

A Framework for Capacity Management in the Public Sector

A case study of the Swedish Migration Agency

Master of Science Thesis in the Programme Quality and Operations Management

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Chalmers Reproservice Gothenburg, Sweden 2016 A Framework for Capacity Management in the Public Sector A case study of the Swedish Migration Agency Ida Aasa and Viktor Johansson Department of Technology Management and Economics Division of Innovation and R&D Management Chalmers University of Technology

Abstract

Capacity management has historically focused almost explicitly on goods and manufacturing within the private sector, whereas capacity management's implication concerning the public sector and services has been somewhat overlooked. Thereby, the profit driven organisations within the private sector are often in the forefront regarding the field of capacity management. Over the past decades though, as the demand for an increased efficiency of public sector organisations begun to rise, there has been an increased interest from scholars and professionals alike concerning the adaptation of private sector practices to public sector organisations. As a consequence, numerous studies concerning operations management role in the public sector has been conducted. However, the attention of these studies has mainly focused at different business process improvement methodologies, such as Lean, leaving capacity management as an area of insufficient investigation deserving additional attention. Therefore, the purpose of this study was to increase the understanding of capacity management within the public sector and how it can be used to cope with fluctuations in demand.

At the end of 2014 the refugee crisis in Europe begun to escalate to a point beyond control of the countries within the European Union, leading to a collapse of the Union's fundamental policies of controlled migration during 2015. In Sweden, the Swedish Migration Agency reported a record number of 162 877 asylum seekers that same year. Thus, making the situation and organisation interesting from a capacity management point of view and suitable to study in order to fulfill the purpose of this study.

The study consisted of both a literature study concerning capacity management as well a case study of the Swedish Migration Agency. The outcome of the study indicated that even though the long term and medium term capacity management strategies identified in literature might be connected to organisations capability to satisfy a fluctuating demand, public sector organisations seem to be limited in their ability to influence these types of strategies. Instead organisations within the public sector seem to manage their capacity through practices. Therefore, based on findings from the case study and findings from the literature study, a framework for capacity management in the public sector was developed. The framework aims at assisting public sector organisations with judging the suitability of different capacity management practices.

Keywords: "capacity management", "capacity management strategies", "capacity management practices" "public sector", "public sector organisations", "capacity management framework", "service", "public sector services"

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Gothenburg, 2016

Ida Aasa Viktor Johansson

Glossary

| ABO | Accommodation provided by the Swedish Migration Agency to asylum seekers. | | | |
|--------------------|--|--|--|--|
| AEGO | Abbreviation for "Ansökningsenhet Göteborg". The Swedish Migration Agency's application unit in region Väst. | | | |
| APGO | Abbreviation for "Asylprövning Göteborg". The Swedish Migration Agency's examination unit in region Väst. There are six APGO within the region, i.e. APGO1, APGO2 etc. | | | |
| Asylum | The right to protection from prosecution, inhumane treatment or armed conflict. | | | |
| Asylum Seeker | The individual who applies for asylum. | | | |
| Call Off | The act of notifying a demand within a pull system. | | | |
| EBO | Accommodation found by the asylum seeker through own means. | | | |
| LMA | Abbreviation for "Lagen om Mottagande av Asylsökande"; "The Reception of Asylum Seekers and Others Act". The act includes, for instance, obligations to provide accommodation and financial support. | | | |
| EURODAC | The European fingerprints database for identification of asylum seekers. | | | |
| OH/OT | Abbreviation for "omedelbart hemland/omedelbart tredjeland"; immediate home country/third country. Meaning that the country of origin of the asylum seeker is classified as safe and with an acceptable state protection. | | | |
| Public Procurement | The process by which public authorities purchase goods and services. | | | |
| PUT Presumption | Abbreviation for "Permanent residence presumption", Meaning that the country of origin of the asylum seeker is classified as unsafe and therefore reasons of asylum is valid. | | | |
| Quotation Refugees | Refugees selected by the Swedish Migration Agency to be granted asylum. The selection is based on recommendations from UNHCR. | | | |

| REG 1 | The initial meeting between the asylum seeker and personnel at the Swedish Migration Agency. This meeting includes the registration of the asylum application, thereby legalising the asylum seekers stay in Sweden. |
|-----------------------|--|
| REG 2 | The second meeting between the asylum seeker and personnel at the Swedish Migration Agency. This meeting includes further collection of information that is added to the asylum application. |
| REG 3 | The meeting during which the Swedish Migration Agency informs an asylum seeker that his or her application to falls under the Dublin Regulation. |
| Schengen Area | An area of countries that are included in the Schengen Agreement. The Schengen Agreement concerns open borders between the countries it includes. |
| Skapa | The Swedish Migration Agency's internal information system in which necessary information concerning an asylum seeker is registered. |
| The Dublin Regulation | The country within the European Union which asylum was first applied is assigned responsibility to consider the application. Thereby, it's not allowed to apply for asylum in more than one state within the Union. |

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1. Introduction

This chapter presents an introduction to the study. Firstly, the reader is provided with a background covering both theory and the case used for this study. Secondly, the purpose, aim and research questions are introduced. The chapter is concluded with the delimitations of the study and the outline of the report.

1.1 Background

At the end of 2014 UNHCR (2014) reported that the number of displaced individuals in Europe had researched 3.1 million, an increase of 72 per cent if compared to 2013. During 2015 the refugee crisis in Europe continued to escalate, which resulted in a collapse of the European Union's fundamental policies for controlled asylum migration (Migrationsverket, 2016a). In Sweden the number of asylum seekers reached a record peak as the Swedish Migration Agency (hereafter sometimes referred to as the Migration Agency or the Agency) reported a total of 162 877 asylum seekers in 2015 (Migrationsverket, 2016b), see figure 1.



Figure 1. Number of asylum seekers arriving in Sweden 1984-2015

During the mid 2000's, when the Migration Agency noticed that their processing time for asylum applications was getting longer and longer, the LEAN philosophy begun to attract the interest of the Migration Agency (Arpi, 2014). After a time of trial and error with other types of improvement changes, the Migration Agency's leadership decided to commit. Partnering with one of the most high profile consulting firms, the Migration Agency started to introduce the LEAN philosophy in 2009 (McKinsey & Co., 2014), with the aim of translating its success in the private sector to their organisation. Even if LEAN faced some internal scepticism (Arpi, 2014), the Migration Agency managed through LEAN efforts reduce the processing time for asylum applications from an average of 270 days in 2008 (McKinsey & Co., 2014), down to 78 days in 2014 (Pettersson, 2016). However, during the extreme situation of 2015, processing time skyrocketed back up to an average of 152 days (Pettersson, 2016). During this extreme situation, the LEAN way of working was not enough for the organisation, there was a need for other operation management practices. In the autumn of 2015, when the largest peak in demand occurred, the Agency started adopting capacity management practices in order to increase the capacity at their application units, in order to be able to register the large amount of incoming asylum seekers. However, after a couple of months when the demand had decreased the application units suddenly were in a situation of overcapacity, and different capacity management practices needed to be taken in use. Figure 2 depicts the fluctuations in demand during 2015.



Figure 2. Number of asylum seekers in Sweden 2015

If looking into literature however, capacity management has not been given much attention within the public sector even if, as Radnor and Noke (2013) argue, operations management practices in the public sector has attracted the attention of scholars, management consultants, industrialists and policy officers alike over the past decades (Radnor & Noke, 2013). With an increased pressure to improve efficiency, public sector organisations including healthcare (Fillingham, 2007), central government (Radnor & Bucci, 2007) and local government (Seddon, 2004) has tried to improve their internal operations (Radnor & Noke, 2013). The majority of these improvements attempts, 51 per cent of the publications concerning the attempts, have been focused on the Japanese philosophy known as LEAN (Radnor, 2010). It is clear that LEAN and other types of business process improvements methodologies is what the public sector has focused on within the field of operations management, the attention to capacity management has been almost non-existent in comparison.

Not only has capacity management been absent in the public sector literature, Sasser (1973) argues that literature concerning capacity management historically has focused on goods and manufacturing, diminishing the differences between goods and services, and especially the integral differences which makes them incomparable in terms capacity management. Sasser's article from 1976 is considered as a starting point for the documentation of service companies struggling with capacity management (Walley, 2013). In the article "Does the public sector need a more demand-driven approach to capacity management", Walley (2013) investigates this struggle further in the public sector. His findings include indications that the public sector often has a more resource-driven approach to capacity management, compared to the private sector's demand-driven approach. According to Boyne (2002) public sector organisations are different from private organisations in regards of characteristics such as ownership, funding and control. Radnor and Noke (2013) furthermore argue that the differences between organisations within the private and the public sector creates a need to re-conceptualize and re-contextualize operation management thinking and frameworks from the private sector to the public sector. These arguments strengthen the need for additional contributions concerning the knowledge and role of capacity management in the public sector.

1.2 Purpose and Aim

The purpose of this study is to increase the understanding of capacity management within the public sector and how it can be used to cope with variations in demand. By comparing literature and the case presented in the study, the authors hope to achieve a contribution to the field of capacity management within the public sector and also to identify managerial implications concerning capacity management for the specific case studied.

1.3 Research Questions

Even though there are some available literature concerning capacity management, there is always a issue regarding the generalizability of results and theories. Thus research question one, stated below, aims at understanding capacity management within the specific context of public sector organisations.

Research Question 1: What strategies and practices within the field of capacity management could act as enablers to increase public sector organisations capability to satisfy a fluctuating demand?

However, if enabling strategies or practices could be identified it raises another question:

Research Question 2: How could public sector organisations evaluate the suitability of capacity management strategies and practices?

1.4 Delimitations

Considering that this study has a time constraint, some delimitations are needed to ensure the depth of the study. Furthermore, the delimitations will set the scope of the study and help to guide the researchers during the data collection phase.

The Swedish Migration Agency and its operations are influenced by many factors, both external and internal. This study therefore delimit itself to investigating the Migration Agency's internal operations, as the context becomes too complex if external factors such as political decisions, both domestic and international, would be taken into consideration.

Furthermore, delimitations are made within the Migration Agency's internal operations to exclude the Migration Agency's work concerning study and work permits and other minority tasks. Instead the study focuses on the asylum process, and specifically the protection process. The asylum process as a whole represent approximately 97 per cent of the Migration Agency's total costs (Migrationsverket, 2015).

As the Migration Agency is divided into geographical regions that are rather autonomous, there are small variations between each region way of working, making it difficult to provide a detailed investigation and a comprehensive report that would cover all regions. Therefore, the data collection during this study is delimited to one specific region, "Region Väst".

1.5 Outline

Method, chapter 2, explains the research strategy, how the research was designed, and the research methodology used for data collection. Moreover, the *Method* chapter includes the method for achieving trustworthiness as well as the ethical considerations taken during the study. The chapter ends by a discussion of the methods used in the study.

Theoretical framework, chapter 3, summarises and analyses current relevant literature concerning capacity management. Since this study regards public organisations and service operations, the *Theoretical framework* chapter takes an extra interest in these areas and explains their characteristics. The chapter is concluded by presenting a framework for capacity management strategies and practices.

Case Description, chapter 4, present the context, organisation, processes and characteristics of the case studied in this report, i.e. The Swedish Migration Agency.

Results, chapter 5, presents the findings from the study connected directly to capacity management.

Analysis, chapter 6, compares the results from the case study with the framework presented in chapter 3. The chapter is concluded by presenting a revised framework that was developed based on both findings from the case study as well as theoretical findings from the literature review.

Conclusions, chapter 7, summarises the answers to the research questions.

Concluding Discussion, chapter 8, consists of a reflection regarding the conclusions from the study. The chapter is concluded with suggestions for future research and managerial implications for the Migration Agency.

2. Method

This chapter presents the research strategy, research design and the research methods used in this study. It also explains the means taken to achieve trustworthiness as well as the ethical considerations taken. The chapter is concluded by a discussion regarding the research methodology of the study.

2.1 Research Strategy

The research questions guided this study into an inductive in approach, as the aim was to contribute to research by generating a theory rather than striving to confirm an already existing one. Thus, the study predominantly had a qualitative research strategy, which according to Bryman and Bell (2011) is suitable for an inductive oriented study. Generally, qualitative research can be described as more concerned with words than numbers as forms of data input (Bryman & Bell, 2011). Figure 3 depicts Bryman and Bell's (2011) view of the process of qualitative research.



Figure 3. The qualitative research process according to Bryman and Bell (2011, p.169)

According to Bryman and Bell (2011), a qualitative research strategy is often connected with the researchers having an interpretivistic epistemological orientation and a constructionstic ontological orientation. These orientations emphasize the importance of understanding that social actions are different from the objects of natural science, since social actions can have an underlying meaning which should be viewed as acceptable knowledge (Bryman & Bell, 2011). As this was a qualitative study the researchers adapted the mind-set of these orientations during the study.

Even though not explicitly articulated by Bryman and Bell (2011), their process outlined in figure 3 touch upon what Dubois and Gadde (2002) refer to as an abductive research approach, or systematic combing. The abductive approach entails that empirical findings and theory could be used iteratively (Dubois & Gadde, 2002). Such an approach thereby allows researchers to refine and re-direct their study as more knowledge and understanding is gained. This approach was considered as an instrumental part of the research strategy of this study, since the researchers appreciated that they themselves would have a learning curve which may affect their view on certain aspects of the research.

Even if the study predominantly had a qualitative research strategy, it also included some quantitative elements in order to verify, understand and illustrate the current status of the research topic and to allow for the possibility of making estimations.

2.2 Research Design

In order to be able to facilitate the qualitative research strategy with an abductive approach this study was designed as a case study. Case studies thoroughly examine a specific case and are therefore a common and popular design (Bryman & Bell, 2011). This study was initiated by the Swedish Migration Agency, thus the organisation and issue examined in this study was pre-determined. However, studying the Swedish Migration Agency from a capacity management point of view at this time was also highly relevant. The extreme situation that the organisation recently had faced, in terms of changes in demand, provided the opportunity to conduct a case which could be viewed as revelatory, i.e. a situation that have not before been accessible to investigate (Bryman & Bell, 2011).

The design of the research process of this study consisted of three main phases, visualised in figure 4. The process draws from the ideas of both Bryman and Bell (2011) as well as Dubois and Gadde (2002).



Figure 4. The research process during this study

The first phase of the process is highly connected to the abductive research approach proposed by Dubois and Gadde (2002), as its aim is to increase understanding by iteratively using findings from the case studied and the literature reviewed. During phase one, new findings were allowed to impact the definition of the scope, and to some extend also the research questions of the study. The second phase of the research process concerns the analysis of the results from the data collection. The analysis was three folded, as it included analysing the literature findings, empirical findings as well as analysing the differences, i.e. comparing, between the literature findings and the empirical findings. Moreover, data collection was also a part of the second phase of the process, as the analysis in some cases required additional data and verification of data collected in phase one. The third, and last phase, of the study is similar to the final step of the qualitative research process design by Bryman and Bell (2011), see figure 3. However, in addition to write up findings from the study into *Managerial implications,* directly aimed at the Migration Agency to fulfil the purpose of this study.

2.3 Research Methodology

According to Yin (2009), a case study design benefits from using multiple sources during the data collection, since multiple sources increases the quality of case studies. The empirical findings in this study includes primary data from interviews and secondary data from internal documents. The secondary data consisted of documents published by the studied organisation as well as quantitative data supplied by the organisation. In addition to the empirical data, an extensive literature study was conducted. The section below elaborates on how the data collection was carried out.

2.3.1 Interviews

The majority of the collected data in the study was obtained through interviews. The interviews were either unstructured or semi-structured. Unstructured interviews are quite similar to a conversation ((Burgess, 1984) in (Bryman & Bell, 2011)), and the purpose of using this type of interviews was to help the researchers to obtain a holistic view of the process at play. Furthermore, unstructured interviews can facilitate freedom and flexibility for the interviewee subject (Bryman & Bell, 2011), which also is a reason for why they were used. Semi-structured interviews on the other hand, are more focused than unstructured interviews, as the researcher uses an interview guide of topics to be covered during the interview (Bryman & Bell, 2011). Generally, the semi-structured interviews used in this study were based on knowledge derived from the unstructured interviews, and used to obtain more in depth and specific data. Therefore, the interview guide used during semi-structured interviews was altered to suit each specific interview. The methods of verification were different depending on the interview's structure and the interviewee subject, e.g. factors like time and geographical availability to the subject affected the method of verification. Methods used were additional meetings and sending back notes or transcriptions.

All interviews were conducted with both researchers present, where each researcher was assigned a responsibility area before the interview; either to conduct the interview or to take notes. In addition to having notes taken, all interviews were also recorded. The result from each interview was verified with the interviewee subject in retrospect in order to avoid errors and misunderstandings. Table 1 provides a summary of the number of interviews conducted during this study. In the figure the interviews are separated depending on during which phase, with regards to the research process, they were conducted and whether they were unstructured or semi-structured.

| | n which form. | | |
|--|---------------|-----------------|--------------------------------|
| | Unstructured | Semi-structured | Number of interviewee subjects |
| | | | |

Table 1. A summary of the number of interviewees, during which phase of the research process the interview was conducted and in which form

| | Unstructured | Semi-structured | Number of interviewee subjects |
|---------|--------------|-----------------|--------------------------------|
| Phase 1 | 10 | 6 | 14 |
| Phase 2 | 2 | 5 | 6 |

2.3.2 Secondary data

As previously mentioned, this study used some sources which supplied secondary data, i.e. internal and published documents, as well as quantitative data. The secondary data used in the study was evaluated, and later discussed, against the four criteria for assessing quality of secondary data purposed by Scott (1990):

- Authenticity; are evidences genuine and unquestionable?
- Credibility: are evidences free from error and distortion?
- Representativeness: are evidences typical of its kind, if not, is the extent of its untypically known?
- Meaning: are evidence clear and comprehensible?

(Paraphrased from Bryman and Bell (2011, p. 545))

During this study, the researchers had access to internal documents and internal quantitative data. The amount of available data thereby became almost overwhelming. To minimise the risk of being immersed in a protracted process, which according to Bryman and Bell (2011) is not uncommon when working with secondary data, internal documents were only studied if the document in question was repeatedly mentioned during interviews. Examples of documents published by the organisation that were used to retrieve data are annual reports and the Swedish Migration Agency's writings to the Swedish government. These documents were primarily used to obtain very specific data, and therefore manageable despite the large amount of data available in these documents. Regarding internal quantitative data, e.g. employee data, the researchers were assisted by employees at the Swedish Migration Agency, as the IT-systems for managing information at the organisation are complex and require training and experience to utilise. However, to minimise the risk of misinterpretations and ensure quality, the researchers were always present during the extraction of data from the systems.

2.3.3 Literature study

Initially the literature study helped to create an understanding of the research area and thereby provide the foundation on which this study is built. However, the literature study stretched almost through the whole duration of the study, thereby facilitating the abductive research approach. Moreover, the literature study also concerned research strategies, designs and methods. Information concerning how to conduct research was mainly found in books but some published scientific articles were also used. The sources used in the theoretical framework chapter were found in both published scientific articles and in books. Both the scientific articles and the books were primarily accessed through the Chalmers University of Technology's online library, lib.chalmers.se, which is connected to the Summon database. In addition, Google Scholar was also used, however to a considerably lower extent.

To focus the literature study, three main areas were considered as specifically relevant for the study: capacity management, public sector organisations and services. However, all three subjects did not need to occur in an article/book in order for the article/book to be considered relevant. Examples of keywords used during the literature study were "capacity management", "capacity management strategies", "capacity management practices", "public sector", "public sector organisations", "services" and "public services".

2.4 Data Analysis

According to Bryman and Bell (2011), there are few well-established ways for analysing qualitative data. However, the authors also state that inductive research requires an iterative process between theory and data, something which have been an integral part of this study.

The semi-structured and unstructured interviews conducted during this study were analysed slightly different from each other. During the unstructured interviews, notes were taken and the interview was recorded. The notes were summarised, analysed and compared to literature after each interview, and the recorded file was used to ensure that no data had been missed when taking notes. The analysis of the semi-structured interviews included the same methods used for the unstructured interviews, but the interviews were in addition also transcribed and coded. Coding the semi-structured interviews enabled the researchers to stratify the collected data around groups of topics, thereby also enabling the researchers to judge the level of theoretical saturation, i.e. when "no new or relevant data seems to be emerging regarding a category" (Bryman & Bell, 2009, p. 443). Thereby, a qualitative analysis of the level of theoretical saturation was used to judge the need, or lack of need, for further data collection. Concerning the analysis of literature, it consisted of summarising findings and judging the appropriateness of theory within the context of this study.

The quantitative data analysis mostly consisted of visualisation of the dataset through diagrams and charts, which according to Bryman and Bell (2009) is one of the most common methods to display data. Furthermore, the quantitative data analysis concerned interpreting the visualised data.

