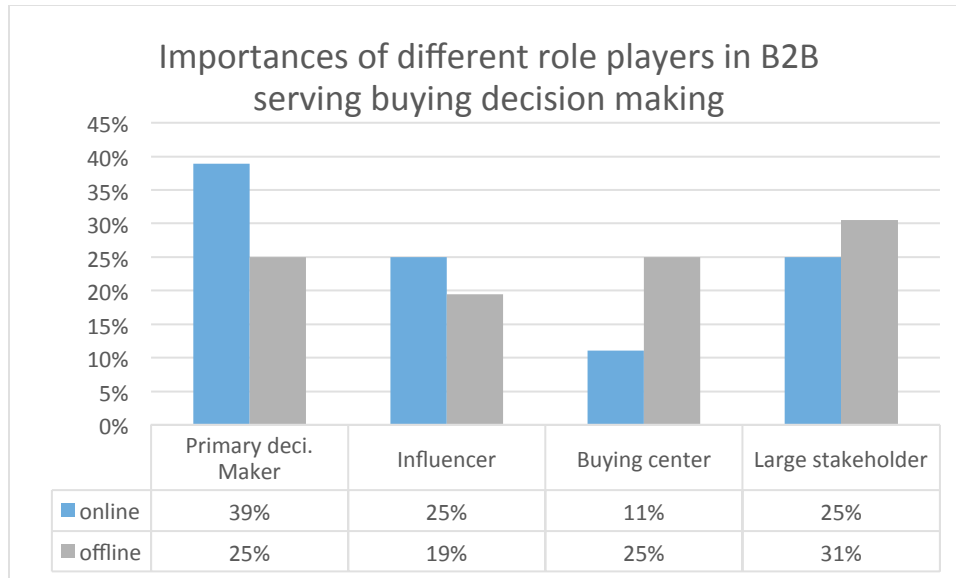
In the third question we asked the respondents about importance of different roles played by different B2B buying decision makers. These primarily included primary decision maker, the influencer, the buying center and the large stakeholder. The primary decision maker is that single person whose decision is final in the organizational context, while influencers are referred by communication channel and promotional activities, the buying center represents the purchasing department and the large stakeholders are mostly implied for supply chain members. The above bar graph shows the gather responses from the respondents where responses for both online and offline are compared. According to the graph, for online media 39% respondent replied for primary decision maker, 25% replied for influencer, 11% replied for buying center and the remaining 25% replied for large stakeholder while for offline the responses shifted substantially as p25% respondents opined for primary decision makers, 19% for influencer, 25% for buying center and remaining 31% for large stakeholder. When the responses are compared between online and offline the standard deviation between the responses came as 0.07 with a mean of 8.

Likeliness to buy remote service for functions vs areas

	Engineering	Operations	Purchasing	Administrative	Business Intelligence	Energy	Construction	IT	Machine	Industrial Manufacturing	Process
Serie1	11%	17%	25%	8%	39%	8%	6%	39%	22%	8%	17%
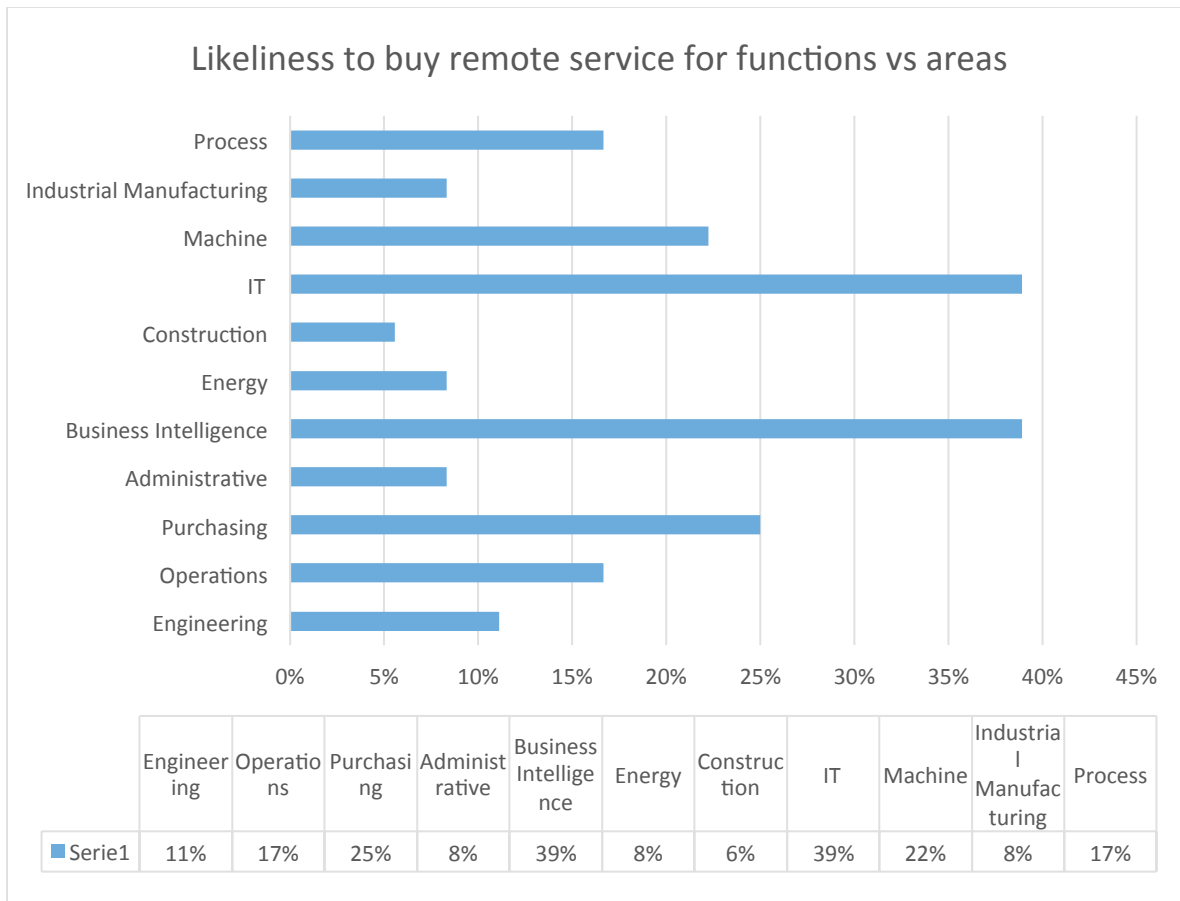
In the fourth question we attempted to identify the area and the function for which the respondents would be more likely to buy the remote services using the internet. For functions we provided them options like engineering, operations, purchasing, administration and business intelligence. For areas we provided the respondents with options like Energy, construction, IT, machinery and equipment, industrial manufacturing and processes. All the two areas of the responses are showed in the above graph. According to the graph 11% respondent replied for engineering, 17% for operations, 25% for purchasing, 8% for administration and remaining 39% for business intelligence under functional category. As for areas 8% respondent replied for energy, 6% for construction, 39% for IT, 22% for machine and equipment, 8% for industrial manufacturing and remaining 17% for processes.

Comparing considerations influences on buying services

	Uniqu e benefi t of comp etitor s suppli ers	Econo mic value of the servic e in marke tplace	Safety and enviro nmen tal benefi ts	Suppl y chain reson ance with target audie nce	Verifi able refere nce of servic e qualit y	Requi red time	ROI calcul ation	Impac t on busin ess life cycle	Opera ting cost	Efficie ncy impro veme nt	Impac t on custo mer servic e	Contr acting scope for maint enanc e suppo rt	Flexibi lity in financ ing
Online	8%	3%	11%	8%	11%	6%	3%	6%	8%	8%	3%	6%	19%
Offline	6%	11%	8%	6%	11%	6%	8%	3%	6%	6%	6%	8%	17%

In the fifth question we listed different influential considerations that buying decision for services get impacted. These include unique benefit of competitors suppliers, economic value of the service in market place, safety and environmental benefits, supply chain resonance with target audience, verifiable reference of service quality, required time, ROI calculation, impact on business life cycle, operating cost, efficiency improvement , impact on customer service, contracting scope for maintenance and support and flexibility in financing. All of these considerations are compared between online buying and offline service buying decision process. According to the survey respondents, considerations like unique benefits of competitors suppliers, safety and environmental benefits, supply chain resonance with target audiences, impact on business life cycle, operating cost, efficiency improvement remains prime while in offline buying enterprises put emphasis on economic value of the service in the market place, ROI calculation impact on customer service and contracting scope for maintenance and support remains vital. Other than these issues like time requirement, verifiable reference of service

quality equally matters between both types of buying media. Above all these considerations, flexibility in financing remains as the top most consideration in both the online and offline instances with 19% and 17% responses, respectively. The Pearson correlation coefficient between the responses show

X Values

$\sum = 36$

Mean = 2.769

$\sum(X - M_x)^2 = SS_x = 32.308$

Y Values

$\sum = 36$

Mean = 2.769

$\sum(Y - M_y)^2 = SS_y = 20.308$

X and Y Combined

N = 13

$\sum(X - M_x)(Y - M_y) = 15.308$

R Calculation

$r = \sum((X - M_y)(Y - M_x)) / \sqrt{((SS_x)(SS_y))}$

$r = 15.308 / \sqrt{((32.308)(20.308))} = 0.5976$

Meta Numerics (cross-check)

r = 0.5976

As the R value is 0.5976 between considerations influences on buying service we can say that there is a moderate positive relationship between online and offline considerations. This means there is greater likeliness among the considerations applied influence in buying decision determination irrespective of online and offline variation. And the P value is 0.031013 which is lesser than 0.05 means that the result is significance. Thus, it can be concluded that though the considerations will have positive relationship but there will be substantial differences, too.
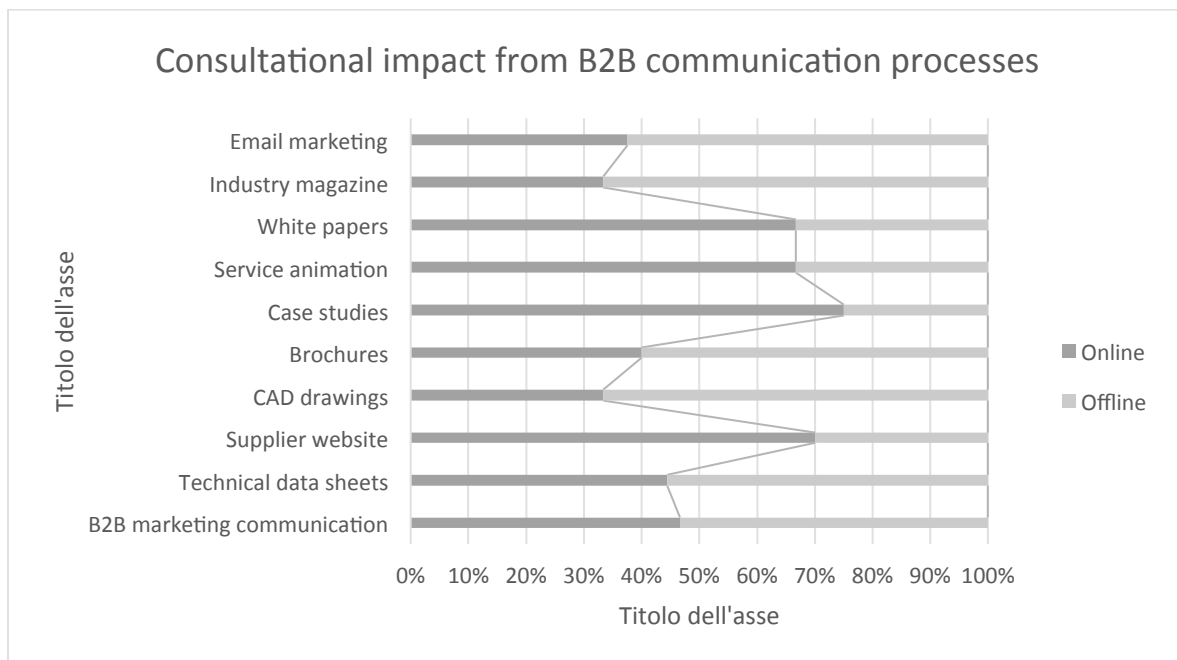
In the sixth question the respondents were asked about their consultative resources usage and ranking their impact of consultative resources. These resources were listed as email marketing, industry magazine, white papers, service animations, case studies, brochures, CAD drawings, supplier website technical data sheets and B2B marketing communication. The objective behind asking the question is that to make the respondents aware about the fact that whether they consume or buy the service online or offline, many of their marketing communication,

resourcing, and marketing collateral development have already adopted some changes. Those companies which are dealing service offline are also using online resources for their purpose while the ones offering online services are also offering online resources for their purposes. All the respondents attended the question and the results are gathered in the above graph. Undoubtedly the result are interesting enough because for online the respondents ranked case studies as their highest consultative resource followed by supplier website and then service animation and white papers while these are least used in the case of offline service. Contrary to online, for the offline the highest response been gathered for industry magazine, followed by CAD drawings, brochures and email marketing. Technical data sheet and B2B marketing communication also received substantial responses in offline, too while they were slightly less favored under online. As mentioned these results are interesting since they do not completely match with common perception. So their reasons are explored. Apparent B2B marketing communication, email marketing, supplier website, technical data sheets, drawings and animations, are most widely used in all the online and offline cases. But here white papers, service animation, case studies and supplier website appeared for online. Companies have three types of buying patterns in B2B settings, they buy once, or frequently or regularly without much control. Given the unique B2B consumption pattern the respondents responses have uniquely variated. The value of R is 0.5098 which means there is a positive relationship between the marketing communication effects but the P value is 0.1322 which is higher than 0.05 significance level. This means this relationship has no significance.

