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Delineating Born-public ventures

Beskrivelse av oppstarter som selger til offentlig sektor

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Abstract

Twelve percent of the GWP is spent on public procurement. The purpose of this paper is to explore the phenomenon of startups whose goal is to provide the public sector with goods and services. These startups are called *Born-public Ventures*(BPV), and even though the phenomenon of public sector-oriented startups is not new, the topic has been largely overlooked by academia. Neither the field of public procurement, public sector innovation, nor the field of entrepreneurship covers this research gap.

In this exploratory study, five cases are built around five Norwegian Born-public Ventures. By cross-examining these cases, certain trends are unveiled. A pattern of expertise of handling public procurement policy relative to the startups' dependency on the public sector is unveiled, and based on this, a framework of three categories is built.

The first category of Born-public being the *Hardly BPV*, startups who have attempted or won public contracts but whose main operation lies in the private sector. Secondly, the *Basic BPV*, that is a kind of startup that provides solutions that fit both the private and public sector, but experiences the public sector opportunities to be greater and therefore primarily targets the public sector. In the cases presented here, these startups are likely to target private sectors when expanding abroad. Lastly, the *True BPV*. The True BPV are startups whose goal has been to fulfill a public need from the get-go.

In the discussion guidelines for entrepreneurs considering a BPV is suggested.

The results of this study provide grounds for new research within the field of BPVs. The results of this study might prove useful to public procurers. As none of the startups interviewed in this study utilized any PPI routines suggest a need for better solutions.

Sammendrag

Tolv prosent av verdensøkonomien blir årlig brukt på offentlige anskaffelser. Formålet med denne oppgaven er å utforske fenomenet om oppstartsselskaper som har som hovedformål å tilby den offentlige sektoren med goder eller tjenester. Disse oppstartene kalles *Born-public Ventures*(BPV), og selv om dette fenomenet om offentlig sektor orienterte oppstarter ikke er nytt så har det i stor grad blitt oversett av det akademiske miljøet. Verken forskningsfeltene innen offentlig anskaffelse, offentlig innovasjon eller entreprenørskap dekker dette litteraturgapet.

I dette eksplorative studiet blir fem caser bygget basert på fem norske BPV'er. Ved å kryssanalysere disse casene blir visse trender synlige. Et mønster på aksept av offentlig anskaffelses forskrifter relativt til selskapets avhengighet av deres offentlige kunde blir synliggjort, og ved bruk av dette blir et rammeverk basert på tre kategorier av BPV'er bygd. Den første kategorien er *Hardly BPV*, oppstarter som har forsøkt og/eller vunnet en anbudsrunde, men som hovedsakelig jobber seg inn mot private kunder. Den andre, *Basic-BPV*, som tilbyr produkter eller tjenester som passer både privat og offentlig sektor, men som primært sikter seg på det offentlige markedet. I casene presentert i oppgaven her ser vi at disse er synlig til å satse på det private markedet i utlandet. Sist, *True-BPV*. True-BPV er oppstarter som har det å oppfylle et offentlig behov som sitt hovedformål fra starten av.

I diskusjonen presenteres et forlag til retningslinjer entreprenører kan bruke om de vurderer å opprette en BPV.

Resultatene fra dette studiet tilrettelegger for mer forskning innen feltet til Born-public Ventures. Innsikt er presentert som kan ha nytte for offentlige anskaffere. Ingen av oppstartene intervjuet i prosjektet her gjennomførte noen av rutinene til offentlig anskaffelse av innovasjon, som antyder behov for bedre løsninger.

Preface

It is with both pride and joy that I complete this thesis, and with it marks the end of my journey in Academia.

The past five years have been an exhilarating and transformative experience. During the time of my bachelor's degree in electronics, I got a fascination for creation. Using my spare time in student organization, I got interested in leadership. And now, in the course of my master studies in business development, I've learned how to combine these two passions, preparing me for the real world.

I would like to thank the interview participants for taking time out of their busy schedule to help my research.

A special thanks to my supervisors, Professor Elsebeth Holmen and Doctoral Research Fellow Maren Wiktorin Østensen, who has mentored and guided me through each step of the process the past year.

On a personal note, I would like to thank my father Selman and my mother Shpresa, for always motivating me and for being my greatest role models. Continually proving that hard work pays off. I would like to thank my beloved sisters Kosovare, Arta, and Shkurta for providing moral support when my goals seemed unreachable. And lastly, I would like to thank my friends, Sander, Frans, Maciek, and Maren, who have been there for me throughout this whole journey.

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List of abbreviations

BPV	Born-public venture
difi	Norwegian Digitalization agency
ESAF	NSE Alumni organization
GDPR	General Data Protection Regulation
GWP	Gross World Product
NAV	Norwegian Labour and Welfare Administration
NSE	NTNU School of Entrepreneurship
NSD	Norwegian center for research data
OECD	Organisation for Economic Co-operation and Development
PPI	Public procurement of innovation
PPP	Public procurement policy
TED	Tenders Electronic Daily
SSB	Statistics Norway
WTP	Willingness-to-pay

1 Introduction

The topic of this paper is *Born-public ventures* or BPV. BPVs are startups whose goal is to provide government administration, or public agencies, with a product or service(DeGhetto, Sutton, & Zorn, 2018). Startups are generally known for lacking resources, experience, having high-risk tolerance, and having fast-paced decision-making processes. On the other hand, government tenders are resource-heavy, require low risks, and are traditionally time-consuming(Wagrell & Baraldi, 2019a; Pickernell, Senyard, Jones, Packham, & Ramsey, 2013; Melo, de Campos, & Machado, 2012; Mattsson & Andersson, 2019). As tenders are the most utilized method of acquiring public contracts, BPV's compete on terms not necessarily designed for them. With both parties having clear reasons to want to cooperate, BPVs providing innovation and public actors providing unique opportunities, the state BPVs find themselves in is challenging.

1.1 Background

Out of the \$90 trillion of the gross world product (GWB) in 2018, twelve percent was spent on public procurement. Public procurement is the process by which public administrations or public enterprises purchase goods or services. This means that \$12 trillion are spent annually following public procurement regulation(Bosio & Djankov, 2020). Public procurement regulation is designed to reduce risk, increase spending efficiency, and to facilitate healthy and fair competition between suppliers(Edquist, Vonortas, Zabala-Iturriagoitia, & Edler, 2015). Innovation is a tool that governments try to utilize to resolve challenges related to budgetary pressure and societal demands(León, Simmonds, & Roman, 2015). Startups are well

known and critical in both the production and adaptation of innovations(Praag & Versloot, 2008).

Once the value of a procurement reaches a particular threshold, laws usually require the purchase to be done through tenders. Tenders are competitions where suppliers compete on criteria sett by the government and the customer. These criteria usually include points such as a proven track record, good financials, and features and quality of the goods or services. The process is generally perceived as time-consuming and tedious, with limited communication between the supplier and the customer. However, public tenders provide unique opportunities that are presumed to be predominant drivers of both young and experienced firms.

1.2 Literature gap

The academic entrepreneurship community has largely overlooked the phenomenon of startups who pursue public sector opportunities. This literature gap was first brought up recently in 2018(DeGhetto et al., 2018). An independent literature review was carried out as a preparation for this thesis, which supports this claim(Olluri, 2019). There are no reasons to assume this type of business is new, even though the phenomenon was first recently presented as its own thing. Although no studies have been done on Born-public ventures, some fields of study do cover many of the broader topics within this subject. This being research is done on entrepreneurship and public procurement.

1.3 Purpose

The purpose of this study is to delineate Born-public ventures and their challenges. A grand assumption in this thesis is that

Born-public ventures are unique in some way or another. Something to point out is that the services provided by the public sector are often not market-driven, but rather societal demand. This allows startups to attempt to solve issues not found in the private sector. While the opportunities might differ, so do the challenges. Tenders, competition, resource management, and more are unique for a startup in this situation. All of this might develop unique characteristics. However, before any of this is considered, what defines a Born-public venture needs to be discussed.

1.4 Mission statement and research questions

MS: Delineate Born-public ventures

To begin with, all startups who successfully sold their goods or services to a public customer is deemed a BPV. As when how long a company is deemed a startup or not is somewhat diffused, this issue is inherited. It is still unsure if all, some, or none, of the startups that target the public sector, have any common traits or characteristics. Or perhaps startups that only target some part of the public sector have common traits. The term is still under-defined. Assuming Born-public ventures have some unique properties means this is a result of their customer since the one predominant defining trait of BPVs is their target customer. To resolve the mission statement two research questions are constructed:

RQ1: What are the characteristics of Born-public ventures?

RQ2: Are there any different kinds of Born-public ventures?

1.5 Fulfilling the statement

Using the limited available literature on Born-public ventures, entrepreneurship, and public procurement, a framework is constructed.

Parallels between BPVs and the similar startup type Born-global venture are drawn to help describe BPVs as Born-global firms are the only other known startup-type that uses the "born" terminology.

Utilizing this, a framework is designed and presented. Five cases of different Norwegian BPVs are presented in detail, broken down, and analyzed. First, with a within-case analysis, placing each case startup within the framework. Then, a cross-case analysis to compare the results.

The cases are based on semi-structured interviews. A multiple case study and an inductive research method are used to create a ground for theory and help resolve *RQ1* and *RQ2*.

1.6 Contribution

This research is meant to contribute to the general entrepreneurial academic field, and open up for further research on the whole new field of BPVs. Besides, the findings might be interesting for both public actors and startup wishing to collaborate.

1.7 Previous work

The idea of a startup pursuing to provide public goods and services is not new, but surprisingly the topic has barely been researched. There are, however, trends of multiple research themes closing in on BPV's. The themes being government allocation, which describes the government's ability to push entrepreneurial efforts in certain directions (DeGhetto et al., 2018). Secondly, public procurement, and in the later years, public procurement of innovation, which

describes how governments and public agencies can purchase goods and services efficiently while providing the market with healthy competition and facilitate innovation suppliers(Edquist et al., 2015).

A surprisingly similar form of a startup is the Born-global startup. Not only describing what it means to be "born", but the interesting situation BPV's find themselves in is quite similar. Both types enter a market which traditional firms wait to enter after years of settling in the local market, both types have to abide complex legislation's not found locally, both often compete with innovative goods and solutions not available in the new market, and both compete with companies that have more resources, experience and time than themselves(Oviatt, McDougall, & Loper, 1995; Rennie, 1993).

The term Born-public venture was first coined by DeGhetto, Sutton, & Zorn, in their *Institutional drivers of Born-public ventures* (2018) publication. Here the authors attempt to identify and theoretically delineate the government-based institutional drivers. They conclude with governments having the ability to affect the limited entrepreneurial efforts towards the public sector(DeGhetto et al., 2018).

1.8 Scope

The scope of this thesis covers Born-public Ventures. Each case has at least experience attempted a tender. Every case is based in Norway and has Norwegian origin, but some of them have also expanded internationally. As the Norwegian government mostly bases its procurement legislation and laws on what the European Union requires of its member states. There are different members of the European Union, but given that they all base their procurement laws on the same legislation, it is assumed that information and the results of this study are transferrable when setting in the context of other countries.

The startups were reached through the authors' network, and as a result, each startup is either a product of, or is connected in some way, to *NTNU School of Entrepreneurship*. All the interviews were held during the spring of 2020 through online video chats or phone calls. As the focal point of this study is BPV's, the challenging relationship between the public agencies and BPV's will be presented as experienced by the BPV's.

2 Background

In this chapter, relevant literature of Born-public ventures will be presented. Born-public ventures, even though not necessarily a new phenomenon, is not well defined within the available literature. There are, however, a couple of subjects that are relevant to it. By combining themes from entrepreneurship theory, Born-global ventures, and public procurement, we are able to delineate Born-public ventures. This chapter is divided into three sections.

First, key concepts relevant to Born-public ventures are explored. This includes entrepreneurship theory and information on Born-global firms, which will be elaborated further in the discussion. Secondly, as the main trait describing BPVs is their public sector customer, a breakdown of the public sector and relevant policies will be presented. Based on this information, a framework is presented, which will be used for evaluating and analyzing the cases.