2.5 Trustworthiness

In qualitative research, a study's trustworthiness can be assessed by four criteria: credibility, transferability, dependability and confirmability (Bryman & Bell, 2011). Yin (2009) builds further on these four criteria and develops four tests and connected tactics suitable for establishing quality in a case study design, see table 2 (Yin, 2009, p. 41).

| Test | Case study tactics | Phase in the research which the tactic occurs | | |
|-----------------------|--|--|--|--|
| Construct validity | Use multiple sources of evidence Establish a chain of evidence Have key informants review draft case study reports | Data collection Data collection Composition | | |
| Internal validity | Do pattern matching Do explanation building Address rival explanation Use logic models | Data analysis Data analysis Data analysis Data analysis | | |
| External Validity | Use theory in single-case studies Use replication logic in multiple-case study | Research design Research design | | |
| Reliability | Use case study protocolDevelop case study database | Data collection Data collection | | |

 Table 2. The four tests and connected tactics for achieving quality in a case study according to Yin (2009, p.41)

2.5.1 Construct validity

The three tactics that Yin (2009) argues secures construct validity, i.e. *multiple sources of evidence*, *establish a chain of evidence* and *having key informants review the case study report*, were used in this study. The evidence in the case study was therefore collected through different means, including interviews, internal documents, internal quantitative data, public documents and quantitative data. Furthermore, interviews were held with different interviewee subjects, with a variation of positions within the organisation, at different times of the study.

The key informants with an interest in the progress of this study, the academic supervisor and the supervisor at the organisation which the case study concerned, reviewed a mid-draft of the report. The academic supervisor also reviewed parts of the report continuously as well as a more developed draft close to the final report. Thus, both key informants were given opportunity to provide insights regarding the report and progress of the study.

2.5.2 Internal validity

Internal validity parallels credibility and concerns ensuring that research has been conducted in line with good practice (Bryman & Bell, 2009). Two main methods were used to increase the internal validity of this study. Firstly, the notes, recordings and transcriptions of interviews enabled the researchers to reexamine findings, thus mitigating the risk of misinterpretations. Secondly, the researchers also strived to verify important data, either by additional contact with the interviewee subject whom provided the data or by triangulation of the data, meaning that another source was used for verification.

2.5.3 External validity

External validity concerns the degree to which findings from a study can be generalised to other contexts (Bryman & Bell, 2011). This study includes an extensive description of the studied case, and thereby provides other researchers to assess the study's transferability and thereby also its generalisability. The results and analysis from the study were translated into conclusions and a framework derived from both theory and empirical findings, thereby the outcomes might be applicable for other public organisations.

2.5.4 Reliability

Reliability of a case study concerns whether or not the same conclusion would be made if another researcher later followed the same procedure, conducting the same case study (Yin, 2009). This study benefited from having an academic supervisor for external audits of the study throughout its duration, something that according to Bryman and Bell (2011) enhances a study's dependability (which according to the authors parallels reliability). Furthermore, Yin (2009) proposes that a case study protocol should be developed to ensure reliability during the data collection. Therefore, this study presents a summary of the interviewee subjects, chapter 2.3.1, *Interviews*.

2.6 Ethical Considerations

The Swedish Migration Agency processes asylum applications with highly personal data regarding, not only the asylum seeker, but also personal data concerning employees at the Migration Agency. Ethical considerations therefore became paramount. A non-disclosure agreement was signed between the researchers and the Migration Agency. This agreement provided the researchers to access a wider spectrum of internal documents, as well as an assurance that legal security was maintained.

Furthermore, this study was guided by the ethical principles for business research laid out by Diener and Crandall (1978): *avoid harm to participants, avoid lack of informed consent, avoid invasion of privacy* and *avoid deception*. All interviewees were therefore kept anonymous and informed beforehand about the background and purpose of the study, as well as the background of the researchers. By safeguarding anonymity of interviewees and emphasising the agenda of the study, it is the hope of the researchers that the study has lived up to the ethical principles stated above.

2.7 Methodology Discussion

The case study primarily collected data through interviews. The interviews were conducted at an operational level, with both managers of the process and employees working at an operational level. A question worth asking is whether the results would have been different if more data would have been collected from employees at a top management level. Using interviews as a method for data collection is also connected with some risks. During the data collection it became evident that there often were linguistic barriers between the researchers and the interviewee subjects regarding language of special use. As a consequence, both questions and answers may have been misinterpreted in some cases. Furthermore, it is difficult to say whether or not the data collected from interviews is representative for the organisation or if the interviewee has placed his or her personal view and values in the data. Thus, the interpretivistic epistemological orientation and constructionistic ontological orientation has been important to sustain during this study. In addition to interviews, internal documents, and to some extent the Swedish Migration Agency's webpage, were used to collect qualitative data. The validity of the data collected through these channels could be questioned, as there might be discrepancies between the information available online, internal documents and reality. To mitigate this risk, the researchers verified secondary data during interviews or through e-mails.

Even though this case study was primarily based on qualitative data, the use of quantitative data was considered a necessity to add depth and richness to the study, as well as to triangulate data. Regarding the methods of how the results from the quantitative data derived that there are some factors that needs to be considered, as they might affect the validity of these results. Firstly, the complexity and inconsistencies of the Migration Agency's IT-systems for managing information needs to be addressed. The Migration Agency is operating with multiple systems, each with a specific purpose. These systems are not always compatible with each other when it comes to extracting data in cases where information from more than one system is needed. The reason for this is that the systems lack in holistic consistency regarding what certain data categories should be called. Thus, combining the systems to retrieve data is an issue as it requires a high level of knowledge regarding both the IT-systems and the organisational structure. To overcome these difficulties of extracting data, the authors have during this study relied on personnel from the Migration Agency, well accustomed to the system, to assist with retrieving quantitative data.

The secondary data used during this study either came from internal documents (including the Migration Agency's home webpage) or internal quantitative data. As mentioned in chapter 2.5, *Trustworthiness*, there are four criteria on which secondary should be evaluated (Scott, 1990): *authenticity, credibility, representativeness* and *meaning*. Of these criteria, the credibility of the secondary data might have been an issue during this study, due to complexity of the IT-systems.

This study was guided by Yin's (2009) four tests to ensure quality when conducting a case study. However, the construct validity of the study could have been increased by also using observations to a larger extent, to reach a higher number of sources of evidence. Especially, additional observations regarding the processes could have benefited the study. Furthermore, the external validity of a single case study often imposes an issue. However, by including a rather extensive case description this report provides the possibility to judge the generalisability of the results from the study.

3. Theoretical Framework

This chapter presents the theoretical framework used in the study. Firstly, public sector services are defined and also the characteristics of these services and the organisations they are conducted in. Secondly, capacity management is explained and put into the context of public organisations and services. Lastly, a framework is presented that summarises capacity management strategies and practices from the theoretical framework.

3.1 Public Sector Organisations

Since this study aims to contribute to the field of capacity management within the public sector by adapting capacity management theory to the context of service operations within public sector organisations, it is important to present the view in this study of what service operations in public sector organisations are, and the connected characteristics.

3.1.1 Defining public sector services

Radnor and Bateman (2016, p.1) defines a public service as "a service or set of services provided to citizens directly through a public sector body or through financing of provision by private sector, third sector or voluntary organisations". Furthermore, they define the public sector as "the economic body in which many public service organisations reside" (p.1). In this study public services specifically within the public sector will be studied, which in this report will be referred to as public sector services.

Since the definitions by Radnor and Bateman (2016) do not bring up any characteristics that what a public sector services have, besides who the provider is, some further explanation of services are needed. In this study, the definition by Fitzsimmons and Fitzsimmons (2006) has been found suitable: "*a service is a time-perishable, intangible experience performed for a customer acting in the role of co-producer*" (James Fitzsimmons, p.4). By combining the definitions by Radnor and Bateman (2016) with the one by Fitzsimmons and Fitzsimmons (2006), the term of public sector services used in this report can be referred to as "*one, or a set of, time-perishable, intangible experiences, founded through the economic body of the public sector, provided to a customer acting in the role of co-producer*".

3.1.2 Characteristics of public sector services

Services are according to Fitzsimmons and Fitzsimmons (2006) a very important integral part when creating a functioning society. They argue that services are everywhere, even in manufacturing operations. Furthermore, they state that services provided by the government are important for keeping a stable environment that invites for economic development.

When it comes to characteristics of services, Fitzsimmons and Fitzsimmons (2006) mention five different characteristics: *customer participation, simultaneity, intangibility, perishability* and *heterogeneity*. Concerning *customer participation,* they argue that the design of the front office can enhance the customer experience if designed well, and mention interior design and noise level as important things to consider. However, they further state that it is getting more common to develop service solutions where the customer do not have to travel to the facility. When the customer is participating in the process, Fitzsimmons and Fitzsimmons (2006) claim that it is important to bare in mind that the motivation, knowledge, experience and honesty of the customer influences the service performance.

With *simultaneity* Fitzsimmons and Fitzsimmons (2006) refer to the fact that services are produced and consumed at the same time and therefore cannot be stored in an inventory, making it harder to respond to fluctuations in demand. In manufacturing, inventory often act as an enabler to decouple different stages of a production, in services this decoupling of processes is enabled by customer waiting/queueing (Fitzsimmons & Fitzsimmons, 2006). Furthermore, simultaneity also makes it difficult to control the

quality of services, since no inspection can be done before delivery (Fitzsimmons & Fitzsimmons, 2006).

The *perishability* of services is quite connected to the simultaneous production and consumption. Since inventories cannot be kept Fitzsimmons and Fitzsimmons (2006) argue that service opportunities often are lost because of the inability absorb fluctuations in demand. They also state that demand variations often follow cyclic patterns and that there are other ways to cope with fluctuations in services.

Another distinguishing characteristic of services, according to Fitzsimmons and Fitzsimmons (2006), is *intangibility*, which refers to the fact that products are things which can be touched, while services are ideas and concepts. Because of this, it is not able to get a patent for a service innovation and it also creates an issue for the customers since they cannot see and feel the service beforehand, in the same way as they can do with a product (Fitzsimmons and Fitzsimmons, 2006). Instead of testing the service before a purchase is made, as with a product, Fitzsimmons and Fitzsimmons (2006) argue that customers have to judge services/service firms based only on their reputation.

The last characteristic discussed by Fitzsimmons and Fitzsimmons (2006) is the *heterogeneity* among services which arises due to the intangible nature of services and the variation among customers, since they are involved in the service creation. Even if services have a heterogeneous nature, customers expect to be treated in a fair way and be given the same service as others (Fitzsimmons and Fitzsimmons, 2006). In order to be able to achieve such a consistency within service operations, Fitzsimmons and Fitzsimmons (2006) argue that it is important to develop standards and train the staff for the service execution. Furthermore, they claim that service managers need to be concerned about the performance and attitudes of their employees, since a bad service execution from one employee can harm the whole organisation.

3.1.3 Characteristics of public sector organisations

It has been argued in literature that publicness consists of three dimensions: *ownership, funding and control* (Boyne, 2002; Meier & O'Toole, 2011). When it comes to *ownership*, public sector organisations are owned by the state while private sector organisations are owned by shareholders or partners (Esian *et al.*, 2016). Concerning *funding*, public sector organisations get their resources from the state, founded by taxation, while private sector organisations get their funding through revenues from sales and fees (Esian *et al.*, 2016). Also budgeting differs between the public and private sector, where private sector organisations can base their budget on profit and be more flexible compared to public sector organisations who have quite fixed budgets, decided on a yearly basis based on the previous year (Radnor & Noke, 2013). In the matter of *control*, it is the government that sets the direction for organisations within the public sector while profit sets the direction for organisations within the public sector while profit sets the direction for organisations within the private sector organisations are controlled by the law to a great extent since they, regardless of costs, have to make sure to fulfil, their legal mission (Radnor & Noke, 2013). As Esian *et al.* (2016) put it, private sector organisations often perform necessary activities that are not profitable.

Even if these three dimensions might seem to describe what a public organisation is, both Boyne (2002) and Meier and O'Toole (2011) claim that these dimensions are not fully supported by empirical research literature. As an example, Meier and O'Toole (2002) discuss the US postal office who as a public organisation still earn revenues from serving the people. They further argue that there are many private organisations who claim the majority of their revenues from the state. In order to see what the real differences between private and public organisations are, Boyne (2002) does a comprehensive study of various academic resources and identifies four areas of differences between public and private organisations that affects management operations: *the relation of publicness and organisational environments, the relation of publicness and organisational goals, the relation of publicness and organisational structures* and *the relations of publicness and managerial values*. In each of these categories Boyne (2002) lists factors mentioned in literature which later on act as hypotheses which he investigates by comparing empirical studies in the literature. Meier and O'Toole (2002) argue that it is

very important to be consistent in a comparative study of public organisations with using the same definition of what a public organisation is. In order to define what organisations that are public vs private Boyne (2002) looks at the ownership of the organisations.

Concerning the relation of publicness and organisational environments Boyne (2002) discusses four different factors. First of all, he brings up *complexity* and argue that the fact that public organisations face various stakeholders can make it difficult to cope with the different demands and constraints set up by the different stakeholders. It often happens that the requirements from different stakeholders are conflicting, e.g. the taxpayers might have completely different demands than the customer. Also Radnor and Noke (2013) list conflicting interests of stakeholders as a characteristic for public sector organisations. Secondly, Boyne (2002) discusses the *permeability* of public organisations and argue that the systems within these types of organisations often are very open and therefore also easily influenced by events outside its organisational boundaries. Radnor and Noke (2013) state the management of public sector organisations always is under public scrutiny and that the public perception always has to be considered in order to reduce the risk of political embarrassment. Thirdly, Boyne (2002) claims that public organisations suffer from *instability* since they are governed by the state and therefore impacted by the short political cycles, where quick results are wanted, leading to difficulties for public managers to plan long-term. Lastly, Boyne (2002) mentions the absence of competitive pressure and state that there at most times are very few competitors to public service organisations, leaving them in a very dominant position.

Concerning organisational goals in public organisations Boyne (2002) argues that they in public organisations have *distinctive goals*. Public organisations often have ethical goals, and goals to keep citizens satisfied, which are not present among private organisations (Radnor & Noke, 2013). Boyne (2002) also stresses that public organisations often have *multiple goals*, due to the fact that they need to satisfy multiple stakeholders. However, the goals that exists within public organisations are often *vaguer* than goals within private organisations, since they often are set on a political level rather than on a managerial level (Boyne, 2002).

Regarding the relation between publicness and organisational goals Boyne (2002) identifies three distinguishing factors: *more bureaucracy, more red tape* and *lower managerial autonomy*. The fact that there is *more bureaucracy* within public organisations affects the decision making to be more time consuming (Boyne, 2002). According to Esian *et al.* (2016), public organisations have a more mechanical organisational structure and their influence over how the operational system is designed is very low. Furthermore, the authors state that changes in the operational structure can take a long time to implement. Boyne (2002) also argues that public sector organisations have *more red tape* than private organisations, which he refers to the delays and irritation caused by the obsessiveness with rules instead of results, and the process-focus instead of outcome focus. Both the situation of more bureaucracy and more red tape has an impact on the fact that it in public organisations is *lower managerial autonomy* (Boyne, 2002). Radnor and Noke (2013) state that public managers often shares their authority with more people and has a limited authority in expanding operations or shut down operations that are going bad.

When it comes to managerial values within public organisations Boyne (2012) identifies three differences in the literature between the staff of public and private organisations. First of all, staff within the public sector seem to be *less materialistic*, making them harder to motivate with privileges and financial rewards (Boyne, 2012). Secondly, their *desire to serve the public* is stronger. Compared to private organisations who often only thinks of individual customers' demands, the staff within public organisations has the public interest in mind (Boyne, 2012). Thirdly, Boyne (2012) argues that there is a *lower organisational commitment* among the staff within public organisations compared to private organisations. He claims that one of the reasons for this, is that there can be very difficult for employees to see what impact their own contributions has on the organisation's performance.

When using these factors as hypotheses in his comparison of empirical studies within the literature, Boyne (2012) came to the following results, presented in table 3:

Table 3. A summary of the results from the comparison of empirical studies made by Boyne (2012, p. 116)

| | 0 | ≤50% | >50% |
|--------------------------------------|-----|------|------|
| Environment | | | |
| H1 more complexity | х | x | х |
| H2 more permeable | 2 | 2 | 1 |
| H3 less stability | x | x | x |
| H4 weaker competition | х | х | х |
| Goals | | | |
| H5 distinctiveness | x | X | x |
| H6 larger number | x | X | x |
| H7 more vague | 2 | 3 | 3 |
| Structures | | | |
| H8 more bureaucratic | 2 | 1 | 8 |
| H9 more red tape | 0 | 2 | 2 |
| H10 lower managerial autonomy | 0 | 2 | 2 |
| Values | | | |
| H11 less materialistic | 2 | 0 | 4 |
| H12 stronger public interest motives | - i | 1 | 2 |
| H13 weaker organisational commitment | 1 | 0 | 3 |

 Figures show number of studies with support scores of zero, less than or equal to 50%, or more than 50%.

2. X = no tests of this hypothesis

Even if there are certain characteristics of public sector organisations, there can be large variations between different public sector organisations. Radnor and Bateman (2016) argue that there is great variation among public services when it comes to structures, delivery models, incentives and drivers. According to Radnor and Noke (2013) this heterogeneous nature of the public sector, is one of the things that needs to be taken into account within the field of operations management.

3.1.4 Operations management within public sector organisations

Radnor and Bateman (2016) claim that public management theory often has looked at public services as manufacturing operations, rather than as service processes. Therefore, when it comes to operations management, the authors argue that public sector organisations should consider theory and frameworks not only from manufacturing literature, but also service literature. However, applying service concepts may not be enough. Radnor and Noke (2013) argue that organisations within the private sector, both manufacturing and service organisations, differ from organisations within the public sector. The authors further mention a need for translating and adapting operation management thinking and frameworks into the public sector, by re-conceptualizing and re-contextualizing.

A lot of literature point towards the fact that operations management within the public sector needs to be further studied. Radnor and Bateman (2016) discuss that methodologies within the field of operations management often are context specific and that there is a lack of research papers that sets the agenda by developing new concepts and frameworks. They further argue that there is a need to adapt operations management methodologies to the public service context. Also Upton (2016) claims that public services need their own approach to operations management, and Radnor and Noke (2013) stress the importance of coming up with new operations management models and frameworks applicable for the public sector.

But even if developing adapted operations management models and frameworks, it might not be that easy to implement them. Radnor and Bateman (2016) argue that a problem within public services is that operations management concepts are not very well understood; organisations are missing out on the operations management vocabulary and sometimes even the notion of processes. The authors claim that

this especially is a problem within the fields of planning and control, and capacity and demand management.

3.2 Capacity Management within Public Sector Organisations

The capacity within an organisation impacts the overall organisational performance since it affects everyday operations, the ability to respond to demand changes, and the development, production and delivery of products and services (Yu-Lee, 2002). However, managing capacity can be difficult. Ritchie and Walley (2016) argue that there are a couple of different challenging factors, especially within the service sector. Firstly, they claim that the perishability of services often leads to a waste of resources when the demand is low, and backlogs when the demand is high. Secondly, they state that the variation in demand, both annually, monthly, weekly and daily, makes it tricky to achieve a match between capacity and demand. Lastly, the authors mention that the ability to make changes to capacity might be limited. For instance, they argue that changes in fixed assets (e.g. facilities) often needs to be planned a long time beforehand and that changes in the structural capacity (e.g. employees) often are limited because of a non-supporting operations system within the organisation. Besides the problematic factors that Ritchie and Walley (2016) mention, Radnor and Bateman (2016) claim that operation management concepts, especially in the fields of capacity and demand management and planning and control, sometimes not are very well understood.

When it comes to capacity management within public sector organisations, one of the main differences compared to private sector organisations is that they often are operating in a way where the available amount of resources act as the driving factor, compared to the levels of demand in private sector organisations (Ritchie & Walley, 2016). This was also shown in a case study by Walley (2013), further implying that variations and how they can be dealt with are not well understood in resource-driven settings, leading to a waste of resources and unnecessary queueing. Walley (2013) further argues that organisations with a resource based approach often lack knowledge about the market, which inhibits their use of capacity strategies, since they do not have enough facts to base their decisions upon. Walley (2013) summarises his reasoning in the conceptual model which can be seen in figure 5.



