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Knowledge transfer in a competitive business environment Case: Finnish education export and its competitive advantage in foreign market

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Abstract

Knowledge has remained one of the critical assets for institutions and firms in a growing competitive world. Such intangible assets have emerged as a significant part for organization's success by way of application in producing goods and services. Whereas competition has emerged as a new phenomenon of knowledge management, most companies have struggled to integrate capabilities of knowledge in their processes and activities to keep up with the intensity of the competition. The objective of this study was aimed at assessing the Finnish knowledge export business, approaches employed and cross-compare with that of other competitors in the same sector. This study has employed both qualitative and partly quantitative data collection methods. Earlier studies have established that companies not necessarily succeed only from its great competitive advantage but an integration of models can lead to effective performance in the long run. Despite its dominance in education rankings, results have confirmed that, the Finnish education export lack of experience, coordination and fringe resources has hampered its knowledge export activities globally. Ironically, evidence suggested that lack of coordinated universal model by Finnish institutions and systematic transfer of knowledge activities has affected efforts of penetration into the foreign market. Hence, this thesis is based on interviews, expert debates and documented Knowledge Transfer (KT) theories. Effective knowledge export hinges on deployment of designated resources, forging of a common goal between institutions among other strategic approaches.

Keywords/tags (subjects) Knowledge transfer, Education export, Bukowitz & William's Model

Miscellaneous (Confidential information)

Table of contents

Figures

Tables

ABBREVIATIONS

OECD…….Organization for Economic Countries of Development

EDUFIN……..Education Finland

KM……Knowledge management

KT……Knowledge transfer

R&D……Research and devlopment

nd. ……Not defined

PISA……..

KBV……Knowledge-based view

RBV……..Research-based view

UK……United Kingdom

USA……United States of America

JAMK……..Jyvaskyla ammattikorkeakoulu

MIT……Massachuchets Institute of Technology

ICT……..Information & communication technology

SECI……..Social, Externalization, Combination, Internalization

UAE……..United Arab Emirates

SEAMK……..Seinäjoen ammattikorkeakoulu

VTT……..Finnish technical research centre

EU……..European Union

1. Introduction

Knowledge has been attributed as a key resource that defines how companies can remain sustainably competitive as possible. Knowledge assets can be of great significance particularly in a competitive environment. Despite this acclaim, most of the business enterprises operating internationally today are faced with myriad challenges not only because of poor market strategy but also due to global dynamics of competition and the ever-evolving knowledge resources. There has been also debate over ability for companies to properly exploit knowledge assets to their advantage. Gulev (2011) asserts that a company may have unique and valuable resources, but unless it has the capability to use those resources effectively, it may not be able to create or sustain a competitive advantage. Initially, industrial focus has been marginally reduced to production of tangible assets and very limited research in academic context on intangible assets like knowledge.

The backbone of this thesis is knowledge transfer. This is because knowledge transfer gives a better value for competitive advantages in a competitive environment for companies as narrowed to the context of education. Nonaka and Teece (2001) concur that modern corporations will need to evolve into a knowledge-generation, knowledge integrating and knowledge-protecting. This implies that some aspects of knowledge even though they can be integrated and transferred into operational stream of the organizations, would need protection. What is not clear however to most organizations is in what form or type of knowledge to be transferred and at what expense and to whom is the knowledge intended to? This begs a fundamental question; how then is knowledge transferred said to generate value for companies in the long term and creating a competitive advantage in the current environment of knowledge economy in equal measure?

1.1 Research settings: The knowledge transfer in the education context

Knowledge consists of knowledge repositories, relationships, information technologies, communications infrastructure, functional skill sets, process know-how, environmental responsiveness, organizational intelligence, and external sources. The get, learn, and contribute phases are tactical in nature. Education is one such practice of knowledge transfer that cuts across the two forms of knowledge. Carlile and Rebentisch (2003) define knowledge transfer as a conveyance of knowledge from one place, person or ownership to the other. In slight contrast Wang and Noe (2009) refer to knowledge transfer as involvement of both the sharing of knowledge by the knowledge source and the acquisition and application of knowledge by the recipient. Knowledge transfer typically has been used to describe the movement of knowledge between different units, divisions, or organizations rather than individuals (e.g., Szulanski, Cappetta and Jensen, 2004).

Given the contesting yet related definitions, this study is only concerned with knowledge transfer in the context that inculcates educational activity (ies) and the setting with which that knowledge is transferred to. It can be within the framework of educational facility, organizational sector, and even individuals within these settings depending on what strategic aim (s) the knowledge transferring party elects. For education sector the success of any knowledge transfer or knowledge sharing activity are dependent on the effectiveness of its systems and processes, and technology. Therefore, as for the Finnish education export context, maintaining competitiveness and profitability of its venture, systems and processes must be anchored on potential benefits of knowledge export activities whose success shall be measured on returns and how sustainable when compared to other competitors in the market.

Although there is a thin line of literary between educational and the knowledge, philosophical studies suggest existence of causal relationship in both contexts. Hegarty (*2000)* argues that competition intensity as a factor that distinguishes education from other sectors is certainly relevant, but it belongs more to the context of knowledge generation and use rather than to the nature

of a knowledge base. Seyoum (2009) affirms that the systematic approach involves selection of a product or service based on overall market demand. Knowledge transfer constitutes a process and absorption. Whereas process is a means or mechanism used to reach or obtain something either for gain or not, absorption is how something acquired diffuses into use. Diffusion taxonomies of knowledge include knowledge exchange, knowledge transfer and knowledge integration. It can be as a result of innovation, new discovery or invention triggered by a process of knowledge transfer. Empirical studies have suggested that knowledge travels through different mechanisms and its effectiveness depend upon parameters of absorptive capacity. In the models of knowledge diffusion, Cowan (2004) asserts that knowledge travels along a multi-agent chain. For this case, applicability of the knowledge transferred can be through individuals, tools (Information Technology) or both. Indeed, the concept of 'Knowledge Management' (KM) comprises, knowledge acquisition, creation, sharing and transfer. The foundation of this research thesis therefore is not on the sheer perspective of knowledge creation but the end result of the two subsets of knowledge management. With consideration of other factors such as costs, typology, context and barriers affecting knowledge, it is prudent to conclude that successful knowledge transfer or knowledge export are defined by competitive advantage.

1.2 Research Objectives

The main focus of this thesis is to investigate factors that determine Knowledge Transfer in a competitive environment, the context being an education sector, more preciously education export. In this study, education export is also referred as "knowledge export". By extension, this study reviews and assesses export models by different competitors in education export business vis-à-vis that of the Finnish education export model (s). A broader comparative analysis will attempt to identify Finnish education export shortcomings in a competitive environment and develop recommendations and frameworks suitable for future efforts of knowledge export programs.

This study aims at extending other Knowledge Transfer (KT) literature by identifying existing gaps that can be bridged possibly through adoption of systematic and robust knowledge transfer processes particularly in a

competitive environment. Results from this study anticipate that, education stakeholders and universities will choose and adapt distinctive activities from evidence-based knowledge vital in their pursuit for the long-term attainment of strategic economic goals.

In the conclusion, I shall argue that possessing competitive advantage and value proposition alone is not enough to guarantee economic value but consideration of organizational factors (discussed here separately), choice of the right strategy in sync with continuous innovation can effectively lead to sustainable success in a given competitive environment. The fundamental research objective is to analyze what distinctive models are best suitable for knowledge transfer or export in order for organizations to be competitive?

1.3 Research Questions

In order to analyze the previously mentioned research objective, this thesis sought to address the following research questions:

1. What is the nature, extent and direction of the Finnish export education program?
2. How does the Finnish knowledge export sector position itself in the global market in comparison to the established international competitors?
3. What is the role of the Finnish government in promoting knowledge export?

1.4 Thesis Outline

This thesis constitutes two key economic sectors; education and partly industrial cases. While attempting to identify knowledge transfer in practice, I have demonstrated differences and similarities of the knowledge export models and sought to build a case for competitive advantage. And by extension, given the overarching fact that institutional and commercial sectors are either agents, generators or providers of the so-called ‘know-how, how

that unique competitive advantage succeeds in a competitive environment are explained by way of models used to enter a given market.

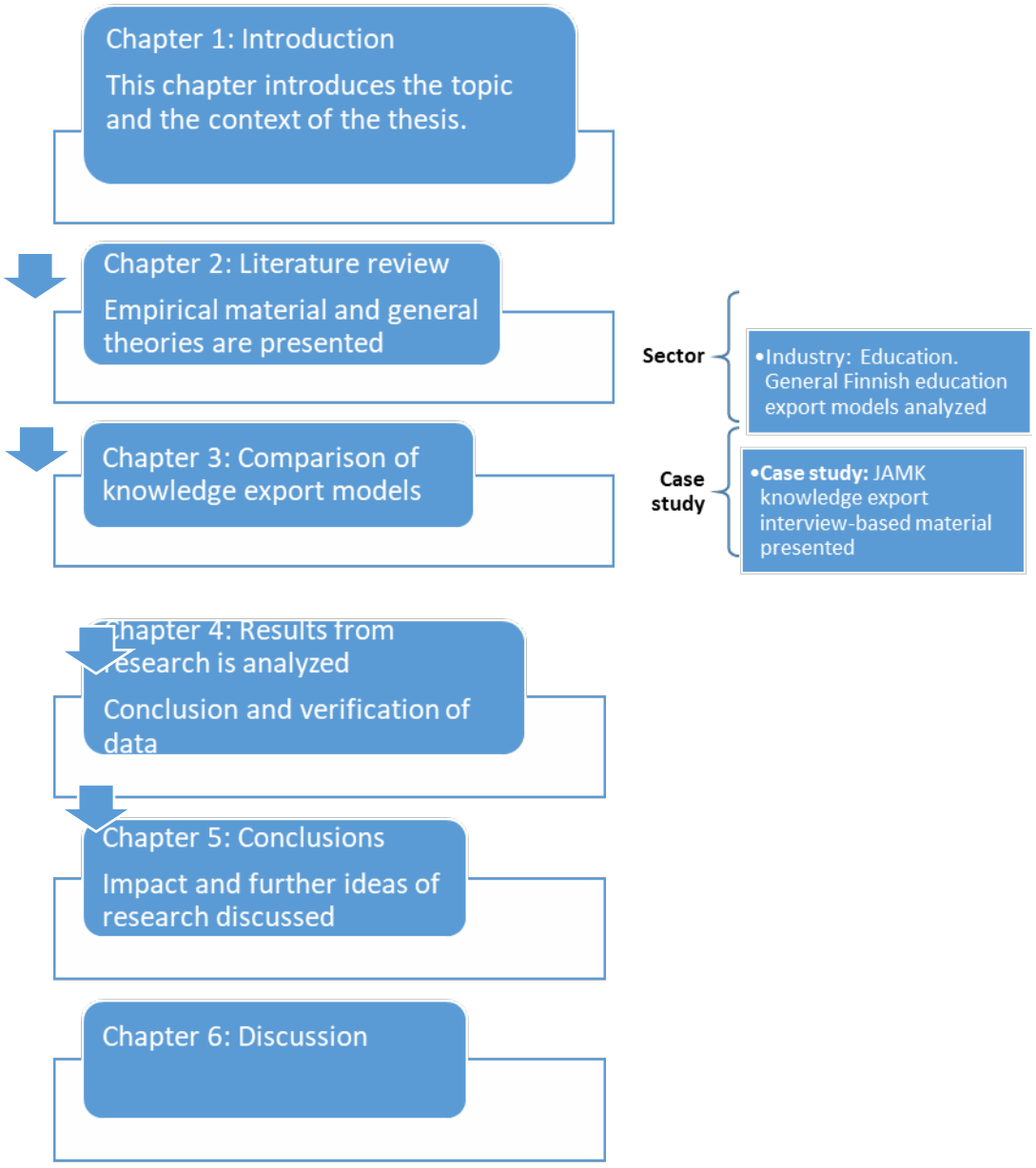
In the literature review below, I have defined knowledge and knowledge transfer concepts from the institutional and commercial point of view in order to give a clear understanding and differences of execution of transfer in relation to evolving knowledge-based economy and where knowledge implementation in various aspects defines the destiny of performance. I have also explored factors driving the needs of “knowledge-based economy” and the role of “knowledge communities”, global networks in creation and transfer of knowledge. Individual actions are not the focus of this thesis however the concept of tacit knowledge that is stored in one’s individual mind are meant to advance an explicit perspective of knowledge resulting from shear contribution of individuals which is basically the contribution of human capital component.

