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THE INTERNATIONALIZATION PROCESSES OF CLOUD SERVICE PROVIDERS IN FINLAND

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ABSTRACT

This study focuses on the internationalization processes of the Finnish cloud service providers, in both pre- and post-phases. As this new kind of service model is likely to have a disrupting impact on the existing theoretical models, this study aims to observe to what extent it reshapes these models and what kind of new possibilities it offers for companies when it comes to their internationalization.

The study consists of a theoretical and empirical part. The first theoretical part examines the current state of the international services and what kind of new features cloud computing adds to this setting. In the second part processes and theories relating to the internationalization are presented from various perspectives to offer an extensive foundation on the existing research, on which the theoretical framework is built on. This framework is then compared against the empirical part to find out which of these traditional theories also apply today in the era of cloud computing and which do not. Qualitative research methods were chosen for this study, and ten Finnish cloud service providers were interviewed to collect data for further analysis.

Based on the interviews and the data analysis the increasing role of cloud computing was identified. Many of its elements are not yet fully utilized, mainly stemming from its young nature, but it is likely to cause more rapid internationalization processes in the future for various kind of companies. Currently the challenges for service providers to expand more quickly internationally rise from the customers' side, as many are still concerned about the legal and security issues and do not fully understand the concept. However, attitudes are likely to change in the near future as both the offerings and the legal aspects become clearer. The triggers for Finnish cloud service providers to internationalize are also increasing, as the competition within the home market is becoming fiercer. Also, Finland offers a favorable environment for cloud computing from the customers' point of view, which is likely to impact positively on service providers' desire to target global customers.

KEYWORDS: Cloud computing, service providers, internationalization

1. INTRODUCTION

Already in the late 20th century the internationalization processes of services was recognized as a highly growing phenomenon, which was mainly enabled through the rapid globalization of the economic activities (Ekeledo & Sivakumar 1998: 274). In 2010, already 70 percent of the world's total output consisted of services (World Bank 2013), thus witnessing its significant role in the global business. However, the research focusing on international services is surprisingly scarce when compared to the manufacturing sector. This has also been addressed among other researchers (Clark & Rajaratnam 1999; Davis 2004: 51; Grönroos 1999; Lovelock 1999; Knight 1999; Samiee 1999).

Even though exportation of services is not a new innovation, this research area has become highly interesting due to the continuous development of information and communication technology (ICT). The introduction of worldwide Web has enabled services to be exported across the borders without a physical appearance, thus creating a new kind of business, e-services. E-services have also enabled developing countries to participate to the race through so-called leapfrogging phenomenon, and created highly information- and knowledge-based competitors like India for the developed countries. (Javalgi, Martin & Todd: 2004: 561.) In addition, the rapid development of the e-services and also ICT in general has also let a new kind of business model to arise: cloud computing.

Cloud computing is at the moment one of the hottest topics in the field of information technology (IT) (Greenberg 2009: 3), and it has also generated a lot of discussion. As the majority is seeing cloud computing as a new revolutionary business concept, some are rather skeptical of its ways of creating value in addition to the existing technologies. For example, the CEO of Oracle, Larry Elison, stated in 2009: "All the cloud is, is computers in a network. Our industry is so bizarre. I mean, they just change a term and they think they've invented technology". On the other hand, the CEO of Salesforce.com, Mark Benioff, sees cloud computing as a technology enabling companies to cut costs radically and react faster to the market changes. (Kepes 2011: 2.)

Financial analysis indicates that cloud computing is far from being only a hype. In 2011, the European market for cloud professional services was almost 2,1 billion dollars. Within

one year the market was forecasted to grow by 40%, and to reach almost 8 billion dollars in 2016, with an over 30% annual growth rate. (Ahorlu 2012: 1.) Another forecast by Forrester regarding cloud computing's global development is that from the year 2012 (61€ billion) cloud would reach 241 billion dollars by 2020 (Dignan 2011). A distinction from the previous years is the migration from public cloud to the private cloud, increasing its share by 19 percent. (Ahorlu 2012: 1.)

The benefits of the cloud computing has also clearly been identified in the management sector. In a research conducted by CIO Research (2008), 173 IT and business leaders were surveyed, revealing that 58 percent of the respondents stated that "cloud computing will cause a radical shift in IT" and 47 percent said that they were using or researching it already. (McLaughlin 2008.) Also, another survey conducted by IBM, where business and technology leaders were asked about their organization's cloud adaptation, 90% of the respondents predicted that their company would implement cloud within the organization by the year 2015, with 41% of them expecting this implementation to be substantial. (Berman, Kesterson-Townes, Marshall & Srivathsa 2012: 2).

Today, many companies still have their own datacenters which they need to maintain even though that would not be their main expertise, resulting in a high level of inefficiency. Cloud computing offers a solution where computing facilities can be delivered from the service provider facilities to the customer as a pay-per-use service. Naturally, switching to this kind of new business model requires several adaptations within the organizations and a thorough analysis of its benefits, risks and effects, but in many cases it can result in cost savings and more flexible corporate solutions. (Khajeh-Hosseini, Sommerville & Sriram 2010: 2.) What is especially needed among the IT personnel is to create a broader mindset in addition to the new set of skills. As cloud computing fades the borders between the IT and other departments, more business driven understanding is needed besides the technical expertise. (Kepes 2011: 15.)

What also needs to be highlighted is cloud computing's vast benefits for almost every business area, not only for the IT sector. In the education and research sector cloud computing enables low cost simulations, fast access to global resources and highly interactive collaborative learning resources. In manufacturing, better supply chain coordination, improved manufacturing processes, rapid prototyping and collaborative

design can be achieved. Lastly, in healthcare, platforms for health and insurance services can be created, computer power utilized for drug discovery and real-time health monitoring services developed. (World Economic Forum 2010: 6.) Thus, it needs to be understood that cloud computing is a highly important technology, creating new possibilities in many business sectors and enabling new disruptive business models to be developed.

1.1. Definition of cloud computing

As the storage and processing technologies have developed rapidly alongside the Internet during the recent years, this has made the computing resources to become cheaper, more powerful and more ubiquitously available than ever. Also, this technological trend has enabled a new computing model, called cloud computing, to arise. The term cloud computing itself is not that new. The earliest references to it are from the 1990's, but after Google's CEO Eric Schmidt used it in 2006, the term started to stabilize amongst the crowds. (Zhang, Cheng & Boutaba 2010: 7.) Nowadays, there are numerous amounts of definitions for cloud computing, of which three are presented here. The first one is by Mell and Grance (2011), representing the U.S. National Institute of Standards and Technology (NIST):

"Cloud computing is a model for enabling ubiquitous, convenient, ondemand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction. This cloud model is composed of five essential characteristics, three service models, and four deployment models." (Mell & Grance 2011: 2.)

As this definition describes the cloud computing with a rather technical manner, also simpler definitions exist. Etro (2011) describes cloud computing more from the perspective of a service provider:

"Cloud computing is an Internet-based technology through which information is stored in servers and provided as a service and on-demand to clients" (Etro 2011: 2).

Lastly, Plummer (2012) presents cloud computing from the end-customer's perspective, illustrating its core benefit for them.

"Cloud computing means someone else runs your computers and software while you use what they deliver and focus on delivering value" (Plummer 2012: 5).

As these three definitions describe cloud computing from quite different aspects, they also provide a comprehensive picture of its functions in the rapidly evolving field of information technology. In this paper, the cloud computing is discussed mainly from the service provider's point of view, focusing on their internationalization process. However, also the effects of cloud computing to the end-user are briefly described to provide more comprehensive picture of the business overall.

Cloud can be divided into four deployment models depending on its use. These are private cloud, community cloud, hybrid cloud and public cloud. In the case of private cloud, the cloud infrastructure is used exclusively by different business units in a single organization. The cloud can be either operated by the organization itself, rented from a third party or a combination of these two and it may exist on- or off-premises. (Mell & Grance 2011: 3.) The benefits are that it offers the highest degree of control over performance, reliability and security, but however, can be criticized of its high costs and being similar to the traditional proprietary server farms (Zhang et al. 2010: 10). In community cloud the difference compared to a private cloud is that the cloud is used exclusively within a specific community sharing same mutual concerns. (Mell & Grance 2011: 3.)

In the public cloud the cloud infrastructure is located at the premises of the cloud provided where it may offer services to the general public (Mell & Grance 2011: 3). For the customers this offers an opportunity where no capital investments on infrastructure are needed, thus minimizing the risk and the entry costs. However, in this deployment model the control over data, network and security is much lower. Lastly, hybrid cloud is a combination of a private and a public cloud, endeavoring to capture the pros from both of these alternatives. The main benefit is its flexibility, but to be able to create a well-functioning hybrid cloud, there is a need to allocate a lot of time at the designing phase (Zhang et al. 2010: 10.)

As all of the deployment models have their pros and cons, choosing the most suitable one requires the customer to analyze their current business scenario (Zhang et al. 2010: 10). For example, starting small might be a great idea to avoid risks, that is, using public cloud at the beginning, and after receiving experience and understanding of the concept the public or hybrid might offer better benefits. All in all, as there is not a universally best entry mode for a company, there is not either a superior, identical cloud strategy for every company.

In addition to the deployment models, cloud computing can also be observed from three service models, which are software-as-a-service (SaaS), platform-as-a-service (Paas) and infrastructure-as-a-service (Iaas). SaaS is a common cloud service, utilized by almost every company, and is used to run applications, for example email, on a cloud infrastructure. The end user can access from multiple client devices to this service over the Internet. The service is usually highly standardized and managed by the service provider. PaaS model gives the end user a possibility to configure and modify own applications, however, without the possibility to manage and control the cloud infrastructure. IaaS provides the end user the possibility to provision processing, storage, networks and other computing resources in an infrastructure that is owned by the service provider. (Mell & Grance 2010: 2-3.)

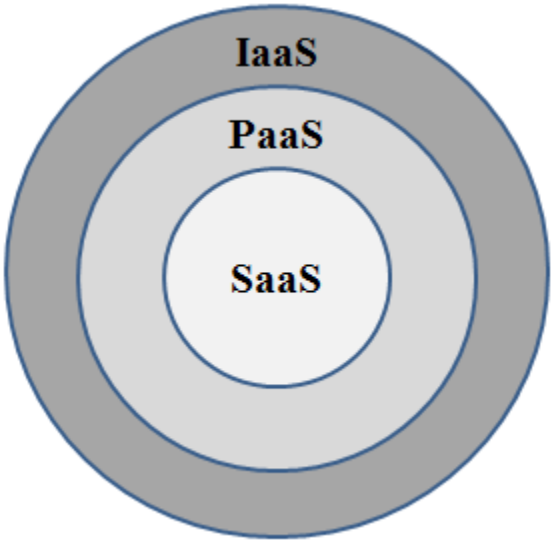


Figure 1. Three service models of cloud computing

All these service models are forecasted to grow substantially within the forthcoming years. The global growth for public cloud is forecasted to jump from 13 billion dollars to over 105 billion for SaaS between the years 2010-2017. In PaaS the forecasted growth is from 0,3

billion to almost 12 billion and in IaaS from one to 5,45 billion. As SaaS creates the largest market, the proportional growth for both PaaS and IaaS needs to be recognized, as between 2012 and 2017 their market shares are likely to increase by over 470 percent and 85 percent, respectively. (Ried, Kisker, Matzke, Bartels & Lisserman 2011.)

To be able to get a better understanding of cloud computing in a larger scale and to identify the factors that have enabled its development, in the chapter two the concept of international services is presented, right after the purpose and the structure of the study are observed.

1.2. Consumerization and the Nexus of Forces

IT-related opportunities are growing nowadays as the IT-related spending diffuses across organizations. This has also generated a growth in the scenarios for the use of technology within the business. Gartner, the world's leading IT research and advisory company, has created a four force model, Nexus of Forces, referring to this phenomenon, which arises from the consumerization of the IT. Based on their research, as the technology is nowadays found more easily approachable among the business consumers, this increases the amount of innovations in a company-wide level when the level of usage is increased. (Plummer & Sribar 2013: 3-4.)

The Nexus of Forces consist of four forces, which are social, mobile, cloud and information. Firstly, social encourages companies to engage in new, more extreme collaborative scenarios. Mobile means that the company's data and services are easily accessed regardless of the location. Cloud, as already described in this study, enables this new kind of solution's delivery. Lastly, the continuously increasing amount of information restructures the ways both analytics and data management is needed. In a nutshell, the Nexus of Forces summarizes in what kind of reformation process the whole IT is at the moment and what are the key focus areas where the changes are taking place. (Plummer & Sribar 2013: 4.)

Even though Gartner's Nexus of Forces is mainly designed for individuals within the organization, in this paper the model is expanded also to describe companies in their

business network. As developed technology and cloud have offered new ways to operate in their network for individuals, so has it also to companies. Nowadays, being able to rent services from the cloud providers and focus on their time on their core competencies, companies have started to have same kind of qualities than consumers, just within a larger scale. Services are bought on need basis and wanted to be used immediately. Thus, it can be said that consumerization has happened on business-to-business level also, and that the Nexus of Forces effects on larger scale. Started by Amazon, service provider companies have started to create service entities with a simpler structure, "a consumerised retail model", to react to the market changes (Venters & Whitley 2012: 192).

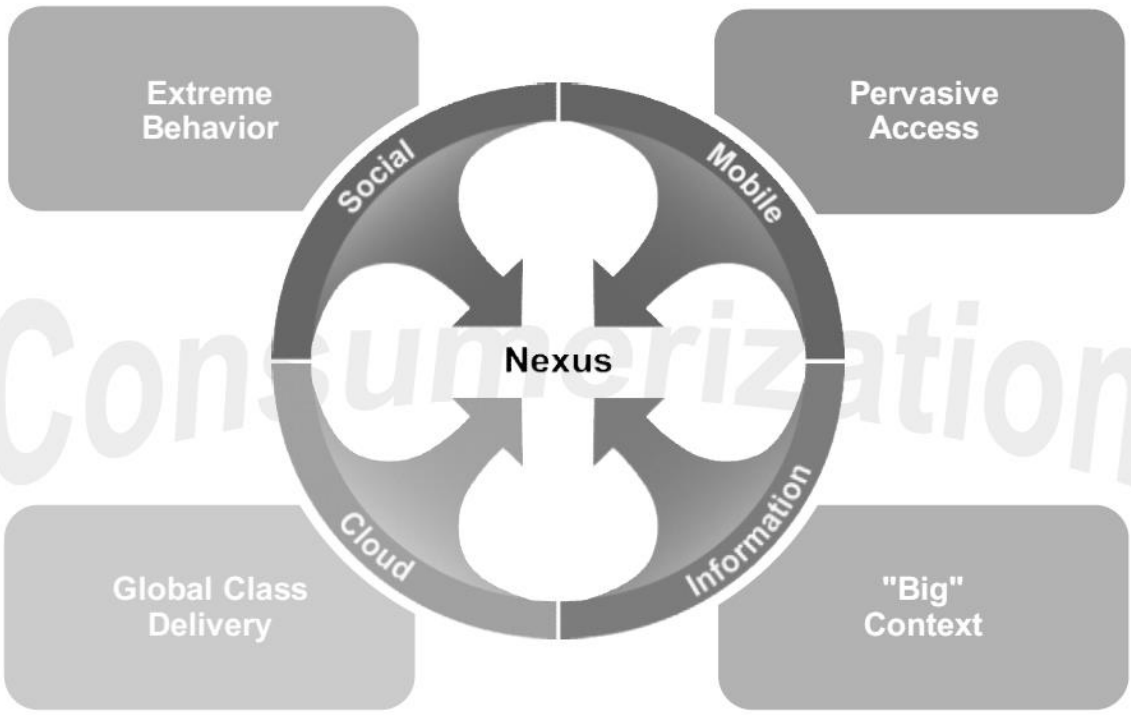


Figure 2. Nexus of Forces (Plummer & Sribar 2013: 3).

1.3. The purpose and the structure of the study

As presented above, cloud computing is reforming business in many areas now and in the future. However, being such a new phenomenon, there exists only a little amount of research, especially from the business studies point of view. The existing research has already identified the benefits of the cloud in the sense of for example cost-reduction and scalability which will be presented also in this paper in the chapter 3, but the research has

been focused mainly either on the largest cloud service providers, like Amazon, Microsoft and Google or the end-customers. Even though these few large players are dominating the market at the moment, new companies are entering to this market all the time at an increasing speed. Many traditional resellers are transforming their businesses, becoming cloud service providers and starting to challenge the globally largest players locally.

In a market as small as Finland, the cloud service provider companies have only a limited amount of potential customers, and as the competition gets fiercer while the amount of service providers increase, the next logical step would be to enter international markets to maintain growth. At the moment there is no existing research focusing on cloud service provider's internationalization processes. As these service providers are not forced to enter these new markets physically due to the nature of cloud which enables them to offer the services across borders as intangible services, the existing service internationalization theories need also to be developed. Naturally, there is also a possibility that these companies could enter markets by wholly owned ventures (acquisition or greenfield investment), by utilizing the acquired company's datacenters or building their own from the scratch. As this kind of entry mode is also taken into consideration, the probability for coming across such cases is less likely, as the majority of the companies researched in this paper are small and medium sized enterprises (SMEs), which are lacking the capital for this kind of investments.

In the Finnish cloud service provider market there exists already companies that have gone international. Also, there are many rapidly growing companies, for which the next logical step would be expanding to new markets to maintain their growth. However, there might also be steps before that, which we are trying to identify in this paper to be able to create a realistic picture of the current state of the Finnish cloud service providers, identify triggers to internationalize and also barriers relating to it. Thus, the research questions of this paper are:

What are the main trigger and barrier creating factors for cloud service providers in Finland to internationalize?

What is the role of their business partners in the pre- and post-internationalization phase?