Role influences rank in purchasing decision

■ Online ■ Offline

	Online	Offline
Formal and informal contacts	19%	17%
OEM	31%	22%
Distributors	17%	19%
Manufacturers representatives	25%	36%
Tradeshows	8%	6%
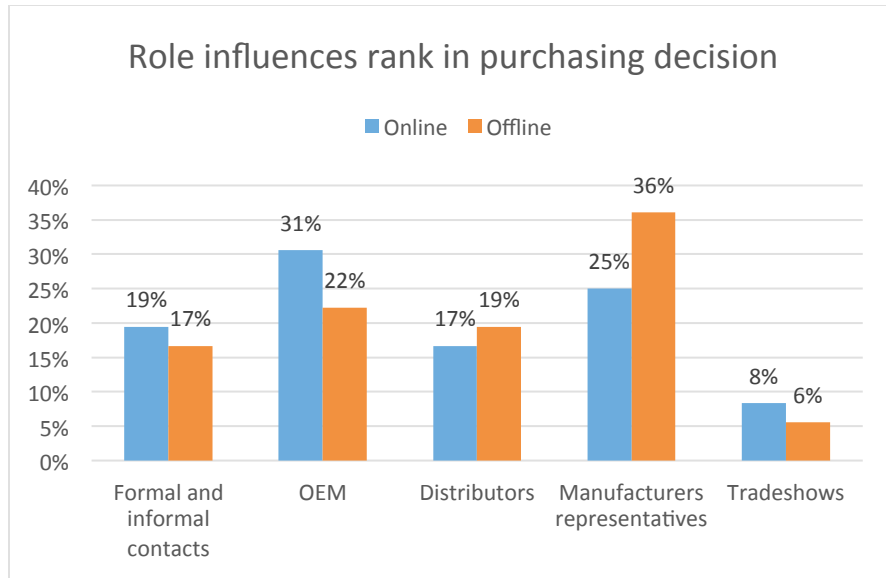
In the seventh question the respondents were asked about ranking the roles influences in purchasing decisions. These includes roles of formal and informal contacts, OEM, distributors, manufacturers' representatives and trade showers. As for online the influences of roles of formal and informal contacts and tradeshows remained higher than they were in offline cases. However, OEM and manufacturers' representatives' roles were ranked higher in online purchasing decision while distributors and manufacturers representatives ranked higher in offline. The variations are understandable because with remote service the distributors' roles get eliminated while in offline more they have a higher importance. What is important to see here is the differences of responses, in online it is 17% respondents and in offline it is 19% respondents. The difference is not broad. So, it can be concluded that even when the respondents are to consider an online decision the role of distributors remain important to them and thus, eliminating or wiping the functional advisory role of the distributors would not be a good move for their B2B customers. Another important fact is the responses for formal and informal contacts. For offline 17% valued its but for online 19% valued. The importance significantly increased in the case. It means remote service provision is still not sufficiently satisfying to decision makers – they still need to

maintain personal level contacts. Now if we put up the total results of the analysis we see that in offline more 36% value manufacturers' representations while OEM is supported by 22% respondents, 19% distributors and 17% by formal and informal contacts and 6% by tradeshows. For online the situation is not same even when we try to consider responses trend. In online 31% valued OEM role, 25% opined for manufacturers representations, 19% said for formal and informal contacts and 17% said for distributors and remaining 8% for tradeshows. The Pearson correlation coefficient R is 0.7446 which means there is very strong positive relationship and the P value is 0.1488 which is again higher than 0.05 meaning that it is of no significance.

Detailed significant of influences on decision making process

	Industrial contacts	OEM representatives	Distributors	Manufacturers representatives	Trades hows		Industrial contacts	OEM representatives	Distributors	Manufacturers representatives	Trades hows
Service identification	14%	31%	25%	25%	6%	0	17%	25%	25%	8%	25%
Criteria creation	11%	22%	25%	25%	17%	0	14%	22%	25%	28%	11%
Search	22%	14%	19%	25%	19%	0	19%	8%	25%	22%	25%
Evaluation	17%	22%	19%	28%	14%	0	22%	14%	22%	8%	33%
Test and selection	25%	19%	11%	25%	19%	0	8%	25%	28%	28%	11%
Procurement	11%	33%	8%	31%	17%	0	14%	31%	25%	25%	6%

In previous question we attempted to rank the roles however, now in question eight we attempted to precisely identify the significance of each roles in six areas of decision making considerations for both the online and offline scope. The first set of answers are for online while the right side

are for offline answers. The set criteria for role playing significance includes service identification, criteria creation, search, evaluation, test and selection and procurement. According to the graph, for online, 25% respondents consider their industrial contacts for testing and selection decisions while 22% of they also value the role of industrial contacts in searching a solution and 17% in evaluating a service. As for OEM representative in online context they influence the most in making purchasing decision with 33% responses and then in service identification with 31% responses. The OEM representatives are also given importance in criteria creation and service evaluation. Then distributors are equally weighed for service identification and criteria creation with 25% responses each. As for manufacturers' representatives 31% respondent consider them for procurement decision followed by 28% for evaluation and 25% each for the remaining four considerations. Trade shows influence is examined with 19% responses each for searching new service and product and testing and selecting the same, under online scope. Under offline the responses have different implications. For example, industrial contacts are weighed by 22% respondent for evaluation while OEM representatives were weighed for procurement with 31% responses. Distributors' role is signified for test and selection important with 28% response while for manufacturers' representations 28% respondents each opined for test and selection and criteria creation. Lastly the tradeshow for offline purchasing settings, is weighed by 35% responses for evaluation following by 25% each for service identification and search. Now given the entire analysis here it is very important to understand the trend as well as the shifting patterns of the roles significance in the B2B buying processes. For example, when responses for industrial contacts are compared between online and offline there is least similarities in the considerations. Testing and selection received highest response for online while it received the least response in offline settings. The same finding of

the anomalies go with tradeshows; in online the importance is attached with searching and testing and selection while in offline it is also for the similar process of evaluation. Rather than these, all other aspects there are more or less similarities in the responses trendiness for both the online and offline situations for OEM, distributor and manufacturers' representatives. Even if there are some differences but they are not so vivid as in the cases of the previous two roles mentioned here. The Pearson correlation coefficient R between online and offline is:

X Values

$\sum$ = 216

Mean = 7.2

$\sum(X - M_x)^2 = SS_x = 178.8$

Y Values

$\sum$ = 216

Mean = 7.2

$\sum(Y - M_y)^2 = SS_y = 226.8$

X and Y Combined
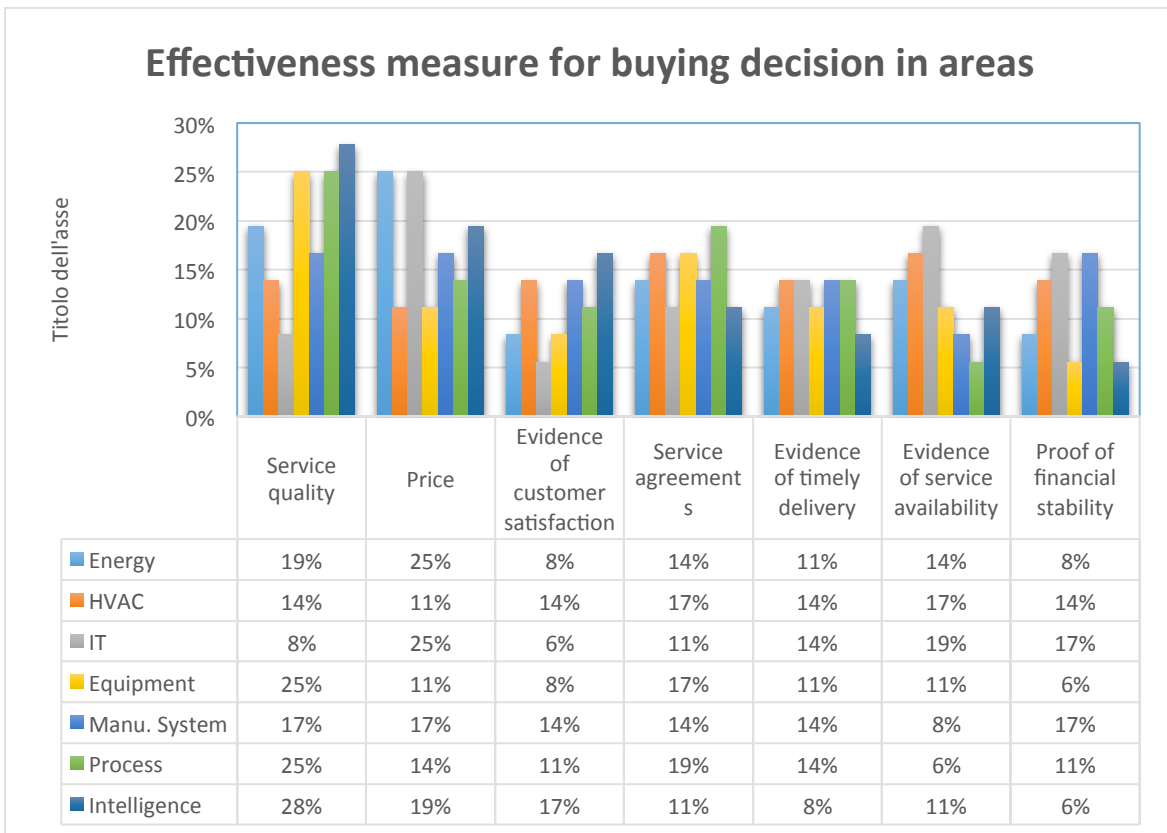
N = 30

$\sum(X - M_x)(Y - M_y) = 19.8$

R Calculation

r = $\sum((X - M_y)(Y - M_x)) / \sqrt{((SS_x)(SS_y))}$

r = 19.8 / $\sqrt{((178.8)(226.8))}$ = 0.0983

r = 0.0983

The value of R is 0.0983. Although technically a positive correlation, the relationship between your variables is weak (*nb.* the nearer the value is to zero, the weaker the relationship). The value of R^2, the coefficient of determination, is 0.0097. The P-Value is 0.605304. The result is *not* significant at p < 0.05.

Effectiveness measure for buying decision in areas

|	Service quality	Price	Evidence of customer satisfaction	Service agreements	Evidence of timely delivery	Evidence of service availability	Proof of financial stability
Energy	19%	25%	8%	14%	11%	14%	8%
HVAC	14%	11%	14%	17%	14%	17%	14%
IT	8%	25%	6%	11%	14%	19%	17%
Equipment	25%	11%	8%	17%	11%	11%	6%
Manu. System	17%	17%	14%	14%	14%	8%	17%
Process	25%	14%	11%	19%	14%	6%	11%
Intelligence	28%	19%	17%	11%	8%	11%	6%

The ninth question centered about measuring the effectiveness of the buying decision for different combinations for different service areas. These service areas included energy, HVAC, IT, equipment, manufacturing system, process and intelligence. And the considerations included service quality, price, evidence of customer satisfaction, service agreement, and evidence of

timely delivery and proof of financial stability. All the responses are reflected in above graph. According to it 28% respondents opined that processing business intelligence is the prime area where service quality's effectiveness remains very high. This has been followed by 25% respondents each for service quality for business processes and service quality for equipment. As for price 25% respondents, each opined effectiveness for energy and IT followed by 19% respondents for business intelligence. For evidence of customer satisfaction 17% respondents expressed effectiveness for business intelligence followed by 14% each for HVAC and manufacturing system. For service agreement highest response was gathered for business processes with 19% respondents followed by 17% each for equipment and HVAC. For evidence of timely delivery the respondents are more distributed with 14% each for HVAC, IT, manufacturing system and business processes. Energy and equipment received 11% responses each while business intelligence 8%. For evidence of service availability 19% respondents opined for IT following by 17% for HVAC and 11% each for business intelligence and equipment. Energy was also selected by 14% respondents for evidence of service availability. Lastly for proof of financial stability 17% responses opined for IT and manufacturing system followed by 14% respondents for HVAC. Then some 11% respondents opined for business processes while intelligence and energy received 6% and 8% responses, respectively.

Buying history versus satisfaction

	Buying History			Satisfaction				
	Yes	No	Don't know	Yes, high	Yes, some what	No comment	No, some what	No, very much
■ Italian companies	1,00	0,00	0,00	0,22	0,25	0,00	0,19	0,33
■ European companies	0,53	0,39	0,08	0,39	0,19	0,00	0,22	0,19
■ Others	0,36	0,42	0,22	0,17	0,33	0,00	0,31	0,19

The tenth question was about comparing the consumption experience of products and services from international perspective. Since our research topic has the element of comparing the psychological diffusion for international purchase of remote services, respondents' responses for this question is very important to get precise understanding of their satisfaction level with contemporary practices. The respondents were firstly asked as if they have purchased from any of the companies either from Italian, European or beyond Europe identities and then they were asked to rate the level of satisfaction derived from it. 100% respondents confirmed that they have bought services from Italian companies while 53% of them also reported to have purchased service from European service providers and remaining 36% have received service from non-European international sources. Those who have received non-European international services, did it on rare occasions and compared to it, their European purchase is more incidental and Italian purchase is regular. As for satisfaction from buying from these three sources, satisfaction is reported to be very low for Italian companies while it is highest for European companies. The non-European international companies are favored with somewhat positive satisfaction by 33% of the respondents who used such services but for most of the European companies' service