I have particularly taken into account the case of Finnish education export in comparison with three other countries including United States of America, United Kingdom and Australia. And since this thesis is concerned with knowledge transfer in the global dynamic scale hence justification of the term “export” as a temporary agent of knowledge transfer. Another merit I considered in this research is the shared consistent variable of success amongst institutions selected here which have been ranked highly in global education indexes released prior to the writing of this thesis. This thesis is meant to understand the models used in the education and find similarities which enable effective transfer of knowledge. Further to that, I have also narrowed down to one institutional setting situated in Finland *(also here referred to as a knowledge-group),* the University of Applied Sciences JAMK which is emerging as a one of the growing international education institutions in Finland**.** Although some methods were not utterly consistent with other techniques, I created a harmony in order to attain equity during the next phase of data analysis. To achieve a more consistent and factual results, I corroborated initial responses through follow-up telephone calls and emailing and analyzed them accordingly against available literature.

In concluding, I analyzed appropriate knowledge transfer/export modalities relevant to the needs of the seeker (recipient) and capability of the provider

(transferee) relative to factors of competition. The goal was to develop a framework suitable for future consideration by Finnish organizations aspiring to enter a competitive market.

Diagram 1: Thesis structure



2. Literature review

In the modern-day society, knowledge assets play a major role especially for individuals, companies and institutions. And just as for knowledge itself knowledge transfer presents a clear reminiscence of an intangible resource and therefore difficult to describe in single context. Prior studies have shown that knowledge has immense contribution to product and services and that

knowledge contributes to new and unique products or services or increased efficiency which can be building blocks of competitive advantage (e.g. Argote and Ingram, 2000; Conner and Prahalad, 1996; Cyert, Kumar and Williams, 1993). Dash and Das (2010) reaffirm that a firm's probability of success depends whether its business strengths not only match the key success requirements for operating in the target market, but also exceed those of its competitors.

It is worth of saying that no wonder that in the recent times there have been concerted efforts to capitalize on the opportunities presented by knowledge initiatives by majority of enterprises both at the institutional university level and industrial sectors. Relating to Finnish education export - whether the initiatives are a sheer evolvement of less dependence on dimming returns of tangible products - there is strong evidence that over the last few years there has been a major paradigm shift in Finnish education system leaning towards the outside world. For instance, Finnish institutions and companies in different sectors are exploring different market opportunities steered courtesy of its high-quality education brand. From offering of degree programs, short courses, intensive programmes and development of curricula.

These recent education export services are good evidence that knowledge transfer can go against the traditional behavour in which organizations hoard knowledge they have. This traditional view of knowledge was to hoard it and if organizations were to share this valuable information, a competitive edge would be lost (Verna 2000b). This suggests existing transformational gaps of the past and the current where in the former most them lacked incentives or merely were rigid to share knowledge and therefore affected free transfer of knowledge. However, the modern economy tends to go against that culture by embracing an open knowledge transfer. All these activities symbolize execution of knowledge transfer projects or orientation of knowledge of some sort.

Teece (2004) echoes that the essence of the firm is its ability to create, transfer, assemble, integrate, and exploit knowledge assets. According to Teece (2004), knowledge assets underpin competences, and competences in turn underpin the firm's product and service offerings to the market.

Compared to Finland, as part of the wider exploration of “Knowledge assets”, Finnish education export initiatives have come of age putting her to the global map as the most admirable brand. Such projects as consultation and development of curricula carry a bunch if mutual benefits for the Finnish institutions and those of the recipient parties.

Xiaoying (2002) argues knowledge transfer is the process of applying effective knowledge or skills proved by practice in the different environment to enhance the production and the applied scale of knowledge. During the process, the knowledge itself might change. These changes brought about by knowledge enable recipients to integrate proven processes hence improving their systems and aiding their economic development to meet competitive dynamics in the long run. Moustaghfir (2012) emphasizes that dynamic capabilities shape and systematically reconfigure operational capabilities through assimilating new knowledge, and linking, organizing and integrating the generated knowledge into new and/or improved organizational routines. There is a flurry of tangible and intangible use of knowledge which can stir development for the host countries from sheer boost of literacy levels, re-vitalizing learning environments to increasing production capacities and effectiveness.

Relating to the empirical context of this thesis, it can be said, that undoubtedly so knowledge export is a crucial avenue to capitalize on competitive advantages for Finnish institutions to real world problems as well as enhancing the nation’s ability to internalize its critical knowledge assets for sustainable competitiveness both at nationally, regionally and more importantly at the global level.

2.1 Knowledge Revolution

For many generations' knowledge has been a symbol of heritage and treasure. It has come through different phases consisting of four analogies illustrated below (*Table 1).* In Ancient era, for instance, knowledge transfer was symbolized by means of spoken words and writings. Many cultures interacted in various ways including sharing of religious knowledge. Earlier studies of knowledge as pioneered by Douglass (*nd)* attributed to scientific knowledge that triggered advancements in engineering and architecture,

producing of remarkable monuments and buildings formed a major development in Ancient period. These developments happened diversely even as societies worked together despite deep cultural differences to ensure that knowledge was passed from one generation to another and from one context to another. Scholarly theories by author Drucker (1969) predicted the emergence of knowledge force whereas Douglass (nd) documented and concluded that indeed knowledge of history proves that modern inventions and scientific understanding was indeed the product of exchanges among many cultures, over a very long period of time. First forward, in 1990s the advent of knowledge-economy was precedented by a pile of information stored in organizational technological systems. Years before then, a vast majority struggled to find ways of re-using a chunk of information enabled by new technological computer tools. Hence recent developments where commercialization of key capital asset in the form of knowledge has made entrenched itself into the modern-day institutions whose activities are focused on knowledge creation, dissemination and knowledge re-use for purpose of economic value. Thus, the presence of vicious competition of activities such as university research for new knowledge and industrial R&D which have triggered what has emerged today as academia-industry collaborations. Chichilnisky (1996), opines that as did the two previous revolutions, it involves new knowledge about how to use a new and different fuel: information technology. This fuel is fundamentally different because it is not physical, like land and fossil fuels are. Therefore, economic progress no longer means using more physical resources. This argument relates well with knowledge activities tied to education export which require considerable amount of processes key among them – technology and consideration of other critical factors that bolster knowledge export activities while also making relevance of short- and long-term economic objectives of an organization. According to OECD (1996) technical review paper, education accounts for an average 12 per cent of OECD government expenditures, and investments in job-related training are estimated to be as high as 2.5 per cent of GDP in countries such as Germany and Austria which have apprenticeship or dual training (combining school and work) systems. Previous research into the development of competitive advantage for service firms has highlighted the importance of developing “resources/skills stock” (Dierickx and Cool, 1989;

Bharadwaj et al., 1993). However, knowledge creation alone does not guarantee any feasible results without transforming those resources into monetary value activities. Alavi and Leidner (2001) caution that organizational process of knowledge creation and transfer do not necessarily lead to improved organizational performance as organizational performance is often determined more by its ability to turn knowledge into effective action and less by knowledge itself. Underlining the wording “effective action”, it means that knowledge creation and transfer processes go beyond seller-to-buyer activity but also a constitution of robust actions implemented by organization in order to attain competitive edge over other institutions. Effective distribution of knowledge, however, also depends upon investing in the skills for finding and adapting knowledge for use, and in developing bridging units or centres (OECD, 1996).

This brings us to a pertinent question as to what types of knowledge exists and in which forms should they be deemed as transferrable and which ones are not. There are two main types of knowledge; tacit knowledge and explicit knowledge. The former means knowledge held by individuals whereas the latter is expressible knowledge. The two have symbiotic relationships as one cannot operate in isolation. Nonaka and Takeuchi (1995) suggest that tacit knowledge can be transferred face to face within organizations, but the conversion of tacit into explicit knowledge facilitates redistribution. At the macro-level, tacit knowledge is transferred in various ways such as labour spillovers, and observation of rivals, while explicit knowledge may be acquired from suppliers in the form of technology.”

While according to some scholars, for instance Argote and Ingram (2000) the focus for competitive advantage should be on resources developed or made valuable inside the organization rather than those purchased from outside it, there is views that resources in the form of knowledge assets are dynamic and that they can be acquired anywhere, converted and reused or create new knowledge. Sometimes this knowledge is hidden within dozens of databases, reports and information systems. In other cases, knowledge is locked inside someone’s head, and is lost to the organization when that person leaves the business.

Knowledge has undergone subsequent transformation over the past years *(ref. table 1 below.*

Table 1, below is an illustration of key knowledge differences in three different historical periods;

Features	**Agrarian**	**Industrial**	**Knowledge society**
Key production factor	Land	Capital	Knowledge
Wealth base of organizations	Ownership of land	Holding of capital and latest technology	processing of knowledge (tacit)
Primary products	Anything extracted from farming, breeding and mining	manufactured goods	intangible products (e.g software, corporate solutions)
Main sector	Agricultural sector	manufacturing sector	service sector
Main occupational	Farmer	Factory worker	Knowledge worker
Goals	Farmer ensuring maximum production	Reaching economies of scale	Knowledge worker enhancing quality of service

Table 1: Source: Adopted from Series of Innovation and Knowledge Management Vol. 11

In the modern-day knowledge economy management and modalities particularly used in knowledge transfer has an inspiration from the past even though it does not seem to have similar features as shown above. This is evident of agrarian knowledge transformations that were critical during the later stage of human development as experienced throughout industrial and post-industrial revolution. There were key core critical features showing how knowledge came into being from the Ancient age. Theories suggest in this

specific period that knowledge was characterized by human civilization which was seen as a “subject” for change. Scaruffi (2004) states that knowledge has been, first and foremost, a tool to become the "subject" of change, as opposed to being the "object" of change. McNeill and. McNeill (2003) conclude that steady cultural contacts stimulated the transfer of knowledge and fostered the development of technologies in areas such as navigation, war, astronomy and physics. This argument was later to be supported by a comparative analysis by history scholar, Jürgen Lenn, giving a clear hint that knowledge transfer indeed occurred amidst impediments of language, cultural settings and religious influences, which are coincidentally seen as persistent barriers of knowledge export even in the modern day. In his findings, knowledge of Mesopotamian and Egyptian astronomy, cosmology, medicine and arithmetic diffused gradually into the Greek world. Lenn describes two levels of knowledge where he argues that textual which were mainly Babylonian ascriptions formed a first-order knowledge whereas theoretical part professed by Greek philosophers (Aristotle and Plato) was second-order knowledge. Defending his arguments, Lenn writes; “This is not to say that the Babylonians did not produce second-order knowledge, but such knowledge is scarcely found in their texts.” Scholars have concluded that knowledge transfer in own version dominated historical ages in different geographical zones. Roman encyclopedists such as Pliny did, however, assemble a considerable amount of Greek knowledge, as well as knowledge from other sources, and enable the transmission of this knowledge through the European Middle Ages (. Len, 2002, pg 90). The urge to acquire knowledge was indeed based on experience that could help one apply to prevent against certain calamities. “Ancient scholars undoubtedly wanted to obtain knowledge about the connections between certain events, so that they could intervene and perhaps prevent an otherwise probable future event from occurring.” This is an experiment of learning and experience with which one affects the other in practice. Knowledge in the past was almost completely tied to the underlying economy of labor but little on modern day perspective of competitiveness. For example, literacy was closely correlated with socio-economic status, and in Babylonia for instance astronomical knowledge was pursued for agricultural and legitimatory ends, so that the pursuit of astronomical knowledge was ultimately motivated by economic concerns,” Lenn continues. However little

details are available to link knowledge in the Ancient age with the main theme of this thesis; “know-how” and the subsequent value of exploiting this component by economical means resulted in what is today view as basis of competition globally. Knowledge based theories purely focused on competition are narrow hence limiting the possibility of gaining correlation that is consistent with historical view of knowledge as a capital. This thesis is not however concerned with protection of knowledge but instead its use, exploitation as a competitive advantage for economic value. University institutions play a significant role in enabling creation, use and distribution/transfer of knowledge. Knowledge creation on the other hand ensures that knowledge assets are build or developed in order for organizations to remain abreast and sustainable in the face of competitive dynamics. Mazzarol (1998) reiterates that development of a breadth and depth in the courses and programs offered by the institution, or developing these courses to provide a degree of product differentiation for the institution is also consistent with the literature. Product differentiation is firm practice that involves making a product that is slightly different from the products of competing firms not necessarily on the same product. Merits of effective knowledge transfer depends not only on the process but also the way in which that knowledge will be absorbed and used by the receiver for purposes of mutual satisfaction.