The paper is divided into theoretical and empirical parts. In the next chapter the current state of the international services is observed and what have been the factors developing it to the way it is nowadays. In the chapter three cloud computing is presented as a disrupting business model and its effects are studied from the both service providers and their customers' perspectives. Chapter four illustrates the existing internationalization theories, the motives encouraging companies towards it and the possible barrier creating factors. Then, the research methodology is presented, followed by the analysis of the empirical part. The empirical part is based on cloud service provider companies top level managers' interviews. In the last chapter conclusions are presented, in addition with the limitations of the study and recommendations for the future research.

2. THE NEW ERA OF INTERNATIONAL SERVICES

2.1. Cloud computing changing the classic service definitions

As already highlighted, service companies vital role in the global economy is undeniable (Sepulveda 2010: 3). Services export growth has increased around 170 percent in the past decade, showing that it has a significant influence also in the international sector (UNCTAD 2013). As e-services and cloud computing brings new qualities for services and their internationalization processes, service classifications should be closely looked and a more updated view created.

When comparing services and goods, a few classical definitions of their differences exist. Firstly, services are intangible, that is, they cannot be touched, seen or physically transported. Secondly, services are inseparable from their users. Thus, local presence is needed to be able to satisfy local customer demands. However, when different cultures meet this might cause challenges that can reflect on the service experience. Thirdly, services are perishable and cannot be inventoried. This might cause unbalance between the supply and demand in the case of either rapidly increased or decreased demand, causing shortage or oversupply. Lastly, services are heterogeneous, that is, the output is likely to vary. (Javalgi & Martin 2007: 392; Zeithaml, Parasuraman & Berry 1985: 33-34.)

Interestingly, cloud computing proves two of these classifications outdated. Cloud computing enables service to be separated from the user, offering ubiquitous network access with the use of Internet. Services can be provided from the service provider's home country datacenter to the host country's end customer without a physical presence, offering a geo-distribution quality (Zhang et al. 2010: 11). Thus, the role of culture can be considered less than in the normal internationalization when it comes to the deliverance process, as the customer can in many cases use a self-service portal and choose the services for its needs. This so called shared resource pooling enables service providers to maximize their resource utilization and also save costs (Zhang et al. 2010: 11). Secondly, services provided through cloud are not heterogeneous as services in the past. Naturally, customer designed solutions can be done, but the basic service products, such as storage services, is highly standardized. With cloud computing economies of scale can be achieved (Venters &

Whitley 2012: 190), which is a revolutionary change for service providers, as this has not been possible in the past. Thus, this makes the service market even more attractive and highlights the research needed in this field of study.

Whether the services are produced and consumed simultaneously, they can be divided into hard and soft services. With hard services the production and consumption can be done separately in different times, even in different countries. Thus, this element makes hard services exportable. These services include for example packaged software and banking services. When the decoupling of the production and the consumption is not possible, we are dealing with soft services. As the producer and the consumer need to be in a close physical proximity, this means that soft services cannot be exported. This also limits the possible entry modes to licensing, franchising, contractual entry or foreign direct investment. An example of a soft service could be healthcare or management consulting. (Erramilli 1990: 57, Ekeledo & Sivakumar 1998: 278.)

Based on the illustrations of hard and soft service qualities, cloud computing can be categorized as a hard service. It is an easily exportable service as no physical appearance is needed plus the consumption and production is not happened simultaneously. Another interesting characteristic related to the computer services, thus also cloud computing, is that unlike many other services, these are often standardized. (Erramilli 1990: 58.) Even though one quality associated to services is customization, with standardization cloud service providers are able to obtain economies of scale and at least in theory real-time service delivery.

2.2. Enabling factors for the service internationalization

In order to the internationalization of services to become possible, there has been a consequence of a few vital factors. Firstly, the role of information technology cannot be overly emphasized, as it has made the whole e-services concept possible, enabling companies to deliver their services globally to their customers regardless of their physical location. Secondly, the establishments of the World Trade Organization (WTO) and regional trading blocks (EU and NAFTA) have increased the amount of opportunities for services and goods. Lastly, due to the high competitiveness level in the manufacturing

sectors, companies have shifted their focus on service differentiation. These factors are discussed further next. (Javalgi & Martin 2007: 392.)

2.2.1. General Agreement of Trade in Services

In 1994 the General Agreement of Trade in Services (GATS) was signed by 110 nations, covering global trade in the service sector. It can be compared to the General Agreement on Tariffs and Trade (GATT), which applies to merchandise, however, leaving the countries with much higher authority of which services they want to exempt. The objectives of the GATS is to create a credible and reliable system of international trade rules, to ensure that all the participants are treated fairly and equally, to stimulate economic activity through guaranteed policy bindings and to promote trade and development through progressive liberalization. (World Trade Organization 1994; Ojasalo 2010: 105-106.)

As originally many domestic services have become internationally mobile during the last few decades, mainly due to the rapid development of the information technology which we will discuss soon, another GATS's principle is to let these services to diffuse internationally and possibly open the long-term monopolies in multiple countries. Also, the aim is to enable comparative advantage, that is, "a party to produce a particular service at a lower opportunity cost and higher efficiency than another party". As services are often linked to goods and other services, by international trade they can generate benefits beyond the service sectors, thus reducing barriers in other sectors. (Ojasalo 2010: 105-106.)

The liberalization of the service sector is also likely to impact on many other aspects. Firstly, if no trade blocks exist, delivering the service will be more cost-efficient as the fastest delivering routes can be utilized. Another significant cost saving opportunity can be found from the fixed costs perspective, by being able to switch from two service providers sharing the same task to a single one, as the output of the two providers can be unified. Besides, positive externalities relating to the internationalization of the services are economies of distance, economies of scale, border friction, time, regulatory costs and red tape costs. (Deardorff 2001.)

2.2.2. Free trade blocks

As the world is becoming more and more borderless with the free trade agreements, this has also had a strong positive effect on the growth of services. Regional economic blocks, for example North American Free Trade Agreement (NAFTA) and European Union (EU), are creating larger markets with more opportunities for goods and services. (Javalgi & White 2002: 565.) The results have been significant: the U.S trade with Canada and Mexico tripled during the first 15 years after NAFTA was published (Kim 2010: 35). Also EU's Service Directive, published in 2006, has a significant effect on cloud computing. This directive aims at improving the regulatory environment for the service providers supplying international services inside the EU without physically entering to the host country (Ojasalo 2010: 106). In addition of removing obstacles, the aim is to "abolish discriminatory requirements based on the recipient's nationality or place of residence" (EU Service Directive 2006: 44).

2.2.3. Information technology

The essential role of information technology (IT) to service internationalization cannot be overly emphasized, especially in the case of the cloud computing. Advanced IT enables companies and individuals to move data and services internationally easily, fast and economically (Javalgi & White 2002), regardless of where the user or the information is physically located (Javalgi & Martin 2007: 392). When it comes to the export processes of e-services, the difference for a traditional service is that it can be delivered across borders in a digital form (Javalgi, Martin & Todd 2004). In fact, the renewed processes in the IT sector increases the amount of digitalization of information and also the shift from data processing to information handling technologies, thus creating a transition phase to the more developed, knowledge technology era (Miozzo & Soete 2001: 163).

When it comes to exporting the e-services, it is highly dependent on high performance hardware, software and communication delivering for example voice and data, regardless of the user's or information's location (Ojasalo 2010: 107). However, as a consequence of a highly developed information and communication technology, fast and efficient international delivery has become possible with e-services. This originated from several reasons: Firstly, through e-services traditional products that have traditionally been

delivered as a good can now be distributed globally in a digital form. Also, services which also needed physical presence in the past can be delivered electronically to B2B customers and consumers, for example education, computer and information services. Lastly, as barriers for international trade are getting lower due to the establishment of for example the World Trade Organization, this enables more opportunities for both developed and developing countries to innovate new procedures to exploit the technology. (Javalgi, Martin & Todd 2004: 561.)

2.3. International services

International services can be divided into four modes, based on the locations and the persons involved. In cross-border supply the supplier and the customer are located in different territories, meaning that an international service flow is involved. Clearly, cloud computing is included in this mode. Consumption abroad mode describes a situation where the service consumer moves into the service provider's territory to obtain the service (for example tourist or patient). Commercial presence means that the service provider is located within the consumer's territory where the service is also delivered (for example subsidiary of an insurance company). Lastly, presence of natural persons, differs from the commercial presence only in the sense that instead of a company, the service provider is a natural person (for example accountant). As this paper focuses on services crossing the national boarders from the cloud computing service provider's perspective, only cross-border supply is covered. (World Trade Organization 2013; Ojasalo 2010: 109.)

Another classification for international services is made by Clark and Rajaratnam, dividing services into four categories. Contact-based services are the ones where people cross national borders to engage in transactions (consultancy), as in vehicle-based services the service is transported through wires or Internet. Asset-based services are "commercial service ideas tied to foreign direct investment cross borders to establish an operating platform" (banks). Lastly, object-based services are services embedded in physical objects (computer software). (Clark & Rajaratnam 1999: 299.) Based on this classification, cloud computing could be categorized as a combination of a vehicle-based and an object-based service, as it requires physical objects (hardware) to be utilized, and it is delivered through Internet from the supplier to the end-customer.

Last comparison between international services is whether they are people-processing, possession-processing or information-based services. In people-processing services the consumers themselves are involved to the production process, and often consume the service simultaneously (transportation). Possession-processing services consist of tangible actions to physical objects, where the object itself is included to the process but the customer is not (warehousing). Information-based services are built around data, and delivered often from one datacenter to multiple locations. Neither customer involvement nor physical presence is usually required. (Lovelock & Yip 1996: 68.) Clearly, cloud computing belongs to this category.

When comparing the internationalization process between service and manufacturing companies, two key differences can be identified. Firstly, service companies tend to reap performance benefits faster than the companies at the manufacturing sector. Secondly, knowledge-based service companies, including cloud service providers, are achieving the internationalization benefits earlier than capital-intensive service companies. Thus, this should reflect as lower entry barriers for knowledge-based service companies to internationalize than for manufacturing companies. Also, exporting can be suggested as an entry mode, enabling faster and easier way to achieve the benefits from the expanded market. (Love & Ganotakis 2013: 4.)

3. CLOUD COMPUTING AS A BUSINESS MODEL

3.1. Defining the concept of a business model

Even though business model is a constantly appearing term in the business literature, it is lacking a clear definition. (Al-Debei & Avison 2010: 360; Chesbrough & Rosenbloom 2002; Sako 2012: 24) Often it is used at referring to a company's way of creating and delivering value to its customers. Also, it should describe the manner how the company "captures value and converts it into profit." Thus, it can be concluded that business model is strongly connected to the strategy and also the way a company creates its competitive advantage. (Sako 2012: 24.)

Business models are also strongly linked to innovation. Firstly, as new technologies arise, so do also new business models. These business models are ways of transforming technical success into commercial success. Also, business models themselves are connected to innovations, as they may create new possibilities for companies to enter a market, satisfying a consumer's unmet needs in a new way. (Sako 2012: 24.) New adaptive business models are needed in today's ICT-business, where it is essential to be able to accommodate the ongoing changes. As these changes happen in a dynamic environment, it creates both challenges and requirements for companies to manage and harmonize the whole package. As shown in the figure 3, business model has an essential role at intersecting the business strategy and the business processes, creating a unique strategic, operational and technological mix. (Al-Debei & Avison 2010: 369-371.)

Cloud computing can be seen as creating new business models from both the customer's and service provider's point of view. As cloud computing lowers the entry barriers for the market, this enables companies to enter without huge upfront investment costs when no own datacenters are needed. In addition to this cost perspective, cloud also changes service providers' business models, as they need to create new kinds of revenue alternatives in a renewed customer field. Without a careful consideration and adaption to all the changes that cloud computing does to the existing business model, companies are likely to struggle in a longer time frame. (Sako 2012: 23.) Next, cloud computing's effects on the existing

business will be observed from both the customer's and service provider's view more closely.

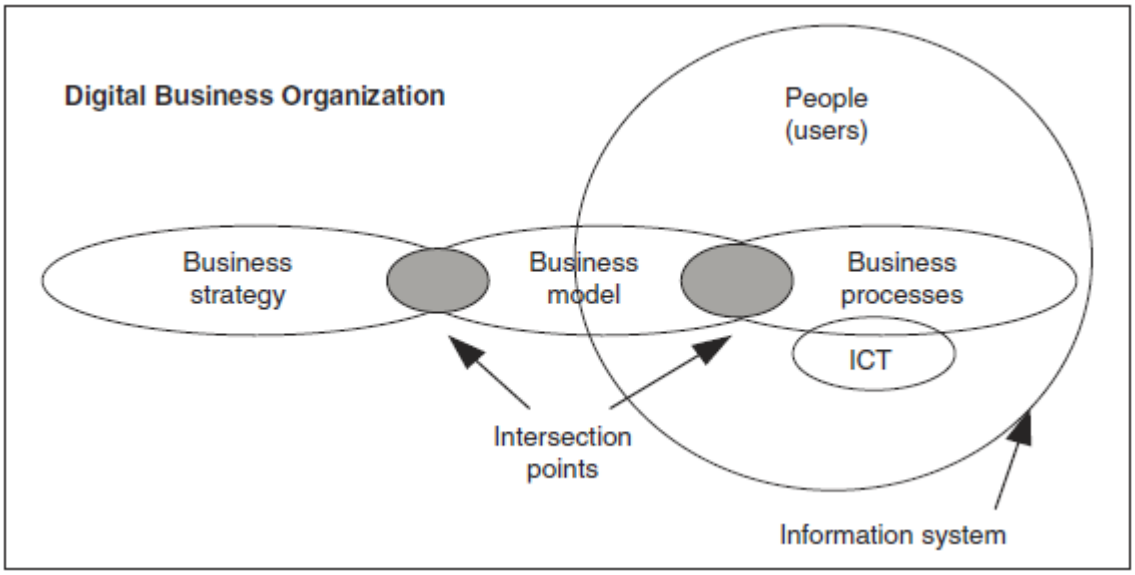


Figure 3. Business model intersection points (Al-Debei & Avison 2010: 370).

3.2. Cloud computing - the end customer perspective

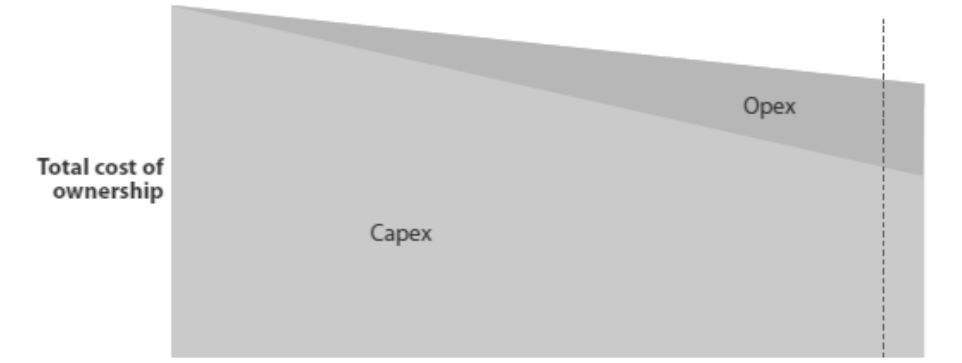
Through cloud computing, end-user companies can obtain both elasticity and cost-efficiency. Being able to rent the computing power from the service provider on demand (hardware, software or storage) enables companies to avoid idle use of servers. As the server utilization normally ranges from 5% to 20% when owning hardware in the own datacenter, caused by companies necessity to prepare for peak workloads, renting these services only when needed enables companies to achieve significant savings. Also, as keeping a datacenter up-to-date requires a lot of planning and investments without a guarantee that it still would satisfy all the needs, renting the right services on demand eliminates planning far ahead for provisioning to the end-user companies. As service providers offer a large pool of resources with easy access from their datacenters, cloud computing enables the end-user to rapidly react to the changes in the demand and satisfy it with a right service by renting it from a service provider. (Etro 2011: 3; Armbrust et al. 2010: 51, 53; Zhang et al. 2010: 7.)

Rent-as-you-go procedure not only makes companies faster to react to the market changes, but it also increases the amount of players in the market. As entering the market requires much lower investment costs due to low up-front investments when no own datacenters are needed, this is likely to increase the amount of companies in the market. (Etro 2011: 9; Armbrust et al. 2010: 51; Zhang et al: 2010: 51.) As cloud service providers handle the complex data processing operations, not to mention hardware and software configurations, through cloud computing also countries with less skilled employees can benefit from its services (Venters & Whitley 2012: 182). Another factor broadening the customer range is called masked complexity, enabling companies to expand their product and service sophistication, while the cloud service provider can take care of the maintenance processes with its specialized know-how (Berman et al. 2012: 2).

Also, shifting from fixed capital expenditure (CAPEX) into operative costs (OPEX), that is, to a financial model where the costs are based on the demand instead of a fixed investment costs enables more SMEs to enter the market. Cloud computing reduces and also moves the business risk and maintenance costs from the end user to the service provider, thus enabling the company to use the money normally allocated for this to other business purposes. (Etro 2011: 9; Armbrust et al. 2010: 51; Zhang et al 2010: 7-8.) Another benefit the cloud is offering is the speed, enabling companies the ability to change quickly from one solution to another which could not have been done in the past (Moyse 2012: 10).

Lastly, cloud computing also has macroeconomic effects. Increased amount of companies in the market creates new jobs and job reallocation in the ICT sector, thus leading into increased direct and indirect tax revenues. Furthermore, network effects between businesses, increased productivity and innovation are likely to arise. Lastly, positive externalities can also be obtained from the energy saving point of view, as reduction of the total carbon emissions are expected as the services move up to the cloud. (Etro 2011: 3, 6.)