buyers this experience is highly positive. Aside from these extreme gathering of the respondents responses the feedback were mostly distributed between 19% and 25% for other responses. Favorability remained high for European companies though only 53% respondent said they opted for such service. For non-European international services the respondents have feedback is evenly distributed because 33% said they somewhat favored it while 31% said they somewhat disfavored the service satisfaction experience. In informal discussion with the respondents in relation to this question it was revealed that the preference is always on having service from known source; less on country of origin based considerations. Many services are good in Italy than its neighborhood and the all customers do not have the same kind of fascination for these service providers. They also said, they believe that Bavarian engineering is only available in Bavaria, Germany.
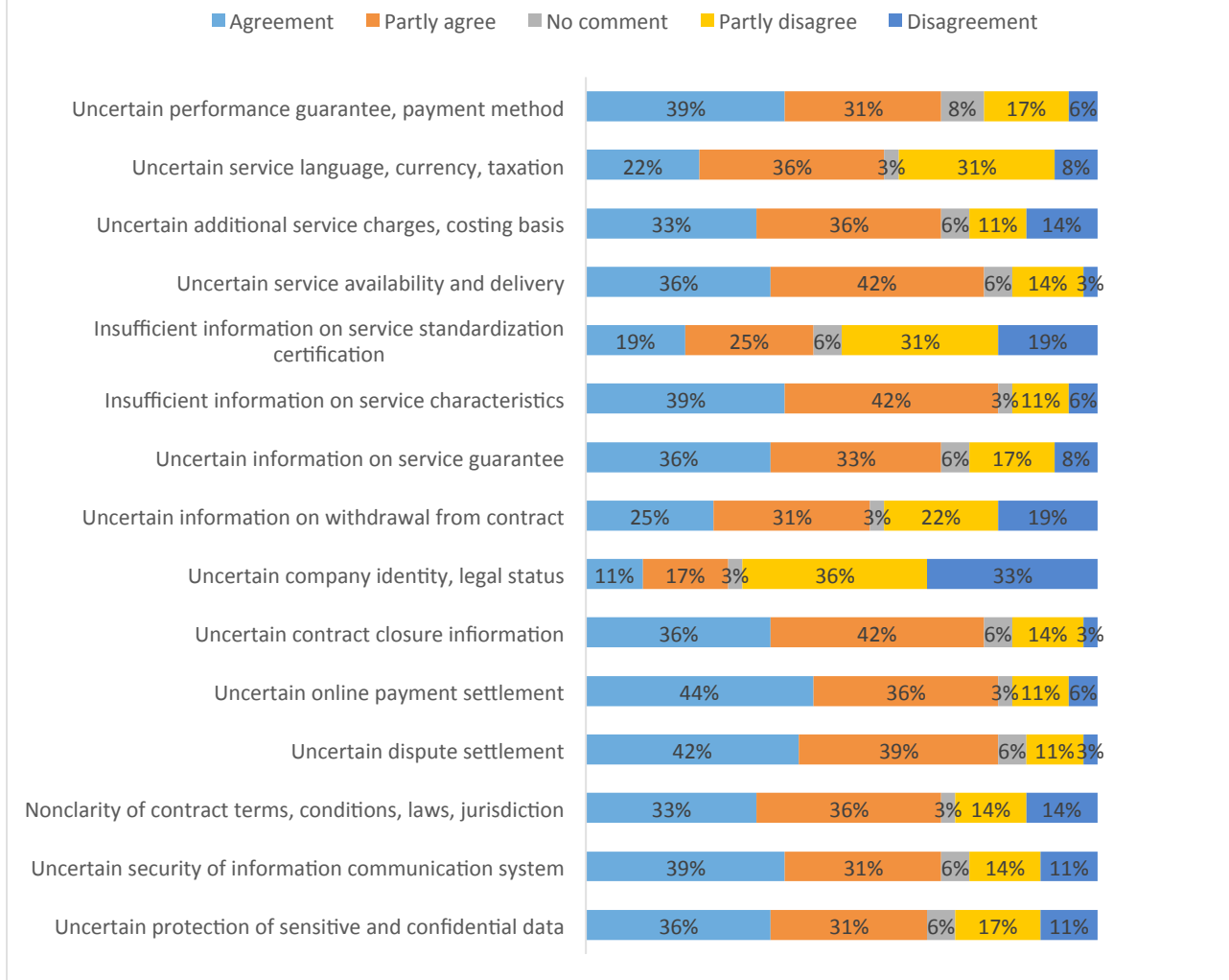
Reality check for online service buying
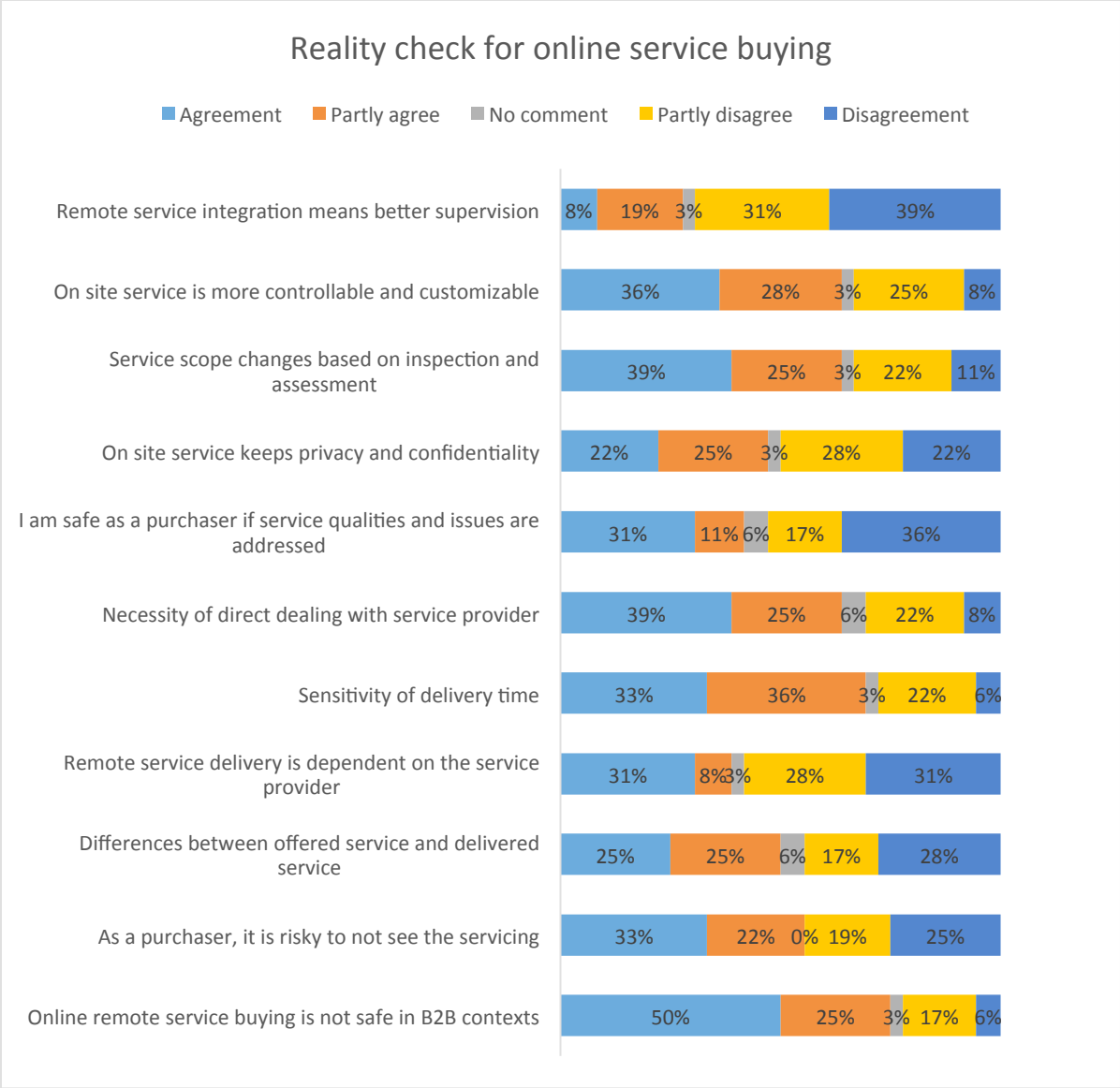
In the eleventh question the respondents were given a reality check as if they are considering to buy remote service from international sources. The respondents were given numbers of statements to reflect their degree of agreement with each of these statements. All the respondents provided feedback for each of the statement. According to their response, 39% respondents said they disagree to the statement that remote service integration means better supervision while another 31% respondent responded that they partly believe the same. So, when both the feedback are gathered, we can see most of the respondents do not favor the concept that remote service

integration reflects better supervision. From the responses likeliness it can be inferred that supervision of services is a higher concern for respondents and they certainly do not want to lose sight in supervision of the service. Secondly for 36% respondents agreed to the statement that on-site service more controllable and customizable. This statement has been favored by another 28% respondents who partly agreed to the statement. So, when both the agreed and disagreed feedback are compared, there is higher likeliness among the respondents for the statement that on-site service is more controllable and customizable. The third statement was about changes of service scope. When service providers visit the problem areas, the inspection and assessment often gets changed in scope than what the user perceives versus what the technicians specialist assessment finds out. Most of the respondents recorded their agreement and disagreement for the statement. According to the feedback, 39% respondent strongly agree that service scope changes based on inspection and assessment while another 25% partly agree to the same statement. Only 11% respondent expressed their disagreement followed by another 22% with partial disagreement. Now comparing both the agreed and disagreed responses we can say that higher number of respondents agree to the fact that service scope can always change when a technician closely inspects and assesses the problem area. The fourth statement to express agreement and disagreement was concerning benefit of onsite servicing as on-site servicing maintains privacy and confidentiality. The responses were mixed in nature as 22% respondent opined in favor of the statement while 25% respondent expressed partial agreement. Only 3% respondents refrained from expressing their opinion while 28% respondents opined for partial disagreement with the statement while another 22% respondents clearly disagreed with the statement. Thus, if we compare the agreed and disagreed responses then we can see that there is a slightly higher tendency among the respondents in disagreeing with the statement that on-site service keeps

privacy and confidentiality. However, the findings is still important since it showed that customers put a great weight on the privacy and confidentiality issues of the service. In the fifth statement the respondents were asked about their agreement and disagreement. 6% respondent did not attempt the question. Of the remaining respondents, 31% agreed to the statement that as a purchaser they are safe as long the service qualities and issues are addressed in buying the service while another 11% partly agreed to the same statement. However 36% respondents said they do not agree with statement followed by another 17% who also partly disagreed to the same statement. When both the agreed and disagreed responses are compared together we can see that higher number of people disagree to the statement that as long the service qualities and issues are addressed they are safe as purchaser. In the next statement 6% respondents refrained from providing feedback. The respondents were asked whether they agree or disagree with the statement that there is a necessity of direct dealing with the service provider. According to the gathered feedback 39% respondents agreed to the statement while 25% respondents partly agreed to it. Of the remaining 22% partly disagreed with the statement while another 8% fully disagreed to it. When the agreed and disagreed feedback are compared more respondents feel the need and the necessity of direct dealing with the service provider than having a remote service ordered. Seemingly 39% respondent opined that there is a necessity of direct dealing with service provider while another 25% partly agreed to the statement. As low as 8% respondent disagreed to the statement followed by another 22% of partial disagreement. 33% respondent agreed to the statement of sensitivity of delivery time followed by 36% respondents with partial agreement while 6% respondents opined negatively along with another 22% of partially disagreed respondents. As for remote service delivery's dependency 31% respondent fully agreed that it depends on the service provider while 8% respondent partly agreed to it. However, the

respondents' trend is higher on disagreement side as 31% said they fully disagree with the statement while another 28% reported to partially disagree to it. 25% respondent believe that there is difference between offered and delivered service in remote service provision while another 25% respondent also partially agree to the same statement. However some 17% respondent partially disagreed to it while another 28% fully disagreed to the statement. 33% respondent agreed to the statement that as a purchaser it is risky to not to see the service being delivered. The statement is partially agreed by another 22% respondent while 19% respondent partially disagreed to it and another 25% respondent fully disagreed with the statement. The last statement was safety concern of online remote service buying for B2B context. Astonishingly 50% respondents agreed to the statement followed by another 25% of partial agreement. Only 5% respondent disagreed to it while another 17% partly disagreed to it. In this question we specially wanted to get respondents response for safety issues of remote service buying but before doing so we let the respondents consider several relevant aspects of it.

Paradigm of trusting B2B remote service from internet

Legend: Agreement ▪ Partly agree ▪ No comment ▪ Partly disagree ▪ Disagreement

| Category	Agreement	Partly agree	No comment	Partly disagree	Disagreement
Uncertain performance guarantee, payment method	39%	31%	8%	17%	6%
Uncertain service language, currency, taxation	22%	36%	3%	31%	8%
Uncertain additional service charges, costing basis	33%	36%	6%	11%	14%
Uncertain service availability and delivery	36%	42%	6%	14%	3%
Insufficient information on service standardization certification	19%	25%	6%	31%	19%
Insufficient information on service characteristics	39%	42%	3%	11%	6%
Uncertain information on service guarantee	36%	33%	6%	17%	8%
Uncertain information on withdrawal from contract	25%	31%	3%	22%	19%
Uncertain company identity, legal status	11%	17%	3%	36%	33%
Uncertain contract closure infiormation	36%	42%	6%	14%	3%
Uncertain online payment settlement	44%	36%	3%	11%	6%
Uncertain dispute settlement	42%	39%	6%	11%	3%
Nonclarity of contract terms, conditions, laws, jurisdiction	33%	36%	3%	14%	14%
Uncertain security of information communication system	39%	31%	6%	14%	11%
Uncertain protection of sensitive and confidential data	36%	31%	6%	17%	11%

In the next question the respondents were assessed on the paradigm of trusting B2B remote service from internet under various considerations. These primarily included uncertainty with performance guarantees, service language, currency, payment method, taxation, costing basis, service availability and delivery and standardization. All most all the questions were responded by the participants which are depicted in the graph in above. For uncertainty with performance guarantee and payment 39% respondents have fully agreed while another 31% have partly agreed to it. Only 8% respondent did not respond while of the remaining 23% respondents 17% opted for partial disagreement and 6% for full disagreement. Uncertainty with service language,

currency and taxation also appeared to be a consideration with 22% full agreement and 36% partial agreement. However, some 3% respondents did not attended the question but of the remaining 39% respondents 315 partially disagreed to language, currency and taxation uncertainty while another 8% fully disagreed to it. Uncertainty with additional service charges and costing basis is put as another consideration for the respondent. It also received high agreement with 36% fully agreeing to it while another 36% partially agreeing to the same. 6% respondent did not attend the question but of the remaining 11% partly disagreed while another 14% fully disagreed. For uncertain service delivery and service availability 36% respondents fully agreed while another 42% respondent partly agreed to the consideration. As low as 3% respondent fully disagreed to it followed by another 14% with partial disagreement. Strangely, 6% respondent did not attend the question. Insufficient information on service standardization certification emerged as comparatively less important consideration. 19% respondent fully agreed to it while another 25% partly agreed to the statement. Then for disagreement 31% partly disagreed while another 19% fully disagreed to the consideration. Contrary to insufficient information on service standardization certification, insufficiency on service characterization emerged as more important to the respondents. At least 81% respondents are in agreement with it. 39% with agreement, 42% for partial agreement, 11% for partial disagreement and 6% with complete disagreement. Only 3% respondent did not attend the question. Next uncertainty with service guarantee is agreed by 36% respondents and partly agreed by 33% respondents. 6% respondents did not attend the question and of the remaining, 17% partly disagreed and 8% are in full disagreement. Uncertain conditioning of withdrawal from contract appeared to be another important consideration for the respondents. 25% respondents agreed to it while 31% partly agreed. 3% respondents did not attend it. 22% partly disagreed and 19% fully disagreed to the

same. As for uncertainty with corporate identity and legal status of doing business or providing service; majority respondents' views are non-affirmative. 33% respondents disagreed with the consideration while another 36% partly disagreed to the same. 3% respondent did not attend the question but another 11% and 17% responded for full agreement and partial agreement, respectively. Uncertainty with contract closure and contract protection is another important consideration for the respondents. 36% agreed to it while 42% partly agreed. 6% respondent did not answer. 14% partly disagreed and only 3% disagreed to it. Uncertainty with online payment settlement, dispute settlement, no clarity of contract terms, laws to govern, jurisdiction to ascertain and conditions to contracts remain other vital considerations for the respondents including the security of information through privacy and confidentiality and protection of data. Uncertainty with online payment settlement is agreed by 44% respondents and followed by another 36% partially agreeing respondents. 3% respondents did not gave their feedback. Of the remaining, 11% partly disagreed and 6% fully disagreed. Then uncertainty with dispute settlement is agreed by 42% respondents and partially agreed by 39% respondents. 6% respondents did not give any opinion while 11% partially disagreed to it but another 3% fully disagreed to the consideration. Other aspects like contract terms clarity, conditions, warranty, laws and jurisdiction remained a vital consideration for the respondents because 33% respondent agreed to it while another 36% partially agreed to the same. 3% did not give their opinion but 14% respondents partly and fully disagreed with the concern, respectively. Information communication system's security also emerged as an important consideration with 39% respondent opting for agreement while another 31% opting for partial agreement. 14% respondents partly disagreed and 11% fully disagreed. Rest of the respondents did not refrained from commenting. Lastly protection of sensitive and confidential data appeared to be a strong

consideration for the respondents with 36% agreeing to it and another 31% partly agreeing to it. 17% respondents partly disagreed while 11% disagreed fully. Only 6% respondents did not answer it.