2.1 Theory and key concepts

2.1.1 Entrepreneurship

Entrepreneurship and innovation are viewed as vital for industrial growth and renewal in society (Braunerhjelm, Acs, Audretsch, & Carlsson, 2010; Praag & Versloot, 2008). Entrepreneurship is defined as not only the process of how entrepreneurs establish new organizations but also how technical information is converted into products and services (Shane & Venkataraman, 2000). The academic field of entrepreneurship began in the late eighteenth century with Frank Knight and Joseph Schumpeter, who was viewed as the fathers of the research field, focusing on the economic and societal effects entrepreneurs and innovation had. It would, however, take close to another

hundred years before the field really took off. What defined entrepreneurship and entrepreneurship research during and after this period has changed with time. Since the 70s, new technologies and industrial changes have led to questions being raised against the efficiency of big corporations. Public opinion on small businesses changed, and policy-makers took notice of the trend. Resulting in scholar flocking to the new and exciting field of entrepreneurship and industrial dynamics. Studying how entrepreneurs achieve their goals and their effect on society (Landstrom & Benner, 2010). With entrepreneurs being linked to employment growth, innovation providers, and production growth (Praag & Versloot, 2008).

2.1.2 What is innovation?

The Oslo Manual is the definite book used by all OECD member countries describing the guidelines for collecting, reporting, and using data on innovation. The Oslo manual describes innovation as:

An innovation is a new or improved product or process (or combination thereof) that differs significantly from the unit's previous products or processes and that has been made available to potential users (product) or brought into use by the unit (process) (OECD, 2018).

Citing that innovation is playing a crucial part in virtually every sector and lives of citizens around the globe (OECD, 2018). Needless to say, innovation is the improvement of processes and product which improve the efficiency and quality of products and services, benefiting nations, organizations, and personal life quality.

2.1.3 Startups

Innovation is a product or process improvement, and entrepreneurship being the process of implementing these improvements, leaves the last part being "the who" to perform the implementation. Schumpeter described the entrepreneur as the one introducing the innovations (Landstrom & Benner, 2010). Startups are the new ventures entrepreneurs build to implement their innovation. Often recognizes with small teams that are able to quickly create value with little to no resources. In recent years technology startups have been a popular topic of discussion in both academia and public media. With examples of startups from Silicon Valley or the 1990's DOTCOM boom having rapid success in a short period of time (GRANT, 2020). Startups are well known for their innovation output. With the constant pressure from the current economic environment, startups need to either innovate to be able to compete against well-established firms or perish (Ries, 2011).

2.1.4 What does it mean to be "Born" ?

Using the term "Born" to define a firm is mostly known from the business type known as Born-global firms. The term was first coined by Michael W. Rennie to describe the new wave of firms that gained a competitive advantage by exporting their goods and services few years within their operational time of business (Rennie, 1993). The term was further defined in greater detail by Oviatt, McDougall, and Loper, which made a checklist of criteria to define and build a Born-global firm (Oviatt et al., 1995).

The main feature describing Born-global firms is the time between establishing the company and the time the company exports its goods and services. Born-global firms often cited as being

international within their first two years of operation, contrary to their more traditional parts that average closer to 20 years (Rennie, 1993; Bernardo Diaz de Astarloa & Tybout, 2012; Oviatt et al., 1995).

Furthermore, a definition as *True Born-global venture* was specified by (Moen, Sørheim, & Erikson, 2008). This definition excluded firms that were well established nationally, and that expanded their efforts internationally out of emergence. Building on this (Tanev, 2012) used this definition to define unique characteristics of Born-global firms, their success criteria, and important ecosystems for their development and survival (Kudina, Yip, & Barkema, 2008).

As the description of Born-global firms was getting defined, the definition of what was *not* made in coincident. The opposite of Born-global firm is the *Born-local firm*. The term Born-local is rarely used, and when it is used, it is generally in contrast to Born-global firms.

Looking at Born-globals, a surprising amount of parallels became apparent. Using the terms used to delineate Born-globals to describe Born-public ventures became innate. How many years do firms traditionally wait before competing on tenders? How old are Born-public ventures when they first acquire their first public contract? Is there any difference between true Born-public ventures versus firms that compete on tenders out of emergence? Are there any critical and unique characteristics, success criteria, or ecosystems necessary for success? Contrary to Born-public ventures, does it need to be defined as a Born-local?

2.2 The public sector

2.2.1 Public procurement policy (PPP)

Public procurement is the process by which government or public agencies

acquire goods and services. The public procurement policies being the laws and regulations dictating how these acquisitions are to be done. As 12% of the GWP was spent on public procurement in 2018, it is important that these expenses are done efficiently. To avoid fraud, corruption, waste, while providing a market for fair competition and efficient use of government expenses, countries created public procurement policies. With the exception of Japan and the US, which started in the late 40s, most countries adapted public procurement regulations in the early 90's (Bosio & Djankov, 2020; Smallbone, 2016). EU and OECD member states all base their PPP on regulation-suggestions as described by EU and OECD (Mattsson & Andersson, 2019; Melo et al., 2012; Omer, 2010; van Winden & Carvalho, 2019), however, the PPP still varies between countries (Wagrell & Baraldi, 2019a).

In Norway, the purpose of the law is written as follows:

The law shall promote the efficient use of society's resources. It shall contribute to the public sector acting with integrity, with the aim of having the public having trust that public procurement is executed in a societal, beneficial way (anskaffelsesloven, 2016).

Each part of the public sector, as depicted in Figure 2, has to follow these laws. The laws also apply to enterprises or projects where the public actor either owns or funds a project with more than 50 percent.

In addition to defining when and how an acquisition is to be executed, the laws also define additional requirements to support the integrity of the public body. These are requirements covering processes, materials, environmental effects, and more.

2.2.2 Tender

Tender is the most popular process of public procurement. Tenders are requests for products, services, and jobs to be done. The customer announcing the tender describes what it needs and sets the criteria. When the public sector announces tenders, they are required to follow the national public procurement policy. Providers of such solutions then draft their offer and compete on the criteria set by the customer. Typical criteria include price, deliverance time, and certifications. In Norway, all public tenders are announced on doffin.no, the Norwegian database for public procurement. Depending on different *thresholds*, different policies need to be followed.

2.2.3 Thresholds

Depending on the monetary value of procurement, different regulations need to be followed. In Figure 1, the different thresholds for public procurement in Norway are lined up. The levels written on the figure are not as used by the Norwegian government but are made here to simplify the overview of the different thresholds. This is because the values are mentioned in the procurement regulations in seemingly arbitrary order (anskaffelsesforskriften, 2016). Most of the different thresholds only apply to specific situations.

The three most mattering levels being level 1 on 100 000 NOK, level two on 500 000 NOK, and level 4 on 1 300 000 NOK. The Norwegian public procurement regulations are defined from level 1. This means that there are no state rules or regulations that decide how the procurement of products or services are to be done below this level. From level 1 and up, most of the regulations apply but are not as strict. From level two and up, the applicant is required to submit a tax report along with their application.

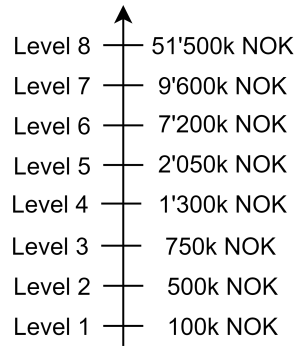


Figure 1: The Norwegian public procurement threshold values(anskaffelsesforskriften, 2016)

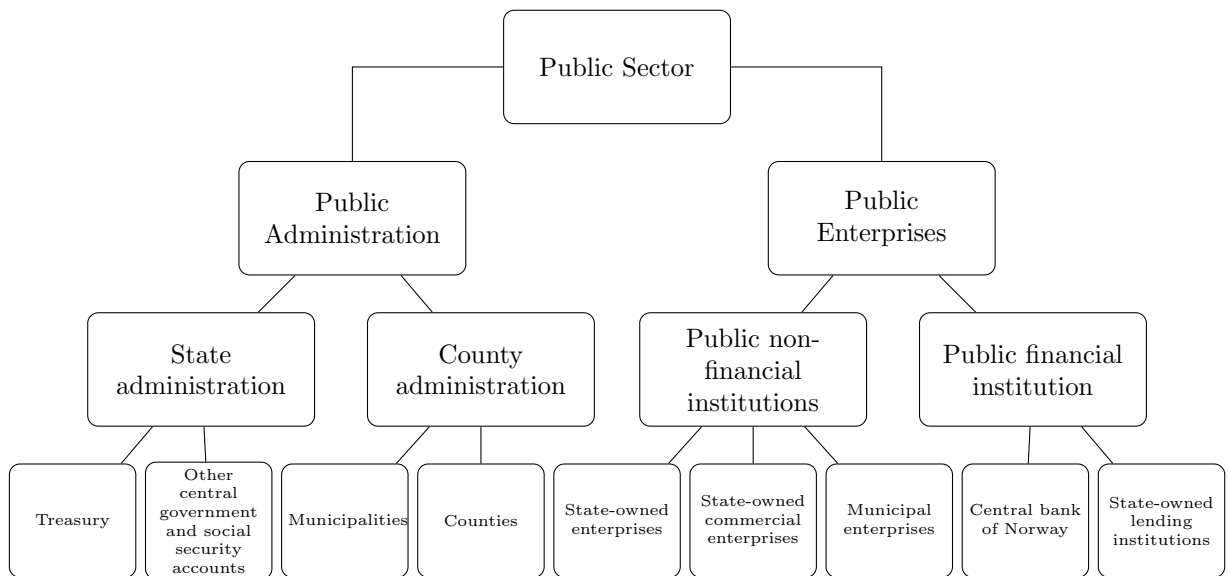


Figure 2: The Norwegian public sector(kongelige Handels-og Næringsdepartementet, n.d.)

The policies do not define how the tender is supposed to be executed in this range except for the need to announce it on doffin.no. Lastly, starting from level 4, all

state and EU regulations apply, and all the tenders need to be submitted to the European public procurement database, TED, through doffin.no.

2.2.4 What is meant by public actor?

In the context of this paper, public actors are meant as the customer found in the public sector. In short, the agencies that need to follow the public procurement regulation(anskaffelsesloven, 2016). The public sector in Norway is built as depicted in Figure 2. The public sector has two main branches *Public administration*

and *Public enterprises*. The branch of public administration covers state, county, and municipal administrations and their services such as school, healthcare, police, infrastructure, and other public services. Public enterprises cover state-owned organizations that are more commercial in their nature. The non-financial institutions being organizations that are operating within telecommunication, power, and

transportation. Whereas, the financial institutions are organizations such as Norges Bank and state lending institutions such as lånekassen.

2.2.5 Public procurement of innovation(PPI)

A subtopic of public procurement is public procurement of innovation. PPI is a demand-sided policy tool meant to improve the uptake, demand, and conditions for innovations in the public sector(Edquist et al., 2015). When a public organization orders the fulfillment of a function within a set time, and though a new or improved product, PPI transpires. The Norwegian Digitalisation agency (difi) presents a four-step process of how PPI is to be executed in Norway.

1. Describe the job to be done
2. Describe the "need" that has to be covered
3. Invite suppliers and developers to a dialog
4. (a) Innovative Procurement
(b) Innovation friendly procurement

Innovation procurement (4a) is the route chosen when the solution does not yet exist. 4a covers six different paths; innovation partnership, pre-commercial procurement, research and development contract, competitive dialogue, plan and design competition, and best value procurement.

Innovation friendly procurement is technically a normal tender, but the description focusing more on the problem to be solved rather than the solution. Leaving room for interpretation and alternative solutions. It is often performed when solutions to a problem already exists, but the public actor desire an improvement to current alternatives.

2.3 Literature review and Theoretical framework

During the fall of 2019, an independent literature review was done. The only article mentioning BPVs directly also presented the need for further research on the topic(DeGhetto et al., 2018). Other than confirming the apparent literature gap, the literature review presented articles relating to BPVs, which brought forth some recurring themes and topics(Olluri, 2019).