2.2 Knowledge transfer

“Knowledge transfer” is one of the complex processes in the field of Knowledge Management (KM). It involves processes for capturing, collecting and sharing explicit and tacit knowledge, including skills and competence. For the purpose of this thesis the concept of Knowledge Transfer and “educational knowledge export” are synonyms that have been interchangeably to cover broader theme of “knowledge transfer”.

From business perspective, knowledge transfer is not only the linking of research to commercial outcomes (patenting, licensing and spin-off creation and the income streams arising from these activities) but also includes activities such as academic publication, capacity-building, contract research and consultancy, student projects in industry, conferences and seminars and

continuing professional education. While there is no consensus on definition of knowledge transfer, it would be necessary to marry definitions with the contexts in which such transfer happens. This study is concerned with fundamental process of knowledge transfer activity. Thus, the choice of *MIT Sloan School of Management (1994),* definition of KT as the effective sharing of ideas, knowledge, or experience between units of a company or from a company to its customers. The knowledge can be either tangible or intangible*."* The context by which knowledge is transferred to has to be considered when carrying out implementation activities. According to Ward et al. (2009) one of the major difficulties with deterministic approaches to knowledge transfer is that they presume that both the knowledge itself and the contexts in which it is implemented are uniform and tend not to acknowledge the complexity of the process. Tselekidis (*nd*) affirms that knowledge transfer is neither an easy nor a costless task. "Unlike information, capabilities and knowledge simply cannot be bought in market, arms' – length, transactions. Instead, they have to be gradually built through strenuous and systematic learning efforts." In the knowledge-based theory, two primary conceptions exist to integrate knowledge: direction and routine. According Grant (1996a) reliance upon direction increases with complexity of the activity, the number of locations in which the activity is performed, and the stringency of performance specifications. The mechanisms of knowledge transfer for a given competitive context shall be determined by ability of the firm to integrate knowledge components to organizational routines based on knowledge transfer activities it is involved in anchored on that nature of external demands and competition. These components of knowledge chosen referred to as tacit and explicit where the former is codified (not transferrable) whereas the other is modifiable (transferable) are vital for success of knowledge transfer. Pinch et al (2003) allude that codifiable knowledge can be expressed in various forms, and rapidly disseminated through various geographically dispersed user communities. Hansen, Nohria and Tierney (1999) share this view defining tacit knowledge saying it tightly related to a person and transfer is difficult, however, by using person-to-person contact it can be shared. Whereas explicit knowledge is gathered from a knowledgeable person, it can be stored, accessed and utilized for other objectives by any other employee within an organization. This shows the existence of symbiotic relationships between

tacit and explicit knowledge as one cannot take a single concept in isolation of the other.

Earlier concepts of knowledge further elaborated the contents of knowledge in practice. This refers that knowledge and skills can be easily taught or written down, whereas collective explicit knowledge resides in standard operating procedures, documentation, information systems, and rules (see Brown and Duguid, 1991, Lyles, 1988 Starbuck, 1992). Nonaka andTakeuchi (1995) advance this definition by arguing that tacit knowledge is can be transferred face-to-face within organizations, but the conversion of tacit into explicit knowledge facilitates redistribution. Both are very vital theoretical views that tend to suggest that actually both tacit and explicit knowledge can be transferred arbitrarily. But it is the cruelling process of transfer, amount of resources required and mechanisms that has left many organizations lurking behind especially at the advent of knowledge economy. Hansen et al. (1999) reaffirmed that sharing processes often require major monetary investments in the infrastructure needed to support and fund information technology (Knowledge has varied definitions that tends to confuse especially when read out of context. Davenport and Prusak (1998) define knowledge as "[…] a fluid mix of framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information. According to them knowledge originates and is applied in the minds of knowers. In organizations, it often becomes embedded not only in documents or repositories, but also in organizational routines, processes, practices and norms.

Matusik et al. (1998) describe component knowledge as which relates to a sub-routine or discrete aspect of an organization's operations. Whereas architectural knowledge according to Henderson and Clerk (1990) relate to the whole-that is to organization-wide routines and schemas for coordinating the various components of organization and putting them to productive use. An extension of concepts of knowledge expressed above hints at activities and engagements in different organizational set ups showing a close correlation between tacit and explicit knowledge. Previous studies have emphasized on scientific and technological knowledge, other forms such as technology-enabled business processes are also concerned. Knowledge transfer

underlines the importance of a process and its success is defined by effective implementation of Knowledge Management (KM) strategies and clear understanding of value preposition in order to remain competitive. Value preposition is an overall view of a company's bundle of products and services. Knowledge has been described in various definitions by different authors. Polanyi (1967) argues that tacit dimension of knowledge corresponds to the form of human knowledge distinct from, but complementary to, the knowledge explicit in conscious cognitive process.

The central focus of this study is emphasis on knowledge as a competitive advantage leading to realization of economic good in a competitive environment. Porter (1985) refers to competitive advantage as capability to generate profit more than average in the particular industry. In a mediative context Bengt- Lundvall (2003) asserts that while the production of knowledge is important for the overall dynamics of the global economy in the long run, the greatest economic impact comes from broadening the use of knowledge in the economy. In other words, knowledge is now recognized as the driver of productivity and economic growth, leading to a new focus on the role of information, technology and learning in economic performance (OECD, 1996).

Just like Finnish education commands superior competitive advantage, demand for quality education globally is thus a correlative factor which can be adapted and integrated into knowledge export processes in order stave off competition at the same time meet the needs of those seeking quality skills and knowledge. The field-specific study focusing on dynamic-competitive environment and organizational capability by Grant (1996a) explains that competitive advantage is determined by a combination of supply-side and demand-side factors. Consequently, universities are attempting to provide a competitive, quality educative experience to an increasingly culturally, educationally, and economically diverse student cohort, Grant continues. According to this, the success of Finnish knowledge export shall depend on among other factors encompassing aspects of competitiveness.

Competition allows the companies to compete based on their competitive advantages and capabilities in a given economy. Hudson (2012) concurs that competition expands the customers served, the needs that are met, and the

overall value pool. In todays' economy, companies design competitive strategies to outsmart rivals by enhancing the value of their product and service offerings. Hence to realize the value of knowledge transfer in a competitive export environment not only needs regular upgrade or innovation but also but concerted effort consideration of application of that knowledge assets. The ultimate goal of education and training is to acquire skills and expertise but it should be noted that dynamic processes of globalization, technological changes and the intensity of global competition are important factors to be considered for success of knowledge transfer. Gold et al. (2001) state that the successful application of knowledge management enables a firm to become innovative, harmonize its efforts better, commercialize new products quickly, foresee surprises, and become more responsive to market change (Theriou, Maditinos and Theriou, 2010). The value and worth of individual, group and corporate intellectual assets grow exponentially when shared and increase in value with use (Smith, 2011). Intellectual assets and knowledge assets are used interchangeably to refer to knowledge assets in this study. Hegarty (2000) alludes that competition intensity as a factor that distinguishes education from other sectors is certainly relevant, but it belongs more to the context of knowledge generation and use rather than to the nature of a knowledge base. Carrington et al (2007) agree that education export market is highly competitive especially among English native countries (Carrington, Meek & Wood, 2007). The trigger of the Finnish national education system to enter international arena is based on its competitive advantage – high quality education system. This system has been boosted by ubiquitous innovativeness in technology industry hence giving her a starting point in the global market. As far as education is concerned, it can be said that the entry of Finland into international market where other players had established themselves is a contestant one by nature and takes the form of a "latercomer." Porter (1982) illustrates in five-force factors of competition that; entry, threat of substitution, bargaining power of buyers, bargaining power of suppliers, and rivalry among current competitors that determines strength of competitive position. However, this goes beyond established competitors mainly United States of America (USA), United Kingdom, Australia and Canada. When applying Porter's framework, it can be stated that Finnish

knowledge export with already strong brand position gives her an upper hand against other competitors.

Porter (1982) noted that even a company with strong market position in an industry where potential entrants are no threat will earn low returns if it faces superior, low-cost substitute. This argument is echoed by John A. Mathew's;

They can accelerate their uptake and learning efforts utilizing various forms of collaborative processes and state agencies to assist with the process, bypassing some of the organizational inertia that holds back their more established competitors (Asia Pacific Journal of Management, 19, 467–488, 2002).

Grant (1996a) comparing resources versus competition argued that markets for resources have become subject to the same dynamically-competitive conditions that have afflicted product markets, so knowledge has emerged as the most strategically-significant resource of the firm. Mateescu *et al (2009)* underline that human abilities, knowledge, information and ICT sector have a positive influence on economic strategic advantage between productive agents. It is as if the basis of competition is knowledge combined with other external aspects.

Grant (1996a) argues that, if competitive advantage in dynamic market settings is critical dependent upon establishing first-mover advantage then the critical merit of firm networks is in providing speed of access to new knowledge. This argument linked to internalization processes quashes hopes for a new entrant to the market as they lack first-mover advantages. Internalization is a process of embodying explicit knowledge into tacit knowledge (Nonaka, 1995).

Relating to the empirical context of this study, I would argue that the absence of networks for Finnish institutions could impede not only effectiveness of knowledge export, but also the pace at which it implements knowledge transfer. Consequently, there will be make less or no economic value. Justifiably, possessing competitive advantage in form of knowledge assets alone is not enough to obtain economic value. Finnish knowledge export business models have no commonalities per se hence lack the element of

systematic mechanism effective to knowledge transfer and integration particularly in the face of heated market competition. It is therefore critical to view competitive advantage or knowledge export activities vis-à-vis market dynamics - competition. The process of comparing export activities in relation to market is mainly predisposed to institution's strategic function. Finnish education export strategy published by the Ministry of Education and Culture (2010) underlines enhancement of international competitiveness but statement itself is too broad considering the fact that Finnish institutions are merely "infants" of the global environment thus other key external factors. "Measures must be taken to maintain and enhance the international competitiveness of the Finnish education system (Ministry of Education and Cultural, April 24, 2010)." Institutions were therefore going to adopt multiple knowledge export strategies. For example, in one region, Middle-East (Emirates, Qatar & Dubai) Public-Private-Partnership (PPP) model has been used by Finnish education export entities. In other contexts, direct engagement through private cooperation has been applied. Whereas in others networking and train-the-trainer's models have been largely in debate as a systematic approach. From the analysis, it is difficult to make a deduction whether these approaches take into account market forces – and therefore the efficiency of export models implemented.

