LAPPEENRANTA UNIVERSITY OF TECHNOLOGY

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Master's Thesis

IMPROVEMENT BARRIERS OF PROCUREMENT KNOWLEDGE AND PERFORMANCE

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ABSTRACT

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The aim of this thesis was to study the barriers hindering the improvement of purchasing and supply management. Additionally, the measurement and definition for performance and capability, the drivers for purchasing and supply management (PSM) knowledge and performance improvement and PSM perception were studied. To form the theoretical basis from which to understand the research, a literature review on purchasing and supply management was conducted. The theoretical literature review covers for example PSM performance, capability, knowledge management and resource-based view.

The empirical research was conducted in qualitative method. The empirical data for the research was collected using semi-structured interviews of PSM professionals in Finland. Results of the study indicate that various barriers for improvement of PSM knowledge and performance do exist and can be identified.

Based on the results, the barriers of improvement are identified as being related to lack of organizational support, lack of suitable training services, lack of motivation for improvement, lack organizational improvement culture and as the improvement not being considered important.

Furthermore, the results indicate that the practical definitions for capability and performance are varying, that improvement of PSM is driven mainly by practical factors and performance improvement, that PSM theory is viewed as being important and useful as a support for PSM activities.

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Tämän työn tavoitteena oli tutkia esteitä, jotka haittaavat hankintatoimen parantamista. Lisäksi tutkittiin suorituskyvyn ja kyvykkyyden mittaamista sekä määritelmiä, hankintatoimen tietojen ja suorituskyvyn parantamisen kannustimia sekä suhtautumista hankintatoimeen. Tutkimuksen ymmärtämistä helpottavan teoreettisen pohjan luomiseksi tutkimuksessa on kirjallisuuskatsaus hankintatoimeen. Kirjallisuuskatsaus käsittelee esimerkiksi hankintatoimen suorituskykyä, kyvykkyyksiä, tietojohtamista ja resurssiperusteista näkökulmaa.

Empiirinen tutkimus toteutettiin kvalitatiivisin menetelmin. Tutkimuksen empiirinen aineisto kerättiin Suomesta hankintatoimen ammattilaisilta käyttäen puolistrukturoitua haastattelumenetelmää. Tutkimuksen tulokset viittaavat, että hankintatoimen tietämyksen ja suorituskyvyn kehittämiseen liittyy esteitä ja ne voidaan tunnistaa.

Tulosten perusteella kehittämiseen liittyvät esteet ovat organisaatiotuen puuttuminen, sopivien koulutuspalveluiden puute, motivaation puute kehittämiseen liittyen, parantamisen kulttuurin puute sekä se, että kehittämistä ei välttämättä nähdä tarpeelliseksi.

Lisäksi tulokset viittaavat, että käytännössä näkemykset kyvykkyyden ja suorituskyvyn määritelmistä ovat vaihtelevia. Hankintatoimen kehitystä ajavat lähinnä käytännön syyt sekä pyrkimys suorituskyvyn parantamiseen. Tulosten perusteella hankintatoimen teoria myös koetaan tärkeäksi sekä hyödylliseksi hankintatoimea toteutettaessa.

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Mika Hännikäinen

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ABBREVIATIONS

HRD	Human Resource Development
HRM	Human Resource Management
ICT	Information and Communication Technology
IT	Information Technology
KPI	Key Performance Indicator
PSM	Purchasing and Supply Management
RBV	Resource Based View
SCM	Supply Chain Management

1 INTRODUCTION

The world and thus also the state of business is in a continuous state of change. The changes themselves can occur slowly, or extremely quickly, depending of the matter at hand and on what constitutes as quick or slow. In the context of business, the changes in the past decades are especially evident. In recent decades, the business has transformed to become more global and competitive. The introduction of new technologies and ideas has had substantial impact into the world of business and the world as a whole. The various changes become ever more evident when examining the field of purchasing and supply management (PSM).

PSM evolved trough the needs of businesses in changing situations and experienced various stages in its evolvement process, all influenced by the trends in business as well as the changing needs imposed by changing markets (Hopkins, 2010). Through the evolvement process, the theoretical background and practices of procurement, purchasing and supply management has become well established and related practices have become commonplace in business and in various organizations. As PSM has become a recognized, it has also been identified as a function where competence in its conduct can influence business and organizational success (van Weele and Rozenmeijer, 1996). The rising role of supply management has led to van Weele for example to state that the role of supply management and its functions can be a ‘key driver’ in firms’ short term financial state and also in long term competitive strength (van Weele, 2005).

The changes in the business environment has led to the situation where companies can no longer rely on just investing into technology and the processes to create efficient supply chain. This has led into the need to focus on human resources and intellectual assets that are important for supply management performance improvement. (Hallikas et al., 2012) The people doing the PSM and their skills and capabilities can indeed affect greatly into the end result and success of PSM activities (Green, 2010)

As the importance of purchasing and supply management performance, as well as the importance of people doing it and their skills is acknowledged, it also becomes relevant to know how it could be improved and what factors can function as barriers on improving PSM knowledge and performance. This study is to be focused on shedding light on the matter in order to uncover these possible barriers. The viewpoint of this study is to be on recognizing these factors as seen by the PSM practitioners themselves.

1.1 Research Focus and Limitations

The study will examine the perceived barriers of improvement on PSM knowledge and performance as seen by various PSM professionals and conductors. The focus will be on finding what the conductors themselves see as barriers on improving their own and perhaps other employees' skills and knowledge on purchasing and supply management.

In other words, the aim is therefore to find out what barriers could stand in the way of the organizations and the individuals that prevents or hinders the improvement of PSM performance. Identifying these barriers of improvement can help to alleviate or to eliminate them in order for the organizations and the individuals themselves to improve upon the situation. Identification of the barriers from user or supply management conductor standpoint can in its own part also open possibilities for further study on the issue and the deeper causes of the barriers. Aim is to pinpoint at least few clear and perhaps common factors that function as the barriers on the improvement.

The secondary areas of study would be on how and if the interviewees perceive and measure procurement performance, how do they perceive procurement theory and its practices overall and what factors or drivers would motivate the possible improvement of procurement knowledge and performance. The issue of how the interviewees perceive and measure procurement performance helps to form a picture on what the standpoint of the participants at the study is.

It is likely that interviewees with varying professional positions on procurement and supply management have different perceptions on the issue that can affect the results. Mapping the perceptions and the ways of performance measurement could help to explain other findings and can also help to provide independent results on the matter. Understanding and reporting how the participants perceive and measure the PSM performance is also the key to understanding further the overall picture on the improvement barriers as well. Same reasons apply on finding out how the participants perceive and what their attitude on PSM theory and its practices is. Comparing for example the results of the barriers of improvement on the participants' perception of PSM theory and its practices can help to uncover the possible reasons for the findings and as it can be possible that negative perception might affect the results. In general, also recording and reporting the results provides usable results and information in its own right as well. Lastly, the identification of possible motivators for improvement of PSM knowledge and performance could help to build recommendations for tackling the main issue of perceived barriers of improvement of PSM knowledge and performance by focusing on the right issues. By identifying what would motivate improvement it the issue of how the improvement can be improved can be better understood.

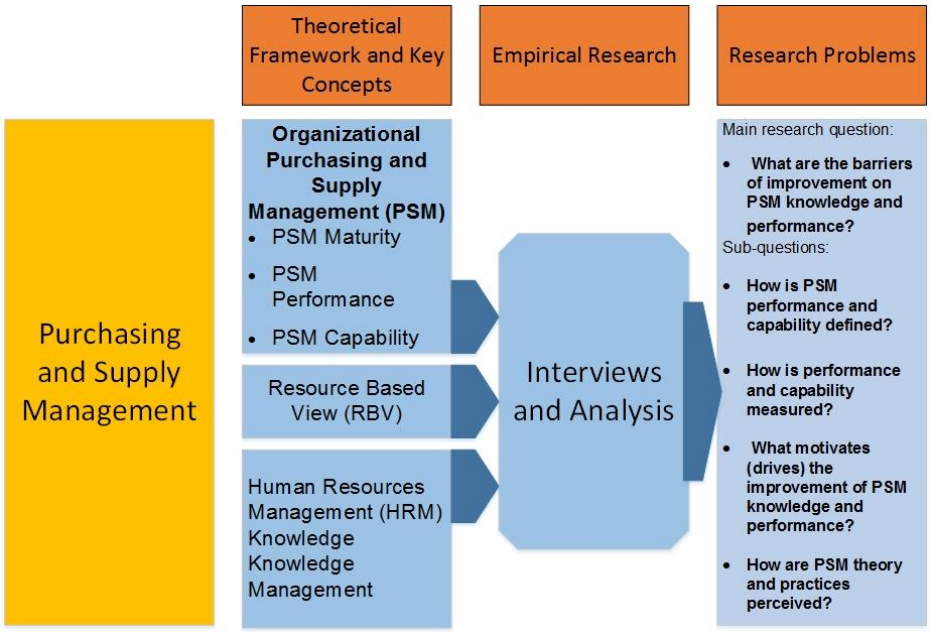

Figure 1. Theoretical framework for the thesis

This study is conducted in qualitative research method that is very common in business research (Lee and Lings, 2008). The type of research is to be semi-structured in-depth individual interview as it offers great deal of flexibility and allows for additional discussion and questions to delve deeper into the issue where necessary (Hirsjärvi et al. 2010).

For the limitations of the study, the important thing to note is that the study will not research or measure the actual purchasing and supply management performance of the interviewees or their organizations. Instead the focus is on how they measure the performance and if and what they could see as the reasons for improving the said performance and what could bar that improvement from happening.

1.2 Research Questions

The core area under research in this thesis is the presumed barriers that can possibly prevent improvement on PSM knowledge and performance. Assumption, that is to be tested, is that the barriers are likely to exist and can be identified. Hence, the main research question approaches the issue directly.

Main research question:

- *What are the barriers of improvement on PSM knowledge and performance?*

To help approach this main issue, secondary supporting sub-questions are formed. These questions help to see the overall state of the issues and especially PSM amongst the different interviewees. It can be assumed that different answers to sub-questions, as per the presented theory of PSM maturity on chapter 2.3, can be related to the answers on the main research question. Answers in sub-questions also independently help to probe the state of capability and performance measurement, state of knowledge on PSM and also on what could be the drivers that could help to overcome the presumed barriers.

Perception of the PSM theory and practices is valid as it can be assumed that negative perception is likely to be connected into view on the whole issue of improvement and barriers.

Secondary supporting sub-questions:

- *How is PSM performance and capability defined?*
- *How is PSM performance and capability measured?*
- *What motivates (drives) the improvement of PSM knowledge and performance?*
- *How are PSM theory and practices perceived?*

Through the theoretical framework presented in this thesis along with the abovementioned questions, that form the core of the empirical study, the goal is to improve knowledge on the research topic and the PSM in general.

1.3 Research Structure, Key Concepts and Theories

This thesis study is structured around six chapters. The structure of the thesis can be seen in the Figure 2.

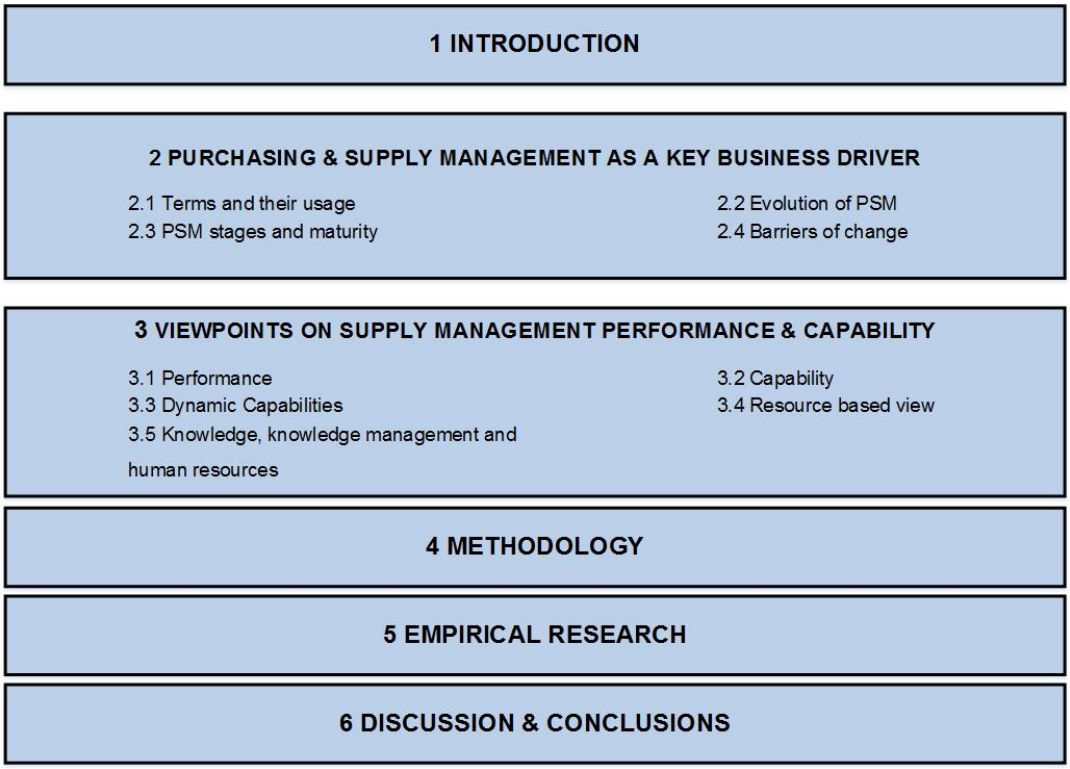

Figure 2. Structure of the Thesis

Chapter 1 includes the introduction, research focus and limitations, research questions, research framework, key concepts related to the subject. Chapter 2 is focused on presenting the essential theoretical background related to the research area with the emphasis on purchasing and supply management (PSM). On this chapter, the purpose is to examine the relevant existing theories upon which the context of the study is based on. Chapter 3. focuses on performance, capability, dynamic capabilities, resource-based view and knowledge management. Performance and capability are discussed to help formulate a general understanding on where the barriers of improvement might affect, and the other theories are introduced to give wider understanding on the issue.

Chapter 4 is about research methodology, data collection and research design that form the basis for the empirical part of the thesis. Chapter 5 deals with the empirical research part of the thesis. Research data, findings and the analysis are discussed within the theoretical framework provided by chapters 2 and 3. Chapter 6 summarizes the research and discusses the most important aspects of the study and its findings.

1.3.1 Purchasing and Supply Management (PSM)

Purchasing and supply management (PSM) forms the main basis of the theoretical framework for the study. As such, it becomes relevant to define what is exactly meant with these terms. As for the definition of the concepts themselves, the following definitions by the standard university course books on the matter shall be used in this study. The first definition used for the concepts of 'Purchasing' and 'Supply Management' is offered by Moczka et al. (2005) by defining Supply Management as: "… *a broader concept than* ***purchasing****.* ***Supply Management*** *is a progressive approach to managing the supply base that differs from a traditional arm's-length or adversarial approach with sellers*." Monczka et al. further elaborate: "*We can describe supply management as the process of identifying, evaluating, selecting, managing, and developing suppliers to realize supply chain performance that is better than that of competitors*." Moreover, that: "*Instead of adversarial relationships, which characterize traditional purchasing, supply management features a long –term win-win relationship between a buying company and specially selected suppliers*." (Monczka et al. 2005)

In other words, Monczka et al. define supply management as proactive cooperation with suitable suppliers that produces favorable outcome for both parties and encompasses more aspects than traditional buying.

Van Weele (2005) defines supply chain management as: *"…concept can be described as the management of all activities, information, knowledge and financial resources associated with the flow and transformation of goods and services from the raw materials suppliers, component suppliers and other suppliers in such a way that the expectations of the end users of the company are being met or surpassed. Supply chain management differs from purchasing in that it also encompasses all logistics activities. Moreover it entails the management of relationships not only with first tier suppliers but also with lower suppliers*." (Van Weele, 2005)

Additionally Lysons and Farrington (2006) offer the following definition for the term purchasing: *"The process undertaken by the organizational unit that, either as a function or as part of an integrated supply chain, is responsible for procuring or assisting users to procure in the most efficient manner the required supplies at the right time, quality, quantity and price and the management of suppliers, thereby contributing to the competitive advantage of the enterprise and the achievement of its corporate strategy."* (Lysons and Farrington, 2006)

Lastly, another definition for the term '*purchasing'* is offered by Van Weele (2005) as: *"The management of the company's external resources in such way that the supply of all goods, services, capabilities and knowledge which are necessary for running, maintaining and managing the company's primary and support activities is secured at the most favorable conditions."*

From these definitions, it can be seen that the concept of purchasing and supply management includes wide range of aspects and that the understanding on the scope of things that these terms include differs. It is evident that also somewhat different definitions of the terms do exist, and no single definition is final.