3.3. Cloud computing – the service provider perspective



	Solution provider	MSP 1.0	MSP 1.1
Monitoring	None	Remote monitoring/management	Cloud
Support	Reactive	Proactive management	Preventative management
Staffing	Internal IT	Selectively outsourced	Holistically outsourced
Pricing	Break/fix	Recurring	Recurring
Deployment	On-premises	On-/off-premises	Cloud
Hosting	Fully on-site	Colocation/multitenant/hosted	Fully hosted
Managed services relationship	Service consulting	Trusted advisor	Virtual CIO

Figure 4. The three evolutionary stages of managed services (Silber 2012).

Forrester Research (2012) has divided managed services into three phases, starting from the past, moving to the present and then to future. As the study was conducted in the year 2012, the managed services are now in the future phase instead of the present, but to avoid complication we will use the terms present and future as they were in the original study. In the past (pre-1997) small and medium sized businesses (SMBs) employed their own internal IT systems which were bought with a break-fix support and maintenance contracts from the resellers. This required significant capital investments for the IT systems, and also high operating expenses for labor, as for example all the maintenance work was executed on-site, by the reseller. (Silber 2012.)

In the present phase (1997-2011) the first form of managed service providers (MSPs) was presented, as a result of new disruptive technology, software called remote management and monitoring (RMM), which enabled many SMBs to outsource some of their IT functions to these new kinds of solution providers, creating a new business model called

managed services. As this model enabled service providers to offer one-to-many IT services to their customers, this appeared in enhanced efficiency, costs savings and elastic scalability from their side, and in a significant OPEX savings from their customers' point of view. (Silber 2012.)

The future phase (2012 onward) includes also the cloud perspective, and besides IT infrastructure also broader supply is offered, including for example storage and application hosting. In this phase the IT systems are centralized, virtualized and highly scalable, enabling the end user to use the service it wants only when needed. This offers transformation from CAPEX to OPEX which has been discussed earlier, enabling companies thus reduce their fixed costs and service providers to offer pay-per-use pricing. (Silber 2012.)

As in the cloud computing's customer perspective section was described how getting rid of the own datacenters with a low service utilization and renting these from the service provider's datacenters enables companies to focus on their core competencies, this has also a direct effect from the service provider's point of view. As an increasing amount of companies are starting to utilize cloud service providers, this also increases their service utilization. Cloud service providers usually are able to run their service farms at 75 to 90 percent utilization, providing to the customer in addition to the cost efficiencies also higher resilience and performance. (Moyse 2012: 7.) As cloud computing enables service providers to locate their datacenters geographically to most suitable locations, that is, with cheap electricity and cold environment, this allows them to save money in both electricity and cooling costs, having also an environmentally friendly impact (Venters & Whitley 2012: 181). In larger datacenters these expense savings are significantly high, as they are estimated to create 53% of the costs. (Zhang et al. 2010: 53).

Supporting the argument that cloud is far from being only hype, a recent report by International Data Corporation (IDC) shows that the worldwide revenue from IT cloud services exceeded 16 billion dollars in 2009. And the market analyses predict this rise to continue, reaching over 55 billion dollars in 2014. Representing a 27% annual growth rate, cloud computing has achieved over five times greater growth rate when compared to the traditional IT products. Being able to offer cost savings for companies, this has also

encouraged companies to deepen their knowledge in cloud computing during the current economic downturn. (Hasty, Schechtman & Killaly 2012: 51.)

3.4. Cloud computing as a democratization force

Enabled by cloud computing small and medium sized enterprises are nowadays able to enter a market which traditionally has involved high entry barriers due to investment costs. Hence, cloud computing can be described to have a democratization force. As "democracy means empowering the weak by providing equal access to resources", this term has found its place among the researchers when describing this phenomenon. (Sultan 2013: 813.) The most extreme visions see cloud computing turning ourselves into one-person IT teams, with an access to all kinds of services we need in a preferred time (Waggener 2009).

As the force of democratization is seen especially among the SMEs, also already previously mentioned less developed countries can benefit from this effect. For example, in many African countries the IT infrastructure is inadequate, as is also their ability to keep up in a constantly upgrading hardware and software requirements. Thus, cloud computing enables these countries to benefit from its features, as long as the people within the countries have computers and access to internet. For example, Microsoft rolled out 250 000 computers to the teachers in Ethiopia to help them to store the academic records in the cloud and also to securely transfer data. (Sultan 2013: 813.)

3.4.1. Long-tail concept

The benefits of the cloud computing to the both end customer and service provider can be described though the long-tail concept. This concept can be illustrated with a plain example where traditional and modern book stores are compared. The owner of the traditional book store knows that every day new books are published, and there are customers who would like to buy them. However, due to the limited amount of space and resources, the owner will most likely only sell the bestseller books in his store, thus responding to the highest demand. Nevertheless, the owner realizes that there would be a demand also for the other kinds of books, representing the long tail in the figure 3, but when making rational calculations, he ends up dividing the demand into the addressable and non-addressable

market, and sells the bestseller books to get the best investment value for the products (figure 4). (Chong & Carraro 2006; Katzan & Dowling 2010: 28-29.)

However, the modern book store does not have the same kind of problem, as it only sells e-books through cloud where the inventory costs do not apply. Thus, it can offer both the bestseller books and the ones with less demand to satisfy much larger segment of customers. In fact, Amazon.com has perceived that the majority of its book sales come from outside of the bestseller, that is, from the books the traditional book store will not even offer for its customers. (Chong & Carraro 2006.)

As this kind of dilemma has also existed in the past in the ICT sector, as also in many others businesses where vendors face a complex line-of-business (LOB), cloud computing has enabled companies to approach customers that have never been cost-efficient before. (Chong & Carraro 2006.) Also, figures 4 and 5 represent a so-called availability model from the service provider customers' perspective. As by renting the services on-demand basis from the service provider, the companies can utilize the multi-tenancy technology and the economies of scale. (Katzan & Dowling 2010: 32.) So, once again, the end customer benefits from the services it can use without up-front infrastructure costs, and the service provider benefits from the increased amount of its datacenter's usage (Katzan & Dowling 2010: 29). In addition, as the service provider offers a "turnkey" solution, saving the end customer the trouble of owning, managing and understanding the underlying resources, this makes it much easier for new business without IT skills to leverage the cloud directly (IDC 2012: 10). In this new phase, the regular vendors have been divided into service provider companies owning the datacenters, and their customers, which are renting services on-demand basis. This arrangement should appear to the end customer as a better functioning service, as both of the vendors can focus on their core capabilities.

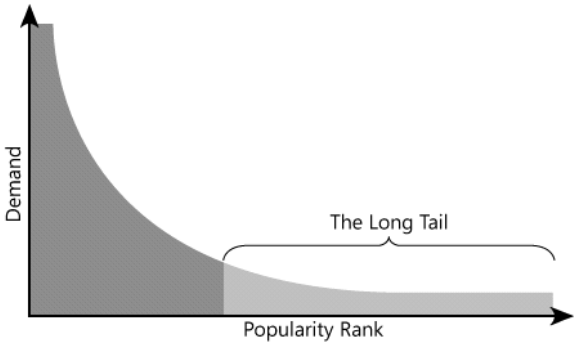


Figure 5. The long-tail (Chong & Carraro 2006)

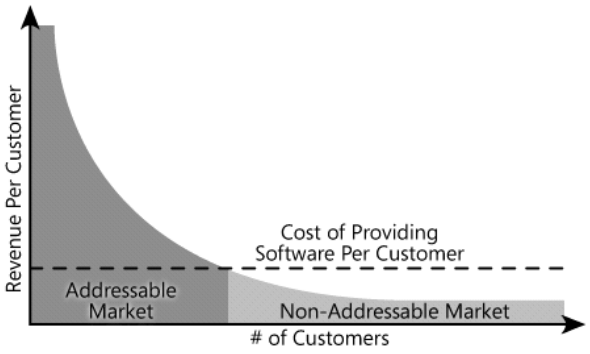


Figure 6. Market curve for LOB software vendors (Chong & Carraro 2006).

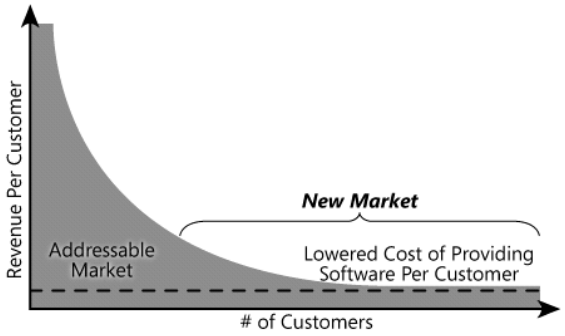


Figure 7. New market opened by lower cost of cloud computing (Chong & Carraro 2006).

3.5. Cloud computing as a disrupting business model

A classification for a new market disruption is that when a new innovation enables customers to acquire a product or service that was prevented from them before due to cost or complexity issues (Christensen, Anthony & Roth 2004). These kinds of innovations have happened for example in the computer and mobile phone businesses, which are nowadays available for almost everyone. When observing cloud computing and its effect on the ICT market, it clearly has the elements of being a disruptive innovation. As described above, it is likely to destabilize the traditional IT market and also create business opportunities that did not exist in the past. (Sultan 2013: 812.)

As cloud computing has offered new ways of utilizing the existing capabilities for example with the scalability and pay-per-use invoicing, it has also given companies the ability to

disrupt the existing business models and thus reach competitive advantage. In one research conducted by IBM, companies have been divided into three different business archetypes based on how they are use cloud to enhance the company and industry value chains and also customer value propositions (see figure 8). These three archetypes are optimizers, innovators and disruptors, and depending on which archetype the company represents depends on multiple factors, for example the amount of risk they are willing to take and their competitive landscape. (Berman, Kesterson-Townes, Marshall & Srivathska 2012: 1-2.)

Optimizers use cloud mainly to improve their current product and services, and also to enhance their current and potential customer's experience. When it comes to the value chain, the main focus is at improving efficiency without risking too much with the new business model. However, this risk avoidance strategy tends also to appear in lower revenues and market shares when compared to innovators and disruptors. Innovators use cloud to create new revenue streams, by extending their customer value proposition and transforming their current value chain by entering into a new industry space or adjacent market, thus reaching competitive advantage by combining previously unrelated elements. Lastly, disruptors try to invent a new market and thus reach the first mover advantage with their new cloud solution. As this has the highest risks, it also has the highest revenues in the case of a successful innovation. (Bernman et al. 2012: 7-8, 9, 11.)

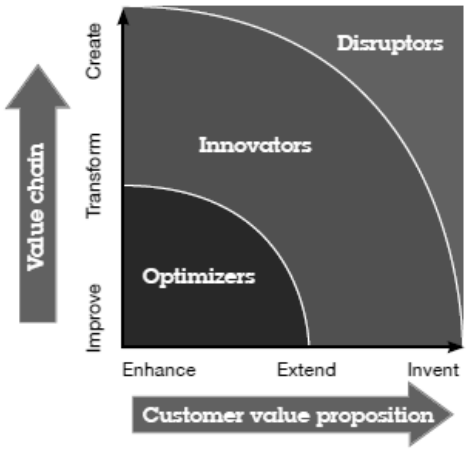


Figure 8. Cloud enablement framework (Bernman et al. 2012: 8).

As none of these three archetypes is better than the other and the company needs to evaluate carefully when choosing the right cloud strategy depending on its goal, it is interesting to observe whether cloud service providers in Finland with an urge to internationalize show similar kind of qualities towards one of these archetypes.

4. INTERNATIONALIZATION PROCESSES AND THEORIES

When it comes to the theories of internationalization, the amount of research is vast. When narrowing the topic to the service internationalization, the amount of research decreases significantly, but research and theories exist. However, cloud computing has enabled new qualities to services as previously presented, enabling digital delivery with homogeneous product that is separable from the user also including economies of scale and this changes the service concept so radically that new theoretical models are most likely to be needed. As this study tries to find out what kind of transformation this new kind of business model is likely to have on the existing theories rather than building a new theoretical framework, the internationalization process is observed through multiple aspects to be able to make an analysis which of them are connected to cloud service providers' internationalization process. Even though existing models cannot be fully utilized, by combining different features from them a more current option can be built to describe the internationalization process of cloud service providers.

4.1. Internationalization processes

Before getting into the internationalization theories, processes connected to them need to be presented. As researchers such as Kotler and Mintzberg have found that the internationalization process should be a strategic decision and include considerable amount of planning, others see it more as an ad hoc procedure. Whether we can make any suggestions relating to the cloud computing service providers internationalization processes, a few different models are presented and then compared to the results of this study. Four models are observed more closely here, which are Johanson and Vahlne's model, Root's model, Miller's ten steps and Way Station model, all describing the internationalization process with different steps. (Yip, Biscarri & Monti 2000: 11.)

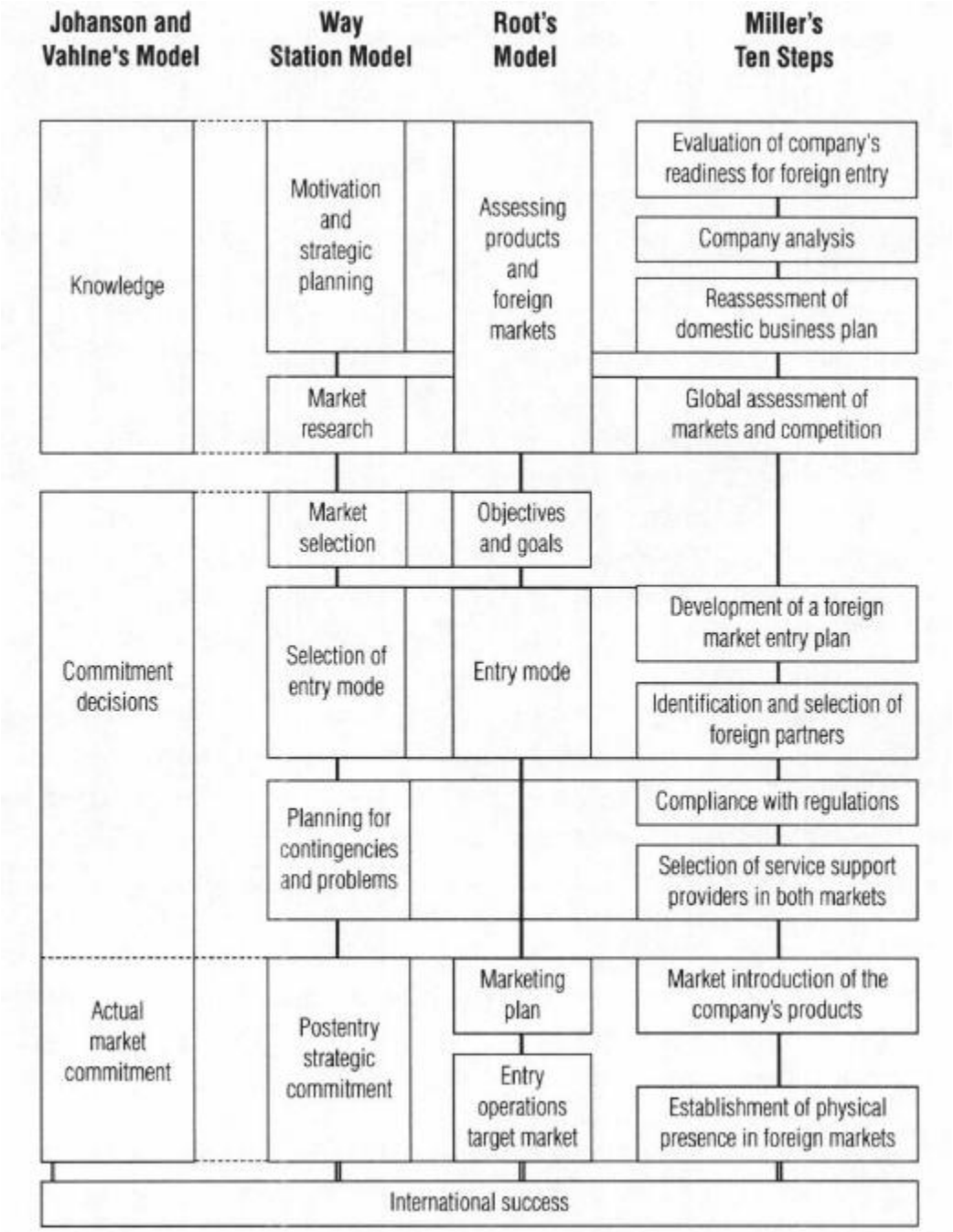


Figure 9. A summary of the internationalization processes through various theories (Yip, Biscarri & Monti 2000: 13).

In their model, Johanson and Vahlne present that the internationalization process develops through small steps that the company takes, thus not destabilizing the balance between the company and the environment too much. Through the increased amount of knowledge of the market the company will get more committed to it, creating a cycle where the

knowledge and commitment are linked to each other. This model can be seen to have elements from both the deliberate and the ad hoc approaches. However, it has been criticized for giving too generalized picture of the internationalization process and thus not giving managers concrete directions of the implementation process. (Yip et al. 2000: 11-12.) In addition, it has been seen not taking into consideration the complexity of the realities regarding to the internationalization of the SMEs, especially in the high-technology sector, where the changes in the environment take a much more rapid form (Crick & Spence 2005: 169).

In Root's model the primary stress is on the entry activities, as the starting point already is that the company has decided to enter a new, foreign market. This model offers more concrete steps for managers to implement compared to the Johanson and Vahlne's model but on the other hand does not include the motivational aspects that are likely to be vital before and during the internationalization process. (Yip et al. 2000: 12-13.)

The model created by Miller has ten steps for managers to implement during the internationalization process. In the beginning it highlights the importance to evaluate whether the company is even ready to expand to new markets, identify its strengths and also analyze the level of competition. Even though the ten tips are good for every manager to consider, in these steps choosing the entry mode strategy is not included, which is essential before starting to build customer contacts in the new market. (Yip et al 2000: 12-13.)