Figure 5. The differences between service sector literature and public sector practice according Walley (2013, p. 885)

3.2.1 Defining capacity management

Different definitions of capacity management associated to the context of services, and services within the public sector, can be found in literature. Ritchie and Walley (2016, p.118) focus on services in the public sector in their article, and state that "capacity management is the process of reconciliation of resource requirements to meet demand over time". Armistead and Clark (1991, p.3) focus on services (not specifically in the public sector), and define capacity management as "the ability to balance demand from customers and the ability of the service delivery system to satisfy the demand". In both these given examples, capacity management is made up by two vital parts, the supplied capacity constituted by the different resources within the organisation, and the demanded capacity required to satisfy the customers. What differs the two definitions, is that Ritchie and Walley (2016) only focus on adjusting resources to meet demand over time while Armistead and Clark (1991) focus on both adjustments of supply and demand. Yu-Lee (2002) claims that it is important to look at capacity management from both a capacity and demand perspective to avoid sub-optimizations, a statement which goes hand in hand with the earlier mentioned argumentations by Walley (2013) concerning the consequences of having only a resource based approach. Due to these argumentations, the definition by Armistead and Clark (1991, p.3) "the ability to balance demand from customers and the ability of the service delivery system to satisfy the *demand*" has been chosen for this study, since it covers both demand management and supply management.

3.2.2 Capacity planning and control

As well as the capacity within an organisation affects the organisation's overall performance the capacity planning and control also does it. According to Slack *et al.* (2007) capacity planning and control can have an effect on a lot of different parameters concerning an organisation's performance, such as: *quality, dependability, speed, flexibility, working capital, costs* and *revenues*.

There are different views in literature of what capacity planning and control is. One view that goes very well in hand with how capacity management has been defined in this study are the one by Jonsson and Mattsson (2009), who argue that capacity planning is about using different activities in order to achieve a balance between the demanded capacity and the supplied capacity. When trying to achieve such a balance, the authors further state that it is important to distinguish between accumulated correspondence and periodic correspondence; accumulated correspondence concerns the match between the demanded capacity during all planning periods while periodic correspondence concerns



Figure 6. A model for capacity supply and capacity demand presented by Walley (2013, p. 880)

the match in every individual planning period.

In order to achieve a match the demanded capacity and the supplied capacity, different strategies and practices can be of use. choosing suitable strategies and practices for how to manage the capacity of a process Yu-Lee (2002) argues that it is very important to know the characteristics of the process itself. Walley (2013) presents a model of three steps, see figure 6, for figuring out how the capacity supply and demand within an

organisation should be managed. The first step in the model concerns creating an understanding of the demand, the second step is about analysing how much capacity is needed to meet the demand, and the third step is to consider what resources that are required, and choosing the right practices for managing the capacity supply and demand.

Create an understanding of the capacity

As Yu-Lee (2002) stated, the capacity supplied within an organisation, should be aligned with the capacity demanded from it. Capacity supply could therefore be seen as "the ability to work off an existing demand" (Armistead & Clark, 1991, p.4), an ability mainly influenced by three factors within a service delivery system: the resources that makes up the capacity within service delivery system, the supply of the element to be served and also the variability of the incoming element (Armistead & Clark, 1991). In order to achieve a match between the demanded capacity and the supplied capacity, organisations need to find suitable ways to both calculate, but also express, the capacity that they are supplying and also the capacity that are demanded from them (Jonsson & Mattsson, 2009).

Understanding the capacity demand

According to Yu-Lee (2002) forecasting demanded capacity is not easy, but despite the difficulties he still argues for the importance of estimating it. Because when organisations are unaware of their future demand, their capacity plans will turn out to be incorrect (Yu-Lee, 2002). In the model presented by Walley (2013), figure 6, an understanding of things such as growth and decline patterns and seasonal adjustments are mentioned to be helpful when estimating the capacity demand.

However, it is not enough to only forecast the demand, Slack *et al.* (2007) claim that it is equally important to measure how much the actual demand might fluctuate. Furthermore, the authors state that it is important when forecasting demand, that the demand is expressed in the same unit as the capacity.

Understanding the capacity supply

Measuring capacity supply is not easy either, Slack *et al.* (2007) argue that the main reason for this is the large complexity of a lot of operations, and that it is only when operations are highly standardized and repetitive capacity is easy to calculate. Armistead and Clark (1991) claim that even if the demand would be completely constant, it may still be fluctuations in the supplied capacity because of variations in the execution by employees and equipment. From a long-term perspective these fluctuations may not look that bad, but from a daily or hourly perspective it may cause problems in meeting the demand (Armistead & Clark, 1991).

Armistead and Clark (1991) state that it can be worthwhile to more in detail examine the different resources that makes up the capacity within the service delivery system. In order to do this, they argue that the first step is to figure out an appropriate unit for how capacity can be measured. Secondly, a list should be made over the different main elements constituting the capacity, such as information, people, facilities, materials and equipment. Thirdly, the factors influencing the listed elements should be identified, and finally an analysis should be done over what resources that are causing bottlenecks within the service delivery system. Also Yu-Lee (2002) argues that it is important to know what builds up the capacity and claims that many organisations tend to forget that the knowledge and skills of employees has a huge impact on the overall capacity.

When trying to get an understanding of the capacity within an organisation, it could also be good to know what limits it. Therefore, it is important to understand that an operation consists of different sub-processes where some perform below their maximum capacity and some just in line with it, where the sub-processes performing at their max sets the capacity limit for the operation as a whole (Slack *et al.*, 2007).

Choosing the right resources

In literature one can find different strategies and practices that can be used to manage capacity. These strategies and practices, and their characteristics, will be presented in this section.

Choosing the right capacity management strategy

Advantages

In order to achieve a match between capacity supply and capacity demand, Slack et al. (2007) argue that organisations first need to decide upon a long-term capacity strategy and establish the right capacity according to that strategy, which mainly is done by increasing/decreasing physical elements within the capacity. The authors further mention two common long-term strategies that can be applied: the capacity *leading strategy*, where organisations plan so capacity always can meet forecasted demand, and the *capacity lagging strategy*, where the capacity within the organisation is planned to be lower or equal to the forecasted demand. These strategies are extremes, and Slack et al. (2007) claim that a lot of organisations often position themselves somewhere in-between the two strategies. The advantages and disadvantages connected to the two different strategies are displayed in the table below, table 4.

| Table 4. Advantages and disadvantages of the | e leading respectively | lagging capacity | strategies according t | o Slack <i>et al</i> . |
|--|------------------------|------------------|------------------------|------------------------|
| (2007, p. 167) | | | | |

| Capacity Heading strategies | Always sufficient capacity to meet demand, therefore revenue is maximized and customers satisfied Most of the time there is a "capacity cushion" which can absorb extra demand if forecasts are pessimistic Any critical start-up problems with new plants are likely to affect supply to customers | Utilization of the plants is always relatively low, therefore costs will be high Risks of even greater (or even permanent) overcapacity if demand does not reach forecast levels Capital spending on plant early |
|-----------------------------|--|---|
| trategies | Always sufficient demand to keep the plants working at full capacity, therefore unit costs are minimized | Insufficient capacity to meet demand fully, therefore reduced revenue and dissatisfied customers |
| Hagging s | Overcapacity problems are minimized if forecasts are optimistic | No ability to exploit short-term increases in demand |
| Capacity - | Capital spending on the plants is delayed | Under-supply position even worse if there are start- up problems with the new plants |

Disadvantages

However, when setting the capacity a long time beforehand, some adjustment both in the medium-term and the short-term are usually needed, where medium-term adjustments are based on forecasts of the upcoming 2-18 months while short-term adjustments either are based on predictions or done with short notice (Slack et al., 2007).

From a medium-term perspective, Slack et al. (2007) discuss two different strategic options: the level capacity plan and the chase capacity plan. The level capacity plan aims to keep the operation's output /capacity constant, no matter the variation in demand, and is often used in operations which have an inventory to store the output (Slack et al. (2007). If used in a service without inventory possibilities, Slack *et al* (2007) argue that the level capacity plan is about keeping the service availability at a high uniform level. However, they further stress, that a low utilization of this type of plan in a service operation can lead to very high costs. But despite that, they still argue that it can be appropriate to have such plans, especially in operations where the costs of losing individual sales are high. An issue with the level capacity plan though, are periods when the demand is very high since it may have a negative effect of the service level; long queues may occur and the customers may be taken care of in a less sensitive way (Slack *et al.* 2007). In contrast to the level capacity plan, Slack *et al.* (2007) claim that *the chase capacity plan* aims to adjust the process output/capacity in order to respond to demand variations. They further mention, that it is most common to adopt this type of plan in operations where the output cannot be stored. The advantages of adopting the chase plan in such operations is that the organisations avoids having excess staff (Slack *et al*, 2007).

Besides long-term and medium-term strategies, Armistead and Clark (1991) argue that there is a need for a more short-term strategy that can be used when the operation is either busy or slack, a strategy which they refer to as *the coping strategy*. In the article the authors mention four circumstances when this sort of strategy can be of use: when the demand is high in an operation with a chase strategy, when the demand is low in an operation with a chase strategy, and when the demand is low in an operation with a level strategy.

Choose suitable capacity management practices

To execute the capacity strategies different practices are of use. These practices are in literature often divided into categories. Sasser (1973), Fitzsimmons and Fitzsimmons (2006) and Ritchie and Walley (2016) divide the practices into two different fields, demand management and supply management. Some of the demand management practices that both articles mention are: *changing prices, creating complementary services* and *using reservation systems*. Some of the supply management practices mentioned in both articles are: *capacity sharing, having part time staff*, and *customer participation*.

Jonsson and Mattsson (2009) on the other hand, divide practices into whether the practices are shortterm or medium-term solutions, see table 5, but also into five different types of practice categories: *increase/decrease capacity, increase/decrease capacity needed, re-allocate capacity, adjust capacity* and *re-allocate capacity requirements*. If analysing these categories one can see that they can be divided into the two categories of demand management and supply management mentioned by Sasser (1973), Fitzsimmons and Fitzsimmons (2006) and Ritchie and Walley (2016), where *increase/decrease capacity needed* and *re-allocate capacity requirements* can be seen as demand management practices while *increase/decrease capacity, reallocate capacity* and *adjust capacity* can be seen as supply management practices.

| Type of alternative | Medium term | Short term |
|--------------------------------------|--|--|
| Increase/decrease capacity | Hire/fire employees New machines Number of shifts/short week Subcontracting | Subcontracting Extra shift |
| Increase/decrease capacity need | Change master production Schedule increase/decrease stock | |
| Re-allocate capacity | Re-allocation between work centers | Re-allocation between work centers |
| Adjust capacity | | Over time Postponed maintenance |
| Re-allocate capacity requirements | Make to anticipation stock Change delivery lead times | Earlier/postponed order start Changed order quantities Alternative work centers Overlapping/order splitting |

Table 5. Medium-term and short-term capacity management practices from Jonsson and Mattsson (2009, p. 293)

In order to be able to choose the right practices for the right situation, Jonsson and Mattsson (2009) present a model constituted of four different planning situations, table 6, where the most suitable one can be chosen based on how the accumulated and the periodic correspondence in the organisation looks like. Where, as mentioned previously, accumulated correspondence concerns the match between the demanded capacity and the supplied capacity during all planning periods while periodic correspondence concerns the match in every individual planning period.

Table 6. A model for choosing suitable capacity management practices developed by Jonsson and Mattsson (2009, p.291)

| espondence Yes | ldeal capacity plan | Decrease/Increase Capacity Decrease/Increase Capacity Need |
|---------------------|--|--|
| Periodic corr No | Re-allocate capacity Adjust capacity Re-allocate capacity need | Combine decrease/increase and re-allocate capacity and capacity need |
| | | |

Yes

No

Accumulative correspondence

3.2.3 Framework for choosing the right practices

For this study, both the categorisation of dividing practices into what part of capacity management they belong to, mentioned by Sasser (1973), Fitzsimmons and Fitzsimmons (2006) and Ritchie and Walley (2016), and the categorisation of dividing practices into different practice categories, mentioned by

Jonsson and Mattsson (2009), are interesting. Therefore, a framework combining these categorisations has been created. Just as Sasser (1973), Fitzsimmons and Fitzsimmons (2006) and Ritchie and Walley (2016), the practices are divided into if they concern demand management or supply management. Concerning the practice categories however, the categories used in the framework are slightly different from the ones used by Jonsson and Mattsson (2009). Increase/decrease and re-allocate are, just as in the article by Jonsson and Mattsson (2009), applicable for both demand- and supply management options. Contrary to the article however, the adjust category's applicability as a supply management practice explicitly is questioned, as Jonsson and Mattsson (1990) does not provide reasons enough to exclude the possibility of adjusting the demand. For instance, the authors argue that increasing or decreasing stock affects the overall demand. However, one could argue that the demand per se that is not affected, and that it is rather adjusted to align with an organisation's capacity. By this categorisation, the framework consists of three different practice categories (re-allocate, adjust and increase/decrease), where all three are applicable for both demand management and supply management. The framework is considered applicable for public sector organisations offering services, and the demand and supply management practices included in the framework are presented in table 7 and table 8 respectively.
Demand management practices

The demand management practices, presented in table 7, are practices found in literature that have been arranged into the three practice categories of re-allocate, adjust and increase/decrease. A description of the different practices within each practice category follows after the table.

| Demand Management Practices | | | |
|-----------------------------|--|--|--|
| Practice Category | Practice | Source | |
| Re-Allocate | Alternative work-centers | Jonsson & Mattsson (2009) | |
| | Order splitting | Jonsson & Mattsson (2009) | |
| Adjust | Increase/decrease stock | Jonsson & Mattsson (2009) | |
| | Create reservation and booking systems | Sasser (1973), Fitzsimmons & Fitzsimmons (2006), Ritchie & Walley (2016) | |
| Increase/Decrease | Developing a non-peak demand | Sasser (1973) | |
| | Developing complementary services | Sasser (1973), Fitzsimmons & Fitzsimmons (2006), Ritchie & Walley (2016) | |
| | Pricing | Sasser (1973), Fitzsimmons & Fitzsimmons (2006), Ritchie and Walley (2016) | |

Table 7. A summary of practices concerning demand management found in literature.

Re-allocate

One way to re-allocate demand from overloaded work centers is according to Jonsson and Mattsson (2009) to open up *alternative work-centers* that can absorb of some of the production. These alternative work centers are not originally adapted for the production and therefore normally not as optimal from an economic perspective (Jonsson & Mattsson, 2009). Another way to re-allocate the demand is to use *order splitting*, which refers to splitting up the execution of a step in the process, into at minimum two places that can perform the operation (Jonsson & Mattsson, 2009).

Adjust

Organisations can experience fluctuations in demand, which easily result in differences between their demanded capacity and their supplied capacity (Jonsson & Mattsson, 2009). One way to temporarily decrease the difference is to have an *adjustable stock*, which easily can be increased or decreased (Jonsson & Mattsson, 2009).

Another common demand management option is to create *reservation or booking systems* (Sasser (1973); Fitzsimmons & Fitzsimmons (2006); Ritchie & Walley (2016)). One category of booking/reservation systems are online self-booking/reservation systems (Ritchie & Walley, 2016). An advantage of these types of systems is according to Sasser (1973) that organisations can redirect people to non-fully booked time slots and therefore decrease waiting times. He further states however, that a problem with booking/reservation systems is that customers do not always show up at the time slots that they have booked/reserved. One way to deal with this issue is according to systematically use overbooking (Sasser, 1973).

Increase/Decrease

Three different ways to increase/decrease the demand has been identified in literature. The first way is to adjust the pricing (Sasser (1973); Fitzsimmons & Fitzsimmons (2006); Ritchie & Walley (2016)). According to Fitzsimmons and Fitzsimmons (2006) an organisation with a high demand can increase prices, to get higher profit per sale, and when there is a low demand, decrease prices in order to increase its demand and utilization of resources. Sasser (1973) mentions matinee prices at movies and happy hours at bars as two examples. The second way is to develop a non-peak demand, which means that organisations should try to increase the volume of demand during non-peak periods (Sasser, 1973). This is according to Sasser (1973) a very common practice which many companies use, as an example he mention hamburger chains that has increased their demand during mornings by adding breakfast to their menus. The third way to increase/decrease demand is to *develop complementary services* (Sasser (1973); Fitzsimmons & Fitzsimmons (2006); Ritchie & Walley (2016)). These services should according to Sasser (1973) have the purpose to either satisfy customers while they are waiting in a queue or attract them away from the peak times in bottleneck operations. Sasser (1973) mentions cocktail lounges at restaurants as one example, and the possibility to do your bank errands by mail as another one. A third example, identified in the case study of police custodies by Ritchie and Walley (2016), is to use field services such as different "pop-up services".

Supply management practices

In the same way as for the demand management practices, the supply management practices found in literature have been arranged into the three practice categories of re-allocate, adjust and increase/decrease. This arrangement is presented in table 8, which is followed by a description of the different practices within each practice category.

| Supply Management Practices | | | |
|-----------------------------|--|---|--|
| Practice Category | Practice | Source | |
| Re-Allocate | Share capacity between different services | Fitzsimmons & Fitzsimmons (2006), Ritchie & Walley (2016), Jonsson & Mattsson (2009) | |
| | Share capacity between similar facilities and work centers | Ritchie & Walley (2016), Sasser (1973) | |
| | Over time | Jonsson & Mattsson (2009), Slack et al. (2007) | |
| | Perform only the most essential tasks | Sasser (1973) | |
| Adjust | Complete/postpone non-essential tasks | Armistead & Clark (1991), Sasser (1973), Jonsson & Mattsson (2009) | |
| | Take in use easier types of contracts | Ritchie & Walley (2016) | |
| | Increase/decrease the service provision given | Armistead & Clark (1991) | |
| | Using part-time employees | Sasser (1973), Fitzsimmons and Fitzsimmons (2006), Ritchie Walley (2016), Slack et al. (2007) | |
| | Adjustment of the work shift | Fitzsimmons & Fitzsimmons (2006), Ritchie & Walley (2016) | |
| Increase/Decrease | Increase/decrease number of work shifts | Jonsson & Mattsson (2009) | |
| | Subcontracting | Jonsson & Mattsson (2009), Slack et al. (2007) | |
| | Invest in new machines | Jonsson & Mattsson (2009) | |
| | Hire/fire employees | Jonsson & Mattsson (2009), Slack et al. (2007) | |
| | Investing in new facilities | Sasser (1973) | |

Table 8. A summary of practices concerning supply management found in literature.

Re-allocate

In order to re-allocate capacity supply, Ritchie and Walley (2016) and Sasser (1973) mention that organisations could *share capacity between similar facilities* or work centers. Sasser (1973) argues that sharing capacity should be considered when organisations have invested in resources that are not utilized enough. Organisations could in these situations also *share capacity between different services*, a practice

mentioned by Fitzsimmons and Fitzsimmons (2006), Ritchie and Walley (2016), and Jonsson and Mattsson (2009). In order for this to be possible though, Jonsson and Mattsson (2009) state that either the tasks carried out have to require very little skill, or the staff have to be trained well beforehand for the work. Training staff takes time though, and has to be well planned. Armistead and Clark (1991) argue that it in periods with low demand can be efficient to train the employees, something that Sasser (1973) addresses that organisations should do in order to stay productive during non-peak time periods. Sasser (1973) further argues that cross-training of staff can be used during such times to prepare for higher demand, since the cross-training makes it much easier to re-allocate staff. In order to train the right people for the right thing, he also emphasizes that organisations need to investigate what skills that are missing and also if there are skills being used in an ineffective way.

Adjust

There are many different practices for how the capacity within an organisation can be adjusted. Jonsson and Mattsson (2009) and Slack *et al.* (2007) mention *overtime*, which according to Jonsson and Mattsson (2009) increases the utilization of both machines and staff. The authors further argue though, that overtime is a limited solution, regulated by the law. Other practices organisations could use when the workload is high is to shorten the execution of a process by *only performing the most essential tasks* within the process (Sasser, 1973), or *decrease the service provision* given (Armistead & Clark, 1991). When using these practice however, Armistead and Clark (1991) and Sasser (1972) argue that organisations needs to warn their customers about that the service provision will be lower. In times of a low demand on the other hand, organisations could instead *increase the service provision* given (Armistead & Clark, 1991). They could also consider to *postpone non-essential tasks*, such as cleaning and maintenance, from busy times to times when there is less to do (Sasser (1973); Armistead & Clark (1991); Jonsson & Mattsson (2009)). Armistead and Clark (1991) however, argue that it is important to let the staff within an organisation rest and recover right after a peak in demand.

Another way to adjust the capacity in times of high demand, is to *take in use easier types of contracts*. The case study by Ritchie and Walley (2016) showed that it is possible to use more flexible types of staffing contracts in order to increase flexibility. Furthermore, Jonsson and Mattsson (2009) argue that it could be good to have temporary employees if it occurs higher peaks that not are expected to last. Sasser (1973) and others (Fitzsimmons & Fitzsimmons (2006); Ritchie & Walley (2016)), Slack *et al.* (2007)) discuss the advantage of *having part-time employees*, since it creates a flexibility which can be helpful during peak periods. Part-time employees can according to Sasser (1973) be found at for example resource pools and among students.