A framework was built to systematize and sharpen the research. Onward, the cases will be evaluated and analyzed using the most predominant and recurring themes from the literature review done. First of all, this being the startups' *motivation and drivers* for attempting public sector ventures. Secondly, how they interact with their *customers* and what kind of *roles* they take. Thirdly, the startups' choice of targeting the public sector appear to present its own *barriers*. Lastly, how the BPVs *overcome these barriers*, as the public sector is reluctant to take much of the risk associated with startups. Coincidental, this framework also presents the journey of the BPVs experience. Starting from the decision to take on this venture, to their choice of customers and their interactions, the challenges these choices bring, and lastly, how they overcome them.

2.3.1 Motivation and drivers

What drives entrepreneurs to grasp opportunities in the public sector is unknown, whether it is opportunity-driven or driven by necessity. A conceptual study suggests that it might be a combination of the available information on the opportunity, the entrepreneur's knowledge, the social norms, public spending on public procurement, available training, or promotion(DeGhetto et al., 2018). Either it being driven by necessity or

opportunity, there is little doubt that the public sector does provide significant and unique opportunities not found in the private sector (DeGhetto et al., 2018; Smallbone, 2016; Mattsson & Andersson, 2019). The transparency of tendering might provide enough ground for the entrepreneur to see the opportunity (ibid).

2.3.2 Customers and roles

It is widely accepted that procurement in the private sector differs from its public counterpart (Telgen, Harland, & Knight, 2012; Thai, 2001; Erridge, 1996). In addition to what one would expect in the private sector, having the public sector as a customer requires the fulfillment of additional demands. External demands such as integrity and transparency, internal demands such as political and organizational goals to fulfill, contextual demands considering the public sector are budget-driven, demands related to process' and demands given the public sectors' role in society (Erridge, 1996). The public sector in Norway is divided, as depicted in Figure 2.

There are three roles the public actor can have for a startup. That being financier, co-developer, or purely a customer. Which role, or a combination of varies widely depending on what kind of project the startups are working on. A study showed that the effect of what role the public actor has on the startup differs significantly. With financier being the least problematic, to a customer being the most problematic. Having the public actor as a customer brought barriers and challenges big enough to possibly damage startups' growth and reputation (Wagrell & Baraldi, 2019a).

2.4 Procurement process

Selling to a public actor requires the startups to follow certain policies (Mattsson & Andersson, 2019; Melo et al., 2012; Omer,

2010; van Winden & Carvalho, 2019). Depending on what kind of product or service they sell, the value of the procurement, or if their product or service already exists or not (anskaffelsesforskriften, 2016). Similar parts of the public sector might even differ between counties and municipalities (Mattsson & Andersson, 2019).

2.4.1 Barriers

Challenges startups meet in the public procurement market are plenty. The exhaustive regulations, complex procedures, and need for track record discourage startups from attempting public procurement opportunities (DeGhetto et al., 2018). Public procurement is, in comparison to the private market, more bureaucratic (DeGhetto et al., 2018). Public procurement is generally known for its complexity (DeGhetto et al., 2018; Mattsson & Andersson, 2019; Wagrell & Baraldi, 2019a) and heavy regulations (Wagrell & Baraldi, 2019a; Pickernell et al., 2013; Melo et al., 2012; Mattsson & Andersson, 2019). The necessary documentation, transparency, accountability, and track record requirements (DeGhetto et al., 2018; Wagrell & Baraldi, 2019a; Pickernell et al., 2013; Curtis, Herbst, & Gumkovska, 2010; Erridge, 1996) are viewed as disadvantageous for SME and startups and might remove the appeal to compete at tenders or for contracts (Pickernell et al., 2013; van Winden & Carvalho, 2019; Smallbone, 2016). A case also showed challenges with being evaluated on criteria outside its control (Wagrell & Baraldi, 2019b).

In addition to this, under-performing after receiving a contract can be a reason for exclusion in future tenders (Smallbone, 2016). Additionally, scaling might also prove challenging since public procurement policy can change between municipalities (Mattsson & Andersson,

2019).

2.4.2 Overcoming barriers

The technological advances the past years have brought plenty of new opportunities(Engin & Treleaven, 2019). To grasp opportunities for improved public services, the public actor might take some of the risks. The "buyer's"

acceptance of risk is one of the key access factors for startups in public procurement(Borowiec, 2018). Having the public actor cooperate with the startup helps create new opportunities where both parties share the risk(van Winden & Carvalho, 2019).

If BPVs are more reliant on external funding, investments, or other sources of income is unknown.

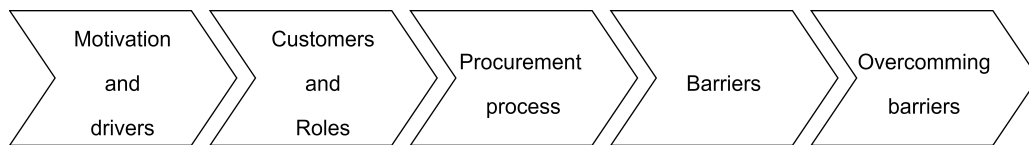


Figure 3: Proposed framework for describing Born-pubic Ventures

3 Method

The findings, analysis, and conclusion of this thesis were primarily based on empirical data acquired and analyzed using the methods presented in this chapter. The approach used was deemed the most suitable for the five cases built. The reasoning is discussed, and its limitations presented. This chapter presents the research design, multiple case study, the data acquisition, the data analysis, and the method’s limitations.

3.1 Research design

Finding a fitting research design is crucial in both the collection and analysis of data. The research design used in this thesis was chosen based primarily on two factors:

- The lack of available literature on the topic.
- The available startups fitting the scope.

The limited research done on BPVs left few theories to build upon. Thus, the natural approach to study the subject was through *inductive reasoning*. Rather than realizing findings and observations from theory, an inductive approach focuses on building theory from observations and findings. Something to point out is that even though some researchers often do produce novel theories by inductive studies, the results have a fair chance of ending up being an empirical generalization of the topic at hand(Bell, Bryman, & Harley, 2019).

The final research design, as shown in Figure 4, is designed around general concepts of inductive research design(Bell et al., 2019), multiple case studies(Eisenhardt, 1989), and the fact that a preliminary study and a literature review was done as a preparation to this project(Olluri, 2019).

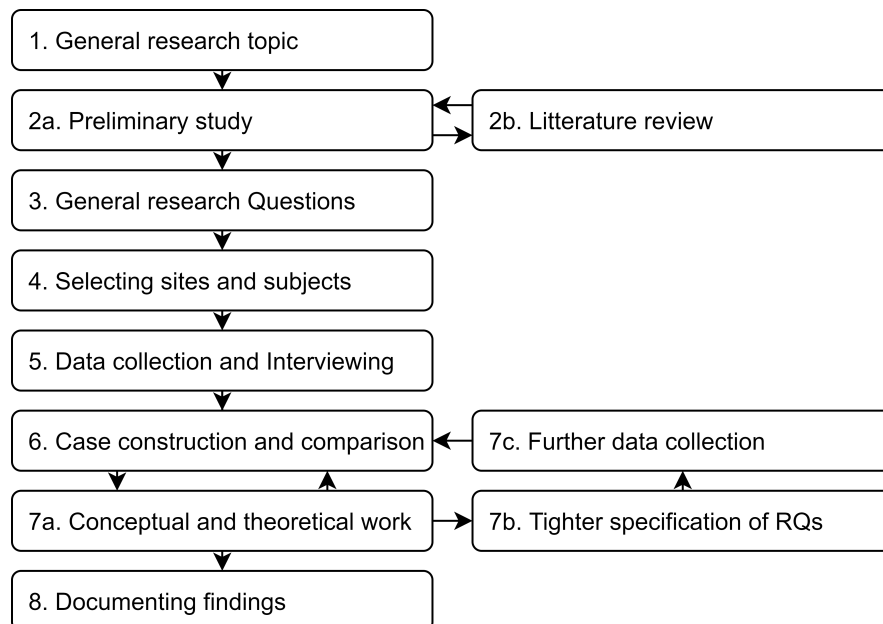


Figure 4: The research design

3.2 Research design point 1-3: Preparation

As a preparation for this project, a literature review and a pilot/preliminary study were conducted. Other than confirming the literature gap and finding the startups for the cases, few results were fruitful (Olluri, 2019). The results were primarily used to get to know public procurement regulation and its coverage.

3.3 Research design point 4: Scope and selection criteria

The topic being Born-public ventures leaves some considerations to be taken. Since the term was relatively recently defined, additional descriptors to "pursues public contracts" does not exist. Such descriptors could be the time between founding and the first public contract, the startups' motivation, the startups' ambition, etc. Since this is the case, initially, all startups who have sold a product or service to a public actor will be viewed as a BPV.

No international records on BPVs were found, shifting the focus to Norwegian startups. Neither the Norwegian national database for public procurement (doffin) nor Statistics Norway (SSB) had any statistics on participants of tenders in regards to the participating age of the firms. Neither the age when the firms first attempted or won a tender. The participants of this study were then predominantly found through the authors network. The author is a student at the NTNU School of Entrepreneurship and a member of its alumni organization ESAF. ESAF is one of the most prominent and most active entrepreneurship communities in Norway.

Since the goal was to discover information across all BPVs, regardless of which public actor they targeted, firms that were

too similar by nature were avoided. With this in mind, a restriction of two cases per industry/public sub-sector was set, as the goal was to focus the efforts on finding cases across the public sector.

This resulted in the firms studied in this thesis to be limited to:

- Startups who have competed in a public tender
- Located in Norway
- Within the author's network
- No more than two firms of a given type, or within the same industry

3.4 Research design point 5: Data collection and interviews

Qualitative interviews were used as the main method of data collection. Qualitative interviews stand out by the way it relies more on the interviewees' perspective, rather than having maximizing validity and reliability as a goal. The research questions are often not specified, and the goal is often to extract the interviewees' point of view. Going off on a tangent is often encouraged as it provides insight into what the interviewee views as important. Following a schedule, plan, or guide of an interview is viewed as second to getting insight, opening up the possibility of asking follow-up questions (Bell et al., 2019).

The interviews were semi-structured with the help of an interview guide. Semi-structured interviews are interviews where the researcher has prepared questions on specific topics to be covered but mainly uses these questions to initiate discussions on the given topic.

Questions were skipped or added as the interviews went on. The goal is more about the extracting the general opinion of the interviewee on a given subject,

rather than having the given question answered. Having the interviews be semi-structured, versus non-structured, helped keep the flow of the interviews going. Having prepared topics to be covered also aids the analysis.

The interview guide (APPENDIX 1) used was based on the results of an independent literature review done in the fall of 2019. The guide covered the most repeating topics on the available literature. These topics regarding the startup's customer, the dynamic and roles between the startup and their customer, their barriers, and their drivers.

To follow European Union GDPR (General Data Protection Regulation) rules, and in addition, rules set by the Norwegian center for research data(NSD), an application had to be sent to NSD. To get the application approved, the anonymity of the interviewee was vital. Therefore the names of the interviewee and the firm they represent, alongside other recognizable information, are either held back or altered. Any original recordings and transcriptions are to be destroyed once this project has ended.

Two interviews were held in person, two online through video chat, and the last one by phone. The first four interviews were audio-recorded for future transcription. Since the last interview was done by phone call, only notes were taken. All interviewees agreed to respond to additional questions by mail if asked. Each interview lasted about 45 minutes.

3.5 Research design point 6 & 7: Multiple case study

The research strategy found most fitting is the multiple case study. The case study design is a popular research strategy within social sciences utilizing qualitative data to build cases, and then using these cases to form theoretical constructs, propositions, and

theory(Eisenhardt, 1989). The strategy is seen as especially suitable when seeking to understand dynamics within a single setting(Bell et al., 2019; Eisenhardt, 1989; Eisenhardt & Graebner, 2007).

The cases are built on extensive research on topics or subjects. The cases are grounded in qualitative data, but also in combination with quantitative data. The evidence combines data from public archives such as proff.no, their respective web-pages, interviews, and observations.

Once the cases are built, the data will be analyzed using techniques from *Grounded theory* and compared.