The Way Station Model is sort of a combination of the three already presented models, but also including phases that were overlooked in them. Starting with the first station, motivation and strategic planning, the company needs to find motivational factors to maintain its desire to enter new markets. For example, increased competitive advantage, following the competitor or trying to capture economies of scale and scope are such factors. However, to be able to achieve these successfully, strategy is an essential role. Thus, it can be concluded that these two factors are strongly connected to each other. Through continuous strategic analysis the company can also perceive when is the most strategic time to go international to benefit the company the most. (Yip et al. 2000: 14.)

The next step is to do market research to find the most suitable market for the company to enter. By increasing the amount of knowledge of different alternatives, the market with the best fit can be chosen. After a careful consideration the company can move to the third station, which is the market selection. Country's characteristics, the company's competencies and the synergistic effects need to be considered, as for every company these are likely to differ, resulting in different kind of optimal target countries. Thus, the market research needs to be aligned with the company's strategic picture, so that the most vital factors from the company perspective are taken into consideration and the entry decision is made based on this analysis. (Yip et al. 2000: 15.)

Next, the most suitable entry mode will be chosen. In general, as there is no entry mode superior to the other, through careful analysis the company can choose the most suitable one for the certain occasion. The fifth station recommends companies to prepare for contingencies and problems beforehand with a comprehensive market evaluation to be able to either prevent these from occurring or solve them with the minimum damage. Lastly, a post-entry strategy is essential to maintain the constant growth. Both commitment and high level of involvement are needed, finally leading to the international success. (Yip et al. 2000: 15-16.)

Whether the internationalization processes for the cloud service providers follow any of these patterns will be further analyzed in the chapter six. Before this, the internationalization process will be analyzed from the both external and internal perspectives, identifying possible triggers and barrier creating factors for entry. As also choosing between the entry modes is an essential decision, different alternatives are presented.

4.2. Entry modes

Before entering a foreign market, a company needs to decide their entry mode. The five frequent options are exporting, licensing, franchising, international joint venture and wholly owned venture. (Mellahi, Frynas & Finlay 2005: 191.) Whether service companies are delivering hard or soft services this will have an effect on their entry mode options as previously described (Erramilli 1990: 57). However, cloud computing being a hard service,

service providers in this business can in theory choose any of these options when entering a new market, but in practice, based on the nature of the service only direct export and wholly owned ventures are further analyzed in this paper.

4.2.1. Direct export

Direct exporting occurs when a company, being either a manufacturer or an exporter, sells directly to a customer located in a foreign market area. Normally either a distributor or an agent is used as an intermediary to decrease the amount of risk. Distributors are independent merchants that are importing a company's product or service independently. An agent's role is quite the same, but as distributors take title to the goods and finance the inventories, they are exposed to a significantly higher level of risk than agents. Also, as agents are often paid by commission, distributors make their profit between the buying and selling prices. (Hollensen 2011: 341-342.)

However, e-services have caused a transformation in the direct exporting structure, which has traditionally involved intermediaries in a critical role (Sharma, Taiani & Sariteke 2006: 30). Many studies already in the late 1990s when the e-services started to increase, noticed that this had a negative effect on the intermediaries' roles in the business. With the help of internet, companies were able to identify new customers (Hamill & Gregory 1997), promote their products and conduct sales independently, thus reducing the importance of intermediaries (Bennett 1997). Also, both e-services and cloud computing make a change in a traditional business channel; that is, making it some cases even obsolete. As these services can be sold directly to the customer, the amount of intermediaries has also diminished. (Moyse 2012.)

4.2.2. Wholly owned ventures

Wholly owned ventures may be executed either through acquisition or greenfield investment, where the former one means buying an existing company and the latter one an option where the operations are built from scratch. Naturally, acquisition offers a faster way for a company to enter a new market, as the company can utilize the existing customer base, channels and employees' market knowledge. Acquisition is recommended especially in cases where the company has either limited international management expertise or when

the market is saturated. (Hollensen 2011: 393-394.) However, acquisitions have also risks. For example, a collision of two different organization or national cultures may result in unwanted ways and reflect negatively to the performance. In addition, the managers of the acquired company may object to the acquiring company and cause tension. (Mellahi, Frynas & Finlay 2005: 198.)

While building an entirely new subsidiary takes time through greenfield investment, it also gives the company a fresh start in a new location. Decision behind choosing this entry mode may also stem from the lack of appropriate acquisition targets. (Hollensen 2011: 394.) However, greenfield investment has also risks. Firstly, in case it does not start creating profit, the company loses a vast amount of capital as this mode of entry is the most expensive choice. Thus building strong relationships with the local customers, suppliers and government is vital, as without these the investment is likely to fail. Also, other risks are not to find the right local people with the appropriate market knowledge or if the foreign company is rejected by the local stakeholders. (Mellahi et al. 2005: 196.)

In the case on cloud computing, both acquisition and greenfield investments may be required even though no mandatory physical presence is needed due to the nature of the service. As markets are likely to have significant differences for example in the area of legislation, acquiring a company is likely to bring local knowledge to the provider which can help them to avoid the most typical minefields. Secondly, the most critical potential customers may demand that they want their data to be stored in their home country or that they want their provider to have a local office in their country to show long-time commitment. These might force the service provider to open an office to that country if the financial potential is significant enough. These and other barrier creating and trigger factors will be discussed more in depth later in this chapter.

4.2.3. eBay's entry mode strategy

When observing entry strategies through a case example from the digital information goods industry, we can analyze eBay to get a real life example and also a comparison target for the entry strategy decision. The company was founded in 1995, started entering new markets with a rapid pace in 1999, entering first the UK, followed by Australia and Germany within the same year. In 2000 they continued their market expansion, entering

Canada, Japan and France, followed my Korea in 2001 and then Taiwan and China in 2002. When reflecting these countries through Johanson and Vahlne's assumption of psychic distance, it can be noticed that the internationalization process started from the low psychic distance countries but its role rapidly diminished. Thus, it can be assumed that in the case of digital service providers, the internationalization process is driven by other factors than the ones that are presented in the stage model theory. (Mahnke & Venzin 2003: 131)

4.3. Born globals

One definition for a born global company is "companies who have reached a share of foreign sales of at least 25 per cent within a time frame of two to three years after their establishment" (Kudina, Yip & Barkema 2008: 39). Even though not many of the interviewed companies in this research's sample are likely to fulfill this requirement, they might still represent the ideology behind the born global company with a great desire to go global. Thus, 11 typical statements describing born globals are listed below and will be reflected to the answers of the interviewees in the chapter six to find out if these are also adaptable to cloud service providers. When compared the characteristics of cloud computing to the statements in the table 1, we could assume that majority of them would also be relevant for cloud service providers, but the later analysis will reveal which of these are supported and which are not.

1.The market in your home country is not large enough to support the scale at which you need to operate.
2. Most of your potential customers are foreign, multinational companies.
3.Many of your potential customers have overseas operations where they will use your products or services.
4. You operate in a knowledge-intensive or high-technology sector.
5. Having the most technically advanced offering in the world is key to your competitive advantage.
6. Your product or service category faces new trade barriers.
7. Your product or service has high value relative to its transportation and other logistics costs.
8. Customer need and tastes are fairly standard across your potential country-markets.
9. Your product or service has significant first mover advantages or network effects.
10. Your major competitors have already internationalized or will do so soon.
11. You have key managers who are experiences in international business.

Table 1. Statements encouraging for a rapid globalization. (Kudina, Yip & Barkema 2008: 43)

4.4. Pull and push factors for internationalization

An extensive amount of studies have examined the motives for companies to internationalize (for example Pavord & Bogart 1975; Jeannet & Hennessey 1992; Segal-Horn 1993; Bell 1995) and these motives can be divided into pull and push factors. These factors are shown in the figure 10.

As many of these pull and push factors are obvious triggers for companies to internationalize, for example opportunistic behavior, that is, recognizing potential business opportunities in the foreign markets, some factors are interesting to investigate further when it comes to the cloud service providers.

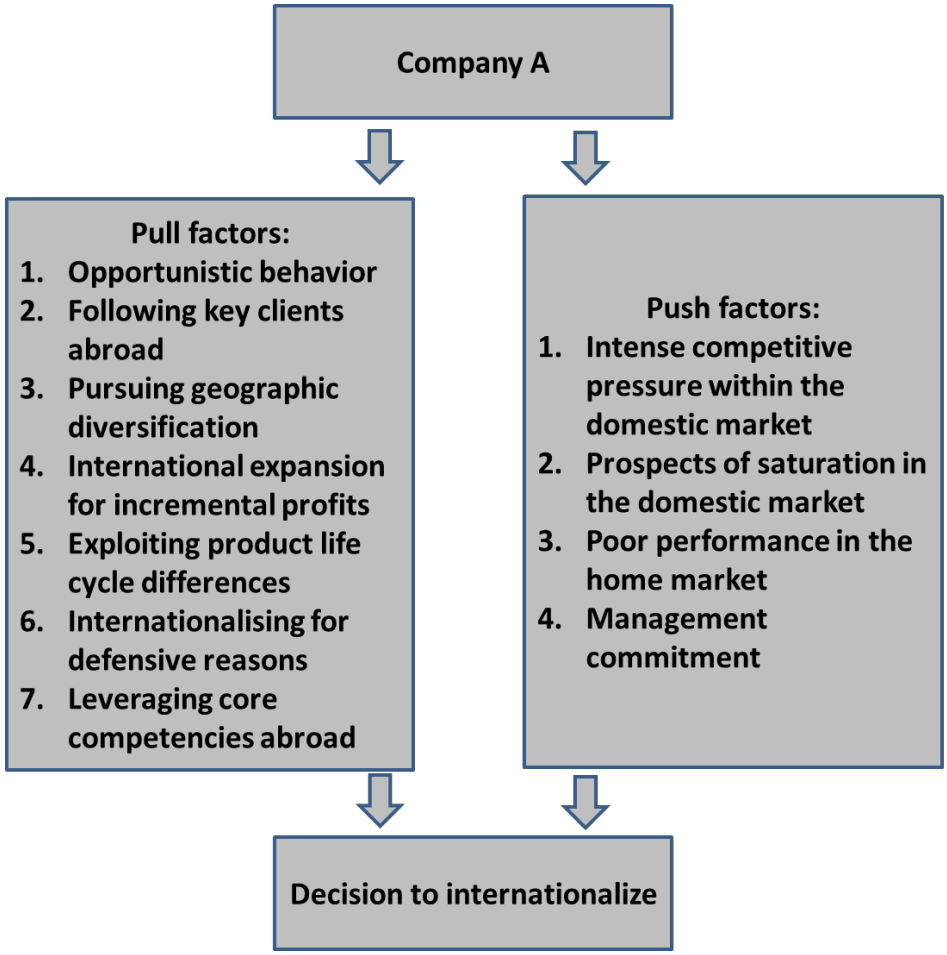


Figure 10. Pull and push factors for internationalization. (adapted from Patterson et al. 1999: 355)

Prior research suggests that the internationalization decision is often considered more risky for service firms when compared to the manufacturers. This originates from the fact that especially in many traditional services the producer and the production facilities cannot be separated from each other, thus requiring the company to have a full control of its resources. As a comparison, manufacturing companies can choose less risky options, starting for example with indirect export and gradually move into more direct channels. (Grönroos 1999: 291.)

Another interesting aspect relating to the internationalization decision is the amount of the planning that is used before the decision to enter new markets. Surprisingly, it has been found in the previous research that for many service companies the decision to internationalize is rather unsystematic and ad hoc than a carefully planned one. (O'Farrell, Wood & Zheng 1998.) This seems to be the case especially amongst the small and medium sized companies: "Many SMEs will not make explicit market selection decisions: by restricting their consideration to the merits of a proposed transaction or a particular country, they effectively conflate the two decisions into one" (O'Farrell & Wood 1994: 253).

4.5. Barriers to entry

Barriers to entry are obstacles that a company might face when entering a new foreign market. The higher the amount of the potential barriers exists, the less is likely to be the amount of competitors in the market. As a consequence, markets that have high entry barriers are often offering higher profit opportunities for companies, as often new competitors force other companies to cut their prices and spend more money on innovation. Barriers to entry can be divided into six different types, which are capital requirements, economies of scale, product differentiation, access to distribution channels, government policy and expected retaliation. (Mellahi et al. 2005: 71, 74.)

Entering into a new market naturally requires resources to be invested, for example marketing so that the company gets recognized within the market among the potential partners and customers. The amount of the capital requirements varies strongly between the industries, and even within an industry. However, the general rule is that "the higher the

capital requirements in an industry, the less likely is the entry of new competitors". (Mellahi et al. 2005: 74.)

When it comes to the economies of scale, internationalization will increase the chances for a company to achieve them, as it can to some extent duplicate the operations that is has done in one market to the new ones, thus increasing efficiency. On the other hand, the next barrier, product differentiation or in this case service differentiation, might make it harder for a new entrant to capture the economies of scale and altogether to enter a new market, if the new market is highly differentiated. The more differentiation exists or the more clustered the market is around a few players, the higher are the entry barriers. (Mellahi et al. 2005: 75.)

As new markets require often new partners, finding the most beneficial ones is likely to be a significant challenge for a newcomer (Mellahi et al. 2005: 75-76). As Mellahi et al. (2005) present this issue as access to the distribution channel, to be more relevant to the cloud service sector we are focusing on the partner channel instead, because these are more likely to be in a central role when considering service providers' entry success.

The fifth type of barrier to entry, government policy, has found to be a critical actor when entering a new market. For example, governments can raise entry barriers indirectly by creating standards that might be difficult for a newcomer to fulfill. However, the creation of World Trade Organization (WTO) and acts increasing the liberalization of global business has decreased the amount of direct government interventions. (Mellahi et al. 2005: 76.) On the other hand, as cloud computing is a relatively new business model, an interesting aspect that will be analyzed later on is how the governments have adapted to this new kind of business, where in theory the boarders of the countries become less important. As revising the legislation regarding for example the data privacy is likely to take time, this can be one significant barrier creating factors, as if the service providers cannot ensure that the foreign country's government does not misuse the data of their customers.

Lastly, the new entrant might also identify the risk of retaliation from the existing players in the market and this can discourage the entry decision. Acts of retaliation may consist of aggressive price-cutting, raising expenditure on advertising or lobbying the government. (Mellahi et al. 2005: 77.)

When reflecting these barriers to the ones that the cloud service providers are likely to face in their entry phase, majority of them probably exist. Capital investments are needed to achieve market recognition within both the customer and the partner level. Also, when the client base increases more capacity is needed in the datacenter which will involve costs. The entry investments are likely to be lower compared to companies with tangible products, where physical capacities such as production plants are needed, but still building a well-functioning business in a new environment consumes a considerable amount of resources.

When it comes to the economies of scale, successful internationalization processes in cloud computing might be relatively easy to duplicate, as the service is somewhat standardized and should need relatively low cultural adaptations based on its nature. However, Finnish companies face a great challenge when starting to compete internationally, as the market has big players and a direct competition against them is likely to result in failure. Thus, finding a market niche or a unique solution is needed.

Finding the right partners is likely to act in a central role towards success. Through efficient co-operation potential clients can be found, partner's network utilized and faster entry implemented. The government policies, especially their regulations regarding cloud computing, is likely to cause problems to some extent when new markets are entered. This issue will be further discussed in this chapter. Whether the risk of retaliation exists as a barrier of entry is also observed through interviews.

4.6. Network approach

In the network approach it is suggested that in the market that is to a large extent internationalized, also the internationalization processes for the companies in it are likely to happen faster. (Johanson & Mattsson 1998: 474). Also, according to the approach the traditional internationalization theories describe the process in a too structured way, as in reality it appears in a much more complex and dynamic environment, involving the relationships between the parties (Bell 1995: 62). Networks have been perceived to have a strong impact especially on the SMEs internationalization decisions regarding for example market selection. This is also likely to increase the speed of internationalization, when

having existing synergies in the relationships at various stages of the value chain. (Crick & Spence 2005: 171.)

Another factor that is emphasized in the network approach is the relationship between the supplier and the customer. Extensive knowledge about each other is essential when doing business together, and this develops during a long-term relationship. This knowledge consists of both specific business related issues such as price and quality and "each other's resources, organization and development possibilities". Being able to get a comprehensive picture also often involves several people from different parts of the organization and their continuous knowledge transfer between the companies. Building this kind of contacts takes time to establish, but enables efficiency in the partnership if successfully created. (Johanson & Mattsson 1998: 469-470.)

Contrary to the traditional market model where the main decision making criteria is the price, the network approach sees it only as one of the several influencing conditions. In addition to the price, deeper understanding is needed of the opportunities and the parties need to allocate enough time to develop a relationship that is fruitful for both of the parties. Some relationships are more tightly structured than others, but the essential idea is for all parties to make compromises to achieve the most beneficial, mutual end result. (Johanson & Mattsson 1998: 470-473.)

The role of personal networks have also found to impact the internationalization processes. For example, personal relationships from the university times might act in surprisingly large role when choosing a new market to enter, as having a trustworthy local contact is seen in many cases one critical factor for a successful market entry. Naturally, when one already has a contact this also makes the whole internationalization process much more quicker, which can give competitive advantage against competitors. (Kudina, Yip & Barkema 2008: 42-43.) Having also a previously known contact in a potential co-operation partner might also hasten the negotiations as the parties already have a mutual trust, which normally takes time to build between the parties.

4.7. Eclectic theory and international services

Dunning's eclectic theory (1980, 1988, 1990, 1995) is a transaction cost-based theory focusing on transfer, internationalization and firm-specific ownership advantages. As it takes into consideration both the company and the location specific factors to explain the internationalization process, it explains why this particular theory has been chosen to this paper. (Javalgi, Griffith & White 2003: 188.) As there exists no previous studies regarding the internationalization processes of the cloud service providers, at least based on the writer's literature view, it can be considered important that both the internal and the external perspectives are observed to be able to compare their role in the internationalization process. Even though Dunning's eclectic theory was originally intended to explain international investments, it can be extended also to describe a company's internationalization processes. As this theory has been found suitable for both manufacturing and service companies when observing their internationalization processes, this also justifies the decision and also enables a possibility to find out whether its variables are suitable also for cloud service providers. (Javalgi et al. 2003.)