The most prominent approach used is knowledge transfer between firms and research institutions which means basically translation of research work into innovative solutions but not considering the dynamics of a competitive environment as they are only based on individual learning activities and outcome of knowledge anchored on specific goals, for instance developing certain drug to diagnose a malaria disease.

Spender (1992) recognizes, firms are engaged not only in knowledge creation but also in knowledge application. Infact Morone and Taylor, (2010) in the theory of knowledge diffusion and innovation cautions that Research & Development conceived in laboratories are no longer sufficient to put together all the required knowledge it takes to be competitive. Yet it is the integration of knowledge that gives it more effectiveness of use and application. By extension, Nonaka (1990), Clark and Fujimoto (1991), Wheelwright and Clark (1992) contribution to this view is that much of the research into the

management issues concerning the integration of different types of specialized knowledge has been within the context of new product development.

Education sector offers such evidence where Knowledge transfer in the industrial ages was marginally reduced to production of tangible assets and very limited on academic research or intangible assets like knowledge.

Organizational knowledge itself is at the center of all themes and issues surrounding the knowledge management field (Jassimudin, 2012). These include knowledge generation, knowledge codification/storage, integration and transfer of knowledge. Therefore, this critical discipline demands broader understanding of other interrelated components of knowledge assets which are not only tightly focused on already created knowledge. Knowledge assets are not just the knowledge created like patents, know-how, technologies and brands but it also includes knowledge to create knowledge such organizational capability to innovate (Ichijo and Nonaka, 2007). The backbone of this thesis relates mainly to the third component of knowledge – knowledge transfer, in the context of education as it is key to competitive advantage and future organizational value. Nonaka and Teece (2001) concur that modern corporations will need to evolve into a knowledge-generation, knowledge integrating and knowledge-protecting. This implies that some aspects of knowledge even though they can be integrated and transferred into operational stream of the organizations, would need protection. Knowledge creation on the other hand ensures that knowledge assets are build or developed in order for organizations to remain abreast and sustainable in the face of competitive dynamics. But knowledge creation alone does not guarantee any feasible results without implementation of varied actions. Alavi and Leidner (2001) caution that organizational process of knowledge creation and transfer do not necessarily lead to improved organizational performance as organizational performance is often determined more by its ability to turn knowledge into effective action and less by knowledge itself. Underlining the wording “effective action”, it means that knowledge creation and transfer processes go beyond seller-to-buyer concept but also a constitution of robust actions implemented by organization in order to attain applicability and adoption of knowledge being transferred in exchange for something of

economic value. In the education context though, most recent literature underlines experience and knowledge transfer techniques as a key factors for educational programs. Adam et al. (2014) concur that development of educational projects require complex knowledge and experience in many fields, such as: psychology, creativity, overall curriculum, design, programming, computers, and most important knowledge transfer techniques.

2.3 Resource-based view theory

There are two main theories advocated by earlier proponents based on resources and knowledge. Penrose (1959) first developed a concept of competitiveness based on competencies. Similarly, trio scholars Wernerfelt (1984), Rumelt (1984) and Barney (1984) further developed this concept proposing that the firm as a collection of individual unique resources. These authors claim that this collection is increasingly knowledge-based. Drawing from author's varied concepts, it is therefore prudent to focus on two main theories in context. The two are Resourced-Based View and Knowledge-Based View (KBV) theories. In resource-based perspective, the company commands certain resource attributes with highly competitive advantage. Barney (1991) and Wernerfelt (1984) contends that the possession of strategic resources provides an organization with a golden opportunity to develop competitive advantages over its rivals. Proponents of RBV agree that sustainable competitive advantage (SCA) stems from having a set of unique resources that create value in the marketplace (Medcof, 2000). These competitive advantages in turn can help the organization enjoy strong profits. An extended view by underlines that RBV of the firm draws attention to the firm's internal environment as a driver for competitive advantage and emphasizes the resources that firms have developed to compete in the environment. Amit and Shoemaker (1993) enhance this discussion, adding that the combination of resources over time allows for the evolution of specific capabilities which optimally lead to competitive advantage. A resource is valuable to the extent that it helps a firm create strategies that capitalize on opportunities and ward off threats. Conner (1991) emphasizes that performance variance between firms depends on its possession of unique inputs and capabilities. Indeed, this argument relates to the Finnish education

system acting as a strategic resource whose unique attributes form a bunch of competitive advantages. Steininger et al. (2011) affirm that an important issue regarding the RBV is to define what resources in this reign actually are and how they can be differentiated. Evidently, recognition of the Finnish education globally confirms its differentiated resources. And if the Finnish education system is a collection of differentiated resources and therefore a key trigger to knowledge export, then indeed offers the credence to Finnish institutions to capitalize on opportunities in the global market despite its "newness". Chesbrough (2011) asserts in reference to new entrants to the market that these companies do not yet have a legacy business model and inertia in the market, and thereby they do not study their markets. Instead, they enact the market by creating offerings that reveal hidden demands in the customer base.

2.4 Knowledge-based view theory

In Knowledge-Based View (KBV) knowledge is regarded as a generic resource which to some extent can provide a competitive advantage if, together with other resources, is expressed in skills and utilized strategically (e.g. Barney 1991; Penrose 1959; Grant 1996b). This argument justifies conceptual framework proposed in this thesis. It directly relates to firms' capabilities (knowledge assets) and firm's uniqueness (resources) out which when systematically applied (systems & processes) can yield a competitive advantage in a competitive environment (market). Omerzel and Gulev (2011) refer competitiveness as the ability to provide products and services, as effectively as, or more effectively and efficiently than the relevant competitors.

While relating knowledge and resource theories, Prahalad et al. (1990) sum that resource-based theory treats enterprises as potential creators of value-added capabilities, and the underlying organizational competences that involves viewing the assets and resources of the firm from a knowledge-based perspective. Maier and Remus (2002) concludes that assets in question could be physical assets, knowledge assets (intellectual capital) as well as human resources, which in turn determine the capabilities of a firm. Grant (1996b) refers knowledge as a principal productive resource of the firm. The two main types of knowledge are tacit and explicit. There seem to exist relationship

between organization resource and knowledge as variables of competitiveness. Cole (1998) acknowledges that together with traditional resources (Land, Labour and Capital) knowledge is a determinant element of the firms and nations competitiveness. Daft (1983) enhances this view stressing that “firm resources include all assets, capabilities, organizational processes, firm attributes, information, and knowledge”. The resource-based view of the firm recognizes the transferability of a firm's resources and capabilities as a critical determinant of their capacity to confer sustainable competitive advantage (Barney, 1984). These theoretical claims however fall short of the context of knowledge transfer/knowledge export which is the main focus of this study. It is therefore critical to examine knowledge perspective in light of the current context just like in a real-world situation – recognizing the impact of environmental conditions synonymous with modern knowledge economy.

> *‘The most effective modern economies will be those that produce the most information and knowledge.’ (The Lisbon Council Policy Brief: The Economics of Knowledge, 3/7/06).*

Argote and Ingram (2000) and Jasimuddin, (2008) asserts that knowledge transfer is widely emphasized as a strategic issue for organizations competitive advantage and as a source for firm competitiveness. Zack (1999) further explores this debate noting that competitive advantage arises due to the strategic use of resources and capabilities, of which knowledge is believed to be the most significant. In this era, institutions find themselves under constant pressure due to the radical changes advanced by increased knowledge demands. Van Buren (1999) compliments that Knowledge Age, as a new era which is likely to have a radically different outlook and which will entail a new business compass to traverse. Whether a firm is eyeing new product development, new market, increasing product value, knowledge shall remain a critical resource yet it is still not well articulated in organizational systems.

DeNisi et al. (2003) RBV of the firm is a suitable approach to understand competitive dynamics. It is the basis of mechanism that makes knowledge transfer meaningful yet contributing to economic rent. Curado and Bontis

(2006) underscore that characterizing knowledge as the nature of most knowledge-based resources being mainly intangible and dynamic, allowing for idiosyncratic development through path dependency and causal ambiguity, which are the basis of the mechanism for economic rent creation in the Knowledge-based view of the firm. Conner and Prahalad (1996) argue that clearly there is a body of literature that considering KBV of the firm as being the essence of the RBV of the firm. According to these authors there is an emerging strategic management literature on the RBV that points out knowledge as the basis for competition. Coincidentally, this study has given a clear distinction between the two theories and found complementing factors that supports the need for alignment to strategic framework in knowledge export programs.

2.5 Competitive advantage

Bridoux (2004) defines competitive advantage as superior differentiation and/or lower costs by comparison with the marginal (breakeven) competitor in the product market. Barney (1991), says that a firm is said to have sustained competitive advantage when it is implementing a value creating strategy not simultaneously being implemented by any current or potential competitors…" Khan (2014) further argues that to secure the competitive advantage, firms should be able to continuously acquire, create and disseminate knowledge across various levels of the organization. Ling-yee and Ogunmokun (2001) refer competitive advantage as competitive strength relative to competitors in export markets. Competitive advantages can be achieved through cost advantage, or a differential advantage. Cost advantage is attainable when the firm offers its product/service at a lower price, mainly due to lower production, procurement, distribution, and allied costs; while a differential advantage is attained when customers perceive a consistent difference in important attributes between the firms offerings and those of competitors (Bharadwaj, Varadarajan and Fahy, 1993; Day and Wensley, 1988). While author's opinions vary in definitions given here, there seems to be a correlation between competitive advantage and customer satisfaction by companies. However, to sustain these competitive advantages is a key challenge for competitors due to the nature of competition in the market. Studies have

determined that the source of sustainable competitive advantage is knowledge. Nonaka (1991) asserts that in an economy where the only certainty is uncertainty, the one sure source of lasting competitive advantage is knowledge.

Concerning the empirical case of this, Finnish education export, I would say that the major impediment common with the Finnish education export is finding a systematic path to endear its competitive advantage (s) particularly in a competitive environment. This goes with views of Grant (1996a) who extends argument suggesting that in order to create a competitive advantage, firms need to harvest and exploit knowledge. Companies compete on the basis of how it uses its knowledge resources in its core competencies. Warkentin, et al. (2000) posit that organisations are encouraged to work "in close co-ordination to optimize the flow in the entire supply chain". Competitive advantage is derived from the value chain thus companies that have effective knowledge transfer strategies can gain from its distinctive and unique value preposition. Morone and Taylor (2010) affirm that knowledge is a non-rival good and can be exchanged without decreasing the level of knowledge possessed by each trader." access the value of their knowledge assets and therefore enjoy competitive advantage over others. However, trade-off of such undertaking arises through efficiency and equity.