3.6 Research design point 7: Analysis

3.6.1 Recording and transcribing

Each interview was recorded with the interviewee's permission. Recording the interview allowed the interviewer to focus on the discussion, rather than writing down notes. Listening to the recording also provided an opportunity to notice points overlooked during the interview. Recording the interview also made it possible to transcribe the interviews.

Transcribing the interviews allowed a more thorough examination of the data. The transcripts also allowed for more systematic categorizing and analysis of the data. Transcribing the interviews did require more time than expected, with 4-6 hours of work transcribing per hour of interview recording.

3.6.2 Grounded theory

The framework used to analyze the results of the cases was *grounded theory*. Grounded theory is one of the most used methods of analyzing qualitative data (Bell et al., 2019). Describing grounded theory is as abstract and complex as some of the theories it develops. It is a non-linear and unstructured framework built

using semi-structured and elaborate tools. Instead of being a step-by-step road map, grounded theory is often more defined by its tool and possible outcomes.

The tools and their simplified description of grounded theory are:

- *Theoretical sampling* is a process of data collection where the researcher uses the collection and analysis of data to decide what data to collect. Sort of snowballing data collection.
- *Coding* is the operation of labeling and categorizing qualitative data.
- *Theoretical saturation* is a goal or state studies should reach before concluding its data collection. It is the point in which there is no longer a need for additional data on a specific subject to answer the research questions adequately.
- *Constant comparison* refers to the process of maintaining a close connection between data and conceptualization. Explicitly, grouping up findings coded with the same labels together until a theory emerges.

Using this in combination with the framework produced five categories and 48 labels. By cross-examining the occurrence of the tags between cases revealed certain trends. Each case was constantly compared. Topics brought up in and between cases were used to spur more conversations in the later interviews. Relevant topics mentioned by the interviewees were looked at and included in the background section. Because of certain circumstances, only five cases were

made. Considering this, it is uncertain if theoretical saturation was achieved. The results do reveal interesting findings that might suffice as stepping stones for more research to come.

3.7 Limitations

Eisenhardt describes the limitation of results from ground theory to the minds of the researchers working on it. It is recommended to be more people to be able to spur conversations that might realize new theories.

In addition, when planning, outlining, and strategizing the execution of this thesis in the fall of 2019, the author failed to anticipate a global pandemic outbreak. This resulted in obstacles and challenges of varying degrees. First of all, it resulted in some of the case-interviews being postponed or canceled, leaving less time to analyze the interviews thoroughly and losing some data altogether. Secondly, the pandemic prompted the need for social distancing, and having all the interviews be held online through video chat. Thirdly, loss of access to the university meant having to work at home in a less optimal work environment.

3.8 Authors reflection

As a researcher, it is essential to be aware of its own presumptions and preconceptions. Before the studies took place, from the summer of 2018 to the fall of 2019, the author was the CEO of a failed BPV. Even with the best of efforts, some personal experiences might have affected the thesis.

4 Case presentations

In this chapter, the five cases will be presented. Before analyzing the cases in the next chapter, the cases will be presented using the topics from the Framework from Figure 3. Given the different thresholds and regulations discussed in chapter 2, which sales method used will also be presented. Each case will first be presented with a table describing basic information such as their industry, product type, age, who their customers are, roles, and what kind of procurement method they use. Some statements from the interviewees will be used, but as the interviews themselves were held in Norwegian, the quotes are translated. To maintain the interviewees' anonymity, some information about their exact product or service has been altered.

4.1 Case 1

The first case was built around a startup based in Trondheim that produces mobility equipment for the elderly or those physically impaired. The interview was held at their offices. The interviewee is the CEO of the company, which is in its sixth year of operation. The team was formed in January 2012 and spent the next three years developing the product.

Motivation and drivers

The founding team was all enlisted at NTNU School of Entrepreneurship(NSE). This is a master's and a Venture Creation Program, meaning the students attending this course are somewhat expected to found a business. As a part of an assignment, they contacted multiple individuals, businesses, and public actors, searching for a business idea or problem to solve.

	Industry	Role of interviewee	Age	Product
Case 1	Health Tech	CEO	6	Home mobility equipment
Case 2	Health Tech	CEO	3	Activity gear for impeded persons
Case 3	Management	Partner	13	Leadership consulting
Case 4	IT	CEO	3	IT and application development
Case 5	Education	Marketing director	15	Online educational tools

Table 1: Case interviewee presentation

Case 1

Industry	Health technology
Product	Mobility assisting equipment
Primarily public customer oriented	Yes
Years of operation	6
Age when first public sale	4
Customer	NAV Assistive Technology Centers
Customer's role	Customer only (Some early soft-funding was granted early inn the development process)
Sales method	Alternative

Table 2: Case 1

After contacting a public institution, they heard about a recent project/study done on mobility at home, stating a need for a better solution. Case 1 had positive feedback after drafting possible solutions combining existing technologies.

As to what drives the company to target the public sector, contrary to the private sector, it seems to be out of necessity rather than a goal in itself. The solution itself being tailored to the case given by the public actor, and private market of the solution being too small. The interviewee was stating their naivety of what was to come.

In Norway, its quite hard since you basically only have one customer if you want to develop this kind of equipment. If that customer doesn't want to buy from you, you're in trouble. That customer being NAV Assistive Technology Centers.

Customers and roles

Their first and primary customer in Norway is NAV Assistive Technology Centers(hjelpemiddelsentralen). NAV accounts for 95% of their sales in Norway. Since 2016 the startup has exported its product internationally. The rate of sales internationally has increased rapidly, with exports covering 15-20% of their gross income in 2018 to 65% in 2019. Even though the local sales are public, the international are almost entirely private.

"Our costumers and processes differ vastly depending on which country we are selling to. In the country we sell the most, in 2019, we sold more to France than Norway, all sales are private."

Despite the fact that Case 1 only has NAV as their sole customer inn

Norway, they still have many individuals to please. NAV Assistive Technology Centers is divided into 18 different district offices. Each one operating relatively independently.

"There are few people working in these Assistive Technology Centers, which leads to being vulnerable to each subjective opinion of the ones in charge. Hopefully, Entering tenders might change this and result in more homogeneous practices"

When asked about the public customers' involvement or role, the interviewee stated that NAV had primarily been a customer, funding the development of an early prototype only. The founding team felt the need to keep a steady dialogue with NAV to maintain a relationship and to make sure the development was headed the right way.

Procurement process

The intervals of tenders NAV announces for assistive technology of this kind is four years. Thus, to sell their product, Case 1 utilizes alternative ways to reach their customers. As there are no directly competing products on the market, they are exempt from some regulations, meaning they can sell to the public sector without competing on tenders. To reach their end-users, Case 1 needs to provide information to ergo-therapist. Having a suitable potential user, these therapists then need to make an order to NAV on the product and detail why and how current alternatives that have won tenders do not fulfill the same needs. However, before that, the product needs to be in NAV's assistive technology register. To reach users, therapists, and to get their product on NAV's assistive technology register, Case 1 has signed a distribution deal with a company that provides other assistive equipment.

"It's kind of like the hen and the egg. The Assistive technology center is the center of information distribution, but the demand needs to be created elsewhere"

Barriers

Early on, they *needed investments*, as most hardware companies do. The lack of investments resulted in slower development as it took years before the product was what they deemed market-ready. Entering the market was what the interviewee deemed the most challenging.

NAV's Assistive Technology centers are the information hub of their users. Since there are no tenders on their product, the information NAV provided their therapists were limited. Resulting in the startup having to directly *communicate* with each Assistive Technology center, their therapists, and their users. When *conversing* with NAV and therapists, they met what felt like a surprisingly conservative crowd.

Competing companies that made similar kinds of gear and equipment also provide *larger product portfolios*. Many of the tenders that were made in this category were made on broader topics that cover multiple needs. The public sector customer often had more significant framework agreements. Having a single product in such a market made it hard to compete.

The tender time cycle of this kind is four years. The first time the competing passed, the startup had their application denied. Since then, they have had multiple sales to the public sector. Case 1 has recently been invited to discussions to add a tender regarding their product type. If this happens, it would have been five and a half years from the first time they sold to the public until they could compete on tenders.

Overcoming barriers

The founders were still students at the initiating of this project. This meant that they had at least a year and a half until they really needed to consider salaries. They did not have any funding for the first year and built their first prototypes bootstrapping and using free scrap metals from nearby workshops. After the first year, they got some public funding, and later investors to help cover expenses. The startup spent three years developing the product. It then took nine months from the time the startup deemed the product ready for the first sale took place.

Case 1 has had much success from cooperating with a supplier. This meant that the portfolio challenges were solved, as they now supplied one of many products on a group. The supplier administrated sales, which entailed the difficulties of contacting the many individuals were solved.

"We might have been too naive, considering the toughest part wasn't developing the product but building the market"....."If we did not have investors and funding at that time, it would be the end of this project"

4.2 Case 2

Case 2 is built on a startup that has its origin on Trondheim, but that later moved its operation closer to Oslo. The startup builds activity gear for people with impaired function. Their main product was a result of the founder's bachelor's thesis, and the startup began after the founder enrolled in NSE and saw a business potential. The interview was held online. The interviewee is the CEO of the company, and even though the business is barely three years of age, the CEO and the co-founders have worked on the product for close to six years.

Case 2

Industry	Health Technology
Product	Activity equipment for disabled people
Primarily public customer oriented	Yes
Years of operation	3
Age when first public sale	
Customer	NAV
Customer's role	Customer only
Sales method	Alternative

Table 3: Case 2

Motivation and drivers

The founders of this startup designed a product similar to what they deliver now as part of their bachelor's thesis. They later enrolled at NSE and were expected to start a business. Deciding early on to focus their efforts on the product they had already developed. Their product is expensive to develop and produce. They quickly realized the private market in Norway was not big enough to sustain their kind of business, and that they had to target the public sector.

The interviewee states that the public sector's willingness-to-pay to be a great motivator, disclosing that NAV's Assistive technology centers are able to pay twice as much per product as what they could expect in the private sector.

Customer and roles

Similar to Case 1, Case 2's initial customer was NAV's Assistive Technology centers. The product Case 2 provides, is meant to help people with specific disabilities exercise and have fun. Which in Norway, and some other countries, is viewed as essential for life quality.

"How it works in Norway is that the state orders the product since the user needs it. In Norway and some other countries, being in good shape and being social is seen as a confidence and happiness

boost, with the likelihood of contributing to the society, increasing as a result"

The team of Case 2 realized early on that they needed to sell to the public sector. Having made the decision to start their business in Norway, they were able to use this to sharpen their focus.

"It became clear fast that we needed to know the requirements of NAV, as the paying customer, and that we needed to fulfill the needs of the end-user. We had to make a product that fit these users"

Case 2 has always focused on communication with their customer. Even preparing for requirements long before they are demanded. The role of NAV has always only been as a customer purely, but the startup has included them in discussions as much as possible. This both to stay close to their customer, but also to confirm the development is heading the right way.

"We've learned that it's important to have a dialogue with the customer, NAV in this instance, as early as possible. Creating good relations is very important to confirm or refute assumptions"

Abroad Norway they sell their product both private and public. Mentioning that insurances often cover the expenses for their users.

Procurement process

The tender for similar kinds of equipment is held every two years, with the possibility of extension. Meaning a possibility of four years between a window of entry. This product being unique enough not to fit any tender is purchased by NAV using exemptions from the PPP. As no fitting category for Case 2's product exists.

"There are only tenders if there are any competing solutions."

The sales funnel is long. With an order often taking two months from the initial order, sometimes taking up to six months. Not competing on tenders seems to have some pros. Many requirements still being strict, delivery time is left flexible.

"This is equipment that is relatively expensive. It's expensive to make, and it has to have an expensive price tag. The market in Norway is not big enough to sell this private. We have about twice as high of a price on our product in Norway as what we could have deem abroad"

Barriers

The two biggest barriers Case 2 presents are about what they experience about their *fractured* customer and the *complicated processes*. Similar to Case 1, the startup needs to send representatives to each county to inform each Assistive technology center of their product and use. Being dependant on both therapists and end-users to know about their product. Therefore representatives from

case 2 regularly travel to each county and market their products directly.