However, it can be seen that the term and concept of 'supply management' (or also 'supply chain management' SCM) is wider and more encompassing than just 'purchasing' with it including more functions and strategic aspects of an organization.

It is to be noted however that the issue is further complicated by the addition of the term ‘procurement’ alongside the term ‘purchasing’. Although differing definitions for both of these terms can be found, Monczka et al. (2005) for example use both terms interchangeably and similar approach is to be used on this study as well with also the PSM as the composite abbreviation term for ‘Purchasing and supply chain management’.

1.3.2 Supply Management Performance

One part of the study is to probe into the issue of examining if, and how performance is measured, thus it becomes relevant to determine what performance actually means in supply management context.

Performance is a term related to the success of the PSM function. To determine performance, a measure has to be defined. Supply management performance can be measured in numerous ways, depending on the type of activity and the wanted result. According to Monczka et al. (2005) the measures themselves fall into either of two broad categories: effectiveness and efficiency measures. Both of these in term form the PSM performance. Efficiency relates to the comparison of effort versus the results in PSM function and effectiveness relates to the ability to reach a desired outcome using the chosen course of action (Cousins et al., 2008).

1.3.3 Capability

Where performance and its measures themselves are relatively practical and ‘hands on’ –type of approach, determining capability is more ambiguous. According to Hallikas et al. (2012) the exact definition of supply management capability has not yet been formed.

Hallikas et al. further state that numerous lists that define skills and general knowledge needed to operate supply management do exist, much like mentioned above in supply management performance –definition. As for the emergence concept of capability, it has been seen to emerge from the concept of resource-based view (RBV) (Hallikas et al. 2012; Barney, 1991; Penrose, 1959; Wernerfelt, 1984). RBV itself is covered further below.

Although capability can thus arguably be seen to be somewhat vague, to define the term 'capability' in supply management context of this thesis, the following definition by Hallikas et al. is used: "…supply management capability is defined in this paper as the organization's overall capacity and ability to manage its procurement function and supply base, and to carry out its internal tasks, routines and responsibilities in order to achieve the desired results." (Hallikas et al., 2012, 48)

1.3.4 Dynamic Capability

Dynamic capability refers to the specific theory on abilities of firms to achieve and sustain competitive advantage and it is related to the resource-based view of firms. In this model the dynamic capabilities is seen to comprise from the capacity of firms to *"… (1) to sense and shape opportunities and threats, (2) to seize opportunities, and (3) to maintain competitiveness through enhancing, combining, protecting, and when necessary, reconfiguring the business enterprise's intangible and tangible assets."* (Teece, 2009). More specifically it is defined by Teece et al. (1997) via Leonard-Barton (1995) as the firm's ability to: "…*integrate build and reconfigure internal and external competences to address rapidly changing environments. Dynamic capabilities thus reflect an organization's ability to achieve new and innovative forms of competitive advantage given path dependencies and market positions*." (Leonard-Barton, 1995).

1.3.5 Resource Based View (RBV)

As the study also examines the issue of supply performance and how it is measured, the issue of understanding the sources of competitive advantage becomes relevant. Resource-based view is one theory that can be used to approach it. According to resource-based view (RBV) the performance and firms' competitive advantage in markets can be explained trough the various unique resources that the firm possesses. These resources can be further divided into valuable, rare, imperfectly imitable and non-substitutable categories. If a firm is to have competitive advantage over its rivals its attributes should at foremost be in some way valuable, to qualify as resources. Secondly, these resources should be rare in order to create competitive advantage as non-rare resources gift no competitive advantage as all competitors can also acquire them. Lastly, through imperfectly imitable and non-substitutable qualities the resources provide long-term competitive advantage as competitors have difficulty in imitating and creating substitutes for the said resources. Through having as many of these resources as possible firms can ensure to have competitive advantage. (Barney, 1991)

1.3.6 Human Resources Management (HRM)

When going into the issue of supply performance and knowledge and especially on the barriers of improvement for the said areas, human resources become notable aspect.

After all, human employees are the ones who conduct the purchasing and supply management actions and as such are the focus of this study. According to van Weele (2005) Human resources management is defined as: "…*all the activities directed at recruiting, hiring, training, developing and compensation of all types of personnel, active in both primary and support activities."* (van Weele, 2005, 10)

Porter (1985) defines HRM almost exactly same as being: *"Human resource management consists of activities involved in the recruiting, hiring, training, development and compensation of all types of personnel."*

Further that: "*Human resource management affects competitive advantage in any firm, through its role in determining the skills and motivation of employees and the cost of hiring and training*." (Porter, 1985, 42-43)

As can be seen from the above definitions, the skill and knowledge level of the employees can be seen as an important factor in the success of purchasing actions also. Therefore, it is important to also know how the individual employees could, or why can they not (the barriers) improve their expertise and knowledge on supply management and purchasing, as this study aims to do.

1.3.7 Knowledge

In the context of this thesis, knowledge on PSM is defined through the capabilities viewpoint and it is limited to mean the awareness of various PSM theories, tools, practices etc. that affect the success of PSM activities. Knowledge on PSM can be seen also as one of the sources for PSM capabilities and respectively skills can be seen as abilities that rise through knowledge or practice (Carr and Smeltzer, 2000).

Axelsson et al. (2006) define knowledge as: "*…the ability of a person to perform a task by connecting data (external sources) with their own information, experience and attitude. For example it could consist of abilities to recognize and act on specific emergent risks for project budget overruns."* (Axelsson et al., 2006, 137)

Hallikas et al. (2012) further stated that "*…human performance and knowledge management are among the most crucial issues in supply management.*" This further highlights the importance of knowledge as one of the major factors on supply management. Possible other, wider definitions of knowledge are not used within the limited scope of this thesis.

2 PURCHASING AND SUPPLY MANAGEMENT AS A KEY BUSINESS DRIVER

Often found statement regarding purchasing and supply management (PSM) in publications is that it has significantly risen in importance within organizations and firms especially within the time period that encompasses 1990's to 2000's. Monczka et al., van Weele and also Lysons and Farrington all testify how especially during this time period the PSM has become important factor in achieving positive results for organizations in regard to cost savings, quality, innovation, strategy, flexibility and numerous other areas. (Monczka et al. 2005) (van Weele, 2005) (Lysons and Farrington, 2006)

Van Weele suggest that the most important factors in the prominence of PSM have been globalization, development of new technologies (especially regarding information technology and internet) and changing desires by the consumers. These changes have resulted in PSM becoming important "key driver in business". (van Weele, 2005).

In the scope of this study the overall theoretical basis of PSM and its terminology in chapters 2.1 to 2.3 was chosen to be introduced first as it forms the basis upon which the other theoretical concepts are built upon. To understand the more complex concepts of 'performance' and 'capability' for example, one needs to first understand the more basic terminology and the wider, over-encompassing concepts of PSM. After the introduction into the PSM and the concept of maturity in the chapter 2.3, the issue of 'barriers of change' is covered as it of direct importance to the research topic.

2.1 Terms and their usage

The terms of 'purchasing', 'supply management', 'supply chain management' and 'procurement' are commonplace when exploring the literature regarding the buy-function of firms and organizations. Sometimes these terms are used somewhat interchangeably, but one can also find various examples of more exact definitions for each of them respectively also.

The definitions for these terms in the scope of this study, albeit being somewhat limited, can be found under the ‘key concepts’ –part. In this study, the terms ‘procurement’ and ‘purchasing’ are to be used interchangeably with their definition, following the style used by Monczka et al. (2005). It should be noted however, that van Weele (2005) and Lysons and Farrington (2006) argue that the term ‘procurement’ is wider than just ‘purchasing’ with it including the logistics and other forms of obtaining the supplied items or services.

In regard of the term of ‘supply management’, a separate definition is used and can be seen from the 1.3.1 chapter of this paper. The term ‘supply management’ can be seen to represent a different, even more encompassing approach than just ‘purchasing’ (Monczka et al. 2005). van Weele also makes difference between the terms similarly (van Weele, 2005). The difference of terms has also been driven by Kraljic already back in 1983 with the influential and famous article ‘Purchasing must become supply management’ in Harvard Business Review, by representing supply management as more holistic, strategic and supplier cooperative way than just purchasing (Kraljic, 1983). Through Karljic it also possible to see how wider supply management started to evolve from simpler purchasing, although both concepts continue to be used today.

As evident also from the key concepts chapter of 1.3.1, there exists various definitions for the terms used in this study. Despite the existing different definitions for the various concepts; within this study the terms ‘procurement’ and ‘purchasing and supply management’ (PSM) are used interchangeably. This is done for the sake of simplicity and in order to shortly refer to the professional process of acquiring goods and services with the use of a general term being sufficient.

2.2 Evolution of PSM

With the definitions and terminology aside, the evolutionary process, which eventually led to the rising popularity of PSM among academics and business managers, can be rather evidently seen along the large number of publications over the years.

PSM itself could be seen to date back, in one way or the other, all the way to the early history of mankind, with examples dating all the way into the 2800 BC (Lysons and Farrington, 2006). McIvor et al. (1997) date the beginning of evolution of purchasing to the 1970's with later the 'five competitive forces' (1980) and 'procurement as support activity in value chain' (1985) writings of Porter for example forming important basis. In 1993 Gadde and Håkansson noted the increasing importance of purchasing especially in the strategic sense and stated that its tangible effects had become evident during the 1980's. As for the reason of this emergence, Gadde and Håkansson proposed that it was due to the increasing specialization within industrial system (Gadde and Håkansson, 1993).

Monczka et al. (2005) trace the evolution of purchasing and supply chain management into the 1850's with the most significant evolution happening during and after the 1990's. The roots of the evolution of purchasing lie in the development of industrial system and logistical networks. First principles of purchasing came to be in the first half of the 20th century with both world wars creating new demands for industrial production. After the second world war interest into purchasing somewhat diminished until its importance rose again following the development of managerial and industrial developments and new challenges through economic recessions were presented between the late 1960's to the late 1970's. From there on, the most significant developments in purchasing and supply chain management occurred as globalization, rising competition in markets and new information technologies allowed and demanded new advancements and eventually leading into the rising importance of purchasing and SCM in organizations. (Monczka et al. 2005).

In one view, some of the phases of the PSM evolution have also been named to be the just-in-time period of the 1980s, outsourcing in the 1990's and the rise of the Internet in the 00's (Hopkins, 2010). PSM literature has also traditionally had a more manufacturing based approach on the issues it covers and has only in the recent decades become also more service based in its view (Lewis and Roehrich, 2009).

On regard to the future of PSM, it has been suggested that for example data science, predictive analytics, increased environmentalism, sustainable supply chain management or sustainable supply management (SSCM and SSM), e-commerce, logistics improvements and big data are among possible themes that could hold potential in the progression of PSM for the future (Schoenherr and Cheri Speier-Pero, 2015) (Chen et al. 2017)(Yu et al., 2017).

2.3 PSM Stages and Maturity

In somewhat similar way that PSM itself has evolved over the years, the PSM can evolve within an organization as well. This theory evolvement of PSM is also important to note as it can be seen to be connected to the supply management performance and capability theories, as for example according to van Weele (2005) the more mature stages lead to increased effectiveness or cumulative savings. Link between maturity level of purchasing and cost savings is also found to be especially true with mature level purchasing organizations (Schiele, 2007). In line with these results it can be seen that the use of maturity indicators is likely to bring positive effects on supply chain management (SCM) performance and on financial performance as well (Söderberg and Bengtsson, 2010). Low maturity level in purchasing is likely a decentralized function that operates with a less advanced approach to purchasing and also likely has low corporate coherence (Axelsson et al., 2006). Firms with short-term, cost-oriented, non-mature purchasing relationships might also hamper the development of capabilities (Paulraj et al., 2006). Thus, it can be reasoned that higher levels of maturity in purchasing are likely more beneficial and likely lead to a better outcome in purchasing actions.

To help describe and measure the level of maturity within purchasing function and organizations, a number of models has been developed. One model of maturity on purchasing is presented by Lysons and Farrington (2006). They present an adaptation of a model (Figure 3) by Reck and Long (1998) where four overall stages that define the maturity of an organization's purchasing function. In those stages, the purchasing function can be categorized to be Stage 1: Passive, Stage 2: Independent, Stage 3: Supportive or Stage 4: Integrative.

Lysons & Farrington (2006) adaptation of a model by Reck & Long (1998)	
Stage 1 Passive	**Definition:** Purchasing function has no strategic direction and primarily reacts to requests of other functions **Characteristics:** High proportion of time on quick-fix routine operations Functional and individual communications due to purchasing's low visibility Supplier selection based on price and availability
Stage 2 Independent	**Definition:** Purchasing function adopts the latest purchasing techniques and processes, but its strategic direction is independent of the firm's competitive strategy **Characteristics:** Performance based primarily on cost reduction and efficiency disciplines Coordination links are established between purchasing and technical disciplines Top management recognises the importance of professional development Top management recognises the opportunities in purchasing for contribution to profitability
Stage 3 Supportive	**Definition:** The purchasing function supports the firm's competitive strategy by adopting purchasing techniques and products, which strengthen the firm's competitive position **Characteristics:** Purchasers are included in sales proposal teams Suppliers are considered a resource, with emphasis on experience, motivation and attitude Markets, products and suppliers are continuously monitored and analyzed
Stage 4 Integrative	**Definition:** Purchasing's strategy is fully integrated into the firm's competitive strategy and constitutes part of an integrated effort among functional peers to formulate and implement a strategic plan **Characteristics:** Cross-functional training of purchasing professionals and executives is made available Permanent lines of communication are established with other functional areas Professional development focuses on strategic elements of the competitive strategy Purchasing performance is measured in terms of contribution to the firm's succes

Figure 3. Strategic stages of the development of a purchasing function (Lysons and Farrington, 2006) 11; Reck and Long, 1998)

In these stages, the position of purchasing varies from having no strategic importance to being gradually “fully integrated in to the firm’s competitive strategy and constitutes part of an integrated effort among function peers to formulate and implement a strategic plan”. Lysons and Farrington, 2006) (Reck and Long, 1998)

Additionally, Lysons and Farrington present a five-stage model (Figure 4) that originates from Jones 1999 article ‘Development models’, in which a five-stage model is introduced. The model rates the maturity/development stage of the purchasing and its performance based on its capabilities and estimated organizational contribution.

This model can also be used to valuate individual areas of activity by their development stategs within an organization to help form strategies that can address possible areas with lower development. (Lysons and Farrington, 2006)

Purchasing development stages and performance capabilities according to Jones (1999)		
Stage of development	**Capabilities**	**Estimated organizational contribution**
Stage 1 Infant	Fragmented purchasing	None to low
Stage 2 Awakening	Realisation of savings potential	Clerical efficiency. Small savings via consolidation 2-5 per cent
Stage 3 Developing	Control and development of purchasing price/negotiation capabilities	Cost reduction 5-10 per cent
Stage 4 Mature	80/20 recognised Specialist buyers Cost reductions Commencement of supplier base management	Cost reduction 10-20 per cent Acquisition costs 1-10 per cent
Stage 5 Advanced	Devolution of purchasing Strong central control Supply chain management	Cost reduction 25 per cent Cost of ownership Acquisition cost and supply chain management 30 per cent + Leverage buying Global sourcing Understanding and practice of acquisition cost and cost of ownership

Figure 4. Purchasing development stages and performance capabilities (Lysons and Farrington 2006, 12; Jones, 1999)

In somewhat similar, but more detailed model (Figure 5), van Weele argues that the development of PSM can be divided into six stages that through evolution lead to increased effectiveness or cumulative savings.

In this model, the stages are as follows:

Stage 1: ‘Transaction orientation; Serve the factory’

Stage 2: ‘Commercial orientation; Reduce cost’

Stage 3: ‘Co-ordinated purchasing; Savings through synergy’

Stage 4: ‘Internal integration; Total cost of ownership’

Stage 5: ‘External integration; supply chain optimization’

Stage 6: ‘Value chain orientation; Total customer satisfaction’

Within these stages, the PSM on first stage of lowest maturity represents a routine like approach into purchasing, where the work of purchasing professionals is a mundane and clerical in nature. Primary focus is on securing the supply of raw materials and the education of the buyers in to the purchasing is to be considered low. In the next stage, the focus is on the reduction and management of costs. Here the purchasing function turns into a specialist function and is allowed to have limited autonomy. Employee skills are ‘hands-on’ –type.