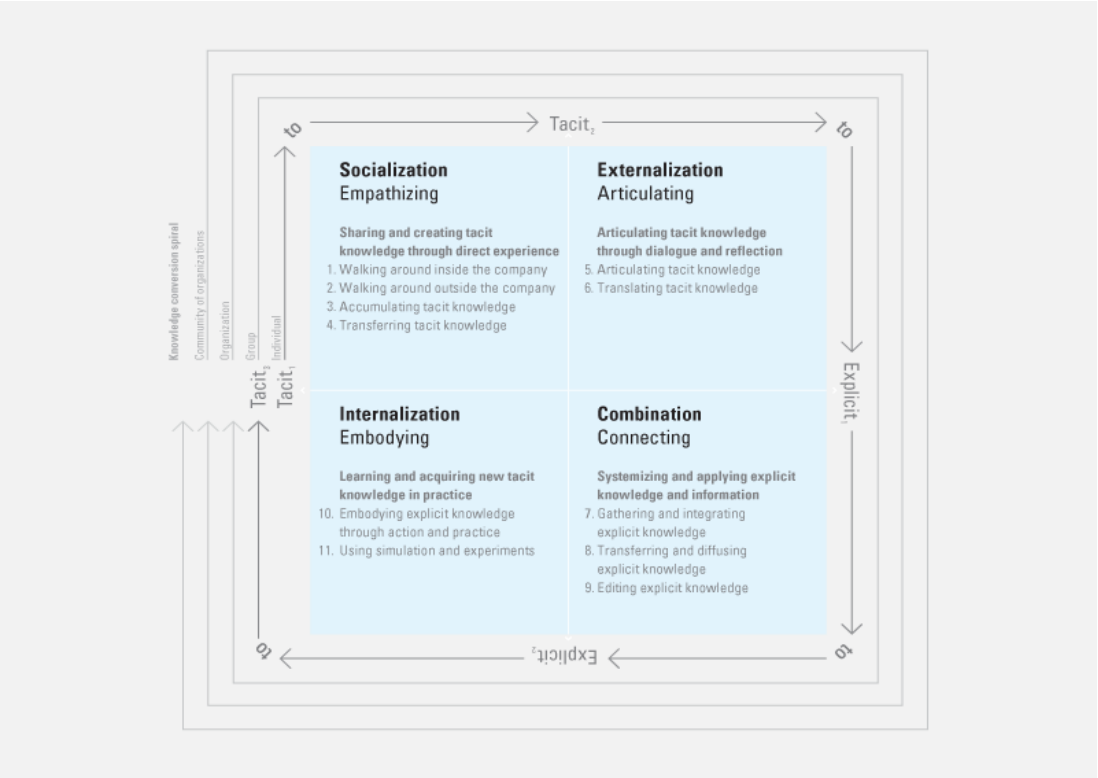
There seem to be a theoretical link between knowledge assets as a source of competitive advantage. Effective exploration of these assets for strategic needs makes firms competitive. Pralahad and Hamel (1990) posits that sustainable competitive advantage is dependent upon building and exploiting "core competencies"- those capabilities which are fundamental to a firm's competitive advantage and which can be deployed across multiple product markets. Indeed Allen et al. (2013) reaffirm this argument that the basis of competitive advantage is the company's resources referring to knowledge and other capital assets. Prahalad and Hamel (1999) assert that in strategy, knowledge is used to establish a competitive advantage. It stems from a different context: it is no longer to adapt to the environment or to position on a defined market but to build the market and to identify new competitive rules, imposing its own solutions as technical standards. Competitive advantage can therefore then be attributed not only to the ownership of knowledge assets

and other assets complementary to them as well as the ability to combine knowledge assets with other assets including human resource needed to create value. Strategies, knowledge, competences, architecture and co-ordination are among key knowledge core features.

2.6 Knowledge management models

Popular models cited in the field of Knowledge Management (KM), for instance, SECI model popularized by Ikujiro and Hirotaka (1991) (shown below) describes the behavioral context of a firm in knowledge transfer. It is dissected into four main components; Socialization, Externalization, Combination, and Internalization, also abbreviated as SECI. This model which came to be popularized in 1991 and later years attained recognition as a useful and rigorous approach to describing the ways knowledge is generated, transferred and re-created in organizations. Bose (2004) argues that SECI processes work through organizational processes such as: offering training programmes, creating communities of practice and encouraging knowledge sharing and providing time and space for practicing knowledge activities. Nonaka (1991) concludes that successful companies are those that consistently create new knowledge, disseminate it widely throughout the organization and quickly embody it in new technologies and products. SECI model has however faced a diverse criticism as being subjective and static framework as it is only concerned basically with knowledge creation process through managerial authority. Wei *et al* (2012) elevate this statement adding that with the continuous economic and social development, increasingly diverse knowledge creation activities across organizational boundaries is becoming a new focus, especially in heterogeneous organizations context (such as University-Industry Collaboration). Another critique of SECI model, Gregorio et al. (2008) argued that, the four modes of knowledge conversion are flawed and the SECI framework omits inherently tacit knowledge.

SECI model as shown in Table 2 below;



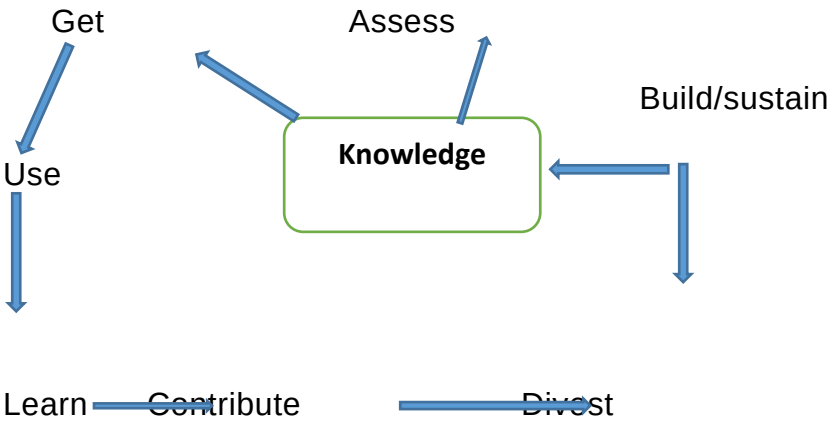
Another limitation attributed to SECI model is that it fails to incorporate other factors mainly external dynamics of knowledge processes. It can be concluded therefore that, the ultimate strategic focus of SECI model is creation of knowledge for re-use by means of wide dissemination. And since this study is not mainly concerned with knowledge creation/conversion, it is prudent therefore to align the theme with a concrete framework that justifies a foregoing variants requisite to efficient and effective knowledge export taking into consideration the context. Singh and Zollo (1998) argue that firms should align knowledge strategies along with task characteristics. Carneiro- da-Cunha *et al* (2011) underscored three major influencers that relate to external environment namely; (i) development level of host country, (ii) psychic distance (iii) and business distance. They further pointed out that among these one is related to firm characteristics – status of the exporting activity; and one is related to strategy – systematization of export planning.

Relating Finnish education export, it seems that systematization and experience are what lacks in part within the Finnish knowledge export programs yet it forms the significance of undertaking education export activities. Therefore, I agree with Madu (1989) who emphasizes that in order

to enable a successful knowledge transfer process it has to be integrated into national development process. Herout and Schmid (2015) caution that it is not the extent or the success of the project that are key but its significance, it's potential to provide relevant information to learn from the practice. To corroborate this fact, knowledge-based theory provides indeed a cycle in which knowledge transfer happens within the value chain and relationship between actor's i.e organizations and its customers involved in interactions and roles to create both tangible and intangible products which author terms as "value network" (Allee 2000). In education export involves a process of network of agents involved in execution of activities either for commercial, social or other benefits. Timo Juntunen, education export manager at JAMK says that "Education export implicates to commercial activities meaning that nature of "export of education expertise" is profit-oriented. The 21st century concept by Sveiby (2001) seem to have a high correlation with knowledge activities since great attention is placed on the value created whenever there is conversion or an activity involving knowledge transfer by people. Thus, a desirable model for this case would be Bukowitz and Williams's (1999) knowledge management model. I think that this this specific model is symmetrical to the core characteristics of Finnish education export although slightly differs in contextual applicability. It is based on four core principles; get, contribute, assess, build and sustain.

The underlying emphasis on learning, innovation and sustainability attracted my attention as they seem to directly relate to global dynamics of competition. Indeed, it is only by learning and innovating in a continuous process that any venture similar to Finnish education export shall be able to effectively increase performance and remain competitive. Pasha and Pasha (2012), emphasize of Bukowitz & William's model that KM model depicts the process that defines the strategy for management to build, divest, and enhance knowledge assets. It is a model that emphasizes the "why" and "when" aspects." The strengths of this model rest on its strategic focus, which essentially puts knowledge management action into context. It is also worth noting that the notion of "divestment" is included - something which is often missing from KM models. Figure 3 illustrates Bukowitz & William's model.

Diagram 2: Bukowitz & William's model



Source: Bukowitz and William (1999)

In the analysis of "New Generation Knowledge" Grant and Grant (2008) find that firms have specific strategies for knowledge management to realize the benefits. Relating Finnish education export, evidence-based of the Finnish education system suggest that it lacks integration and so the difficulty in sharing and distribution are concerns that can be remedied by deployment of a systematic model encompassing the key aspects in the proposed framework. This takes us to another knowledge transfer model which has been widely ignored by many practitioners in knowledge management. Leonard-Barton (1995) in fact amplifies discussion on the modern-day knowledge driven economy. In Leonard-Barton's model various activities that include shared and creative problem solving, implementing and integrating new methodologies and tools, experimenting and prototyping, importing and absorbing technologies from outside of the firm's knowledge have been taken into account. Also adopted in recent research of Sivasubramanian (2016) it has four core capabilities framework; These are physical systems, employee knowledge and skills, managerial routines directing resource accumulation and deployment creating the channels through which knowledge is accessed and flows and the organization's values and norms.

However, to conclude that these models explained here are a panacea to competitive demands will be short-sighted conclusion. I think that Bukowitz & William's model aims to be triggered by market-driven opportunities or demands, and they typically result in day-to-day use of knowledge to respond

to these demands. This argument indeed describes the need for assessment, build/sustaining, or divesting stages which are more strategic, triggered by shifts in the microenvironment. These stages focus on more long-range processes of matching intellectual capital to strategic requirements. Microenvironment constitutes factors or elements in an organization's immediate area of operations that affect its performance and decision-making freedom. These factors can be for instance, competitors, customers, distribution channels, suppliers, and the general public. It is therefore vital to keep into consideration the role played by microenvironment while formulating strategic models for knowledge export as it informs deeper understanding of the applicable environment –market. On contrary Market-Based-View (MBV) perspective relates to organization's external environment. Wang (2014) defines strategic position as a firm's unique set of activities that are different from their rivals. Alternatively, the strategic position of a firm is defined by how it performs similar activities to other firms, but in very different ways. This argument relates directly well to the Finnish education as explained in the literature and the knowledge export activities are to be considered crucially important for its performance relative to competitors'.

2.7 Types of competition

There are three main types of competition and its characteristics as illustrated as below:

Figure 2: Types and characteristics of competition

Category	**Characteristics**	**Number of competitors**	**Barriers to entry**	**Product type**
Monopoly		Single	Very high	Unique product
Monopolistic		Many	Low	Differentiated
Oligopoly		Few	High	Standardized/different

				iated
Perfect competition		Many	Low	Standardized

Source: Harford (2008)

Hegarty (2000) argues that competition intensity as a factor that distinguishes education from other sectors is certainly relevant, but it belongs more to the context of knowledge generation and use rather than to the nature of a knowledge base. Evidently, from the Ancient times, there is existence of what could have been the basis of two divergent science propositions - one that was justifiable and the other which was not. Grabhoff (2012) argues; “While the objectives of science include the acquisition of truth and the avoidance of errors by following methodical procedures, with reasonable decisions being made about the appraisal of hypotheses and the acquisition of empirical data, these goals are absent in the pseudoscience, which serve other, ideological orientations than those of truth.” According to him, these kinds of procedures, despite not standardized in this era led to need for better understanding of what were regarded as “hard-to-solve” problems at different settings. Nicholls (1998) supports this view that the quest to understand knowledge requires analyzing complicated problems, challenging assumptions, and forging new and innovative solutions. Prusak (1996) highlights the significance of knowledge even more by saying: "The only thing that gives an organization a competitive edge-the only thing that is sustainable-is what it knows, how it uses what it knows, and how fast it can know something new.”