As already mentioned, in this paper both the external and internal factors are observed from several angles that the previous literature has identified. External factors describe variables in which the company has limited or no control (Ekeledo & Sivakumar 1998: 281). These include cultural distance, market attractiveness, uncertainty of the host country environment, legal environment in the host country, competitive situation in the host country and culture of the home country (Morschett, Schramm-Klein & Swoboda 2010: 61). Internal factors focus on variables that the company can control and which it can turn into competitive advantage. Three most often mentioned ones are the company size, its goals and objectives in addition to the managers' history (Ekeledo & Sivakumar 1998: 284; Perks & Hughes 2008: 313-314, 325).

Another research in the area of the business-to-business service companies and their internationalization observed the phenomenon from the internal and external stimuli. The six internal stimuli observed were: specialized knowledge-based nature of services, professionals with international experience, networks of formal and informal relationships, desire to minimize and spread risk, changes in organizational structure and increased management experience. External stimuli were: lack of domestic growth due to a

competitive domestic market, government trade initiatives, host government regulations, client requirements and client following, foreign market size and growth rate and geographic location. (Coviello & Martin 1999: 56.) Majority of these are overlapping with the earlier mentioned factors in this paper, but one new aspect is the government trade initiative as an external stimulus which should also be monitored, as many cloud service companies are relatively young and focused to internationalize quickly without that stable financial base. Thus, financing from the government might actually be a relatively significant trigger to internationalize.

4.7.1 External factors

Cultural distance. The difference between the home and the host country's cultures has proved to be a disputed subject when observing its effect on entry modes. Often the assumption is that the larger the distance, the higher are the costs of entry and the lower the operational benefits. (Tihanyi, Griffith & Russell 2005: 271.) Some researchers have found evidence supporting these assumptions (Gomez-Mejia & Palich 1997; Hennart & Larimo 1998), but, some have not found any solid consensus between these two factors (Brouthers & Brouthers 2001; Evans & Mavondo 2002).

When observing the role of the culture and its effect to the company, three variables can be presented: entry mode choice, international diversification and MNE performance. Firstly, depending on how valuable the company sees the potential market, that is, how much risk it is willing to take at the entry phase, it can choose between various entry modes. These are for example foreign direct investment and exporting, the former representing a high risk and the latter a low risk option. (Tihanyi et al. 2005: 272.)

As expanding to the new markets provides also a possibility to capture a greater amount of resources, many companies are tempted or even at some point forced to penetrate into new, international markets. As these markets are likely to differ from the home market, many companies may initially expand to the markets with cultural similarities. (Tihanyi et al. 2010: 272). Especially, stage theory of internationalization, also known as the Uppsala model, states that companies are likely to enter new markets gradually, starting from the ones where the market knowledge is similar to their home country (Johanson & Vahlne 1977). The lower the psychic distance between the cultures of the countries, the more

attractive is the new market to enter. Whether the psychic distance has a positive (Erramilli & Rao 1993), negative (O'Grady & Lane 1996) or no role (Sharma & Johanson 1987; Macleyton, Smith & Hair 1980; Millington & Bayliss 1990) for service companies, depends highly on the research and the service industry. (Majkgård & Sharma 1998.)

As cloud service providers are not physically forced to enter the foreign country, this is likely to reduce the role of the psychic distance when choosing a foreign market. Whereas building a personal contact and a local proximity is often in an essential role between the customer and the offering in the case of physical goods and services, this does not necessarily apply with the digital goods. As digital good providers, including cloud providers, are less dependent on the location, storing and distribution issues, this is likely to decrease the role of the psychic distance when considering new market entries. However, as these kinds of service providers are highly dependent on advanced telecommunication infrastructure to be able to provide their services, this is likely to have a much greater impact when choosing a new market. (Mahnke & Venzin 2003: 120-121.)

Thirdly, cultural differences have also an effect on an MNE's performance. Whether it is a negative or a positive impact varies between different studies. Some research has found that the higher cultural differences correlate with the lower performance indicators. Also, evidence has been found of this exactly in the case of a market entry, as a consequence of the intra-organizational conflicts and unsatisfactory implementation actions. Increased monitoring and control costs are also causing inefficiency. (Tihanyi et al. 2010: 273.)

However, also positive impacts can be identified. The advantages of the foreign operations can be significant regardless of the cultural differences, offering for example broader customer base or lower manufacturing or labor costs. Also, new business environment may provide innovation benefits or unique resource combinations for the company, thus resulting in an improved overall performance. (Tihanyi et al 2010: 273.)

The role of culture from the cloud service providers' point of view is further researched in the interviews. Many aspects are likely to have an effect on this. Firstly, whether the company enters the market by exporting or wholly owned ventures is likely to have an impact. Also, the cloud service model (SaaS, PaaS, IaaS) and the level of standardization might require the service provider to embed the cultural differences more carefully in the

operations. Naturally, the more different the culture between the home and the host country, the higher level of adaptation is needed due to the country differences, for example in the area bureaucracy and customer relationship management.

Market attractiveness. Naturally, the market attractiveness has a great impact on whether or not a company will enter into a new market. Country with high market attractiveness offers a possibility to improve a company's efficiency with additional capacity, thus luring companies to expand their business. The market growth of a selected market is often one significant factor when deciding the amount of resources the company is willing to commit. (Morschett et al. 2010: 61.)

Before entering to a new market, the company also needs to decide whether to use a partner or not. Especially in the case of a fast entry to a growing market normally cooperation is recommended, as external learning is faster than internal. (Morschett et al 2010: 61.) Even though cloud service providers are not forced to physically enter the market when choosing direct export as their entry mode, the role of a cooperation partner needs to be researched. For example, what kind of help is needed in the host country and vice versa in the home country to enable the most successful market entry and to maintain growth. Both pre and post implementation processes need to be clearly defined so that the service provider can achieve the best results, which also reflect to its business partners with higher revenues.

Uncertainty of the host country environment. When entering to a new market, often cooperative entry mode is suggested to keep the risk under control. As the demand is often volatile at the beginning, the knowledge of the market scarce and the investment costs large, a business partner is a favored option. (Morschett et al. 2010: 63.) The need for a local business partner in the host country is obvious also when considering cloud service providers' market entry. However, whether the traditional global vendors like IBM, HP and Amazon or other players are the ones to do the co-operation with and the importance of their role is in this case unclear and further analyzed in the chapter six.

Legal environment. As normally the service provider is interested in the host countries legal environment and requirements, in cloud computing the situation is different. In case both the service provider and the end customer are from the same country, the legal environment applied is naturally the country's data protection legislation. However, even in this situation

the business agreement needs to clearly state to whom the data belongs to and who can use it (ENISA 2009: 6). This becomes even much more complicated when companies from two different countries with different legal regulations are involved. In many cases legal issues are resolved through contract evaluation between providers and negotiations (ENISA 2009: 6). Problems might also arise when something unexpected happens by accident and the jurisdictions between the countries differ (Khajeh-Hosseini, Sommerville & Sriram 2010: 1). As customer data may be located in multiple locations, thus involving multiple jurisdictions, this might also cause confusion if there is a lack of transparency (ENISA 2009: 45-46).

Another important question without an answer is whether the cloud or a service provider is legally designated to one location, thus obeying that countries laws and regulations, or then in "every location that has datacenter that is part of the cloud" (Jaeger, Lin, Grimes & Simmons 2009). In a nutshell, being such a new business model, cloud computing needs much clearer legal standards. Even though regulations within EU should be standardized, still terms and conditions should be clearly examined from both sides. That being said, regulators are usually in a catch-up mode with policies, governance and law when new advanced technologies are introduced (Yang & Tate 2012: 43). Whether legal complexity has an impact on service providers' decision to internationalize in general and does this affect which countries to enter and which not, will be observed in the analysis part of this paper. Naturally, this does not mean that the end-customer would have the same kind of viewpoint.

Competitive situation. When the competition in a host country is high, it is likely to make the market less profitable and thus reduce its attractiveness. Also, the higher the volatility of the competition, the less likely is the company to commit to the market. (Morschett et al 2010: 64; O'Farrell & Wood 1994: 249.) When it comes to cloud computing, basically the whole globe is the market. Large multinationals are at the moment dominating the majority of the market, but however smaller players are all the time founded and many of them seem to be successful. Having still many issues, for example from the legal point of view, being a local firm or from the neighboring country might actually benefit smaller players, especially within Nordics where cultural and legal differences are rather limited.

Culture of the home country. Lastly, both the companies' national and organizational culture is likely to have an impact on the internationalization process. According to Hofstede (1980), culture's effect can be analyzed from five different dimensions and thus to give a directional picture of the country. Power distance (PDI) deals with the level of individualism (IDV) and hierarchy while individualism dimension shows whether the culture is "I" or "we" oriented. Masculinity/feminine (MAS) indicates culture's competitiveness and success driven attitudes, and uncertainty avoidance (UAI) how people react to unknown situations. The fifth dimension, long term orientation (LTO) describes whether the country is more conventionally short-term oriented or encourages a pragmatic future-oriented perspective. (Hofstede 2013.)

Hofstede's dimension model might be useful when analyzing the internationalization of the cloud service providers from the masculinity/feminine and uncertainty avoidance point of view. For example, when compared to the US where the internationalization percent is much higher among the cloud service providers, as is also the level of masculinity (62 compared to the Finnish 26), there is likely to be a connection between these two. In addition, when adding that the Finns are also higher in the level of uncertainty avoidance compared to the US people (59 versus 46), at least on the paper it seems that cultural background may have an impact when it comes to significant business decisions such as internationalization. This could explain the low level of the current internationalization percent of the Finnish cloud service providers and will be further analyzed in the chapter six.

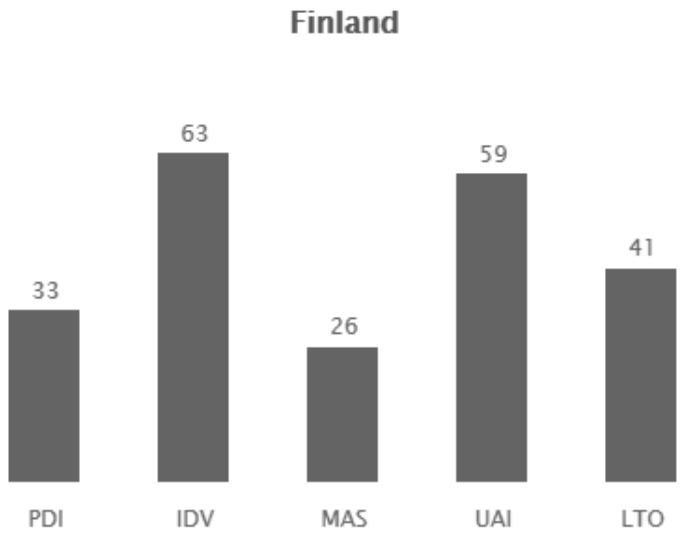


Figure 11. Five dimension model, Finland (Hofstede 2013)

4.7.2. Internal factors

Internal factors are strongly linked to a company's strategy and thus naturally it can control these variables, aiming at creating competitive advantage. There exists a considerable amount of research in this field (Ekeledo & Sivakumar 1998: 284), and the three categories chosen for a further investigation are company size, corporate goals and objectives, managers' history and knowledge in the internationalization processes and the company and the national culture (Ekeledo & Sivakumar 1998: 284; Perks & Hughes 2008: 313-314, 325).

In several studies a company's size has been found to have a prominent role in the company's decision to internationalize (Mellahi et al. 2005: 186; Javalgi et al. 2003: 194; Winsted & Patterson 1998: 296; Cavusgil & Naor 1987). Mainly this is a consequence of the larger company's ability to bear the higher costs and the risks related to the internationalization better and to possess more managerial resources (Mellahi et al 2005: 186).

Goals and objectives of the company determine the motives for internationalization (Ekeledo & Sivakumar 1998: 285). Often one motive alone does not trigger a company to enter new markets, but rather a combination of different factors (Lommelen 2004: 32). Management commitment and active search of internationalization possibilities from the managerial sector can be included to this category, and is likely to have a significant impact on the internationalization decision (Lommelen 2004: 35).

In addition, managers' previous international experience has also been found to have a positive influence on the internationalization process in the ICT sector, especially among the born global companies (Laanti, Gabrielsson & Gabrielsson 2007: 1106). Through travelling and experiences from abroad managers are likely to become more open-minded towards internationalization and may also have already existing business networks which to utilize. Also, international work experience is likely to lower the barriers of entry, as it might make the first step easier when having experience of foreign markets. (Mellahi et al. 2005: 185.) However, it has also been found that the previous experience may also damage the internationalization process, if the managers have learned incorrect knowledge or developed inaccurate assumptions from the past (Brannen 2004).

4.8. Networks and internationalization strategies

A vast amount of research in the internationalization literature has pointed out the significant role of the existing networks of relationships for the internationalization decision. Within this network, a company can choose between the client-following or the market-seeking strategies. The starting point in a client-following strategy is that the company is part of an international network of exchange, that is, companies in its network work in an international environment. Thus, with the help and pressure from the network, companies are entering into new international markets utilizing the accumulated experiential knowledge of each other. (Majkgård & Sharma 1998: 9.)

Market-seeking companies normally operate in domestic exchange networks, where the internationalization aspect might not be relevant. So that these companies find an impulse to go abroad, it needs to detect a need, find partners outside its home country and build relationships with them. As market seekers are lacking international know-how in their network, they are likely to face more problems than the client-following companies. Another challenge is to create credibility among the buyers, which requires adaption operations in the whole value chain, consuming resources and time. (Majkgård & Sharma 1998: 10-11.)

What Majgård and Sharma found in their research, was that service companies were rather choosing markets based on their incremental level of risk rather than on high chance of business opportunities. Also, it was found that market-seeking companies were more likely to enter countries with a short psychic distance than the client-following companies. Lastly, the role for choosing between these two options seemed to be hindered during the years as the internationalization processed. (Majkgård & Sharma 1998: 26, 30) Interestingly, Erramilli found in her research (1990) that companies providing computer services are often highly market seeking (Erramilli 1990: 56, 59). Whether any support for this can be found in the area of cloud computing will be analyzed in the chapter six.

The theories presented in this chapter are summarized into the theoretical framework below (figure 12). This framework will work as a foundation for the analysis, and each of its points is either validated or rejected based on the answers of the companies so that this

framework can be updated to support the internationalization process of the cloud service providers in Finland.

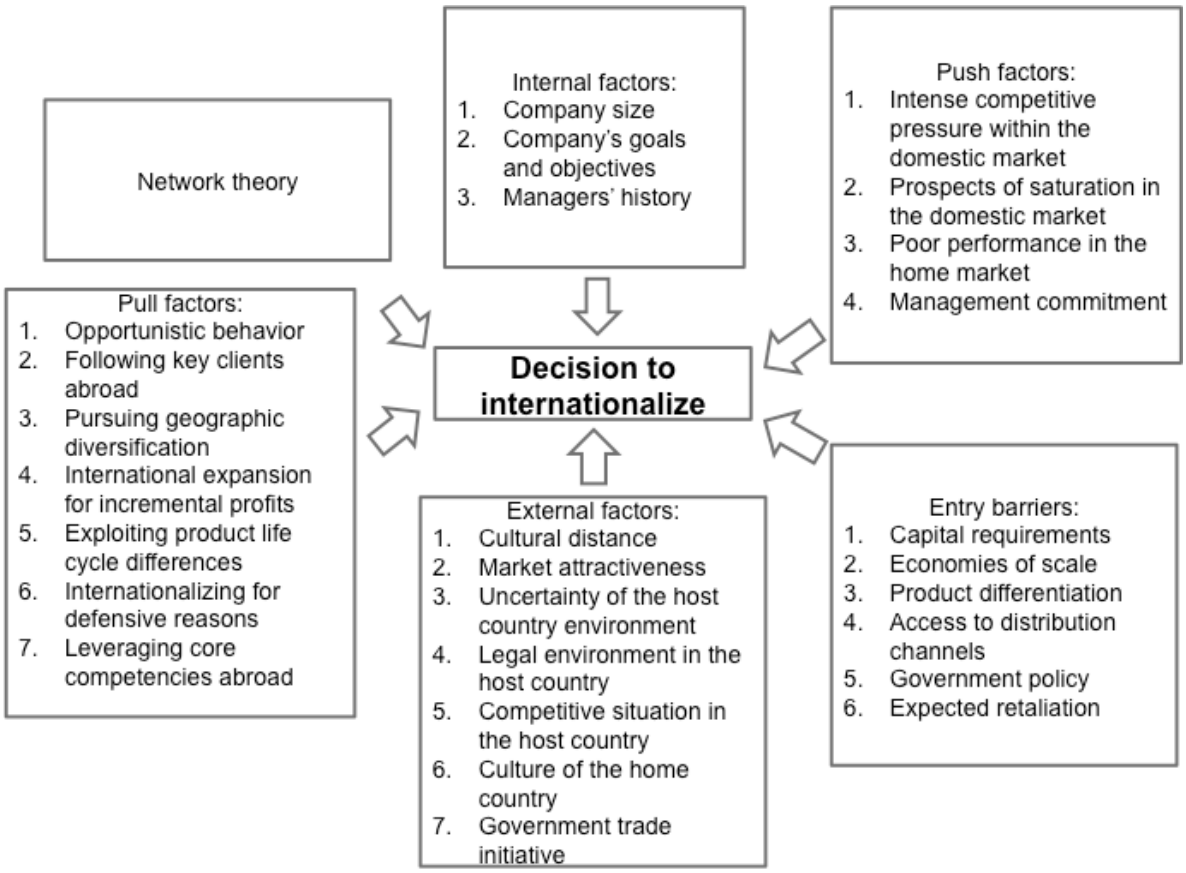


Figure 12. Theoretical framework.