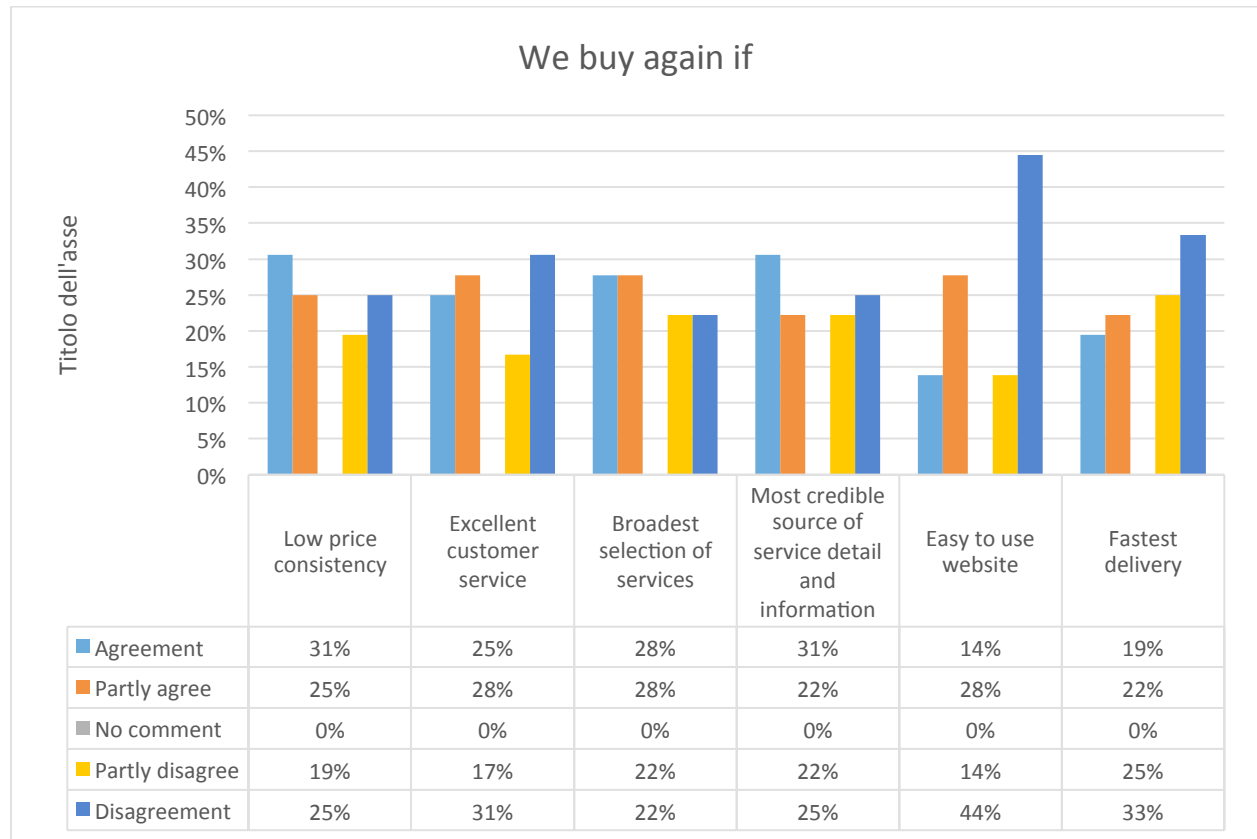Conditional combination statements
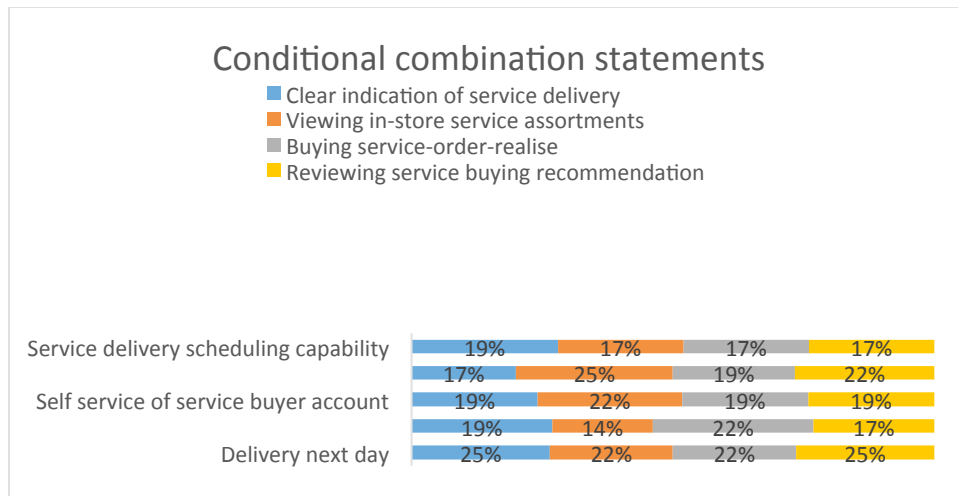
In light of the previous questions to understand the service buying of the respondents we have presented the respondents with conditional statements to be combine. All the respondents attempted the question and their responses are compiled in the above graph. According to the responses next day delivery should be clearly indicated in the service delivery contract – is opined by 25% respondents while viewing in store service assortments is matched with downloading service information sheet by another 25% respondent. Real time inventory information availability is linked with buying service-order-realize by 22% respondents, self-service of buyer account is linked with in-store service assortment by 22% respondents and lastly service deliver scheduling capability is linked with clearly indicated service delivery by 19% respondents. Deliver next day is also further linked with service buying recommendation by 25% respondents, with buying service order realize by 22% respondents and in store service assortments with 22% respondents. It is clear from the responses that lead time to delivery,

assortment of service and more importantly the experience comprising service order and realize play very important role in overall satisfaction of the process.

Importance of buying process steps visibility in online purchasing
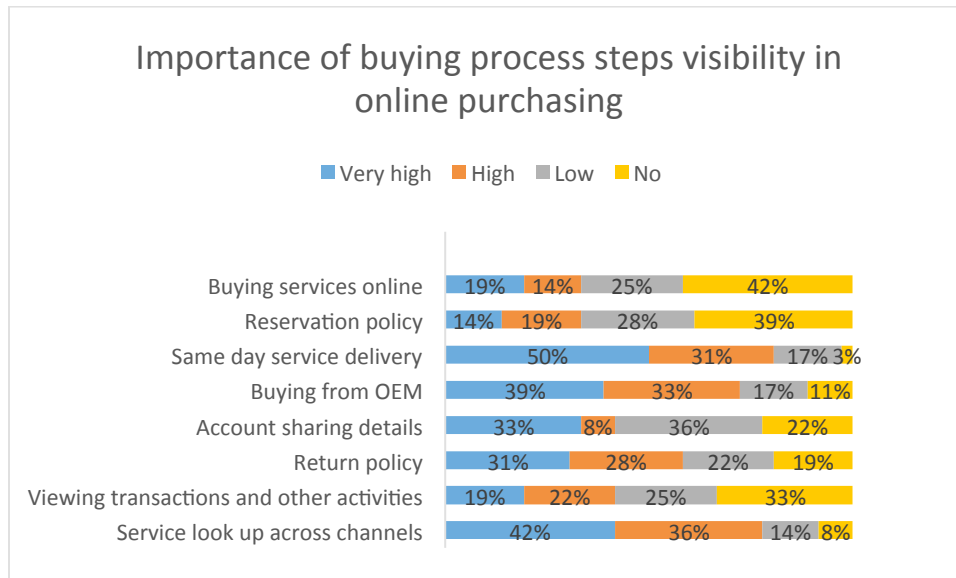
Since we are assessing the organizational perspectives of purchasing, one must understand that the purchasing at organizational level is different. Here persons responsible for purchasing has to ensure compliance conformity, transparency, procedural alignment and integrity. So, our next question to the responders were about importance of buying processes steps visibility in online purchasing. The respondents were given eight steps to rank their importance in terms of visibility considerations. All the respondents attempted the question and their feedback is compiled in the graph in above. The highest number of 50% respondents were gathered for same day service delivery followed by service look up across different channels with 42% respondent's feedback. Buying from OEM received 39% response while account sharing details received 33% and return policy received 31% responses. Other criteria's like buying services online, reservation policy and viewing transactions received 19%, 14% and 19% respondents responses respectively. Thus according to the graph we can conclude that same day service delivery, service look up across channels and buying from OEM are three top most important

consideration for the purchaser when transparency is concerned and visibility requirement has to be fulfilled.

We buy again if

|	Low price consistency	Excellent customer service	Broadest selection of services	Most credible source of service detail and information	Easy to use website	Fastest delivery
■ Agreement	31%	25%	28%	31%	14%	19%
■ Partly agree	25%	28%	28%	22%	28%	22%
■ No comment	0%	0%	0%	0%	0%	0%
■ Partly disagree	19%	17%	22%	22%	14%	25%
■ Disagreement	25%	31%	22%	25%	44%	33%

Our next question asked the respondents to reveal their repeat purchasing causes. We provided them with options like low price consistency, excellent customer service, broadest selection of services, credibility of information and knowledge leadership, and ease of use with website and lastly the fastest delivery. The respondents were asked to rate their agreement and disagreement with the provided options. All the respondents attended the question and the gathered feedback is depicted in above graph. According to it, the most disagreed rebuying consideration is the ease of use for the website with 44% responses. It then followed by fastest delivery with 33% which is bit strange to find. AS for low price consistency 31% respondents agreed to it while another 25% partly agreed to it. Customer service excellence is disagreed by 31% respondents and

followed by 17% more partially disagreeing one. Broadest selection of services received 28% agreement and partial agreement responses, each from the respondent while partial disagreement and disagreement only received 22% responses each. Credibility of information and knowledge leadership also emerged to be important consideration in initiating repeat purchase. 31% respondents agreed to it while 22% participant partially agreed to it but some 22% respondent partly disagreed and another 25% fully disagreed to it. Ease of using the website appeared to be least important consideration in repeat buying with 44% respondents in disagreement and another 14% in partial disagreement. Only some 14% respondents responded affirmatively while another 28% responded for partial agreement. Lastly fastest delivery also received least agreement. 33% respondent opted for disagreement followed by another 25% for partial disagreement. Only 19% respondents agreed to it while another 22% partially agreed to it.
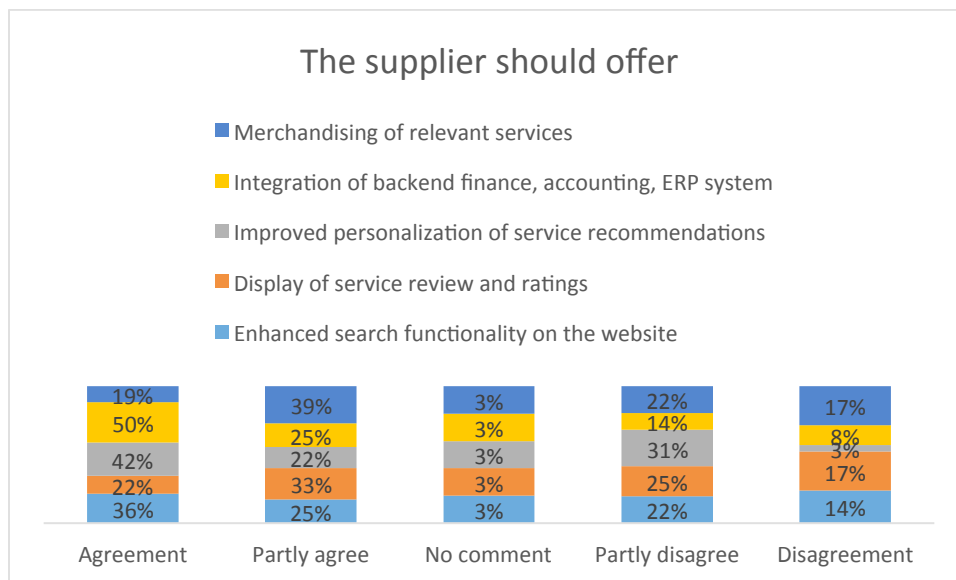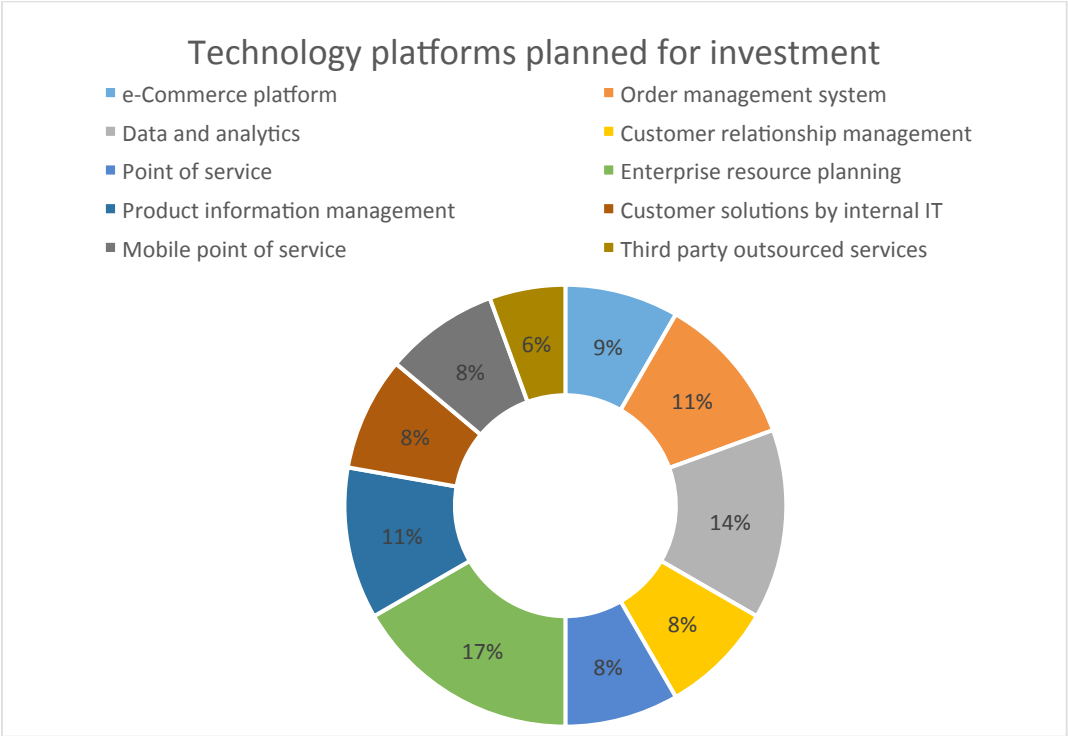