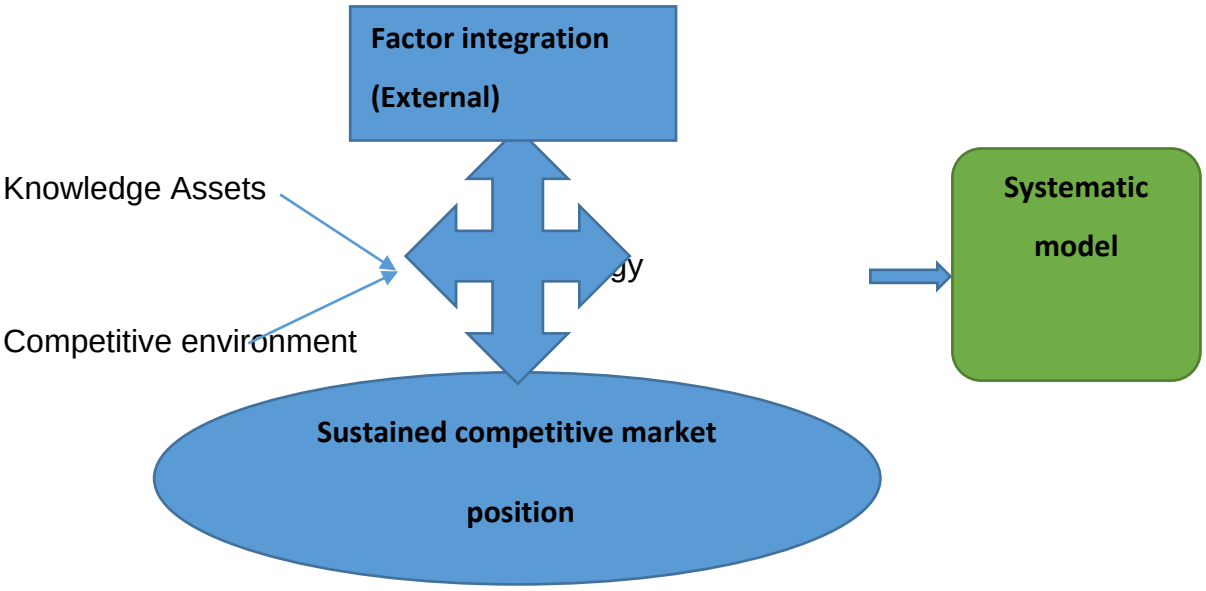
Some aspects of ancient knowledge critical to today’s extensive innovations differs from the fact that competition for know-how remains the main goal. According to soma analysis it tends to be collectively owned and takes the form of stories, songs, folklore, proverbs, cultural values, beliefs, rituals, community laws, local language, and agricultural practices, including the development of plant species and animal breeds. Traditional knowledge is mainly of a practical nature, particularly in such fields as agriculture, fisheries, health, horticulture, and forestry (Shimray, 2007).

From the background of historical knowledge, below is an illustration of contrast and features of knowledge in the period starting from Ancient, Renaissance to Industrial revolution. The latter will be dealt with independently in-depth considering the influence and the evolution of a new concept-knowledge-based economy.

2.8 Conceptual model for knowledge export

In this literature review, I have analysed broadly the concept of knowledge, knowledge transfer, knowledge management and types of competition. To answer to the more theoretical research objective; What distinctive models are best suitable for knowledge transfer or export in order for organizations to be competitive – I have drawn the model which is presented below.

Figure 3. Conceptual model for systematic knowledge export program



Original source: Villar et al. (2014) (*Modified).*

3. Research Methodology

In my research, I applied qualitative data collection methodology. As for qualitative method, I conducted interviews to obtain vast amount of responses

relative to theme applying unstructured question approach. I also carried several face-to-face interviews, emails, telephone and observations. I also used secondary data methodology through reading and analyzing library materials, online sources, published journals and newspaper materials. The ultimate goal was to obtain meaningful quality data to enrich the objective of my thesis.

Research methodology chart

Objective: Predict causal relationships

To describe characteristics of phenomena

Question type

Open-ended

Closed-ended

Format

Videotapes, and field notes, (transcribed

Management information systems, library, journals,

Reporting

Data analysis

Report writing

Ethics & safety

voluntary participation, informed consent, PDA

Figure 1 above shows Research Methodology chart

There were some instances of the methodology selected where techniques would prompt further probing due to complexity on part of respondents owing

to limited time frames and sensitivity of information. In such cases, I resorted to alternative data collection tactic by sending advance interview questions to the targeted respondents.

> *Susman and Evered (1978, p. 582), 25 years ago, went so far as to claim that: There is a crisis in the field of organizational science. The principal symptom of this crisis is that as our research methods and techniques have become more sophisticated, they have also become increasingly less useful for solving the practical problems that members of organizations face"*

3.1 Data collection

This thesis is primarily based on interviews of different stakeholders in the education export conducted via mail and face-to-face. Polit and Beck (2014) argues that researchers have primarily conducted face-to-face interviews but with advances in technology, multiple options such as telephone, videoconference, email, and text message interview methods for data collection now exist. It can therefore be categorized as qualitative data. Table 3 below provides a list of interviewees as distinguished by positions held at the time of conducting the interview. Interviewees were identified by letters A, B, C and D whereas their responses which were mainly via email are in italic format. This prescription was deliberately chosen in order to discern the questions from the answers particularly in the written form. Respondent C and D features a transcribed version of a recorded interview carried within an educational setting. The latter's transcribed interview response appears in appendices section. I took note of grammatical errors from the respondents' and therefore maintained originality of the text as it is. Although it would be have been of greater value to encompass commercial sectors, time constraints on the part of respondents was a major impeding factor. However, interviewees' past personal experience in the commercial sector filled this gap as if it were a direct sectoral source.

Field	**Title**	**Organization**

A. Global Education Services	Senior Advisor	SEAMK
B. Education export Finland	Director	EDUFI Finland
C. Global Competence	Project Director	JAMK
D. Education Export	Officer	JAMK

Table 3. List of interviewees

4. Results

In this chapter I am presenting the main results. I begin by analyzing the findings from the empirical data collection (4.1 and 4.2.), followed by more general analysis on the Finnish export model. I end this chapter by highlighting the main features of education models of UK, Australia, USA and Canada.

4.1. Actors in the Finnish education export

There are over 80 selected full members participating in the Finnish education export and another 20 associate members invited to participate in the export programmes supported by the Finnish government. Private enterprises form part of the groups engaged in export of Finnish education with nearly 40 of them also invited. The export programs target four major target markets that include China, Latin America, South-East Asia and the Gulf states. These programmes are focused on educational sectors, educational concepts, services and technological products. Currently education export products are for instance, degree education, short programmes, intensive programmes, development of education, curricula, learning environment, learning methods and institutional internationalization, consultation, evaluations. In addition, to these services, growing number of Finnish edutech companies are exporting their products, particularly in the fields of Educational technologies, E-learning materials and E-learning environments.

According to the interviews, competition from established educational export players such US, Australia, UK and Canada continue to remain a major challenge for the Finnish knowledge export programmes. One of the emerging

trend of this study was the intra-competition between the Finnish institutions in the international markets. Respondents were of a consensus that a collective cooperation should be forged among the Finnish institutions of higher education, vocational training colleges and local companies. Perhaps this explains the significance exhibited by existence of a universal model of knowledge transfer.

4.2. Promoting Finnish education export activities

Obstacles. The interviewees stated that there are still some legal obstacles (e.g. on upper secondary education). However, on higher education, there are a few legal restrictions for ‘eduexport’ as the government is nowadays allowing selling whole education programmes abroad as well as charging degree from students coming outside of European Union (EU). Also, restrictions affect provision of Master Degree programmes which remain the tenets of major achievement for recipient host countries, if it was to be offered besides degree programmes. Unfortunately, competitors on the other hand have been offering such master programmes for a while. It is expected that the education export will grow significantly during the upcoming years. The interviewees were rather satisfied with the way how Finnish Government and Education Finland program aim at providing universities and by extension private sector with opportunities to share best practices. Just recently, the Ministry of Education Finland launched a knowledge network as part of efforts to export Finnish knowledge. It is no wonder that major policy reviews has been undertaken with an aim of promoting internationalization in Finland. “The Ministry of Education and Culture is establishing a Team Finland Knowledge network to enhance Finnish education and research cooperation and the export of Finnish knowledge, expertise and educational innovation,”(*press article, 18.1.2018).* However, the interviewees think that the competition is getting tougher as the need for education, not only in developing countries but also among wealthier consumers in emerging markets (such as China, Vietnam) are growing. One interviewee summarized this well:

"*The market presence is crucial in order to make sustainable business. Thus, the network of Finnish educational export operators will be widened globally during the forthcoming years."*

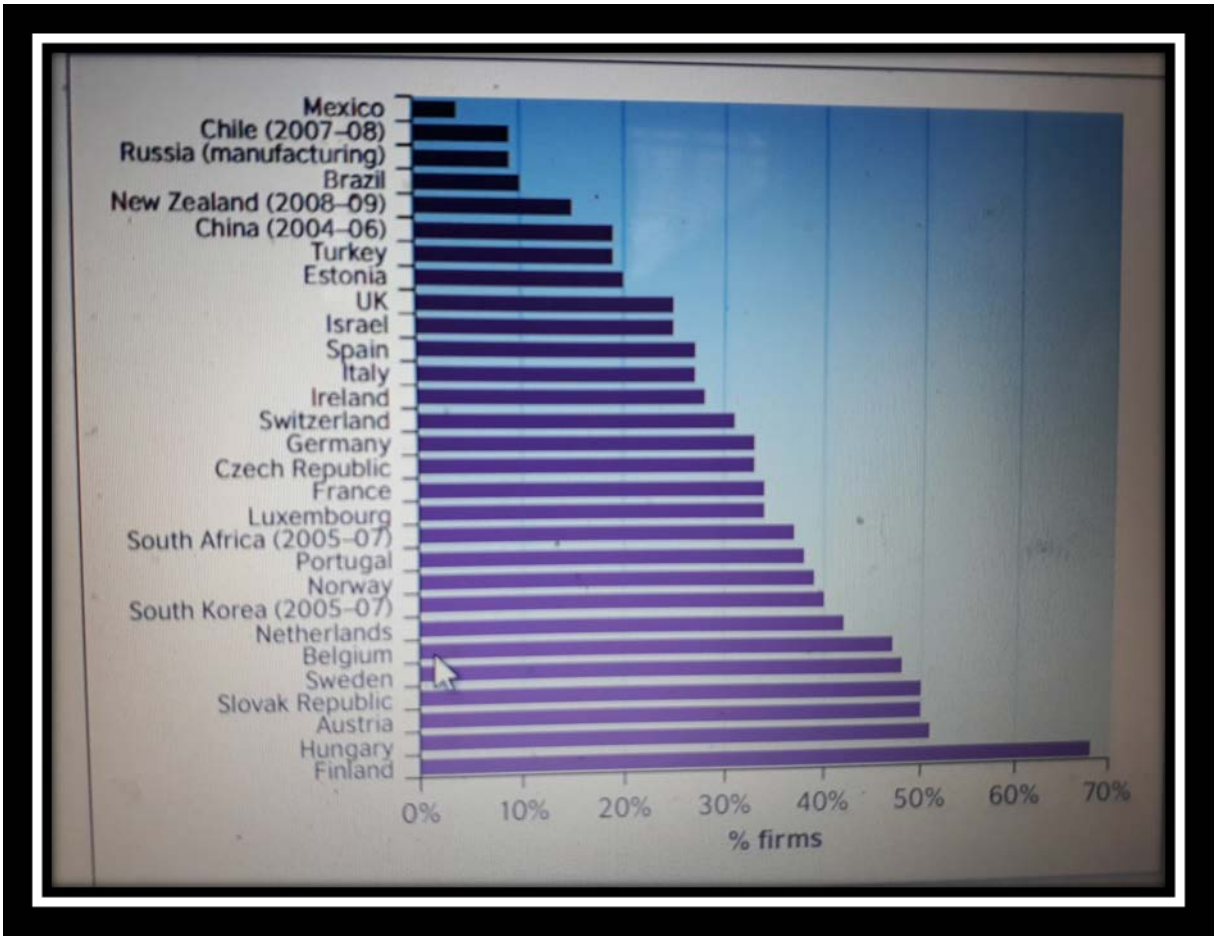
Finland today has one of the most respected and potentially powerful national education "brands" in the world. In its 2016-2017 Global Competitiveness Report, The World Economic Forum ranked Finland's primary school system as #1 in the world out of 138 nations, and its higher education system as #1 in Europe. Currently, Finland is becoming one of the leaders in education export. Finnish education system is highly valued worldwide and there is demand for Finland's education expertise. The good brand of Finnish school system and also benefits the education export in the higher education field. As one of the interviewees says:

"*yes definitely,– the Finnish Education system is seen as a 'model system' for many countries and is thus a base for educational export. We are having Finnish Brand promotion is under discussion and how we can utilize that."*

4.3 Knowledge Export and Finnish Education system

Knowledge Transfer' or otherwise referred here knowledge export has gained much more attention among different actors in the field of knowledge management. Education is one such practice of knowledge transfer. Finnish education system export venture can therefore be said to be a "practice of knowledge export" in the form of education which is a fundamental strategic asset owing to its unique attributes of colossal competitive advantages. It has consistently maintained strong global footprint over the last years of review. This has been due to multi-sectoral architecture of innovation cutting across crucial industrial sectors of economy largely technological and highly-skilled human capital. Success of many Finnish companies has been triggered by robust strengths in sectors of technology, innovations, effective state systems and the high quality of education taught across universities, vocational colleges and schools and even pre-school. It is as a result of knowledge capital that Finnish companies have been able to hit the global market with much success for many years.

Table 1.1 Share of firms collaborating on innovation with higher education or government research institutions – large firms (2006–08).



Source, OECD 2006

According to recent assessments, it has been proved that the Finnish educational system stands out amongst the global best in the ranking order. PISA or an assessment “Programme for International Student Assessment”, by Organization for Economic Co-operation and Development (OECD) countries is based on an internationally established assessment structure of 15-year-olds, which measures “literacy”... in the broad sense of a continuum of competencies of the student ((OECD, 2004 [2003]: Finland had topped the PISA rankings in 2000, 2003, and 2006, and consistently ranked near the top in other years (*Business Insider:* Dec. 3, 2013). And if the Finnish education system is a collection of competitive advantages and therefore a trigger of recent concerted urge for knowledge export, then indeed persistence of the Finnish institutions to capitalize on opportunities in the global market as a new entrant confirms theoretical link suggested by predecessors of resource-based view. Madhani (2010) describes RBV in context; “it draws upon the resources

and capabilities that reside within the organization in order to develop sustainable competitive advantages." Internal resources and capabilities determine strategic choices made by firms while competing in its external

Unites States of America (USA)	Australia	United Kingdom (UK.)	Canada	Finland

business environment. Konttinen et al (2011) opines in reference to new entrants to the market that these companies do not yet have a legacy business model and inertia in the market, and thereby they do not study their markets. This confirms theoretical claim discussed earlier in the introduction of this thesis that knowledge resources alone is not a sufficient condition to achieve competitive advantage. Instead, they enact the market by creating offerings that reveal hidden demands in the customer base (Chesbrough, 2011).

4.4 Competitor's export models

In the table below I have combined briefly the main features of the education export model of UK, USA, Australia and Canada. I selected these countries as they have long-history in the education export field and have penetrated significantly the market, particularly in several Asian and in few African countries.

Table 2. Brief description of key players in the education export market;

Devised franchised and articulated programs. "We needed both strategic, institution-wide partnerships, and academic unit-based collaborations that are more focused in scope. (American Council on Education, 2011)"	Australia's export-education model is based on a public-private partnership that is market driven and regulated at the national level. In 1986, the federal government changed the funding model for international students from taxpayer-subsidized to export driven, making it illegal for universities to subsidize the cost of foreign students' tuition from government funds. (*World Education* *Reviews 2009)* *Hybrid model constitute* augmentation where international branch campuses in developing countries exist. Australia as the dominant play and also fly in-fly out arrangements, twinning agreements, articulation arrangements • Australian universities set up a non-profit organization, the IDP Education Australia, wholly owned by the universities • Predominantly 'in situ' branch campuses	It is purely backed by government's vigorous 'brand image' marketing programmes that seek to promote UK universities i.e Education Counseling Service of the British Council and the Department of Trade and Industry which established an "Education and Training Export Group" Policies are geared towards encouraging partnerships, bilateral agreements and "system-to-system" engagements for sectors supporting education exports with a view of	Gained a shift where Universities move academic programs abroad through joint degree programs, twinning partnerships and branch campuses.	Follows a scholarship model is highly influenced by the strong equity principle that dominates the Nordic values. - Recently (2016/17 introduced new legislation for Non-EU students to pay tuition. - Four-level matrix-organizational, regional, national and international - *Source:* Walid El Cheikh (2015)

	• Distance learning • Complement of distance learning within Australia (Deloitte Access Economics, 2015)	reaping from commercial value exchange of education		

Table 2.1: Programmes, models applied and respective target countries

Education programme	**Type of model**	**Provider**	**Target countries/recipient**
English programmes Nursing, Business	Business Canvas & Train-the-trainers model have been utilized by Finnish universities Network model	Finland	Middle-East, Dubai, Kazakstan
Engineering, Business, Arts, Economics, Technology	Diplomatic, live student fairs, virtual student fairs, and trade missions for education professionals *(2016) Top Markets Report Education*	United States of America (USA)	China, South Korea, Saudi Arabia and Canada
	international branch campuses (IBCs, now twinning arrangements/joint programmes/ franchises, overseas campuses and	United Kingdom (UK)	All Common Wealth countries (Asia and Africa). Malaysia, China, Singapore, Pakistan, Nigeria, Hong Kong, China, Sri Lanka, Egypt, Oman, Ghana, United Arab Emirates, Greece,

	distance learners respectively joint & partnership arrangements, overseas campuses are subject of debat		Mauritius, India, Kenya, Trinidad & Tobago, Ireland, Saudi Arabia, Zimbabwe, Zambia etc
Business, Engineering, Social Sciences, Health & Education	Strategic alliances and partnerships Agency recruitement	Canada	Singapore, India, China, Brazil, the United States, France, Mexico and Germany
Arts and science, arts and law, or commerce and engineering	Public-private partnership that is market driven and regulated at the national level Export model; joint and double degree programmes, partnership arrangements with foreign institutions or via traditional classroom and practicum teaching through Australian campuses overseas	Australia	Singapore, China, Mauritius, Hong Kong, Malaysia, Srilanka, Vietnam, United Arab Emirates (UAE)

5. Discussion

The fundamental theoretical research objective of this thesis was to analyze what distinctive models are best suitable for knowledge transfer or export in order for organizations to be competitive? The answer to this has been presented in the figure 3 (chapter 2.7). In addition, this thesis had three more empirical oriented research questions: What is the nature, extent and direction of the Finnish export education program? How does the Finnish

knowledge export sector position itself in the global market in comparison to the established international competitors? And what is the role of the Finnish government in promoting knowledge export?

Partly, the findings were discussed during the literature reviews provides a reflections to the theoretical concepts. Here, I am providing an outlook of the results.

There is strong evidence that over the last few years there has been a major paradigm shift in Finnish education system leaning towards the outside world. For instance, Finnish institutions and companies in different sectors are exploring different market opportunities steered courtesy of its high-quality education brand. From offering of degree programs, short courses, intensive programmes and development of curricula. All these underscore a growing pool of activities by Finnish institutions endeavors in the global arena.

Finnish education export initiatives have come of age putting her to the global map as the most admirable brand. Such projects as consultation and development of curricula carry a bunch if mutual benefits for the Finnish institutions and those of the recipient parties. Undoubtedly, knowledge export is a crucial avenue to capitalize on competitive advantages for Finnish institutions to real world problems as well as enhancing the nation's ability to internalize its critical knowledge assets for sustainable competitiveness both at nationally, regionally and more importantly at the global level.
Relating to the empirical context of this study, I would argue that the absence of networks for Finnish institutions could impede not only effectiveness of knowledge export, but also the pace at which it implements knowledge transfer. Finnish education system has unique attributes, which form a bunch of competitive advantages.

Concerning the empirical case of this, Finnish education export, I would say that the major impediment common with the Finnish education export is finding a systematic path to endear its competitive advantage (s) particularly in a competitive environment.

Relating Finnish education export, it seems that systematization and experience are what lacks in part within the Finnish knowledge export programs yet it forms the significance of undertaking education export activities. Therefore, I agree with Madu (1989) who emphasizes that in order to enable a successful knowledge transfer process it has to be integrated into national development process.

The findings of this thesis show that there is a strong value in deploying systematic approaches for knowledge export programs in a comprehensive manner encompassing both public institutions and private sector. As expected, the respondents of the interviews shared a common opinion that, extensive resources should allocated in order for knowledge transfer initiatives to achieve its intended objectives. It is however of significance to deploy resources when opportunities present potential high economic gains. This means mapping of knowledge transfer opportunities in the market and aligning them with organizational integrative strategic models vis-avis competitive forces. Since education export is a larger part of the Finnish national development strategy, forging a common goal in the foreign market with assistance from defined and effective models would have added value than competing against each other. The government has a stake of responsibility in ensuring the existence of policies and legislation aimed at intra-university collaborations in various aspects targeting global market with a common objective. It is a fact that most competing countries in the education/knowledge export have further employed scholarship programs. This is a developing area of discussion among the Finnish universities with a section questioning its sustainability.

6. Conclusion

This thesis examined - both in theoretical level and in empirical context of (Finnish) education export - factors that drive successful knowledge transfer in a competitive environment. Here I offer brief conclusion on this topic.

In today’s competitive world, there is no doubt that organizations are tied in a fierce rivalry. The trajectory unto which education export falls appears to entirely under assumption when compared to other ideal ventures in goods

and serve industry. Past theories have focused the theme of knowledge transfer in the larger dimension of Knowledge Management (KM) discipline. This topic has however been a subject of many definitions. There is divergent literature understanding of knowledge transfer as a component of KM hence it has continued to attract different comprehensions.

Infact, education export theories are more leaned on “student mobility.” Universities exporting knowledge or education abroad have often been omitted in the academia. This thesis is grounded on the study of knowledge transfer as an impetus providing companies to compete on level of knowledge assets they possess. It is important to note that, this thesis has addressed the missing gaps by identifying two perspectives. Firstly, this study has underscored organizational knowledge assets as significant set of intangible resources key to competition. Secondly, it is on the basis of these assets that an organization reaps economic benefits. However, it would be good to understand that this takes an exhaustive process to achieve success. Nearly every day, there are new ways of doing things different to what competitors do. These are model and strategy-driven activities as argued in this thesis (pg35-36). Bukowitz & Williams model for instance, relates to firms’ capabilities (knowledge assets) and firm’s uniqueness (resources). Key fundamental question tackled by this thesis is what effective models then should a company adopt in order to succeed in knowledge export ventures in the face of stiff competition. In connection to this, recognizing the dynamic nature of competition, education by its contextual form is normally seen as a social course or other means not for profit-orientation. In the findings of this thesis, I have determined that the source of competition is knowledge and that those companies that are capable of presenting differentiated competencies are able to sustain their competitive advantages in the market. This brings us then to the final objective of the thesis which was to ascertain what model of knowledge export would be best suitable in order to gain advantage over rivals.