It is also important that the time when the employees are working is matched to the demand. In order to achieve such a match, organisations can *adjust the work shifts* (Fitzsimmons & Fitzsimmons, 2006). At the organisation in the case study by Ritchie and Walley (2016), no changes of the work shifts was done, which the authors claimed to be an indication of their limited understanding of demand variations.

Increase/Decrease

One way to increase capacity, which can be done with quite short notice, is to *increase the number shifts* (Jonsson & Mattsson, 2009). When doing this, Jonsson and Mattsson (2009) argue that the machine utilization increases, while the labor utilization is kept at a constant level. They further claim that there are two main options when assigning staff to the new shifts, either to hire new employees or to reallocate staff from operations with lower workload. *Hiring new staff* is by itself a practice to further increase the capacity the capacity of an organisation (Jonsson & Mattsson (2009); Slack *et al.* (2007)). If not wanting to hire new staff, another way to increase the labor capacity is to use *subcontracting* (Fitzsimmons & Fitzsimmons (2006), Slack *et al.* (2007)).

Two practices connected to the fixed assets of an organisation are *investing in machines* and *investing in facilities*. According to Jonsson and Mattsson (2009), organisations comes to a point when they have to invest in new machines, and Slack *et al.* (2007) argue that organisations, when investing in facilities,

should consider to invest in the expansion ante, which means to invest in larger facilities that they can "grow in to".

Choosing the right capacity management practices

In order to know what practice categories that should be chosen for a specific situation, the framework by Jonsson and Mattsson (2009) presented in table 9 has been modified into the above described capacity management options. Compared to the framework by Jonsson and Mattsson (2009) this framework does not divide the options into demand- or supply management options, instead all options are seen as suitable for both demand- and supply management.

Table 9. A framework for choosing suitable capacity management practice categories. Adapted from Jonsson and Mattsson (2009)



Accumulative correspondence

The framework shows that when an organisation has a periodic correspondence they should, if not having an accumulative correspondence, try to increase/decrease the capacity. If they on the other hand both have a periodic and an accumulative correspondence, no adjustments have to be done to the capacity plan. In situations when an organisation has no period correspondence but an accumulative correspondence, they should use practices within the categories of re-allocate and adjust. If an organisation in addition to not having a periodic correspondence, also lacks accumulative correspondence, they should try to combine practices within the categories of re-allocate and adjust.

Similarities between the developed framework and the coping strategy

In the literature studied, no other short-term strategies could be found besides what Armistead and Clark (1991) refer to as the coping strategy. The coping strategy concept is a bit fuzzier than the long-term and medium-term strategies and mostly seem to concern how to handle situations, of either over or under capacity, that occur during a medium-term planning period. These situations can be likened with what Jonsson and Mattsson (2009) describe as a lack of periodic correspondence. In times when there is a lack of periodic correspondence, the part of the framework for choosing the right practice categories presented in table 9 suggest that practices from all three practice categories can be used, which implies a connection between the coping strategy and the different practices. However, the framework has a more comprehensive view of what actions that should be taken, and further suggests that the accumulated situation always needs to be taken into consideration. Since the framework provides a more comprehensive and firm direction of what actions that could be taken in order to handle fluctuations in demand, compared to the coping strategy, only the framework of practices has been investigated further in the case study.

4. Case Description

To be able to fulfil the purpose of this study, the context and its specific attributes must first be understood. Therefore, this chapter presents a description of the Swedish Migration Agency's organisation, its structure as well as the asylum process and its sub-processes relevant for this study. Furthermore, the chapter presents and explains the demand placed on the asylum process and the output which the process can supply. The description focuses mainly on the asylum process as it is the primary scope of the study.

4.1 Description of the Swedish Migration Agency

The Swedish Migration Agency is commissioned by the Swedish parliament and government to apply and uphold the Swedish asylum and migration policy. The Migration Agency is thereby the authority who considers applications from people who wants to take up permanent residences, get citizenship or visit Sweden. The Migration Agency is also responsible for decisions concerning those who seek protection from persecution, i.e. asylum seekers (Migrationsverket, 2016b). The goal of the Migration Agency is to "… ensure a long-term, sustainable migration policy that safeguards asylum rights and, within the framework of regulated immigration, facilitates mobility across borders and promotes a needs-driven labour immigration, while utilising and considering the development effects of migration, and furthering European and international cooperation." (Migrationsverket, 2016b).

4.1.1 Organisation

The Migration Agency currently employs approximately 7000 employees and operates nationwide. In January 2015 the Migration Agency launched its new organisational structure, which implied two major changes. The first of the two changes is that the organisation moved from having a functional structure, organised by the different areas of practices within the Migration Agency, i.e. asylum, other permits etc., to be organised by geographical regions with centralized management having all areas of practice represented within each region, figure 7 illustrates the Migration Agency's organisational structure.



Figure 7. The organisational structure of the Swedish Migration Agency

As can be seen in figure 7, the Migration Agency is headed by a Directing General, who is appointed by the Swedish government. The operational activities at the Migration Agency is divided into eight different parts, six of which are the geographical areas mentioned previously. The remaining two are national departments: the Detention department and the Legislation department. The Detention department facilitates and manages the Migration Agency's accommodations for individuals who needs to be available for deportation. The Legislation department represent the Migration Agency in court when decisions regarding refusals of asylum claims are under appeal. The quality department at the Migration Agency, works to assure and increase legal certainty by improving the Migration Agency's operational processes.

The other major change made in January 2015, is how the Migration Agency defines its operational processes. The goal of the Migration Agency is to reach the best possible flow through its processes by adapting a process oriented holistic view of its organisation. Seven sub-processes have been identified within the organisation (Migrationsverket, 2016b):

- 1. To seek protection
- 2. To return
- 3. Coming to Sweden
- 4. Staying in Sweden
- 5. Becoming a Swedish Citizen
- 6. Service and reception
- 7. Accommodation and support

Out of these seven operational processes; "*To seek protection*", "*To return*" and "*Accommodation and support*" are mainly concerned with the asylum process. Whereas, "*Coming to Sweden*" and "*Staying in Sweden*" concern other permits such as study permits and work permits etc. The process defined as "*Service and reception*" is less tangible as it is an integral a part of all the other six defined processes. Table 10 depicts these sub-processes and how they are grouped into major practice areas (excluding "*Service and reception*"). Added to the table is also the goals, stated in the 2015 annual report from the Migration Agency, for each of these groups of processes. To provide a picture of how the Migration Agency's total costs are also added to the table.

| Practice Area | Goal | Sub-processes | % of total costs |
|-------------------|---|--|------------------------|
| Asylum process | To create the prerequisites for an efficient and long- term sustainable asylum system that upholds the rights of asylum | •To seek protection •To return •Accommodation and support | 97,3 % |
| Permits | To facilitate a demand-driven labour migration and other movement within the boundaries of regulated migration. | •Coming to Sweden •Staying in Sweden | 2,5% |
| Citizenship | - | •Becoming a Swedish citizen | 0,2% |

| Table 10. The sub-process of the Swedish | Migration Agency gr | roup into practice areas | , goals and percentages of t | he |
|--|----------------------------|--------------------------|------------------------------|----|
| organisation total costs. | | | | |

The Migration Agency's operational processes occur within the geographical regions. The regions are rather autonomous, as it is the regions themselves that make decisions affecting the operational activities. Each region thereby has units working with all practice areas. Figure 8 depicts regions and offices of the Migration Agency, and shows the number of employees of each region.





The Migration Agency only employs personnel to work with their actual core competence, i.e. its practice areas, and needed supportive functions, such as quality and economic administration. For functions such as security, public counsels and interpreters, the Migration Agency uses subcontracting.

As the scope of this study concerns the asylum process, the other practice areas of the Migration Agency will be excluded from the rest of the report. Instead the asylum process will be thoroughly investigated and explained

4.2 The Asylum Process

The asylum process concerns the Migration Agency's work with asylum seekers and their applications for protection in Sweden. An asylum seeker is defined as an individual who has made his or her way to Sweden and applied for asylum in the country, but whose application is not yet decided. As Sweden has signed the UN Convention Relating to the Status of Refugees, the Swedish Migration Agency acts in accordance with the UN Convention as well as the joint European Union, EU, regulations concerning reasons to grant asylum seekers residence permits. In addition, the Migration Agency follows the Swedish Aliens Act, a legislation with no equivalent in the international convention or the EU legislation (Migrationsverket, 2016c). Together these policies form various reasons for which an individual can seek for asylum in Sweden:

- *Refugee status:* An individual who has well-founded reasons to fear persecution due to race, nationality, sexual orientation, gender or affiliation to a particular social group should be classed as a refugee. In accordance with Swedish legislation, EU regulation and the UN Convention Relating to the Status of Refugees (Migrationsverket, 2016c).
- *Subsidiary protection:* An individual who is in the risk of being sentenced to death, subjected to torture or other inhumane treatment, or as a civilian facing serious risk of injury due to armed conflict. In accordance with EU regulation (Migrationsverket, 2016c).
- *Other protection:* An individual who cannot return to their native country due to armed conflict and/or due to an environmental disaster. In accordance to Swedish legislation, therefore only applicable in Sweden (Migrationsverket, 2016c).

Seen from a holistic point of view, the asylum process consists of four areas that leads to a decision whether or not the asylum seeker should be granted asylum based on the above stated criteria. These four steps of the process is however divided into two main categories; *the protection process* and *reception process*. Figure 9 illustrates how the four steps are categorised.



Figure 9. The asylum process according to Aasa and Johansson

The protection process concerns the Migration Agency's practices of receiving and examine asylum applications. Whereas, the reception process handles issues such as accommodations and financial support. The reception process is also responsible for the closing procedure of the asylum process.

4.2.1 The reception process

The reception process within the asylum process lays without the scope of this study and will therefore be elaborated on to a great extent. However, to provide a full description of the case, the work in the reception part of the asylum process will still be explained briefly.

Once the asylum seeker's application is registered, he or she is covered by the LMA regulation; the Reception of Asylum Seekers and Others Act (SFS, 1994:137). In accordance with the LMA regulation the Migration Agency, through the reception units, is responsible to provide financial support and accommodations to the asylum seekers who cannot arrange accommodation by owns means. Thus, the reception units handle the direct contact with the asylum seekers and assist them with issues such as accommodation and questions regarding the right to daily allowance. There are different types of accommodation in which an asylum seeker can stay:

- *Step 1 accommodation:* initial housing located close to the main city of entry and close to an Application Unit. The accommodation is rented but managed and maintained by the Migration Agency. The goal of the Migration Agency is that no asylum seeker should stay in this type of housing for time period longer than 4 days (Migrationsverket, 2016d).
- *Step 2 accommodation:* short-term housing rented but managed and maintained by the Migration Agency. These accommodations should be located close to an examination unit and close to a city of with possibility of departure.
- Step 3 accommodation: long-term housing that primarily consists of apartments.

The alternative to the ABO accommodations is called EBO. EBO accommodations are arranged by the asylum seekers themselves, often by living with family or friends. Regardless of if an asylum seeker is housed in a ABO or EBO accommodation the reception units are responsible for upholding the LMA regulation and to notify the asylum seeker when a decision is made concerning their application.

Moreover, the reception units notify the asylum seeker once a decision has been made concerning his or her application. If the application has been denied, the reception units also gives support when arranging the deportation.

4.2.2 The protection process

As of February 2016, the Migration Agency redefined its protection process. The purpose being to improve the flow of asylum applications through the protection process and the flexibility of the Migration Agency's resources. The redefined protection process is divided in two areas; *the application process* and *examination process*. The redefined protection process also includes a *distribution function* with the purpose to facilitate a pull system that would increase flow efficiency in the *examination process*. Each individual examination unit is responsible to demand, or order, applications to process, from the *distribution function*. The protection process is depicted in figure 10.



Figure 10. The protection process according to Aasa and Johansson.

Governing principles of the protection process

When designing the protection process, the Migration Agency also defined a number of governing principles to help facilitate the goals of the process. One of the governing principles is that *asylum applications should be considered in line with its character*, which implies that the processing of each application should be adapted depending on its attributes. This is connected to the governing principle of *screening and sorting*, which concerns sorting applications depending on their character. In figure 10, the sorting of applications is symbolised with the five different tracks. Tracks one, two and three covers applications that have been placed at the distribution function while awaiting additional investigation. The distribution function also helps to have a clear *separation between production and inventory*, another of the governing principles. By clearly distinguishing between applications in active processing and applications that are inventoried while awaiting processing, the Migration Agency aims to create prerequisites for a pull system which can reduce the administrative tasks of its operative employees.

Track 1: applications are sorted as *track 1* if the application is not subjected to refusal or deportation, and if the identity of the applicant is strengthened and believable. This implies that *track 1* mostly concerns application cases that fall under the "*Permanent residence presumption*", or *PUT presumption*. Asylum seekers from countries that are classified as unsafe, due to political or environmental situations, falls under this presumption and are considered to have valid reason for asylum. The applicant does therefore not need legal consultation. Thereby, *track 1* cases should have a short wait between application and decision. However, an application can be resorted if information surfaces that could require further investigation, e.g. questions about the identity of the asylum seeker.

Track 2: applications sorted as *track 2* requires additional verbal investigation compared to the application sorted under *track 1*. Applications that are placed in *track 2* may fall under the PUT presumption but the asylum seeker have failed to prove his or hers identity. In some cases the question

whether the application could be subjected for refusal or deportation is raised. Thus, applicants whose application are sorted in *track 2* may need legal consultation.

Track 3: applications sorted as *track 3* requires extensive investigations. The question whether the application could be a subjected for refusal or deportation is raised and thus legal consultation is thereby needed. Applications that falls under the *track 3* process are called *"ordinary cases"* as they are not covered by any special regulation or legislation, e.g. *PUT presumption*.

Compared to track one, two and three, tracks four and five does not require additional investigation and are therefore not placed at the distribution function.

Track 4: applications sorted as *track 4* are considered to be obviously unfounded. As a consequence, the applications are placed in the *immediately home country/third country and obviously unfounded*, *OH/OT*, process. Meaning that applications are presumed to be refused since the asylum seekers come from countries classified as safe with an acceptable state protection (Migrationsverket, 2015). There is no legal consultation during the OH/OT process.

Track 5: track 5 concerns applications that falls under *the Dublin Regulation*. Asylum seekers who have already applied for asylum in another country are covered by the Dublin Convention. According to the Dublin regulation, the asylum seeker should then be re-allocated to the country where he or she first applied for asylum (Migrationsverket, 2015). There is no legal consultation in cases covered by the Dublin regulation.

The Migration Agency also has some governing principles which concerns its employees, their way of working, their competences, their roles and their views. *Teamwork* is one of these principles, which is something that the Migration Agency believes helps to clarify the role of each employees, and therefore uses to a great extent. Another of the principles is to have *the right competences at the right place*, which is considered by the Migration Agency to help ensuring that decisions are made by employees with appropriate knowledge for each specific step of the process, and thereby minimizes rework. The Migration Agency also wants to have *clear roles of employees*, a principle which is a reaction to the fact that the Migration Agency has experienced a problem with employees being assigned a lot of administrative tasks, taking time from their operative tasks. At last the Migration Agency has developed a governing principle about *having a holistic view of the process*, which concerns that employees should perform their tasks with the coming steps of the process in mind, and by doing so reduce rework and increase the efficiency of the process.

The application process

The application process legalises the asylum seeker's stay in Sweden by register the application. After the registration is made, the application process aims at obtaining enough information about the asylum application in order to be able to sort applications into different tracks, depending on the character the application, as explained above. Figure 11 depicts the steps of the application process.



Figure 11. The application process according to Aasa and Johansson.

REG 1

To be able to proceed with the registration of an application, the application units require information regarding the asylum seeker's name, place of birth, native country, language, how the individual has travelled to Sweden and the reason for leaving his or hers home country. It is the responsibility of each asylum seeker to prove their identity, as well as evidence that would justify a residence permit. Therefore, in the first step of the REG1 process, the asylum seekers themselves retrieve and complete an application form that is available both online and at the application units. The application form covers the above stated information which the application unit requires to proceed with an application. Additionally, the asylum seekers can add their economic declaration in order to be able to apply for economic support, and whether or not they need the Migration Agency to support them with accommodation.

As the second step, the application form is handed at the reception of the application units where the REG 1 meeting between the asylum seeker and an employee takes place. This meeting is short and mainly consists of registering the application at the Swedish Migration Agency.

Once the application is registered, the asylum seeker is asked to wait in the waiting hall until called in for getting photo and fingerprints taken. The fingerprints are then matched against a European database, EURODAC. If a match is found during the screening against the database, the asylum seeker has previously applied for asylum in another European country and will be therefore be regarded as a Dublin case. When the screening has been conducted, REG 1 is concluded. The process steps included in REG 1 are depicted in figure 12.



Figure 12. The steps included in REG 1 according to Aasa and Johansson.

REG 2

During the REG 2 meeting the asylum seeker's reasons for asylum, health conditions and family situation are investigated further, to enable a more accurate screening of the asylum application. The asylum seeker is also informed about how the process will continue after the application process is completed. REG 2 meetings are generally held the same day as REG 1, thereby the entire application process takes less than one day. If an applicant arrives at a time when REG 2 cannot be held the same day, only REG 1 is conducted since it is during REG 1 an asylum seekers stay in Sweden is legalised.

REG 3

The REG 3 meeting is a communication with the asylum seekers that have been considered as Dublin cases, i.e. track 5. During the meeting, the asylum seeker is informed that there has been a match of this or her fingerprints within the EURODAC database and that the application therefore will be handled by the country within the Schengen area which he or she first entered. During the meeting, the asylum seeker is also asked about his and her view of the situation. The Agency also has to communicate the Dublin case to the concerned country within three months from registration, otherwise the responsibility to consider the application stays with the country in which the applicant currently resides, i.e. the Migration Agency loses the possibility to hand over Dublin cases.

The Examination Process

Once an application is registered and sorted depending on its nature in the application process, the application enters the examination process. During the examination process, examination units consider the asylum claim made in the asylum application. However, the examination process vary slightly in design and timeframe depending on the nature of the application, i.e. under which track it is sorted. Within region Väst there are six examination units, i.e. APGO1 to APEGO6. The process of distributing the different tracks is depicted in figure 13.



Figure 13. The process of distributing the different track to the examination units according to Aasa and Johansson.

Distribution function

The distribution function exists within each of the regions that divides the Migration Agency's operative work, e.g. Syd, Väst, Öst etc. The function is either autonomous or part of a examination unit. The purpose of the function is to facilitate flow efficiency in the examination process by handling and storing applications waiting to be processed until a call off is made by an examination unit. Thereby, the examination units can control their inflow, creating a possibility to plan and process more effectively. If possible, the distribution function also contributes to the investigation of applications while they are stored.

For applications categorised as *track 1*, the distribution function supplies the unit with an application within three days from the day the call off is made. For *tracks 2* and *3* however, call offs are made one month before the asylum examination is initiated. The reason for this extended time period is due to scheduling with legal consultation for which the distribution function is responsible in these cases. It is up to the unit manager to decide the frequency of the call offs. However, the frequency of the call offs should be planned to align with the following governing principles:

- Applications should be considered without interruption and thereby not be stored as inventory at the examination units.
- There should be a balance between input and output of applications from the examination units.
- Create an even distribution of applications in regards to the planning period

As displayed in figure 13, tracks four and five are not part of the distribution function.

Examination

The actual investigation of an asylum claims validity during the examination process lays under the responsibility of the examination units. The examination units have four operative employee roles that are involved with considering asylum applications; *assistants, team leaders, case officers* and *decision makers*. Figure 14 is a process map of the examination process, included in the process-map is also which employee role that is responsible for each process step.



Figure 14. The examination process according to Aasa and Johansson.

Once a call off is made by an examination unit to the distribution function, the application, and all of its relevant information, is sent to the examination unit in question and registered by an assistant at the unit. After the application has been registered for examination, a team leader screens the application to understand the need for interpreter and public counsel, and also the basic reason for asylum. This information is then handed back to an assistant. The assistant then enters the application to the Migration Agency's internal system Skapa, that distributes the asylum examination to a case officer based on the "first available" rule. The assistant also sends a vocation to the asylum seeker and books the time with an interpreter and a public counsel. The case officer handed the case goes through the information in the case and discusses it with a decision maker who provide his or hers thoughts and suggestions. By involving two persons in the process, the Migration Agency hopes to ensure quality and objectivity

when considering an application. The last step of the process is the asylum investigation, the investigation itself is a meeting between the case officer, the asylum seeker and the public counsel as well as an interpreter, if needed. The process consists of a number of steps, depict in figure 15.



Figure 15. The asylum investigation meeting process according to Aasa and Johansson.