The procurement process is time-consuming and has many demands to be fulfilled. From the time a customer initiates the ordering process, it often takes five to six months before delivery. The interviewee admits that the long delivery time is often a result of time-taking processes on both their and the customers' part. The bill is not paid until the product is delivered to the user. Challenging demands the startup has met include both technical and points like service accessibility and repair.

"To be able to compete, we have had to be able to offer the same services nationwide. Offer just as good where-ever in Norway. We've had to hire extra employees and make more partnerships to cover this."

Overcoming barriers

Being students, when founding the startup meant that the founders did not need salaries, to begin with. Having the initial product being a part of the bachelor's thesis project meant that the startup did not have to cover much of the early development expenses.

Having many parts of the same organization to keep informed while also reaching therapists and users, the startup has put a lot of effort into having their web-page as informative as possible, with videos and tutorials, to make sure every detail is as available as possible. To add to this, the startup also invited representatives from the Assistive technology centers to annual workshops to present and demonstrate their product.

Contrary to viewing the strict regulations and demands of the public sector as something bad, the startup viewed them as guidelines. Using the demands

to form both their product and business development.

The interviewee underlined the positive experience of communicating and cooperating with the public sector. As innovation and working with students seemed exciting and good PR.

”Nav and Norway wishes to promote innovation. They think its cool that we as Norwegian students want to develop equipment for this target audience”

4.3 Case 3

Case 3 is a consulting firm specializing in advisory for internal routines and leadership. The firm does not consider itself a startup now, nor does it relate itself to the term Born-public venture. The interviewee is a partner in the company and joined it five years after its inception. This, while the company neared its end of being a ”startup”. The company aids large enterprises with leadership consulting, some of these targets being commercial public-owned enterprises. It took 5-6 years after the founding of the company before it competed on tenders.

Motivation and drivers

This company desires to attain public

sector customers as an addition to their private ones. Private customers are their main target audience. As commercial state-owned enterprises operate similarly to private enterprises, this case company’s services are easily transferable.

A motivation to pursue such goals is to ”get on the inside”. The public contract lasting longer being perceived as lucrative deals. The interviewee was describing the daily operations working for a public sector to be less demanding. Perceiving public actors to have another focus on efficiency and quality, as compared to their private counterparts.

”It’s very different delivering to a commercial bank than to let’s say a municipal administration. If we postpone a meeting to a municipal administration or say we couldn’t deliver on each point, it’s usually no problem. I’m exaggerating a little, but its kind of this way.”

Customers and roles

This company has experience with multiple commercial state-owned enterprises, typically service providing industry. Some of their customers either being partly state-owned or replicating public sector structures and procurement procedures. Their customer portfolio is about 90% private.

Case 3

Industry	Consulting
Product	Management and strategy consulting
Primarily public customer oriented	No
Years of operation	13
Age when first public sale	5
Customer	State owned enterprises
Customer’s role	Collaborator
Sales method	Tenders

Table 4: Case 3

"If you have a line of public sector enterprises, with telecommunication, postal and banking on the left side - that is very commercial, and hospitals and municipalities on the right side; we've been on the left and near the center. We have not reached to the right side yet"

Their customers are service providers of different kinds. The interviewee has been in charge of multiple acquisitions and sales processes. This case company does not differ their private and public customers. Targeting big companies and their leadership, helping them strategize their next 10 to 15 years strategy.

"Our customers are service providers. Meaning typically not a product or production-oriented companies. Not industry, not oil, and typically not public. Some of our customers are publicly owned, but these are commercial in nature"

When working with their customers, one or more of their employees work at their customers' offices a couple of days a week. Projects last three to six months. During this time of collaboration, this company prefers not to have their employees working at their customers' offices more than necessary. Experiencing what they perceive as their employees becoming less efficient.

Sales process

Both in their private and public ventures, Case 3 often compete on tenders to acquire their contracts. The interviewee describes some of his experiences with the tendering process as unpleasant. Stating that writing a proposal amounting to six weeks of work, or three weeks for two

people. Writing the proposal based on an often 200 page, miswritten, inconsistent, and bad tender description.

You basically deliver your proposal into a black hole, without any dialogue

Barriers

The biggest barriers are experienced as the processes being *Resource heavy*, the lack of *communication* opportunities, and the absolute need for *transparency*. In addition to frustration in regards to the ones handle the procurement being other people than needs the service.

This company did not attempt venturing into the public sector for the first five years of operation. This because it was deemed too expensive to do so. Having only four employees, they could not afford to spend three to five weeks of work on an initial application for later to potentially spend another two or three weeks on a formal proposal.

Another point brought up here, when concerning targeting the public sector early on, is the timing issue. Framework agreements are often lasting five years; the startup has to time their attempts accordingly.

"If we were to compete on tenders from the get-go, we'd be filing for bankruptcy before the tender would have been over. And if you miss the timing - what would do you do then? "

Given the nature of their business, each case they work on is different. Each service is tailored for each specific case. As a part of the PPP competing companies are not allowed to directly contact the public sector actor procuring, as to avoid any special treatment. Instead, each participant can ask questions through

doffin.no. The issue here is that the questions and answers are available to each participant in the tender, and asking a question might reveal strategies and positions. As a result, the tenders are often completed with minimal communication.

The tender descriptions themselves are stated to be poorly made. The interviewee describing them with inconsistencies all over and with unrealistic demands. Assuming that the ones actually writing the tenders not to know what they need. Some of the demands being so demanding that most companies being disqualified for answering questions.

"When we competed for a contract with "Transport agency", which we lost, we were asked: what other national covering transport agency with more than a billion NOK revenue have you worked with the past three years?"

Overcoming barriers

The only way this company is able to cover the resources heavy processes of tenders is by leaning on profits made in the private sector. The interviewee appears frustrated as to lacking apparent solutions to the other barriers.

4.4 Case 4

This case is based on a short-lived attempt to enter the public sector by a startup. The startups in question saw an opportunity to sort challenges related to managing substitute workers across schools in municipalities. This by tweaking existing software they already provide to the private sector. The interview was with the CEO of the company, and it was held through an online video chat.

Motivation and drivers

This startup is a software development company that designs a platform making a certain kind of software development more efficient. The startup primarily targets private customers. Their main product is a platform with countless applications. Seeing a need for a better solution at managing substitutes in schools, while having similar software already developed, drove them to grasp the opportunity. Tweaking their existing solution for the new application was perceived as quite easy, especially when comparing it to how big of a problem it solved. The product itself being a digital substitute pool, perfect for large organizations with similar branches working in parallel.

The CEO had knowledge of procurement policies. He knew that if the project was to succeed, most of the risk had to be taken by themselves. After cold-calling multiple municipalities and schools, the response was positive all over. They were able to find two municipalities that were willing to cooperate, this if the startup were to take the costs of development. This resulted in two pilot projects, including more than 30 schools. At this point, the startup's employees were quite optimistic.

Knowing about procurement policies, the interviewee was aware of many of the barriers. While grudging over some challenges, having obstacles also proved to be a driver. Stating that the barriers meant that once you are in, you stay there. Observing no signs of their current customers to stop using their services.

When asked about their motivation, the interviewee responded:

"This is a big problem, and it costs Norway and municipalities a lot of money. They aren't working smart with this, and we knew we had a solution that could make a great difference"

Case 4

Industry	IT
Product	HR software
Primarily public customer oriented	No
Years of operation	3
Age when first public sale	2
Customer	schools and municipalities
Customer's role	Customer
Sales method	Level 1

Table 5: Case 4

Customers and roles

This startup primarily targets private customers, primarily business-to-business. Either developing software for their customers or providing their platform as a tool for development. They experience their public sector customers to be less intense and slow-paced than their private sector customers.

The pilot project, where they cooperated with two municipalities, took four months. During this time, the startup covered all risks and expenses. The customers did not finance or help develop the product but gave continuous feedback.

When the pilot was completed, they attempted selling to both the private and public sectors. As this product was design for big organizations, it made more meaning to concentrate most of their efforts towards the public sector, which they did. The two municipalities that participated in the pilot project both became customers. Outside those two, the startups have had little luck gaining more customers.

Procurement process

The startup reached most of their customers through cold calling. The procurement from their municipal customers was done by tenders after completing the pilot projects. The two municipalities made tenders, which this case company

won.

The startup has attempted to persuade and convince other municipalities to arrange tenders for their product, without much success. This even though many school workers were positive to their value proposition.

There have been attempts at selling directly to schools by lowering the price to avoid policies without much success.

Barriers

The startup met its biggest barriers once the development was done, their first customers had acquired their services, and they were ready to expand. Their first barrier was convincing municipal administrations. Given the nature of their service, it made sense to cover whole municipalities at once, and not single schools at a time. The barrier became clear as school workers were overworked, and the municipalities did not see the problem. The ones doing the decision taking being too far away from the problem.

Innovation partnerships were not an alternative. Likewise to tenders, innovation partnerships require long processes and many demands. The application requires a plan for a one year project. Spending a whole year on development that would take a couple of months did not make sense to the startup. As innovative tenders are designed for products that do

not yet exist was also troublesome. As once the development was done and they had procurers consecutively, the product already existed in the market. Even if there was a high interest in the service from the users, no one initiated the process to arrange a tender. Out of the sixty municipalities they had a dialogue with, fifty-five said it sounded great.

The interviewee experiences public procurement policy to be too focused on solving issues the procurer observes themselves. Leaving little opportunity for solving issues that the public sector does not realize it has themselves.

To perform the pilot project, the startup had to have resources available to cover all the expenses of research and development related to the project. Seeing that it was the only way to get the customer to cooperate. Saying that it was no way they could have even attempted this if they did not have resources acquired in the private sector.

As this is a tool for managing human resources, the municipalities were reluctant to try new solutions. As they already had other services in place. Even though those solutions did not solve the same problems, they do not want single solutions, but systems of them.

Legitimacy was another issue, both in the process of tendering and when meeting municipal administration representatives. Being a startup meant no financial records, nor a proven track record.

As of now, the barriers are viewed as too big to continue on with this project. Experiencing that it is more lucrative to spend their efforts in the private sector. They are currently not shutting the project down but continue providing their services to the municipalities that they initially acquired.

"I have kind of lost the belief of the public sectors ability and desire to try new things"

Overcoming barriers

Knowing about public procurement policies, the CEO knew what to expect. Knowing that they needed to save up resources acquired in the private sector.

The startup intentionally did not develop this project without the inclusion of the municipalities. As they covered all the expenses, the only thing they got was feedback. However, by including them in the process, they believed it to increase their chances of getting the same municipalities as customers later on. It was deliberate in including the customer as early as possible. The CEO did not want to include the municipal administrations any more than necessary. Not believing in their ability to organize the project or development efficiently. Including them just enough to make them invested.

"This project had died before it even started if we did not have other sources of income to lean on"

4.5 Case 5

Case 5 was built on a startup that creates software solutions for schools, developing a platform for video sharing and other educational services. The interviewee is the marketing director, who joined the startup a few years after its founding. The interview was held by phone, and no recording was made. Therefore no quotes are available, basing the case on notes taken during the lengthy phone call.

Motivation and drivers

This startup targets one of the public sector's primary services, namely, education. Seeking to improve public services.

A driver of this project has been public funding. In addition to possible funding

Case 5

Industry	Educational technology
Product	Educational platform
Primarily public customer oriented	Yes
Years of operation	10
Age when first public sale	
Customer	Schools and municipalities
Customer's role	Costumer and contributor
Sales method	Sub Level 1

Table 6: Case 5

opportunities available for all startups, there are certain public funds meant to support educational development.

Customers and roles

Their target customers are schools from elementary to high school level and municipalities. The schools they target are both private and public. In their eyes, there is little to no difference when concerning public or private schools. As the procurement value does not reach the threshold of public procurement policy, the routines of acquisition do not differ much.

The startup has previously attempted selling some of its services to students or the student's parents, but its segment was deemed too costly to pursue further.

The schools themselves are the content providers of this service. The platform was originally designed for video sharing for teachers and students. The startup did not develop any content for the site for the first couple of years. Focusing on the development and depending on the schools themselves for the content.