There are two dimensions that this author analyzed to arrive at exquisite data during the stages of the study. It was critically important to relate the topic to previous research in the product market and service industry. Activities such as execution of educational practices and organizational routines which

squarely fit to the bill of this thesis have emerged as key areas of research and thereby empirical evidence captured in part of this thesis may lack extensive data due to the infancy nature of the field. Not until the advent of information era that, firms begun to realize the importance of intangible resources. For instance, knowledge economy has indeed illuminated academic and industrial cycles due to its role in defining sustainability of an organization. Although discussions and arguments have swirled around capital assets in the form of knowledge for a while now, it is only recently that knowledge economy has been featured in academia and industry. This confirms a major shift between organizations wielding on their knowledge repositories against those that views its value by turning them into meaningful economic gains. Research findings showed that the process involved in knowledge transfer or also referred here as education export requires commitment of huge resources, conducive legislative environment and expertise with knowledge of the target-country market. Apart from these, there are also hardly expressed challenges relating to logistics, worker motivation, political environment and specific reforms affecting the sector in question. All this bunch of issues present a tricky balance both for implementers and the recipients of the services hence consideration of these critical factors when formulating applicable knowledge export model is vital. Previous studies have out rightly ignored the role that factors like resources, motivators, and channels of knowledge transfer alongside foreseeable contingencies play when organization desires to achieve effective and efficient knowledge transfer programs. While there is not any defined path of success for knowledge transfer programs that runs in isolation at any given time, integration of these determinant factors in a holistic manner is virtually significant. According to Foss and Pedersen, (2002, p. 54), affirms that knowledge transfer is not a total replication of knowledge in a new location, rather, it involves the modification of some existing knowledge to a different context – ‘‘what is transferred is (usually) not the underlying knowledge but rather applications of this knowledge in the form of solutions to specific problems.” Context application as observed by expertise practically tested models that typically enable systematic ways of knowledge transfer. Unfortunately, due to varying contexts for different geographic zones, knowledge export model proposed here is not a fundamental one-fit-all type of

a model. It varies from one context to another as change is always inevitable in every given context.

6.1 Recommendations

There is need to incorporate a systematic and holistic knowledge export model which seeks to respond not only to competitive demands but also sustainability in the market. This requires continuous process of innovation, creativity and learning for organizations. Quoting from Harris and Li 2009; Gkypali *et al*, empirical findings, 'self-selection' and 'learning by exporting' and in some cases the existence of a two-way relationships (endogenous) and exogenous between exporting and innovation activities are crucially important for export performance. It is therefore a prerequisite for institutions involved in knowledge export to consider both factors that affect the implementation of knowledge export initiatives. This means in context that exporting activities do not only serve as a proxy to other factors but also requires ancillary methods of deployment, diverse rates of implementation and choice of priority areas and frequent assessments of performance and competition. Finnish institutions should consider a holistic framework accentuating an alignment of activities that defines the strengths of the Finnish other sectors beyond education system; i.e technological and innovation capabilities. In some cases, it might also be more considerate to forge a partnership with these key sectors as education system is wholly a combination of different players from diverse sectors both private and state-controlled. In strategy formulation, perhaps future knowledge export ventures should further articulate various categories of knowledge transfer as highlighted by Dixon (2000) following a certain strategic model like the one proposed here. The author identifies five categories of knowledge transfer;

1) Near Transfer ("transferring knowledge from a source team to a receiving team that is doing a similar task in a similar context but in a different location")
2) Serial Transfer ("the source team and the receiving team are one and the same").
3) Far: Similar to Near with tacit knowledge about a non-routine task.

4) Strategic: Complex knowledge with transfer teams separated by time/location; differs from Far in scope
5) Expert: Explicit knowledge about an infrequent task; transfer does not involve interpretation— it only involves clear statements

6.2 Limitations

I acknowledge that this study has several limitations. Firstly, this thesis is too much theoretical oriented. Secondly, the amount of interviews collected do not allow to make generalizations concerning the Finnish education export system neither does it reflect in entirety strategic approaches undertaken in collaboration with commercial enterprises. Nevertheless, I have utilized quite much archival data which have deepen my own knowledge and understanding on the Finnish education export. In reference to appendices, there are glaring linguistic errors in respondent's interview which the author deemed necessary to keep the originality of the interviewee's views without necessarily altering with the context and objectives of this study. Hence, through the text I have compared the theoretical concepts of the Finnish education export in a more general level. This demands a lot of attention from the reader. While the models discussed here share less or more similarities in context, an in-depth research to unearth relevant systematic and collective models applicable to a given competitive environment and mutual to both educational institution and commercial sector would be relevant for future studies.

Reader's note

Theories and models discussed in this thesis ideally recommended to be deployed holistically based on contextual relevance.

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Appendices

Appendix 1 A. Interview scripts

MINISTRY OF EDUCATION FINLAND

Dr Lauri Tuomi
Director Education export Finland

i) What is the nature, extent and direction of Finnish education export programs?

Education Finland is a governmental programme supporting the growth of the educational export in Finland. Some figures:

- *83 selected full members*
- *37 companies invited to the support group for organisations aiming to export*
- *abount 20 invited associate members*
- *4 target markets: China, Latin America, South-East Asia, Gulf*
- *the offering covers all educational sectors, educational concepts, services and technological products*
- *aim +100 MEUR*

- ii) Considering crucial support needed in education export programs by the universities and stakeholders involved, would you say there has been enough support from national government?

The support structure of Education Finland programme has been planned together with the educational exporters. Also, the support is given by Study in Finland service for the marketing of degree programmes.

- iii)If not, what obstacles are there in the implementation of your education export programs? How have you been able to deal with these obstacles?

In Autumn 2017 a survey on obstacles were made: there are still some legal obstacles (e.g. on upper secondary education). however on higher education there are on a few legal restrictions for eduexport – however e.g. the 3 years working experience rule on master level education in UASes has been seen one of the legal obstacles.

- iv) In your assessment, do you think these obstacles can be dealt with by adopting certain government policies and government-designed models?

yes, definately

- v)Considering tough competition in international market, are there specific policies or initiatives currently designed and promoted towards enhancing the Finnish competitiveness internationally?

yes – the Finnish Brand promotion is under discussion

- vi)Finnish education system is recognized globally, do you think this offers the government ability to effectively integrate policies in favour of education export programs?

yes definately – the Finnish Education system is seen as a 'model system' for many countries and is thus a base for educational export

- vii)Given that education sector is principally a government's social role, how do current policy interventions affect university's education export business models in relation to global competition?

T*he export activities as such are under universities autonomy. Government and Education Finland program aim at providing the universities with opportunities to share best practices.*

- viii)Where do you foresee the future of Finnish education system in the global market and what would be State's role?

There will be more 'Finnish' schools, institutes and university campuses in abroad- Government will support the actors on their needs to prove the quality of their concets by e.g. providing support for the foreign accreditation processes.

- ix)Are there any lessons learnt from initial entry into competitive markets? How have these lessons been integrated to promote current knowledge export programs?

The market presence is crucial in order to make sustainable business. Thus, the network of Finnish educational export operators will be widened globally during the forthcoming years.

Appendix 1 B. Interview questions and responses

Education Export Global Advisor, SEAMK

Helli Kitinoja

Seniour Advisor, Global Education Services

1. In your opinion what is your understanding of knowledge export?
   Knowledge export products are e.: degree education, short programmes, intensive programmes, development of education, curricula, learning environment, learning methods and institutional internationalization, consultation, evaluation – it is very wide concept.
2. Your institution is involved in knowledge/education export programs, what is the nature, extent and direction of these programs?
   Degree programmes (joint and double degree) – eg. Vietnam. Intensive and short programmes 2 weeks – 2 months – eg. Kazakhstan, Training for trainers – eg. China and Vietnam.
3. With deficiency of experience, how hard/easy was it to implement Finnish education export programs?
   It takes time, productization takes time and also finding markets, pricing, selling, service design, everything takes time. Staff members need also education and orientation for a new situation.
4. Could you highlight some ofthe existing obstacles that affect implementation of knowledge/education export programs in relation to competition?

In Finland we need to have cooperation among the Finnish HEIs and also between HEIs, vocational schools and other organizations. Competition among us is one of the obstacles.

5. In your assessment, do you think these obstacles can be dealt with by adopting certain export models not currently adopted?
   Together we could find out some new export models, which are not yet existing.
6. Considering competition out there, how has your institution positioned herself to battle established players like US, Australia, UK and Canada?
   Our Institution is very small compared to players like US, Australia, UK and Canada. But we have some unique products, different than they have in those countries.
7. Are there any lessons learnt from the global competitive environment?
   At least cooperation in a national level. Processes to sell degree education.
8. How have these lessons been synchronized with your current export models?
   Not so well yet.
9. Finnish education system is recognized globally; do you think this can be a key factor in your knowledge export activities?
   It is one of the key factors, but there are also other factors.
10. Given that you are majorly dependent on government resources, how have current state policies and processes affected your knowledge/education export programs?
    It has affected positively to the attitudes towards export of education. Also, strategies like "Koulutusviennin tiekartta" eg. have affected positively.
11. Where do you foresee sustainability of the Finnish education system in relation to competitive global market?
    I think the Finnish education will have even stronger sustainability in the future and also it is stronger in global education market.

Appendix 2.

TECHNICAL FEATURES	**UNIVERSITY FEATURES**
• Technology maturity	• Level of general know-how

• Technical risks • Project viability and technical feasibility • Well defined objectives • Stakeholders involvement • Application capalcity or usefullness • Strategic context	• Level of specific know-how • Researchers motivation • Staff and resources • Incentives and rewards structure • Senior management support • Strong leadership • Experience of working with industry
COMPANY FEATURES • Absorptive capacity# • Ability to integrate technology into value chain • Confidence in results • Experience of working with academia • Senior management support • Sufficient resources • Change management capacity • Effectiveness of internal communication	**RELATIONSHIP ASPECT** • Mutual confidence • Shared vision • Professional and personal relationship • Cultural interface • Establish planning and coordination • Clarity of role and responsibilities • Access to information or transparency • Flexibility • Effective project management • Long-term relationship

Factors of Knowledge Transfer Analysis (Adapted from Barbolla and Corredera, 2009)

Case:

JAMK Education export

Case: Development of Kazahkstan Healthcare system

- Development of healthcare system in Kazahkstan
- Dedicated Finnish experts involved in development of health programmes (multi-discipline; sales, pedagogic and customer service)

- Strategic entry mode followed years of assessment of target host countries
    - Assistance from Finnish embassy abroad
    - Cooperating with local host country universities and also competing internally between other Finnish universities

- Deficient resources
- Lack of total control as the institution is wholly-owned by City of Jyväskylä
- Tough legislation as institutions have not been allowed to charge for Degree programmes but this has then been reviewed and universities can charge individual fee for courses offered
- Adjust programmes according to client expectations but warned on the need to harmonize expectations and interests of all parties involved

- ***Train-the-trainer model****, possibly the model can be duplicated in East Asia as well*

- *New developments include expanding the model and synchronizing it with current technologies in order to cover a larger pool of recipients*

- *Pre-school models on higher demand including formal infrastructure, the challenge however is getting a common model for both developers and education service providers*

- *The challenge is institutional readiness to adopt branch campuses or run joint programs. Physical presence is key*