5. RESEARCH METHODOLOGY

When a research is conducted, an appropriate research methodology needs to be decided. The researcher can choose between the quantitative and qualitative studies. Quantitative study is appropriate when the primary stress is on testing and verification of an issue, that is, when the study is deductive. Also, the researcher knows in advance what he or she is looking for. The major types of quantitative study are descriptive research, correlation research, causal-comparative research and experimental research. Qualitative study is appropriate when the researcher is interested about matters that cannot be measured quantitatively. The aim is to find something new and surprising and to understand the respondents' point of view. (Creswell 1994.)

As the aim in this study is to truly understand the interviewees and to obtain new information, qualitative research method is chosen. Also, the end results are far from predictable, which also strengthens the fact why qualitative method is selected. Through questionnaires this kind of in-depth understanding could not be obtained, which makes the qualitative method a rational and justified choice.

5.1. Data collection

The data collection in this study is done by using interviews. However, as there are several ways of conducting interviews, finding the most suitable one depending on the nature of the study requires planning beforehand. There are several typologies differentiating the interview types, which we will here observe two of. Firstly, one commonly used typology divides interviews into three categories based on their formality and structure. These categories are structured interviews, semi-structured interviews and unstructured or in-depth interviews. In structured interviews the interviewer reads the identical set of questions to the interviewee and records the responses on a standardized schedule. To avoid bias between the interviews, the questions should be read exactly as written, using the same tone of voice. (Saunders, Lewis & Thornhill 2009: 320.)

Semi-structured and unstructured interviews represent non-standardized ways of conducting interviews. In the semi-structured interviews the researcher has decided beforehand certain themes and questions to be covered, but the structure is much looser than in the structured interviews. Thus, some questions may not be covered in every interview and the interviewer may also need to create additional questions during the interview if during the conversation new, interesting areas arise relating to the research question. Unstructured interview is the most informal type of conducting an interview. As the aim is to create a continuous flow of information relating to the topic during the interview without a predetermined list of questions, the content of the interviews are likely to differ. (Saunders et al. 2009: 320-321.)

Based on another typology the types of interviews can be divided into two forms, which are standardized and non-standardized interviews. As in the previous typology the different interview styles were differentiated through their formality and structure, in this typology it is done based on the nature of interaction between the interviewer and the interviewee(s). Standardized interviews are normally used to gather data to support the quantitative analysis, as the data from the non-standardized is normally used for a qualitative analysis. Non-standardized interviews can be divided into "one-to-one" interviews and "one to many" interviews. "One to one" interviews consist of face-to-face, telephone, internet and intranet-mediated interviews, as "one to many" interviews are conducted in focus groups. (Saunders et al. 2009: 321.)

As none of these forms in better than other, the nature of the study needs to be analyzed to be able to find the most suitable interview method. To do that, the researcher needs to decide the purpose of the study, that is, whether the study is exploratory, descriptive or explanatory. As an exploratory study's aim is to seek new insights and to get an understanding of the current state, unstructured interviews are normally used. In a descriptive study it is important to have a clear picture of the phenomena before the data collection, and the structure interview type is likely to be used. When the aim is to establish and understand the causal relationship between the variables, then explanatory research is used often with a combination of the semi-structured interviews. (Saunders et al. 2009: 139-140, 322-323.)

Semi-structured one-to-one interviews are chosen for this research. As the existing research around this topic is scarce and thus the end results far from predictable, structured research could eliminate fruitful unpredicted topics arising during the interviews. However, to be able to get even some answers covering the research question and objectives, semi-structured interview method can be considered more justified than the unstructured. In addition, this study can be found both exploratory and explanatory, as its aim is to get both more structured understanding of the current state from the business point of view and also to understand what factors are important from the internationalization's perspective.

5.2. Data analysis

In the empirical part of the study the interviews of the ten chosen companies will be analyzed and linked to the previously presented theoretical framework. The interviews will be first transcribed from the recorder into a text format and then further analyzed.

5.3. Reliability and validity

Reliability and validity are two important issues to be considered to ensure the credibility of the research findings. For a research to be reliable, it needs to yield the same results on every occasion, be independent from the observer and avoid both observer error and observer bias. Thus, the data collection should be conducted in a neutral time, in a neutral place and analyzed neutrally. Validity evaluates whether the study actually measures what it is supposed to and do the variables have a causal relationship. (Saunders et al. 2009: 156-157.)

In this study both reliability and validity are improved through the following actions. Firstly, the research process is clearly presented in the methodology chapter, thus justifying the chosen research methods through argumentation. Secondly, the questionnaire for the interviews is designed based on the presented theories, thus increasing the validity of the study. Thirdly, in the theoretical framework several theories are presented with a critical examination and from various references, thus giving a current picture presenting both the original theories and recommended updates for them.

When it comes to the reliability of the study, the interviews are conducted in neutral conference rooms in the interviewees' offices at a before-hand scheduled time of their choice, where present are only the interviewer and the interviewee. The questions presented are neutrally formed and the interviews are conducted using the interviewees' mother tongue, thus letting them to express themselves in the easiest and versatile way. Also, the interviews are recorded so that they can be listened afterwards to minimize the risk of ignoring important details.

To ensure interviews reliability and interviewees suitability for this study, only high level executives are chosen, to be able to get a strategic perspective to which this study aims. As not all the companies that are being studied have yet entered to international markets, those companies' top-level management is still aware of their company's next steps to maintain their growth and have also the overall picture of the market and where it is likely to develop.

6. ANALYSIS AND DISCUSSION

Ten cloud service providers were interviewed for this research. These companies were chosen based on two criteria: These companies were originally founded in Finland and they had already internationalized or this was in their near future's agenda. The aim of these interviews was to understand their current state, how they have gotten there, which markets they had already entered and why, what challenges they had faced and what were their next steps. As very little or no existing research in this area exists in the Nordic sector, another aim was to find out if existing internationalization theories are adaptable firstly in cloud computing and secondly in the Nordic region.

6.1. Overview of the interviewed companies

The sample of the companies studied in this research is diverse. All cloud service models are represented, as some companies are specialized in one of them and some are providing services in all IaaS, PaaS and SaaS categories. Interestingly, also a fourth category can be identified, which will be called the cloud brokers. This group represents a business model where the company offers other providers' cloud services instead of owning own capacity, thus enabling the customer to use multiple providers simultaneously, customize and control the entity and to achieve high level of automation.

The level of internationalization varies significantly between the companies, as the sample includes both born-global companies and companies that have been in the international markets for over a decade. All of the companies are originally founded in Finland, but one is a merger of two Finnish companies that were acquired by an international company two years ago (company I). The person interviewed from this acquired company is the ex-CEO of the other Finnish company, and in the interview the internationalization is mainly observed from the former company's perspective, as they were involved in an international business already before the acquisition.

Nine out of the ten interviewed companies were already offering services outside Finland. The one that did not yet have any revenue coming from outside Finland was founded in the

beginning of the year 2014, but the company is planning to open its offering in a global scale in the beginning of the April 2014. Mainly the countries where the companies were already doing business were in the Nordic sector; however, also for example Russia, UK, USA, the Netherlands and Australia were involved.

Company	Founded	Employees	Title	Countries	Cloud service model	Market seeking/client following
A	5-10 years ago	16-500	Vice president	3	IaaS, PaaS & SaaS	Both
B	5-10 years ago	16-500	Vice president	2	SaaS	Both
C	< 5 years ago	< 15	COO	2	IaaS	Market
D	< 5 years ago	16-500	CEO	2	PaaS/broker	Client
E	< 5 years ago	< 15	COO	1	Broker	Market
F	over 10 years ago	> 500	CTO	4	IaaS, PaaS & SaaS	Client
G	over 10 years ago	> 500	Vice president	20	SaaS	Client
H	5-10 years ago	< 15	CEO	8	SaaS	Market
I	over 10 years ago	> 500	Director of sales, Finland	< 15	IaaS	Market
J	over 10 years ago	> 500	Technical director	3	IaaS, PaaS & SaaS	Client

Table 2. Companies interviewed

6.2. Cloud computing now and in the future

Among the interviewees cloud computing was seen as a market with high growth potential, thus being in line with the forecasts previously described in the paper. However, as it still is a relatively new business concept, it requires companies to observe the market continuously, as changes happen rapidly and new players arise. As naturally for new companies that were interviewed that have built their business model upon cloud computing, they described its role as a "strategic cornerstone" and a precondition for the company's existence. For companies with longer history in the ICT-business in general

cloud computing was seen more like a complementary business and an instrument, which enables companies to reach the economies of scale by minimizing the costs per unit. What has also been identified in the market place during the recent years is customers' increased knowledge and awareness of the cloud, and the customers are more or less presuming that cloud based solutions are involved:

> *"…nowadays… we no longer even discuss (with the customer) whether the service operates in the cloud or not"* (company B).

The classification between IaaS, PaaS and SaaS was seen among the majority of the interviewees as old-fashioned and irrelevant. As some features inside these service models overlap, in many cases it might even be impossible to draw the line where service model is being discussed. Thus, it can be presumed that better describing terms are likely to be created in recent years as both the business and the solutions start to mature.

> *"The trend of today that the customers are talking about, is a user-oriented cloud service, meaning how our customers are in the center and the customer has a certain need and how (different cloud services) can be combined to it in a suitable proportion"* (company F).

When asked whether the largest global players such as Amazon, Microsoft and Google should be seen as rather competitors or co-operation partners, only one interviewee saw them strictly as competitors, while others saw their role more or less as a partner. This one IaaS provider described their strategy to target the segments that these giant players do not see worthwhile. Also, he mentioned that they can differentiate themselves with more customer focused service, as these giants offer highly standardized and generic service. What was mentioned among all the interviewed companies was the essential need for them to create added value on top of for example Amazon's services, whether this being a unique service model, local knowledge or innovation. As the interviewee from the company G summarized:

> *"... we need to also act like our service innovates more or less the concept significantly, and at that point I always talk about three different issues: either it has (innovation) in the user experience, in the core technology or then in the*

> *business model how it is penetrated to the market, with what terms and through who, or then in their combination usually needs to be something completely unique and new."* (company G)

The other two IaaS providers (company F and J) saw that by combining their and for example Amazon's offering, they can build hybrid cloud solutions, which may offer the most suitable end result for the end customer. Company F's CTO mentioned that they do not need to be worried of these giants and their public cloud offerings at least in the near future, as local providers can still offer more competitive solutions through their private cloud solutions when prices are compared. However, by creating hybrid clouds, Finnish providers can utilize global players' services, combine them with their own offering plus gain profit when configuring these applications. One factor highlighted also among the IaaS providers was the need for them to be able to create supplementary service, as the level of profitability in the pure capacity selling business is poor and shortsighted. To be able to succeed in the business in a longer run the strategic focus needs to be in the services adding value, as competing against the largest global players in a pure volume business is not seen as sensible.

For SaaS providers the co-operation approach is natural, as their services are often built on the giants' IaaS and PaaS models. By utilizing the global players' market reach, they can quickly enter new markets cost-efficiently. This factor was highlighted by company H's interviewee when asked why they chose Amazon instead of a Finnish IaaS partner:

> *"... we have done some research and yes, Amazon is more expensive, but the fact that we can open (a business) within one hour in Sidney or Hong Kong is a big thing for us".* (company H)

However, one factor that was mentioned by company B was that the change in the customer field's mindset has also enabled smaller players to compete against the giants. As in the past the end customers wanted to get one large system that could do a little bit of everything, nowadays the trend has been to put together a system which consist of several companies' products and services. This enables smaller players to create for example a cutting-edge application, serving the customer better than for example Google's equivalent application. Also, companies can develop interfaces that help different systems to

communicate with each other and build their business around that. Many interviewees were actually surprised how poor cloud based tools for example Google is offering at the moment when considering the size of their service development department, but naturally this has also given a great possibility for smaller players to enter the market.

For the cloud brokers also the co-operation with the market leaders is essential for their business. As cloud brokers' business model is built on adding value to the IaaS and PaaS providers' offerings, their aim can be assumed to co-operate with as many global players as possible, so that their range of services of which the customer can choose from is broad.

6.3. Entry forms

All except one interviewed company had physical facilities outside Finland, these representing either datacenters or offices. However, many services were still also offered from Finland. Thus, based on the interviews it could be seen that companies were internationalizing through a hybrid model, where their aim is to combine both the local and global approaches to be able to offer the customer a solution that suits them the best. Even though cloud services are intangible and in theory no physical presence is needed, many interviewees highlighted that in some countries the customers demand the data to be located in their home country, which forces service providers to open datacenters and offices outside Finland. On the other hand, some customers seem to be particularly happy when the data is located in Finland, due to its stability and firm legislation level.

One noteworthy matter was that even though nine out of ten interviewed companies had already gone international, all of them had built a stable clientele in their home country before that. As this is natural for companies that were founded long before the cloud computing, not to even mention before the e-services even existed, but for companies that were founded with the cloud computing business logic this was not a forced decision. As some of the companies in the sample can be described to some extent as born globals, meaning high-tech companies operating in an international market quickly after the foundation, still the companies in the sample saw success in the home market also critical even though this is rarely typical among born globals. Actually, in a study conducted in 2008, where 12 born globals were studied in the UK, the companies had even 69 percent of

their revenues coming from abroad within few years of the foundation, some of them having even 100 percent (Kudina, Yip & Barkema 2008:39). However, success in home country can also help when entering new markets. Company H's interviewee mentioned this:

> *"the first customerships we do (in a new market), we contact (the customer), tell what we have done in Finland, it is really good statistics, really impressive numbers, and in Australia we got actually easily to negotiate (with the customers, who were) like yeah, now we are interested, tell us more"* (company H).

One definition for a born global company is "companies who have reached a share of foreign sales of at least 25 per cent within a time frame of two to three years after their establishment" (Kudina, Yip & Barkema 2008: 39). None of the companies in this sample interviewed had reached this high foreign sales numbers, but had however entered foreign markets in the timeframe. All of the companies either mentioned majority of the statements or belonged to the categories which describe the companies that are likely to go global based on the Kudina et al. (2008) study, which was presented in the chapter 4. However, as one significant trigger for the UK companies in the study of Kudina et al. (2008) was that for many companies the internationalization decision was not a matter of choice, but rather the only way to survive. As this was not mentioned in any of the interviews, it can be concluded that most likely the Finnish market is not matured yet in the area of cloud service providers. Thus, this still gives them a chance to build their business first in their home country after expanding abroad. On the other hand, it cannot be exclude the possibility that some companies might have tried the instant globalization strategy and have failed, or that these companies are simply not interviewed in this research. If this research would be done again after five years and companies with less than three years from their foundation would be interviewed, the results could be different as already now more and more companies are entering to the market and the market starts to mature.

When observing the initial entry modes of the three largest companies of the sample (F, G and J), no consistent model can be found. Even though both companies F and J firstly expanded from Finland to Sweden, company F entered there with acquisition strategy whereas company J merged with a large Swedish company. Company G started expanding to new markets through subsidiaries, starting by creating an independent subsidiary to the

US market. Since the first internationalization actions, companies F and J have nowadays a strong Nordic focus in their internationalization strategy, as company G is globally focused. Naturally it would not even be consistent to make conclusions based on these, as these internationalizations took place long before the cloud computing even existed.

Even though companies F and J have nowadays a similar growth focus, that is, increasing their market share in the Nordic countries, their initial strategies were different. As company F has utilized network strategy and thus client-following approach, company J targeted markets with potential, representing market-following approach. However, after a comprehensive strategic transformation, company J withdrew from multiple markets and is at the moment focusing primarily on the Nordic markets.

When observing the smaller companies, it is interesting to see how many of them are exploring these markets gradually, which would be less likely in the case of a physical product. Many interviewees mentioned that they are having initiatives in very geographically distant locations, and that they are at the same time still forming their internationalization strategy. When asked about the internationalization, entry modes and strategy in general, it seemed that many companies were still in the beginning of this journey, as no structured processes or stages were presented. Also, when comparing these companies to the ones that had years of experience, it was surprising how little risks they saw, as the situation was completely the other way around among the larger companies with a longer history and they highlighted how significant the challenges are related to the cloud computing.

Based on this research a clear generalization cannot be created whether the client-following or market-following approach is better suited for cloud computing. However, what became clear in the interviews was that even though the cloud computing has changed the internationalization concept, also some new challenges have emerged and some existing barriers appear in a larger role. In addition, as cloud computing is still a rather new concept, this is also likely to have an impact on entry speed and entry decisions, as the best practices are still in the development mode. Also, as the majority of the end-customers are still not fully comfortable with the cloud solutions, this is also likely to have an impact on service providers' market entry pace. All in all, it can be concluded that even though the service could be provided without physical presence to a new country, the reality is much more

complex and the entry decisions still need to be carefully analyzed, whether the company is having a physical appearance in the new market or not.

6.4. Triggers for internationalization

What was pointed out in every interview was the rapidly increasing competition in Finland within the cloud sector. New companies are founded constantly and many existing IT-companies are taking cloud computing to their offering. This combined with the small market size of Finland forces companies to expand for international markets. As one of the most significant benefits of cloud computing is its possibility for providers to reach economies of scale, this goes naturally hand-in-hand at reaching a broader market area. Thus, both pull and push factors were recognized, and will be now further analyzed.

6.4.1. Pull factors

In the chapter four seven pull factors were presented: opportunistic behavior, following key clients abroad, pursuing geographic diversification, international expansion for incremental profits, exploiting product life cycle differences, internationalizing for defensive reasons and leveraging core competencies abroad. Four of these were supported by the interviews. Firstly, opportunistic behavior was mentioned as the companies were aggressively seeking for growth:

> *"... growth is probably the reason, growth is something that everyone is seeking... and growth potential is higher in Sweden than in Finland"* (company F).