Procurement process

For the first couple of years, everything on the platform was for free. Instead of focusing on building services and letting the users provide the content. Later paid services were included. The price tag of

these services being low enough not to reach any public procurement threshold. Most of their early adopters become paid users.

Even with a decade since the founding of the company, it is first in the past year that the startup has actively pushed and marketed their product. Reaching more than a hundred thousand monthly users organically. However, when marketing their product, they work both bottom-up and top-bottom. Often attempting to convince multiple teachers and school administrations in a municipality before contacting the municipal administration, using sales in their district as a tool of persuasion.

Selling to municipalities often require framework agreements, as the more prominent customer have bigger needs. When dealing with these customers, the startup cooperates with a partner that provides a bigger portfolio—selling this startups servies as part of their product portfolio.

Barriers

The biggest barriers are related to complicated procurement processes and bureaucracy. Having experienced long and heavy application processes that concluded with meaningless meetings, resulting in a lot of work suddenly becoming meaningless. Much time goes to application writing as the demands

of their public customers are combined from many individuals. These individuals being from every level, from teachers all the way up to municipal administrators.

To fulfill some of the many demands a tender might consist of, the startup has experienced the requirements or the public actor to shape the development in a certain direction. That direction not necessarily being where the startup wants to head.

Overcoming barriers

To counter the need for having a big portfolio and compete on tenders regarding framework agreements, the startup has an agreement with a third-party supplier.

Since many of their services are relatively cheap, the startup is dependant on having many users. Targeting municipalities to cover bigger districts and selling agreements combining multiple services is a must. They solve this by targeting the schools first, and when acquiring multiple schools in a single municipality, they contact the municipal administration.

To cover the resource-heavy development and lengthy procurement process, the startup needed income from other sources. No investors were included, the startup depending on public funding sources, and bootstrapping by providing consulting as a service to their first customers.

5 Analysis

Having presented the cases in the past chapter, the data is now ready to be analyzed as described in chapter 3. This chapter is divided into two parts. First, each case is analyzed by a simple within-case analysis using the framework presented in chapter two. The information collected from the cases was already presented using the framework in the last chapter. However, the within-case analysis of this chapter strips down some of the excess information and code the results. This to make the next part of this chapter more manageable with the cross-case analysis. Instead of looking at each case, all cases are compared using the topics from the framework and the tags created from the with-case analysis.

5.1 Within-case analysis

In this section each case is stripped down to basic tags and labels fitting the categories in the framework from figure 3, and then palced into said framework.

5.1.1 Case 1

Motivation and drivers

The founders were motivated through *pressure from their educational institution*. After market research as a part of an assignment, they discovered a need for a better solution. Drafting up a *product* they got *good early responses*. This proved a *Unique opportunity* as the was only a market for this in the public sector. To help them on their journey they got *Public funding*.

Customers and roles

Their *only customer in Norway* is NAV, a state/municipal level service provider. Once the startup grew internationally, the *target audience became private*. They have had *public funding* from other sources in the public sector. The customer helps with *feedback* for development.

Procurement process

Not being able to compete properly at tenders, the startup was able to sell their goods to the public sector through *PPP exemptions* or through third-party *Distributors*.

Barriers

Even with only one customer in Norway the customer was *fractured*, with many individuals to please. Procurement processes being *complex, slow*, and demanding *resources*. The customer demanding more than *one product*. In addition, challenges were met having to convince a *Conservative audience*.

Overcoming barriers

Being student meant not having to think about salaries for some time. The startup was able to access *public funding* and *investors* to help cover development expenses. *Continuously communication* with their customers helped convince the conservative audience, while *distributors* helped to manage the fractured market and complex regulations.

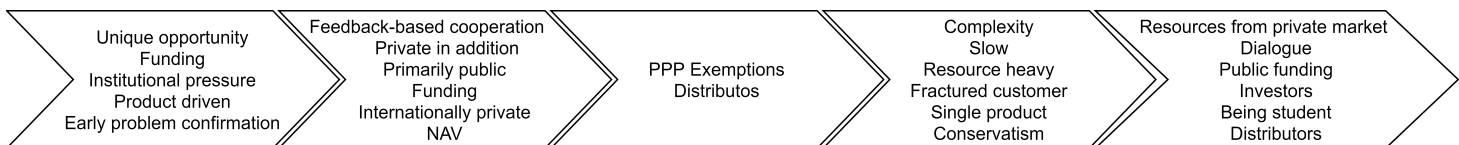


Figure 5: Case 1 placed in the framework

5.1.2 Case 2

Motivation and drivers

The startup of Case 2 decided to target the public sector for multiple reasons. Starting out with a *product*, and having *pressure educational institution*, they searched for a market opportunity. They discover a *unique opportunity* in the public sector, which had a high enough *Willingness-to-pay* to sustain the business. They grasped *public funding* opportunities, and viewed their customers *high demands as guidelines* for development. They had *knowledge* of what to expect through their network, and exploited the *trend* of the public sector wanting to innovate and work with students.

Customers and roles

Their customer is *NAV's Assistive technology centres*. Their customer has not helped with development but did procure an early prototype and *helped with information from their users*. The startup has also gotten *public funding* from other state sectors. In Norway, they *primarily target the public sector*, but *abroad their sales are mostly private*.

Procurement process

The startup has not been able to sell their product through tenders, even though that is desirable. They have been able to sell their product by keeping the value of the procurement's *below threshold values* and other *PPP exemptions*.

Barriers

The *sales funnel is long*, which is challenging since no payments are made until delivery. Which often takes 4-6 months from the order is made. The process itself is seen as *resource heavy and complex*. Even with a single customer, they have many people to please. *Finding it tough to please all and keep the information available*. The startup attempted to enter tenders and failed at doing so, resulting in having to *wait four years until the next opportunity*.

Overcoming barriers

Being students resulted in saving resources and their customers being *cooperative*. To help with information distribution, the startup created *high quality web-pages* and invite their customer to *yearly workshops*. Demands helped as guidelines for development. To cover resources the startup got *public funding*, as well as *investors*.

5.1.3 Case 3

Motivation and drivers

The startup from case 3 was already established in the private sector before attempting anything in the public sector. Seeing their services being *transferable* they grasped the opportunity. A motivation being that *contracts last long* and daily operations perceived as *less demanding*.

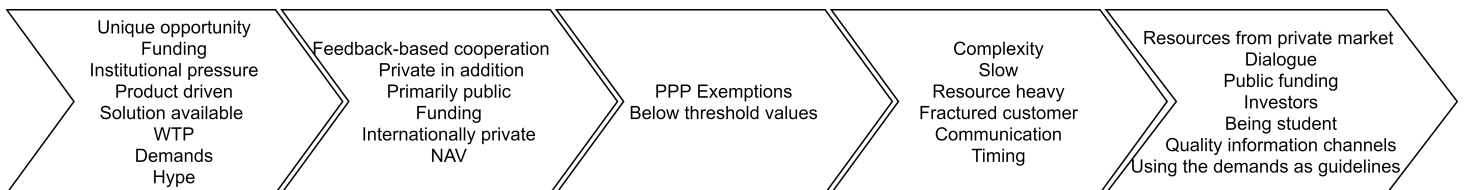


Figure 6: Case 2 placed in the framework

Customers and roles

The case company primarily focuses its efforts in the public sector. The public sector customers target being publicly *owned commercial enterprises*, which operate similarly to private enterprises. The roles of the relationship are purely service-provider and customer, with the *customer providing necessary information*.

Procurement process

Tenders have been exclusively the process of procurement.

Barriers

As the ones *creating the tenders and the ones in need of goods and services are different people* problems appear. The procurer trying to tend the needs of many creating *complex, inconsistent, high demanding criteria*. The whole process *takes time* and requires *resources*. The need for *transparency* is challenging since asking questions might reveal strategies and positions.

Overcoming barriers

The interviewee stated that the only way they overcome these barriers is by relying on resources acquired in the private market.

5.1.4 Case 4

Motivation and drivers

The CEO of this case company saw a need for a better solution for their customer. Having *already delivered a similar solution* to the private market, getting *positive feedback* through customer dialogue, the CEO saw an opportunity to *transfer* their services to this new customer. They had *knowledge of PPP* and desired the presumed *lock in effects*.

Customers and roles

This startup primarily targets the private sector. Their public customers are municipalities. During development for their product, they had a pilot with two municipalities. The startup covering all expenses and the municipalities providing users information. Both these pilot municipalities later became customers.

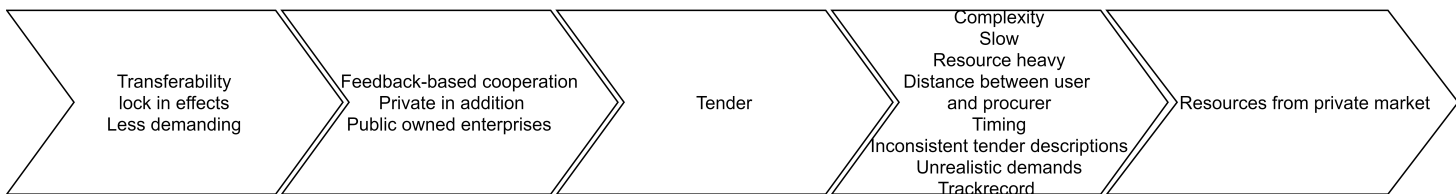


Figure 7: Case 3 placed in the framework

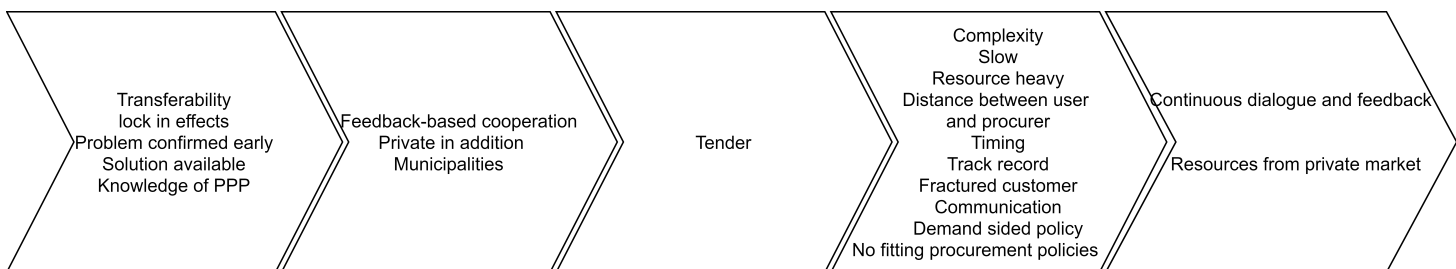


Figure 8: Case 4 placed in the framework

Procurement process

The two municipalities that participated in the pilot project both later held tenders, which the startup won.

Barriers

Straight after the pilot ended, and the startup team was optimistic. However, after just ending a *lengthy process* with their two customers, more barriers appeared. When contacting new municipal administrations, their *procurers did not relate* enough to the challenges solved by their product. To consider it, the startup had to provide whole human resource systems, *not just a single solution*. The startup did not feel any *procurement process fit their services* properly, and felt too reliant on the procurer realizing their problems, stating that public procurement is based on the public sector realizing a need, without entry if the *public sector does not grasp their issues*.

Overcoming barriers

The startup had knowledge of PPP and knew its essential to include the customers as early as possible. Using this, the startup even intentionally delayed development to include the user's input to keep them invested. There was no way this project would have gone through without resources acquired in the private sector.

5.1.5 Case 5

Motivation and drivers

This startup saw an *unique opportunity* in

one of the public sector's primary services, education. Seeing a need for digitization, they grasped the opportunity. Their services *quickly became popular*, getting thousands of users organically. The public sector *provide unique funds* for innovative projects in education, which drove the startup further.

Customers and roles

Their customers are *primarily public schools and municipalities*. With some *private schools in addition*. The base services they provide is a platform for sharing educational content, where the schools are the *content providers*. The users actively give feedback to help increase the quality of the services. Other parts of the public sector also help *fund the project*.

Procurement process

Their business model is based on a freemium service. All the schools can use the base services for free. The income coming from additional services and content. The extra services are either sold below threshold values or through distributors. The startup often tries to sell to a couple of schools in a municipality before targeting the municipal administration to pursue bigger contracts. When their customers only want more significant systems, they sell their services as part of a distributor's portfolio. The distributor then handles much of the procurement process.