In the next question the respondents were asked what the supplier should offer. The respondents were given option of merchandising of relevant services, integration of backend finance, improved personalization of service, display of service and enhanced search functionality. All the gathered responses were reflected in the above graph. According to it, respondents are in full

agreement that the supplier should be offering integration of backend finance, accounting and ERP system.   50% respondent have opined for it. 42% respondents agreed that service recommendations improve personalization is another important quality that the supplier should offer. Enhanced search functionality on the website also received 36% respondents' agreement. Merchandising of relevant service has received 39% partial agreement followed by 33% for display of service review and ratings. Improved service personalization also received 31% partial disagreement. Display of service review and ratings received strong disagreement from the respondents.
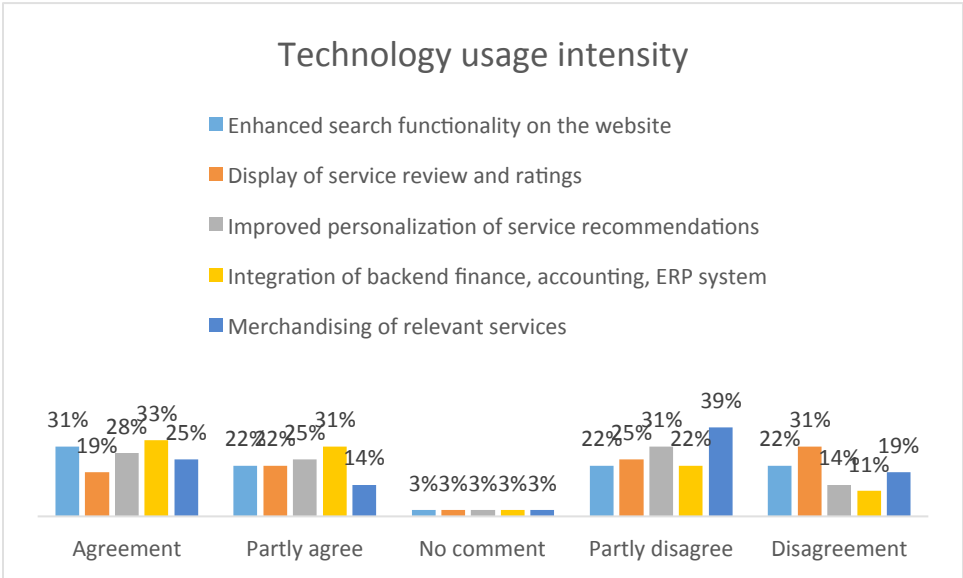

Since the respondents also have role as supplier they were also asked the same question they responded for their supplier but this time they were asked to reflect their technology usage intensity. Except some 3% respondents, all the participants to the survey attended the question and their complete feedback are depicted in above graph. Here the criteria remained the same like previous questions. According to the graph, 33% respondents agreed for integration of backend finance, accounting and ERP system while 31% responded for enhanced search functionality and 28% responded for improved personalization of services. The integration of

systems is also partially agreed by 31% respondents followed by 25% for improved personalization of service. Disagreements were high for display of service review and ratings with 31% respondents while 22% respondent also opined for enhanced search functionality on the website. Merchandising of relevant services is partially disagreed by 39% respondents, followed by another 31% for improved personalization of service.
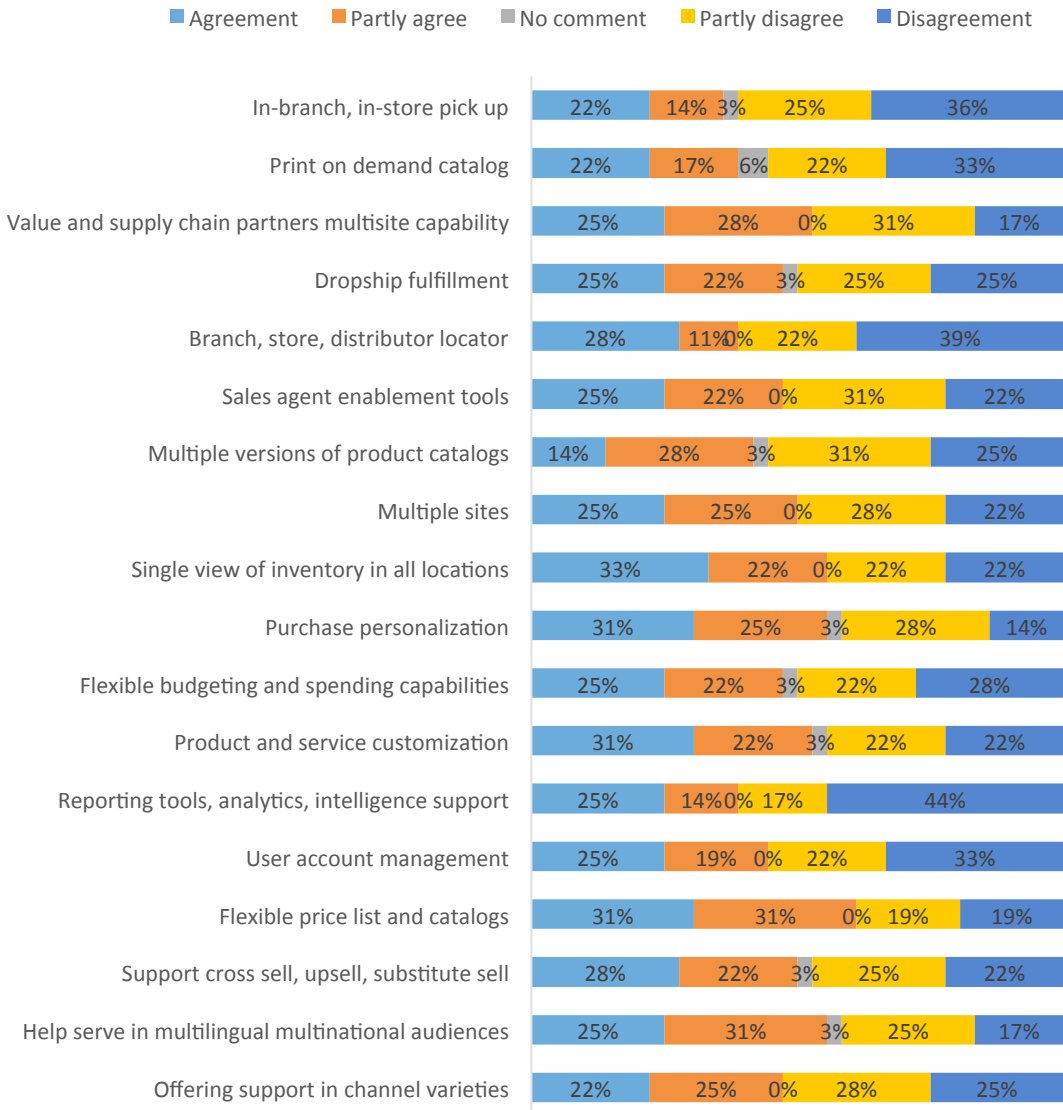

In the next question the respondents were asked about technology platform that they would plan for investment given the fact that they were asked to decide about remote service scope. All the respondents attended the question and their feedback are gathered in the above pie chart. According to the pie chart 17% respondent said they would be investing in enterprise resource planning system followed by 14% respondent for data and analytics. 11% respondent opted for both point of service and order management system, respectively. Ecommerce platform, customer relationship management system, customer solutions by internal IT and product information management have received 8% responses each.

Use of payment option
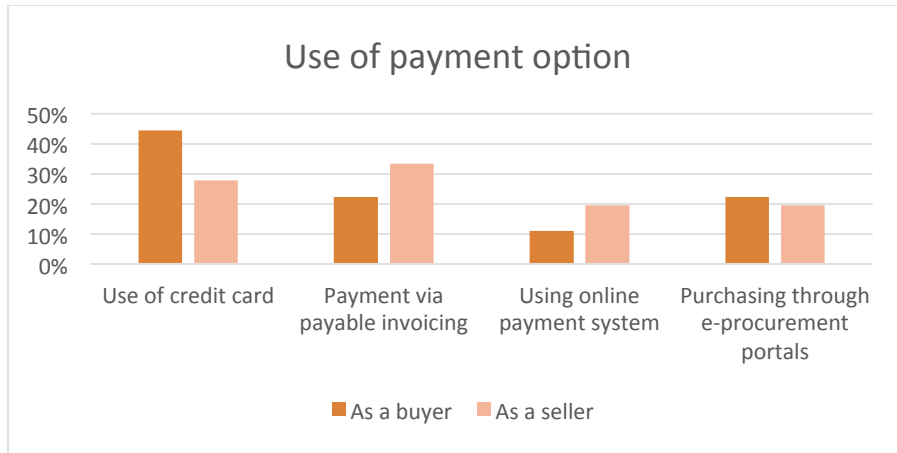
In the next question we compared the use of electronic payment options as a buyer and as a seller. The respondents were provided options of credit card, payable invoicing, online payment system and using e-procurement system. All the responses were plotted in the above graph and according to it as a seller the respondents' preference is high with payable invoicing system following by credit card then online payment system and e-procurement systems. Contrary as a buyer the preference have slightly shifted. As a buyer the respondents' first preference is the credit card then payable invoicing and e-procurement system and lastly online payment system.

Agreement/Disagreement with remote service buying considerations

■ Agreement　■ Partly agree　■ No comment　■ Partly disagree　■ Disagreement

| Consideration	Agreement	Partly agree	No comment	Partly disagree	Disagreement
In-branch, in-store pick up	22%	14%	3%	25%	36%
Print on demand catalog	22%	17%	6%	22%	33%
Value and supply chain partners multisite capability	25%	28%	0%	31%	17%
Dropship fulfillment	25%	22%	3%	25%	25%
Branch, store, distributor locator	28%	11%	0%	22%	39%
Sales agent enablement tools	25%	22%	0%	31%	22%
Multiple versions of product catalogs	14%	28%	3%	31%	25%
Multiple sites	25%	25%	0%	28%	22%
Single view of inventory in all locations	33%	22%	0%	22%	22%
Purchase personalization	31%	25%	3%	28%	14%
Flexible budgeting and spending capabilities	25%	22%	3%	22%	28%
Product and service customization	31%	22%	3%	22%	22%
Reporting tools, analytics, intelligence support	25%	14%	0%	17%	44%
User account management	25%	19%	0%	22%	33%
Flexible price list and catalogs	31%	31%	0%	19%	19%
Support cross sell, upsell, substitute sell	28%	22%	3%	25%	22%
Help serve in multilingual multinational audiences	25%	31%	3%	25%	17%
Offering support in channel varieties	22%	25%	0%	28%	25%

The next question of the survey was about remote service buying considerations. The respondents were given numbers of considerations to express their agreement and disagreement using the Likert scale. These considerations were in-branch or in-store pickup, print on demand catalog, dropship fulfillment, sales agent enabling tools, multiple sites, purchase personalization, product and service customization, user account management, support for cross sell - upsell and

substitute sell and lastly offer for support in channel varieties. These considerations are specifically plotted here to reflect what the B2B remote service buyers specifically consider at the moment of buying. The considerations also included value and supply chain partners multisite capability, locator for distributor, product or service catalogs multiple version, inventories single view, budgeting flexibilities, reporting tools and intelligence support, price list flexibility and multilingual support service. The pickup consideration is agreed by 22% respondent while another 14% partly agreed to it, 35 refrained from responding and 25% partly disagreed to it and the remaining 36% fully disagreed with the statement. The catalogs print on demand feature is also considered by B2B buyers as agreed by 22% respondents and partially agreed by 17% respondents. 6% respondents did not provide any feedback on the matter but 22% respondent partially disagreed to it while another 33% also full disagreed to the statement. Value and supply chain partners' multisite capability is considered by 25% respondents while another 28% respondents partly consider the matter. However 31% of respondent partly disagree to it while remaining 17% also disagree to it. Dropship fulfillment is strongly considered in all online purchases. So, for B2B setting it is agreed by 25% respondents followed by another 22% of partially agreeing respondents. Contrary to the agreed respondents 25% partially disagreed and full disagreed to the statement, respectively. Distributor locating service is also an important consideration in online buying. It is agreed by 28% respondent and followed by another 11% partially agreeing respondents. 25% each respondent disagreed and partly disagreed to the statement. Sales agent enablement tools is agreed by 25% respondent fully while another 22% partly agreed to it. But 31% respondent partly disagreed to it while another 25% fully disagreed to it. When the agreement and disagreement are compared; disagreement is higher for sales agent enablement tools consideration. The multiple versions of product catalogs is least agreed too.