Abovementioned quote summarizes greatly three essential factors that have been already previously discussed: cloud service providers are seeking for rapid growth, which stems from the fact that also their competitors are pursuing the same goal and lastly, the growth potential is much higher outside Finland. Thus, it is no wonder that opportunistic behavior was mentioned in all of the interviews. Above all, it can be seen more like a lifeline for this type of companies if continuously increasing revenue and long-term success is pursued.

Also following key clients abroad found support by company J and E as a pull factory for internationalization.

> *" The most important reason (for internationalization) is that our customers have internationalized… that is why we have internationalized as we have customers there. Sweden is our home market in that sense, Norway, we are growing there as the market has business potential. The most essential reason is that we have followed our customers"* (company J).

> *"… in home country exists companies who also operate outside Finland, so through their partners is a possibility to expand business outside Finnish boarders"* (company E).

What was also highlighted by company J was that when following the key partners to new markets, the risks can be significantly reduced. For example, the partner that is physically opening a business in a new country needs to find out about the legislation and such, as the cloud provider's role includes only to fulfill what is mentioned in their service level agreement. If the partner's market expansion is successful, this is likely also to result in increased need for cloud services, which grows cloud provider's revenue.

Several interviewees mentioned international expansion for incremental profits also as a trigger to internationalize. This will be further analyzed in the push factor section, as it is also closely related to the fierce domestic market competition. However, this factor is a cornerstone of the cloud providers' business model, as incremental profits can be achieved utilizing the previously described long-tail concept, where the service can be offered to companies regardless of their size, as the delivery itself becomes more cost-efficient due to a high level of automation and economies of scale.

Lastly, Finnish cloud service providers can leverage the country's core competencies in an international expansion. Being a stable country, whether observed from the political, legislation or geographic perspective, this offers significant benefits in the area of cloud computing:

" In Finland one strength is naturally a great infrastructure, we have a stable legislation, there is no need to worry whether an outsider can access to the servers, there are no earthquakes, in other words, we have extremely safe datacenters" (company A).

" The strengths in Finnish cloud services are naturally the energy issues, meaning the electricity price, being ecological in that sense that we have a reliable soil, it was (a main reason) for Google and others who have brought their servers here… the climate, cheap electricity, cooling, stable environment" (company J).

" One strength could be the Scandinavian know-how which is valued, meaning if we say that we are from Finland, it has not been a negative merit anywhere, rather: okay, we want to listen to you" (company H).

" A trustworthy country… our geoposition next to Russia is good, it attracts customers from the USA who do not cross the border (Finnish-Russia border), so this is a good location and the government does not lobby that much in these days" (company I).

Altogether, Finland seems to be a relatively good breeding ground for cloud computing and its providers. As its geographical position, stability and legislation makes it an excellent place to start a cloud company, these elements in addition to the well-known Nordic know-how makes these companies interesting in their potential partners' eyes. Utilizing the partner's networks is likely to be in many cases prerequisite for these companies so that fast international presence and recognizability can be achieved also in the customer field.

6.4.2. Push factors

From the list of push factors intense competitive pressure within the domestic market (1), prospects of saturation in the domestic market (2) and management commitment (4) found support in the interviews. However, poor performance in the home market (3) did not find any, as all of the companies penetrated to the international market only after first ensuring that their business succeeded well within Finland. Intense competitive pressure within the

domestic market and prospects of saturation in the domestic market were especially highlighted by many interviewees:

> *" Finland is a small country… here the competition is intense and you have to get the business in the future also from somewhere else in addition to Finland, you cannot just stay here if you want to grow"* (company A).

> *"... you cannot operate this as a profitable business only within Finland. The growth potential… it is not profitable business due to the large investments and on the other hand, the international growth potential is limitless"* (company G).

> *"... the small size of the Finnish market, five million (potential) customers is just too little if we talk about international web service" (company E).*

> *" (Finland) has relatively high level of competition. Not that the neighboring countries would not have, but when you broaden the palette you will have more options"* (company I).

However, as all of the already internationalized companies had first started their business purely in Finland this points out that the intense competitive pressure is just a challenge of today or the near future. Most likely when the Finnish market gets more matured, the newly founded cloud service providers are forced to go global right from the start, most likely with the help of the global partners. This being said, it could be assumed that the role of push factors are likely to increase in recent years, making the internationalization even more like a necessity than an option.

Also managements' commitment (4) got support. As internationalization is a strategic and time-consuming process involving several risks, finding support for this factor seems rather logical. However, there is still a need to emphasize management's commitment, as many of the interviewed company's had the internationalization in their vision right from the start instead of recognizing it after years of the foundation.

> *"It all started from the ambition, the passion to do something big and significant… to make the impossible possible"* (company C).

> *"... since the first version, internationalization has been the whole owner group's vision, from the beginning it has been the goal"* (company B).

One additional push factor having a positive impact on internationalization decision among the smaller companies was the role of Finnish funding agencies. Three companies mentioned this as a supportive factor. Especially the role of TEKES (Finnish funding agency for innovation) seemed to encourage companies to internationalize and lower the barriers relating to it. Mostly what was mentioned among the interviewees was the role of funding, thus decreasing the risks relating to the internationalization, but also the role of the contact networks and the risk loans were seen as helpful.

Lastly, when it comes to cloud computing, the push factors list should also include the economies of scale. As cloud computing's business model is built for increasing the customer base as the typical challenges relating to the growth for tangible products such as more complicated supply chain or production factories do not appear in the same level, economies of scale pushes companies to internationalize. Also, as the business model also offers an alternative to operate from the home country without making significant investments to the host country and still capturing nearly all of the profits, this also enables companies to internationalize slowly and steadily. Naturally, it can be argued that is this the right way to go, as too slow market penetration may result in lost deals if the competitors are faster, and the lack of physical presence might lead to missed sales, as quite rarely the customers come to the vendor directly asking for an offer. Then again, as many of the companies in this study were relatively new and still continuously developing their service offering, it could also result in much more fatal end results if the internationalization would be done in a hurry and without carefully thinking the process through.

6.5. Barrier creating factors

When asked about challenges and barrier creating factors regarding internationalization, many generic problems were mentioned. Building market reputation, finding the right partners, recruiting the best people, maintaining a profitable growth and after all the learning how to operate in the new environment were the most common ones. From the

earlier mentioned barrier creating factors capital requirements and access to distribution channel found support from the cloud computing's perspective.

> *"... finding the right contacts, we would like to have more resellers around the world... more contacts are needed so that we would understand how the business is done in the target country and it also helps at starting the sales process when you have a local person there helping you"* (company A).

> *"... how to find the right partners, right ways in a new market, get people's attention..." (company B).*

Relating to the challenge of getting the right partners, in the highly masculine countries such as the UK and Germany it was even challenging especially for a smaller company to get in contact with the right people. The interviewee from the company H had found this extremely frustrating, as for example in the UK the secretaries do not give their manager's direct phone number, which makes having a local partner mandatory for being able to get in contact with the right people. Surprisingly, the company has found it much easier to do business for example with Australians, where the business culture is more similar to Finland.

One significant barrier that was mentioned was questions relating to the security. Information security and its risks have become clear to everyone after Edward Snowden and his document disclosing. Most of all, companies are nowadays much more interested in knowing where their data is hosted. Company G's interviewee saw this as a clear barrier when considering internationalization:

> *"... it has become a problem, as now when offering an international cloud service that is hosted for example from Finland or from one country in Asia, within Asia they all would want it (the datacenter) to be located within their own country, which makes the internationalization slower and frustrating"* (company G).

Even though the safety level would be at a top level, convincing the customer of that might be time consuming for the service providers. However, this was also seen as a positive issue among some of the interviewees. As the interviewee from the company J mentioned,

at some level Snowden has made Finnish companies a favor, as when the security issues are brought up to the discussion, they can point out how strict the legislation in Finland is and thus convince the customer.

When comparing the different service models of companies (SaaS, PaaS and IaaS), no clear differences were found in their answers regarding the security. However, companies that had been in the business longer and also involved in international business for many years identified much more problems regarding the security compared to the newer companies. In fact, majority of the newer and smaller companies were diminishing the whole security topic and its impact on cloud computing. One could argue that the companies with less experience may have too naive attitudes regarding the issue, as they are still new players in the international field. On the other hand, as cloud computing composes only one portion of the larger companies and 100% from the smaller players' business, it could also be that the causalities are more easily observed in the latter one, thus making it easier to perceive and solve the possible issues. For pure SaaS companies on the other hand issues regarding security and data's location are much simpler, as they only provide the software for the customer and are not responsible for the data itself, as they normally use Amazon or another large player as their service provider.

The interviewee from the company G saw four kinds of barriers relating to cloud computing. Firstly, a high level of standardization was seen critical, so that benefits relating to efficiency could be achieved.

> *"If you always need to adapt to those operator specific networks and local conditions, the speed disappears…"* (company G).

Secondly, he brought up the challenge relating to the novelty of the services. Both internally and externally, people have been a bit confused how they should start building a business case around the cloud services.

> *"… the risk has been seen high (by the operators), should I go into this business or not…How will you make the operator believe in this business case and to understand that it is a great business for them?" (*company G).

Another challenging factor mentioned was the slowness of the operator partners. According to the interviewee, if they do not adapt to the new trend rapidly enough, they will not have a chance in the fierce competition.

> "*... they are extremely conservative, slow to make decision and slow putting services to use. And when they start deploying the services, they need to market them as dynamically as internet-based services need to be marketed." (company G).*

As a solution to this problem, the company has expanded their partner network and started to operate more closely also with the resellers in the B2B market. Even though the resellers are not the fastest in their moves either, the interviewee saw that there is still a clear difference when compared to the operators. Also, support for utilizing resellers' profitable customers can be found:

> "*... smaller companies seem to have a high need to get these solutions deployed, where they do not need to buy own hardware, to configure them by themselves, to get everything ready up and running, the demand seems to be high and there seems not to be that many resellers who would offer this." (company G).*

Lastly, he mentioned a challenge relating to the service development when not being used to work closely in the end-customer interface.

> "*... we have been behind the operator's back and maybe 4000 kilometers away from the end-users, so how can be develop a service which is right for this time, and also visionary so that it can change the existing regularities and become popular"* (company G).

For the company E issues relating to the taxation and taxation policies were seen problematic. In addition, getting started with the building of the partner network was seen challenging, as the company was only a few months old.

What summarizes challenges relating to the majority of the interviewed companies is said by the company C's interviewee:

> *"... they (challenges) concretize to this very basic sales and marketing related challenges, also increasing the recognizability especially when thinking of our main market Nordic and North-Europe, increasing the recognizability and credibility, cultural differences are relatively moderate in these countries."* (company C).

One noteworthy challenge mentioned by the company F was not related to the service itself, but rather how to make it as a part of a larger entity. As the interviewee highlighted that it is not profitable to compete against Amazon and the rest of the giants by only selling capacity, to succeed in a long run the provider needs to work closely with the customer so that larger profits could be achieved.

> *"... cloud services... work anywhere, when delivered over the Internet. But to get the cloud solution as a part of the customer's solution is hard work"* (company F).

As it was mentioned by the company G's interviewee, even though there are challenges there is also demand. By targeting the smaller companies who are more willing to start utilizing cloud computing instead of their own datacenters, this enables cloud service providers to start small but still increase their knowledge and reputation. Even though the providers would be hungry to get to the "big league" faster, that is, to deals with higher revenues, these smaller cases should be seen as a way to build market reputation and credibility. When having a lot of reference cases the service provider is also likely to appear more attractive in the eyes of the customer and/or partner, especially if these reference case customers are also from various geographical locations. These companies are also likely to tackle many problems that are mentioned above, and are likely to succeed in the longer run.

As a solution to the problems and challenges, the cloud service providers need to find the answer to the issue that the interviewee of the company F mentioned, that is, how to get the cloud solution as a part of the customer's solution. As it has become clear throughout this paper and the interviews, the cloud computing itself is already ready, but how to get it utilized in the best way in each customer scenario is a more challenging task. In addition, building a long-term business model with elements offering differentiation from the competitors is essential, as the competition is likely to become even fiercer when more international companies start to penetrate to new markets. Also, cloud giants are likely to push the profit margins even lower when it comes to purely storage and capacity selling,

making it impossible for smaller players to compete against them in this market, forcing them to focus more in the niche markets with customers with more specified needs.

6.6. Networks

Networks seemed to have a vital role for the internationalization and also when choosing the potential market. Having a local person in a foreign market with existing relationship was recognized to be a great asset. Firstly, this was seen to hasten the entry process, as the local person knew the right persons whom to contact.

> *"We expanded to Germany and Australia, as we got there through our friends' assistance"* (company H).

Also, the interviewee from the company H mentioned that without the local person and his/her connections it is even almost impossible to get to the same room with the top level management in some countries, especially if the company has no existing recognizability in the market:

> *"You need to have a friend there who recommends you to them (potential partners)"* (company H).

Based on their experience, some countries seem to appreciate that a company is from Finland, but some see it more important that they are dealing with a local partner:

> *"To the UK you cannot enter only through Internet, you need to have a native person on-site, Sweden starts to be the same, they treat the Finns a bit arrogantly… Hong Kong… it is okay to be a Finn, in some countries it is even an asset, Australians did not care at all that we were from Finland, but Germany and England are good examples, if you do not speak the language and have not attended the same schools, you will have a long road ahead"* (company H).

Company I's interviewee saw that the easiest way to get started with the internationalization is by utilizing local partners. If the companies did not have existing

networks in a country, in many interviews the need to build partnerships with locals was emphasized. Company B was at the moment trying to build business in the US, and to do that they saw it essential to do this through a partner network. In fact, the interviewee mentioned finding the right partners one of the biggest challenges relating to the internationalization. What was also seen important was to build a network of partners that see the company important enough.

Company I's and H's interviewees highlighted that for smaller companies the best fit is a local partner, to whom the Finnish company is the right size.

> *"For too large ones we do not bring volume enough to benefit from it"* (company I).

However, if a potential partner can be offered something they are currently missing, the size of the partner company does not necessarily matter. However, also in this case tight collaboration is needed so that the partnerships starts successfully and can then continue in a way that is valuable for both of the parties.

> *"… a local company is missing from their palette what is being offered… and build it so that both can benefit from it"* (company I).

Company H's interviewee also mentioned that at first they were just trying to find partners with the right fit from the product portfolio point of view, but soon they noticed that if they did not comprise a proportion significant enough from the partner's sales, the sales persons did not push the service aggressively enough to make good results. Thus, nowadays they are:

> *"… using more time to find the hungry (local) partners… to whom we can create a large net revenue opportunity"* (company H).

Hence, small and medium sized cloud service providers could be recommended to build partnerships with either same sized companies, or then ensure that their role is critical in their business partner's business model. However, an interesting question that was not discussed in the interviews applies to the larger cloud providers and their ideal partners

when considering the partner's size. Naturally, there is not likely to be one truth, but it would be fascinating to research whether large cloud service providers value more other large companies with broad networks, or rather smaller players that can offer them local agility and most likely more innovative solutions.

When asked about how the interviewed companies chose their partners, building personal relationships was seen important.

> *"If thinking from the small company's perspective, you need to know them (partners) personally, it does not matter where you have heard about them or known the company or the employees there, but you need to personally visit and know the ones you are doing business with"* (company I).

Meeting face-to-face was seen necessary when starting to build a relationship. Thus, it could be recommended that even though cloud computing offers the possibility to sell over the Internet, if wanting to build a long-term relationship, the parties need to meet regularly and know each other, otherwise the customer is likely to switch quickly to a new provider in case of receiving for example cheaper prices, when no personal ties are involved.

> *"If you are not selling newspapers, if you are selling business, yes… you need to know the one who is buying so that it will grow into a big business"* (company I).

Company E's and I's interviewees emphasized also the importance of partner network, when entering to a new market, to be able to get to the right customers.

> *"You must find a partner in the target market, with whose help you start to push it forward, without you will not get that kind of advantage that you get through a partner"* (company E).

He also mentioned that finding the partners in a new market is the factor having the largest impact when choosing between potential markets. Company I's interviewee also mentioned that they have benefited from having a local partner especially in the UK:

> *"We have a partner there who has attended the same schools (with the customers) so he can help at opening doors"* (company I).

One essential factor that was mentioned in a couple of interviews was the need of the partner to avoid legal issues. Company F's interviewee mentioned that when having a Nordic partner buying their services in a Nordic sector where the company F is mainly operating and having their data centers, they do not need to worry about legal issues even though the customer would have customers anywhere in the world, as the company F is only responsible for their services within the Nordic where their partner is located.

> *"... we do not sell (the cloud services) to everyone, instead there is a specifically dedicated clientele to whom we offer it. We have noticed that this is a good solution so far to go with the customers, and yes, we have international customers who are using our capacity. This is the way how we internationalize, through the customers"* (company F).

Company G's interviewee also mentioned same kind of benefits. As they have a broad, global partner network basically in every continent, he highlighted that their partners for example in the UK or in the US are doing the local adaptations to the service provider's more or less standardized offering:

> *"... when they offer the service, naturally they follow in information security and in right to privacy the provisions that exists in those countries and our service takes the shape it needs to take. So we do not need to particularly adapt, the partners are the ones putting the buttons in the right position so that the service is suitable for the market* (company G).

Based on the answers of the interviewees, networks can be seen more or less mandatory in cloud computing. When utilizing the local partner, the service provider can rather focus on building their offering and service better rather than struggling with the local legislation and cultural issues. As efficiency is one key element in cloud computing, through well-functioning networks both the service provider and its local partner can focus on their core competencies, creating a win-win situation for the market entry. Naturally, the role of partners is likely to change when the service provider has established a certain level of

recognizability in the market and a stable client-base, but as this was not yet a current issue for the service providers in the study due to the young age of this business model, this topic should be researched more closely after a few years.