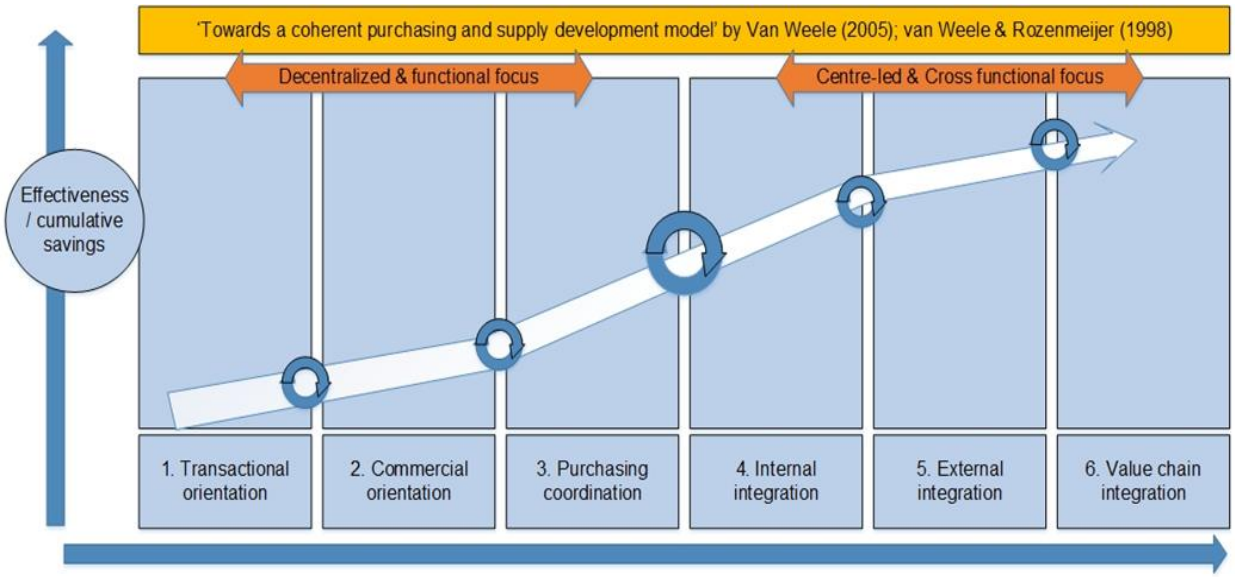

Figure 5. Purchasing and supply development model (Adapted from van Weele, 2005, 94; van Weele and Rozenmeijer, 1998)

In the third stage, the purchasing turns into coordinated function that has limited strategic dimensions. Quality rises to be one of the aims of the purchasing function and synergy is desired. In the fourth stage, the purchasing is focused on cross-functional activities within the organization and the strategic significance is noted. Process orientation is involved and the educations of the employees in purchasing have high educational level. Fifth stage the integration has advanced from internal to include the supply chain and focus is on cooperation with suppliers. Strategic integration of suppliers includes strategic supply chain methods.

In the sixth and final stage, the purchasing strategy has become part of the overall company strategy and the vision is shared by the whole organization. Objective is to create "…the most efficient and effective value chain possible to serve the end-customer." It should be noted however that van Weele places uncertainty as to whether the purchasing development matures in a continuous change or rather step-by-step. Also questionable is if the process can skip stages and if the purchasing managers are the most important actors in the purchasing development. It is also noted that the whole model needs more testing and empirical validation. (van Weele, 2005)

The different evolution models presented by van Weele (2005), Lysons and Farrington (adaptation of Reck and Long 1998 model) and Jones (1999) models can be seen in figures 3, 4 and 5.

The purchasing maturity concept has been applied for example to construction industry and could be used to determine the functionality of a business companies supply management. Furthermore, it could improve the overall performance of a company (Bemelmans et al. 2013). It should be noted however that numerous additional models have also been developed, with Úbeda et al. (2015) and Schiele (2007) counting 12 models. These models could be further divided into four categories depending on the aspects that they include and the empirical evidence supporting those (Úbeda et al. 2015) (Schiele 2007). However, in the context of this research the model by van Weele (2005), that is based on van Weele and Rozenmeijer (1998), is used as it can be used to explain why possible barriers can hinder the development of PSM maturity.

2.4 Barriers of Change

In accordance with the van Weele maturity model (2005), the purchasing function may develop into a more mature, more efficient and more strategic function over time. But other outcomes are also possible. The maturity of purchasing function can be stopped or even revert to become less mature and less capable. Axelsson et al. (2006) call these hindrances “barriers related to strategic change in sourcing” (Axelsson et al., 2006).

Axelsson et al. categorize the issues as three main aspects that form further four possible areas where the barriers for change could appear. First aspect is formed by the historically relatively low status of purchasing in organizations. The traditionally low status of purchasing may cause the importance of purchasing to be downplayed and thus reducing the drive to improve it. The previously low status of purchasing is evident also when examining the status and evolution of PSM-function in chapter 2.2., which also reveals the addition of strategic dimension to PSM occurring relatively late. Second aspect is that purchasing is strongly related to the idea of keeping costs down to minimum and thus causing aversion to possibly risky and expensive changes in its functionality.

Thirdly, the difficulty of measurement of certain aspects in purchasing has directed the measurement to be more costs and prices related, hindering the development of more difficult areas to measure (such as process development and supplier selection). (Axelsson et al., 2006)

The four main barriers that are based on the aspects presented above are: Barriers within the sourcing department, barriers in relation to other departments in the company, barriers in relation to suppliers and obstacles in relation to the overall supply network. (Axelsson et al., 2006)

In *barriers within the sourcing department* –category the barriers are formed by factors within the sourcing function of an organization. These can be for example procedures, processes, leadership, competences, attitudes and/or measures of performance.

Lack of improvement on any of these issued can hinder the development of PSM within the organization and thus prevent maturity from evolving. In *barriers in relation to other departments in the company* –category the barriers are formed by the difficulties of coordinating and communicating with other departments within the organization. Conflicts may arise from differing views on the tasks of various functions and internal competition alongside with lack of competence can lead to cooperation being difficult. (Axelsson et al., 2006)

In *barriers in relation to suppliers* –category the barriers are formed by the suppliers and their possible aversion to risks and changes. In addition, the costs of the changes and differing views on strategy can cause the suppliers to shy away from the changes and improvements. Lastly in *obstacles in relation to the overall supply network* –category the barriers are formed by the complexity of supplier networks and the intricate links between the suppliers. Changes within the network may catalyze needs for other changes that can be difficult to achieve. (Axelsson et al., 2006)

In similar fashion Storey et al. found that numerous barriers can increase the difficulty in dealing with suppliers in supply chain when implementing change to create customer responsive supply chain (Storey et al., 2005).

In other classification Fawcett et al. (2008) adapt the classification of Park and Ungson (2001) to the SCM by dividing the major obstacles of strategic SCM development as either “inter-firm rivalry” or “managerial complexity” by nature where the former describes the differing goals of organizations and poor collaboration, and the latter describes the differences in processes, structures and cultures within the firms (Fawcett et al., 2008) (Park and Ungson, 2001).

Taking into account the profound effect that the presented barriers might have in preventing PSM from developing into more mature stages within the maturity model, it is further evident that research on the subject of this thesis can be of importance.

3 VIEWPOINTS ON SUPPLY MANAGEMENT PERFORMANCE AND CAPABILITY

On relation to the effectiveness and the abilities of purchasing and supply management function in organizations, a certain set of concepts are used commonly in academic literature. The most relevant for this study are the concepts of performance and capability. The definitions for these concepts can be found in chapter 1.3. To summarize, it can be stated that PSM performance and capability are related terms which describe the different parts of the PSM function. Performance is a term under which falls a broad scope of measures and doctrines used to determine and monitor the success of PSM function within organizations and suppliers. Respectively capability refers to the skills and competences of the PSM function employees to achieve performance and success in PSM activities. (Cousins et al., 2008; Hallikas et al. 2012)

The concepts of performance and capability are introduced as they are one relevant way on how the level of PSM can be measured. They are also relevant concepts to be covered as the measurement and definition of them are part of the research setup. In addition, the related concepts of dynamic capabilities, resource-based view (RBV) are inspected as these are notable viewpoint that can in part be used to explain how issues of improvement can be approached. The ideas of human resources- and knowledge management are covered in this chapter also to address the relevant viewpoints on how successful PSM activity can be formed and what factors can affect it. The concepts of knowledge, knowledge management and human resources are covered also due to them being of importance in understanding how improvement and management of knowledge and human resources are related to the improvement of PSM.

3.1 Performance

For performance to be determined it has to be measured in some way. Van Weele states that the evaluation of purchasing performance is an important concern for many companies, yet it can also be rather unclear to measure. Performance measurement itself is not to be considered in isolation, but rather as a part of purchasing management process where planning and control are related. (Van Weele 2005)

Monczka et al. (2005) and Cousins et al. (2008) state that purchasing has along its evolution lagged behind on measuring its functions and performance compared to other business functions. Measurement of PSM is a complex issue and depending on the needs on what needs to be measured the measuring can be done in hundreds of different ways (Cousins et al. 2008). As performance and its measurement are also of direct relevance on the subject of this research, the concept and its most important contents are covered in this chapter.

Measurement of PSM performance in itself can be highly beneficial as it can help to add value in many ways. Decision making benefits by improvement of directing ability and through the understanding of cause-and-effect between processes and their outcomes. This in term helps to more easily plan, coordinate and control all the actions in organizations. Communication benefits materialize through the establishment of targets and the wider understanding of the purchasing function within the organization. Visibility benefits are benefits that are formed through the increased attention into the activities within purchasing process and with other departments. Motivation benefits are formed because measurement is likely to motivate employees to achieve set goals and relays an idea on what is important on their work. If employees see objectives being achieved through their participation, they are likely to be more motivated and feel satisfaction in their work to achieve said objectives. (Cousins et al., 2008; van Weele, 2005)

It is also suggested that performance measurement can affect three different areas in organizations. The performance measurement would have an effect on people's behavior, on organizational capabilities and finally these would in term have an effect even on the actual performance itself. (Franco-Santos et al., 2012)

Due to the nature of purchasing the measures can be difficult to form and that supply chain performance measurement and evaluation systems include many measures, with them being classifiable to two wide categories: **effectiveness** and **efficiency** measures. In those categories, the effectiveness measures examine the rate in which by certain actions the management can meet defined goals. (Monczka et al., 2005)

Respectively efficiency measures then examine the sacrifices made to achieve a determined goal and usually are focused on comparing the input-output performances of processes (Cousins et al. 2008). The way in which PSM performance is formed through effectiveness and efficiency can be seen below in figure 6.

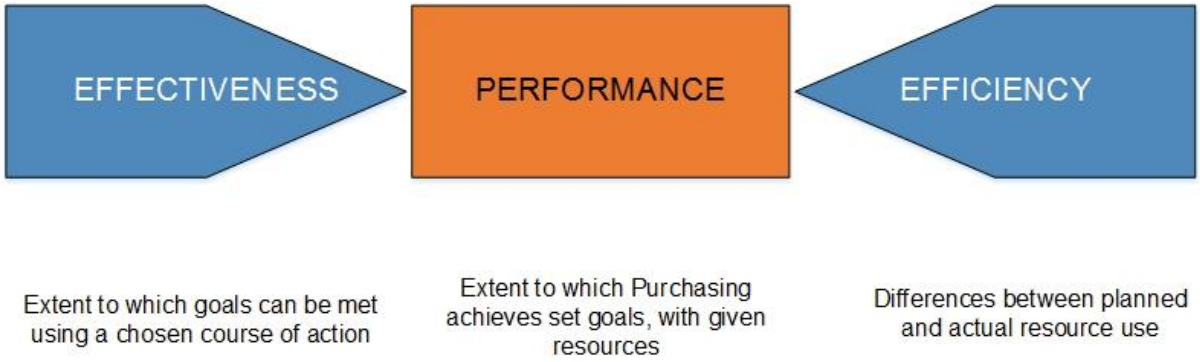

Figure 6. Definitions of purchasing performance components (adapted from Cousins et al., 2008, 149)

Van Weele (2005) similarly divides the purchasing performance measurement into two main categories of 'purchasing effectiveness' and 'purchasing efficiency', but further categorizes the areas which the measurement covers to four sub-categories dependent on the areas to be measured. These four sub-categories are: purchasing materials costs/prices, Product/quality, purchasing logistics and purchasing organizations. An adaptation of this categorization can be seen in figure 7.

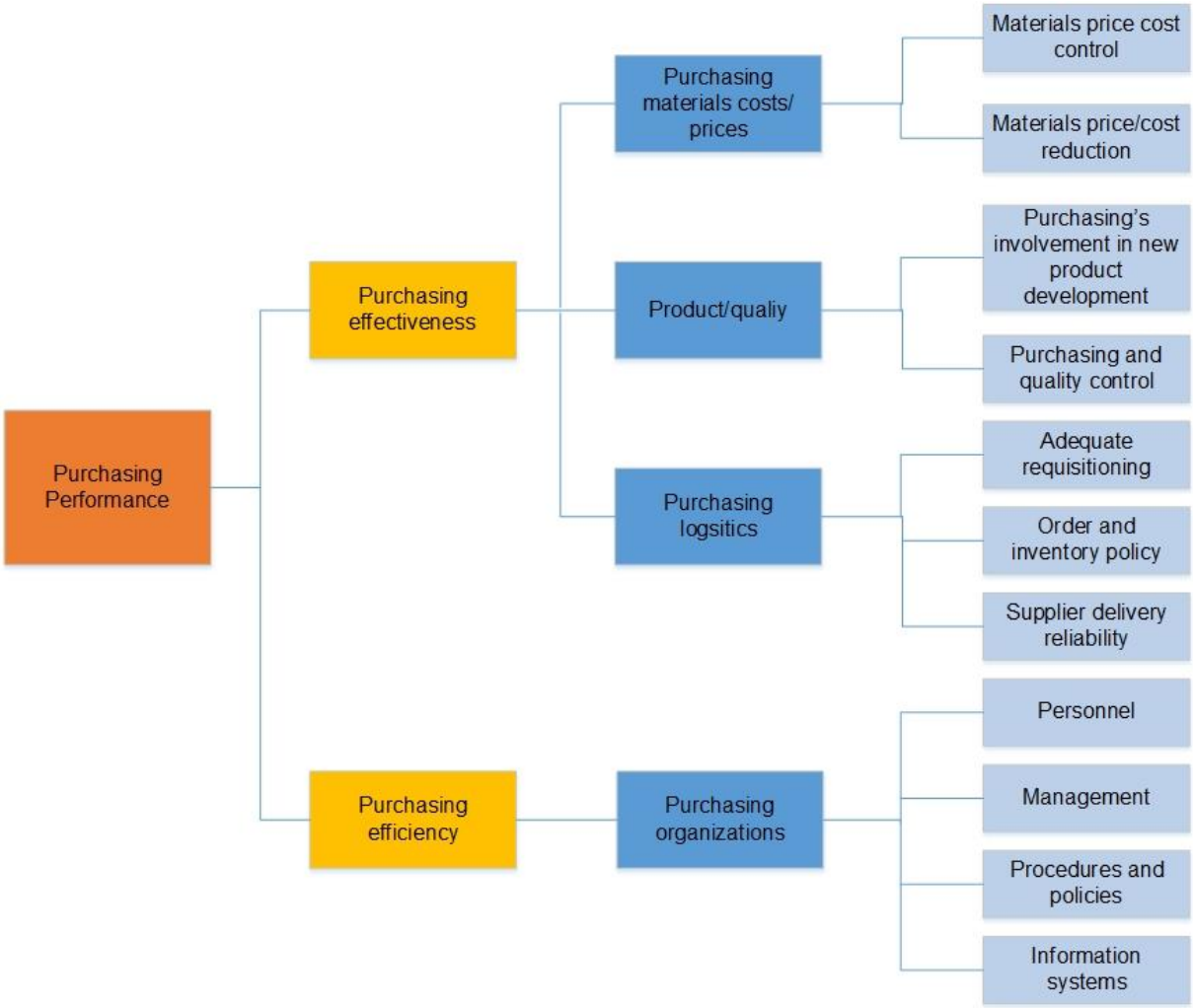

Figure 7. Key areas of purchasing performance measurement. (Adapted from Van Weele, 2005, 256)

Monczka et al. (2005) state that the measures usually include a pre-determined target, goal or standard into which evaluate performance results or outcomes. Each type of measure can further be categorized according to the areas, which they cover, and some of them have well established statuses: e.g. benchmarking. Furthermore, Figure 8 shows that "…most purchasing and supply chain measures fall into one of the following categories" (Monczka et al. 2005).