The asylum investigation starts with the case officer informing the asylum seeker what the investigation meeting is about, what is expected from him or her as an asylum seeker during the investigation and the possible outcomes of the investigation. Once the asylum seeker has been informed, the case officer uses a standardised set of questions aimed at obtaining the information needed to be able to make an informed decision when considering the application. After the questioning, the public counsel is given time to ask questions to the asylum seeker. The investigation meeting is ended by finalising and signing off on the protocol from the meeting. After the meeting, the public counsel takes approximately two weeks to draw up an insertion, which is sent to the examination unit. The case officer then asses the application along with the insertion, together with a decision maker. An additional investigation meeting could be held if needed, otherwise the application is stamped as ready for decision and a decision in the application is written by the case officer.

Depending on under which track an application is categorised, the procedure of the examination process can vary, in accordance with the explanation of the tracks in chapter 4.2.2, *The protection process*. Generally, tracks one, four and five does not include the public counsel in the process. Furthermore, tracks four and five are not entered in the distribution function (see figure 13). Tracks two and three follows the processing illustrated in figures 14 and 15.

4.3 Demand and Supply

It is the number of asylum seekers entering Sweden that sets the demand which the Migration Agency needs to satisfy. However, there are differences between how the application units and examination units are affected by that number. The following two sections provides a picture of the demand placed on the two process in the protection process, as well as the units' ability to satisfy that demand.

First of all, however, it is important to understand that the capacity of the Migration Agency is, in a long-term perspective, determined by governmental funding. The funding is based on forecasts concerning the future estimated demand of the Migration Agency's services and are made by the Migration Agency itself. The forecasts are made on a national level and is publicly published four times each year and considers all the services provided by the Migration Agency. However, only the information directly connected to the Migration Agency's work with the protection process is considered of interest for this study.

Included in the forecasts are three scenarios regarding the estimated number of asylum seekers:

- Scenario A: the upper limit of number of asylum seekers
- Scenario B: the main, and planning scenario, of number of asylum seekers
- Scenario C: the lower limit of number of asylum seekers

Figure 16 presents the final forecast published in November 2014 and includes all three scenarios for 2015.



Figure 16. The forecasted scenarios for the monthly number of asylum seekers during 2015 made by the Swedish Migration Agency 2014.

4.3.1 Application process

As the Migration Agency is obligated to register asylum seekers in order to legalise their stay in Sweden, the demand which the application units need to satisfy therefore correlates with the number of asylum seekers entering the country. Figure 17 shows the number of registered asylum application per month, between the years 2010 and 2015. Looking at figure 17 it becomes evident just how deviant the fall of 2015 was compared to previous years. In 2015 a total number of 162 877 asylum applications was registered by the Migration Agency, of which approximately 88 000 were registered between August and November, compared to 81 301 in total 2014 and 54 259 in 2013.



Figure 17. The monthly variation of number of asylum seekers registered in Sweden 2010-2015.

Looking at the asylum applications in region Väst during the same years, figure 18, the variation patterns are similar.



Figure 18. The monthly variation of number of asylum seekers registered in region Väst 2010-2015.

The applications units also face variations in demand during the week. Figure 19 depicts the patterns of day to day variation on a national level and for region Väst respectively. Figure 19 shows the average number of asylum application for each day of the week between the years 2010 and 2015.



Figure 19. The daily variation of number of asylum seekers on a national level and for region Väst. The average is based on data from the years 2010-2015.

4.3.2 Examination process

The number of asylum seekers entering Sweden does not have the same immediate effect on the examination units as it does at the application units, as the applications are inventoried while awaiting investigation. Thus, even though the demand of the examination process in reality is the same as the demand on the application units, the examination units does not need to satisfy that demand with the same directness as the application units. Figure 20 shows the number of applications awaiting investigation at the end of each year 2010-2015.



Figure 20. Number of asylum application awaiting investigation in the examination process 2010-2015.

Figure 20 can be compared to the number of decisions taken concerning asylum application over the same time period, figure 21.



Figure 21. Monthly variation in number of total decisions 2010-2015

Even though more decisions were taken during the autumn of 2015 than during any other time period these years, it was not an exponential increase in the same way as the number of application awaiting investigations and number of submitted applications. Looking at the number of asylum decisions taken in region Väst, figure 22, the number of asylum decisions taken were slightly lower than for the same time period in 2014 and 2013.



Figure 22. Monthly variation in number of decisions regarding asylum application in region Väst 2010-2015.

5. Results

This chapter of the report presents findings concerning the Swedish Migrations Agency's capacity management strategies and practices, within the sub-processes of the protection process. Findings are divided to first concern the application process, after which findings regarding the examination process are presented. Moreover, findings are separated depending on if they concern managing the demand, or managing the organisation's supply.

5.1 Capacity Management at the Swedish Migration Agency

The theoretical framework of this report presents numerous examples of authors and scholars who emphasise the importance of capacity management, and its influences on an organisation's performance. In the case description of this report, the focus has been to provide an accurate picture of the structure and operational processes of the Swedish Migration Agency. This part of the report will focus on the capacity management strategies and practices used at the Migration Agency, with a special attention at the protection process.

Based on what can be seen in chapter 4.3, *Demand and Supply*, the Migration Agency is an organisation that is under heavy influence of a fluctuating demand. It also becomes evident that the different operative parts of the protection process, i.e. application and examination, are affected differently by these fluctuations in demand. As a consequence of these differences, the practices which the Migration Agency uses to manage its capacity also becomes different. Therefore, the application unit and examination unit will be kept separate when results from this study are presented below.

5.1.1 Application process

During the months between August and November 2015, the application units faced an extreme situation and struggled to deliver on their obligation to register each new asylum seeker arriving at the units. The application unit AEGO in region Väst was subjected to a situation of under capacity, meaning that AEGO should not have been able to satisfy the demand placed on it to register asylum seekers. In contrast to the time of under capacity, between August and November, AEGO entered a period of overcapacity in December 2015, due to a governmental decision to implement stricter border control policy, which affected reduced the number of incoming asylum seekers. To cope with these issues of a mismatch between the application unit's capacity and their demand, the region adapted practices which helped the unit to overcome the issues of under capacity and overcapacity.

Demand Management

The sections below concern the methods used by the application units within region Väst, concerning managing capacity through demand management.

Redefining the function of units and setting up coordination of operations

As the inflow of asylum seekers to AEGO begun to reach heights beyond what the unit could handle on its own, region Väst redefined the function of some of its other units. To increase the region's capacity to register asylum seekers, the Migration Agency's units in Vänersborg, Mariestad, Falkenberg, Halmstad, Borås and in central Gothenburg was assigned to support AEGO with registration efforts. Normally, these units work concerns other areas than the application process. Vänersborg, Mariestad, Falkenberg, Halmstad and Borås are units which normally operates within the Migration Agency's reception process, while the Migration Agency's unit in central Gothenburg is a national service centre that mainly handles applications of work and study permits, but also asylum applications where the asylum seeker can provide his or her own accommodation, so called EBO. In order to make the distribution of asylum seekers feasible between the different units a coordinator function was established, a position given to the manager of AEGO.

The coordinator facilitated and managed the communication between units and monitored the available capacity of the different units as well as transports between them. Thus, obtaining and sharing information concerning capacity issues were major tasks for the coordinator. Information sharing appeared on two different levels, national and regional. The coordinator participated in a daily phone meeting on a national level, whereas the regional communication was conducted continuously during the day. The issues discussed during these meetings concerned the current available number of accommodations and each unit's available capacity to register application. Based on this information, the coordinator distributed the asylum seekers to the most suitable application unit within the region. The coordinator also had contact with terminals for ferry and train in Gothenburg as well as the Migration Agency's application units in other regions, providing the coordinator a preliminary report of the quantity of asylum seekers entering region Väst. These preliminary reports did however pose a risk, as incorrect reports concerning the quantity and origin, i.e. train station, ferry terminal or from another region, of arriving asylum seekers created great planning difficulties. Even though the coordinator became an integral part in facilitating and creating a possibility to operate with multiple applications unit during these extraordinary circumstances, or chaos, it created some issues both for the coordinator and the system.

Because the coordinator became such an integral role, the holistic view and understanding that was needed to take correct decisions regarding the distribution of asylum seekers between different application units was rather concentrated to the coordinator alone. Taking an incorrect decision could lead to a system failure with an increasing number of non-registered asylum seeker, which could take two to three days to correct. Thus, the coordinator needed to be involved, available and approve each decision regarding where to re-allocate the incoming asylum seekers. Thereby, the coordinator became a potential bottleneck of the process and was required to be available around the clock. Furthermore, the coordinator had to handle initial discrepancies between the estimated and actual capacity of registering applications at the redefined units. Table 11 presents an evaluation made between the estimated and actual capacity of some of these units. The estimation was based on the number of photo and fingerprints machines available at each unit.

| Unit | Estimated capacity (daily) | Actual capacity (daily) |
|-------------|----------------------------|-------------------------|
| AEGO | 350 | 250-350 |
| Vestagatan | 100 | 70 |
| Borås | 100 | 25-30 |
| Värnersborg | 100 | 30 |
| Total | 650 | 385-485 |

 Table 11. An evaluation made by the Swedish Migration Agency concerning the estimated and actual capacity of some redefined units within region Väst.

Setting up work centers to ensure quality of the service

In addition to redefining some units into application units in order to increase the region's registration capacity, AEGO also increased its own registration capacity by establishing provisional work centers, in the form of tents, outside the facilities of its application unit. As the number of asylum seekers increased, so did the pressure on the employees conducting the registration. Registration was not conducted in these tents; the purpose was move them from the small space in the waiting hall and enable sorting of asylum seekers into segments based on their reason for asylum. By assigning responsibility of some of these segments to specific units within the region, the Migration Agency could maximise the benefits of operating with multiple application units. The tents also provided a possibility for the

employees at AEGO to segment the asylum seekers depending on how far along they had come in their application process, for which a total number of nine tents was set up.

Keeping track of which steps of the process an asylum seeker is in his or her application process, is not usually an issue. However, during the autumn of 2015, asylum seekers could initiate their application at one application unit and finish it at another. Under normal circumstances, the application process is fully processed from arrival to completed application at the same application unit and during the same day. As a consequence of the extraordinary circumstances the application process could take up to two or even three days, the application unit was in other words forced to build an inventory of asylum seekers awaiting completion of their asylum application. Thus increasing the difficulty to monitor the progress of each individual asylum seeker and thereby the risk of re-allocate an asylum seeker to another application by mistake, even though he or she already had completed initial steps of the application process. The coordination process used during the autumn of 2015 is depicted in figure 23.



Figure 23. The process facilitated by the coordinator according to Aasa and Johansson.

Another issue connected to the re-allocation of asylum seekers was that the application units experienced an increased amount of re-work, due to insufficient information regarding how far along in the process an asylum seeker had progressed. An example of such re-work was that photo and fingerprints of asylum seekers sometimes was taken twice. By engaging with asylum seekers and acquiring details about their status in the application process in the sorting tents, before they entered the application unit, such kind of rework could be reduced. Moreover, by making the sorting tents the first interaction between asylum seekers arriving at AEGO and the employees working there, the unit was able to free personnel conducting the registration of applications inside the application unit from interrupting questions from asylum seekers, thus allowing the registration personnel to focus their work on actually registering applications.

When the demand decreased

When the number of asylum seekers rapidly decreased, as an effect to a stricter border control policy decided by the government, so did the extent to which demand management practices were used. The redefined units within region Väst incrementally decreased their involvement in the application process until the point when these additional registration units were no longer needed. Thereby, the coordinator role became obsolete along with the sorting tents outside AEGO.

Supply Management

In addition to coping with fluctuation in demand by managing the demand, the application units also affected the capacity that could be supplied. Practices used to do so are presented in the section below.

Increasing the workforce by investing in new personnel and using staffing companies

In order to increase the workforce during the autumn of 2015 to meet the peak in demand, the Migration Agency invested in recruiting new personnel. In region Väst the number of employees working within the application process increased from 75 to 191 between August and November 2015, figure 24, and thereby, based on historical data, increased the region's application capacity with 139,4 %, figure 25.



Figure 24. Number of employees within the application process in region Väst 2015



Figure 25. The capacity of the application process in region Väst based on historical data. See appendix 1 for calculations.

To make a rapid increase in number of employees possible, AEGO used employment contracts that included a time frame of employment, in order to safeguard the Migration Agency from a later state of overcapacity. Thus, the majority of personnel hired during the autumn of 2015 signed contracts of employment that could be discontinued in June 2016. Firing personnel with full time contracts only occurs during periods of overcapacity, since the cost of employees cannot be justified during such periods. However, decisions regarding discontinued employee contracts, temporary and full time, are not based explicitly on the specific process written in the contract of an employee, meaning that an

employee might be transferred to another processes within the organisation, in need of extra capacity, instead of having his or her contract discontinued.

In addition to hiring employees with the competence needed to contribute to the actual application process, AEGO also contracted staffing companies to support the unit with personnel that performed time consuming tasks not requiring the same level and type of competence. Personnel provided by staffing companies could for instance assist with scanning and digitising documents.

Maximizing the utilization of employee resources and increasing capacity by scheduling changes

During the autumn of 2015, AEGO also adopted practices to maximize its utilization of employee resources. Through experience, managers and personnel at AEGO have learned that the number of asylum seekers often is highest in the beginning of the week, which is also supported by the data presented in figure 19 in chapter 4.3.1. *Application Unit*. Based on this knowledge AEGO is staffed by fewer employees, one of four work teams, during weekends. However, due to scheduling issues AEGO has struggled to uphold this staffing policy. Scheduling the workforce to match the declining trend of number asylum seekers arriving during the weekend is nothing specifically used during periods when the application unit experience over or under capacity, but rather used as a continuous way of working. During the autumn of 2015 however, the employees at AEGO wanted to extend the possibility to increase capacity by scheduling changes, i.e. longer opening hours at the application unit during weekends and an extra evening shift by using additional personnel. However, even though supported by management at AEGO, the proposition of longer opening hours took time to be implemented. The reason being that negotiations with the union and the overwhelming workload delayed the approval of the proposition.

Re-allocating staff from the examination units

Looking at practices used at AEGO during the autumn of 2015 to maximise utilization of employees, there was an increase in overtime work hours. Figure 26 displays the variation in overtime hours, translated into how many extra full time employees it sums up to, between January 2013 and December 2015 at AEGO. There is an obvious peak in overtime that coincide with the peak in number of asylum seekers during the autumn of 2015. However, it is also worth mentioning that even though the number of employees increased during this period. The percentage of employees in active work, i.e. full time work hours excluding short-term sick leave (less than fourteen days), vacation and care of sick child, decreased and was considerably lower than for the same time period in previous years.



Figure 26. Overtime at AEGO 2013-2015 translated into full time employees.

Figure 27 depicts the number of employees in active work in relation to the number of employees in total, and figure 28 compares the difference in percentages of active workers in relation to number of employees between the years 2013, 2014 and 2015.



Figure 27. Number of employees compared to the active workforce 2013-2015 at AEGO



Figure 28. A comparison of the percentage of the active workforce in relation to the number of employees 2013-2015.

AEGO benefited from being located at the same site as the examination units in Gothenburg since it enabled personnel from the examination units to assist with the application process. Legal obligations force the application units to respond to shifts in demand instantly, whereas the examination units have the possibility to build a stock of applications that are awaiting consideration. The possibility to reallocate employees between processes during the high pressure in the autumn 2015 was instrumental to uphold the obligations of the application process. Even though trying to make lending personnel as non time consuming as possible by primarily lending employees who had previous experience from working in the application unit, keeping track of the competences and help inexperienced personnel became somewhat of an issue.

In addition to have partially inexperienced personnel from the examinations units assisting with application process, AEGO also had a high number of completely new employees. Together, the high proportion of inexperienced personnel led to an efficiency decrease for the more experienced personnel,

as it falls on the responsibility of the more experienced employees to assist and train the more inexperienced employees. Resulting in a situation where the productivity of the experienced personnel was experienced as decreased. Besides that the new employees are given operational training, the Migration Agency also offers a two day introduction for each new employee at its headquarters in Norrköping. This introduction however, only concerns values and ethics of the Migration Agency, and does not emphasize on how to perform everyday work.

Adjusting the design of the process

Besides increasing its capacity by an increase of personnel and working hours, AEGO also decreased the service provided during the process. As it became increasingly difficult to manage the obligation to register each arriving asylum seeker during the autumn of 2015, AEGO shortened the application process. Initially the REG 2 and REG 3 meetings were assigned a shorter time frame and the standard questionnaire used during the meetings were shortened to only contain questions concerning the most important information. Thereby enabling the application unit to hold more registration meetings each day. Eventually however, as the number of asylum seeker continued to increase, AEGO was forced to completely remove the REG 2 and REG 3 meetings from the application process. Even though legally possible, as it is only REG 1 and the photo and fingerprints steps of the process that are required to legalize an asylum seeker's stay in Sweden, it created problems later in the process. Especially the work with Dublin cases was affected by the decision of not conducting the final registration meeting. Since the Migration Agency first must communicate the decision to consider the asylum application as a Dublin case with the asylum seeker in question, and receive an approval from the country that will take over responsibility of the application, within three months from the registration. Thereby, a high share of cases that otherwise would have been handed over as Dublin cases to other countries remained under the responsibility of the Migration Agency. Furthermore, removing the final registration meeting from the application process added work for the examination process, as the registration meeting was moved to be a part of the examination process for those applicants whose registration meeting was not held during the autumn of 2015.

Prioritising essential tasks and postponing non-essential tasks

In addition to making changes to the design of the application process itself in order to satisfy the high increase in demand during late 2015, AEGO also prioritised among its work tasks and focused employees work to concern only the most essential tasks and postponed other less urgent tasks. One example of such a prioritisation, scanning and digitisation of documents. Another example is the postponing of the approval of subsidy winter clothing to quotation refugees, normally handled by the reception units. These tasks were considered non-essential during the period of extremely high demand, thus postponed and later solved through an effort made by extra personnel and employees at AEGO.

Investing in facilities and machines

The practices identified and presented in the sections above, primarily concerns aspects connected to reaching a higher capacity by modifications in process design or staffing. However, investments in facilities and machines also occurred as a way to increase AEGO's application capacity, both during and after the autumn of 2015. During the peak of number of asylum seekers in 2015, the employees working with the application process experienced that the facilities did not support an optimal way of working, in fact the layout of the application unit was contributing to confusion and rework. The main deficiency of the layout of the facility, that created confusion and rework, was considered to be that newly arrived asylum seekers and asylum seekers awaiting to be photographed and get their fingerprints taken where waiting in the same room. This was one of the reasons that the previously mentioned tents came to be, to separate asylum seekers who were at different points in their application process.

Moreover, a problem perceived among the employees working with the REG 1 was that there were no way to hinder someone from approaching the reception desk, creating a situation where disturbing and misplaced enquiries from asylum seekers disturbed the employees work within the registration. Furthermore, the employees experienced that the photo and fingerprints machines used in the process became a bottleneck. With this information and experience in hand, AEGO have taken a number of

actions to deal with these issues. One of these actions was that the number of photo and fingerprints machines was increased during the autumn of 2015.

Regarding optimization of facilities, it is important to remember that the Migration Agency will never be able to build their own facilities customized to serve their process due to the fact that public organisations in Sweden are subjected to public procurement and thus only allowed to rent their facilities. Therefore, the Migration Agency initiated a restoration of their facilities in Gothenburg, as well as a reconstruction of the layout, starting with AEGO and the service centre in central Gothenburg in the beginning of 2016, with goal to update the facilities to support the units' processes. However, the restoration and reconstruction have received some criticism from employees at AEGO, as the reconstruction of the layout has failed to improve some aspects considered of high importance to the personnel working in the process. There is still no way for the employees working with REG 1 to control who approaches the reception desk. Moreover, the application process is divided into two different floor levels within the facility. REG 1, photo and fingerprints and registration meetings are conducted at the first floor level whereas decision about daily allowance and other back office steps are completed on the second floor level. Having the process divided between two different floors was considered as ineffective by the employees, as it would require time consuming walking as well as communication issues. This has also been the experience of the employees after starting to work in the restored facilities.

5.1.2 Examination process

As described, the examination units in region Väst provided AEGO with staff during the autumn of 2015. This was done because the application units, due to legal obligations, have to respond to peaks in demand, while the examination units do not have any similar legal obligations put on their processes. During this time period however, the examination units themselves were also experiencing an under capacity, but since fulfilling the legal obligations connected to the application process, actions were not taken to the same extent in the examination process. When the amount of incoming asylum seekers later on decreased though, the Migration Agency directed its attention to the examination process instead, and more actions were taken to handle the tough situation.

Demand Management

To achieve a match between the incoming demand and the capacity supplied, the examination unit has used a couple of demand management actions.