Only 14% respondent fully agreed to it while another 28% partly agreed to it. 3% respondent did not give their opinion. But 31% respondent partly disagreed to it and 25% fully disagreed to multiple versions of product catalogs. As for multiple sites 25% respondents each fully agreed and partly agreed to it while 28% partly disagreed and another 22% fully disagreed to it. The agreement to disagreement here have fifty-fifty ratio. Single view of all inventory in all locations emerged as an important consideration since 33% respondents fully agreed to it followed by another 22% who partly agreed to the same. 22% respondents partly disagreed and fully disagreed, respectively. Purchase personalization also emerged as an important consideration since it received 31% full agreement and 25% partial agreement while 3% respondents refrained from giving their feedback on the matter. As for disagreement 28% respondent partly disagreed to it while another 14% fully disagreed to it. Strangely, flexible budgeting and spending capabilities appeared least to be a consideration because 25% fully agreed to it while another 22% partly agreed to the consideration. This is contrary to the 50% respondents, combining both partial disagreement and full disagreement. As for product and service customization, 31% respondents respondent affirmatively while 22% partially agreed it to be a consideration. 3% respondent did not respond to the question while 22% each have responded for partial and full disagreement with the consideration. However, we must note here that the respondents have mostly agreed to purchase personalization in previous section. The reporting tools, analytics and intelligence support is agreed by 25% respondent while 14% partially agreed to it. But 17% partially disagreed to it and another 44% fully disagreed that reporting tool, analytics and intelligence support are important consideration for them. Overall the respondents' attitude is negative here. The user account management is also fully agreed by 25% respondents and partly agreed by 19% respondents while 22% respondents partly disagreed and 33% participants fully

disagreed. Flexible price list and catalogs appeared to be very important to the respondents. It is fully agreed by 31% and partly agreed by another 31% respondents. Only 19% each respondent said they partly and fully disagree with the consideration. Support for cross sell, upsell and substitute sell received distributed responses. 28% for full agreement, 22% for partial agreement, 25% for partial disagreement and 22% for full disagreement and remaining 3% did not attend the question. Help serve in multilingual multinational audiences received 25% full agreement, 31% partial agreement, 25% partial disagreement and 17% full disagreement as feedback. 3% respondent did not attend the consideration question. At the end, offering support in channel varieties received 22% full agreement, 25% partial agreement and 28% partial disagreement and 25% full disagreement, as the feedback.
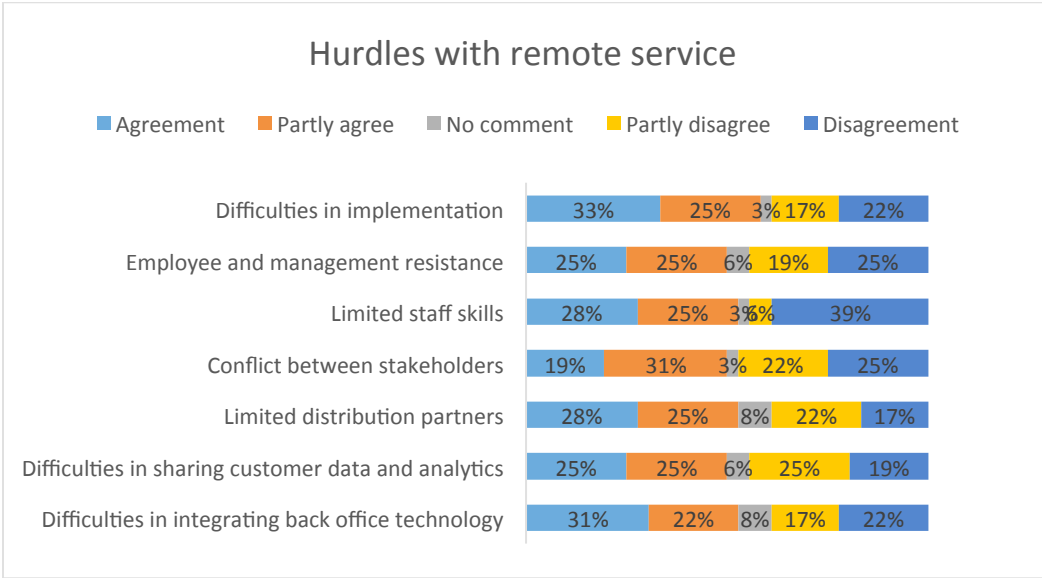

Our next question in the survey was based on experience sharing and prediction of hurdles by the respondents in buying remote service. All the respondents were given situations like difficulties in implementation, employee and management resistance, limited staff skills, conflict between stakeholders, limited distribution partners, difficulties in sharing customer data and analytics and difficulties in integrating back office technology. All these hurdles identified were primarily

bookish in nature that are common to every enterprise. Each of these hurdles then presented with a rating scale for agreement and disagreement. All the gathered feedback are presented in above graph. According to it 33% respondents agreed that remote service is difficult to implement while another 25% respondent partly agreed to the same. As for employee and management resistance 25% respondent fully agreed to it while another 25% partly agreed to the statement. Limited staff skills have been agreed by 28% respondent and another 25% have partly agreed to the same. Conflict between stakeholders have been fully agreed by 19% respondents and another 31% have partly agreed to it. Limited distribution partner is identified as a problem by 28% respondents while another 25% partly agree to the same. Difficulties in sharing customer data and analytics is also agreed and partly agreed by 25% respondents each while difficulties in integrating back office technology is agreed by 31% respondent and another 22% partly agreed to the same. In reviewing the feedback what is important to understand is that all the considerations been agreed at least by 50% of the respondents that they consider the situations to be hurdles for them to implement remote service buying for their business.
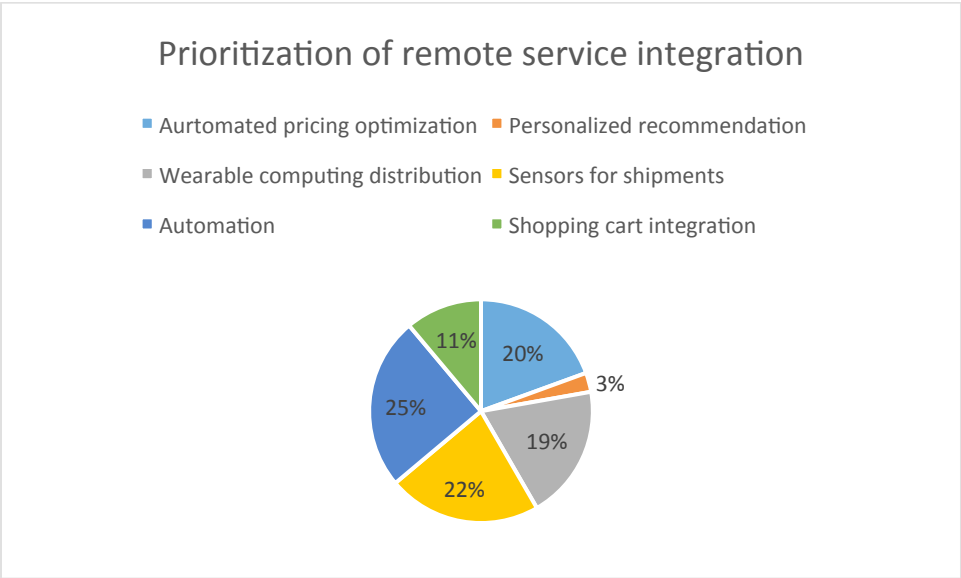
Our next question was about prioritizing the remote service integration to different service areas of the oil and gas business. We provided few options to the respondents like automated pricing optimization, wearable computing distribution, automation, personalized recommendation, sensor for shipments and shopping cart integration. The reason of putting the question after getting the respondents reviewed for remote service buying hurdle is that, it will help in understanding the expectation and realities prevailing in the industry. All the respondents have answered the question and their entire feedback is plotted on the pie chart in above. According to the chart 25% respondents believe automation is the prime area where remote service can be integrated followed by 22% respondents for sensors for shipments. The third highest response was gathered for automated pricing optimization with 20% feedback and followed by another 19% feedback for wearable computing distribution. Shopping cart integration and personalized recommendation have received 11% and 3% responses respectively. Given the analysis it can be concluded that the scope for remote service integration is understandably higher in automated service settings.

	Highly likely	Likely	No comment	Non-likeliness	Disagreement
Serie1	0,17	0,28	0,06	0,33	0,17
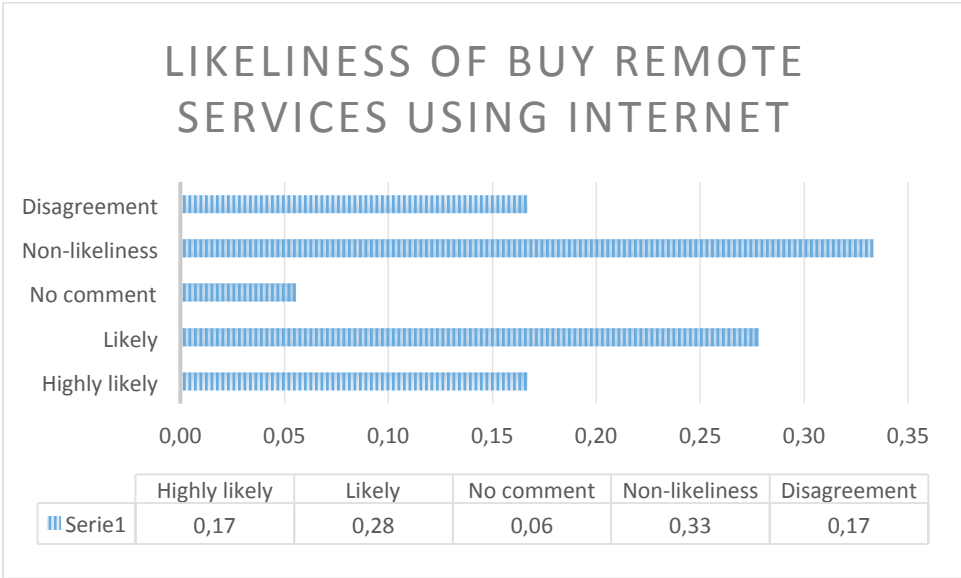
The last question of the survey questionnaire was directly reflecting the key research question that is whether the respondents are likely to buy remote services using the internet on international settings. All the respondents attended the question and they were given Likert rating scale to reflect their response. All the gathered responses are plotted in above graph. According to the graph only 17% respondents said they are highly likely to buy remote services using internet while another 28% respondents said they are only likely to buy the remote services for their oil and gas business using the internet. Some 6% respondents refrained from expressing any likeliness and disagreement. As for non-likeliness 33% respondent said the same followed by another 17% for strong disagreement. Now when all the favored responses are compared with non-favoring responses, we can see the difference to be little but evidential. Based on the favorable and non-favoring responses comparison we can conclude that respondents are more non-likely to buy remote services for their oil and gas business using the internet. The reasons of their belief is understandably explored in previous analysis.

5.2 Statistical analysis

At the end of the analysis and discussion we have carried extensive statistical analysis to show that all the findings are significant and of real importance to the research question. Therefore we have compiled all the ordinal feedbacks and coded them as below:

	Agreement	Partly agree	Partly disagree	Disagreement	No comment
Online remote service buying is not safe in B2B contexts	18	9	6	2	1
As a purchaser, it is risky to not see the servicing	12	8	7	9	0
Differences between offered service and delivered service	9	9	6	10	2
Remote service delivery is dependent on the service provider	11	3	10	11	1
Sensitivity of delivery time	12	13	8	2	1
Necessity of direct dealing with service provider	14	9	8	3	2
I am safe as a purchaser if service qualities and issues are addressed	11	4	6	13	2
On site service keeps privacy and confidentiality	8	9	10	8	1
Service scope changes based on inspection and assessment	14	9	8	4	1

On site service is more controllable and customizable	13	10	9	3	1
Remote service integration means better supervision	3	7	11	14	1
Uncertain protection of sensitive and confidential data	13	11	6	4	2
Uncertain security of information communication system	14	11	5	4	2
Nonclarity of contract terms, conditions, laws, jurisdiction	12	13	5	5	1
Uncertain dispute settlement	15	14	4	1	2
Uncertain online payment settlement	16	13	4	2	1
Uncertain contract closure infiormation	13	15	5	1	2
Uncertain company identity, legal status	4	6	13	12	1
Uncertain information on withdrawal from contract	9	11	8	7	1
Uncertain information on service guarantee	13	12	6	3	2
Insufficient information on service characteristics	14	15	4	2	1
Insufficient information on service standardization certification	7	9	11	7	2
Uncertain service availability and delivery	13	15	5	1	2
Uncertain additional service charges, costing basis	12	13	4	5	2
Uncertain service language, currency, taxation	8	13	11	3	1
Uncertain performance guarantee, payment method	14	11	6	2	3
Low price consistency	11	9	7	9	0
Excellent customer service	9	10	6	11	0
Broadest selection of services	10	10	8	8	0
Most credible source of service detail and information	11	8	8	9	0
Easy to use website	5	10	5	16	0
Fastest delivery	7	8	9	12	0
Enhanced search functionality on the website	13	9	8	5	1
Display of service review and ratings	8	12	9	6	1
Improved personalization of service recommendations	15	8	11	1	1
Integration of backend finance, accounting, ERP system	18	9	5	3	1
Merchandising of relevant services	7	14	8	6	1
Enhanced search functionality on the website	11	8	8	8	1
Display of service review and ratings	7	8	9	11	1
Improved personalization of service recommendations	10	9	11	5	1
Integration of backend finance, accounting, ERP system	12	11	8	4	1
Merchandising of relevant services	9	5	14	7	1
Offering support in channel varieties	8	9	10	9	0
Help serve in multilingual multinational audiences	9	11	9	6	1
Support cross sell, upsell, substitute sell	10	8	9	8	1
Flexible price list and catalogs	11	11	7	7	0
User account management	9	7	8	12	0
Reporting tools, analytics, intelligence support	9	5	6	16	0
Product and service customization	11	8	8	8	1
Flexible budgeting and spending capabilities	9	8	8	10	1

Purchase personalization	11	9	10	5	1
Single view of inventory in all locations	12	8	8	8	0
Multiple sites	9	9	10	8	0
Multiple versions of product catalogs	5	10	11	9	1
Sales agent enablement tools	9	8	11	8	0
Branch, store, distributor locator	10	4	8	14	0
Dropship fulfillment	9	8	9	9	1
Value and supply chain partners multisite capability	9	10	11	6	0
Print on demand catalog	8	6	8	12	2
In-branch, in-store pick up	8	5	9	13	1
Difficulties in integrating back office technology	11	8	6	8	3
Difficulties in sharing customer data and analytics	9	9	9	7	2
Limited distribution partners	10	9	8	6	3
Conflict between stakeholders	7	11	8	9	1
Limited staff skills	10	9	2	14	1
Employee and management resistance	9	9	7	9	2
Difficulties in implementation	12	9	6	8	1

5.2.1 Descriptive statistics analysis

Descriptive Statistics	Agreement	Partial Agreement	Partial Disagreement	Disagreement	No Comment
Mean	10.43283582	9.373134328	7.850746269	7.28358209	1.059701493
Standard Error	0.365410793	0.321712276	0.284734263	0.474022582	0.097180042
Median	10	9	8	8	1
Mode	9	9	8	8	1
Standard Deviation	2.991016249	2.633328467	2.330650393	3.880042058	0.79545293
Sample Variance	8.9461782	6.934418815	5.431931253	15.05472637	0.632745364
Kurtosis	0.377688977	0.214334305	0.013187349	-0.582622388	-0.089142178
Skewness	0.151090237	0.072869093	0.060137772	0.248694427	0.450117088
Range	15	12	12	15	3
Minimum	3	3	2	1	0
Maximum	18	15	14	16	3
Sum	699	628	526	488	71
Count	67	67	67	67	67

The above descriptive statistics results are self-explanatory as they are representing individual ordinals mean, standard, error, median, mode, standard deviation, sample variance, kurtosis, skewness, range, minimum, maximum, sum and count. Given the considerations, challenges, hurdles and limitations with the remote service on the B2BN contexts, most of the respondent respondents in light with the theoretic understanding developed in the literature review section and according the questionnaire been prepared.