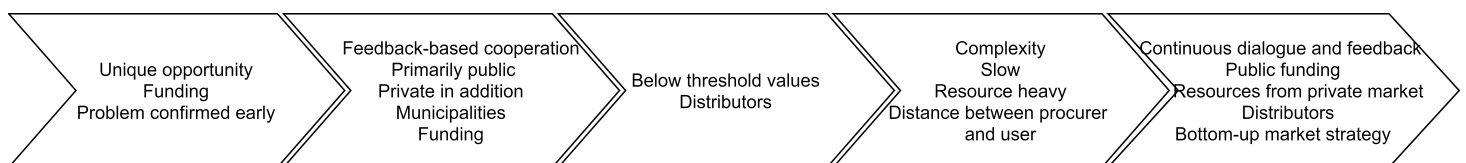


Figure 9: Case 5 placed in the framework

Barriers

Complex, slow, and expensive application periods often lead to non-fruitful meetings. The startup experiences the procurers often not grasping what their users want. The tender descriptions often include services or points the startup does not provide or want to provide. They are experiencing pressure to head the development in an undesired way.

Overcoming barriers

This startup overcomes the barriers they meet without relying on investors. During their initial development, they were able to bootstrap *public funds* and took *jobs as consultants* to cover costs. Some of the barriers were overcome through *distributors*. It took over parts of procurement processes and supplied other solutions when the customers required a more significant product portfolio of solutions. The startup strategically acquires more prominent customer like municipalities by *first selling to schools in their district*.

5.2 Cross case analysis

Each case is compared to each other in Table 7 using the 49 labels found within each main category of the framework.

5.2.1 Motivation and drivers

When combining the labels found within the categories of motivation and drivers, we are left with twelve tags—seven tags reappearing in more than one case.

Three of the cases were motivated to target the public sector because of its *unique opportunities*, either solving problems not found in the private sector, or solving problems that are not big enough. Finding a market that can sustain them in the public sector when there is not a significant private-sector alternative.

The same three cases had government funding to help them on their way. They were utilizing both public funding meant for general innovative startups and funds specifically meant for innovation within their respective industries.

Three of the cases planned their ventures strategically, and acquired market accept before developing their business. This either through customer dialogue, talking to users, or launching basic MVPs to test market response.

Two of the cases' motivation for targeting public-sector seemed based on their product. Before founding the company, the founders behind the startup from case 2 built their prototype as a part of their studies. Starting out with a product, they searched for a market fitting it. The market is happening to be the public sector in Norway. The startup from case 1 is in a similar kind of situation. The problem to be solved was pointed out from a public institution, and the drafts the founders created had great feedback. Searching for a market, it ended with the public sector being the most prominent opportunity nationally. However, both these startups expanded their business internationally a few years, and internationally both these startups predominantly target private customers.

The startup from case 1 and case 2 had somewhat of an artificial driver behind them. Both these startups were founded during their founders education at NTNU School of Entrepreneurship. This being a Venture Creating Program, the students are pushed to start a business. During this time, the founders had access to state scholarships, meaning that they did not have to think about resources to cover salaries during this time. Case startup 4 was in a similar situation during its creation, but that startup was already well established before its attempt in the public sector and therefore not included here.

Case company 3 and case company 4 were both established in the private sector before attempting to get a public sector customer. Contrary to the startups from case 1, case 2, and case 5, which were motivated by the public-sectors unique opportunities, these were drawn by its similarity to the public sector—finding their services transferable.

A driver of case company 2 and case company 4, was having a part of a solution ready. As case 2 presented, before founding the company, they already had a prototype ready. They were realizing from market research that tweaking that product could spawn value in the public sector. Likewise, case company 4 had already developed a similar product in the private market. Their previous product not needing many tweaks to fit this new market.

Both case company 2 and 4 had prior knowledge of the public sector and Procurement Policies before attempting their venture. Case company 2 mentioning they had learned from the mistakes from other startups from their network. Namedropping the startup from case 1 as an example. The interviewee from case 4 also declaring his knowledge without mentioning where he knew it from.

5.2.2 Customers and roles

When discussing the public actors' role in their cooperation, none of the startups included the public actor in the actual development. Each and one feels the importance of including the public customer as much as possible, but still keeping all responsibility for development. They were contacting their customers early on and continually asking for feedback. Maintain a dialogue to ensure the development is heading in the right direction while keeping its customers invested.

As a combination of necessity and opportunity, every startup also has projects and incomes from the private sector. Case

startup 1 and 2 from private customers abroad, and case startup 3 and 4 from their main customers. Case startup 5 provided consulting to the private market to cover expenses until making a sustainable income. They were later targeting both private and public schools.

Three of the cases primarily targeted the public sector, and the income from the private sector was viewed more as an addition to their main revenue. However, this changed when acquiring customers abroad.

The same three startups that primarily targeted the public sector also utilized public funding efficiently. The parts of the public sector that funded them more often than not being another part of the public sector than their customers. Nonetheless, the public sector is often both a financier and a customer.

The public parts of the public sector that worked with the startups in the cases were different municipalities, public-owned enterprises, and NAV. NAV being placed somewhere in-between state and municipal administration.

5.2.3 Procurement process

The most popular alternative to selling their goods or services was keeping the procurement value below threshold values, and avoiding public procurement regulation altogether. None of the startups that primarily target the public sector could fit their product within any category that has tenders. Even though competing and winning tenders being desirable for all of them. Finding workarounds such as keeping their product price purposefully low, or finding other regulation exemptions to pass their product through. Usually, a combination of both.

It is unsure what exact procurement process or routine was used when the interviewee said they could utilize these exemptions. Both these cases were stating it was based on no competing alternatives

to their products. None of them knowing what to call the purchase but stating it was not through PPI.

The two companies that were already established in the private sector compete on tenders to win public contracts.

5.2.4 Barriers

Each case found the process of acquiring public sector customers as complex, slow, and resource-heavy. The complexity resulted in work and efforts not going anywhere. Much time spent on creating a tender application, for then the public actor spending much time on decision making. The case firms experiencing much uncertainty as a result. The complexity and time resulting in resources being spent.

Most of the startups experienced challenges related to their fractured market. Case 1 and case 2 in actuality only having one customer NAV, but many people to please. A fractured market in this sense is meaning many parallels but conflicting segments of the market. Having to please offices in each county in Norway. Not being on official tenders meant the structures and systems defined by regulation policies fell through, and the startups and their products being subject to individual meanings from people working on the Assistive Technology Centres. The startups from case 3 and five experiencing similar situations.

Three out of five cases experienced barriers related to how the public sector often desires framework agreements. It is hard to compete with a single product, the customer often requiring more significant product and service portfolios with similar and supporting items. Observing this to be the case even if their product or service is viewed as objectively better than the solution in use. Case 5 also experiencing needing to utilize a distributor but did not see that as a barrier but a natural part of their operations.

The distance between the user and the one procuring goods and services is perceived as an issue for more than half the startups, resulting in three challenges. First, the one writing up the tender descriptions not being the one encountering the problems to be solved often resulted in misunderstanding the issue or its magnitude. Secondly, the one writing up the tender descriptions having to include opinions and experiences from multiple parallels resulted in complicated, demanding, and inconsistent problem descriptions. Not understanding what they are asking for, also resulting in some unrealistic demands. Lastly, the startups were reliant on having users push their respective administration to initiate the tender or procurement process. Being dependant on the user having the time, will, and knowledge of how to make their respective administration initiate such processes.

Communicating with each stakeholder within each customer, such as NAV or municipalities, proved challenging. Not being on tenders resulted in many individuals to please and to communicate directly. Making sure each county or municipal office or administration had all the information they needed. This especially considering parts of the public sector being perceived as conservative.

As the contract and framework agreements acquired through tenders often last years, some of the startups required timing their efforts. A window to enter proper tenders appearing rarely meant the startups had to strategize and find less desirable alternatives. The startup from case 2 was unable to convince NAV to add a category for their product the first time there was a possibility. These kinds of tenders only being held every four years resulted in six and a half years between the first time the public actor procured one of their products to the time the product type is included in tenders.

Only the two companies that were previously established in the private sector mentioned meeting barriers concerning rerecord. This relating to the fact that they are also the only ones that have competed in tenders.

5.2.5 Overcoming barriers

Every case company was reliant on resources acquired in the private market. Either in the form of investments or revenue. This to cover the costs related to writing their proposals or cover development. The time it took to develop their products and create relations with their customers being time without income.

All the startups early on realized the importance of continually keeping their customers invested. As the procurement processes take time, all the startups worked continually to keep their potential customers in the loop. This made sure the development was heading the correct direction, and that customers were taking somewhat ownership of the product or service. The startups knew that given the long time before contact is made to a potential deal is set, that they had to maintain and tend the relationship regularly. One of the more significant challenges the company from case 3 experienced was not being able to tend these connections during the tenders.

The startups who targeted the public sector from the get-go also all received public funding of some sort. Proving to

have knowledge of public sector opportunities covering both funds and customer options. These funds not providing enough capital, two of the same case companies were able to attract investors to cover the rest.

Attending NTNU school of entrepreneurship proved to help overcome many early barriers. Since students in Norway all get monthly stipends meant the startup did not have to cover expenses related to salaries to begin with. Attending this program also meant the interviewees had access to a vast network of Norwegian Entrepreneurs. Innovation and working with students being a trend, case 2 remarked that their customers seemed eager to start a cooperation. The CEO mentioning that they wanted to exploit that trend.

To overcome the public sector's want and need for more significant product catalogs and portfolios, two of the cases started cooperating with distributors. This has seemed to solve a plural of challenges. First, the distributor now providing their product to the customer as part of a more significant portfolio, tending to the customer's many needs. Secondly, the distributor handling part of the marketing, sales, and procurement of the product or service. And thirdly, handling much of the information and correspondence with the customer, leaving the startup to focus their efforts on improving their products and services.

	Label[Number of appearances]	Case 1	Case 2	Case 3	Case 4	Case 5
Motivation and drivers	Unique opportunity[3]	X	X			X
	Funding[3]	X	X			X
	Problem confirmed early[3]	X			X	X
	Product driven[2]	X	X			
	Pressure from educational institution[2]	X	X			
	Transferability[2]			X	X	
	Solution available[2]		X		X	
	Willingness-to-pay[1]		X			
	Knowledge[2]				X	
	Demands[1]		X			
	Hype[1]		X			
Customers and roles	Less Demanding[1]			X		
	Feedback based cooperation[5]	X	X	X	X	X
	Private in addition [5]	X	X	X	X	X
	Primarily public[3]	X	X			X
	Funding[3]	X	X			X
	Internationally private [2]	X	X			
	Municipalities [2]				X	X
	Public owned enterprises[1]			X		
	NAV[2]	X	X			
	Content providers[1]					X
Procurement process	Below threshold value[2]		X			X
	Tenders[2]			X	X	
	Distributors[2]	X				X
	PPP exceptions [2]	X	X			
Barriers	Complexity [5]	X	X	X	X	X
	Slow[5]	X	X	X	X	X
	Resource heavy processes[5]	X	X	X	X	X
	Fractured customer[4]	X	X		X	
	Timing [3]		X	X	X	
	Only one product [3]	X		X	X	
	Distance between procurer and user[2]			X	X	X
	Communication[2]		X		X	
	Inconsistent tender descriptions[2]			X		
	Conservative customer [2]	X			X	
	Unrealistic demands [2]			X	X	
	Trackrecord [2]			X	X	
	Demand sided[1]				X	
	Transparency [1]				X	
Not fitting any procurement routes[1]				X		
Overcoming Barriers	Resources from private market[5]	X	X	X	X	X
	Continuous dialogue and feedback[4]	X	X		X	X
	Public funding [3]	X	X			X
	Investors [2]	X	X			
	Being students[3]	X	X			X
	Distributors[2]	X				X
	Quality information channels [1]		X			
	Using barriers as drivers[1]		X			
Bottom-up market strategy[1]					X	

Table 7: Cross examination of the cases

6 Discussion

6.1 BPVs and Born-global ventures

When researching Born-global firms to help describe the analogy "born-" some parallels became evident. The similarities became even more so after the analysis. Likewise to Born-global ventures: BPVs compete in a market traditional startups wait years to enter, they compete in a market competing with well-established firms, and they are able to compete by providing innovative solutions. Their strengths are more apparent the more reliant they are on their target market. As suggested with "True Born global" and the presented True BPV here. The cases presented in this study suggest multiple similar traits when comparing BPVs to Born-global ventures. Examples being BPVs being able to compete in different industries in the public sector, having limited financial and tangible assets, and being proficient at utilizing intermediaries for distribution. All these being traits Born-globals are known for (Tanev, 2012; Moen et al., 2008).