Categories of purchasing and supply chain measures
• Price performance • Cost effectiveness • Quality • Time/Delivery/Responsiveness • Technology/Innovation • Physical environment and safety • Asset and integrated supply chain management • Administration and efficiency • Government/Social • Internal customer satisfaction

Figure 8. Categories of purchasing and supply chain measures. (Monczka et al. 2005)

In one simpler variance of performance measurement categorization, Cousins et al., (2006) categorize performance measures into five categories as seen in figure 9. In cost related performance measurement, the focus is on spend and how effective and efficient it is. It includes the evaluation of inventory costs as well as making forecasts for inventory levels. On quality category, the measurement is on production quality, defects per supplier and customer returns to determine rates of defects and to minimize them. On time category, the goal is to ensure that all orders are delivered on time and that the internal processes required to fill the order are fulfilled in a timely fashion. Supplier performance is focused on evaluating how suppliers perform on various measures. Finally, customer satisfaction is used to determine the impact on internal customers (other departments) and external customers (final customers). (Cousins et al. 2006)

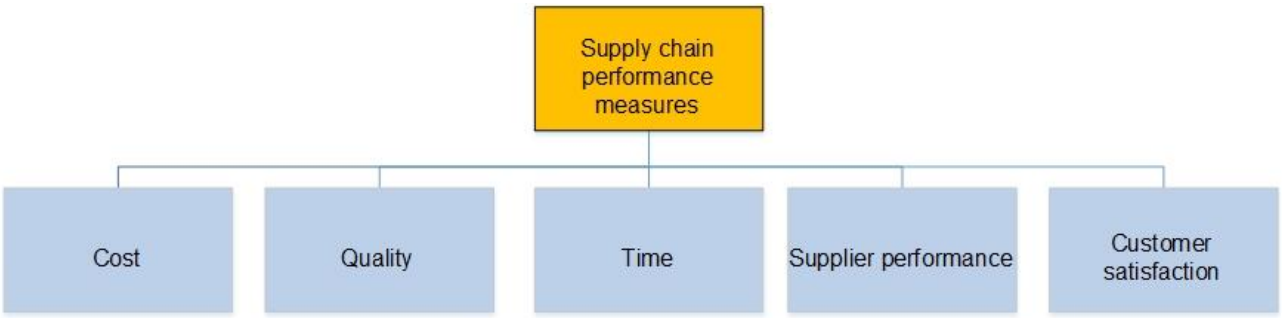

Figure 9. Categories of performance measurement (Cousings et al., 2006, 153)

Often used idea in performance measurement is the concepts of key performance indicators (KPI´s). By utilizing KPI's the company chooses a bundle of measures on performance it deems most important for its own operations. These measures form the key performance indicators that are monitored and compared to benchmarks to better express abstract supply chain objectives in financial or physical units (Lysons and Farrington, 2006). The KPI's themselves should be simple to use and understand, but also be able to provide meaningful data for complex and changing business applications (May et al., 2014). The setting up of KPI can be a challenging task and one common problem is the lack of guidelines on how to set up KPI's and what to include in them, this has led to the slower adoption of KPI measures in PSM than in other business functions (Chae, 2009).

It should be noted that performance measurement as a whole is also not without its own set of problems imposed by the characteristics of PSM and its activities. Monczka et al. (2005) for example list the following common problems in performance measurement: too much data and wrong data, measures that are short-term focused, lack of detail, drive the wrong performance and measures of behavior versus accomplishments. (Monczka et al. 2005)

Van Weele (2005) presents that the common problems in purchasing measurement are firstly the lack of definition, where the problems arise from lack of definition for terms of purchasing performance, purchasing effectiveness and purchasing efficiency.

In lack of formal objects and performance standards, the problems are caused by lack of proper goals and agreeance on what should be the standards of performance. In problems of accurate measurement, the issues are formed by the inherent difficulty of measuring intangible purchasing activities. Lastly in difference in scope of purchasing, the problems are caused by varying responsibilities of purchasing function in different companies, this makes it hard to agree on what could be a standardized uniform evaluation and benchmarking system. (van Weele, 2005)

As can be seen from the literature examples presented above, the subject of performance measurement in PSM is not totally uniform and does have differences, with its contents varying somewhat from author to author. The issues are complicated by the different demands imposed to the purchasing function by varying maturity levels and industries in which the PSM function operates.

As visible from figure 9, performance measurement can be further applied into the supply chain and suppliers but as these are of no direct relevance to the topic of his study they will not be examined here.

3.2 Capability

Capability is a term that is not as easy to define as performance. On regard to capability, Hallikas et al. stated in 2012 that: "…as yet there is no explicit definition of what supply management capability is and what it covers." (Hallikas et al. 2012). Also due to the lack of coherent conceptualization of capabilities, their actual effect on firms' competitive success are difficult to accurately compare (Day et al., 2015). Despite of this fogginess of the term, capability has been covered in organizational and PSM literature. By using the definition presented in chapter 1.3.2 it can be argued that the issue of capability is of importance to the subject of this research. Capability can be thus seen to be one area in which improvement can be of great value to a business.

In regard to examining the barriers of improvement on PSM activity, it becomes necessary to examine the role of capabilities as well as they can be argued to have effect on the success of PSM activities.

The concept of capability can further be divided into the areas if dynamic capability, organizational capability and supply management capability. As stated in chapter 1.3.2, the concept of capability is seen to have emerged from the resource-based view (RBV) theory (Hallikas et al. 2012; Barney, 1991; Penrose, 1959; Wernerfelt, 1984). Capabilities are formed through combined application of different combinations of human resources, technologies, production equipment, organization, processes and procedures (Axelsson et al., 2006).

Day et al., (2015) argue that capabilities are formed through successful routines in company activities which create stability to use a competitive advantage (Day et al., 2015). Teece et al. (1997) argue that competences and capabilities are formed through processes and have to be difficult to imitate and replicate in order to have value and that dynamic capabilities arise from competencies (Teece et al., 1997). Miller and Morris (1999) argue that capability is formed by people and their knowledge, technology, processes and practices and tools.

Amit and Schoemaker (1993) defined capabilities through resources. In their definition the resources are factors that are owned or controlled by firm and are then transformed into products or services by using various assets and mechanisms and contain also the knowhow and human resources. Capability is then the capacity that deploys the resources using organizational processes to achieve desired result. As such they are both tangible and intangible, information-based processes unique to a firm and developed over time. (Amit and Schoemaker, 1993)

Capabilities can be useful for only a limited timeframe due to the changing competitive circumstances and can even become negative in relation to the value they create (Teece et al., 1997). This view is supported by Chen et al. (2004) who argue that the turn to negative effect on competitive advantage can be caused by lack of improvement on organization and due to the changes in competitive environment (Chen et al., 2004).

The capabilities will also have to be examined by comparison against the competitors, due to the possibility that the advancements in the capabilities of the competitors can cause the relative capabilities of a firm to be lowered (Axelsson et al., 2006).These time and competitive situation tied attributes of the capabilities has led to the term of dynamic capabilities to be used also. It is therefore also discussed in chapter 3.3. In supply management context the capabilities can be defined as ‘bundles of routines’ that are formed by ostensive and performative dimensions which in turn use resources to create value through supplier interaction (Day et al., 2015). Hallikas et al. (2012) see the capability in the PSM context as the capacity and the ability of the organization to carry out its internal and external actions to achieve desired outcome on procurement (Hallikas et al. 2012).

According to Monczka et al. (2005) successful supply chain management requires the human resources to have certain abilities and skills. In order to achieve proactive purchasing and supply chain strategies the human resources should have the abilities to:

- View the supply chain holistically
- Manage critical relationships
- Understand the business model
- Engage in fact-based decision making
- Practice advanced cost management
- Understand electronic business systems

(Monczka et al., 2005)

Number of studies into defining of supply management capabilities has led to listing of skills (Hallikas et al. 2012; Chan and Chin, 2007). Skills have an impact on the PSM capability of firms and 29 different skills have for example been researched to be valued in supply management (Hallikas et al. 2012). Accumulation and development of skills through learning and innovation has been found to have strong relation to capabilities (Kale et al., 2002).

Skills can be seen also as essential in creating the capability of PSM and can have direct influence on firms' financial success (Carr and Smeltzer, 2000). It is therefore evident that capability can also be viewed to be formed via skills. It is relevant to note that competencies are used by some sources as a distinct term. For example, Axelsson et al. (2006) argue that the capabilities are formed through the competencies of employees.

Competencies are the ability to pursue defined activities in a defined quality level and are in turn enabled by certain sets of skills and knowledge (Axelsson et al., 2006). Teece et al., (1997) use the term of competencies to describe the routines and processes that firm employees form through their activities and that the most important competencies (so called core competencies) enable the firm to achieve competitive advantage over competitors (Teece et al., 1997).

Competencies could be improved through the sources of competence development which could broadly be differentiated as education, on-the-job learning and recruitment. In these, the education section refers to the activities in which by the employees are educated along their work into operationally directed positions or general knowledge. In on-the-job learning the employees learn by interacting in connection to the workplace and tasks, can happen both internally and externally in relation to the organization. Lastly in the recruitment the focus is on selection of new employees from different backgrounds and qualifications to use education and labor markets effect on competence. (Axelsson et al., 2006)

It should be noted that as a differing adaptation of the term, the competencies can be understood also as organization wide concepts. In this adaptation the competencies are not entirely employee related but arise from organizational capabilities and resources that are integrated and coordinated. In this view the competencies are higher in value than capabilities, and capabilities are the sources of competencies which in turn create core-competencies. (Javidan, 1998)

3.3 Dynamic Capabilities

As discussed above, capabilities and their usefulness are tied to the time and changing competitive situation of the organization. This shifting nature of capabilities usefulness has led to the term of dynamic capabilities to be used alongside and within the concept of capability.

The concept of dynamic capability is a research framework in strategic management that is evolutionally theoretical and aims to better explain the nature of firms and competitive advantage than RBV (Teece, 2009). As can be seen from the 1.3.3 chapter the term underlines the need to adapt into the changing market and competitive situations by adapting the capabilities to meet the changing needs driven by changing competitive situations. This dynamic nature of capabilities is highlighted by Teece et al., (1997) and further by Teece (2009) but despite the dynamic nature can be also the source for a long-term competitive advantage when used properly as they are difficult to imitate and to replicate (Teece, 2009). The concept of dynamic capabilities came about into literature trough Teece, Pisano and Shuen in 1990 and it was much related to the RBV theory (Teece, 2009).

In dynamic capabilities the aim is to prepare for the future by harboring various capabilities of any one of which could become valuable source of competitive advantage. As the knowledge on exactly what kind of capabilities are needed in the future is known by no-one, it is reasonable to create some surplus competencies as well that function as a type of insurance. This often involves the education human resources which in turn are likely to be more adept at reacting to changing situations in the right way. These activities can be important in a long-term qualitative growth of organizations. (Axelsson et all., 2006)

Dynamic capabilities are dependent on the type of market the firm operates in. In rapidly changing markets the need is for different dynamic capabilities than in stable markets. Furthermore, the utilization of dynamic capabilities requires them to be used to create resources which in turn create competitive advantage over competitors if done better than what the competitors can achieve. (Eisenhadt and Martin, 2000)

Dynamic capabilities are according Eisenhadt and Martin (2000) identifiable and specific processes despite being sometimes described through vague terms. The processes themselves can be classified according to relation that they have with resources.

Some processes integrate different resources, e.g. management skills and functional backgrounds, to create revenue creating products and processes. Further, they can be classified as resource reconfigurable, where the resources are reconfigured in order to create new products and synergies, which in turn create new revenue. Lastly, the dynamic capabilities can be used to addition and release of resources. Here the dynamic capabilities are focused on creating more resources and this can be achieved for example through research and development or by bringing in new resources through mergers for example. (Eisenhadt and Martin, 2000)

Teece (2007) further specified the foundations of the dynamic capabilities by taking into account the microfoundations which enable for the company or organization to sustain capabilities, which in turn enable the sustainment of superior performance in the markets. The microfoundations are underlying factors which can explain the underlying reasons for some companies long-run success. The microfoundations of dynamic capabilities are formed by distinct skills, processes, procedures, organizational structures, decision rules, and disciplines. These in turn allow for companies to perform organization-level sensing, seizing, and reconfiguring of capacities. In the model the term sensing refers to the formation of “analytical systems (and individual capacities) to learn and to sense, filter, shape, and calibrate opportunities”. (Teece, 2007)

Seizing refers to the creation of: “enterprise structures, procedures, designs and incentives for seizing opportunities”. And finally, reconfiguring refers to the: “continuous alignment and realignment of specific tangible and intangible assets”. (Teece, 2007)

If viewed from the dynamic capabilities viewpoint, the improvements on PSM can be seen as actions to harbor dynamic capabilities. As pointed out by Axelsson et all., (2006) dynamic capabilities can consists even of human resources which through development can ensure that the organization makes the right decisions in order to create competitive advantage. Shuen and Sieber (2009) suggest that dynamic capabilities become even more important as world is becoming more linked through new internet technologies and communication. Additionally, dynamic capabilities can be used to explain the theoretical source of sustained competitive advantage of multinational enterprises operating in global environments (Teece 2014).

3.4 Resource Based View

As the resource-based view (RBV), or resource based approach, is of relevance to the concept of capability as capability is based on RBV-theory and RBV -theory in itself is also partly about improvement of performance. Therefore, RBV is discussed briefly in this chapter.

RBV of the firm is attributed to Penrose (1959) writing ‘The theory of the growth of the firm’ that conceptualized firm as a bundle of resources, which are used in combination to create services and products (Cousins et al., 2008). These resources are different and vary from firm to firm. The differing resources firms’ poses makes them heterogeneous and explains why some firms achieve competitive success over others, as firms are tied to the resources they have and don’t have in the short term (Teece et al., 1997). These resources basically can include financing, machines, skilled employees, knowledge of products, processes and systems and even things like reputation (Baden-Fuller and Stopford, 2006).

The value created through resources can be in some instances called ‘rents’ that the owners of scarce, firm-specific, resources receive instead of focusing on economic profits via product market positioning (Teece et al., 1997). Teece et al., (1997) further state that the valuable resources are often difficult to obtain and often cannot be successfully bought.

Resources themselves are of different value for the company. In RBV some resources might yield considerable sustainable competitive advantage, whereas some might not yield sustainable competitive advantage at all. (Fahy and Smithee, 1999)

As described through Barney (1991) in 1.3.4, the resources themselves can be categorized according to three criteria to determine the rate in which they yield competitive advantage. The more the resources have these three attributes the more valuable they are for the firm. The categories are: Inimitability, Non-substitutability and Immobility.

Resources fulfilling these criteria are valuable for firms and can be used to create long term competitive advantage. In some cases, the development of resources can be better done via external channels than by trying to form them in-house (make-or-buy decisions). (Cousins et al., 2008)

There is considerable leeway in what different authors consider as the characteristics of a valuable resource. In addition to the Barney (1991) classification, Collis and Montgomery (1995) argue that the resources must poses inimitability, durability, appropriability, substitutability and competitive superiority in order to be considered valuable. According to Grant (1991) in resources the different attributes of durability, transparency, transferability and replicability are important in determining the value of resources. There exists even a list of eight criteria that contains the attributes of complementarity, scarcity, low tradability, inimitability, limited substitutability, appropriability, durability and affected by various strategic factors related to the industry (Amit and Schoemaker, 1993).