5.2.2 Covariance analysis

Covariance	Agreement	Part. Agree	Part Disagree	Disagree	No Comment
Agreement	8.812653152				
Part Agree	2.271329918	6.830920027			
Part Disagree	-3.636890176	-2.586099354	5.350857652		
Disagree	-8.003341501	-6.971485854	1.325907775	14.83002896	
No Comment	0.556248608	0.455335264	-0.453775897	-1.181109378	0.623301403

The covariance analysis is showing the linear relationships between the feedback. According to the analysis presented in above both agreement and partial agreement has positive relationship but for all disagreement and partial disagreement feedback, we see negative relationship between the covariance – which is linear. Though we analyzed 'no comment' feedback; it also have positive relation with affirmative feedback and negative relation with non-affirmative feedback.

5.2.3 Correlation analysis

Correlation	Agree	P Agree	P Disagre	Disagree	No Comment
Agree	1				
P Agree	0.292743514	1			
P Disagree	-	-0.42775383	1		

	0.529620942				
Disagreement	-0.700078935	-0.692651454	0.148843755	1	
No Comment	0.2373376	0.220669664	-0.24847384	-0.388481253	1

The correlation analysis is quite reverse of the covariance analysis, where correlation is analyzed and tested between the data. In terms of the correlation analysis we also see that there is a negative relationship between the respondents agreeing to remote service buying considerations and the respondents disagreeing to remote service buying considerations. This findings is further checked through Pearson correlation coefficient analysis. The Pearson correlation coefficient for the dataset is below between agreement, partial agreement and disagreement and partial disagreement.

The resulting r value is -0.56; this again means the negative relationship and moderate linear relationship. At the same time it also shows that the result is of significance.

5.2.4 F – test two sample for variance

	Agreements	Disagreements
Mean	9.902985075	7.567164179
Variance	8.163449669	10.24733475
Observations	134	134
df	133	133
F	0.79664126	

P(F<=f) one-tail	0.095588605	
F Critical one-tail	0.751055214	

5.2.5 T-test two sample assuming unequal variance

	Agreement	*Disagreement*
Mean	9.902985075	7.567164179
Variance	8.163449669	10.24733475
Observations	134	134
Hypothesized Mean Difference	2	
df	263	
t Stat	0.905991177	
P(T<=t) one-tail	0.182884892	
t Critical one-tail	1.650668012	
P(T<=t) two-tail	0.365769785	
t Critical two-tail	1.969024974	

5.2.6 Z test two sample for means

	18	*6*
Mean	9.842105263	7.578947368
Known Variance	1	1
Observations	133	133
Hypothesized Mean Difference	2	
z	2.145987688	
P(Z<=z) one-tail	0.01593698	
z Critical one-tail	1.644853627	
P(Z<=z) two-tail	0.031873961	
z Critical two-tail	1.959963985	

5.2.7 Regression analysis

Regression Statistics	
Multiple R	0.56774
R Square	0.322329
Adjusted R Square	0.317195
Standard Error	2.360942
Observatio	134

ns

ANOVA

	df	SS	MS	F	Significance F
Regression	1	349.9648	349.9648	62.78471	8.46E-13
Residual	132	735.774	5.574045		
Total	133	1085.739			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	13.73753	0.525158	26.15887	4.52E-54	12.69872	14.77635	12.69872	14.77635
X Variable 1	-0.50674	0.063952	-7.92368	8.46E-13	-0.63324	-0.38023	-0.63324	-0.38023

All these statistical analysis confirms that there are psychological diffusion among the
respondents with regard to buying remote service from international sources using the internet
for their organizations operation in the oil and gas industry.

6.0 Findings

In the findings section if we review the entire analysis, discussion and the literature review revelations, we can be optimistic to get a valid answer to our research question. As the survey results showed, majority of the respondents have never considered buying remote service using the internet. The level of response gather for the option, 67%, shows can be apprehended with the understanding that these respondents were well aware that there is little scope of remote service from international sources. And the same can also be taken like these respondents were well convinced that remote service from international sources was not a practically feasible solution to their site based service needs. This information can be used to validate the second response of the sample population where they disclosed their service buying medium preference. Very large number of respondents, 92%, limited the preference with offline solution. Now if we analyze whether the decision of preferring certain media for service needs is an individual realization or systematic organizational understanding then we need to explore the different roles in the B2B remote and international service buying decision making. Our analysis showed that based on buying media differences for service, the roles are changing their importance ranks. Primary decision makers have the most dominating influence in online while for offline large scale stakeholders dominate B2B service purchase in the oil and gas industry. So, we can conclude that individuals trait influence the matter of international remote service buying in B2B contexts. This findings provides a valid starting point to further our research on the psychological diffusion.

In the next part of the analysis the respondents were pushed to deeper level considerations of the international remote service buying provision for B2B settings. The respondents against a question depicting their likeliness for the same for functions and areas expressed interesting findings. For areas Information Technology and for service Business Intelligence received highest 39% feedback, each. When both the oil and gas sector and related industries are mostly concerned with energy and industrial manufacturing and processes as well as operations and engineering and purchasing options; the response was unexpected. As such both the findings that is Information Technology and Business Intelligence require further exploration. For comparing considerations influences on buying services the respondents opined that flexibility in financing besides operational and environmental safety, economic valuation impact of the service on the market place and verifiable reference of service quality remain dominant considerations. This reflect a simple understanding that B2B buyers are fully in complete unaware state of remote service scope from international perspective. Whether they can overcome the unawareness through consultation and other contemporary market communication is assessed, too in the analysis section. Findings revealed that for online the preference is on supplier website for authenticity of information as well as success stories documentation. But for offline it is mostly industry magazine, CAD drawings and email marketing. So, this reveals that the buyers are completely okay to change their marketing communication media and tool preferences if they are to decide on buying remote service for the oil and gas industry. This finding is further validated from the next gathered feedback where the respondents said OEM's have a higher role in influencing their purchase decision for online while the same in offline is for manufacturers' representatives. Why the respondents think so is assessed and evaluated in the following question. The respondents opined that industrial contacts can significantly influence the decision

making process for testing and selection while OEM can do it for service identification and procurement in online but for the same role players the influence is on evaluation and procurement respectively. Distributors are more related with service identification and criteria selection but manufacturers' representatives are related with procurement and tradeshows with search, test and evaluation for online. According to the Pearson correlation coefficient both the online and offline role influences impact on purchasing decision have positive relationship. Then the research aimed to gauge the effectiveness of the role influences and relevant considerations. The findings revealed that the effectiveness of the buying decision can be categorically analyzed on number of areas - not only including services but also some tangible products. For service quality effectiveness matters the most for business intelligence followed by process and equipment while price stands as a strong effectiveness consideration for energy and IT initiatives. Other effectiveness considerations like service agreements, evidence of timely delivery and service availability and financial stability have received distributed responses. This means service quality and price are strong effectiveness measure for business intelligence, process, equipment, price and IT. The findings are important because it shows that B2B purchase is also about evaluating purchases and learning from it. After effectiveness the satisfaction is surveyed with comparison of buying history and satisfaction. Satisfaction is usually high for European companies with half of the respondents having the buying history of services from these European companies. But these are all offline, none are online - remote access based. Once the respondents shared their buying history and satisfaction level it was important to check them for some realities. So, we compiled numbers of statements to evaluate it. Half of the respondents confirmed that online remote service buying is not safe in B2B contexts which validated their responses for previous question and in favor of their feedback the respondents included

statements like service scope changes based on inspection and necessity of direct dealing with the service provider. On the contrary side the respondents agreed that remote service integration does not mean better supersession, nor does it give them a safe feeling as a purchaser and furthermore the delivery of service is fully dependent on the service provider. These findings are understandably pure and reality based. Given these responses it is clear that respondents have some underlying concerns, anxious feelings about B2B remote service buying. So, the next question dealt to check the paradigm of trusting B2B remote service from the internet. All the respondents agreed for uncertainties and insufficiencies dealing with performance guarantee, service characteristics, payment dispute settlement, payment settlement, information security system, confidentiality and data sensitivity. Other issues included uncertainty and insufficient information for additional service charge, taxation, contracting scope, financing scope, legal jurisdiction and protection and contract governing laws under European Union's single market implications. At this context it was important to understand how seriously the respondents have realized or thought the issue. So, some conditional statements combination were presented to them and the respondents concluded that clear indication of service delivery along with service scheduling capabilities, self-service buyer account management and real time inventory information and service assortments. After the conditional statements combination the respondents were evaluated for the buying processes visibility. As per their responses most respondent indicated same day service delivery, service look up across channels and buying from the OEM becomes their most important aspects. The respondents also said besides the visibility, they would be repeat buying the service when they get lowest price consistently and customer service is at excellent level. As such the suppliers or the service providers need to offer the abilities to integrate backend finance, accounting and ERP solution as well as improved

personalization of recommended services. These findings are very important since the respondents are clearly indicating that they are ordinarily not after remote service buying in oil and gas sector but when they are to consider it, they apply number of other considerations that they believe is important. With such considerations, they are also dictating a marketing mechanism of the remote services and also shaping up the transaction norms. They are being clear about what they expect and what they factually need to make their decisions in favor of remote service buying. Currently these buyers are intensely using technology for searching functionalities on a service provider website. They are also after the integration of backend systems. They are also pursuing plan for their marketing and sales in terms of enterprise resource planning, point of service and date and analytics. They have also expressed that they have payment option preferences based on their interchangeable buyer seller roles. At the end part of analysis the discussion became targeted to find specific research question. Here respondents were asked about their agreement and disagreement on remote service buying with different characteristics combination. The findings revealed that single view of inventory in all locations, purchase personalization, product and service customization and flexibility with pricing are the most dominating interests for them. Then in realizing the hurdles the respondents showed acceptance of challenges in implementing remote service in oil and gas sector. These specifically included overall understanding for difficulties in implementation and integrating the back office technology. Even when the remote service integration is prioritized the respondents emphasized automation and sensory monitoring and wearable computing distribution. At the end the respondents expressed their non likeliness of buying remote services using internet. Based on these findings it can be decided that remote service buying may not be a newer concept but already very much into consideration if not specifically related to oil and gas but with other

aspects of these businesses. It is also certain that when the remote service buying is considered on international perspective, there are important areas for which further work and development at governmental and regional levels are necessary. It is also clear that these B2B operators are least interested in the scope because the issue is deeply related with being confident and gaining trust. Thus, the findings conclude that when these oil and gas sector B2B operators would gain confidence and trust on the remote service providers and on their marketing, the situation can change.

7.0 Conclusion

This paper is based on the research topic of comparing the psychological diffusions in buying remote access based services for the B2B oil and gas sector using internet on international perspectives. Therefore the topic specifically addresses a narrow area for the research where the service is not only intangible it is provided internationally, as remote service and through the internet to a specific oil and gas sector industries who only operate on B2B basis. The research is also aimed at a specific area of psychological diffusions, from the organizational perspective, that is to be structured in a comparative perspective. These research aims have specifically been designed to help the B2B service marketers in enhancing their marketing effectiveness which continually deliver value to the B2B customers. All these made the research to be multidimensional yet comprehensive.

In light of the research topic, questions and objectives, the thesis is carried in systematic manner. At first the research orientation is described in detail formulating the problem, explaining the aim and purpose and their subjective relevance. Then the paper detailed oil and gas industry overview which predominated the service buying paradigm from a B2B perspective. In this discussion we have seen that the B2B buying have its own characteristics and considerations that

are unlike the consumer buying behavior. Here individual psychology matters but remains predominated by organizational purposes. Even to what extent the buying manager can function is also dictated by the organization. Purchase managers require to apply their personal assessment in an organizational methodical way that satisfy the procedural requirements, conformity requirements and more importantly makes attainment of business goals quicker. So, we can understand that it remains more complex as a process. Another important characteristic of the industry is that here supplies are real-time based, happening round the clock through their upper stream and downstream channel systems. Industrial servicing has a great implications to these businesses because delay can cause catastrophe, environmental damage and become a national loss. So, the sensitivity to the matter of remote servicing based on internet from international sources is highly delicate and critical choice.

In the next section we reviewed contemporary literature with specific focus on B2B buying behavior, psychological diffusions, oil and gas industry and related considerations. Several scholarly journals articles, reports and books have been consulted for this purpose. The theoretic understanding eventually developed from reviewing the literature included that even though B2B purchasing behavior and decision making process is subject to number of considerations, buyers level of confidence on the service requirement, service personalization, professionalism of service provider, legal considerations, payment settlement, dispute process, arbitration; individuals trust on the relationship remains as the sole determinant of the decision. Thus, cultural variations, psychological barriers, language differentiation, service agreement terms and service availability, service providers' commitment and service buyers' confidence emerge as important influential factors. Though they emerge as important influential factor the decision of

buying, the process of buying always remain biased on organizational contexts. Thus, trust between the service provider and the service buyer stands as the sole determinant.

Then we carried our survey on some 36 B2B respondents representing the oil and gas industry. Our questions were specific and relevant. We aimed to explore their buying history of service, gauge their satisfaction, interests in buying services online as remote offerings, challenges, marketing implications, hurdles and limitations in the same. The analysis section comprised of lots of graphical representation and it not only compared the online offline service scopes but also individual influence and organizational contexts. It also included detailed analysis of factors that the respondents fear the most. Our analytical discussion followed by the findings section. This combined theoretic understanding from the literature review and analyses.