An adjustable stock handled by a central regional distribution function

A difference between the examination process and the application process is that fluctuations in demand legally can be, and also are, handled by an adjustable stock. As the number of applications increased during 2015, so did the inventory of stocked applications. In the end of 2015, when the demand had started to decrease, the Migration Agency articulated a priority to decrease the stock. In order to handle the applications in an efficient way, region recently opened up a distribution function, collecting and distributing incoming applications to different examination units. Before this function was created, applications were directly distributed from the application units to the different examination units, leading to a inefficient push system that was difficult to manage, especially with the increasing amount of incoming applications. The distribution function facilitates a pull system, supplying the examination units with applications on a call of basis, and therefore decreases the administrative work at the different units. In this way, the earlier issues connected to a decentralized stock management are avoided.

A booking system to match the examination meetings with available resources

In order to distribute the work evenly between employees, the examination units uses a booking system, earlier described in chapter 4.2.2, *The protection process*. Once an application has been distributed to an examination unit, an assistant assigns the case to a case officer and books an examination meeting with the asylum seeker approximately three months beforehand. The Migration Agency has previously booked meetings a longer time beforehand, but this often led to extra work since circumstances around the person has changed from the time the meeting was booked until the time the meeting was held.

Supply Management

The examination unit has besides the demand management actions, also taken different supply management actions in order to match the demanded capacity to the supplied capacity.

Increasing the workforce by hiring employees and re-allocating employees from the application unit As the number of asylum applications increased to a record high during the autumn of 2015, the examination units in region Väst increased their capacity by expanding their workforce, figure 29 presents the total number of employees at the examination units within region Väst between 2013 and 2015. However, the examination process did not recruit to the same extent as the application process.



Figure 29. Number of employees within the examination process in region Väst 2013-2015.

In the beginning of 2016 the Migration Agency further increased the workforce at examination units by re-allocating employees from the application units to the examination units. However, in order to reach a higher understanding of the capacity connected to the workforce within the examination units it is important to compare the number of employees in active work to the actual number of employees, in the same way as for the application units. The number of employees compared to number of employees in active work at the examination units in region Väst between 2013 and 2015, and the percentages respectively, can be seen in figure 30 and 31.



Figure 30. Number of employees compared to the active workforce 2013-2015



Figure 31. A comparison of the percentages of the active workforce in relation to the number of employees 2013-2015.

As the examination process has a defined and measurable input and out, i.e. number of asylum seekers and the number of decisions made, the actual effects of the increase in personnel can easily be compared to the actual achieved examination capacity. Based on historical data, the increase in number of employees from April 2015, a point from where a clear trend of increasing number of employees can been seen, to the peak of 299 employees in October 2015, should have increased region Väst's examination capacity by 41,33 %. However, as can been seen in figure 32, the number of decisions was actually slightly lower in October 2015 than in April 2015. The figure also presents the number of decisions made and the theoretical capacity compared to the number of asylum seekers between 2013 and 2015.



Figure 32. Number of asylum decisions compared to the number of asylum application 2013-2015 in region Väst. Calculations of the historically based capacity can be seen in appendix 2.

An issue with new employees, exactly as for the application units, is that the employees at the examination units are the ones that needs to teach the newly hired ones, which takes time from their own work. Due to these issues region Väst has discussed the possibility of initiating a regional education for newly hired employees at the examination unit. The fact that the teaching takes time from the staff sometimes leads to an unwillingness to borrow staff from the application unit, since they think the time it takes to teach the new people, takes away the benefit of having them as extra staff.

Maximizing the utilization of employees by using overtime

Besides increasing their workforce, the examination units in region Väst also at some points increased the utilization of their employees by using overtime. During October 2015 there was an extreme peak of overtime hours at the examination units. Figure 33 depicts the overtime hours at the examination units within region Väst during 2015 translated into the number of full time employees it cumulated to.



Figure 33. Overtime hours at the examination units in region Väst translated into a number of full time employees 2013-2015.

Restoring facilities

As for AEGO, a restoration of the examination facilities in Gothenburg was initiated in the beginning of 2016, a restoration which is still ongoing. When a restoration of a facility is carried out at the Migration Agency it is the company owning the facilities that takes care of the restoration, the Migration Agency just places an order to them of what they want to be done.

6. Analysis

This chapter analyses the findings from the study, starting by the capacity management strategies followed by the capacity management practices. The chapter ends with presenting a revised framework for capacity management within the public sector.

6.1 Capacity Management Strategies

Since this study focused its data collection at the operational level of the Migration Agency, data explicitly elaborating the Agency's planned capacity management strategies was not found in the study and is therefore not presented in the results chapter. The reason for why no results were found at an operational level might have been because the concept of strategies is difficult to articulate and instead gets translated into everyday practices, i.e. what actions that actually have been taken during different time periods. However, with knowledge about these practices used at the Migration Agency, it becomes possible to identify certain characteristics which can be connected to the different capacity management strategies introduced in chapter 3, *Theoretical framework*. By taking a starting point at an operational level and the practices in play, this study avoids the discrepancies that otherwise may occur between top management's ideas of strategies and what the reality of the organisation looks like, thus enabling seeking a potential answer to research question one.

6.1.1 Long-term strategies

Slack *et al.* (2007) argue that long-term capacity strategies can be categorised into being either leading or lagging. Capacity management theory seems to assume that organisations are in control and empowered to influence this type of strategies. However, this study indicates that empowerment over capacity management strategies is not always the case. According to Boyne (2002) and Meier and O'Toole (2011) there are three dimensions of publicness, i.e. governmental ownership, funding and control. The Migration Agency experiences a high governmental influence in all these three dimensions, which could be an explanation for the lack of empowerment concerning long-term strategies seen in this study. Governmental funding seems to be especially connected to the lack of influence over long-term capacity management strategies. Budgeting for overcapacity do not seem feasible for the Migration Agency, as it is not considered a justifiable cost for the organisation to keep personnel in periods of overcapacity. As a consequence employees are either fired or re-allocated to a different process within the Migration Agency where additional capacity is needed. Based on findings from region Väst, the Agency seems to be forced into what can be seen as a lagging situation, since they cannot justify the costs of keeping an overcapacity capable of covering for extreme situations.

However, in accordance with Slack *et al.*'s (2007) argument that organisations rarely could be described as having a pure leading or lagging strategy, the Migration Agency also have elements of a leading capacity strategy. Investments made in additional machines, and restoration and improvements of facilities that was made as result to cope with the peak in demand in the end of 2015, now entails an overcapacity within the Migration Agency and thereby a leading capacity strategy. However, the possibility to build an overcapacity only emerged through a situation of under capacity. This implies that if a similar peak in demand would re-occur, the organisation may have the machinery capacity needed to meet the demand, but not the employee capacity. Thus, a leading capacity strategy seems to enable the organisation to meet its demand whereas the lagging situation regarding employees might limit the ability to do so. This aligns with the argument by Slack *et al.* (2007), that the leading capacity strategy facilitate the ability to always meet the demand.

6.1.2 Medium-term strategies

Concerning medium-term strategies Slack *et al.* (2007) mentioned that organisations could have either a chase- or a level capacity strategy. Characteristics of both these plans have been found in the case study of the protection process at the Migration Agency. The two sub-processes, application and examination, have different characteristics where the characteristics of the application unit seem to correspond with the chase capacity plan while the characteristics of the examination unit seem to correspond with the level capacity plan.

Something that highly influences these sub-processes to be different in their character are the obligations, or lack of obligations, placed on the two sub-processes. As explained in chapter 4.2, *The asylum process*, the application units are obligated to register each asylum seeker in the initial process in order to legalise the applicant's stay in Sweden. This implies that the application units needs to manage their capacity to align with a chase capacity strategy, as the application units always needs to respond and satisfy the demand placed on them. If looking at figure 34, which described the estimated capacity to register incoming asylum seekers compared to the actual amount of incoming applications during 2015, it looked as if it would not have been possible for the application units to fulfil their obligations during the second half of 2015. However, through the implementation of capacity increasing practices the application units did manage to register each asylum seeker, which in itself implies a high level of a chase capacity strategy.



Figure 34. Number of asylum seekers compared to historically based capacity.

In contrast to the application units, the examination units does not face the same challenges. The examination units are not obligated to act and match its output to fluctuations in demand in the same way as the applications units. Compared to the application units they have the possibility to influence their inflow by building a stock of asylum applications, see chapter 4.3.2, *Examination Unit*, figure 20. Thus, the examination units were not affected to the same extent as the application units during the autumn of 2015. Figure 35 depicts the number of decisions taken regarding asylum applications by the examination units in region Väst during the years of 2013 to 2015 in comparison to number of asylum seekers.



Figure 35. Number of asylum decisions with an added trendline compared to the number of asylum applications filed in region Väst 2013-2015.

Based on figure 35, it becomes evident that the number of decisions taken is not following the trends of incoming asylum applications. Instead, the number of decisions shows variations that fluctuate around a relatively stable trend-line. This indicates that the examination units' way of working is closer to a level capacity strategy, which Slack *et al.* (2007) defined as keeping the output of the process stable regardless of the variation in demand. The level capacity strategy however, does not come without issues. The stock of open applications increased exponentially during the autumn of 2015 and the Migration Agency are now experiencing difficulties to examine all these applications. If comparing the level capacity strategy to the chase capacity strategy, one can argue that both strategies seem feasible in order to cope with fluctuations in demand. However, if the goal is to always satisfy a fluctuating demand, findings from this study suggest that a chase capacity strategy might be considered more suitable than a level capacity strategy.

6.2 Capacity Management Practices

This section covers an analysis of the different actions taken by the Migration Agency in order to manage its capacity.

6.2.1 Demand management practices

The Migration Agency uses different demand management practices, both at the application and the examination units. From the results it is clear that region Väst adopted a number of demand management practices in the application process during the autumn of 2015, when they were in a situation of under capacity. They redefined some units into temporary application units, they re-allocated the incoming asylum seekers (both within an across regions) by the help of a coordinator function and they also adjusted their processes in different ways. When the demand later on decreased, the Agency stopped using these practices. The examination units on the other hand, uses more permanent demand management practices. They have an adjustable stock handled by a distribution function and a booking system to match examination meetings with available resources. To compare the practices used at the Migration Agency to the literature, they have been arranged into the framework presented in table 7, chapter 3.2.3, *Framework for choosing the right practice*, which can be seen in the following table, table 12.

 Table 12. A summary of the demand management practices identified during the case study of the Swedish Migration

 Agency according to Aasa and Johansson.

| Demand Management Practices | | |
|-----------------------------|---|---|
| Practice Category | Practice | Example |
| Re- Allocate | Alternative work- centers | When the demand is high in region Väst, they open up alternative application units During the autumn of 2015, AEGO used tents in order to re- allocate asylum seekers from the waiting hall |
| | Share demand between similar facilities | At a national level the Agency tried to distribute the demand of incoming asylum seekers between different regions The examination unit has a distribution function in region Väst, with the task to distribute applications evenly between examination units |
| | Order splitting | During the autumn om 2015, there were asylum seekers that had completed only parts of the registration that were sent to other regions where the registration later on was completed |
| Adjust | Increase/decrease stock | AEGO sometimes builds a balance of examination meetings when the incoming demand is high There is a stock of applications at the examination unit, handled by the distribution function |
| | Create Reservation and booking systems | The examination unit books the investigation meetings beforehand |
| Increase/ Decrease | Developing non-peak demand | |
| | Developing complementary services | During the autumn of 2015, region Väst guided asylum seekers that arrived at the train station and at the Stena Terminal |
| | Pricing | |
| | Political decisions | There are continuously decisions about new regulations, both from the Swedish government and EU. For instance, the Swedish government decided to take in use border controls in order to decrease the amount of incoming asylum seekers |

Two practices from the theoretical framework, *developing a non-peak demand* and *pricing* were not identified in the case study of the Migration Agency. Two other practices however, *share demand between similar facilities* and *political decisions*, not identified in the literature, were found. An analysis of each individual practice will now follow.

Re-allocate

As mentioned in the results, during the high peak of incoming asylum seekers region Väst opened up temporary application units at facilities that do not normally handle applications. Furthermore, temporary tents were used to sort asylum seekers and re-allocate them way from the crowded waiting hall inside AEGO. These actions could be seen as a way of using the practice which Jonsson and Mattsson (2009) refer to as *alternative work centres*. In order to be able to do this however, region Väst had planned and trained staff beforehand, since the practice constitutes a part of the Region Väst's contingency plan. Despite all preparations though, the outcome at the alternative work centres used during the autumn of 2015, was not as high as expected, something which is in line with the argument by Jonsson and Mattsson (2009), that a lower output than expected often is the case when the practice is used. Being well prepared when taking alternative work-centres in use, seem to be of great importance.

Share demand between similar facilities is a practice used at the Migration Agency which was not explicitly articulated in the theory studied. The Migration Agency uses the practice both to re-allocate asylum seekers between application units and also to distribute open cases to examination units by using a distribution function. When the Agency during the autumn of 2015 started to re-allocate asylum seekers between different application units, it was nothing they had planned for a long time beforehand. Region Väst was able to handle the situation by assigning a coordinator, however, this person needed to be available around the clock in order to avoid becoming a bottleneck. It would probably have been better if the coordination function would have been more thoroughly planned and relying on more than one person. Looking at the distribution of open cases in the examination process instead, handled by the distribution function, it is a solution that took longer time to develop, but then it also came with less problems.

During the autumn of 2015, when the incoming demand was very high, the application units sometimes re-allocated asylum seekers which only partly had completed the application process. This can in some way be seen as what Jonsson and Mattsson (2009) refer to as *order splitting*. However, the order splitting at the Migration Agency was not carried out intentionally, it was more or less a forced action due to a lack of housing opportunities. The splitting of orders led to problems with quality and flow efficiency since it was difficult to know how far within the application processes every individual asylum seeker had come, i.e. if the order had been split and at what step in the process it had been split. These issues might be connected to how quick the practice was taken in use. During the autumn of 2015, the Agency did not really have a plan for the execution, but if they would have had that, they could have been able to figure out a system for tracking the order splitting better. So, even if this practice did not work out very well for the Migration Agency it could however be a good practice in a context where it is clear what orders that have been split and when they have been split

Adjust

Increase/decrease stock is a practice found in the studied literature which the Migration Agency uses both at the application units and the examination units. At the application units, the Agency builds queues of people waiting for different steps in the registration process and sometimes also balances of REG 2 meetings the cannot be held the same day as REG 1. The inventory turnover ratio is very fast at the application unit, with a limit that the registration should take maximum three days. At the examination however, who has an inventory of applications which is managed by the distribution function, the inventory turnover ratio is very long since the examination has had an extremely high input to their process, while their output has not increased to a great extent. This indicates that using an inventory as a practice has to be done with caution since it seems very easy to increase a stock, while more tricker to decrease it.

Create reservation and booking systems is another practice from the theoretical framework that the Migration Agency carries out. It is however only done at the examination unit, which has a booking-system used to plan examination meetings. The application units do not yet have any such systems, but it has been discussed that some sort of booking system could be very helpful in order to tackle incoming demand fluctuations and in that way reduce queues. A booking system at the application units would not only help to cope with demand fluctuations, it would also increase the traceability of data and make
it possible to see the real input to the process, and the real waiting times. Creating such a system though, requires a lot of work before it can be taken in use. There are already people at the Migration Agency working with how a booking system could look like, but there is no plan that a solution will be taken in use in the nearest future.

Increase/Decrease

Using *pricing* at the Migration Agency to increase/decrease demand cannot really be done due to the organisation's degree of publicness. If looking at what Boyne (2002) and Meier & O'Toole (2011) refer to as publicness, the Migration Agency correspond very well to the characteristics. The organisation is owned and funded by the state, and the government controls it and sets its direction. Since the customer do not pay for the service at the Migration Agency, and the service is performed more or less is to fulfil legal requirements, it is very difficult to use pricing as a practice to increase/decrease demand. However, it is possible to draw a connection from how price adjustments could increase/decrease the demand, to how adjustments of the economic support for asylum seekers could increase/decrease it. As Fitzsimmons and Fitzsimmons (2006) argued, services are intangible and customers have to judge them based on reputation. The amount of allowance can be seen as a part of the service quality, and thereby influences the service's reputation. So hypothetically, an increased allowance would lead to an increased demand, while a decreased allowance would lead to a decreased demand. These types of adjustments are however decided by the government, and thereby not in the hands of the Agency themselves. Even if the study limits itself to only investigate internal practices at the Migration Agency, political decisions seem to have too high of an influence to exclude completely from the study. An example is the border controls which were taken in use during the late autumn of 2015 to get a fast decrease of incoming asylum seekers. This opens up for a new practice within the field of increase/decrease, called *political decisions*. How fast political decisions can be taken and implemented varies a lot, the process in the Swedish government can be quite fast while EU regulations often have a very long decision/implementation process.

Developing a non-peak demand is a practice found in the literature study, which the Migration Agency do not use. Sasser (1973), who mentioned the practice in literature, did it in the context of private sector services, and as the same as for pricing, the practice of developing a non-peak demand may not be applicable for public sector organisations due to their public characteristics, and especially since they are not profit driven. When developing a non-peak demand in a profit driven organisation, the aim is to increase the demand, and thereby the profit. This is not the case in public sector organisations such as the Agency, since they do not get any profit. Therefore, the use of this practice in such public organisations can be questioned.

Another practice found in the literature studied is *developing complementary services*. As mentioned in the results, region Väst, during the demand peak in the autumn of 2015, guided asylum seekers at the train station and at the ferry terminal, and also assisted them with bus transportation from these places to the application units. It could be argued that these services were what Ritchie and Walley (2016) refer to as pop-up services, a type of complementary services. However, the guidance and the bus transportation were not really taken in use in order to increase or decrease the demand, they were more a way to support the use of other practices at the Agency, such as sharing demand. Examples from literature of complementary services seem much focused on the ability of these practices to increase the demand and thereby profit. Sasser (1973) for instance mentions restaurants that develops cocktail lounges in which customers can hang out when waiting for a table. So, similar for pricing and developing a non-peak demand, the applicability of this practice in the context of public organisations that are not profit driven, can be questioned.

6.2.1 Supply management practices

Just as for demand management practices, also supply management practices have been found both in the application process and the examination processes. Both units continuously uses practices such as investing in facilities and machines, and increasing/decreasing their workforce by hiring/firing employees. However, during the autumn of 2015, when the extreme peak in demand occurred, other practices were also taken in use, such as overtime, re-allocation of employees, process simplifications and postponing non-essential tasks. Most of these practices concerned the application process, since it was the process being prioritised. When the incoming amount of asylum seekers decreased in December 2015 however, the prioritisation moved to the examination process, and so did the use of capacity practices. To compare the practices used by the Migration Agency, they have, exactly as the demand management practices, been arranged into a revised framework, which can be seen in the following table, table 13.

| | Supply Management Practices | | | | | |
|-----------------------|--|---|--|--|--|--|
| Practice Category | Practice | Example | | | | |
| Re- | Share capacity between different services | When there is a high demand at AEGO they borrow staff from the examination units | | | | |
| Allocate | Shares capacity between similar facilities | When there is a high demand at certain application units the Agency re-allocates staff to these units from other application units | | | | |
| | Over time | Used very frequently during the autumn of 2015 | | | | |
| Adjust | Perform only the most essential tasks | The application process stopped having REG2 and REG3 meetings for a while during the autumn of 2015 | | | | |
| | Complete/postpone non- essential tasks | During the autumn of 2015, AEGO postponed things such as scanning of documents, tasks they completed later on when they were not busy | | | | |
| | Take in use easier types of contracts | Temporary working contracts are sometimes taken in use | | | | |
| | Increase/decrease the service provision given | AEGO shortens the time of the registration meeting when the demand is really high | | | | |
| | Using part-time employees | There are employees working part-time | | | | |
| | Adjustment of the work shift | AEGO continuously improves the layout of the work shift | | | | |
| Increase/ Decrease | Increase/decrease number of shifts | During the autumn of 2015, AEGO increased the time of working and manned it with re-allocated employees | | | | |

| Table 13. Table | 12. A summary | of the supply ma | nagement practices | identified during |
|-----------------|------------------|-------------------------|--------------------|-------------------|
| the case study | of the Swedish M | Migration Agency | according to Aasa | and Johansson. |

All the supply management practices which were identified in the literature studied and assigned to the framework were found in some way or another in the case study of the Migration Agency. A further analyse of these practices will now follow.