The resources themselves do not create success, only through the efficient and successful implementation and combination of resources can value be created. This ability is created by the skill of employees, routines and systems. Thus, the amount of resources is not as important as the effective combination of resources and the ability to create resources from within. (Baden-Fuller and Stopford, 2006)

It should be noted that in some cases of RBV –theory the capabilities of firms and the term resources are used interchangeably to describe the assets that firms use to form and implement strategies that aim to improve performance (Barney, 1991). RBV therefore differs from the capability approach that was developed from it, as in capability approach the capabilities are seen as more than mere resources. RBV theory is of greatest importance to the firm management as RBV promotes strategic choice and it is the firm management that is responsible for the "…important tasks of identifying, developing and deploying key resources to maximise returns." (Fahy and Smithee, 1999).

RBV –theory has been used in strategic management and even in strategic marketing (Fahy and Smithee, 1999). Additionally, it has been used to analyze performance in international markets (Hooley et al., 1996).

It should be noted however that the resource-based view –concept has received criticism from for example Collins (1994), Priem and Butler (2001) and Arend and Lévesque (2010) to name a few. According to the criticism the RBV can at best only partially explain managerial successes in tests and that it possesses attributes that makes it tautological (Collins, 1994) (Priem and Butler, 2001) (Arend and Lévesque, 2010). RBV has also been criticized by the proponents of dynamic capabilities in that it:*" …misidentifies the locus of long-term competitive advantage in dynamic markets, overemphasizes the strategic logic of leverage and reaches a boundary condition in high-velocity markets*." (Eisenhadt and Martin, 2000).

Despite the criticism, RBV theory is presented here as a one possible approach and viewpoint on how a firm could approach the issue of improving its performance. It is also therefore applicable on PSM capabilities and performance and the possible barriers preventing the improvement. As evident from above, the performance is in RBV's view created by focusing on developing resources that have the attributes described earlier in this chapter. It can thus also be seen that improvement and also the barriers in the focus of this research are also related to resources. Therefore, according to the RBV –theory, the improvement of PSM knowledge and performance is the development of the firm's resources that can yield sustainable competitive advantage. From this viewpoint the various aspects that might arrest the development (the barriers) are simply part of the resources development process.

3.5 Knowledge, Knowledge Management and Human Resources

As per Miller and Morris (1999) the capabilities are formed at least in part by the knowledge possessed by employees, it becomes also relevant to examine the issues of human resources management (HRM), knowledge and knowledge management to understand their possible part in improvement and of PSM knowledge and performance.

This is supported by Teece (2009), by arguing that one of the sources for dynamic capabilities that provide competitive advantage is the process of knowledge management. In the Teece model the knowledge management contains learning, knowledge transfer, know-how integration and achieving of know-how and intellectual property protection that for one part allow for "continuous alignment and realignment of tangible and intangible assets" (Teece 2009).

Axelsson et all., (2006) argue that competencies are based on individual skills and knowledge that are combined with motivation to form competencies, which in turn create the basis for the capabilities. They also place great importance on the capability development through organizational learning.

In this view the organizational capabilities are improved and developed via its individuals learning through experiences and other ways, and then applying the learned into the organization's activities. PSM has changed to become more tactical and strategic and this has in turn changed purchasing decision making, turning it into more knowledge and competences driven (Axelsson et al. 2006). This is also relevant to the subject of this study as the goal is to find out the barriers that could hinder this part of improvement on PSM activities.

Axelsson et al., (2006) further categorize knowledge based on empirical evidence on PSM context. Knowledge can be divided into six categories corresponding with different areas of PSM knowledge that purchaser may need to possess. These categories can be seen in figure 10. Of those categories, a survey evidence suggested customer knowledge was deemed most valuable and product knowledge was deemed the least important. (Axelsson et al., 2006)

Areas of sourcing knowledge and competencies

Organizational knowledge
Organizational knowledge refers to a knowledge related to the ability to function in the accordance with the best interest of one's own organization in relation to the role of purchasing within the broader organization.

Professional knowledge
Professional knowledge refers to the knowledge that covers all the relevant theories, concepts and skills that are needed to execute successful procurement to in term meet defined business goals.

Supply market knowledge
Supply market knowledge refers to the knowledge related to the supply market and the changes within it to see threats and opportunities. This knowledge in turn can be utilized to perform activities such as strategic planning and cost modelling.

Supplier knowledge
Supplier knowledge is related to knowledge about suppliers in order to develop more strategic relations and to improve performance. Especially important as the procurement reaches higher maturity levels.

Customer knowledge
Customer knowledge refers to the knowledge about the needs of internal (other departments within the firm) and external customers (end customers). Necessitates the need to know the customer and their wants, needs and expectations.

Product knowledge
Product knowledge is about the knowledge of the product in order to be able to function cross-functionally and to ensure the end product is best possible. Refers to products procured and also to the products delivered to the end customer

Figure 10. Areas of sourcing knowledge and competencies (adapted from Axelsson et al., 2006, 139-141)

As the importance of knowledge in PSM is acknowledged, it becomes relevant to manage it also. The management and development of knowledge is naturally referred to as knowledge management. The knowledge management may be defined as “managing the operational processes in the knowledge value chain to increase the pleasure in and to get an optimal return on the production factor knowledge”. (Axlesson et al., 2005)

In knowledge management the focus is on to availability of knowledge in order to execute the defined strategy and activity of organization. The so-called knowledge value chain can be used to describe the process in which the knowledge management should operate. In it the knowledge management advances from knowledge creation (the needed knowledge and available knowledge are defined here) to knowledge sharing, to knowledge applying and eventually to knowledge evaluation. Knowledge management in PSM is motivated usually by two main motives of preventing the loss of existing knowledge and increasing the level of knowledge. (Axelsson et al., 2006)

In knowledge management several most notable barriers are also possible to identify, the fourteen distinct barriers identified by Bouwmans (2002) are listed below.

Table 1. Barriers to knowledge management (Bouwmans, 2002)

1. No clear definition of knowledge Purchasers and purchasing managers are not aware of what knowledge is and thus what and why knowledge should be shared.
2. Purchasers are unaware of who owns what knowledge. One reason why knowledge is not shared within organizations is simply that purchasers do not know each other or are not aware of the knowledge that a colleague owns.
3. No incentive to share knowledge (‘what’s in it for me?’) Why should purchaser share his or her knowledge? He or she already owns the knowledge and can apply it in daily practice. Sharing knowledge is assumed only to be time consuming and no incentives are in place to motivate the purchaser to share knowledge.
4. Geographically dispersed. Because departments and groups of large companies are often physically and geographically dispersed, purchasers argue that it is difficult to share knowledge.

5. Systems are not available or user-friendly. Purchasers argue that the available systems are not available adequate or user-friendly.
6. The content of systems is not up to date. During case studies many aspects concerning the content were mentioned. First of all, information is often not available in systems. Second, the information and knowledge are often not up to date, or are ambiguous.
7. Purchasers do not have the skills to use the systems. Some of the interviewees claim that they, or some of their colleagues, do not possess the skills to use the systems correctly. This concerns having the administrative skills to use the systems correctly. This concerns having the administrative skills as well as understanding what data should be entered in the systems and how.
8. No time is available to share knowledge. One often heard barrier during the case studies is time. Purchasers have no time available or do not take the time to share knowledge. Documenting their knowledge is often avoided because it is time consuming.
9. Transparency is threatening. Transparency in processes, contracts and supplier relations means that some flaws may be revealed. Purchasers are afraid to be punished or criticized for these flaws.
10. Risk of becoming redundant. When someone owns certain unique knowledge, he or she is important in the organization. If they share this knowledge purchasers are afraid of becoming redundant and therefore losing their jobs.
11. Knowledge is regarded as power. Knowledge gives an individual or a group a certain position in the organization. Individuals are respected for their unique knowledge and groups gain benefits that other groups within the organization cannot achieve.
12. Lack of respect for colleagues and their knowledge. On precondition of knowledge management is that colleagues respect each other and their knowledge. A lack of this respect results in less communication, interaction and openness and thus in less knowledge sharing.

13. Knowledge is assumed to be unique. Purchasers argue that projects in which they are involved are unique. Sharing knowledge concerning these projects would be useless.
14. Knowledge is sensitive and confidential. Purchasers have the perception that their knowledge is sensitive and confidential. Contracts and relation with suppliers, for example, may as result not be shared.

These barriers could in term be applicable to the research scope of this study and are therefore relevant to compare to empirical data in the context of this study. Barriers in knowledge management can be assumed to be partly the reasons why the PSM improvement barriers to occur.

Finally, Axelsson et al., suggest a model in by which the barriers could in wide extent be removed. In the model the variables for organizational design are used in conjunction with the best practices and recommendations to negate barriers and to lead into improvement purchasing performance.

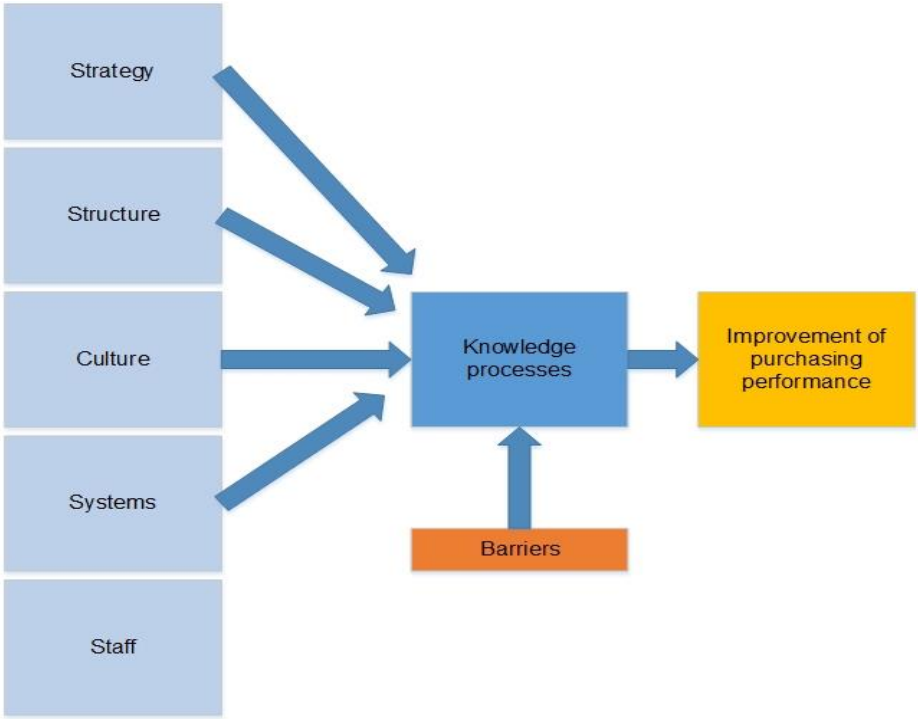

Figure 11. Organizational design variables for knowledge management. (Adapted from Axelsson et al., 2006, 149)

In the model, the **strategy** variable should enable purchasing to act as important inter-organizational link that enables information sharing and is more than just operational department. Development of knowledge strategy and goals as well as definition of knowledge gap should help to form a mission that can be communicated to managers and practitioners. In the **structure** variable the goal is to organize the purchasing department around knowledge and competences of purchasers and to ensure it is standardized in its work methods in relation to other departments. In **culture** variable the aim is to create a culture in purchasing that supports information sharing and promotes respect, reward and recognition among the employees. In **systems** variable the desired effect is to promote systems that enable better information sharing within the ICT systems and technology. Lastly in the **staff** section the barriers can be negated by forming the purchasing department out of motivated and competent, willing to learn professionals. (Axelsson et al., 2006)

On regard the Axelsson et al., model, it is notable that they present the idea of barriers affecting the knowledge processes. In the model these barriers hinder the improvement of purchasing performance. This is further related to the barriers described in the chapter 2.4 and forms part of the theoretical basis upon which the issue of this study is based upon.

In light of the qualities of employees on procurement, it becomes relevant to also approach the issue from human resources management (HRM) standpoint. Porter (1985) identified HRM as one of four important support activities that form a value chain. Porter argues that HRM affects the competitive advantage on all firms and that in some industries it is the key to competitive advantage. Especially important is the aspect that HRM is conducted consistently in a way that promotes firm-wide methodology. (Porter, 1985)

Monczka et al. further elaborate on the importance of HRM that: "*Gaining access to the right skills will require a sound human resource strategy that includes internal development of high-potential individuals, recruiting talent from other functional groups or companies, and hiring promising college graduates. All this satisfies one primary objective: ensuring that qualified participants are available to support purchasing and supply chain requirements*." (Monczka et al., 2005, 16)

As a related, but separate term Axelsson et al., (2006) promote the idea of human resource development (HRD) as one important future area of procurement. In HRD the companies invest into HRD programs that involves human resource strategies and personnel that are aimed at identifying, hiring and developing high potentials for purchasing. These could be accomplished for example through various training- and action learning programs. They further predicted that HRD programs could be cross-functional and involve also the suppliers and customers. (Axelsson et al., 2006)

HRM and HRD could therefore in theory be one area in through which the possible barriers of development on PSM skill, knowledge and competence improvement could be addressed.

4 METHODOLOGY

The theoretical part of the study (the literature review) presented in previous chapters forms the basis for upon which the empirical research part of this study is built upon. The examination of the theory first is necessary in order to understand what is meant by the terms such as ‘capability’ and ‘performance’ in PSM context. The empirical research part is grounded into the theories presented in the earlier literature review chapters and is designed so that it can produce new insights into the selected topic. In this way it becomes possible to test the existing theories through empirical approach and it also opens up the possibility of synthetizing the existing theories with possible new findings arising through the research. In this chapter the methodology and the practical conduct of the empirical research are described.

4.1 Research Design

The empirical research in this study is conduct via qualitative means. The topic of the research allows for qualitative research to be used as the topic of the research is focused on examining how the interviewees see the situation. In qualitative research the aim is to understand the interviewee (Hirsjärvi et al. 2010). It therefore suits to the topic and approach of this study better than quantitative research method. Qualitative research academically usually employs interviews, surveys, observation and document data for data collection methods and out of these the interview method is likely the most used one (Lee and Lings, 2008). Of these options, the individual interview is chosen as it offers great deal of flexibility and allows for additional discussion and questions to delve deeper into the issue where necessary (Hirsjärvi et al. 2010). The interview approach is further homogenized through the use of standard interview form, through which the interviewees are asked the same open questions without pre-determined answering options. This approach is called the semi-structured interview.

4.1.1 Semi-Structured Interview

The type of interview research is to be semi-structured. In order to examine what the interviewees think and how they see the issue (what are the barriers they perceive), the interview along with the semi-structured interview approach is appropriate (Hirsjärvi et al. 2010).

The semi-structured interview is conducted face-to-face, using a pre-formulated interview form. Additional questions and discussion may also be included where appropriate. The methodology in semi-structured interview highlights the perceptions of the interviewees on the matter and the meanings that they give to the issue. (Tuomi and Saarijärvi, 2018) (Hirsjärvi and Hurme, 2007)

The goal in semi-structured interview is not so much to collect a large number of sources, but to focus on a few sources that in themselves provide substantial amount of content, so in other words the focus is more on the quality over quantity (Vilkka, 2015).

4.1.2 Description of the Interview Participants

The study involved 4 interviews to ensure that the issue was covered in suitable extent. Each selected participant practiced procurement and PSM on a professional basis and had suitable knowledge and expertise to give meaningful insights. The interviewees represented varying organizations and business sectors. All the interviewees were from different organizations. Both public and private sector were represented, but public sector was more heavily represented with 3 participants. It should be noted however that all of the interviewees working in the public sector had also previous experience from private sector.

This in part somewhat lessens the assumable skewness of results that higher public sector representation might cause, as the interviewees were able draw insights from the experiences of the private sector as well.

The interviewees had varying academic backgrounds and work history with also differences in self-described amount of experience on the matter.

All the interviewees were chosen so that they still had enough experience on the matter to draw meaningful insights. After each interview, the interview results were analyzed to make sure that the given answers were relevant to the topic and that they showed professional approach to be valid for further analysis. It should be noted however that naturally differences in work experience for example can cause notable differences in the interviewee's views. Additional selection criteria were that the interviewees were chosen on the basis that they currently must work professionally in procurements. Summary table of the interviewees can be seen at table 2 at the end of this chapter.

Interviewee A is a foreman in a medium to small sized construction company specialized in self-described medium to large scale projects centered in around flooring and surface finishing's of various types of buildings. A's organization is an example of a company where the whole procurement function was still in an early stage on its development. As A noted, the company had gone through considerable growth recently, so the company was in the process of having to evolve many of its ways into a more mature level, but at the time of the interview the process was still very much incomplete. A's job involved handling and the making of purchases and orders of materials to varying construction sites on a regular basis. The procurements varied from personal equipment to making of orders that consisted of a value of over millions of euros. A was relatively new on the job, having been hired as a part of the company's growth. A had about a year of experience on the job and about 2 years of related entrepreneurial experience that involved procurements before that.