- Prior concluding the paper it can be said that the thesis remained comprehensive in its scope with a challenge of finding qualifying samples to predetermined selection criteria. We have overcome the challenge and adopted means of communication that are ordinarily practiced in such scale of researches. We have also used various literary sources from online and offline. The entire research is the highest reflection of ethical standards. All works are credited, appropriately referenced and cited in texts. The statistical analysis primarily involved Likert scales ordinal analysis which limited scope for using advanced use of statistical tools. However, where appropriate we have included Pearson correlation coefficient, P value, mean, and weighted average distribution and linear trends. Thus, it can be said that the research carried fully complied with the research plan that the research question suggested. Still we would like to recommend further research on the subject. It is our utmost belief that the research carried here is of highest standard. And finally, at the end this can be said that in comparing the

psychological diffusions in buying remote access based services for the B2B oil and gas sector using internet on international perspective; development of trust and confidence, limitations with marketing and operational scope, organizational mandate remain key decision making perspective. As long these B2B purchasers cannot find reasons to trust, to become confident on the service itself, service buying mechanism, the service provider; commercialization of B2B remote services using internet from international contexts would be a hard reality. So, marketers should be working hard to gain that trust to make their industrial customers confident on them by providing service with the necessary personalization and control interventions at the purchasers' discretion. The market need to be developed further by educating the purchasers more and more on international remote service provision. The market itself needs to offer mechanisms and interventions to all the uncertainties that primarily dominated the psychology of B2B purchasers and their mindset. Therefore, remote service providers aspiring to benefit from technological advancements, also need to concentrate on innovating new market system, its institutionalization, mechanisms and interventions for their customers to gain their trusts not only on the service and the provider; but also on the entire market system; beside developing new services for B2B oil and gas industry!

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9.0 Abstract

Buying an intangible goods with a tangible service: the evaluation of services in the B2B oil sector.

The topic of my thesis was to compare the psychological diffusions of B2B purchasers for remote access based services from an international perspective with specific concentration on the oil and gas industry. As such the main aim of the research is to help the B2B service marketers in identifying marketing implications regarding forwarding remote access based services to oil and gas sector. The oil and gas sector is largely known to be a part of the mining industry involving heavy machinery and capital. In its structure, the industry is broadly divided into the upper stream, middle stream, and downstream. The upper stream is manufacturing functions centering the mine while the middle stream represents the distribution and the downstream represents the consumer end of the industry. The research focused particularly on downstream comprised of gas stations, automobile repair and another consumer specific commercial entities.

Since the report aimed at comparing the psychological diffusions, the research was carried in a systematic manner. It looked into theoretic insights on the subject from the contemporary research literature. It tried to understand the B2B psychological perspectives of the purchasers. It also studied the oil and gas industry's downstream in detail. In course of the review of the existing literature, it was revealed that human psychology dominates organizational buying process. it holds great influence on the decision-making the process that it is quite difficult to segregate. However, we found that organizational purchasing consideration for service differs with individual consumers in terms of the purchasing consideration. Organizations need to think about the competition, the competitiveness and the consumer altogether. Organizations also need to synchronize its purchasing decisions based on its long-term goals and objectives.

At the same time, the thesis also revealed that marketers marketing for service have greatly shifted from onsite to offsite. Internet use is widely adopted and enabled faster transaction and integration of suppliers with buyers. When remote access based services are considered for oil and gas industry, we reveal huge potentials for marketers. We also showed that contemporary B2B purchasers have some preference for such internet based services like in providing security solution, in metering, in maintenance, in data management and other areas. The B2B oil and gas industry emerged as a great field to explore with remote service offerings. But marketers need to know how to make that happen.

Setting the research background with the aim to compare the psychological diffusions, to explore the scope for more service provision and to identifying the key factors causing the psychological diffusions and to provide an academic base for oil and gas industry service providers for further research. Thus, the objectives remained for the research to review the B2B service buying provisions, gaining deeper understanding of the industry's functioning, reviewing the service consumption paradigm of the industry and comparing the key influencing factors behind the psychological diffusions. And at the end, to recommend the service marketers about the appropriate marketing implication from academic perspective.

In light of the research aims and objectives, we designed the research involving questionnaire based interviewing. Since this is a firsthand research and involves respondents to directly record their opinion, interview method found to be the most suitable one. In order to carry the research we used random sampling through Google map search and recommendation from selected respondent. Our initial screening returned us 48 respondents from Italy and neighboring countries of the EU. We have contacted them for the research participation-ship and explained the methods. Most of these interviews were carried through phone and email. The questionnaire

was designed with 25 questions relevant to the research questions. They involved both nominal and ordinal responses. These were close ended allowing respondents only to either put tick mark on their feedback. We have also used ranking order responses. Based on language preference, willingness for participation and communication access; we tried all the initially screened sample population. However, while returned filled-in questionnaires were reviewed we could only accept 36 responses.

Our literature review revealed that B2B buying process and decision support stream either for product or service is influenced by humanly preferences, prioritization and considerations. The buying process occasionally differs in terms of the sources to engage with but ultimately the goal remains same, to benefit the company, to comply with long term goal and to benefit the consumer by attaining competitive capabilities leverage. However, the buying behavior and its subsequent output for oil and gas industry on B2B context is much different. If trust is built such enterprises usually stay loyal with their supplier. They undertake little efforts in alternating the supplier. This is particularly the case for products and services that enterprises consume regularly. Secondly when the product or service is a frequent requirement and the pricing and quality factors continue to fluctuate, the oil and gas industry put effort in identifying such sources which will lead to long term relationships development. For one of purchasing decisions, involving large capital, the enterprises remain speculative. At this point they carry extensive assessment, prediction, negotiation prior engagement. So, the unique modelling of the consumption as well as the usage of the product or service and its implicating effect to business is also another dimension that marketers need to understand.

After reviewing the contemporary literature we including the research design and relevant methodological descriptions. Here we needed to validate our selection of analytical tools based

on the data type returned from the interview questions. This is was a sensitive part of our research since the effectiveness of the entire research was depended on it. Our questionnaire was designed to deal with nominal, categorical and ordinal data. Nominal data are those which usually have a yes / no choice for the respondents to answer. The categorical data are more representative of demographic details. However we did not include these categorical data for the analysis as we believe it would be irrelevant. We rather used them for tracking purposes. The ordinal data were based on ranking selection. For ranking we used ranking categorization as well as likert rating. As we used number of independent variables to identify and compare the underlying factors of the studied research questions, we had to use the ranking categorization of the data. Furthermore the questions included agreement, disagreement rating based on likert for which we required ordinal analysis by default. We focused on putting the attention to multiple areas of the studied research topic which included functional, operational, individual, industrial and international perspectives. Doing so helped us to understand the cause behind the psychological diffusion.

For data analysis we used various tools including percentage weight distribution, descriptive statistics, correlation, P value, t-test, z-test and regression analysis. In conducting our review we found that the psychological diffusion is related to number of factors. So it was essential to select couple of data analysis techniques. Few would be signifying the variants as influential factors while others will be informing about the relationship linearity. We also carried descriptive statistics analysis to exhibit the data quality, their standard deviation. Wherever we compared the feedback of the respondents between online and offline service buying provisions we carried t-test and z –test because for normal distribution we can only use it. Another reason behind using the t-test is to test the differences between two groups and the significance of the difference.

Similar to t-test purposes, we used the z-test to compare the two samples mean. In both the cases we had larger sample size. Though many statistician differentiate both tools on the basis of known and unknown standard error, we used them both to validate the results from each tools analysis. We have used MS Excel's Advanced Data Pack 1 for the statistical analysis and for mathematical analysis and depiction of graph we have used only MS Excel 2013 version. Besides we used WolframAlpha and SOCSCISTATISTICS tools and Vassarstats from the web. This we did to cross check our analysis results. Thus, the results section included both tabular presentation as well as the graphical ones. Furthermore, we have also included the comprehensive details for the statistical analysis so that the data validity and relevance can be understood easily. However we must note here that limitations with time, budget and challenges with communication had affected the research work though highest ethical integrity was applied.

The research results from the analysis revealed numbers of important findings. Ideally the comparison was done between online and offline marketing perspectives for remote and on-site service providing provisions. As per the feedback from the respondents, few purchasers have considered the remote service buying provision using internet as a solution for their business. they have developed a preference for offline medium to buy B2B services. To decide remote service buying top management plays the key role for online while for offline it the top management besides large stakeholders who usually influence the decision making. Most of these purchasers understand that remote service buying provision can work for their information technology and business intelligence needs, followed by supply chain and machine performance. However, in both online and offline cases, respondents put highest importance on flexibility of financing. When pushed for a situation of marketer implicated buying situation through promotional communication, consultation and other types of marketing communication;

respondents ranked white papers, service animation, supplier website and case studies to be effective tool for online. On the contrary for offline they said CAD drawings, email, industry magazine, brochure and B2B communication also works for them. The respondents also said that for online 'OEM' remains as a key consideration while manufacturers representation in offline to influence purchasing decision. Respondents related that OEM representation can directly affect the procurement decision while trade shows and manufacturers representatives also follow the same influence level. Their measure for influence effectiveness mostly considers price and service quality. Next, all the respondents have bought service from Italian companies while a majority of them did the same with European companies. Service buying from non-European companies remained low.

Our next questions in the questionnaire were much direct towards the key research questions. Respondents reported that online remote service buying is not safer in B2B context because there is a necessity of direct dealing with the service providers because service scopes can change based on inspection and assessment and onsite service is more controllable and customizable. Overall there is a sensitivity and confidentiality issue surrounding the reality for the service provider and buyer. As for trusting the B2B remote service from the internet, the respondents said there is uncertainties in a number of areas like payment settlement, service characteristics, performance guarantee, payment method and taxation, costing basis, service availability and delivery model. The respondents also expressed concern for dispute settlement, contracting scopes, jurisdiction for laws to protect businesses, communication issues and data confidentiality. In contrast to the above responses, the respondents also opined that they prefer self-servicing model without having to wait for the other party to deal the situation. They want to customize scheduling capabilities and access to service pool inventory. The respondents also

signified that same day service delivery, buying from OEM and service availability across multiple channels and platforms are very important for their service buying process visibility for monitoring and evaluation needs. When delivery is fast, the service buying system is easy to use and price is competitively consistent; these respondents develop preference to act loyal service consumer. Considering difficulties in implementation, management resistance for the change, lack of staff skills and related reasons, remote service buying remained challenging to them. They concluded that the likeliness to buy remote services is limited due to the gross lacking of trust on the service provider, the service itself as well as the market system, tools and mechanisms and rules. As long the marketers do not educate their prospects, build a customized framework for the prospects, create opportunities for the prospects and allow the prospects to talk their mind, train up the marketing forces, put up the service for extensive demonstration, carry repeated awareness building; it would be difficult to gain success in the particular case. When the marketer will take care of these issues, it will help their prospects to develop further understanding, knowledge and desire to act per marketers call. The said psychological diffusion is equivalent of lack of trust. The lack of trust comes from fear and fear comes from lack of knowledge, only.

The concerns expressed and identified by the respondents are factual and practical. Human trusts them or on that aspect what they know from experience. In order to make human give the unknown a try or the new a taste, it is essential that he or she gets empowered with the necessary knowledge. He or she needs to have the necessary skills developed. And more importantly, there needs to be a mechanism for the person to realize that if anything goes wrong, there are other functional bodies or measures that can take care of it. B2B oil and gas sectors purchasers of service are no different from them. They too need to know the remote service in detail, how to

use it and what if things go wrong who would be there to take care of their concerns. Everyone require a security, belongingness and a ground to exercise the right. Current state of the remote service shows that there are informal developments. There are willing customer to act per marketers expectation but the market itself have structural, procedural, governance and rule of law issues. The marketers need to see the bigger picture. They need to include the market system, its uniqueness in gaining customer confidence by making them secured and protected. The industry therefore needs to work from top to bottom – the service offering as well as the market system. The market and the industry itself should embody measures that are convincing enough for the customers to realize that the entire system is trusting the offering of remote service using internet for the B2B oil and gas industry. They look for visible, credible, measurable and definable evidence that the service is not a hype not a fad but a real solution to the problem that the industry and other relevant parties uniformly has to offer.

Now given the results what the marketers should do to change the situation is very important for our research purpose as the research aimed at exploring the marketing implications. So, to recommend the marketing professionals and practitioners, there need to be the development of the entire marketing system which will address all the issues and concerns that were shared throughout the research findings. It includes taxation, double taxation, payment system, governing law, regulative body to oversee and legal jurisdiction. If any issue arise then it must be arbitrated. Both sides of the parties, the buyer and the service provider should remain protected. There needs to be independent monitoring system to oversee such transactions. Besides, the marketer needs to develop confidence of the B2B purchasers. They can do it when they develop the market through distributing knowledge and necessary skills related to their service offerings. For this, marketers need to make the first step. The customers are interested but their interest is

overtaken by fear and distrust of the entirety of the current paradigm of the remote service buying provision for oil and gas industry. Marketers need to plan, strategize such marketing interventions that help the B2B purchasers to stay confident with their decision.

Based on the above summary discussion on the entire research process, findings and subsequent discussion we have to reiterate our conclusion from the thesis paper itself. Here it goes as "prior concluding the paper it can be said that the thesis remained comprehensive in its scope with a challenge of finding qualifying samples to predetermined selection criteria. We have overcome the challenge and adopted means of communication that are ordinarily practiced in such scale of researches. We have also used various literary sources from online and offline. The entire research is the highest reflection of ethical standards. All works are credited, appropriately referenced and cited in texts. The statistical analysis primarily involved Likert scales ordinal analysis which limited scope for using advanced use of statistical tools. However, where appropriate we have included Pearson correlation coefficient, P value, mean, and weighted average distribution and linear trends. Thus, it can be said that the research carried fully complied with the research plan that the research question suggested. Still we would like to recommend further research on the subject. It is our utmost belief that the research carried here is of highest standard. And finally, at the end this can be said that in comparing the psychological diffusions in buying remote access based services for the B2B oil and gas sector using internet on international perspective; development of trust and confidence, limitations with marketing and operational scope, organizational mandate remain key decision making perspective. As long these B2B purchasers cannot find reasons to trust, to become confident on the service itself, service buying mechanism, the service provider; commercialization of B2B remote services using internet from international contexts would be a hard reality. So, marketers should be

working hard to gain that trust to make their industrial customers confident on them by providing service with the necessary personalization and control interventions at the purchasers' discretion. The market need to be developed further by educating the purchasers more and more on international remote service provision. The market itself needs to offer mechanisms and interventions to all the uncertainties that primarily dominated the psychology of B2B purchasers and their mindset. Therefore, remote service providers aspiring to benefit from technological advancements, also need to concentrate on innovating new market system, its institutionalization, mechanisms and interventions for their customers to gain their trusts not only on the service and the provider; but also on the entire market system; beside developing new services for B2B oil and gas industry!"

<div align="center">Thank you!</div>

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