Re-Allocate

When AEGO has a high demand, they borrow staff from the examinations unit in the region, and the same goes for the other way around. Borrowing staff between processes can be seen as a way to share capacity between different services. What is interesting though is that it seem easier to borrow staff from the examination units to the application units, than from the application units to the examination units. This probably has to do with the different amount of training that is required for the tasks carried out in the two processes. As Jonsson and Mattsson (2009) stated, a prerequisite for borrowing staff is that the tasks either have to require very little skill or that the staff borrowed need to be trained beforehand. The tasks within the examination process requires more skill than the tasks in the application process, and therefore more training is required. Since the training is held by the units themselves, having people from other units as help lowers the value adding time from the original staff. This has been an issue both at the application and the examination units in Region Väst. AEGO has suggested that a competence matrix should be done in order to make it easier to borrow staff with suitable capabilities. An idea to make it easier to borrow staff between units could be to cross-train employees to a greater extent. If the reallocated staff would have the right skills, the power of the practice would probably be bigger. In order to avoid the issues connected to a lack of training, it is also possible to share capacity between similar facilities, whereas the staff already has the knowledge of how to carry out the tasks. However, other issues may arise. At the Migration Agency for instance, the application functions are spread around the country and therefore geographical reasons may hinder this practice to be carried out quickly.

Adjust

During the autumn of 2015 the Migration Agency used *over time* as a practice to increase the utilization of staff and machines. The advantage of overtime is that it is a practice which quickly can be taken in use, since only the utilization of employees and machines are increased. Using overtime however is, as stated in Jonsson and Mattsson (2009), regulated by the law. Working overtime can also be tough for the employees, and what was interesting at the Migration Agency during the autumn of 2015, when they used a lot of overtime, is that there was a decrease of active workforce at AEGO. Meaning that vacation and short-term sick leave increased among their employees compared to previous time periods. The Migration Agency need to be aware of such potential downsides that comes along when using overtime.

Another thing the Migration Agency did during the autumn of 2015, in order to handle the high amount of incoming asylum seekers, was to shorten down the application process and *perform only the most essential tasks*. At AEGO they stopped having any REG 2 and REG 3 meetings, since they found it most important to get asylum seekers registered and thereby legally present in the country. However, without holding any REG 3 meetings, no Dublin communications to other countries could be done and therefore no asylum seekers could be sent back to the European countries they had been in. Due to this the Migration Agency somehow pushed the problem forward and even increased their demand, since they now have to examine all the Dublin Cases. So, as the case at the Migration Agency indicates, performing the most essential tasks is a practice that very easily can be taken in use, but the consequences should be considered beforehand.

A very similar practice found in the literature studied is *complete/postpone non-essential tasks*, which refers to postponing tasks such as cleaning and maintenance during times of under capacity, and completing them during times of overcapacity. In the autumn of 2015, when the demand was high, the application unit for instance postponed the scanning of documents, which was completed a couple of months later when the demand was lover. At this point, the application units also started to help the reception function with requests for winter clothes, a task they had postponed during the hectic months. Complete/postpone non-essential tasks seem as a good practice to free time from periods when the demand is high, by moving it to periods when it is lower. As the same for inventories, even if postponing tasks is quite easy, completing them can be trickier. It was not until a couple of months after the tasks had been postponed that the Migration Agency could complete them.

Increase/decrease the service provision given is another similar practice found in the literature studied. When the demand peaked during 2015, AEGO shortened the time for REG2 meetings, which resulted

in that they could handle more applications. When using this practice, compared to the practice of only performing the most essential tasks, all parts of the process are still performed, which probably explains why the execution of this practice was followed by less issues at the Migration Agency. It seems as if an organisation very easy can decrease their service provision given, and in times of overcapacity there could be a value to increase it. However, as Fitzsimmons and Fitzsimmons (2006) stated, customers expect to be treated in a fair way and be given the same service as others.

At peak times when the Migration Agency hires new staff they *take in use easier types of contracts* in the form of time-based employment. These types of contracts helps the Agency into becoming more flexible and able to respond to changes in demand. In order to become more flexible, the Migration Agency are also *using part-time employees*, which according to literature is a way to achieve a more adjustable workforce. However, the Agency are not really using their part-time employees for that purpose, it could be an opportunity though.

Another practice used by the Migration Agency is *adjustment of the work shift*. AEGO continuously try to plan their work shift in order to match it with the trends in demand. As shown though, the trends in demand can change quite fast at the Agency, which requires the shift adjustments to be quick and responsive. However, AEGO has experienced changes in scheduling being quite slow, which might be connected to the bureaucracy of the Agency. As Boyne (2002) stated, decision making takes longer time in organisations with more bureaucracy.

Increase/Decrease

Increase/decrease the number of work shifts is not done very often at the Agency. During the autumn of 2015 however, the Agency had to increase the times of working and open up an extra evening shift at AEGO in order to handle the large amount of incoming asylum seekers. As Jonsson and Mattsson (2009) argued, increasing the number of work shifts is a way to keep the labour utilization at a constant level. They also stated that staff could be assigned to new shifts by either hiring new staff or re-allocate employees from other parts of the organisation. Both these ways to staff the new work shifts were conducted by AEGO when they increased their work shifts during the autumn of 2015. When the demand at AEGO was lower again the work shifts were decreased. What needs to be considered though when using this practice, is that larger changes in the scheduling needs to be negotiated with the union, which can prolong the introduction of the new schedule.

The Migration Agency *hire employees* when the need is considered strong enough, and during the last years there has been a great need due to the increasing number of incoming asylum seekers. Hiring new staff is connected to some issues though, the Agency cannot hire staff to an unlimited extent due to financial restrictions and since it is the role of the more experienced employees to assist and train the newly hired ones, the productivity of the more experienced staff gets reduced during the training period. Concerning the firing of staff, the Migration Agency are able to fire full time employees only in times of an overcapacity within the organisation as a whole. However, *firing employees* can take a couple of months due to union agreements.

Subcontracting is not a direct way to increase capacity within a process. But by subcontracting certain parts of the work e.g. security, the Migration Agency indirectly increases its capacity by not needing to perform these tasks themselves. Besides security, the Migration Agency also subcontract interpreters, buss companies, cleaners, food services and legal counsels. However, since the legal counsels have to be subcontracted due to legal requirements subcontracting cannot be seen as a way to free capacity in that specific case. The difference for the Migration Agency, who operates within the public sector, compared to organisations within the private sector is that they have to follow the law of public procurement when they are using subcontracting. This means that the Agency themselves cannot choose exactly what company they want to collaborate with, which puts the Agency a bit out of control when using this practice.

The Migration Agency *invest in new machines* when there is a strong enough need for it. During the autumn of 2015 the lack of photo machines was seen as a bottleneck, and the Migration Agency invested in new ones to increase their capacity. Photo machines are however the only large machine used at the Agency, but a lot of computers and other similar equipment are used as well. Since the practice of investing in new machines is taken from manufacturing literature there may be a need for it to be adapted to the context of public sector organisations. A name like "*invest in new machines and equipment*" would probably be more suitable for the context.

The Migration Agency cannot *invest in new facilities* in the same way as private companies, since they according to the law are not allowed to own their facilities. Investing in new facilities means, in this context, to either acquire new facility contracts or to invest in making the contracted facilities better. When initiating improvements efforts of facilities, it is important that they are designed in an efficient way. As Fitzsimmons and Fitzsimmons (2006) stated, the design of the front office, the interior design and the noise level are important things to consider since the customer is participating in the service process. AEGO has recently moved into newly renovated facilities and the staff are not that happy with the layout, they feel as if their thoughts and ideas have not been considered. The noise level is for instance very high since there are no walls between the waiting room and the area where the front staff is working. The open layout do not seem optimal from a customer perspective either, since the reception desks are very close to each other, which can make the asylum seeker uncomfortable to reveal information.

6.2.3 Choosing the right capacity management practices

The Migration Agency is adopting practices from both fields of capacity management, demand management and supply management. Concerning the demand management practices presented, it is clear that the Migration Agency mainly has taken actions focused on re-allocating and adjusting their demand. A reason for why less actions has been taken in order to increase/decrease their demand seem to be because that the Agency themselves cannot control this aspect to a great extent, since it is affected by political decisions. If looking at the supply management practices instead, the Migration Agency applies practices from all three practice categories. Within this field of demand management, increase/decrease is more in the control of the Migration Agency in the field of demand management. But since the organisation do not regulate the size of their financial means themselves, the Agency can sometimes be restricted from increasing their capacity. Increases in capacity, such as investing in machines, facilities and employees can also be argued as quite permanent capacity increases, especially compared to when capacity is re-allocated or adjusted. Therefore, capacity should only be increase the amount of staff without hiring, the Migration Agency often re-allocate employees between different processes within the organisation.

The analysis of the use of practices at the Migration Agency indicates that the framework for choosing the right practice categories presented in the theoretical framework, and re-presented in table 14 below, seem quite accurate. The framework shows that the capacity should be increased/decreased only at times when there is no accumulative correspondence. However, at times when there besides for being a lack of accumulated correspondence also is a lack of periodic correspondence, the framework indicates that besides decreasing/increasing only practices within the category of re-allocate should be used. This is the situation that the Agency was in during the autumn of 2015, but they used all three different types of practices, i.e. also adjust, which probably were good for them since they are a bit restricted to increase their capacity. It could therefore be argued that all three practice categories should be applied to the lower right corner in the framework.

Table 14. A framework for choosing a suitable capacity management practice. Adapted from Jonsson and Mattsson (2009)



Accumulative correspondence

The analysis of the use of practices at the Migration Agency indicates that the framework for choosing the right practice categories presented in the theoretical framework, seem quite accurate. The framework shows that the capacity should be increased/decreased only at times when there is no accumulative correspondence. However, at times when there besides for being a lack of accumulated correspondence also is a lack of periodic correspondence, the framework indicates that besides decreasing/increasing only practices within the category of re-allocate should be used. This is the situation that the Agency was in during the autumn of 2015, but they used all three different types of practices, i.e. also adjust, which probably were good for them since they are a bit restricted to increase their capacity. It could therefore be argued that all three practice categories should be applied to the lower right corner in the framework.

6.3 Revised Framework

If comparing the capacity management practices used at the Agency, with the framework presented at the end of the theory, there some discrepancies. Thus, by adding the findings from the case study to the framework concluded from the literature review, a revised framework can be presented taken both the findings from the literature review as well as contributing findings from the case study into consideration.

6.3.1 Demand management practices

There are seven different demand management practices presented in the revised framework. Compared to the framework presented in the theory however, there are some differences of what practices that are included. *Pricing, developing a non-peak demand* and *developing complementary services* have been removed from the framework because of their strong connection to profit driven operations. Instead two new practices that were found in the case study have been added, *share demand between similar facilities* and *political decisions*. The revised framework for demand management practices is presented in the following table, table 15.

| | Demand Management Practices | | | | |
|-------------------------------|---|--|--|--|--|
| Practice Category Practice | | Source | | | |
| Re- Allocate Adjust | Alternative work-centers | Jonsson & Mattsson (2009), Case study at the Swedish Migration Agency | | | |
| | Share demand between similar facilities | Case study at the Swedish Migration Agency | | | |
| | Order splitting | Jonsson & Mattsson (2009), Case study at the Swedish Migration Agency | | | |
| | Increase/decrease stock | Jonsson & Mattsson (2009), Case study at the Swedish Migration Agency | | | |
| | Create Reservation and booking systems | Sasser (1973), Fitzsimmons & Fitzsimmons (2006), Ritchie & Walley (2016), Case study at the Swedish Migration Agency | | | |
| Increase/ Decrease | Political decisions | Case study at the Swedish Migration Agency | | | |

Table 15. A revised framework for demand management practices based on both theory and empirical findings.

6.3.2 Supply management practices

Concerning the supply management practices, there are no differences of what practices the revised framework and the framework presented in the theoretical framework consists of. In the revised framework however, the practice of *invest in new machines* has been renamed to *invest in new machines and equipment*. What is interesting though is that the supply management practices within the revised framework are more than twice as many as the demand management practices. This implies that supply management has been given more attention than demand management, both in the literature and at the Migration Agency. The revised framework for supply management is presented in the following table, table 16.

| Supply Management Practices | | | | | |
|-----------------------------|---|---|--|--|--|
| Practice Category | Practice | Source | | | |
| Re-Allocate | Share capacity between different services | Sasser (1973), Fitzsimmons & Fitzsimmons (2006), Ritchie & Walley (2016), Jonsson & Mattsson (2009), Case study at the Swedish Migration Agency | | | |
| | Shares capacity between similar facilities | Jonsson & Mattsson (2009), Slack et al. (2007), Case study at the Swedish Migration Agency | | | |
| | Over time | Jonsson & Mattsson (2009), Slack et al. (2007), Case study at the Swedish Migration Agency | | | |
| | Perform only the most essential tasks | Sasser (1973), Case study at the Swedish Migration Agency | | | |
| | Complete/postpone non-essential tasks | Armistead & Clark (1991), Sasser (1973), Jonsson & Matisson (2009), Case study at the Swedish Migration Agency | | | |
| Adjust | Take in use easier types of contracts | Ritchie & Walley (2016), Case study at the Swedish Migration Agency | | | |
| | Increase/decrease the service provision given | Armistead & Clark (1991), Case study at the Swedish Migration Agency | | | |
| | Using part-time employees | Sasser (1973), Fitzsimmons and Fitzsimmons (2006), Ritchie Walley (2016), Slack et al. (2007), Case study at the Swedish Migration Agency | | | |
| | Adjustment of the work shift | 2009), Fitzsimmons & Fitzsimmons (2006), Ritchie & Walley (2016), Case study at the Swedish Migration Agency | | | |
| | Increase/decrease number of shifts | Jonsson & Mattsson (2009), Case study at the Swedish Migration Agency | | | |
| | Subcontracting | Jonsson & Mattsson (2009), Slack et al. (2007) | | | |
| Increase/Decrease | Invest in new machines and equipment | Jonsson & Mattsson (2009), Case study at the Swedish Migration Agency | | | |
| | Hire/fire employees | Jonsson & Mattsson (2009), Slack et al. (2007, Case study at the Swedish Migration Agency | | | |

Table 16. A revised framework for supply management practices based on both theory and empirical findings

6.3.3 Choosing the right capacity management practices

The tables presenting the different capacity management practices primarily focuses on operational actions that an organisation could adapt to manage its capacity. It is therefore important, with regards to the second research question of this study, to understand how to evaluate the suitability of these actions. A way to do this, is by using the framework for choosing the right practice categories presented in the theoretical framework. As argued in section 6.2.3, the Migration Agency in times such as the autumn of 2015, when they have neither a periodic nor an accumulated correspondence, preferably could use practices from all three practice categories. Therefore, the framework for choosing the right practice categories for these types of situations, which can be seen in table 17.

Table 17. A framework for choosing suitable capacity management practice categories. Adapted from Jonsson and Mattsson (2009)





Thus, the complete framework developed during this study is a combination of compiled practices, divided into demand/supply management and practice categories, as well as a method for choosing the right practice categories depending of the type of mismatch that could exist between demand and supply. However, the framework requires that organisations understand demand patterns and estimate future demand. Thus, the results from this study seem similar to Walley's (2013) idea of how public sector organisations should work with capacity management. According to Walley (2013), the starting point for capacity management is to create an understanding of the demand, which is according to the prerequisites for utilising the framework presented in this study. He further argues that organisations need to ask themselves what capacity that is needed to meet the demand. This study however, instead suggests that organisations should consider if their current capacity is capable to correspond to the demand, both from a periodic and accumulated point of view. Thereafter, the required means can be guided by the framework presented from this study by first selecting the right practice categories based on the current correspondence of their capacity (table 17) and thereafter choosing suitable capacity management practices from the selected practices categories (table 15 and 16).

7. Conclusions

Research Question 1: What strategies and practices within the field of capacity management could act as enablers to increase public sector organisations capability to satisfy a fluctuating demand?

First and foremost, this study has confirmed the need for an apadted approach to capacity management in the public sector. In theory, capacity management strategies are divided into long-term strategies (leading and lagging), medium-term strategies (level and chase) and short-term strategies (coping strategies). It seems to be assumed, in private sector theory, that organisations are in control and empowered to influence capacity strategies within each timeframe, i.e. long-term, medium-term and short-term, which in some aspects contradicts findings from this study. The results in this study, instead indicates that public sector organisations might in fact have limited influence regarding long-term and medium-term strategies due to a high governmental influence in the dimensions of ownership, funding and control, confirming that the public sector needs an own to capacity management

Looking at the long-term capacity management strategies, leading or lagging, this study has shown indications that public sector organisations struggles with self-empowerment regarding its possibility to choose what might be considered as the most desirable strategy. Even though a leading capacity strategy could help a public organisation to uphold its obligation, the resources and the costs connected to a leading strategy are not considered as justifiable in such an organisation. As a consequence, public sector organisations seems to be bound to a lagging capacity. Thus, long-term strategies can be argued to be considered as out of control of public organisations. And since restricted actions regarding what strategy to apply can be taken by the organisations themselves, none of the long-term strategies can be seen as a way for how a public organisation with own means can increase their capability to satisfy a fluctuating demand.

Regarding medium-term capacity strategies, i.e. the chase and level strategies, this study has shown that the applicability of these different strategies is highly connected to the context of the process, and especially the legal obligations put on the process. In this study it is noticeable that capacity strategies and practices have been rather different even down at a sub-processes level. Within the protection process, the application process adopts a chase capacity strategy to uphold its obligation to satisfy a fluctuating demand while the examination unit handles a fluctuating demand in the opposite way, by ignoring variations in demand and instead aims to keep the output at a constant level by a level capacity strategy. The study has shown that both types of strategies are able to cope with fluctuations in demand, however, only the chase capacity strategy seems to enable public organisations to satisfy fluctuations in demand.

Concerning short-term strategies, this study concludes that parallels could be drawn between short-term capacity management strategies and capacity management practices as they both concern coping with operational issues. Furthermore, the study also implies that it is through such practices that public sector organisations has the potential to affect its capability to satisfy a fluctuating demand. Therefore, looking at the developed framework, practices concerning both the field of demand and supply management has been identified and categorised. However, different practices and practice categories should be used under different circumstances in order to enable public organisations to satisfy fluctuations in demand. How to know when to use what practice has been further analysed in research question two.

Research Question 2: How could public sector organisations evaluate the suitability of capacity management strategies and practices?

Since the long-term strategies seem to be outside the control of public sector organisations and the chase capacity plan can be argued as suitable in order to satisfy a fluctuating demand from a medium-term perspective, the answer to this research question is focused at how the suitability of capacity practices could be evaluated.

In order to be able to evaluate the suitability of practices, this study has shown that organisations within the public sector first of all needs to have an understanding of their capacity demand and capacity supply. To get this understanding, they should start by creating a picture of the demand placed on the organisation and later on analyse their own capacity in comparison to their demand, in order to appreciate how to get a match between these two parts. In chronological order, the questions that organisation should ask themselves are:

- What demand do we have?
- How much capacity can we supply?
- What is the periodic and accumulated correspondence between our demand and supply?

After created the needed understanding, public sector organisations can start to use the framework developed though this study. Firstly, these organisationa should select the right practice categories based on the current correspondence of their capacity, guided by the table for choosing the right practice categories, table 18. If a public sector organisation both have a periodic and an accumulated correspondence, no actions needs to be taken. If they have an accumulated correspondence but not a periodic correspondence, they should focus at reallocating and adjusting their capacity. If there is a periodic correspondence but not an accumulated, they should consider to increase/decrease their capacity. And, if they have neither a periodic nor an accumulated correspondence they could both reallocate, adjust and increase/decrease their capacity, depending on the situation.

 Table 18. Selecting a suitable practice category based on an estimation of accumulative and periodic correspondence.

 Partly adapted from Jonsson and Mattsson (2009, p. 291)



Accumulative correspondence

Based on the outcome concerning suitable practice categories, the compiled tables of demand management practices and supply management practices organised in practice categories, represented as table 19 and 20 respectively, provides extra guidance for choosing actual practices.

| Table 17. Represented from table 15. Demand management practices. | Table 19. Re | presented from | table 15. Der | nand managemen | t practices. |
|---|--------------|----------------|---------------|----------------|--------------|
|---|--------------|----------------|---------------|----------------|--------------|

| Demand Management Practices | | | | |
|-----------------------------|---|---|--|--|
| Practice Category | Practice | Source | | |
| | Alternative work-centers | Jonsson & Mattsson (2009), Case study at the Swedish Migration Agency | | |
| Re-Allocate | Share demand between similar facilities | Case study at the Swedish Migration Agency | | |
| | Order splitting | Jonsson & Mattsson (2009), Case study at the Swedish Migration Agency | | |
| | Increase/decrease stock | Jonsson & Mattsson (2009), Case study at the Swedish Migration Agency | | |
| Adjust | Create Reservation and booking systems | Sasser (1973), Fitzsimmons & Fitzsimmons (2006), Ritchie & Walley (2016), Case study at the Swedish Migration Agency | | |
| Increase/Decrease | Political decisions | Case study at the Swedish Migration Agency | | |

Table 20. Represented from table 16. Supply management practices

| Supply Management Practices | | | | |
|-----------------------------|---|---|--|--|
| Practice Category | Practice | Source | | |
| Re-Allocate | Share capacity between different services | Sasser (1973), Fitzsimmons & Fitzsimmons (2006), Ritchie & Walley (2016), Jonsson & Mattsson (2009), Case study at the Swedish Migration Agency | | |
| | Shares capacity between similar facilities | Jonsson & Mattsson (2009), Slack et al. (2007), Case study at the Swedish Migration Agency | | |
| | Over time | Jonsson & Mattsson (2009), Slack et al. (2007), Case study at the Swedish Migration Agency | | |
| | Perform only the most essential tasks | Sasser (1973), Case study at the Swedish Migration Agency | | |
| | Complete/postpone non-essential tasks | Armistead & Clark (1991), Sasser (1973), Jonsson & Mattsson (2009), Case study at the Swedish Migration Agency | | |
| Adjust | Take in use easier types of contracts | Ritchie & Walley (2016), Case study at the Swedish Migration Agency | | |
| | Increase/decrease the service provision given | Armistead & Clark (1991), Case study at the Swedish Migration Agency | | |
| | Using part-time employees | Sasser (1973), Fitzsimmons and Fitzsimmons (2006), Ritchie Walley (2016), Slack et al. (2007), Case study at the Swedish Migration Agency | | |
| | Adjustment of the work shift | 2009), Fitzsimmons & Fitzsimmons (2006), Ritchie & Walley (2016), Case study at the Swedish Migration Agency | | |
| | Increase/decrease number of shifts | Jonsson & Mattsson (2009), Case study at the Swedish Migration Agency | | |
| | Subcontracting | Jonsson & Mattsson (2009), Slack et al. (2007) | | |
| Increase/Decrease | Invest in new machines and equipment | Jonsson & Mattsson (2009), Case study at the Swedish Migration Agency | | |
| | Hire/fire employees | Jonsson & Mattsson (2009), Slack et al. (2007, Case study at the Swedish Migration Agency | | |

8. Concluding Discussion

This chapter aims to reflect the conclusion of this study, discuss areas for future research and the Managerial Implications for the Swedish Migration Agency.

8.1 Reflections regarding the conclusions

The purpose of this study was to contribute with an increased understanding of capacity management's potential to enable organisations within the public sector to cope with fluctuations in demand. It could be argued that the outcome of this study confirms Upton's (2016) argument that public sector services needs their own approach to operations management, and thereby capacity management. The study indicates that public sector organisations, compared to private sector organisations, are limited in their ability to dictate their own capacity management long-term and medium-term strategies by governmental decisions concerning legislation, economy and policies. Therefore, even though this study delimited itself from investigating the influence of political decisions on capacity management, it became an aspect unavoidable to totally disregard. A deeper understanding of the connection between political decisions and capacity management could therefore potentially help public sector organisations to improve their organisational performance, since the performance of organisations is strongly connected to capacity management (Yu-Lee, 2002).

The empirical contribution to the field of capacity management from this study mainly concerns medium-term capacity strategies and capacity practices. Thus, even if this study concluded that both medium-term and long-term strategies might enable public sector organisations to satisfy fluctuations in demand, only the conclusion concerning the medium-term strategies are seen as a contribution. The reason for this is that the conclusions of the findings were made based on different grounds. The potential of the long-term leading strategy as an enabler to satisfy fluctuations in demand were based primarily on already existing theory, whereas the potential of the medium-term chase strategy was based on empirical findings from this study.

Regarding capacity management practices, this study derived a framework aimed at contributing to the understanding of capacity management practices potential as enablers to cope with fluctuations in demand. In accordance with literature concerning with capacity management literature, the practices were divided to concern either demand management or supply management and more than twice as many supply management practices in relation to demand management practices could be identified. It could be argued that this study thereby supports Walley's (2013) argument that organisations within the public sector generally have a more resource-driven approach to their capacity management, compared to the demand-driven approach advocated in literature. However, since the case study also showed that the studied public sector organisation to a large extent based their decisions on knowledge concerning the expected demand, by forecasting the demand and using the forecasts as a base for budgeting, the argument by Walley (2013) cannot completely be confirmed.

This study also aimed to identify managerial implications for the case studied. In the study it could be seen that, when using capacity management practices within an organisation, it seems important for the organisation to increase the understanding of what prerequisites that are needed and also to develop these prerequisites. For instance, a practice heavily relying on that the right prerequisites has been developed before it is used, seems to be the re-allocation of personnel between different sub-processes. In order to create a truly flexible organisation, and thereby allowing this practice to reach its full potential, it seems crucial to provide the needed education and make sure that employees are knowledgeable concerning as many parts of the process as possible. Following this reasoning public sector organisations could benefit from carefully monitor, measure and visualise the competence that resided within their organisation.

8.2 Future research

During this study some areas of possible interest for future research has been noticed. Firstly, as complement to this study, it could be of interest to investigate capacity management in the public sector by looking at top management's perspective regarding the subject, compared to the operational perspective used in this study. Preferably this could be done by studying at the same organisation used during this case study. Such a study, combined with the outcome of this study, would allow for an assessment of the strategic alignment regarding the topic.

Secondly, the connection between different public sector organisations that are under the same level of governmental ownership, funding and control could be interesting from a capacity management perspective. The purpose would be to investigate possible synergies between such organisations regarding capacity management, in the same way that this study has identified synergies between processes.

Lastly, the influence of political decisions over capacity management was unavoidable to discard during this study, and the link and relationship between them deserves additional attention. Especially interesting would be to investigate the possible effects that legislations and governmental funding have on public sector organisations possibilities to adapt long-term and medium-term capacity management strategies.

8.3 Managerial Implications

This report provided the Swedish Migration Agency with a decision support tool, designed as a framework, for choosing suitable capacity management practices depending on if the organisation wants to affect its accumulated and/or periodic correspondence to a fluctuating demand. A comprehensive study was done, where the process of the study may be re-used by the Migration Agency if investigating other fields of operations management. During this study a number of improvement possibilities have been identified that could help the Migration Agency to increase the benefits of the findings presented in this report, these possibilities will be covered within this last section of the report.

The Migration Agency relies heavily on being able to re-allocate its personnel between processes within the organisation in order to maximise its capacity where it is considered most crucial. For instance, personnel was re-allocated from the examination process to the application process during the autumn of 2015. Whereas, when the pressure on the application process decreased, personnel was re-allocated from the application process to assist the examination process. However, the Migration Agency is lacking in some prerequisites needed for a flexible organisation, such as substantial cross-functional training. Therefore, it is suggested that the Migration Agency further investigates its educational program for its employees to cover a wider range of work tasks and processes. Furthermore, by making an inventory of the competences within the organisation, and making the results from that inventory available, selecting suitable candidates among employees for re-allocation could be made easier. Moreover, an available inventory of competencies could also facilitate goal setting regarding the level of competence that the Migration Agency consider desirable for its employees.

Practices that adjusts the Migration Agency's capacity are also frequently used by the organisation. However, this study points towards some discrepancies between the Migration Agency's, or parts within the organisation, way of working compared to findings from the literature study concerning its demand management practices in the application process. With regards to these discrepancies, the Migration Agency could investigate the possibility of a booking system or improved queuing system for asylum seekers awaiting REG 1 or REG 2 at the application units. Such a system would allow the Migration Agency to manage its demand to a larger extent, and might also have a positive effect on both flow efficiency and productivity of employees. If investigating the possibility of such systems, it would be interesting to investigate the potential of overbooking, which according to findings from the literature study could be useful to overcome difficulties with waste, i.e. no-shows, which is a common issue with booking systems. The concept of overbooking could also be interesting in other areas and processes within the Migration Agency.

Furthermore, issues regarding the Migration Agency's practices concerning order splitting and changing its service provision has surfaced during this study. Both these practices require a higher level of standardisation in order to help increase capacity without creating unnecessary rework. Firstly, the Migration Agency could examine the possibility of an organisational standard for communication of order splitting in the application process. The goal of such standardisation could be that an asylum seeker's status within the process should be evident regardless if he or she is re-allocated between regions. Secondly, the long-term effects of a reduced service provision need to be understood. For instance, reducing the number of REG 3 meetings during the autumn of 2015 in hindsight seems to have had a negative repercussion as it decreased the number of possible Dublin communications and thereby created additional work for the Migration Agency.

Lastly, the Migration agency could investigate the possibility of improving its IT-systems for managing information. The IT-systems limits the Migration Agency's potential of utilising its vast amount of stored data. This limitation hinders the Migration Agency to monitor and track its personnel, which is troublesome from a capacity management point of view. One specific issue seen during this study, was that data from different data tables could not be connected in an easy way, something that the Agency could start to look into.

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Appendix I – Calculation of historically based capacity for the application process in region Väst

| Year | Month | Region | Number of Employees | Number of Asylum Seekers | Active Workforce | Productivity | Active Workforce/Number of Employees |
|-------|--|--|---|--|--|---|--|
| | 2013 January | Väst | 40 | 884 | 31.05 | 28.47020934 | 78% |
| | 2012 Eobruany | Väct | 21 | 679 | 22.14 | 20 45866022 | 107% |
| | 2013 February | vast | 31 | 078 | 55,14 | 20,43800023 | 10/% |
| | 2013 March | Väst | 39 | 639 | 32,61 | 19,59521619 | 84% |
| | 2013 April | Väst | 38 | 741 | . 30,29 | 24,46351931 | 80% |
| | 2013 May | Väst | 43 | 604 | 30.76 | 19.63589077 | 72% |
| | 2012 lune | Väct | 49 | 707 | 22,52 | 20,88042822 | 70% |
| | 2013 Julie | vast | 48 | 702 | . 55,02 | 20,88042832 | 70% |
| | 2013 July | Vast | 44 | 995 | 22,51 | 44,20257663 | 51% |
| | 2013 August | Väst | 44 | 1135 | 26,34 | 43,09035687 | 60% |
| | 2013 September | Väst | 40 | 1723 | 32.46 | 53 08071473 | 81% |
| | 2013 October | Väct | 10 | 1720 | 24.96 | 40 50820257 | 710/ |
| | 2015 October | Vasi | 49 | 1729 | 54,00 | 49,59659557 | /1% |
| | 2013 November | Väst | 47 | 1344 | 40,21 | 33,42452126 | 86% |
| | 2013 December | Väst | 51 | 1378 | 36,24 | 38,02428256 | 71% |
| | | | | | Ν | Mean 32,91039748 | |
| | | | | | | | |
| Year | Month | Region | Number of Employees | Number of Asylum Seekers | Active Workforce | Productivity | Active Workforce/Number of Employees |
| | 2015 January | Väst | 88 | , 1104 | 62.49 | 17 66682669 | 71% |
| | 2015 January | vast | 88 | 1104 | 02,45 | 17,00082005 | 71/8 |
| | 2015 February | Vast | 82 | 1005 | 60,07 | 16,/3048111 | /3% |
| | 2015 March | Väst | 82 | 976 | 59,5 | 16,40336134 | 73% |
| | 2015 April | Väst | 81 | 872 | 59.78 | 14.58681833 | 74% |
| | 2015 May | Väct | 05 | 1157 | 567 | 20 10561271 | £70/ |
| | 2015 Ividy | Vast | 60 | 1157 | 50,7 | 20,40304374 | 67% |
| | 2015 June | vast | 83 | 1381 | 55,23 | 25,00452653 | 67% |
| | 2015 July | Väst | 76 | 1617 | 42,49 | 38,05601318 | 56% |
| | 2015 August | Väst | 75 | 2183 | 48,24 | 45,25290216 | 64% |
| | 2015 Sentember | Väst | 98 | 5134 | 63.99 | 80 23128614 | 65% |
| | 2015 October | Väct | 170 | 0455 | 01.0 | 102.0056427 | 53% |
| | 2015 October | vast | 178 | 9455 | 91,8 | 102,9956427 | 52% |
| | 2015 November | Väst | 191 | 7708 | 115,5 | 66,73593074 | 60% |
| | 2015 December | Väst | 164 | 1714 | 126,35 | 13,56549268 | 77% |
| | | | | | N | Vean 38.13624378 | |
| Year | Month 2014 January 2014 February 2014 March 2014 April | Region Väst Väst Väst Väst | Number of Employees 62 62 62 62 62 | Number of Asylum Seekers 1200 1153 1319 1352 | Active Workforce 0 47,99 3 48,63 5 51,11 2 48,14 | Productivity 25,00520942 23,70964425 25,72882019 28,0847528 | Active Workforce/Number of Employees 77% 78% 82% 82% |
| | 2014 May | Väst | 58 | 1430 |) 44,79 | 31,92676937 | 7 77% |
| | 2014 June | Väst | 73 | 171 | 5 49.64 | 34,5487510 | L 68% |
| | 2014 July | Väct | 71 | 186 | 36.88 | 50 51518/33 | 52% |
| | 2014 July | vast | /1 | 180. | 5 50,00 | 50,51518450 | 5 52/6 |
| | 2014 August | Väst | 69 | 2036 | 5 46,29 | 43,98358177 | 7 67% |
| | 2014 September | Väst | 82 | 2007 | 7 57,39 | 34,97124935 | 5 70% |
| | 2014 October | Väst | 93 | 176 | 1 65 01 | 27 1342870 | 3 70% |
| | | vust | 55 | 170- | ÷ 05,01 | 27,1342070 | 70% |
| | 2014 November | vast | 89 | 138. | 2 67,32 | 20,52881759 | 76% |
| | 2014 December | Väst | 88 | 1593 | 3 64,78 | 24,59092312 | 2 74% |
| | | | | | r | Mean 30,89399919 |) |
| Histo | rically Based Ca | pacity = | Productivity Mean 201 | 4 x Active | Workforce 2015 | | |
| Histo | rically Based Ca | pacity = | 30,893999: | 19 x | 47,99 = | 1930,56601 | |
| | | | 30.893999 | 19 x | 48.63 = | 1855.80253 | |
| | | | 20,002000 | 10 | E1 11 - | 1020 10205 | |
| | | | 30,893999 | 19 X | 51,11 = | 1838,19295 | |
| | | | 30,8939992 | 19 x | 48,14 = | 1846,84327 | |
| | | | 20 202000 | 10 Y | 11 79 - | 1751 68075 | |
| | | | 20,0323999. | 1.9 X | ++,/3 - | 1131,00313 | |
| | | | 30,8939991 | 19 x | 49,64 = | 1706,27558 | |
| | | | 30 803000 | 19 Y | 36.88 = | 1312 68603 | |
| | | | 30,033999. | 1.J N | 50,00 - | 1312,00003 | |
| | | | 30,8939993 | 19 x | 46,29 = | 1490,32652 | |
| | | | 3U 803000 . | 19 x | 57.39 = | 1976 90701 | |
| | | | | ^ | | 2010,000 | |
| | | | 30,8939993 | та х | 65,01 = | 2836,06913 | |
| | | | 30.893999 | 19 x | 67.32 = | 3568.25691 | |
| | | | | 10 | C 1 70 | 2002 4552 | |
| | | | 30,8939993 | TA X | 64,78 = | 3903,4568 | |

Appendix II – Calculation of historically based capacity for the examination process in region Väst

| Year | Month | Region | Number of Employees | Number of Decisions | Active Workforce | Productivity | Active Workforce/Number of Employee | s |
|------|-----------------|--------|---------------------|---------------------|------------------|--------------|-------------------------------------|-----------|
| | 2013 January | Väst | 174 | 370 | 123,75 | 2,98989899 | 7: | 1% |
| | 2013 February | Väst | 176 | 684 | 129,41 | 5,285526621 | 74 | 4% |
| | 2013 March | Väst | 171 | . 782 | 125,56 | 6,22809812 | 73 | 3% |
| | 2013 April | Väst | 176 | 1154 | 128,05 | 9,012104647 | 73 | 3% |
| | 2013 May | Väst | 188 | 1062 | 138,5 | 7,667870036 | 74 | 4% |
| | 2013 June | Väst | 184 | 975 | 126,9 | 7,68321513 | 69 | Э% |
| | 2013 July | Väst | 182 | 774 | 84,29 | 9,182583936 | 40 | 5% |
| | 2013 August | Väst | 179 | 712 | 93,56 | 7,610089782 | 5. | 2% |
| | 2013 September | Väst | 176 | 916 | 133,31 | 6,87120246 | 70 | 5% |
| | 2013 October | Väst | 190 | 1399 | 133,95 | 10,4441956 | 7: | 1% |
| | 2013 November | Väst | 189 | 1513 | 136,65 | 11,07208196 | 72 | 2% |
| | 2013 December | Väst | 185 | 1036 | 137,63 | 7,527428613 | 74 | 1% |
| | | | | | Mean | 7,631191324 | | |
| Year | Month | Region | Number of Employees | Number of Decisions | Active Workforce | Productivity | Active Workforce/Number of Employee | S |
| | 2014 January | Väst | 211 | . 815 | 135,18 | 6,028998373 | 64 | 1% |
| | 2014 February | Väst | 199 | 1142 | 146,49 | 7,795753976 | 74 | 4% |
| | 2014 March | Väst | 201 | . 910 | 143,75 | 6,330434783 | 72 | 2% |
| | 2014 April | Väst | 198 | 820 | 137,32 | 5,971453539 | 69 | Э% |
| | 2014 May | Väst | 175 | 893 | 137,54 | 6,492656682 | 79 | Э% |
| | 2014 June | Väst | 204 | 1031 | 134,32 | 7,675699821 | 60 | 5% |
| | 2014 July | Väst | 201 | . 979 | 86 | 11,38372093 | 4 | 3% |
| | 2014 August | Väst | 204 | 679 | 95,19 | 7,133102217 | 4. | 7% |
| | 2014 September | Väst | 208 | 880 | 133,68 | 6,5828845 | 64 | 1% |
| | 2014 October | Vast | 198 | 1122 | 135,07 | 8,306803879 | 6 | 3% |
| | 2014 November | Vast | 195 | 8/4 | 136,02 | 6,425525658 | /(| J% |
| | 2014 December | Vast | 194 | 848 | 127,82 | 6,634329526 | 6 | 5% |
| | | _ | | | Mean | 7,230113657 | | |
| Year | · Month | Region | Number of Employees | Number of Decisions | Active Workforce | Productivity | Active Workforce/Number of Employee | S |
| | 2015 January | Väst | 216 | 568 | 140,32 | 4,047890536 | 6 | 5% |
| | 2015 February | Väst | 218 | 904 | 141,48 | 6,389595703 | 6 | 5% |
| | 2015 March | Väst | 211 | . 909 | 138,69 | 6,554185594 | 60 | 5% |
| | 2015 April | Väst | 213 | 816 | 141,84 | 5,752961083 | 6 | 7% |
| | 2015 May | Väst | 219 | 760 | 149,1 | 5,097250168 | 6 | 3% |
| | 2015 June | Vast | 252 | /59 | 146,53 | 5,1/9826657 | 58 | 3% |
| | 2015 July | Väst | 252 | 1046 | 117,63 | 8,892289382 | 4 | 7% |
| | 2015 August | Vast | 2/1 | . /40 | 139,27 | 5,313419976 | 5: | 1% |
| | 2015 September | vast | 283 | 897 | 203,79 | 4,401589872 | 7. | 2% |
| | 2015 October | Vast | 299 | 863 | 210,72 | 4,095482156 | /(| J% |
| | 2015 November | Vast | 298 | 822 | 212,64 | 3,865688488 | 1. | 1% |
| | 2015 December | vast | 286 | 1012 | 196,12 | 5,160106058 | 6 | J% |
| | | | | | wean | 5,395857139 | | |
| Hist | torically Based | Capac | ity = Productivity | Mean 2014 x | Active Wor | kforce 2015 | | |
| | | | | | | | | |
| | | | | | | | | |
| Hist | torically Based | Canaci | itv = 7 | 7 230113657 x | | | 123 75 = 894 7266 | |
| 1115 | concurry bused | cupuc | | ,230113057 x | | | 120,11 025 (40 | |
| | | | | ,230113657 X | | | 129,41 = 935,649 | |
| | | | 7 | 7,230113657 x | | | 125,56 = 907,8131 | |
| | | | 7 | 7,230113657 x | | | 128,05 = 925,8161 | |
| | | | - | 7.230113657 x | | | 138.5 = 1001.371 | |
| | | | - | 7 230113657 v | | | 126.9 = 917.5014 | |
| | | | | ,20011007 X | | | 120,3 - 317,3014 | |
| | | | 7 | ,23011365/ X | | | 84,29 = 609,4263 | |
| | | | 7 | 7,230113657 x | | | 93,56 = 676,4494 | |
| | | | 7 | 7,230113657 x | | | 133,31 = 963,8465 | |
| | | | - | 7 230113657 v | | | 133 95 = 968 4737 | |
| | | | - | ,, X | | | 126 65 - 007 005 | |
| | | | , | Χ / ζαζιτυς, Χ | | | | |
| | | | 7 | 7,230113657 x | | | 137,63 = 995,0805 | |
| | | | | | | | | |