Interviewee B is a procurement specialist working in municipal public procurement. Municipal procurement functions as the organizational body responsible for meeting the procurement needs of various stakeholders within the municipality. The organization's procurements varied greatly in scale, with the largest projects having values of several million euros. B had worked in the public sector procurement for 7 years and has previous experience on industrial procurements from private sector.

Interviewee C is a head of procurement working in public procurement sector and is involved in directing IT systems procurement processes in Finland. The organization directed and collaborated in various kinds of procurement projects that extended from IT related projects to logistics. C stated also that the scope of projects varied from small local projects to one's covering the whole national network with considerable monetary value. C had worked in the position for about 7 years and also had previous experience from the private sector.

Interviewee D is a procurement specialist working in the public sector and is also involved in the municipal procurements. Similar to interviewee B's case, D's organization was responsible for wide array of municipal procurement projects in several municipalities. It should be noted however, that D's organization was different one than B's, but naturally similar in purpose and slightly larger in scale. D had 8 years of experience on the position and had additionally 6 years of previous procurement experience from the private sector.

Table 2. Summary of interviewees

Interviewee	Industry	Job Title	Sector
A	Construction	Foreman	Private
B	Public Municipal Procurement	Procurement Specialist	Public
C	Public IT Procurement	Head of Procurement	Public
D	Public Municipal Procurement	Procurement Specialist	Public

4.2 Data Collection

Data collection was designed around the research problems and the previously introduced relevant literature and theories. As above mentioned, the data was collected using qualitative a semi-structured interview setup. The interview form contained 35 different questions related to the research problems of this study. It should be noted however that all Interviewees were not able to answer all questions in all cases. The questions were categorized around 5 areas that were directly related to, or supported, the research problems. These areas, or themes, were: barriers of improvement, performance and capability, drivers of improvement, purchasing and supply management perception and finally levels of maturity. Example of the research questions are at appendix 1. The themes and their sub-sections can be seen below.

Table 3. Summary of the interview themes and sub-sections

Theme	Sub-sections
Barriers of improvement	Need for personal improvement Barriers of personal improvement Barriers of organizational improvement Ways of overcoming the barriers
Performance and capability	Definitions of performance and capability Measurement of performance and capability Important skills in PSM
Drivers of improvement	Reasons for organizational improvement Benefits of the improvement Motivations for the improvement
PSM perception	Interest in PSM and the improvement of knowledge Most important tools, theories and practices Ways of improving PSM knowledge Barriers of PSM knowledge improvement
Levels of maturity	Organizational structuring Goals of procurement Measurement in the PSM function Tools of procurement and communication Improvement of the maturity level

The semi-structured interviews were conducted during the summer and fall of 2018 in various locations around Finland. The interviews lasted from 30 minutes all the way to an extent of over an hour, varying greatly due the different amounts of discussion and additional questions included within the interview.

4.3 Data Analysis

Data form the interviews was analyzed first individually with analysis focused on finding the relevant information in relation to the research problems. After individual analysis the answers were then analyzed collectively in order to find differences and similarities within the data. In this part central common themes also identified. Out of these various analyses the findings were formed with the aim of finding relevant information and answering the research problems described in the chapter 1.2.

4.4 Reliability and the Validity of the Research

In research the goal is to avoid making mistakes and thus in qualitative research the reliability and the validity of the research are among the most important aspects to note when conducting research (Tuomi and Sarajärvi, 2018). All research should include at least some type of estimation on the reliability and the validity of the study (Hirsjärvi et al., 2010).

Reliability describes the rate upon how much the results are replicable. This in other words relates to the ability of the research to give non-random results. In qualitative research this often becomes apparent if various evaluators reach the same conclusions (Hirsjärvi et al., 2010). Reliability can especially be affected by mistakes in the input of answers or by the misunderstandings between the interviewer and the interviewee on the contents of expressions or concepts (Vilkka, 2015).

Validity is used to describe the ability of the research methodology to measure the phenomena it is supposed to measure (Hirsjärvi et al., 2010).

Validity can be improved by careful definitions of the concepts and by ensuring that the research problems are represented in the research measures and questionnaires. Qualitative research can be considered valid when the theoretical and operational definitions are consistent, thus often relating on how well the researcher has been able to transfer the theoretical concepts into the research questionnaire (Vilkka, 2015).

In qualitative research, the reliability of the study can be improved by in-depth description of the research process and the conduct of the study (Hirsjärvi et al., 2010). Documentation of the research process enables for future research to replicate the study and optimally also the results (Vilkka, 2015). Validity can be further improved by the usage of various respondents and sources for theories and concepts (Hirsjärvi et al., 2010).

5 EMPIRICAL RESEARCH

As mentioned in the previous chapter, the interviews were concentrated around the themes presented in the research questions chapter of 1.2. From the research questions a set of five areas, or themes, were formed. These themes and the interviewee's answers are discussed and summarized in the following sub-chapters. This is followed by the synthesis of the results into the existing theory in chapter 6. 'Discussions and Conclusions'.

5.1 Barriers of Improvement

On barriers of improvement theme, the aim was to find the possible issues that the interviewees think could be improved personally and in regard of the larger organization and co-workers. Once these issues were identified the goal was to identify the barriers that in their view might prevent the improvements, both in personal and organizational level.

In this category the interviewee A saw that especially the formation of routines into competitive bidding would be a central aspect in which improvement would be necessary and possible. This would involve the increase in the number of bidders to build better grounds for supplier selection and also to get new and possibly better suppliers involved. In A's view it would be also possible to personally improve the planning and timetable formation parts of the procurement process. In regard to other employees the most important area of improvement would lie in standardization, creation of routine operation procedures and in the evolvement of contract substance. The greatest barriers preventing the application of these improvements would in A's view be that the many employees don't see the need for improvements as they often offer no personal benefit and that a certain culture of indifference on regard to the issues may have developed in the workplace.

A responded also that in some cases there has been resistance to suggested improvements even from the upper management as the changes might contradict the traditional ways that has been in use in the firm for a long time. Therefore, many employees might not even be interested in making changes or improvements as these could be seen as negative. In A's view these barriers could be overcome perhaps through the use of supervision, monetary benefits and if somehow the whole company culture could be transformed to be more acceptable to suggestions of changes to improve the work.

According to interviewee B the most important areas of personal improvement would in the improvement on the knowledge of legislation and operating procedures required by the public nature of the work. On regard the larger organization the areas of improvement would be on how the other employees would better learn the standard operating procedures and in how they could improve to plan their actions better. The status of procurement and the formation of timetables could also be improved. On a personal level the barriers of personal improvement were according to B the issue that there was not enough of advanced level training on procurement available. On regard the wider organization, the barriers were that the other employees don't always have enough time to improve their skills and that it might not even interest them as procurement is not seen as a central aspect of their work. According to B this might be related to the issues in the division of labor in the organization. As other employees conduct procurement only as a small part of their job, the procurement might be seen as a burden and a secondary function that takes time and effort away from the more important tasks and the main substance of work. Thus, the improvement might be seen as forced and un-interesting. According to B the issues might be overcome through increase of substance in the procurements.

Interviewee C saw that there was a constant need to personally update professional knowledge on procurement and to combine the theoretical knowledge with practical applications. Organizationally the need of improvement was in the areas of delivered quality of the service and in the quality of the procurement process.

The barriers on the improvement were according to C the facts that some personnel could think that the area of improvement is not part of their job description and thus the motivation to improve one's skills or knowledge could be low. Additionally, if the organization does not have a culture of improvement the employees might not feel that improvement is not necessary. Also according to C the lack of monitoring and measurement on employee improvement might lead to less enthusiastic approach to improvement. In C's view these issues could perhaps be overcome by supporting and accepting improvement, change and learning on every organizational level.

Interview participant D though that on personal level there was a constant need for improvement and learning involved in procurement. The similar needs were also present in the organizational level, but the differing employee backgrounds and education can further complicate the issue. The possible barriers for personal improvement according to D were that the resources in the public sector were not always sufficient to allow for external training courses to be used. Also, organizationally the barriers might be formed by the varying interest towards learning about procurement. Especially the legal aspects involved in the public procurement might sometimes be seen as uninteresting. In general, also the appreciation of the procurement was not always good and sometimes even the upper management might not understand the cost benefits that good procurement can enable. According to D, some of the mentioned issues could be overcome through additional training and by stressing the importance of issues related to procurement.

5.2 Performance and Capability

On regard performance and capability, the goal was to see how the concepts of performance and capability are defined by the procurement and PSM conductors themselves and to see if these are measured in any way.

According to A, the term performance could be best defined through good results in the procurement and in that the procurer has good knowledge, maintains effective relationships with the parties involved and that they pose certain aspect of cleverness and ‘gaming approach’ to the tasks. A responded that performance is not particularly measured, but costs involved in purchasing are monitored.

On capability, A thought that most important is knowledge of the issues and to know the parties involved and their backgrounds. Computer skills, social skills and professional expertise were also important. Additionally, working hard might be seen as also beneficial. Capability was in A’s view difficult to measure, the best approach could be to better measure and monitor the different aspects of procurement (costs, waste, planned results vs. actual results) to determine capability. In A’s view this is not done due to the limited resources and due to the fact that change was often not deemed necessary.

In B’s view the term performance could be defined through the level of professionality in regard of the work. This manifests through the proper conduct of procurements. Also, according to B, important in regard of performance is to poses a wide range of common knowledge and to know the goods and services that are involved in the procurement. In regard to capability the most important aspect named was to be able to adapt to different situations and to understand them. Skills useful in procurement were according to B: good expression of oneself through the use of written text, good ability to understand written text and contracts, ability to learn new things and to properly formulate contracts. Neither performance nor capability were not regularly measured.

According to C the term performance is best defined by the results. The procurement performance is good if the procurement is conducted with quality, speed and by meeting the customer needs. In C’s organization there were some measures that provided some information on different procurement categories. According to C these standard measures were however challenging to use and might not provide the needed information to the user.

C saw the term capability as a personal ability to create the performance described above. The capability was determined indirectly through the end result evaluation by using net promoter score (NPS) measurement.

D defined performance through the ability of being able to work independently and effectively while also understanding the core idea behind procurement. Additionally, D saw that being cost-efficient and able to keep up with timetables are part of good performance.

Capability was in D's view the ability of being able to improve one's skills and knowledge while also developing the organizational processes further. Neither of these issues were measured in D's organization.

5.3 Drivers of Improvement

On drivers of improvement, section the focus was on finding out the drivers which can motivate improvements in PSM knowledge and performance.

According to interviewee A, the need for improvements is obvious on regard the procurement. A mentions that one of the most notable motivator for improvement would be if by improvement there would be some personal benefit. A mentioned that even positive feedback on successes instead of negative feedback on failures could motivate into trying to improve procurement conduct. Also, the formation of a good group spirit in the workplace that drives for people to improve their job could in A's view motivate the drive for improvements. Other area that would motivate into improvement according to A could be financial gain in the form of bonus systems.

B saw the non-functionality of the old model of operations as a driver for their currently underway improvement project on procurement. The drivers for the improvement in the organization were according to B the possibilities of achieving clearer work description, possibility of focusing more on the core work on procurement, employees getting better understanding on what to focus on thus improving efficiency.

Also, one important improvement would be to achieve direct and especially indirect savings. As for the personal employee motivators B, thought that one could be created. A possible option could be some type of performance-related pay system.

Interviewee C thought that the need to improve organizational procurement performance was needed due to the changing environment of operations. This was best done in C's view by improving the procurement strategies and development lines. The greatest benefit of the improvement on the organization would be that the procurement specialists would have more time to concentrate on the core content of their jobs if the processes and services would work well.

The improvement could be best driven through the use of capable and able HRM that would enable personnel to automatically motivate themselves on the improvement. Here the involvement of the organizational leadership is in a central role according to C.

In line with the other interview participants, D saw also need to improve the organizational procurement further. The cause for organizational development was due to the need for better efficiency and for better control over various issues. Of the issues involved, especially the contract formation, preparation of projects and resources for further development could be improved. For D the personal the benefits of improvement would be the ability to focus better on issues and the possibility of being able to develop procurements further if more time would become available. D saw that the possible motivators for improvement could be better appreciation of procurement function as a whole and improved salary.

5.4 Attitude on PSM Improvement

This part of research was to probe the issues on how PSM and improvement on it is perceived by the responsible party. In this part, the interviewees were asked how they see PSM theories and practices and improvement on them, as either negative or positive attitude of these issues is likely to affect the views on PSM improvement as well.

According to A, the theories of PSM and the tools and practices presented in literature were not so important in one's particular job but thought that the company management should know more about them. In A's view the most important things to know are how basic tender process is to be conducted and how to make use of spreadsheet programs effectively. Additionally, useful would be to know how to better make supplier contacts and to plan the procurement process beforehand. In general A is interested in PSM theory and would be interested in learning more about it. As a possible way of obtaining more knowledge A mentions open university classes, online courses and literature and other online sites to a lesser extent also. As a possible problem A said that even though there is lot of information available, in some cases it is difficult to find which would be the best way of obtaining knowledge.

B thought that on regard PSM, the most important areas to know are the issues related to legislation, process management, software programs and to learn how to define the contract contents effectively. In general B thought that the knowledge on PSM theory and the operations of business is important in the work. Also, on regard of other areas of knowledge that could be useful, B mentioned that the knowledge on service level agreements (SLA's) was beneficial and also how to design a procurement process beforehand and to standardize it is important. B was very interested in learning more about PSM and thought that the best way to do so could be to participate on short educational training courses provided by external providers and to in general study the legislation related to one's work from public sources. Problem here was that B saw the readily available training courses to be insufficient and too basic for one's needs and that finding more suitable courses was proving difficult.

In C's view the most common use of PSM skills were related to the effective use of electronic procurement tools, use of procurement services and to know how to effectively use the framework systems and tools. Knowledge-wise the important aspect was to know how the common ways of procurement function. Additionally, the theoretical knowledge of PSM was in C's view useful in allowing individual to exit the "knowledge bubble" of the organization and by allowing one to see the PSM from a wider angle.

In public sector there was, in C's view, a strong perception on how the PSM should be done. Changing that in some cases would be good and it could be done by presenting the best practices of the private sector in to the public sector. C was personally very interested in learning more about PSM and had used considerable amounts of personal time to learn more about the subject from sources outside the work organization. According to C the best way to learn more about PSM could be to use external sources of knowledge in combination with the practical work currently underway. Where this knowledge would be obtained was in C's view dependent on the need. On some cases the benchmarking practices used in public sector were good and in some cases the services provided by European Union might be suitable. C had also taken lot of additional education related to one's work.

According to D important aspects of procurement work were the formation contract bidding process, total costs of ownership, contract formulation and the experimentation with new ways of doing things. Theoretical knowledge of various aspects of procurement was seen to be useful and beneficial. D was also interested in learning more and keeping one's know-how up to date. D had also participated in courses and association activity related to procurement. According to D, new training courses and professional forums could be ways to improve one's knowledge related to procurement, but also online sources, literature and open municipal procurement practices were mentioned.

5.5 Levels of Maturity

In the final part of the questionnaire the aim was to probe the perceived level of maturity in PSM and to determine if varying levels of PSM maturity might correspond to differences in the results regarding the other areas of research. Maturity level was probed through the use of theory introduced in chapter 2.3. This was done by asking whether the procurement was centralized or de-centralized, how it was organized, what tools and practices were used and how they would themselves rate the level of maturity. Finally, the interviewees were asked how in their view the maturity level of procurement in their organization could perhaps be best improved.

A's view was that the maturity level of purchasing in the organization was very low. According to A, the procurement was decentralized and a certain aspect of professional approach to it was missing. There was not much measurement to evaluate the process and to determine how successful the outcomes were. Most important measures were costs and time. The main goals of the procurement were to keep the costs low, waste low, keeping up in schedules and to improve the margin of earnings. The procurement was responsible directly to the main owner of the firm. No bonus or reward system was in place. Most important tools used in procurement in A's instance were phone and e-mail, but in some instances the issues were agreed in face-to-face meetings. In A's view the maturity level of the procurement could perhaps be best improved by better planning, monitoring and through better training for the employees conducting it.