6.2 BPVs: the public sector specialist

An interesting finding is that all the cases that primarily target the public sector were also able to access public funding. Either funds directly targeted to innovations in their given industry or funds from entirely different parts of the public sector. This suggests that BPVs that have this focus have traits surpassing only tending to their customers' needs.

The cases which described startups that primarily targeted the public sector had three traits that stood out in regards to PPP and their customers. First of all, every case study startup was able to sell its goods or services to a public

actor. Secondly, even though desirable, none of the startups could fit their product within the tendered category. Still being able to sell their product to their public sector customer indicates having significant knowledge and mastery of handling PPP. Lastly, adding the fact that they all acquired public funding hints to BPVs having vast comprehension of the public sector as a whole.

6.3 A gap in public procurement alternatives

Even with the public sector having prepared procedures for handling procurement of innovation, none of the cases presented here utilized these tools. Each case was handling all of the development themselves.

One of the interviewees brought up an exact example of not fitting any alternatives. Innovation partnerships not making sense to apply for if the development is not expected to last a year. In addition to this, all PPI policy is designed around the concept of the public actor realizing a need for a better solution. The first point in the public sector PPI regulation being defined as "Describe the job to be done": Resulting in no clear path for startups who has a solution, or part of a solution, ready and want to sell.

Every case presented here was dependant on financial resources acquired in the public sector. Suggesting a challenging entrance to the market if the startup lacks skills valuable in the private sector.

6.4 The characteristics of BPVs

Six of the tags used in the final analysis covered every case, suggesting common traits across all BPVs. At the same time,

some traits that might have been expected being present being absent.

Each case company knew the importance of including their customer in the development as much as possible. This while maintaining a healthy distance at the same time. The goal appearing more about keeping their customers invested more than perfecting the product or service. Case company 3 mentioned the lack of communication with potential customers during tender competitions as one of their main challenges. Case company 4 going so far as to deliberately delaying their own development just to be allow the customers to become invested.

No matter if the startup primarily targeted the public sector or not, all the cases had income from the private sector. Most of the cases mentioning that the income from the private sector being detrimental to be able to compete on the public sector at all. This suggest that BPVs have a need to be agile and prepare alternative missions before fulfilling their goal of carrying out their public service.

In the cases presented here, three barriers appeared synonymous with PPP. That being that the PPP is complex, that public procurement tends to be slow, and that this results in the whole process are resource-demanding. Each and every case overcoming these barriers suggests BPVs are still able to handle the complexity, that they are patient, and are able the plan ahead to cover the expenses related to the procurement process. Interestingly, the barriers seem to diminish the more dependant the BPV is of the public sector. Suggesting either that the barriers actually reduce the higher dependency or the perception of barriers easing.

None of the BPVs included their public sector customer in the actual development of their product or service as a co-developer. One of the cases having bad experiences with customers trying to control the direction of the development.

Another outright declaring disbelief in the public sector's ability to take charge of such a project. It is unknown if the reason for the lack of such co-operations happening is the lack of routines being in place, or if such a project is unwanted. The BPVs at least keeping a healthy distance to their customers.

6.5 The public sector segments

In this study, three parts of the public sector were represented. A state/municipal level service provider with NAV, municipal administration, and commercial public-owned enterprises. This is three of them out of the nine possible segments presented in Figure 2. None of the cases suggested any different experiences concerning which segments of the public sector they targeted. Whether the three segments represented are more willing to innovate or cooperate with startups is unknown. Suggesting a need for more research on the topic.

6.6 The Born-private Venture

Using the analogy of Born-public Venture suggests a type of opposite venture. Similarly to how Born-global ventures have their Born-local counterpart. In need of a term to describe a contrasting type of venture to BPVs, a new term is proposed. The Born-private venture is a startup that, from its foundation, has a goal of providing solutions to the private market. This includes all private markets such as commercial, industrial, or global markets. No specific characteristics are meant to define the Born-private venture. The goal of the definition is meant as a foil to BPVs.

6.7 Categorizing BPVs

Looking at the results, a trend becomes visible. With Case 1, Case 2, and Case 5 having striking resemblances in most to all categories. Likewise, the Case 3 and Case 4 being similar to each other, but not to the other three. The first three being the startup whose goal was to target the public sector from the start of their venture, and the latter being the once that targeted the public sector in addition to their private sector customers. Using this, a framework of three categories of BPVs is proposed.

6.7.1 Hardly BPV

The hardly BPV is a Born-private venture which has observed an opportunity in the public sector and has grasped it. Often motivated by the public sector's similarity to the private market. Their public sector customer either needing the same or similar product or service the Hardly BPV already delivers to the private sector.

Similarly to the other BPVs, they are skilled at cooperating with their customers. Listening to every possible input their customer have and are able to keep their customers invested through lengthy processes.

The hardly BPVs main method of public procurement is by competing at tenders. This might be a result of them already delivering similar solutions to the private sector, or lack of awareness of alternatives. At the same time, the Hardly BPVs experience the most barriers. Both these points might be an indication of not grasping the PPP as well as the other BPVs.

6.7.2 Basic BPV

The basic BPV is a startup whose main product or service is just as applicable in the private sector or the public sector but perceives the public sector opportunities to be preferable. The cases shown in this study appeared to target the public sector more out of necessity rather than it being a goal to improve a societal service.

In these cases solving challenges traditionally not being viewed as the public sector's responsibility. The reason these startups being able to sell to the Norwegian government being a strong welfare state. This is shown by the way both startups in this category immediately target the private sector once their solutions are offered abroad.

These startups view the public sector as a necessary stepping stone to a bigger market and are able to strategize accordingly. Showing a keen skill in cooperation, managing heavy regulation, and accessing public funds.

6.7.3 True BPV

The true BPV is the startup type initially conceptualized at the beginning of this paper. They prove mastery in multiple aspects of the public sector. Ranging from how the PPP works, improving public services, and are able to access public funding. They are quite similar to Basic BPVs, but their focus and knowledge result in fewer barriers.

Since there was only one case in this category, more research needs to be done. The apparent trend of fewer barriers, the more dependant the startup is of the public sector, indicates the True BPVs to have an advantage.

6.8 Suggestions for BPVs to come

Looking at how the BPVs presented in this thesis were able to overcome

Hardly BPV	Basic BPV	True BPV
Case 3	Case 1	Case 5
Case 4	Case 2	

Table 9: The cases placed into the BPV framework

their public sector challenges, we are able to create a guide or suggestions to entrepreneurs considering this kind of venture.

First of all, the target customer needs to be included from the beginning. Confirming or disconfirming the need for the solution. During this phase, the goals should be to talk to as many potential users as possible. This point has three goals; validate the need for the solution(1), make the customer invested(2), and get key insight for the development(3). The data suggest that this increases the probability of accessing public funding too.

Secondly, prepare for the long incubation time. In all likelihood, especially if the startup is not already established elsewhere, the incubation time is long. Each case here was reliant on resources external from the public sector. Therefore, if the goal is to target the public sector, an entrepreneur should look for other sources of income. Either through taking on jobs in the private sector or by finding investors for the project.

During the incubation time, there

should be a focus to learn about PPP and how the target public sector customer procures. There are a couple of alternatives available for possible cooperations during development, such as innovation partnerships. If such a deal is not achieved, there is no need to fret, since neither of the BPVs presented managed this either. The recommended procurement routes to look at is how the customer handles purchases below 100 thousand NOK, and innovative solutions not covered by procurement regulation.

If the target customer usually operates with framework agreements, there should be a goal of finding and signing an agreement with a distributor that provides solutions to the same customer. This could prove to be both a method of reaching the target audience, and to reduce the time spent on negotiations, as the distributor is likely to manage more of the sales funnel.

Throughout this process, it is recommended to keep the customer as tightly in the information loop as possible. Before, during, and after the development.

7 Conclusion and further research

7.1 Conclusion

The research aimed to delineate Born-public ventures, and by cross examining the five cases certain trends were revealed. To fulfill the mission statement two RQ's were constructed. The trends made it possible to answer RQ1, "What are the characteristics of Born-public ventures?". All Born-public ventures show expertise in handling multiple segments of the public sector. From providing tailored solutions, to managing challenging procurement regulation, and to access public funding.

Further on, the cross-examination uncover certain trends which answered RQ2, "Are there any different kinds of Born-public ventures?". Certain characteristics being more apparent the more the startup focuses on the public sector. Using this three categories of BPVs are proposed. The different kinds of BPVs having different motivations to target the public sector, and experiencing different barriers. "Barely BPV" is the first category. This type of BPV does not primarily targeting the public sector, but still pursuing public sector opportunities to add to their arsenal. Secondly, the "basic BPV" are Born-public ventures who pursue all available market opportunities. Primarily targeting the public sector as the opportunities appear greater there based on their solutions. Lastly, the "True BPV". The true BPV is a startup who seeks to improve a public services.

In addition describing what a Born-public venture is, what is not was defined. The Born-private venture are startups whose primary and original target market is outside the public sector.

7.2 Implications

The public sector has multiple procedures to handle procurement of innovation.

However, none of the startups presented in this study utilized this. Suggesting a need for improvement if the public sector desires to cooperate with startups. This paper could prove a key insight for policy makers, seeing the challenges from the startups point of view.

The guide presented in the discussion could prove helpful to entrepreneurs considering venturing in the public sector. If a venture is to succeed in the public sector, the entrepreneur is recommended to adapt the traits BPVs are shown to have here.

7.3 Further research

- Now with three categories of BPVs opens the possibility of further research on the topic.
- The similarities between BPVs and Born-global ventures became more apparent as the research went on. A more systematic comparison of the two might show interesting results.
- As only one "True BPV" was found and included in this study, more research is necessary on the topic.
- None of the startups included in this study accessed PPI opportunities. If there are any, and how it affects the startup is unknown.
- As this study is conducted through the eyes of the startups, it could be interesting to study the public sector actors and their experiences working with startups.
- As all the cases had some relation to NSE, an interesting study could study the necessity and effects of ecosystems in relation to BPVs.

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APPENDIX

Appendix 1: Interview guide

Interview guide (1 hour)

Introduction (10 minutes)

- Introduce who i am, and explain the theme and purpose of the interview.
- What type of firm do you represent?
- What is your role and how long have you been in business?

Customer (15 minutes)

- Could you describe your target customer?
- Could you describe the process of how you acquired your first customer(s)?
- Any failed attempts before settling the first deal?
- How do you experiencing working with the customer(s)? If multiple, how do they vary?
- How do you believe your startup has been shaped by your customer?

Roles (10 minutes)

- In terms of co-developer, financier, or customer. Could you describe the role the public actor had, and your impression of the experience?
 - If you have experienced having the public actor as more than one of the roles. Which did you prefer, and why?
- Have you engaged in innovation partnership or other similar co-operations with a public actor? What was that like?
- Depending on the role, did you have do adapt in any special way? How and why?

Barriers (10 minutes)

- What do you perceive as the biggest challenge with public customers?
- Public procurement have policies and red tape not found in the private market, how do you handle and/or experience it?
- Have you had any detrimental challenges, that if not resolved would ruin your business?

Drivers (10 minutes)

- Could you describe your motivations for targeting public actors?
- If not for the public actor, where else could your services or products be valuable?
- Have you found any unique opportunities when being public customer oriented?

Further work (5 minutes)

- Inform them that a transcript will be sent, once it is transcribed.
- Could i send you additional questions?