6.7. The roles of external and internal factors for the internationalization

6.7.1. External factors

When observing a host county's cultural distance and its impact, no one clear pattern can be identified. Five out of ten interviewed companies' first foreign market was a culturally similar to Finland with a nearby distance. Four on the other hand expanded immediately to a country with a different cultural background and/or longer distance. When asked whether companies' main priority was to focus on a few key customers or to get as extensive customer base as possible, this did neither provide any pattern when reflected to the countries where they were operating.

On the other hand, when considering market attractiveness as one external factor impacting on decision making to which country to expand, it needs to be addressed that Nordic countries in general offer an ideal growth environment for cloud services. In each of these countries exist a developed infrastructure, strict legislation and a lot of potential customers and partners and so far much lower level of competition when comparing to for example the US.

> *"Sweden is the largest economy in Nordics, their industrial structure is favorable to cloud… and of course Sweden is near us and its economy is in good shape, so it is a natural choice of expansion"* (company D).

Thus, starting internationalization from the Nordics seems rather logical, but the situation can naturally be completely different after a few years. However, if the service provider's strategy is mainly on capacity providing and thus reaching as large clientele as possible, then limiting itself only to the Nordics might not be strategically rational. If on the other hand the company invests in developing partnerships, then staying in the Nordics is not likely to be a problem, as the company can still benefit from its partner's global networks.

6.7.2. Internal factors

Majority of the interviewed companies' managers had experience in the management level for working in a global environment. This is likely to increase the willingness to enter new markets through two reasons. Firstly, as the interviewee from the company G mentioned, the previous experiences of the whole executive group of the company had taught them to have a realistic picture of the internationalization processes from the start. Thus, costly minefields had been avoided, for example opening an office immediately to a country with a growth potential without first making clear calculations of its profitability. Even when the service has the possibility to be distributed globally in a relatively simple way as the cloud computing does, the process to implement it successfully is far from easy and the challenges should not be overlooked.

Secondly, as previous international experience is likely to decrease the change of the company to make fatal mistakes resulting from being too optimistic, it is also likely to create the belief of its possibility. As the company cannot plan every single step beforehand with internationalization and cannot predict all the possible issues along the way, the existing experience might lower the barrier of over-thinking the process.

Thirdly, mentioned by the interviewee of the company F, creating a territory-focused strategy instead of a country-focused one has had a positive impact on the internationalization. As choosing between these two options depends highly on the company strategy, by choosing a larger territory over one country seems to create a better functioning entity, where the countries are rather co-operating than competing against each other within the territory.

> *"We have business units that cover the Nordic regions… with one director who is responsible for the businesses in Finland, Sweden and Nordics and through that one business unit naturally wants to think of that whole market area as a one entity. And through that we can grow stronger in that region."* (Company F)

Also, this is likely to keep the operations aligned between countries, enabling companies to achieve efficiency. When having for example a Nordic perspective rather than a country specific, it is likely that the Nordic director can allocate the resources between the countries

more strategically, decreasing the over-lapping functions and ensuring that the country-based strengths are utilized together throughout the projects. This can result in a solution in which the company has taken advantage of its international resources, and can beat the local companies.

Also top level management's commitment to act as a trigger factory for internationalization found support. When starting to offer cloud services internationally, company J had the support from the company CEO, which enabled a rapid implementation process inside the company, as the cloud department got the authority to use the highest power. Especially in a large company with over 15 000 employees this hastened the process significantly.

Another trigger for internationalize that appeared in majority of the interviews was the companies' global mindset and original goal of expanding abroad. Especially companies that had been founded less than 10 years ago highlighted the rapid internationalization as one of the key strategic goals that was agreed on right after the foundation. This and other factors that we will discuss later on indicate these companies to be categorized as born globals.

> *"We did not want to build the best tool in Finland, but in the world" (*company B),
> *"we had a great intent to build with the know-how that our people have an international success story at least in a Finnish scale"* (company C),
> *"this (internationalization) was originally the idea"* (company D),
> *"when we started building the new business it was with an international focus from the start"* (company E).

6.8. Market selection

In accordance with both Coviello and Munro (1997) and Moen and Gavlen (2004), it was also found in this research that the internationalization process started for the majority of the companies to countries with a low psychic distance, but later on the role of it seemed to diminish. Four companies' first foreign market was Sweden due to its developed infrastructure for the cloud computing, its stable economy and similarity to the Finnish market.

Also, the interviewee of the company F mentioned the low level of outsourcing; one rather surprising reason choosing the Swedish market. The company culture varies significantly from for example Finland where many large companies have outsourced their IT at least once during the outsourcing boom during the late 90s and early 2000s. In Sweden, companies have had large amounts of subsidiaries, thus making it hard for companies to persuade all of the parties to accept the decision. However, at the moment companies are starting to see IT outsourcing as a way of reaching cost reductions, and this offers Finnish cloud service providers a market with a high potential.

Company B, which firstly expanded to the UK, highlighted both the geographical and distributional benefits of London when building a global service area. As it is located on a spot where most of the main network traffics unite, it offers also a strategic location when expanding for example to the US, which is company B's strategy in the recent future.

Russia seemed to be both tempting but challenging market for three of the companies (company F, I and J). Being such a large market with millions of potential customers, even targeting one city such as Saint Petersburg seemed to be challenging. Two of these three companies had already withdrawn from the market after finding it too challenging after already investing a lot of resources to it.

Affecting the market selection was also to some extent whether the company had market-seeking or client-following strategy. Companies that labeled themselves as client-following ones had much more strictly defined markets where they were at the moment operating and where they wanted to grow within next few years. No consistent definition based on company's service model or size could be drawn based on their strategic decision between these two options.

6.9. Post-entry actions

When comparing post-entry actions of the interviewed companies, no radical differences were found when reflected to the more traditional business models. Search engine optimization was mentioned by company A, C, F and G. However, this was seen rather inefficient, as the interviewee from the company C stated:

> *“ However, Google is quite ineffective in this industry, as there are so many of those large international players, so it is not that cost efficient, you need to be a little bit more smarter when doing online marketing”* (company C).

In addition, he highlighted that other actions are also needed:

> *“...you cannot sell this kind of service only through the web, at least as much as we want to grow, it requires on-site actions in these local markets”* (company C).

Building close relationships with the local partners were seen essential by also many other companies. Co-operation was brought up by companies B, C, D, E G and I. When comparing the answers between the cloud service providers’ service models, the answers of the two cloud brokers offered two rather different strategies. Company E’s interviewee mentioned that the most valuable partners for cloud brokers are:

> *“... local capacity suppliers, whose capacity will be delivered through us to the international delivery. Another one is a local consultant, that is, implementing entity, which makes customer projects to the end-customer without owning capacity, but rather buys it from varied locations. To that kind of players we can offer a ready-made tool... and they can focus more on producing their own work”* (company E).

However, company D’s focus was on utilizing cloud giants such as Amazon and Microsoft when building their market visibility.

> *“... it has given a considerable support... opening doors, first and foremost in new environments... for example if we have organized a seminar and when we are sending invitations, these companies send the invitations to their existing clients, so the match is excellent”* (company D).

Also organizing and/or participating in seminars and trade shows were mentioned by companies C, D, H and I as a way of increasing the awareness of the company. In addition, getting visibility via the press and the media was brought up. Altogether, being active in a new market was seen critical to awaken potential partners’ and customers’ attention.

Lastly, continuous sales work was naturally seen as a critical factor when trying to increase the market share. As the interviewees highlighted that the competition is getting more and more fiercer in the cloud market, a lot of resources are needed in the area of sales to maintain growth and profitability.

7. CONCLUSIONS

What can be concluded is that cloud computing is here to stay. As many companies are already taking advantage of its benefits, still its potential is far from being fully utilized. One reason is the novelty of the business. Majority of the customers are still reluctant to go all-in with cloud solutions even though the business case has been identified, the main reason being that the risks relating to it (or the lack of them) are not currently fully understood. For cloud service providers this demands patience and hard work, as the more successful references they get, the more convinced are also their potential clients.

Regarding the IT infrastructure, the interviews point clearly to the era of the hybrid cloud solutions. As the global giants are likely to become during the next few years the most tempting for the end-customers from the cost perspective, the smaller players can still make very profitable business when focusing on value adding services that the rigid giants are not capable of doing. However, this requires the smaller cloud service providers to have a clear differentiation strategy combined with swift and innovative market entries, as the competition is also getting more and more fiercer among them.

Utilizing rather than competing against the largest global players was seen essential when it came to internationalization. As the Finnish companies neither have the time or the resources to compete in the same league with the global companies, by building unique combinations they can utilize for example Amazon's global availability and add on top of that their own offering. Rather than doing everything in house, the companies saw it more vital to just get into the international business quickly, as Finnish market is not large enough for cloud computing in the longer run and as one of the main elements of the cloud computing is its easy global scalability.

This research was conducted to answer two research questions:

What are the main trigger and barrier creating factors for cloud service providers in Finland to internationalize?

What is the role of their business partners in the pre- and post-internationalization phase?

In the figure 13 a revised theoretical framework is presented, showing the factors that were found to have an impact on the internationalization processes with a bolded font.

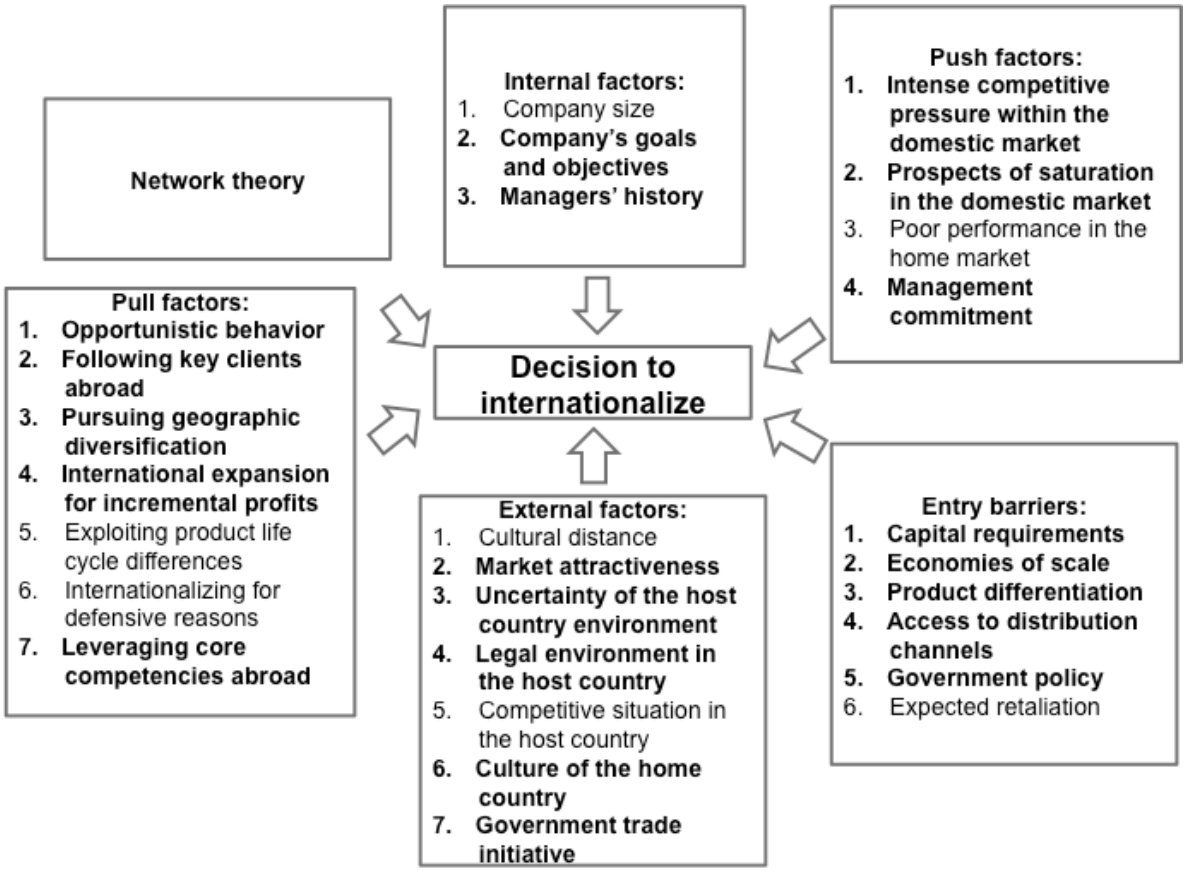


Figure 13.Revised theoretical framework.

As both pull and push factors were broadly discussed in the interviews, it cannot be suggested which of them has a greater impact on the internationalization decision. However, it was identified that the push factors are likely to become even more significant in the near future as the competition is increasing and the Finnish and Nordic markets are coming more saturated and matured. This forces the cloud service providers to target even more heavily global expansion and utilizing the help of the partners right from the foundation of the company. On the other hand, factors that can become more like a given strategic assets also in the future can be Finland's excellent geographical position, legislation and political stability, which might help Finnish cloud service providers to appear as a more desirable alternative than others in the eyes of the potential co-operation partners or customers.

As many generic barrier-creating factors for internationalization were mentioned, for example building market reputation and adapting to a new market, what was found to be most essential was for the service providers to find the right partners. Whether being a large or small company the problems were quite the opposite: For larger companies there were many willing partners approaching them when entering new markets and the challenge was to actually find the best partner with the best connections and identify the company who would be willing to build up a long-term partnership. For smaller companies it was sometimes even hard to get to the same room with the people from the local potential partners not to mention convincing them to partner up, as the lack of name and reputation was missing in the new market.

Another challenge for cloud service providers is to build a strong and clear business case that could be easily shared both internally and externally. Naturally, if the customer does not fully understand the concept of cloud computing, what kind of change does it bring, how will the implementation work and what happens afterwards, it is highly unlikely that the company wants to continue the discussion further. Thus, cloud service providers should have clear answers for the what, why, when, who and how questions. In addition, the service providers should have a clear and well-structured internationalization plan, as even though the global delivery process for intangible product over the Internet is not that complicated challenges relating to the implementing process are far from simple and should not be overlooked.

Most likely the lack of knowledge correlates strongly with the next problem, which is partners' and end-customers' slowness. One solution for the problem is to first target smaller companies with lighter existing legacy systems, where the transformation process from traditional IT solutions to cloud is not that complex. This enables service providers to build their reference list, learn by doing and prove to doubtful potential clients the benefits of the cloud computing. As many potential clients are at the moment concerned of the risks relating to the cloud computing, when reference cases become more popular they are likely to trust the solution more, realize that their existing arrangements have also their own risks and thus start considering cloud services more seriously.

The role of networks was found one of the key factors when expanding to the new markets. The network could be implemented by utilizing the local partner's networks to be able to

get in touch with the potential clients, to avoid minefields regarding the legislation or to increase the amount of credibility in the customer's eyes. However, finding the suitable partner seemed far from an easy task. Careful consideration is needed regarding the partner's size, experience and how to build a successful and long-term relationship.

In addition, even though cloud computing enables in theory a non-personal business model where the service can be bought over the Internet, for locking-in the customer and create personal ties requires still a significant amount of face-to-face meetings, discussion just like before to build a long-term partnership. On the other hand, as it seems that people are everyday more and more comfortable to communicate and run errands from shopping to banking via Internet without any kind of personal contact, it will be interesting to see whether this will also become more popular in the business world during the next few decades.

When it comes to the triggering factors for internationalization market attractiveness, economies of scale, opportunistic behavior and increasing competitive pressure within the domestic market were highlighted. In addition, for smaller companies the government trade initiatives acted in a relatively large role. As the financial support was mentioned, what was seen even more crucial among these companies was again the role of networks that TEKES provided in the new market.

As challenges exist for cloud service providers in their internationalization processes, it is not a surprise that strong commitment and ambition found support. In addition, experience in the international business was seen important and also as a factor triggering and encouraging these companies to internationalize in the first place. As experience in this field may prevent some fatal mistakes, it is also likely to build faith inside the company as these leaders push others to aim high from the start.

Overall, based on the interviews and the literature analysis, it can be found that cloud services offer a model in theory where the role of psychic distance and the classical model of Johanson and Vahlne's are no longer valid for cloud service providers, but in practice many of them in Finland seem to still start their internationalization from the culturally similar and nearby countries. Interestingly, nine out of ten interviewed companies also build first a stable clientele in Finland before expanding abroad. Thus, they are not at least

fully seen as born global companies who thrive for an instant global presence right from the foundation.

Reasons explaining this kind of traditional looking internationalization strategy were that the Finnish cloud market is not yet matured, giving the providers relatively easy and safe environment to test their business idea. As many smaller and newer companies that were in the beginning of their internationalization process saw the risks related to the global expansion relatively low, this also supports the finding that there is still room to grow within Finland. Secondly, even though the cloud service providers would be ready to go global, their customers might not yet be ready. As already mentioned, there is a constant need for ensuring the customers regarding the issues for cloud computing's safety and security, and especially when trying to get customers outside home country these issues come even more vital, especially in the eye of the customer. Lastly, what also found support was the assumption that rather than focusing on the cultural issues, in the case of cloud computing the role of advanced level of infrastructure acts in a much more central role, as without this the service cannot function well and it is also likely to face critical issues in both sustenance and security.

7.1. Limitations of the study and suggestions for further research

As this study was conducted in Finland interviewing only Finnish companies, the results should not be generalized but rather used as a basis for future comparison in a different environment. Some of the findings are country specific and might not have an impact in other countries, but still their possible role should not be however ignored without further analysis. As in this study small, midlevel and large companies were interviewed; another suggestion for further research is to choose only one of these for closer examination, as the factors impacting on their internationalization processes varied a lot.

As many of the companies interviewed in this study were at the beginning of their internationalization journey, mostly originating from the fact that also cloud computing is relative new business model, another suggestion for future research is to observe the market after a few years and compare if the findings from this study are still valid. Most likely at that point the Finnish market is already matured, forcing these companies to move to new

markets more quickly, utilizing the unique benefits relating to cloud computing more agilely. At that time more born global cloud service providers may exist and their features should be analyzed.

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