B saw that the organizational maturity was not at the moment very organized as the whole function was going through a phase of change that would introduce more specialized purchasing team. Parts of the procurement process were de-centralized, but overall management was done by the interviewee. There was not much measurement involved and feedback was mainly done after different projects through discussions. The most important goal of procurement was to fulfill the different needs and B personally aimed in the most efficient usage of public funds.

Also important was to function without preferences to any parties and to avoid discrimination in all matters. Procurement was responsible to the end users and to higher echelons of public management. No bonus or reward system was in place. Most important tools used in procurement in B's instance were phone, e-mail and management software and databases that allowed for more effective work to be done. According to B the level of maturity in the organization might be improved through the development of a purchasing team, through specialization, through regular training, through monitoring and finally by improving the communications between different parties involved.

In C's case the overall maturity of the organization was pretty well established but varied from place to place. In some areas of the organization the procurement practices were well established but in some places that did less frequent procurements the practices were less developed. Some organizational changes had had an effect also.

The procurement was in C's organization a type hybrid arrangement. Procurement was mainly centrally controlled, although practical application was done in a de-centralized way in the field. Some aspects of the procurement were also outsourced. According to C the measurement in the organization was mainly in the customer satisfaction measurement through net promoter score (NPS) and by evaluation of external procurement services. Additionally, the organization measured the amount of offers and the changing offer prices. In C's view these were not as good measures as NPS due to the varying scopes of different procurements. The success or failure in procurement was determined according to C mainly through ability to keep on established timetables, by estimating the end results ability to meet the needs of the customer.

Also, recently there has been increased talk on the need to measure success through the delivered value to the end customer. Feedback was conducted, and C noted that the extremes in it were strongly present. In order to form a complete picture, one had to be active in asking for feedback and suggestions for improvement. The main goals of procurement in C's organization were to ensure that the procurement was wholly economical, efficient, of good quality and to apply the procurement strategy that was in turn applying the larger organizational strategy.

There was no practical bonus system in place, but financial goals could be related to the directing and development of procurement strategy. Procurement was responsible to directing body and also to the budget managers of different projects. The C's organization used electronic tools widely and had various tools to form competitive bidding processes. Communication with different interest groups was mainly done via a channel that announced procurement projects and through conferences which were used to meet the various suppliers.

According to C the maturity in the organization could best be improved by developing the procurement services and processes which in turn would enable effective and systematical improvement in the organization.

D's organization had an organized procurement structure with general level organization and maturity being good or at least better than in most similar cases. Here also the varying levels of competence within the organization became present. Some areas of the organization involved in the procurement might not have very high amount of expertise to conduct the operation. Procurement in D's organization was also of a hybrid type with a central management on many areas but with some procurements being decentralized. Measurement was not very extensive on D's view. There were some indicators that measured the amounts of competitive bidding, contracts values and variables related to set political goas. For example, environmental impacts and social responsibility was measured in some cases through various means. There was also a process underway that would bring the measurement related to the impacts of procurement into use. On the other hand, feedback was active. The different stakeholders involved in procurement were active on feedback, but with negative feedback being present somewhat more than positive.

Goals of the procurement function were not formal, but it was understood that cost efficiency and meeting up with the end-user needs were important. Procurement function was responsible for the upper management and also had legal responsibility over certain aspects. No bonus system was in place.

Most important tools in use were the electronic bidding systems, electronic archive systems, databases and other support services. Communication was primarily done via email, phone or through dedicated internet programs or intranet. The maturity of the procurement function could be improved in D's view through development on the general attitude towards procurement in the management and other areas. Resistance to change and the lack of resources were in D's view the principal barriers preventing the improvement of the level of maturity in the organization.

5.6 Summary of the Interviews

In this chapter the summary results of the interviews are discussed theme by theme. The central themes are used to group answers by the interview participants in order to find common answers and insights. The summaries of the findings and main points can be seen in the theme-by-theme tables below.

5.6.1 Barriers of Improvement -theme

As a summary the first theme of 'Barriers of Improvement' showed a uniform need amongst the interviewees regarding the need to improve one's performance and knowledge regarding PSM and procurement. All the interviewees had faced the need to improve one's performance and knowledge. Most common personal method for possible improvement mentioned was external training services. Regarding the barriers for personal improvement, some variation of the lack of organizational support or the lack of resources were the most common ones. Two interviewees saw the lack of suitable training services to be a notable barrier as well.

On organizational level the single most common barrier preventing the improvement of procurement knowledge and performance was the lack of organizational culture of improvement and the lack of motivation for the improvement.

All the interviewees mentioned the specific issue of lack of motivation for organizational improvement. Additionally, the “not part of my job description” – type of attitude present in some parts of the organizations was mentioned by 3 of the interviewees. Additionally, the lack of measurement of improvement, lack of motivational drivers for improvement and the varying job descriptions were mentioned here as well by multiple interviewees. In some cases, parts of the organization conducting the procurements did the task so un-regularly time wise that it was seen that they thus could not attain the professional skill needed for the task.

As for the ways of overcoming the barriers, the answers were harder to summarize. Some type of improvement of organizational culture or various organizational actions were needed according to two of the interviewees. Increase in training and increase of substance in procurements was each mentioned by one interviewee respectively.

To summarize, there was a definite need for improvement on procurement, but the interviewees felt that the organizations they were part of were lacking in the attitude towards promoting improvement and that the resources that would create improvement were insufficient. On organizational level the biggest problem was lack of motivation for the improvement and the problems in the division of labor with in the organizations.

Table 4. Summary of ‘Barriers of Improvement’ -theme

Barriers of Improvement	
Need for personal improvement	• All respondents had noted a need for personal improvement regarding PSM
Barriers of personal improvement	• Lack of organizational support • Lack of suitable training services
Barriers of organizational improvement	• Lack of motivation for improvement • No organizational improvement culture • “Not part of the job description” – type of attitude
Ways of overcoming the barriers	• Organizational change of culture to embrace improvement and change • Increase in organizational support

5.6.2 Performance and Capability

In the second theme of ‘Performance and Capability’ the answers given by the interviewees were more varying. Especially when asked about the possible definitions for the terms ‘performance’ and ‘capability’, no single common definition could be formed. Most common way of seeing the term performance was through good end results of the PSM. Commonly performance was deemed good it the end results were good. Additionally, some skills, knowledge and personal attributes were also mentioned in relation to the term.

Regarding capability, the results were also very different, but in common the interviewees saw the term more difficult to understand than performance. The ability to improve one self and to adapt was however mentioned by two of the interviewees in relation to the term. Additionally, capability was also seen through the ability of meeting up expectations and the responsibilities of the procurement.

There was however a common line in that neither capability nor performance was really measured in the organizations, but in 2 of the cases at least some indicators were used. In both cases these indicators were however deemed to be not precisely accurate in measuring the issues and the better ability to measure the issues was deemed difficult. As for the skills related to and useful in PSM, the ability to keep up with set timetables was mention by 2 interviewees. Also, the importance of know-how and the ability to grasp the complex issues related to procurement and PSM was highlighted. The skills were also often associated with either good performance or capability

Table 5. Summary of ‘Performance and Capability’-theme

Performance and Capability’	
Definitions of performance and capability	• No encompassing definition could be formed for either term, usually understood through positive end results
Measurement of performance and capability	• No real measurement • Difficult to form indicators for accurate measurement
Important skills in PSM	• Ability to keep up with set timetables • Good know-how • Ability to understand complex issues

5.6.3 Drivers of Improvement

The third theme of ‘Drivers of Improvement’ probed the drivers behind the improvement of procurement. A common view shared by all the interviewees was that procurement function needed improvement in their organization.

A number of possible benefits were mentioned, and several aspects of the function was commonly in need for improvement. For the reasons behind the improvement, the currently partially non-functional status of procurement was mentioned by two respondents. Changing operational environment was seen as one reason. A benefit of improvement, mentioned by three interviewees, was the possibility that employees could better focus on the core aspects of their job.

Also, three of interviewees mentioned the possibility for either financial benefit or increase in efficiency as the benefits resulting from the improvement. Also, the possible reduction of hurry was seen as beneficial in a personal level by two respondents.

For what could be the motivators for improvement, three interviewees mentioned the possibility of personal financial gain in the form of bonuses. Additionally, increase of respect towards procurement was seen as motivational by two interviewees. Also, capable and proficient HRM management was mentioned as an important motivator by one interviewee.

Table 6. Summary of ‘Drivers of Improvement’-theme

Drivers of Improvement	
Reasons for organizational improvement	• Current problems in the procurement • Changing operational environment
Benefits of the improvement	• Ability to focus on the core issues of the job • Increase in efficiency and financial savings
Motivations for the improvement	• Financial gains and bonuses • Increased respect would increase motivation • Capable and proficient HRM management

5.6.4 Attitude on PSM Improvement

In the fourth theme of ‘Attitude on PSM Improvement ‘-the answers showed that 3 of the interviewees thought that the even the more theoretical knowledge about procurement and PSM was very useful, with one believing it was even more useful for the upper management of the company. One view was that it helps to see things in the work from a higher perspective and enables the procurement employee to see things outside the present ‘information bubble’ and enables for best practices to be tried even in the public sector. Other interviewee saw that it helps to understand the functionality of the markets and the rules under which they operate.

All interviewees were however interested in learning more about procurement and PSM, with two of the interviewees having already invested their own time and effort in order to learn more.

All the interviewees said that they currently employ at least some theories or practices of procurement and PSM in their job regularly. The most important tools theories and practices were heavily dependent on the type of work, but most common answer was that it was important to know how to create and manage bidding process effectively by 3 of the interviewees. Additionally, different types of electronic procurement project management tools (3 interviewees) and the mastery of spreadsheet programs such as MS Excel was deemed important. Also, the use of practices such as total costs of ownership (TCO), the use of service level agreements (SLA's) or knowledge of legislation was mentioned.

The best ways of learning more about procurement and PSM was seen to be external training courses interviewees, online services and training and independent learning from literature by 2 interviewees each. Additionally, open university courses, EU guides and government guides were mentioned also. Of the possible barriers preventing the PSM knowledge improvement, the interviewees the previously mentioned lack of suitable training and the lack of resources for training became again apparent.

One respondent also said that despite there being a wealth of knowledge available, finding the suitable knowledge for one's needs effectively was difficult.

Table 7. Summary of ’Attitude on PSM Improvement’ -theme

Attitude on PSM Improvement	
Interest in PSM and the improvement of knowledge	• All interviewees were interested in learning more
Most important tools, theories and practices	• Dependent greatly on the type of work • The creation and management of a bidding process • Electronic procurement tools and software
Ways of improving PSM knowledge	• External training courses • Online sources and services • Independent learning
Barriers of PSM knowledge improvement	• Lack of suitable training services • Lack of resources

5.6.5 Levels of maturity

The fifth and final theme of ‘Levels of maturity’ was focused on inspecting the levels of maturity within the interviewees organization in order to find out if the assumed level of maturity had a possible connection in relation to answers in other themes. Most commonly the procurement was organized around a hybrid model where there was some central management, but with some parts being de-centralized.

One respondent had almost totally de-centralized procurement structure and it is notable that the particular interviewee saw the self-described maturity of the procurement in one’s organization to be lowest of all the interviewees.

All the other interviewees thought that their level of maturity in procurement was somewhere above average although there was still room for improvement.

Goals of procurement were often related to economic aspects such as cost efficiency and minimization of waste. Also important was the needs of the end-user and the need to meet the deadlines and set timetables. None of the organizations had any type of bonus system in place.

Measurement was not very widely used in any of the interviewees' organizations in relation to procurement. Most common answer was that there was some measurement, but it was mainly focused on issues that the interviewees saw as somewhat secondary in importance, such as amount of offers and value of offers. Of the suitable measures in use, one interviewee mentioned net promoter score, or NPS. Two of the interviewees said that practically the situation from their perspective was that there was no measurement in their organization for procurement. Of the tools in use most interviewees said to use email and electronic programs in communication. Of other software in use, the common answer was spreadsheet programs, e-procurement programs and archive systems.

On improving the maturity level of the organization, the view was more difficult to summarize as the answers were mostly specific on the organization they were part of. However commonly the theme was that the organizational procurement processes needed refinement. Also mentioned were the need to appreciate procurement more in the organization, allocation of more resources for procurement, training, creation of overall procurement strategy and better measurement.

Table 8. Summary of ‘Levels of maturity’-theme

Levels of maturity	
Organizational structuring	• Most commonly some type of hybrid organization with central control but with some parts de-centralized
Goals of procurement	• Mainly related to cost efficiency and waste reduction • End customer benefit and keeping up with timetables
Measurement in the PSM function	• Very little measurement • Mostly focused on issues not of direct relevance to procurement
Tools of procurement and communication	• Email most common communication tool • Linked electronic systems are in use
Improvement of the maturity level	• Refinement of procurement processes • Better understanding of the importance of procurement • More resources and training

6 DISCUSSION AND CONCLUSIONS

In this chapter, the interview answers that were presented and summarized in the previous chapter 5 are used to form a synthesis with the theoretical chapters of 2 and 3. Through the synthesis, the research questions from chapter 1.2 are answered. Lastly, the implications of the results, limitations of the study and the suggestions for future research are addressed.

6.1 The Main Results of the Study

In relation to the main research question of:

- **What are the barriers of improvement on PSM knowledge and performance?**

The results can be summarized into two categories: barriers of personal improvement and the barriers of organizational improvement.

It can be summarized that on the personal level the most notable barriers were formed by:

- Lack of organizational support
- Lack of suitable sources from where to improve one's own knowledge

The first result is based on the common answer by interviewees was that that the personal improvement of procurement was hampered by lack of suitable resources for improvement of procurements skills offered by the organization. This was manifested in answers that noted for example that training was too expensive for the organization or that there was no managerial support for improvements, as procurements were not viewed as very important function. This is in line with the view that procurements were not considered important and only slowly is increasing its noted importance amongst management (Monczka, 2005). The result is also relevant with the theory of Axelsson et al., (2006) presented in the chapter 2.4.

There it is noted that the traditionally low status of purchasing may cause the importance of purchasing to be downplayed and thus reducing the drive to improve it. This might in turn explain the personal barrier of lack of organizational support (Axelsson et al., 2006).

The second result of ‘lack of suitable sources from where to improve one’s own knowledge’ refers to the finding that interviewees mentioned problems in finding suitable sources for improvement of one’s own knowledge. Mentioned issues were that the training available was too basic, the training was too expensive, finding suitable source is difficult and that the need for different knowledge varied depending on the need at hand.

Perhaps through the development of the procurement function in the organization the personal barriers related to organizational support could be addressed. As for the lack of suitable sources from where to improve one’s own knowledge and performance, the issue is more difficult to approach from a theoretical standpoint. It can be assumed that perhaps this issue also could be solved through increased organizational support and thus also by applying more resources into procurement improvement. This is also supported by the fact that many interviewees felt that there was not enough organizational training currently and that the resources for the training were too limited. It can also be assumed that there might also be a real demand for better, more easily accessible and needs based training services to be provided.

On wider organizational level the barriers can be summarized to be formed by:

- Lack of motivation for improvement
- No organizational improvement culture
- “Not part of the job description” – type of attitude

These results can be seen to be somewhat related to the results of investigating personal barriers and to each other. Interview answers showed that the organizational barrier of ‘lack of motivation for improvement’ on relation to procurements was common on the interviewees’ organizations. As for the cause of this result, it might be a manifestation of wider issues in the whole organization as the second and third result would imply. Other explanation is offered by the note that two interviewees noted that other parties which are involved in procurements projects might view procurements as being ‘un-interesting’ or of being ‘no-direct relevance to them’. Lack of personal gain on improvement might also be one cause, as there was no type of bonus system or results-based salary reported in any of the interviewees’ organizations.

The result of ‘no organizational improvement culture’ is a summarization of the answers that defined the barrier as being such that the organization did not promote the improvement of knowledge and performance in procurements. This result can be related to the first result of ‘lack of motivation for improvement’ in that it may be assumed that organization that has no culture of improvement is also unlikely to motivate its employees to improve their conduct. Interviewees noted that drive for improvements yielded usually no personal benefit and in some cases the proposition of changes might also be seen as negative. This result might also be related to the fact that none of the interviewees’ organizations had any type of bonus system in place and the measurement in relation to procurements was noted to be rare. These facts might also be the cause for the first result of ‘lack of motivation’. This result is in line to the Axelsson et al., (2006, 151) in that the variable of ‘culture’ is seen as an important part of improvement of purchasing performance as can also be seen in the figure 11. The variable of culture is related to knowledge in that the culture of knowledge sharing requires a system where managers are committed and involved in the discussion about the value of knowledge management and the need to create, share and use knowledge in the organization. “Purchasers have a need to feel that they are recognized and rewarded and need to have and demonstrate respect for their colleagues” (Axelsson et al., 2006). Changes in his variable could in turn enable the improvement of purchasing performance.

Of the results, “Not part of the job description” – type of attitude refers to the employees feeling that either the conduct or the improvement of procurement is not seen as being part of their job description. This was the case in the organizations that the interviewees worked in that had other employees working in procurement projects. In the interview answers it became apparent that this type of attitude was possible especially if the other members of the procurement process did procurement only as a small part of their job or on a part-time basis. In these cases, there was not a clear understanding by all the parties involved on what should be done and by who. Therefore, it was reported that some employees felt that the improvement of procurement knowledge and performance was not necessary as it was not seen to be mandatory or even part of their jobs. This issue might be caused by unclear division of labor in that the work descriptions are not clearly defined, thus causing confusion in what parts of procurement tasks belong to which employee. This could perhaps be alleviated through clearer common practices, better management and by clearer definitions of jobs and the responsibilities within them. According to Baily et al., (2005) especially in public sector the procurement should have a: “…clear definition of the roles and responsibilities of the personnel involved in specifying the need, giving financial authority, and making purchase commitments.” Also furthermore, Baily et al. note that there should be an aspect of professionalism in public sector that rises from professional training and education of those personnel responsible for the strategic aims and practical application of procurement action (Baily et al. 2005). It should be noted that many of the interviewees had some variation of a hybrid structure in procurements that is likely to become common in other instances as well (Monczka et al., 2005). In this structure the procurements were centrally managed but often involved other parties, which usually conducted procurement only in semi- to non-regular basis. This fact naturally can affect the results considerably.

As a summary, the findings are likely related to each other in that they represent the different sides of the same issue. These results reporting a lack of organizational support or a lack of organizational improvement culture on procurements is relevant to the Axelsson et al., (2006) model presented in the chapter 3.4, figure 11 'Organizational design variables for knowledge management'. Especially the presented variables of strategy, culture and staff are relevant in order for the organization to support the improvement of purchasing performance.

As previously stated in the model presentation: the strategy variable should enable purchasing to act as important inter-organizational link that enables information sharing and is more than just operational department. Development of knowledge strategy and goals as well as definition of knowledge gap should help to form a mission that can be communicated to managers and practitioners. In culture variable the aim is to create a culture in purchasing that supports information sharing and promotes respect, reward and recognition among the employees. Lastly in the staff section the barriers can be negated by forming the purchasing department out of motivated and competent, willing to learn. (Axelsson et al., 2006)

Additionally, Axelsson et al., (2006) presented the theory of barriers within the sourcing department where the barriers are formed by factors within the sourcing function of an organization. These were for example procedures, processes, leadership, competences, attitudes and/or measures of performance. Lack of improvement on any of these issued could hinder the development of PSM within the organization and thus also prevent maturity from evolving. (Axelsson et al., 2006)

In response to the second research question of:

- **How is PSM performance and capability defined?**

It can be summarized that no clear definition for either term could be formed based on the answers. Many interviewees understood the PSM performance through achieved results. On regard to capability some personal attributes and skills were offered.

This result does not however contradict the literature, it only goes to show that varying definitions and views on the issues exist in practice.

This is also in line from the earlier mention that no single clear definition for example to capability has not yet been formed (Hallikas et al., 2012). Additionally, it can be assumed that the various existing definitions of the literature are simply not familiar or relevant to the practitioners in the interviews. Additionally, as the interviews were conducted in the Finnish language translations of the terms and what they are understood to hold, might affect the results.

For the third research question of:

- **How is PSM performance and capability measured?**

One important finding is that neither PSM capability nor performance were systematically measured. Many interviewees noted a lack of measurement on other aspects of procurement as well. In the case of the interviewee C for example, the formation of measures was seen to be difficult and further that the standard measures in use were not seen to meet the needs of procurement well. On purchasing performance measurement, the advantages would be that through purchasing performance measurement it could become possible to achieve better decision making, better communication with other departments, it would make things more visible by comparing expected results to realized results and it may contribute to better motivation (van Weele, 2005). In this respect, the improvements on performance measurement could lead to improvements even on other areas such as the issues related ‘lack of motivation’ –result of this study in the ‘barriers of improvement’ -theme. Further, according to van Weele these positive effects performance measurement should lead into a collectively higher added value of the purchasing function for the firm. The measurement itself could be conducted on the areas presented previously in the figure 7. Also, there is evidence that the lack of purchasing performance measurement hinders the status of management recognition of the function (Baily et al., 2005).

As for the fourth research question of:

- **What motivates (drives) the improvement of PSM knowledge and performance?**

There can be summarized two common answers from the interviews that form the need for the improvement in procurement:

- Current problems in the procurement
- Changing operational environment

These reasons were stated as the common cause that agitated the need for improvements to occur. The problems in the current status of procurement was seen as the most common cause for the need of improvement to rise. This was evident on the organizational viewpoint, but also on relation to PSM knowledge and performance.

The need for improvements regarding the whole structure of procurements function can be summarized for example through the case of interviewee B. B's organization was under a process of change that was initiated due to the problems in their current model of operations. The problems were seen as substantial enough to launch an organizational improvement process on procurement, but similarly the interviewees stated for example the need for better efficiency as the driver for their own personal improvement of PSM knowledge and performance. On relation to the issue of procurement structure it is evident that effective or ineffective organizational design has an effect on the success of purchasing and the entire organization. Furthermore, ideally the modern successful procurement organizational designs should have flattened hierarchies, cross-functional teams, de-centralized buying with central coordination of spend categories, open information sharing and finally a rotation of managers between business units and functional groups to support the development of wide knowledge and expertise (Monczka et al., 2005).

Additionally, stated was the need to improve as the world and operating environment of PSM changes. In the interviews this was manifested by example the need to update knowledge on legal issues as the public procurement laws were changed.

As for what benefits the improvement of PSM knowledge and performance might bring, the results of the interviewees can be summarized into to two answers:

- Better ability to focus on the core issues of the job
- Increase in efficiency and financial savings.

These were noted to be the most important benefits of the improvements. Of these the 'better ability to focus on the core issues of the job' was seen as an important benefit on that it was seen to allow for a better quality of work and that it might enable for further improvements to occur as there was more time available for them. 'Increase in efficiency and financial savings was seen as being part for the whole reason for procurement functions existence and thus one of its important goals.

In regard the motivators for the improvement, the interviewees answers can be summarized by three noted possible motivators the improvement:

- Possibility for financial gains and bonuses
- Increased respect would increase motivation
- Capable and proficient HRM management.

These were seen as being motivating factors by the interviewees. Especially the monetary benefit was common, but additionally the importance of respect and good management became apparent as well. These results are also linked to the Axelsson et al. (2006) model presented in figure 11 that contains the culture variable. As presented in the model, the culture variable is one of the aspects to be considered in order to improve purchasing performance. As above mentioned, the culture variable contains the notion that purchasers need respect, recognition and reward (Axelsson et al., 2006). It is therefore important to also address the issues of respect and reward to improve purchasing performance.

Interviewee C for example summarized the benefits of good management as: “Knowledgeable and capable HRM management makes it possible for employees to motivate automatically.” Therefore, it is apparent that good management combined with respect for procurement function might serve as an important motivator in addition to the traditional motivation that the possibility of financial gains might offer.

For the final research question of:

- **How are PSM theory and practices perceived?**

The goal was to inspect the interviewees perception and attitude on PSM theory, practices and their improvement as it can be assumed that for example negative perception or attitude might affect the views on other research questions. Result is that the all of the interviewees saw PSM theory and practices as being interesting to them personally and also of being important in for their work. All of the interviewees were interested in learning more about PSM. Most commonly the PSM theory was seen to be important as it offered better grounds from which to understand procurement and as interviewee C put it: “the theory makes it possible for one to exit the organization’s knowledge bubble.” This goes to say that theory makes it possible to see the issues from a wider angle and makes it possible to find solutions to problems which would not be possible without the knowledge of the various PSM theories and practices. Therefore, it can be determined that negative view on PSM does not seem to affect the results.

Also, in addition to the research questions, the status of maturity was charted by for example examining PSM function organizational design and used tools to give better basis in understanding the results. Maturity is linked to the professionalism of the purchasing function and is shown for example by the status of the function, use of purchasing information systems, quality of the purchasing employees and the level of collaboration with suppliers (van Weele 2005). The level of maturity was self-described to be organized in all but one of the cases where it was deemed to be still rather low due to the fast-growing state of the company. This information puts it into perspective that most of results come from organizations that have organized form of procurements and that the problems are not caused by low level of maturity in procurements alone.

As a final summary of the results, it can be determined that PSM needs support in both personal and organizational level in order to improve. The barriers preventing the improvement can vary from case to case, but some commonality in them can be found even within the limited scope of this research. It can be arguably assumed that additional types of barriers, causes for them and possible solutions for them can be identified through further research. As per van Weele (2005) argument that PSM has become key driver in business, it can be said that the issue of barriers in PSM is thus of a direct importance to companies and even to the efficiency of public organizations.

6.2 Discussion on the Maturity Model

As evident from the results, there can exist several barriers that prevent or hinder the maturity of the PSM within organization and on a personal level as well. The maturity model presented by van Weele (2005) in figure 5 in chapter 2.3, can be used to describe the organizational process and stages of maturity in PSM, it does not however clearly take into account the barriers that are presented from various sources in chapter 2.4. The model presented in figure 11, chapter 3.4 by Axelsson et al., (2006) takes into account the barriers of improvement in relation to knowledge processes, but not in direct relations of barriers into the organizational maturity development of PSM. Additionally, based on the empirical results of this study, it is suggested that the barriers, such as the lack of organizational support, can hinder the maturity from developing into higher stages. Thus, a further adaptation of the model with the barriers is discussed below.

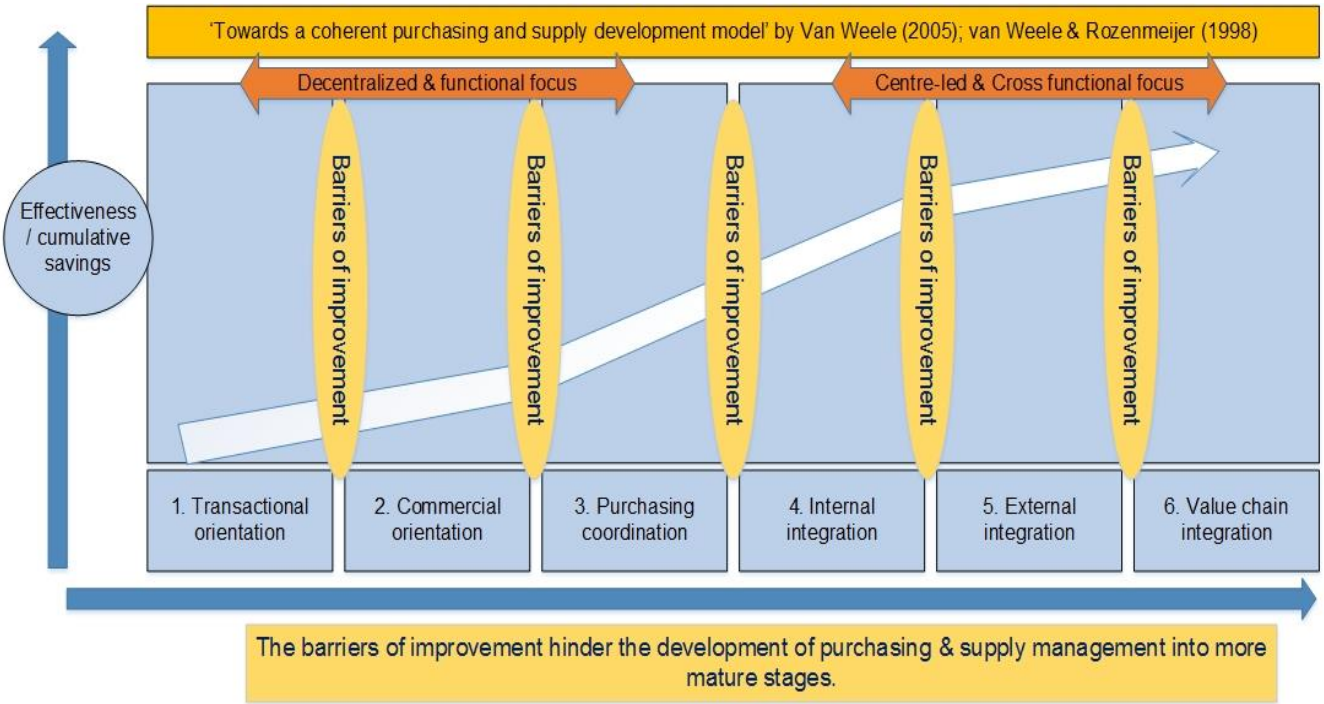

Figure 12. Proposed further adaptation of the van Weele (2005); van Weele and Rozenmeijer, (1998) model, with the inclusion of the idea of barriers of improvement on PSM maturity

In this adaptation model of van Weele (2005) model, it is therefore proposed that the barriers formed by the issues mentioned in chapter 2.4 alongside with the results of the empirical research in this study are merged with the van Weele model of maturity stages to describe the maturity process in more detail. In the adaptation model, the barriers are located between the stages of maturity and thus can be assumed hinder the development of maturity into other stages. This modification of the model presents a clearer hypothesis on that various barriers, such as those identified in the results of this research in previous chapter 6.1, can be assumed to hinder the development of maturity within organizational PSM. This discussion is based on the results of this research, in that the results showed number of reasons (the barriers) existing that prevented the improvement of PSM even on organizational level. The barriers can consist of variety of issues, dependent on the various organizational attributes of the PSM in question and the environment that the PSM operates.

The barriers themselves can be assumedly overcome with suitable actions that promote the improvement of PSM and PSM maturity. However, further testing and research on barriers, what they consist of, how they can be overcome and overall the feasibility of this adaptation would be needed to either validate or disprove the presented model.

6.3 Limitations of the Study

The limitation of this study is formed by the limited scope of the interviewees and the fact that the method of research was qualitative. A more comprehensive quantitative research would be needed to confirm the results in a wider populace. The research was conducted in Finland and as such the generalizability of the results to the scope of global PSM is limited.

The composition of interviewees with higher amount of public sector employees might also affect and limit the results and their generalizability. Although the organizational maturity level was charted, its effects and variations might affect the results. Different composition of interviewees can be assumed to change the results at least to some extent, therefore research on the subject would be necessary to affirm the results.

6.4 Suggestions for Future Research

As the goal of this thesis was to research the wide issue of barriers of improvement on PSM knowledge and performance, it is apparent that the limited scope of this research is not sufficient to reliably determine all of them. More research on the matter is required, and in the light that no similar research was found in the literature review process it can be argued that there exists a form of research gap on this part of the PSM. As this study was conducted with only Finnish PSM practitioners as the interviewees, further research would be needed to affirm if the results and issues are relevant to the PSM in other countries or on a global level as well.

Validation of the presented theory of barriers preventing the development of maturity in PSM would also be further needed.

Additionally, it could be beneficial to further study what could be done to overcome the barriers and if the barriers are indeed even the same in different cases. Although there exists some relevant literature reference into barriers of PSM improvement such as the example offered by Axelsson et al., (2006) it is evident that more concrete evidence is needed on what the barriers might consists of and what their effects might be.

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APPENDICES

Appendix 1. Example of semi-structured interview questions.

INTRODUCTION

Interviewee:

Employment position:

Organization & sector:

Work experience:

Type of procurement conducted:

BARRIERS OF IMPROVEMENT

How experienced are you in conducting purchasing according to your own estimate?

:

Have you ever faced a need to improve your PSM knowledge and/or performance?

:

In what way(s) could you improve your own knowledge on PSM?

:

In what way(s) could you improve your own performance on PSM?

:

In what way(s) do you think other employees or the organizations PSM knowledge and performance could be improved?

:

What in your view is the biggest obstacle(s) in the way on improving your own knowledge and performance?

:

And for other employees or the whole organization?

:

How could the personal barriers be overcome in your view?

:

How could the organizational barriers be overcome in your view?

: