Impact of changes in purchasing practices in the municipal procurement of youth healthcare services in the Netherlands

Master Thesis Business Administration

UNIVERSITY OF TWENTE.

PPRC PUBLIC PROCUREMENT RESEARCH CENTRE

Willemien Hoogenraad (s1971328)

First supervisor	Prof. dr. L.A. Knight
Second supervisor	Dr. F.G.S. Vos
Company supervisor	Dr. ir. N. Uenk

Acknowledgements

First and foremost, I would like to acknowledge and thank several people who helped me greatly in the process of writing my master thesis. First of all, I would like to thank Niels Uenk for giving me the opportunity to do my thesis at Public Procurement Research Centre (PPRC) and teaching me a lot about the world of youth health care procurement in the Netherlands. Without the guidance and the data provided by him and PPRC, this thesis would not have been possible. Secondly, I would like to thank my first supervisor Louise Knight for all the input and ideas for my thesis the past months. Whenever I was stuck with writing my thesis, she was always ready to help and had new ideas on how to make it more interesting. I would also like to thank my second supervisor Frederik Vos for the help regarding the statistics and SPSS and how to present the results of the analysis in an interesting way.

My special thanks goes out to the Business Administration study advisor Charlotte Röring, who was always there when I needed to someone to talk to. She helped me greatly on an emotional and personal level, which is something I am very thankful for. I am also thankful for my friends that I made in the past years at student association Navigators Studentenvereniging Enschede (NSE). Thank you for frequently asking how I was doing, and helping me out by proofreading and providing mental support along the way.

I hope you enjoy reading my master thesis!

Willemien Hoogenraad

Enschede, December 2022

Abstract

In 2015, municipalities in the Netherlands became responsible for organising youth care, including contracting youth care services. This decentralisation was aimed at improving the quality of youth care, reduce costs and reduce the use of these services. One of the key instruments to achieve these policy goals is the strategy in purchasing youth care services. Different purchasing practices have different incentives and competitive mechanisms, which can be expected to impact the efficiency and quality of the contracted care providers. In the years following 2015, some municipalities were consistent in their purchasing practices, while others kept changing their purchasing practices, typically as a means to achieve better outcomes in terms of costs and quality. The question is whether frequent major changes lead to better results or that these changes actually come at a cost. In this research, the impact of changes in purchasing practices in the municipal procurement of youth care services is studied.

This study generated some interesting results. First of all, in the dataset at hand, changes in how suppliers are contracted is associated with a higher average relative increase in costs compared to municipalities that did not change how suppliers are contracted. Meanwhile, changing the type of contracts used is associated with a lower average relative increase in costs. Secondly, while current popular opinion among municipalities and high level politicians is that non-selective contracting of suppliers (such as Open House) may be one of the causes for the rise in cost, this is not supported by the findings of this research. This research underlines the importance of evidence-based policy studies for shaping policy and decision making, and urges municipalities to be careful when making changes in purchasing practices, especially with regards to the selection of suppliers.

Company Introduction

Public Procurement Research Centre (PPRC) is an organisation that undertakes research and consulting regarding public procurement. PPRC was founded in 2013 by emeritus professor Jan Telgen, who was a professor at the University of Twente between 1987 and 2018. PPRC is located in Lunteren, centrally in the Netherlands. The main goal of PPRC is to generate and distribute knowledge about public procurement by combining scientific research with practice oriented research. New insights gained from their research are distributed through publications, guest lectures, training sessions and interviews. Within the public procurement field, some areas are of particular interest to PPRC: innovative purchasing, group purchasing, purchasing selection criteria, healthcare domain and socially responsible

Table of Contents

Overview of Figures

Overview of Tables

1 Introduction: The decentralisation of youth healthcare services in the Netherlands

In this thesis, the impact of changes in purchasing practices for purchasing youth healthcare services is studied. To do so, first a theoretical foundation must be created. First, the origin of the municipal procurement of youth healthcare services will be dived further into, alongside the goals of decentralisation and some of the challenges municipalities have in reaching these goals. The structure of this thesis is rather unconventional, as the literature is introduced rather late in chapter 3. As this is a very practice-oriented piece of research, first the situation is described thoroughly. Theory is used later on to create the propositions.

1.1 Introduction of Jeugdwet 2015 in the Netherlands

In 2015, a law named Jeugdwet 2015 came into effect in the Netherlands. This law made municipalities in the Netherlands responsible for purchasing youth healthcare services for their own inhabitants, while this was purchased by central government before. Municipalities became responsible for purchasing different kinds of healthcare services, ranging from ambulatory care to residential care. An overview of all the healthcare services falling under Jeugdwet 2015 can be found in Table 1. Dyslexia is often purchased separately, while mental health care, day care and other ambulatory are often purchased together. At the same time, the residential care options are often purchased together, and youth probation and youth probation as well.

Healthcare service	**Explanation**
Dyslexia	Diagnosis and treatment for children with severe dyslexia
Mental health care	Mental health care service, ranging from general mental healthcare to highly specialistic healthcare
Other ambulatory care	Other options of ambulatory care not included in mental healthcare, dyslexia or day care options.
Day care	Patient spends at least part of a day, or an entire day individually or with a group at the location a care provider nearby. Usually run by a multidisciplinary team.
Youth protection	Measure appointed by a judge to appoint child protecting measures and protect the safety and development of the child.
Youth probation	Combination of guidance and control for youth people from the age of 12 that came into contact with the police or school attendance officer that resulted in a conviction. Client receives personalised guidance to avoid repeating the same mistake.
Foster care	Staying in the home of a foster family. Can be short or long-term.
Residential care other than foster care	Staying in a group home or something similar. Can be short or long-term

Table 1: Health care services municipalities provide with Jeugdwet 2015. The categories used for care are the same as the ones used in the PPRC dataset.

There were several reasons as to why the decision was made to decentralise youth healthcare services. The most important goals are summarised on the website of the government as follows (Rijksoverheid):

1. Using the own capabilities of the youth, their parents and their social network. It is important that the youth remain in control of their life, and search for help and solutions within their own environment, aided by professionals.
2. Decrease the prescription of medication and decrease the amount of people making use of care.
3. Giving personalised help earlier to vulnerable children.
4. Reducing problems arising from many different care providers associated with more complex cases: one family gets one plan with one care provider. This means harmonizing care services and better collaboration among care providers is needed.
5. More freedom and less administrative burdens for youth professionals to improve quality but also be more efficient.

These goals are quite ambitious. While offering high quality, more personalised care, the goal is to decrease the amount of clients in care and costs through being more efficient. How these healthcare services are purchased are also of importance in order to reach these goals. In order to receive high quality care, the care suppliers contracted need to be of sufficient quality. Municipalities determine through purchasing the requirements a supplier has to meet in order to be contracted for youth healthcare services. Furthermore, the kind of contract determines reimbursements and how the spendings can possibly be controlled through fixed budgets and more. Different municipalities have different approaches to how they purchase their healthcare services, and they may change their practices over the years. Given the influence purchasing has on how youth healthcare works in the Netherlands, it is relevant to study the role in procurement with regards to how municipalities perform on the Jeugdwet 2015 goals.

1.2 Purchasing youth healthcare services in the Netherlands

To analyse the impact of purchasing on the costs of youth healthcare services, it is important to first establish how the procurement of healthcare services works in the setting of municipalities in the Netherlands. First, different procurement models will be introduced, using *Commissioning of social care services* by Uenk (2019) as the main source of information. A summary of the different contracting models can be found in Table 2. Then, examples of how several different municipalities purchase their healthcare services will be discussed.

1.2.1 Different models of how municipalities in the Netherlands purchase youth healthcare services

1.2.1.1 AWBZ-model – limited suppliers, fixed (maximum) annual budgets, old model

This model is named after the Algemene Wet Bijzonder Ziektekosten (AWBZ) act which regulated social care services in the Netherlands until 2015. As such, this AWBZ model resembles the former approaches used to purchase healthcare services. In this model, a limited number of care providers are contracted, and for each of them, an annual fixed budget is determined. Especially in the beginning of the implementation of Jeugdwet 2015, this approach was used a lot as it simply is a continuation of the procurement approach of before. Furthermore, this continuation of practice means that there is little change for clients, as they can keep receiving care from the same providers.

The AWBZ model has some serious drawbacks. First of all, the fee-for-service reimbursement rewards volume, which rewards the supplier for having more clients and more treatment. As such, it is beneficial for suppliers to provide as much care as possible. In principle, the fixed budget allocation

should limit the extent of supplier-induced demand. However, as a result of that, care providers can react by creating a waiting list, which is undesirable as people cannot access the care they need. Furthermore, long waiting lists can put pressure on politicians for additional budgets. Finally, this approach is not helpful in reaching the goals of Jeugdwet 2015 of more tailored care, better integration and the reduction in costs. These ambitious goals are difficult to realise by continuing to purchase everything in the same way as before.

1.2.1.2 Population-based commissioning – main supplier(s), lump sum budgets and disruption of market competitiveness

In a population-based commissioning model, a municipality contracts one main contractor per district of the municipality for certain types of care. The main contractor per district is responsible for all care services agreed upon. This model has a large influence on the market of care providers, as usually more care providers are present in the market when this model gets introduced. The main contractor receives one lump sum budget per year, based on the population it is responsible for, regardless of how much care is provided. There are contracts between the main contractor and municipality for quality requirements such as average waiting time.

One of the main advantages of this model is that it has incentives for prevention rather than treatment, which is one of the goals of Jeugdwet 2015. Because there is only main contractor, the management can be more responsive to a patient's changing needs and strive for early signalling and even prevention in some cases. Furthermore, with only one contractor, contract management and administrative burdens are easier to handle for municipalities. However, this model also has some serious drawbacks that should not be easily overlooked. First of all, the care provider has a financial incentive to provide as little care as possible, as they receive a fixed amount of money regardless of the number of clients they have. Secondly, the competition in the market is heavily disturbed by having only one main contractor, resulting in the municipality creating an oligopoly, or even a monopoly position. By having only one main contractor, the municipality is very vulnerable if this main contractor does not live up to the expectations of the municipality. As many other care suppliers that are not subcontracted will disappear when this model is implemented, there is no immediate way to revert back to the old situation.

1.2.1.3 Catalogue model – many suppliers, great freedom for clients, uncertainty for suppliers

In the catalogue model, many care providers are contracted by a municipality to provide different kinds of social healthcare services. One of the most well-known versions of the catalogue model is Open House, which will be further discussed in Section 1.5. The catalogue model has no contracts with a fixed budget allocation but uses standardised framework agreements to contract a wide variety of care providers. In order to get clients, the care provider must be chosen by the individual client as they have no turnover guarantee. There are two reimbursement options within this model, namely fee-for-service or outcome-based bundled payment. One of the main advantages of this model is that the client has great freedom to choose between many care providers. Furthermore, in this model new care providers are given the opportunity to provide social care services beside incumbent care providers, which causes more competition. In contrast to the population-based commissioning model, the municipality maintains coordination of the commissioning and contract management of all care providers, which results in a strong buyer position.

However, the catalogue model also has several disadvantages. First of all, a substantial number of care providers are contracted, which requires a considerable effort in both contract management and administrative burden. To illustrate the scale of this, it is not unusual for a municipality using this model to have 300 contracted care providers for one type of healthcare service. Furthermore, the

care providers do not have any turnover guarantees, weakening the position of incumbent care providers that had turnover guarantees in the AWBZ-model.

Model	Selectivity of suppliers	Reimbursement	Advantages	Disadvantages
AWBZ-model	Limited suppliers contracted	Fixed maximum annual budgets and Fee-for-service	Expenditure control through establishing care budgets Easy to adopt due to continuing status quo	Volume is rewarded, supplier induced demand. Continuation of old-policy, likely not sufficient for reaching goals of Jeugdwet 2015
Population-based commissioning	One main contractor per district or segment of youth care	One lump sum budget per year	Prevention instead of care is rewarded Less administrative burdens	Competition in the market heavily disturbed, creation of a biliteral monopoly Rewarded for providing minimal amount of care
Catalogue model	Standard contract with wide variety of care providers	Fee-for-service or outcome-based bundled payment	Client has great freedom to choose provider New care providers can join market	No turnover guarantee for suppliers Higher administrative and contract management burden

Table 2: Summary of the different contracting methods used by municipalities for buying youth healthcare. Adapted from ...

1.2.1.4 Open House and Public Contracts

In this thesis, a distinction is made between two frequently ways of purchasing youth healthcare services in the Netherlands, which are Open House and a public contract. In this part of the thesis, Open House and a public contract are defined. After that, the main differences between these two is explained.

1.2.1.4.1 Defining Open House

Municipalities outsource their youth healthcare services in order to provide care to their citizens as is required by the law since 2015. There are several options on how to source youth healthcare services, with Open House being one the most frequently used contracting instruments for purchasing youth healthcare services. In 2018 alone, 90% youth healthcare services were purchased by municipalities using Open House, making it by far the most used instrument for purchasing youth healthcare services (Uenk, Wind & Telgen, 2018).

The Open House procedure has several characteristics. The open house contract is published on a contract database, usually a platform such as Tenderned. A contract is awarded to all suppliers that meet minimum quality and eligibility requirements that are set by the municipality. Optionally, suppliers can also be contracted during the contract, as long as they meet the requirements set by the municipality. In this system, the client themselves can choose among the contracted providers. Thus, care providers only get clients if they get selected by the client, which causes competition during the contract in the market as well, as care suppliers have an incentive to differentiate themselves from competition in order to get chosen by the client. This also means that care

providers in an Open House system have no guaranteed turnover, as clients have to specifically choose them.

In order for this system to function, the municipality has to determine appropriate and fitting reimbursements for the care provided. Moreover, the municipality is obliged to contract every supplier that meet the set minimum requirements and request a contract. This means the municipality does not have control of how many parties are potentially contracted, which can be many, which could possibly result in a lack of control. Moreover, the contracting of many suppliers results in more contract management being needed. Still, Open House also many advantages, such as that no European tender procedure is necessary, and the client has a lot of freedom to choose their own care provider (de Koster, 2019b).

1.2.1.4.2 Defining a public contract and the main differences between a public contract and Open House

The most frequently used option after Open House is a public contract. Generally speaking, a public contract is an agreement between an individual or company and a public authority that commits the former to undertake work from the latter (ContractsCounsel, n.d.). The public organization, which is the municipality in the context of this research, specifies the contract through technical specifications, and publishes a contract notice with selection and award criteria. After this, interested organisations can submit offers. Then, the municipality checks whether submitted tenders meet selection criteria, ranks the submitted offers based on the award criteria, such as price and quality, and awards the contract to the best offer or offers. This is a competition to win a contract, and therefore this is referred to as competitive contracting. These contracts are subject to public procurement regulations to ensure that the competition is fair. This means that every interested organisation is treated equally, there is no discrimination, and the public authority does not impose disproportional quality requirements.

Compared to a public contract, Open House lacks the competitive element in the procurement procedure, as every organisation that meets quality requirements and the other terms in the contract is awarded the contract. However, this contract is not a guarantee of having clients, as the client has to request a specific supplier amongst the contracted organisations. As such, the competition in an Open House system is between care providers for every new client. Meanwhile, as within a selective public contract usually only a limited amount of care providers is contracted, the competition is less for getting every new client and instead more fierce in the tender process to get contracted. For this reason, in the analysis there is a difference between 'selective contracting' – where the municipality organizes a competition and awards contracts to the best care provider(s), and 'non-selective contracting' where there is no competition over getting contracted.

1.3 Examples of how municipalities purchase youth healthcare services in the Netherlands

In order to get a better idea of how municipalities purchase their health care services, examples of two different municipalities are given. For each of these municipalities, the most important practices in instrument, cooperation, selectivity of suppliers, reimbursement method and contract form are described. Also, if there were any notable changes in their procurement practices, this is mentioned as well.

1.3.1 Municipality A

Municipality A is located in a rural area of the Netherlands, and has between 20 000 and 50 000 inhabitants, divided between several towns. In the period of 2018 to 2020, only dyslexia was purchased again. For all the other care forms, they still had active contracts running in the time frame of 2018 to 2020. Municipality A is characterised by little change in purchasing practices in this period and purchasing very similarly across the different care forms. For example, the contracting instrument is a public contract and is the same for every care form. Furthermore, they also use minimum requirements to contract suppliers for all their care forms, including more specialistic care such as youth probation. Moreover, the contract defines a framework agreement, allowing for contracting new suppliers, during the duration of the contract for all their care forms.

However, there are some slight differences between care forms in terms of working together with other municipalities. All ambulatory care and residential care are purchased together with only 5 other municipalities that are located in the same region. However, for youth probation and youth protection, it is bought together with 12 municipalities. As youth probation and youth protection is very specialistic care, it is usually purchased together with a larger region. Interestingly, since 2019, municipality A uses output reimbursement as their reimbursement system. In 2018, this was only different for dyslexia where they used a mixed reimbursement method. When purchasing for dyslexia care again in 2019, they changed the reimbursement method to output related reimbursement, making the reimbursement system the exact same across all care forms. In the period 2018 to 2020, municipality A experienced an relative increase in costs of 14%, which is the average in this period across all municipalities.

1.3.2 Municipality B

Municipality B is a large city between 150 000 and 250 000 inhabitants, located outside of the Randstad. This municipality purchased all ambulatory care and residential care again in both 2018 and 2019. This means that in 2018, their contract only ran for year. This was perhaps because of large financial struggles in financing their youth healthcare from the previous contract before 2018. When they purchased again in 2019, a few changes were made. In 2019, the instrument for ambulatory care was changed from a public contract to Open House. Through this change, Open House is used as an instrument for all care forms except for Youth Probation. There were changes in cooperation with other municipalities too. In 2019, all ambulatory care and residential care was bought together with 11 municipalities instead of the 21 in 2018. Meanwhile, youth probation is still purchased together with 21 municipalities.

In terms of selectivity of suppliers, minimum requirements is used for every care form except for youth protection and probation. Meanwhile, the reimbursement method was changed from output to input reimbursement in 2019 for ambulatory care, causing input reimbursement to be used for all care forms. There were changes in contract form as well. In 2019, the contract form changed from a framework agreement allowing for contracting new suppliers during the duration of the contract to a contract form that specifies a maximum budget for ambulatory and residential care. This may be an attempt to better control costs. Unlike most municipalities in the Netherlands, municipality B actually experienced a relative decrease in costs of 1%. This means that their spendings on youth healthcare stayed roughly the same in the period 2018 to 2020, which is relatively rare.

1.4 Complications with realising goals of Jeugdwet 2015

1.4.1 Increasing costs and amount of clients in care since adoption of Jeugdwet 2015

There are several complications in reaching the goals of Jeugdwet 2015. First of all, the amount of clients and costs have only been increasing since the decentralisation. One of the goals of Jeugdwet 2015 was to decrease the amount of people in care. As can be seen in Table 3, there is an increase in the number of people receiving youth healthcare in the Netherlands, more than 1 in 8 people made use of youth healthcare services in 2021 compared to roughly 1 in 9 in 2015. There are large differences between regions in how many people make use of youth healthcare services. In the municipalities Tiel and Terneuzen, 24% and 21% of people younger than 18 make use of youth healthcare services, while in Westvoorne only 7% use youth healthcare (Bakker, 2022). Still, almost all municipalities have experienced a growth of number of children making use of youth healthcare. This increase in clients makes it difficult to decrease costs as well: even if the amount of costs per clients go down, the total costs will not decrease if the amount of people in care keeps increasing.

	2015	2016	2017	2018	2019	2020	2021
Youth that receives youth care	370 410	391 780	404 040	414 685	428 215	418 855	443 320
Percentage of youth receiving youth care	10.8%	11.5%	11.9%	12.2%	12.8%	12.6%	13.4%

Table 3: Amount of youth aged 18 and younger that receive youth health care in the Netherlands (Nederlands Jeugdinstituut, 2022).

As the municipalities were considered to be closer to their citizens and able to deliver more efficient care, the costs for youth healthcare were expected to decrease with the decentralisation. Municipalities received 16 billion euros to provide youth healthcare and adult social care services which is 20% less than what the central government spent on this before the decentralisation (Lucie). Since the implementation of Jeugdwet 2015, municipalities have struggled greatly to finance youth healthcare services, with budgets frequently being exceeded. In 2018, the total shortage of all municipalities together was estimated to be between 1.2-1.5 billion euros, as can be seen in Table 4. To illustrate the scale of the problem further, according to research done by Dutch research centre It's public, 97% of municipalities within the Netherlands have spent more on youth healthcare than the budget they receive from the central government in 2019 (It's public, 2021b).

	2016	2017	2018	2019
Budget shortage of what municipalities spend vs received for youth healthcare	0.1-0.2 billion euros	0.9-1.1 billion euros	1.2-1.5 billion euros	1.2-1.4 billion euros (after 420 million extra budget from the central government)

Table 4: Budget shortages in youth healthcare by municipalities (it's public, 2021a).

To solve some of the budget shortages, the central government gave 420 million euros extra for youth healthcare, and 300 million euros extra in 2020 and 2021. However, this was not enough according to the municipalities, and talks between the central government and Vereniging van Nederlandse Gemeenten (VNG) did not result in the improvements the municipalities wished for. Because the municipalities considered themselves to be structurally underfinanced for purchasing youth healthcare, they started an arbitration against the central government in 2021. An arbitration

is a private initiative outside of court, providing binding resolution of disputes (Paulsson, 2013). Not a judge, but experts on the subject decide the verdict. The municipalities won this arbitration. According to the arbitration committee deciding on the verdict, municipalities should receive 1.9 billion euros extra for providing youth healthcare in 2022, and 1.6 billion euro extra in 2023 and 2024. After those years, the extra money should be slowly decreased to 800 million extra in 2028 (de Koster, 2021). While no permanent decision has been made regarding this yet, the general expectations of municipalities are that the central government will mostly follow the suggestions of the experts.

1.5 Political debate regarding Open House

Right now, there is a lot of discussion on a political level surrounding whether the widespread use of Open House is appropriate for the healthcare market. This discussion has been going on for a while. Back in 2019, De Jonge, the minister of healthcare at that time, criticised the use of the Open House procedure within healthcare. According to De Jonge, Open House results in a large amount of contracted care providers, resulting in a lack of control for municipalities and lack of overview of care providers to choose from for the clients due to an overabundance of suppliers (de Koster, 2019a). Furthermore, he mentions that the lack of turnover guarantees causes continuous competition between care providers, while cooperation is key within healthcare services. According to De Jonge, the uncertainty in turnover causes care providers to be reluctant in doing big investments.

Instead of using Open House and the requirements it brings to the table, De Jonge is an advocate for purchasing healthcare services through long contracts with local suppliers who have turnover guarantees. According to him, this would help municipalities in reaching the long term goals within youth healthcare as specified by Jeugdwet 2015. Interestingly, he also brings up the point that many municipalities find the entire tendering / procurement procedure needlessly complicated under current European law, while this would not be mandatory if municipalities purchase through the Open House procedure. Furthermore, usually Open House contracts often run for a very long time through making use of clauses to amend any part of the contract. Finally, minister De Jonge mentions that some health care providers are making too much profit: according to him, healthcare ‘’should not be a lucrative market, and definitely not a European market’’ (de Koster, 2019a).

In May of 2022 (this year), minister Weerwind (Legal Protection) and state secretary van Ooijen (healthcare) published a letter to the parliament of the Netherlands with their vision on healthcare and the needed improvements (Weerwind and van Ooijen, 2022). In this letter, Open House is mentioned and criticised several times. The first Open House is mentioned, it is in the introduction. The number of healthcare providers registered in the Netherlands has tripled over the last few years: in 2014, 1180 organisations for youth care were registered, which increased rapidly to 4186 locations in 2021 (Megens, 2021). According to the minister and state secretary, Open House has encouraged this rapid growth in care providers. Weerwind and van Ooijen suggest that most of these new care providers are focussed only on the delivery of light kinds of care, which are the most profitable.

Furthermore, in an Open House construction, all these care providers are contracted if they meet the minimum requirements. Combining this with the rapid growth in care providers, this can lead to a situation where an ever increasing amount of care suppliers is contracted. This causes a very large quantity of contracted care providers that keeps growing. According to the minister, this results in a lack of control for municipalities and great administrative burdens, while some care providers make a lot of profit.

Near the end of the letter, several measures are proposed in order to improve the quality and financial situation of youth healthcare services as a whole. One of the suggestions is the restriction or even possible ban of the use of Open House entirely. Right now, they are doing more research into the possibility of banning the use of Open House altogether. This is a drastic measure that would hit many municipalities. In 2018 alone, 90% of the youth healthcare services were purchased by municipalities using Open House (PPRC, 2018).

2 Research question

Municipalities have differing approaches when it comes to purchasing youth healthcare services, with the aim being to ultimately reach the goals of Jeugdwet 2015. Municipalities are under a lot of political pressure to improve and reduce costs, especially with the huge exceeding in budget over the last years, as demonstrated earlier in Table 4. In order to perform better, some municipalities switch to a new procurement model in order to fix issues the old purchasing model had. However, changes in purchasing practices and reorganisations also cost a lot of money, and might not result in an immediate improvement of the situation. As of yet, it has not been researched whether changing healthcare services purchasing leads to better or worse results. The main research question is as follows:

Do changes in purchasing practices with regards to how municipalities purchase their youth health care services affect the performance of municipalities with regards to costs?

To be able to answer this question, the right data is needed. On a yearly basis, PPRC collects purchasing documents of municipalities in the Netherlands with regards to how they purchase youth healthcare services, and this data is coded into a dataset. As such, this dataset contains information on how all municipalities in the Netherlands purchased their youth healthcare services from 2018 onwards. A more detailed introduction to the PPRC dataset can be found in section 5.5.1. Using this information, it is possible to determine whether municipalities made changes in their purchasing practices. Combining this data with performance data published by Centraal Bureau Statistiek (CBS), it is possible to test whether changes in procurement practices of municipal youth healthcare have an effect on the financial performance. In order to test this, the research question will be refined into testable propositions that follow later in the thesis.

Being able to answer this research question is useful for several reasons. On a theoretical level, measuring the impact of changes in purchasing practices on the performance of municipalities regarding their youth healthcare services has not been done before. Furthermore, being able to answer the research question will be highly useful for policy makers within the government and municipalities as well. Knowing what kind of changes in purchasing practices may influence performance whether it would be positive or negative will help greatly when decisions need to be made regarding the procurement of youth healthcare services.

3 Theory

As mentioned in the last chapter, municipalities have adopted different ways of purchasing in order to reach the goals of Jeugdwet 2015. Many municipalities experience difficulties financially with the frequent increase in spendings and the rising amount of clients in care. Still, it might be the case that municipalities with certain behaviours in purchasing their healthcare services perform better than others. In this chapter, several propositions are proposed in order to test whether municipalities that purchase their healthcare services in a certain way perform better or worse than others. First, theory is provided in order to lay the theoretical foundation on which these propositions are built. Afterwards, the propositions themselves are introduced. The testing of the propositions is found in a later chapter.

3.1 Different kinds of changes and their effects

As mentioned in the introduction, municipalities have different approaches to purchasing their healthcare services, and possibly change how they purchase their healthcare services over time. Change is an ever-present part of organisational life at both a strategic and operational level (Burnes, 2004). It is important for any organisation to identify where it needs to be in the future, and how to manage the changes that need to be made in order to reach these goals (By, 2005). There are different kinds of change, ranging in size and effects. One kind of change is discontinuous change, which can be described as a drastic change, a single, abrupt shift from the past (Luecke, 2003). Advocates of discontinuous change such as Nelson (2003) argue that change cannot be expected to happen during a steady state: rather, she argues that ''…there are periods of incremental change sandwiched between more violent periods of change which have contributed to the illusion of stability once assumed to be the case''. Through discontinuous change, the momentum of the organisation is shifted drastically, hopefully in a more positive direction (Luecke, 2003). However, the possible positive effects resulting from this do not last for a long period of time, due to this approach to change often causing complacency, defensive behaviour, routines, and an inward focus (Luecke, 2003). As a result, a situation is created in which a drastic change is required once again in order to positively shift the momentum.

The alternative situation to the one of discontinuous change, is continuous or incremental change, where the organisation continually perceives and reacts to the external environment (Luecke, 2003). According to Burnes (2004), continuous change refers to the ability of an organisation to change continuously to keep up with the fast-moving pace of change. However, Mintzberg (1978) argues that strategies do not always change in a continuous way: ''change, even incremental change, takes place in spurts, each followed by a period of continuity''. Thus, organisations experience distinct periods of change and continuity (Mintzberg, 1978). As such, the term incremental change is more accurate to use. Incremental change is described by Burnes (2004) as ''being a process whereby individual parts of an organisation deal incrementally and separately with one problem and one goal at a time''. The best results of this kind of change are yielded when it is implemented through successive, limited and negotiated shifts (Burnes, 2004).

Kind of change	Definition	Effects
Discontinuous change	Drastic change, a single, abrupt shift from the past (Luecke, 2003).	• Momentum is shifted dramatically (hopefully in a positive way, but not necessarily so) (Luecke, 2003) • Positive effects do not last for a long time, discontinuous change needed again.
(Continuous) Incremental change	Change where the organisation continually perceives and reacts to the external environment (Luecke, 2003), small but regular changes.	• Not necessarily continuous, distinct periods of change and continuity (Mintzberg, 1978). • Best results of this kind of change are yielded when it is implemented through successive, limited and negotiated shifts (Burnes, 2004)

Table 5: Different kinds of change and their effects summarised

3.1.1 Importance of stability

Change within organisations is happening at a faster pace than ever before. Globalisation and technology increase the speed and reach of change, resulting in the need for faster adaptation (Hess, 2014). This adaptation requires learning processes such as critical thinking, critical conversations and experimentation (Hess, 2014). At the same time, the political agenda of government is driving more changes in the public sector as well (Balogun & Hailey, 2008). Thus, in order to reach desired goals and keep up with competition, change is necessary. However, a certain degree of stability is needed as well. While change and stability may seem contradictory at first sight, successful firms function in an environment between consistent execution and adaptative innovation, so between stability and change (Brown, Brown, Brown, & Eisenhardt, 1998). Stability is defined by Burchell and Kolb (2006) as ''the status quo in organisational features and processes, including all aspects of acquired learning and accepted practices''. In order to obtain sustainability between change and stability in the firm needed for development of the firm, a balance between the two is necessary in order to avoid chaos and inertia, as can be seen in Figure 1.

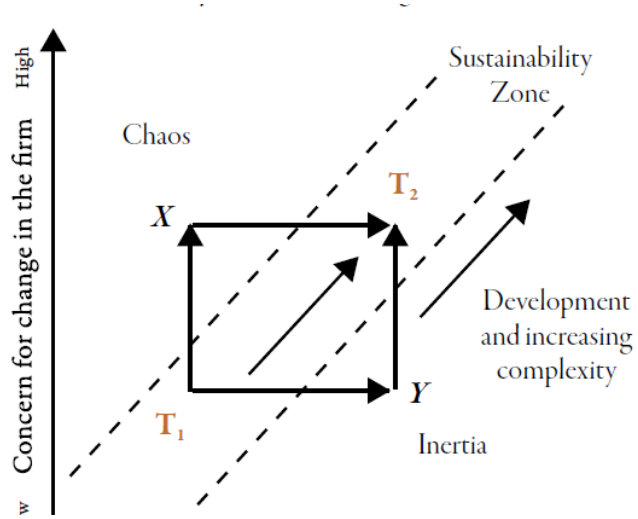

Figure 1: Sustainability zone between stability/inertia and change/chaos. Adapted from Burchell and Kolb (2006)

Stability helps with having regularity in systems, practices and organisational mission within the organisation (Burchell & Kolb, 2006). Furthermore, stability is also important for learning within group purchasing. Relationships need both stability and variety to allow learning and innovation to thrive (Batt & Purchase, 2004). ''*Variety improves the conditions under which learning takes place, while stability allows actors to think and act as they learn''* (Batt & Purchase, 2004). Thus, stability is important within the collaboration in order to allow for effective learning. Through working together, learning can happen within the network of collaboration: *''learning improves the opportunities to utilize the complementary resources brought into the relationship by the different actors and enhances the value of the resources, compared with situations when they are employed in isolation* (Gadde, Huemer, & Håkansson, 2003).'' In close relationships, the parties involved try to combine their resources in systematic ways. However, high-involvement relationships do involve substantial investments and can be expensive to handle (Gadde et al., 2003).

However, too much stability and too little change can result in inertia. Inertia is the strong persistence of existing form and function (Rumelt, 1995). Inertia is influenced by factors such as organisational age and organisational size as can be seen in Figure 2, as older organisations are more prone to inertia. While inertia is not necessarily a problem when the current state of working is efficient, it is costless and arguably beneficial, but it can become a problem when the form or practices of an organisation are inefficient (Rumelt, 1995). Inertia within an organisation is a vicious circle in which organisations can become trapped, as the stronger inertia is, the more difficult it is to make core change attempts succeed. Organisational inertia stems from individual resistance to change, and one of the main reasons why attempted change fails, is because this human side is not managed properly into the transition (Louw & Martins, 2004).

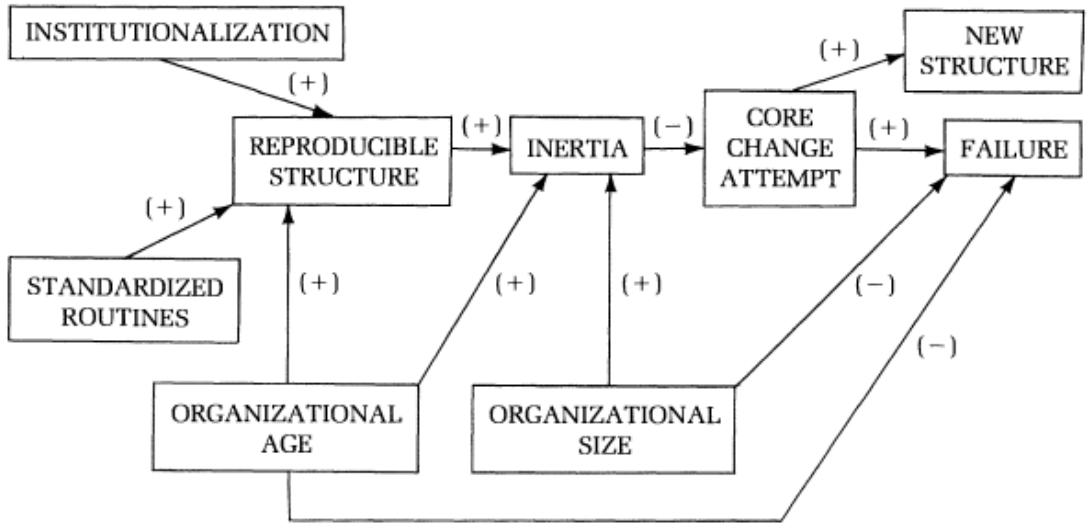

Figure 2: A basic view of structural inertia theory. Adapted from Kelly and Amburgey (1991)

3.1.2 Risks of too much change

As mentioned in the introduction of this chapter, change is considered to have become an ever-present part of organisational life at both a strategic and operational level (Burnes, 2004). In order to make the change last, the change must become rooted within the existing culture within the organisation (Mento, Jones, & Dirndorfer, 2002). However, this is not the case when organisations are constantly changing, especially regarding large changes such as reorganisations. Rieley and Clarkson (2001) argue the following: *''The more senior management opts for reorganisation as a method of increasing effectiveness (a short-term quick fix), the less stable the organisation will be.''*

As can be seen in Table 6, if concern for change is too high and too low for stability, chaos can ensue. The increasing addiction to change affects many parts of the organisation as can be seen in Table 6. For example, due to constant change, the organisation will keep making the same mistakes, have more unmotivated employees, enforce the organisational structure that has put the organisation in the situation it is in the first place, while the organisation is more susceptible to exert political pressure on senior management.

		Consequence
1	Constant ongoing change creates a situation in which people rarely stay in a department or division long enough for any change effort to take effect	• Loss of organisational history • Reliving organisational mistakes, making costly avoidable mistakes
2	Constant organisational change sets up the belief that few in the organisation have knowledge as to what the next change will be or what the overall plan for change will be	• No collective understanding of the 'big picture' • Employees become less motivated to help the organisation realise its goals
3	Constant organisational change helps reinforce the organisational power structure – the same power structure that put the organisation in the situation it is in	• Belief present in the organisation that some organisational power structures keep stirring the organisational pot to retain organisational control
4	Constant organisational change leads to the ability of external forces to exert political pressure on senior management	• Can lead to knee-jerk reaction that are not in the best interest of the long-term future of the organisation, its employees and stakeholders

Table 6: The consequences of constant change on an organisation and its performance. Adapted from Rieley and Clarkson (2001).

3.2 Competitive markets in the public sector and the risks of too few suppliers

Over the past decades, governments in many democratic countries around the world have been focusing on creating a better performing public sector that is less costly, more tailored or better focused and higher quality services to citizens (Barrett, 2000). This has resulted in partly privatisation or commercialisation of the public sector, such as direct participation by the private sector in providing public services. Through creating markets for public sector goods and services, the public sector has been transformed from a sheltered sector into a sector exposed to international competition (Schwartz, 2003). One of the most important differences between the public and private sector is the difference in ownership, with public sector organisations being fully or mainly owned and controlled by the government. Furthermore, public sector organisations are funded mostly through taxation, and is thus subjects to more political control through direct interference and possible fluctuations in budgets (Jewson, Felstead, & Green, 2015). This means the market dynamics in the public sector market are quite different from the private sector market.

In the Netherlands, public procurement spendings are nearly 23% of its GDP, which is quite a lot higher than the average of 14% within the European Union (Cernat & Kutlina-Dimitrova, 2015). As such, the public sector is a large market. Furthermore, the government or a government body organisations are powerful buyers with the potential to shape the market, but even more so considering the political power present in some cases. For example, through economic regulation

they can exercise market power which can result in anti-competitive conduct (Barrett, 2000). According to Hyman and Kovacic (2004), ''market power occurs when sellers or buyer have the ability to profitability maintain prices above or below competitive levels for a lengthy period of time''. When sellers can exercise market power, it is called monopoly, while buyers exercising market power is called monopsony (Hyman & Kovacic, 2004). In the case of a monopoly, one powerful supplier controls the market, while in the case of a monopsony a powerful buyer controls the market. When both the seller and buyer exercise market power, a biliteral monopoly can occur. Biliteral monopoly occurs when a single seller is facing a single buyer (Jacobson & Dorman, 1991). There are different options when it comes to a biliteral monopoly in the public sector. In many countries in the world, public firms can function as a biliteral monopoly, such as British Electric and British Rail being both state-owned firms and being each other buyer and suppliers (Bose & Gupta, 2013). Over the recent years, privatization of state-owned firms has been a trend all over the world, thus creating more mixed biliteral monopoly markets between public and private firms (Bose & Gupta, 2013).

Both monopsony and monopolies are a threat to the competitiveness of the market. Roberts (1991) describes perfect competition as having the following characteristics: absence of monopoly power, demand and supply curves that appear horizontal to the individual, zero profits and equality of returns across all activities and more. Perfect competition does not really occur in real markets as there many requirements that are unlikely to be met in a real life situation. Still, imperfect competition is better than no competition at all, and monopolies are a hindrance to having a competitive market. It creates a barrier for new entrants, resulting in the monopoly pattern not easily being broken. When there are too many or too few suppliers in the market, ''direct and indirect costs (notably transaction costs) can rise, quality can suffer and innovation may be stifled (Walker et al., 2006)''.

Public markets are often uncompetitive as a result of an imbalanced supply market. An imbalanced supply market can occur when there are ''too few, dominant suppliers in the market, or very many, small suppliers, either extreme possibly leading to rising costs and a lack of innovation (Walker et al., 2006).'' In these cases, the competition in the market is functioning well and does not result in the cutting down of costs. Through uncareful outsourcing, it is possible for a very powerful buyer, for example municipalities being the sole purchaser of healthcare services, to create an imbalanced market. In Figure 3, which has been adapted from Walker et al. (2006), shows some actions that can be taken order to balance the market again in the case of supplier dominance or too many suppliers.

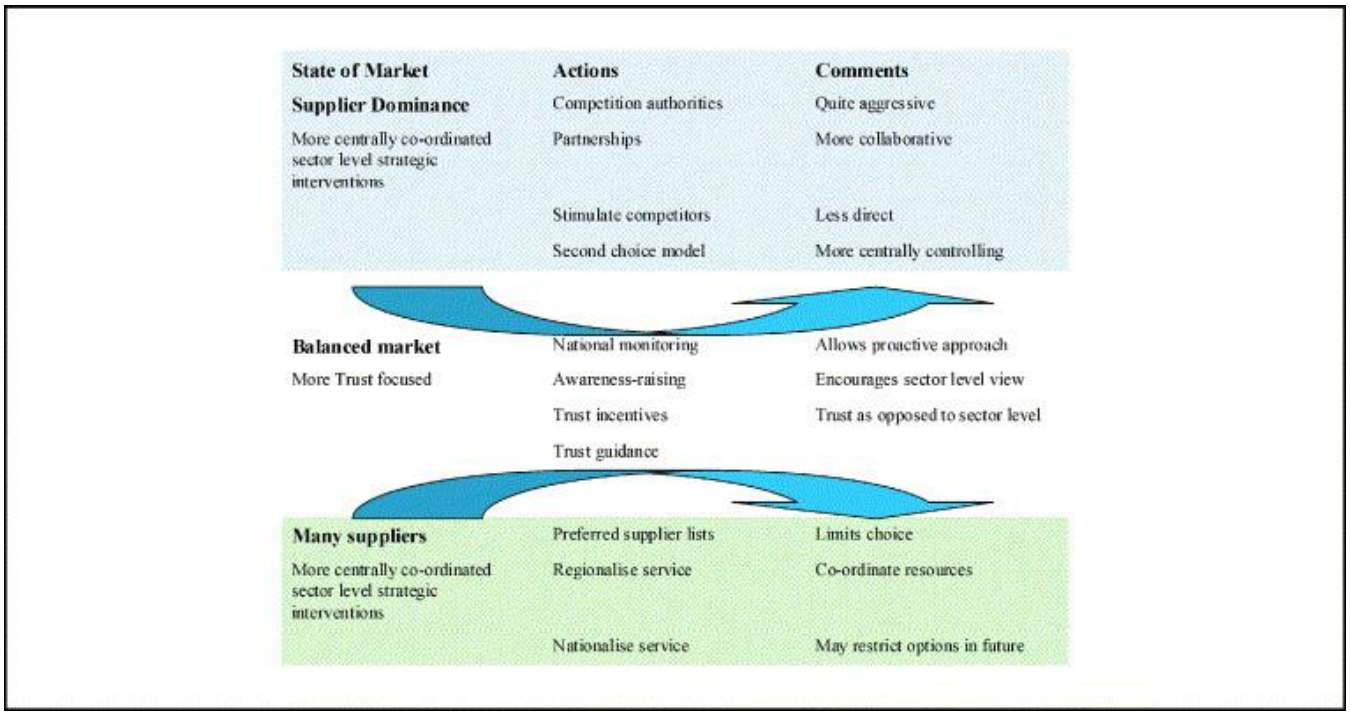

Figure 3: Range of interventions that can be used depending on the state of the market. Adapted from Walker, Knight, and Harland (2006).

4 Propositions

In order to be able to test the impact of changes in purchasing practices on performance, it is important to clearly define what exactly is being tested. For that reason, several propositions are introduced in this chapter. Combining the theory from the previous chapter and the complication of the situation regarding the realisation of the goals of Jeugdwet 2015 shape the propositions in what exactly is going to be tested. These propositions are the core of this research, and guide both the data collection and data analysis.

4.1 Testing the impact of changes in procurement practices on performance

Municipalities have become responsible for buying youth healthcare services for their own inhabitants since 2015. Initially, municipalities purchased health care services similar to how the central government did before 2015, while being assigned to collaboration groups by the central government. Quite a lot of municipalities purchased their youth health care services again in 2018: according to the PPRC dataset, more than half over all care forms was purchased again in 2018. In 2018, the municipalities were not obliged to purchase together anymore in pre-determined (by the government) collaboration fronts. Thus, from 2018 onwards, municipalities began to differ in their approaches for purchasing youth health care services.

Some municipalities have drastically changed their way of working in the years from 2018 to 2020, while others have stayed relatively stable over these years. Certain changes in purchasing youth healthcare system could way of working within the system quite a lot. For example, changing how suppliers are contracted can be a disruptive, discontinuous change which could be done with the hope of improving the performance. Given the nature of drastic, discontinuous change which was described earlier, these changes greatly shape momentum, hopefully in a positive way, but this is not necessarily always the case. Furthermore, as these changes are large, there is less stability in the system, which makes it harder to learn over time. Moreover, continuous large changes could potentially lead to chaos within the organisation, and can have other negative effects which can be found in Table 6. For this reason, it would be interesting to see whether municipalities that perform a lot of large changes in small period of time, so discontinuous changes, perform worse than municipalities that implement smaller incremental changes over time. As the dataset only covers the period 2018 to 2020, it is very difficult to test for municipalities that are perhaps too stable, as the timeframe is very short. If this research is repeated later on, and a timeframe of perhaps 10 years is available, then it would be possible to test whether too little change, also influenced performance. Taking this all into account, the following proposition was derived to test the influence of a lot of change on performance:

Proposition 1

Municipalities that radically change their purchasing practices have a higher relative increase in costs than municipalities that were consistent in their purchasing practices.

4.2 Testing assumptions of ministers about Open House through use of minimum requirements

In the letter of the ministers, Open House is described as problematic mostly due to its characteristic to contract every supplier that meets minimum requirements. According to the minister, this results in (perceived) undesirable effects, such as perceived lack of control by municipalities, high

(administrative) costs, and large increase in care providers that are contracted. Limiting the ability to use Open House is being considered as one of the possibilities by the ministers. If the assumptions of the ministers regarding Open House are true, municipalities that use minimum requirements for contracting their suppliers for most or all of their youth healthcare would have a higher increase in costs compared to municipalities that do not consistently use minimum requirements to contract suppliers. If the assumptions about Open House of the ministers are correct, it would be expected that municipalities that often use minimum requirements or have switched to minimum requirements for contracting of suppliers from a different option, experience a higher relative increase in costs compared to municipalities that do not often use minimum requirements. Likewise, municipalities that have moved away from using minimum requirements, would then be expected to experience a smaller relative increase in costs compared to municipalities that often use Open House. Taking this into account, the following propositions were derived to test the claims of the minister:

2.A Municipalities that purchase their youth healthcare services almost exclusively through using minimum requirements to contract suppliers have a larger increase in relative costs compared to municipalities that do not always use minimum requirements

2.B Municipalities that have switched to using minimum requirements for contracting suppliers from another procedure do have a larger increase in realised costs compared to municipalities that have not switched in how they contract suppliers.

2.C Municipalities that have switched from using minimum requirements for contracting suppliers to another procedure have a larger increase in realised costs compared to municipalities that have not switched in how they contract suppliers.

5 Research method

In this chapter, first the methodology behind the research is discussed. Then, the statistical methods used to test the propositions are introduced. Finally, the steps and simplifications taken to create the dataset needed to test the propositions are discussed thoroughly.

5.1 Policy-oriented research

The focus of this thesis is to study changes in how municipalities purchase their youth healthcare services and the consequences of these changes. Weible, Heikkila, deLeon, and Sabatier (2012) define the policy process as the study of change and development of policy and the related actors, events, and context. As such, how municipalities purchase their youth healthcare services and implement changes in doing so can be considered a policy process, making this research policy-oriented research. Lewis-Beck, Bryman, and Liao (2003) describe policy-oriented research as being designed to inform or understand one or more aspects of the public and social policy process, including decision making and policy formulation, implementation and evaluation. Research that aims to identify issues within public and social policy processes fall under two categories. Firstly, it is called publicly-relevant research when an investigation is done, and the issues that came to light due to the research are taken to the policymakers by the researchers themselves (Johnston & Plummer, 2005). The second option is policy-directed research, in which research is done after a problem has already been addressed by others (usually policymakers), and a problem has been identified (Johnston & Plummer, 2005).

In the case of this thesis, it can be argued that it is both policy-directed and publicly-relevant research. First of all, the claims of the ministers regarding possible negative effects of the usage of Open House were presented without empirical evidence to back up the claims, perhaps because there is no empirical evidence as of yet. In this thesis, research is undertaken to test whether these claims can be supported by empirical data. This is a rather clear case of policy-direct research. However, not only these claims are studied, but also the impact of changes in other purchasing practices regarding the procurement of youth healthcare services. Studying the impact of changes in other purchasing practices can cause possible issues with certain changes to come to light, which can be used to inform policymakers. As such, this research is both policy-directed and publicly-relevant research.

5.2 Exploratory research

Exploratory research can be defined in different ways. Swedberg (2020) describes exploratory research as an attempt to discover something new and interesting by working through a research topic. This is similar to what Reiter (2017) describes exploratory research as: ‘’*Explorative research instead aims at applying new words, concepts, explanations, theories, and hypotheses to reality with the expectation of offering new ways of seeing and perceiving how this segment of reality works, how it is organised, or, more specifically how and in what way different factors relate to each other causally*.’’ This is inductive by nature, as this kind of research can only be undertaken if we are fully aware of where we come from in terms of knowledge that is already out there (Reiter, 2017). Exploratory research does not always yield results, as not all research results in something new and innovative. Still, this does not mean exploratory research is not important. Without the ambition to

dive into a research topic and discover new things, research would come to a standstill (Swedberg, 2020).

Using longitudinal data of how municipalities in the Netherlands purchase their youth healthcare services to analyse the impact of changes on performance is research that has not been done before. As such, this thesis has developed a new procedure in order to be able to test this, as something similar has not been attempted before in this context. This may possibly lead to new insights on the effects of changes in purchasing behaviour that has not been studied before. Thus, this research is explorative in nature.

5.3 Process diagram of the research itself

The process of this research consists out of 6 steps in order to bring the project to completion. In Figure 4, a flowchart of the research process can be found. Most of these steps are rather straightforward. As the procurement of youth healthcare is a hot topic in Dutch politics right now, it is important to have a clear research focus to work towards. As such, the current situation, complications and theory are used to create propositions that can be tested using the data in the PPRC dataset regarding purchasing practices and performance data retrieved from CBS.

Based on the propositions that are created, suitable variables need to be created in order to test them. As such, data from the PPRC dataset is used to create new variables. When all the variables needed to test the propositions are ready for use, the propositions can be tested using an appropriate statistical procedure. The statistical techniques used to test the propositions can be found in 5.4.

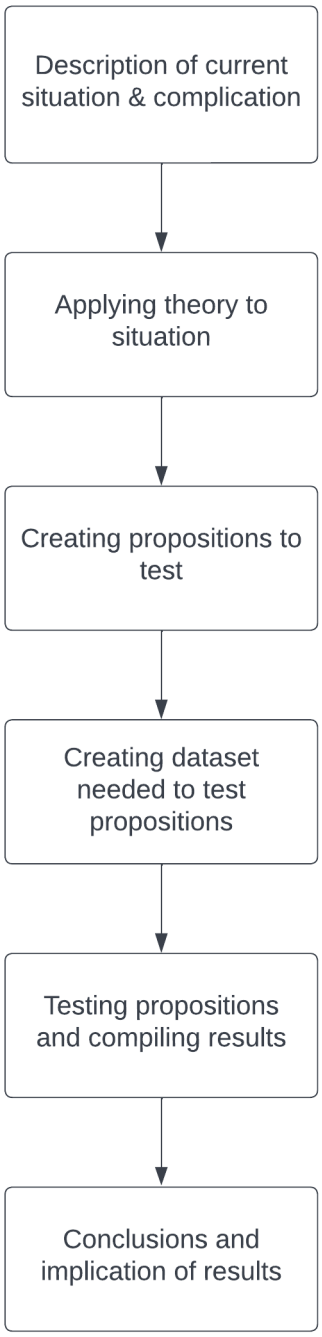

Figure 4: Flow chart of research process

5.4 Statistical techniques used to test propositions

5.4.1 Cluster analysis

In order to find out whether municipalities follow a similar trend with regards to changes in how youth health care services are procured, cluster analysis is used to explore the dataset. The main goal of cluster analysis is to find groups of similar entities in a sample of data (Aldenderfer & Blashfield, 1984). Thus, cluster analysis creates groups of items that fall into relatively homogenous subsets. Within cluster analysis, a case can only be assigned to one cluster. Cluster analysis is an exploratory quantitative research technique that can allow different kind of data depending on the technique that is used.

There are three different kind of cluster analysis techniques that are supported by SPSS: hierarchical clustering, two-step clustering and k-means clustering. In this research, a two-step cluster analysis is used, which can handle both continuous, nominal and ordinal variables. As the name two-step cluster analysis implies, this clustering consist of two steps. First, the dataset is divided into a coarse set of subclusters, while secondly the sub-clusters are grouped together into the desired number of clusters (Gelbard, Goldman, & Spiegler, 2007). This desired number of clusters can be determined automatically by the software programme, or a fixed number given by the researcher.

5.4.2 Regression analysis

To measure the effect changes in purchasing practices have on costs, regression analysis is used in this research. Sykes (1993) describes regression analysis as a statistical tool for the investigation of relationships between variables to study whether there are causal effects between the variables. Regression analysis is one of the most commonly used quantitative analytical tools in economics and business (Welk & Rodriguez Esquerdo, 2018). Regression analysis has a few very important assumptions that must be met in order to be able to use the results. These assumptions are as follows in case of linear regression analysis:

1. Linearity
2. Independence of observations
3. Independence of errors
4. Homoscedasticity, which means that errors have equal variance
5. Errors are normally distributed
6. Residuals are normally distributed
7. No extreme outliers that can heavily skew the results. Normality of the dependent variable is not required.

5.4.3 ANOVA analysis

In a one-way Analysis of Variance (ANOVA), the means of two groups are compared for one dependent variable (Ross & Willson, 2017). The goal of an ANOVA is to determine whether there are significant differences in the means of 3 or more groups (Kim, 2017). For ANOVA, it is desirable to have group sizes equal or greater than 30 in order to reduce Type II error, which is failing to reject the null hypothesis when it should be rejected (Ross & Willson, 2017). However, the group sizes do not have to be equal. Furthermore, for ANOVA it is required that the dependent variable is continuous and normally distributed for every group. In order to compare groups, there must be at least two or more groups, meaning that the independent variable is categorical. The most important requirement is that the assumption of independence of observations is met. Nonindependence can

lead to positive or negative linkage between the groups, which is undesirable in ANOVA analysis due to the bias it adds to the analysis (Kenny & Judd, 1986).

5.5 Creation of the dataset of changes in purchasing practices

This part of the thesis is about the creation of a new dataset containing changes in purchasing practices of municipalities, and several challenges and simplifications that were done in order to make the dataset usable for further analysis. This new dataset is created in order to test the propositions that were introduced in chapter 4. The variables needed for describing changes in purchasing practices are derived from the dataset provided by PPRC. Through comparing how municipalities purchased their healthcare services in the period 2018 to 2020, it is possible to determine how many changes have occurred in this period for specific purchasing practices. The variables needed for determining the performance of municipalities are derived from data of Centraal Bureau Statistiek (CBS). CBS collects and distributes a lot of public data on all kinds of sectors in the Netherlands, such as youth healthcare. Using their information on the spendings on youth healthcare of municipalities in the year 2018 and 2020 makes it possible to determine whether their costs increased in that period.

5.5.1 Introduction to the PPRC dataset

On a yearly basis, PPRC collects tender documents of the procurement of youth healthcare services in the Netherlands by municipalities. These tender documents are analysed, and coded into a dataset where lot of different information is saved. This is done separately for different categories of care that PPRC defined, which has been previously mentioned in section 1.1 and can be found in Table 1. While the PPRC dataset differs very slightly over the years, it contains around 13 variables that describe how municipalities purchased their youth healthcare services. PPRC has started compiling these datasets for adult care services since 2015, and for youth healthcare services since 2018. These datasets are usually requested and funded by a governmental organisation, which use them for their own research and understanding of the procurement of youth healthcare services in the Netherlands

The PPRC procurement of youth healthcare dataset is very impressive for several reasons. First of all, this dataset contains all of the municipalities in the Netherlands. This means that the entire population of the Netherlands is present in this dataset. Secondly, this dataset is updated and maintained on a yearly basis. This means the dataset is maintained on a regular basis. Thirdly, there is simply a lot of information in the dataset. Most of the versions of the dataset contain 13 different variables. This means that for every municipality, purchasing information is available for 13 variables and 7 care forms. In the dataset of 2020, this resulted in 2485 rows and 15 columns of data. Thus, there is simply a lot of information present in the dataset, making it rather extraordinary and one of its kind when it comes to the procurement of youth health care services in the Netherlands.

5.5.2 Selecting the variables to be used in the research from PPRC dataset

The PPRC dataset contains around 13 different variables that together describe how a municipality purchases a specific youth healthcare service. Not all the variables in the PPRC dataset are used in this research as it would result in a lot of variables. This is because changes in some purchasing practices have a bigger effect on how youth healthcare is purchased than others. For example, whether adult care services and youth healthcare services are purchased at the same time is less important than changes in the reimbursement system. In consultation with experts at PPRC, the 5

most important purchasing practices were selected to be used in the study. These specific variables can be found in Table 7, along with an explanation of what a specific variable means in the PPRC dataset.

Variable	**Definition**
Instrument	Legal contract type that is used through the procurement / tender process
Selectivity (of suppliers)	How suppliers are potentially contracted by a municipality
Cooperation	The amount of municipalities purchasing a healthcare service together
Reimbursement	How suppliers get paid for providing their services
Contract type	Kind of contractual framework used, including possibility for more suppliers to be contracted during the duration of the contract.

Table 7: The 5 variables retrieved from the PPRC dataset used in this research.

5.5.3 Counting changes in variable per care form

In proposition 1, the goal is to test whether municipalities that have changed a lot in their purchasing practices score worse compared to municipalities that have not changed their purchasing practices. As such, for every variable, it needs to be calculated how much change occurred. As there are 7 different care forms and 5 different purchasing variables, for every municipality it needs to be checked 35 times what the total amount changes are that occurred for a specific variable in a specific care form in the period 2018 to 2020. These calculations were done in excel using the IF-function, and a more detailed explanation can be found in Table 8. Through calculating this separately for every variable in every care form, it is possible to incorporate a weight per care category later on.

Variable	How amount of changes were calculated
ChangeInstrument (for a specific careform)	Using an IF-statement to check whether the instrument used in 2019 is different compared to 2018 and the same for 2020 compared to 2019
ChangeSelectivity (for a specific careform)	Using an IF-statement to check whether the selectivity of suppliers used in 2019 is different compared to 2018 and the same for 2020 compared to 2019
ChangeCooperation (for a specific careform)	Using an IF-statement to check whether the cooperation with the amount of municipalities has changed more than 50% for 2019 compared to 2018 and 2020 compared to 2019.
ChangeReimbursement (for a specific careform)	Using an IF-statement to check whether the reimbursement method used in 2019 is different compared to 2018 and the same for 2020 compared to 2019
ChangeContract (for a specific careform)	Using an IF-statement to check whether the specific contract form used in 2019 is different compared to 2018 and the same for 2020 compared to 2019

Table 8: Creation and calculation of new variables that are needed to test proposition 1

In proposition 2, the impact of using minimum requirements as a contract instrument is studied, and whether changes in the usage of minimum requirements affect performance. As such, different

variable are needed in order to test this in comparison to proposition 1. First of all, for every municipality, it is determined how often they have used minimum requirements to contract suppliers for every care form in the period of 2018 to 2020. Once again, this is calculated separately per care form to allow for the possibility to incorporate weights per care form later on. In order test the impact of changing it needs to be calculated how many municipalities switched to using minimum requirements, or switching away from using it. More details about these variables and how they were calculated can be found in Table 9.

Variable	How amount of changes were calculated
UsageOfMinimumRequirements	Using the COUNTIF function to determine how many times a municipality used minimum requirements to contract suppliers
SwitchToMinimumRequirements	Using a combination of IF, AND and OR-functions to check whether municipalities used something other than minimum requirements in 2018 (or 2019) and used minimum requirements in 2019 or 2020.
SwitchAwayFromMinimum Requirements	Using a combination of IF, AND and OR-functions to check whether municipalities used minimum requirements in 2018 (or 2019) and used something else in 2019 or 2020.

Table 9: Creation and calculation of new variables that are needed to test proposition 2

5.5.4 CBS data for dependent variables

To test the performance of municipalities, publicly available performance data is used. This data can be found on the website of Centraal Bureau Statistiek (CBS). CBS is a Dutch governmental institution that collects all sorts of statistical information about the Netherlands, including information about the costs of youth healthcare for municipalities. Reducing overall costs was one important objective with the decentralisation of youth healthcare in the Netherlands. Ever since the introduction of Jeugdwet 2015, the spendings on youth healthcare have increased for almost all municipalities. To calculate the performance of municipalities in the period 2018 to 2020, the spendings of 2020 are compared to the spendings in 2018. Most municipalities have experienced an increase of costs in this period.

To compare larger and smaller municipalities more fairly, the relative increase in costs is used instead of just the increase. An increase of 100 000 euros in spending on youth care means a lot more on the budget of a small municipality compared to a large municipality that spends in total 5 times as much compared to the smaller one. Another variable used in the analysis that is collected from CBS is the municipality size. This variable is used in proposition 1 as a context variable in order to test whether municipality size matters when it comes to financial performance of municipalities regarding their youth healthcare services.

5.6 Improving dataset to make it a better fit to reality

5.6.1 Dealing with outliers in costs in the dataset

The data of relative increase in costs that was retrieved from CBS, contains a variety of performances. In this dataset, outliers are present. Hawkins (1980) describes an outlier as ‘’an observation which deviates so much from other observations as to arouse suspicions that it was generated by a different mechanism’’. This means that an observation differs greatly from other observations, which could possible influence data analysis and make the results less accurate. There are different kinds of outliers. In the data of the relative increase in costs, there are a few collective

outliers. According to Smiti (2020), collective outliers occur when a group of data objects deviate extremely far from well-defined norms within a dataset.

In the case of this dataset, there is a group of municipalities that experiences extreme relative increases in costs, ranging from 500% to even 2800%. The municipalities experiencing these extreme increases have all purchased their youth healthcare services together. An increase of this magnitude in a period of just 3 years is very unlikely. As it concerns the entire group of municipalities that work together, it is more likely to assume that the data provided to the CBS 2018 is inaccurate. As such, these municipalities were removed from the analysis. In total, 14 municipalities were removed from the analysis that showed extreme deviations in increase of budget. Removing these municipalities resulted in the variable relative increase in costs being normally distributed, which was verified through a Shapiro-Wilk test. This is very useful, as a normal distribution of the dependent variable is required in order to be able to conduct an ANOVA-analysis.

5.6.2 Simplifying municipalities

One of the main challenges in compiling the data set was taking into account that in 2018, the amount of municipalities in the Netherlands in different compared to the situation in 2020. Some municipalities have ceased existing and were merged together with a larger municipalities. In the dataset of the year 2018, all the fusions with municipalities since the first of January were already included in the dataset. As such, it must be investigated what mergers in municipalities happened in 2019 and 2020. Luckily, there were no fusions at all in 2020. Thus, only the fusions in the year 2019 need to be studied.

As can be seen in Table 10, there are two main categories of the mergers, namely smaller municipalities creating a new municipality together, or a small municipality becoming part of a bigger municipality. In almost all the cases, except for Vijfheerenland, the municipalities that fused purchased all their healthcare services together before. As such, the name of the new municipality is used in the dataset, with the purchasing behaviour determined on how healthcare services were purchased before the fusion. For example, Het Hogeland is used as a municipality in the dataset, instead of all the municipalities it consisted of in 2018. The new municipality Vijfheerenland is excluded from the analysis altogether, as not all municipalities that merged together to create Vijfheerenland purchased together before the fusion.

However, it is more difficult to use the CBS data for these municipalities. Data only exists for them from the year 2019 onwards, as that is when they came into existence. Excluding these municipalities would result in a slight accuracy problem with the sample: basically half of the provinces Groningen and Friesland would be excluded, which would result in underrepresentation of the more rural Northern part of the Netherlands. Because of this restriction, the relative growth between 2019 and 2020 is used, in order to be sure to properly represent the Netherlands in the dataset.

Kind of fusion	**Municipalities created after fusion**	**Purchasing**
Smaller municipalities fusing into one bigger new municipality, usually in rural areas	Het Hogeland, Westerkwartier, Noardeast-Fryslân, West Betuwe, Vijfheerenlanden, Hoeksche Waard, Molenlanden, Altena, Beekdaelen	All the municipalities that were fused purchased the exact same before (with the exception of Vijfheerenlanden)

Smaller municipality or municipalities fusing with a larger municipality, taking on the name of larger municipality	Groningen, Haarlemmermeer, Noordwijk	All the municipalities that were fused purchased the exact same before

Table 10: Mergers of municipalities in the Netherlands in the period 2018-2020

5.6.3 Applying weights to make the effect of changes more accurate

So far, for each of the variables, it has been counted whether they changed over the years, resulting in a numerical value ranging from 0 to 2. If all these values would be added up for each care form, a change in purchasing would weight equally for each care form. This would result in a less accurate depiction of the situation for the dependent variables as the costs are not distributed equally along the different care forms. In order to make the analysis more accurate, changes in different care forms will be weighted with regards to how much they contribute for costs and clients. These values are different for costs and clients respectively.

While the total costs of youth healthcare for many municipalities are available, CBS only has very limited data regarding the division of costs of municipalities between the different care form. Sadly, this means that it is not possible to derive weights for each of the categories from CBS data alone. As such, a different approach was needed. Through contacts of PPRC, data was collected of a large region in the Netherlands that showed their division of costs between the categories in the years 2020 and 2021. Using the averages between the two years, the following weights that were determined can be found in Table 11.

Care form	**Weight**
Dyslexia	1.5%
Mental health (GGZ)	20.8%
Other ambulatory care	27.8%
Day care	9.5%
Foster care	5.7%
Residential care	28.1%
Youth probation + youth protection	6.6%

Table 11: Weight for each care form with regards to cost

5.6.4 Overview of all variables used to test propositions 1 and 2

In Table 12 and Table 13 give an overview of all the variables used to test the previously introduced propositions. In Table 12 the independent variables can be found, while the dependent variables to test performance can be found in Table 13.

Independent variables used to test propositions	Explanation of variable
TotalReimbursement	Contains the sum of all the times a single municipality has switched in reimbursement system per care form multiplied by weight per care form in the period 2018-2020
TotalSelectivity	Contains the sum of all the times a single municipality has switched in how suppliers are contracted (minimum requirements, limited or main contractor) per care form multiplied by weight per care form in the period 2018-2020
TotalGroupPurchasing	Contains the sum of all the times a single municipality had a drastic difference in the structure of the collaboration front (50% different compared to previous years) per care form multiplied by weight per care form in the period 2018-2020
TotalInstrument	Contains the sum of all the times a single municipality has switched in purchasing instrument (e.g. Open House) per care form multiplied by weight per care form in the period 2018-2020
TotalTypeofContract	Contains the sum of all the times a single municipality has switched the type of contracting used per care form multiplied by weight per care form in the period 2018-2020
TotalUseOfMinimumRequirements	Contains the sum of all the times a single municipality has used the minimum requirements to contract suppliers for every care form multiplied by weight per care form in the period 2018-2020
SwitchFromMinimumRequirementsTotal	Contains the sum of all the times a single municipality has switched from using the minimum requirements to another approach to selecting suppliers for every care form multiplied by weight per care form in the period 2018-2020
SwitchToMinimumRequirementsTotal	Contains the sum of all the times a single municipality has switched to using minimum requirements from another approach to selecting suppliers for every care form multiplied by weight per careform in the period 2018-2020

Table 12: All the independent variables used to test the propositions

Dependent variables used to test propositions	Explanation of variable
RelativeGrowthRealisedCosts	The relative increase in realised costs in the period 2018 – 2020 per municipality.

Table 13: Dependent variables used to test the propositions

5.7 Exploring the data set

5.7.1 Correlation matrix

To explore the dataset, the Pearson's Correlation Coefficient was calculated for the change in purchasing practices variables. Correlation is a statistical measure of how closely two variables are related, which can be both positive or negative (Emerson, 2015). Pearson Correlation between two variables result in a number between -1 and 1, with -1 and 1 being perfect negative or positive correlation, and 0 meaning there is no connection between the variables.

In case of this dataset, there are several statistically significant correlations between the variables, which can be seen in Table 14. Change in reimbursement has moderate positive correlation with changes in instrument and contract from, $r(354) = 0.43$, $p < 0.01$. Changes in selectivity of suppliers has weak positive correlation with changes in instrument and contract form, at $r(354)= 0.17$, $p < 0.01$ and $r(354) = 0.27$, $p < 0.01$. Finally, contract form also had weak positive correlation with instrument, $r(354) = 0.14$, $p = 0.05$. As can be noticed from these results, especially changes in contract form are correlated with many of the other variables describing change in purchasing practices. This is partly because changes in contract forms generally occurred a lot more than any other change in the dataset. As such, it happened relatively often that both contract form and another variable were changed at the same time for one municipality. However, none of the correlations are very strong, as most statistically significant correlations are weak or moderate correlations.

Variable correlation	1.	2.	3.	4.	5.
1. Reimbursement	-				
2. Selectivity	0.00	-			
3. Cooperation	0.066	-0.02	-		
4. Instrument	0.43**	0.17**	-0.04	-	
5. Contract form	0.43**	0.27**	-0.05	0.14*	-
Means	0.18	0.20	0.08	0.22	0.38
Standard deviations	0.27	0.31	0.19	0.34	0.48

Table 14: Results of running a bivariate Pearson correlation statistic in SPSS with the 5 variables describing change in purchasing practices

5.7.2 Cluster analysis

In order to gain a better understanding of patterns of changes in the dataset, a two-step cluster analysis was conducted. The results of this cluster analysis can be seen in Table 15. The cluster analysis yields several interesting insights. First of all, about half of the municipalities in the dataset have had barely any change in their purchasing practices in the period 2018 to 2020. This is not entirely unusual, as contract lengths of about 3 to 5 years are used fairly often. Simply put, not all municipalities needed to purchase their healthcare services again in the period studied, and as thus their procurement practices stayed the same in the studied period. However, there are also municipalities that purchased again and did not change any of their procurement practices.

In terms of changes, it is interesting that municipalities usually experience a lot of change in one specific purchasing variable in all the different care forms. Furthermore, certain kinds of combinations in change occur rather frequently in the dataset. For example, when municipalities change how they select suppliers for a lot of their care forms, there are usually also some changes in contract type. This is similar to the results in the correlation matrix. It is also interesting that at first

glance, municipalities that have a lot of change in how suppliers are selected, have a higher average relative increase in costs compared to the other groups of municipalities.

When trying to profile what kind of municipalities are in specific clusters, there are also some interesting patterns visible. First of all, many of the municipalities that had fusions with other municipalities belong to cluster 4. Secondly, almost all the municipalities in the province Limburg are in cluster 3, all the municipalities from Zeeland are in cluster 5 while almost all municipalities from Friesland are in cluster 1. Furthermore, both the largest and smallest municipalities in the Netherlands belong to cluster 1 which barely experienced any change in purchasing practices. Relatively speaking, municipalities between 10 000 to 20 000 inhabitants experienced the most change, with only a third of them being in cluster one which had almost no change in purchasing practices, which is less than average in the dataset.

Cluster	Size	Mean relative cost increase	Description of cluster
1	161	0.16	Consistent in purchasing, (almost) no changes.
2	28	0.11	High change in cooperation, moderate change in instrument, selectivity, contract and reimbursement
3	63	0.11	High change in instrument, moderate change in selectivity and reimbursement
4	62	0.09	High change in kind of contract, moderate change in reimbursement
5	40	0.20	High change selectivity, moderate change in kind of contract.

Table 15: Clusters generated by running two-step cluster analysis over 5 weighted total change variables (instrument, cooperation, reimbursement, selectivity, contract form)

6 Results

In this chapter, the results of the research will be presented. First, a regression analysis is conducted to measure the effect changes in the purchasing practices have on costs. Secondly, an ANOVA-analysis is conducted to see whether municipalities have differences in performance in regards to using minimum requirements for contracting suppliers.

6.1 Testing proposition 1 through regression analysis

In this part of the results, a regression analysis is used to test proposition 1, which consists of the following: *Municipalities that radically change their purchasing practices have a higher relative increase in costs than municipalities that were consistent in their purchasing practices.*

A linear regression was calculated to predict the relative increase in costs based on the total weighted change in purchasing practices instrument, cooperation, reimbursement, selectivity and contract form. A significant regression equation was found ($F(5,243) = 2.383$, $p = 0.039$), with an R^2 of 0.076. As can be seen in Table 16, there are several variables that are statistically significant. First of all, the constant is significant ($B=0.22$, $p<0.001$). Total change in selectivity of suppliers is also statistically significant at a level of $\alpha < 0.05$ ($B=0.09$, $p=0.02$) and total change in contract forms is statistically significant at a level of $\alpha < 0.1$ ($B=-0.05$, $p=0.07$). This means that changes in selectivity of suppliers were associated with a higher relative increase in costs, while changes in contract forms were associated with a lower relative increase in costs.

In order to use the results, it is highly recommended that it meets previously introduced assumptions to make the findings reliable. First of all, the standardized residuals of the regression analysis were normally distributed, confirmed through a Shapiro-Wilk test. Furthermore, there was no heteroskedascity present in the dataset. This was tested by plotting residuals against the dependent variable, which showed a clear pattern of homoskedascity. Finally, there is no problematic correlation present between the different variables in the dataset. There are no VIF value higher than 1.6, most of them are close to 1. As all VIF values are lower than 5, there is no multicollinearity present in this regression analysis.

Variable	B	β	t	p
(Constant)	0.22		4.79	<0.001
Total change reimbursement	-0.03	-0.05	-0.57	0.57
Total change selectivity	0.09	0.16	2.34	**0.02**
Total change cooperation	-0.07	-0.08	-1.25	0.21
Total change instrument	-0.02	-0.04	-0.57	0.57
Total change contract form	-0.05	-0.14	-1.85	**0.07**
Municipality size	-0.02	-0.10	-1.52	0.13

Table 16: Results of a linear regression using 5 variables describing changes in purchasing practices and municipality size.

6.2 Testing proposition 2 through ANOVA-analysis

6.2.1 ANOVA-analysis comparing performance of groups in how often minimum requirements is used to contract suppliers

An ANOVA-analysis is used to test whether there is a statistically significant difference in performance between groups of municipalities depending on how often they use minimum

requirements to contract suppliers. This is used to test proposition 2.A which consists of the following: *2.A Municipalities that purchase their youth healthcare services almost exclusively through using minimum requirements to contract suppliers have a larger increase in relative costs compared to municipalities that do not always use minimum requirements*

In Table 17, the division of groups to test proposition 2.A can be seen and the mean and standard deviation of relative increase in costs are shown for every group. The results of the one way ANOVA can be found in Table 18. There were no statistically significant differences in means between the groups of municipalities divided on how often they use minimum requirements, as determined by one-way ANOVA ($F(2,246) = 0.123$, $p = 0.884$). This means that municipalities that use minimum requirements almost exclusively do not have a higher relative increase in costs compared to municipalities that use minimum requirements less. The dependent variable, mean relative increase in costs, is normally distributed which is determined by a Shapiro-wilk test. All the groups in the sample consist of 30 or more municipalities. As such, that assumption is also met. Thus, the results of this ANOVA can be used to test proposition 2.A.

Group number	Group size	Mean relative increase in costs	Standard deviation of relative increase in costs
1. Barely uses minimum requirements	35	0.15	0.21
2. Occasionally uses minimum requirements	38	0.14	0.18
3. Uses minimum requirements (almost) exclusively	176	0.14	0.18

Table 17: Division of groups depending on their usage of minimum requirements in the period 2018 to 2020 and the mean and standard deviation in relative increase in costs for every group.

	Sum of squares	df	Mean square	F	p
Between Groups	0.01	2	0.00	0.123	**0.884**
Within Groups	8.14	246	0.03		
Total	8.15	246			

Table 18: Results of ANOVA-analysis comparing the relative increase in costs for groups of municipalities that are grouped by how much they have used minimum requirements in the period 2018 to 2020.

6.2.2 ANOVA-analysis comparing performance of groups that have had changes in selectivity of suppliers

An ANOVA-analysis is used to test whether there is a statistically significant difference in performance between groups of municipalities depending on how often they changed regarding minimum requirements which is used contract suppliers. This is used to test proposition 2.B and 2.C which consist of the following:

2.B Municipalities that have switched to using minimum requirements for contracting suppliers from another procedure do have a larger increase in realised costs compared to municipalities that have not switched in how they contract suppliers.

2.C Municipalities that have switched from using minimum requirements for contracting suppliers to another procedure have a larger increase in realised costs compared to municipalities that have not switched in how they contract suppliers.

In Table 19, the division of groups to test proposition 2.B and 2.C can be seen and the mean and standard deviation of relative increase in costs for every group. The results of the one way ANOVA can be found in Table 20. There were no statistically significant differences in means between the groups of municipalities divided on how often they switched in selectivity of suppliers regarding minimum requirements, as determined by one-way ANOVA ($F(2,244) = 0.23$, $p = 0.80$). This means that municipalities that have not switched regarding minimum requirements have a similar relative increase in costs compared to municipalities that switched one way or the other.

In order to be able to use the result, it is desirable that the assumptions for ANOVA are met. The dependent variable, mean relative increase in costs, is normally distributed which is determined by a Shapiro-wilk test. The only problem is that one of the groups that is tested in this ANOVA is smaller than 30, making the ANOVA results less reliable. Still, as the ANOVA analysis is not close to being statistically significant, this does not result in a large interpretation issue.

Group number	Group size	Mean relative increase in costs	Standard deviation of relative increase in costs
1. No switching regarding minimum requirements	193	0.14	0.19
2. Switching away from minimum requirements	36	0.16	0.14
3. Switching to minimum requirements	18	0.14	0.18

Table 19: Division of groups depending on whether they had changes regarding the usage of minimum requirements in the period 2018 to 2020 and the mean and standard deviation in relative increase in costs for every group.

	Sum of squares	df	Mean square	F	p
Between Groups	0.02	2	0.01	0.23	**0.80**
Within Groups	8.01	244	0.03		
Total	8.03	246			

Table 20: Results of ANOVA-analysis comparing the relative increase in costs for groups of municipalities that are grouped by how much they have switched regarding minimum requirements in the period 2018 to 2020.

7 Implications of results

In this chapter, the results of the research will be summarised and the implications of these results will be discussed. First of all, the results of the regression analysis and the implications of these results are analysed. Afterwards, the statements of the minister regarding Open House are assessed using the results of the ANOVA analysis. Finally, limitations but also future opportunities in this field are discussed.

7.1 Proposition 1: Effects of changes in purchasing behaviour on relative increase in costs

Change is an ever-present part of organisational life at both a strategic and operational level (Burnes, 2004). Generally speaking, change in purchasing practices is meant to improve the performance. However, large changes in purchasing practices could potentially also be disruptive, affecting the stability of the firm. According to Brown et al. (1998), successful organisations function in an environment between consistent execution and adaptative innovation, so between stability and change. Stability is especially important for learning within group purchasing (Batt & Purchase, 2004). The effect of changes in purchasing practices of municipalities in regards to the procurement of youth healthcare services in the Netherlands have not been studied before. As such, the main goal of this research is to study whether municipalities that radically change their purchasing practices have higher costs compared to municipalities that were consistent in their purchasing in the period 2018 to 2020.

Before testing the propositions, the dataset was explored. To gain insight into the trends present with regards to how municipalities purchase their youth healthcare services, a cluster analysis was performed which showed that municipalities usually have large change in one of the purchasing variables at the time, or little change at all. Almost half of all municipalities barely had any change in their purchasing practices in the years 2018 to 2020, which is the largest group present in the dataset.

7.1.1 Effect of changes in how many suppliers are contracted

In proposition 1, it is argued that introducing considerable changes in procurement practices may cause a higher increase in costs compared to municipalities that do not change their procurement practices. In order to test the effect of changes in specific purchasing practices on the increase in costs, a regression analysis was performed. This regression analysis yielded interesting results. First of all, municipalities that have changes in how many suppliers are contracted had a statistically significant higher relative increase in costs compared to municipalities that did not have changes in how many suppliers are contracted. This means that especially municipalities that had changes in many care forms in how many suppliers are contracted experienced a higher relative increase in costs.

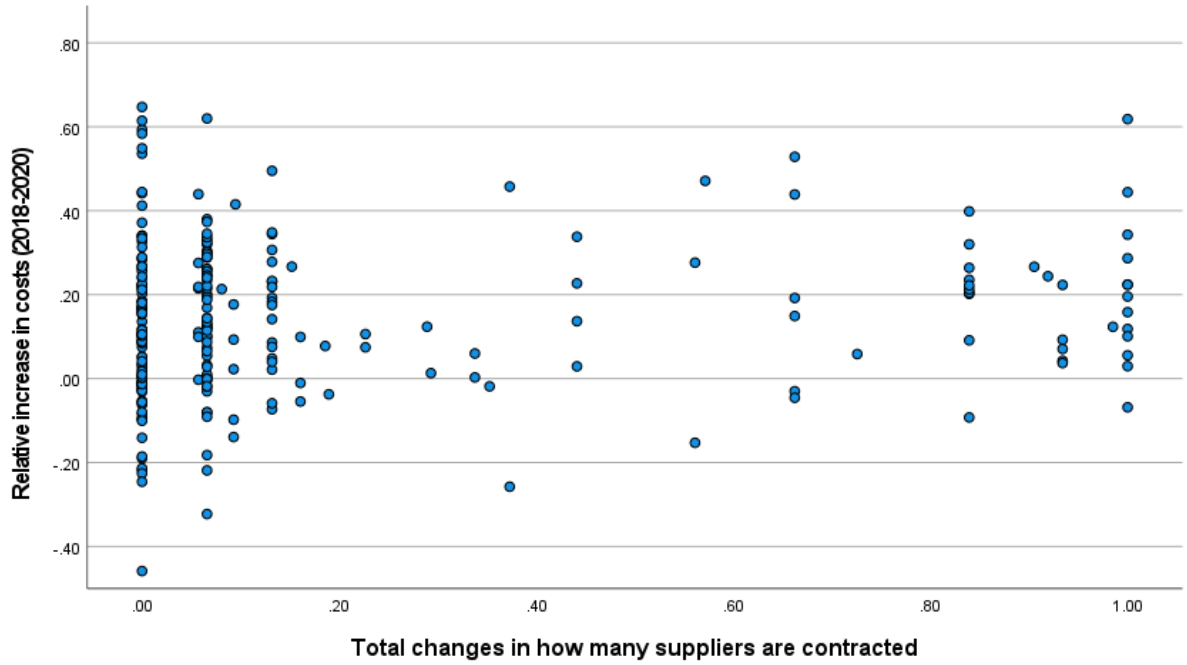

Figure 5: A scatter plot of the relative increase in costs over the total changes in how many suppliers are contracted. The total changes in how many suppliers are contracted is weighted. For more explanation on the weighting method used, see section 5.6.3.

Usually, the changes in how many suppliers are contracted are either from contracting limited suppliers to contracting all suppliers that meet minimum requirements or vice versa. The group of municipalities that switched away from minimum requirements to a more limited approach has a mean relative increase in costs of 16%, while the group of municipalities that did not switch at all or switched from a limited approach to minimum requirements has an average increase of 14%. While an ANOVA-analysis showed no statistically significant difference in performance between the groups, the group switching to a more limited approach does have a higher increase on average.

This is an interesting result for several reasons. Many municipalities decide to switch to fewer suppliers in order to reduce transaction costs of contracting, as within a non-selective contracting municipalities sometimes have over a hundred care providers contracted for one kind of care service. According to the results in this data, switching to less suppliers does not result in a smaller relative increase in costs in the short term: in fact, the average for this group of municipalities is higher than for the other groups of municipalities. As such, there is no short-term cost relief, while this change could have potentially drastic negative consequences in the future. Contracting limited suppliers or sometimes even only one supplier, can result in the creation of a bilateral monopoly or oligopoly, which results in a weak buyer position for municipalities. Considering there seems to be no immediate cost-relief for municipalities by contracting limited suppliers, this change should be made even more carefully than before, taking into account the possible disruption of market competitiveness due to this decision.

7.1.2 Effect of changes in contract form

According to the regression analysis, changes in specific contract forms used is associated with a reduction in the relative increase of costs. A lot of municipalities had changes in their contract forms: almost 83 municipalities changed contract forms for almost all their care forms. If the coefficients of the regression analysis are used, municipalities that change contract forms across all their care forms

have a 5% lower increase in relative increase in costs compared to municipalities that did not change their contract forms at all.

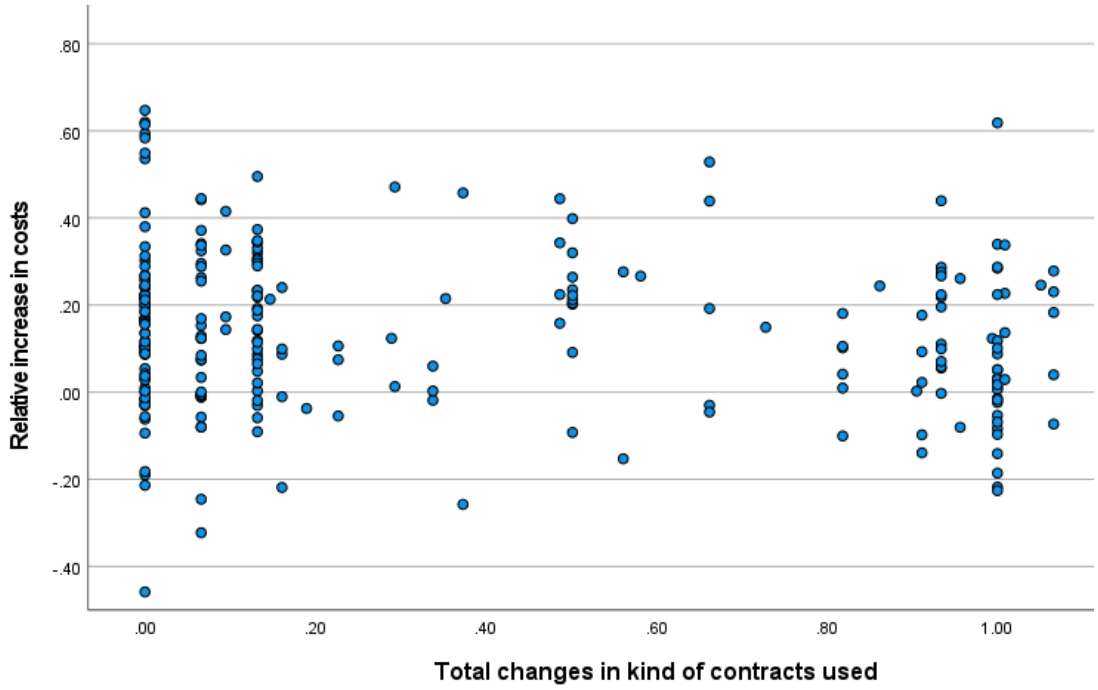

Figure 6: A scatter plot of the relative increase in costs over the total changes in kind of contract used. The total changes in kind of contract used is weighted. For more explanation on the weighting method used, see section 5.6.3.

In contrast to changing how many suppliers are contracted, changing contract forms is associated with a decrease in relative increase of costs. This could be due to the direction of the change. Many of the changes in contract forms of municipalities are towards having a fixed budget in place, or setting a maximum budget that can be used. As such, the change in contract form is used by municipalities to have more control on what is being spent. This strategy seems to be successful, at least for the short term. For this strategy to keep working, the fixed budgets or maximum budgets need to be revised often, as the fixed budget of previous years may not be sufficient later on due to inflation or other economic factors.

7.1.3 Significance of insignificant variables

In the previous sections, the change variables that were statistically significant in the regression analysis were discussed. However, the variables that were not statistically significant are interesting as well. The only context variable used in the regression analysis, is municipality size, as it could be possible that it influences costs as well. It is close to be statistically significant, with $p = 0.13$. Due to the effect size being slightly negative, it means that larger municipalities generally have a smaller relative increase in costs than smaller municipalities. This rationally makes sense, as client numbers and costs tend to fluctuate more if the population is smaller.

Furthermore, three of the other variables describing changes in purchasing practices do not test as statistically significant. This is especially remarkable considering change in reimbursement method is amongst them, as reimbursement method determines how suppliers are paid for their services. However, changes in that seem to not influence whether municipalities had a significantly higher or

lower relative increase in costs as expected in this dataset, which is an interesting finding. Moreover, changes in instrument, which includes switching away or to Open House, is not statistically significant either. While this does not test the impact of Open House specifically, changes in instrument are not necessarily associated with significantly higher relative increase in costs in the short term.

7.2 Proposition 2: Minister's view on non-selective contracting

The minister and state secretary discuss their issues with Open House and its implications in a letter written for the parliament. Their largest issue with Open House is the characteristic that all suppliers must be contracted if they meet minimum requirements. According to them, this results in an undesirable large amount of suppliers contracted, resulting in a potential lack of overview and high transaction costs as a result. In the letter, these claims are not supported by empirical evidence. This research aims to use empirical data to either support or reject these claims.

7.2.1 Usage of minimum requirements and performance

The use of minimum requirements to contract suppliers is very widespread in the Netherlands. In the dataset, 247 municipalities out of 352 in the data set use minimum requirements almost exclusively for all of their youth care forms. This means that any supplier that meets the qualifying criteria can provide services. In order to test whether the usage of minimum requirements has an influence on the performance of municipalities in terms of costs, three groups were created and compared. One group had municipalities that barely used minimum requirements, one group that sometimes used minimum requirements and one group that almost exclusively used minimum requirements. The group that barely used minimum requirements had the highest average relative increase in costs of 15% in the period 2018-2020, while the other groups had an average relative increase of 14%. As can be gathered from these averages, there are no statistically significant differences in performance between the groups.

This is an interesting result for a few reasons. Taking the letter of the minister and state secretary into account, it would be expected that the group that using minimum requirements very often and having lots of suppliers as a result, has a higher increase in costs compared to municipalities that barely use minimum requirements. However, this is not the case in this sample, as the group barely using minimum requirements actually has a slightly larger increase in costs compared to the other groups. In fact, all the groups score very similarly in terms of average increase in costs. All municipalities are experiencing a high increase in relative costs of about 14%, regardless of how much they use minimum requirements in this dataset. Thus, according to this dataset, it is unlikely that the use of minimum requirements by itself caused the average relative increase in costs of 14% in the period 2018 to 2020.

7.2.2 ANOVA-analysis comparing performances of municipalities that switched

In the letter of the minister and state secretary, a possible limitation of the use of Open House is discussed. Furthermore, in the past, the former minister of healthcare expressed his preference for limiting the amount of suppliers contracted, which is a sentiment that is shared in the letter as well. As such, it is not entirely unlikely that using minimum requirements to contract hundreds of suppliers might be limited in the future. In this research, the short-term impact of changing how many suppliers are contracted is studied.

As mentioned before in 7.1.1, the group of municipalities that switched away from minimum requirements to a more limited approach has a mean relative increase in costs of 16%, while the group of municipalities that did not switch at all or switched from a limited approach to minimum requirements has an average increase of 14%. This means that at least on the short term, switching to a more limited approach is associated with higher costs in the dataset. Both the former minister and current minister and state secretary think that municipalities contracting many suppliers is undesirable. However, this research shows that municipalities that do switch away from contracting through minimum requirements do experience a higher increase in costs on average in the period 2018 to 2020. This is something to take into account when encouraging municipalities to switch towards a more limited supplier approach, as it may cause a higher relative increase in costs on the short term. Furthermore, there are also consequences for the longer-term competitiveness of the market, which are also mentioned in 7.1.1.

7.3 Limitations

There were several limitations to this research, which will be discussed here. This mainly concerns limitations to the data that was available for this research.

7.3.1 Only short time frame studied due to lack of data

In this research, only the timeframe 2018 to 2020 was studied. While the law that made municipalities responsible for purchasing their own youth healthcare services was put into action in 2015, PPRC only started collecting and compiling the tender documents in 2018. Before 2018, most municipalities continued purchasing youth care services the same way as was done before the introduction of Jeugdwet 2015, with most of them purchasing again in 2018. At the time this research was done, CBS data on the costs of municipalities on their youth healthcare was only available up until the year 2020. Thus, this timeframe was chosen due to data constraints. As such, the impact of changes are only studied over a short timeframe. As a result of this limitation, only the short term effect of changes in purchasing practices can be studied. For some changes in purchasing practices it would have been nice to study the impact of change on the long term, especially changes in selectivity of suppliers as that could heavily influence the competitiveness in the market. These future opportunities will be discussed in section 7.4.2 of the thesis.

7.3.2 Incomplete data of costs of municipalities for youth healthcare

The public performance data of what municipalities spent on youth healthcare is incomplete. This incompleteness consists of several parts. Only very few municipalities provide detailed data of cost division over the different kinds of care to CBS. Because of this, it was not possible to analyse the impact of changes at a care form level. As such, the impact of changes could only be analysed at an overall level, meaning all the care forms added up to create variables describing the total change in one specific purchasing variable.

Several steps were taken in order to work around the limitation of only having cost data at an overall level per municipalities. Adding up all the changes for each care form equally resulted in problems, as the division of costs amongst care forms is not even close to being equally distributed. To counter this, data of municipalities of one province in the Netherlands was used to incorporate weights to the importance of changes per care form. Still, these weights are based on only one region in the Netherlands, and the division of costs is likely different in other municipalities. As such, it is a proxy

used to simulate the situation in reality, but the results would likely be different with more complete data on the division of costs in care form of each municipality.

While a lot more municipalities did provide their total cost data, this data was still missing for 92 out of 354 municipalities present in the dataset. Taking into account the missing data and outliers, 105 municipalities were excluded from data analysis out of 354 present in the dataset. This means that it was not possible to test for the entire population of the Netherlands, despite having all the data on how they purchased their youth healthcare services. Having more data on total costs and the division of these costs across care forms would be needed to improve the quality of the research and increase the reliability of the findings.

7.4 Future research opportunities

This research is a first attempt to study the effect of changes in purchasing behaviour on costs. As such, there are more opportunities to expand upon this research. In this part of the chapter, future research opportunities will be discussed, as well as their importance for how youth healthcare is purchased in the Netherlands.

7.4.1 The importance of more evidence-based policy studies

One of the main interests in this research was to provide empirical evidence to test the claims of the minister and state secretary. In their letter, no such empirical evidence was present to support the possible negative effects of Open House and contracting a lot of suppliers through using minimum requirements. While some statistical figures are used, for example to show many more care suppliers are active in the Netherlands right now, there is no data used to support that this in particular leads to higher costs. As research like this has not been conducted before, it could be the case that this empirical data did simply not exist at the time of the minister and state secretary publishing the letter in May 2022.

The minister and state secretary are high-ranked government officials whose words have influence. It is not unreasonable to believe that their claims about the risks of Open House and contracting suppliers through minimum requirements could influence the policy on a national level and the procurement strategy of municipalities. As such, it is important that they use empirical evidence to support claims pushing in favour of one system over the other. In this research, no empirical evidence was found in this dataset to suggest that mainly using minimum requirements leads to higher costs for municipalities compared to other approaches in the period 2018 to 2020. This further shows the importance of more evidence-based policy oriented research in order to verify claims before making them public and influencing policy while there is a chance that these claims cannot be backed up by data.

7.4.2 Possibility of analysing the impact of changes at a care form specific level

As mentioned before in 7.3.1 and 7.3.2, the dataset had limitations in terms of timeframe that could be studied and the level at which the research could be conducted. First of all, it would be very interesting to repeat this research in about 5 to 10 years' time, because then the long-term impact of changes can be studied as well. Right now, it was not possible to study the impact of inertia regarding purchasing behaviour, as having no changes in purchasing practices in a period of 3 years is not unusual. In fact, about half of the municipalities in this data set barely had any change regarding

the 5 selected purchasing practices studied. However, no change in purchasing practices at all in a 10 year timeframe might be the result of organisational inertia, which might lead to stagnation and have a negative influence on the financial performance of a municipality regarding youth healthcare services.

Furthermore, having financial data at a care specific level would allow for deeper analysis and possibly provide very interesting data. For example, it might be the case that changes in one purchasing practice negatively influence costs for a certain type of healthcare, while it might be the opposite for a different care form. Having results like that at a care specific level could potentially clearly show the ''dos and don'ts'' for every care form specifically. This could be very useful for policy makers as well, and could be used to inform their decisions on a care specific level, as not all youth healthcare is purchased together: usually, ambulatory care, residential care and youth probation and protection are bought separately and may use different purchasing practices as a result.

7.5 Advice for municipalities regarding changes in purchasing practices

7.5.1 Approach to making changes in purchasing practices

In this research, the impact of changes in purchasing practices on the performance regarding the municipal procurement of youth care services is studied. Change by itself is a normal part organisational life at both a strategic and operational level and not necessarily bad (Burnes, 2004). As such, change itself is not necessarily a bad thing, but caution is needed in order to be sure changes are not disruptive. This part of the research aims to give municipalities specific advice on how to approach possible changes in purchasing practices, taking into account the results of this research.

Using the results of the regression analysis, changes in how suppliers are selected are associated with a higher average relative increase in costs. Furthermore, especially switching from a non-selective to a selective approach has a higher mean average increase in costs compared to municipalities that switched the other way around or did not change how they contracted their suppliers. As there is no immediate cost relief after switching to a more selective approach and this approach heavily influences the competitiveness of the market, municipalities should carefully consider whether this change is worth the possible risks. Meanwhile, changes in contract form, especially changing towards having a maximum budget in place might help in reducing the increase in costs. As such, this option is worth looking into for municipalities who do not work yet with that kind of contract.

7.5.2 Steps to take for municipalities to allow for better research

In section 7.4, a few future opportunities are mentioned. In this section, it is discussed what municipalities should do in order to be able to make those future opportunities a reality. First of all, it would be interesting to repeat this research in 5 to 10 years' time in order to be able to test for continuous change or organisational inertia. To be able to do so, municipalities should provide CBS with their total cost data every year in order to allow for a good analysis. In this research, the data of about 100 municipalities was not there because there was no data for them in CBS. Thus, to allow for better research, it would be very helpful if every municipality yearly submits their financial data to CBS. It would not be that much effort for municipalities, as they likely have total cost data available for their yearly budgets.

In this research, there was only data available on the total costs of municipalities. If there was financial data available on a care specific level, it would allow for deeper analysis and provide more specific advise on purchasing for different kinds of health services. This would require municipalities

to carefully keep track of how much costs are made for what kind of service. To simplify it for municipalities, it is also possible to group certain kinds of care together, such as ambulatory or residential care. While this requires quite some effort from the municipality, the results of research where the impact of changes in purchasing practices can be analysed at a care specific level are very useful for them. These two options for improving the quality of the research have been visualised in an ease-value matrix in Figure 7.

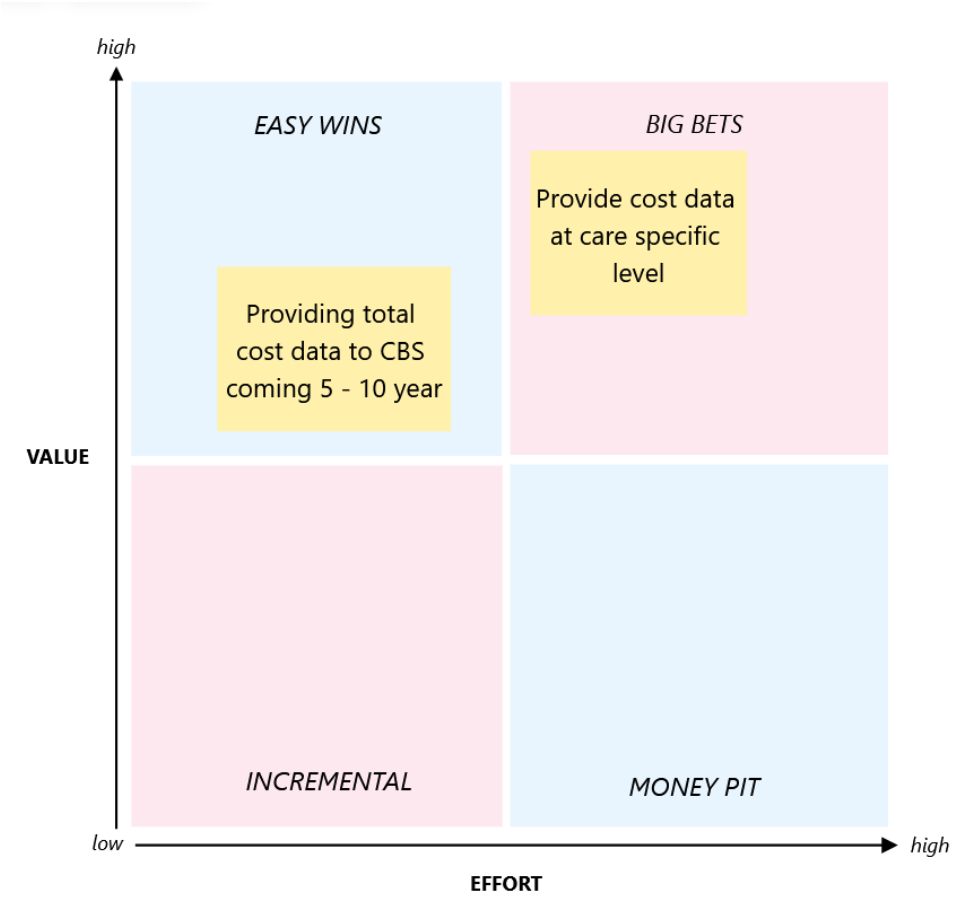

Figure 7: Ease-value matrix for improvements in the research from the perspective of municipalities.

Bibliography

Literature articles and books

Aldenderfer, M., & Blashfield, R. (1984). *Cluster Analysis*. doi:10.4135/9781412983648

Balogun, J., & Hailey, V. H. (2008). *Exploring strategic change*: Pearson Education.

Barrett, A., Pat. (2000). Balancing accountability and efficiency in a more competitive public sector environment. *Australian Journal of Public Administration, 59*(3), 58-71.

Batt, P. J., & Purchase, S. (2004). Managing collaboration within networks and relationships. *Industrial Marketing Management, 33*(3), 169-174. doi:https://doi.org/10.1016/j.indmarman.2003.11.004

Bose, A., & Gupta, B. (2013). Mixed markets in bilateral monopoly. *Journal of Economics, 110*(2), 141-164. doi:10.1007/s00712-012-0310-8

Brown, S. L., Brown, S. I., Brown, S. L., & Eisenhardt, K. M. (1998). *Competing on the edge: Strategy as structured chaos*: Harvard Business Press.

Burchell, N., & Kolb, D. (2006). Stability and change for sustainability. *University of Auckland Business Review, 8*(2), 33-41.

Burnes, B. (2004). *Managing change: A strategic approach to organisational dynamics*: Pearson Education.

By, R. T. (2005). Organisational change management: A critical review. *Journal of Change Management, 5*(4), 369-380. doi:10.1080/14697010500359250

Cernat, L., & Kutlina-Dimitrova, Z. (2015). International public procurement: From scant facts to hard data. *Robert Schuman Centre for Advanced Studies Research Paper No. RSCAS*.

Emerson, R. W. (2015). Causation and Pearson's Correlation Coefficient. *Journal of Visual Impairment & Blindness, 109*(3), 242-244. doi:10.1177/0145482x1510900311

Gadde, L.-E., Huemer, L., & Håkansson, H. (2003). Strategizing in industrial networks. *Industrial Marketing Management, 32*(5), 357-364. doi:https://doi.org/10.1016/S0019-8501(03)00009-9

Gelbard, R., Goldman, O., & Spiegler, I. (2007). Investigating diversity of clustering methods: An empirical comparison. *Data & Knowledge Engineering, 63*(1), 155-166. doi:https://doi.org/10.1016/j.datak.2007.01.002

Hawkins, D. M. (1980). *Identification of outliers* (Vol. 11): Springer.

Hess, E. (2014). Learn or die. In *Learn or Die*: Columbia University Press.

Hyman, D. A., & Kovacic, W. E. (2004). Monopoly, monopsony, and market definition: an antitrust perspective on market concentration among health insurers. *Health Affairs, 23*(6), 25-28.

Jacobson, J. M., & Dorman, G. J. (1991). Joint Purchasing, Monopsony and Antitrust. *The Antitrust Bulletin, 36*(1), 1-79. doi:10.1177/0003603X9103600101

Jewson, N., Felstead, A., & Green, F. (2015). Training in the public sector in a period of austerity: the case of the UK. *Journal of Education and Work, 28*(3), 228-249. doi:10.1080/13639080.2014.900169

Johnston, R., & Plummer, P. (2005). What is policy-oriented research? *Environment and Planning A, 37*, 1521-1526. doi:10.1068/a3845

Kelly, D., & Amburgey, T. L. (1991). Organizational Inertia and Momentum: A Dynamic Model of Strategic Change. *The Academy of Management Journal, 34*(3), 591-612. doi:10.2307/256407

Kenny, D. A., & Judd, C. M. (1986). Consequences of violating the independence assumption in analysis of variance. *Psychological bulletin, 99*(3), 422.

Kim, T. K. (2017). Understanding one-way ANOVA using conceptual figures. *kja, 70*(1), 22-26. doi:10.4097/kjae.2017.70.1.22

Lewis-Beck, M., Bryman, A. E., & Liao, T. F. (2003). *The Sage encyclopedia of social science research methods*: Sage Publications.

Louw, G., & Martins, N. (2004). Exploring inertia in a typical state organisation. *South African Journal of Industrial Psychology, 30*. doi:10.4102/sajip.v30i1.138

Luecke, R. (2003). *Managing change and transition* (Vol. 3): Harvard Business Press.

Mento, A., Jones, R., & Dirndorfer, W. (2002). A change management process: Grounded in both theory and practice. *Journal of Change Management, 3*(1), 45-59. doi:10.1080/714042520

Mintzberg, H. (1978). Patterns in Strategy Formation. *Management Science, 24*(9), 934-948. Retrieved from http://www.jstor.org.ezproxy2.utwente.nl/stable/2630633

Nelson, L. (2003). A case study in organisational change: implications for theory. *The Learning Organization, 10*(1), 18-30. doi:10.1108/09696470310457478

Paulsson, J. (2013). *The idea of arbitration*: OUP Oxford.

Reiter, B. (2017). Theory and methodology of exploratory social science research.

Rieley, J., & Clarkson, I. (2001). The impact of change on performance. *Journal of Change Management, 2*(2), 160-172. doi:10.1080/714042499

Roberts, J. (1991). Perfectly and Imperfectly Competitive Markets. In J. Eatwell, M. Milgate, & P. Newman (Eds.), *The World of Economics* (pp. 534-543). London: Palgrave Macmillan UK.

Ross, A., & Willson, V. L. (2017). One-Way Anova. In A. Ross & V. L. Willson (Eds.), *Basic and Advanced Statistical Tests: Writing Results Sections and Creating Tables and Figures* (pp. 21-24). Rotterdam: SensePublishers.

Rumelt, R. P. (1995). Inertia and transformation. In *Resource-based and evolutionary theories of the firm: Towards a synthesis* (pp. 101-132): Springer.

Schwartz, H. (2003). 'Economic rationalism'in Canberra and Canada: Public sector reorganisation, politics, and power. *Australian Economic History Review, 43*(1), 45-65.

Smiti, A. (2020). A critical overview of outlier detection methods. *Computer Science Review, 38*, 100306. doi:https://doi.org/10.1016/j.cosrev.2020.100306

Swedberg, R. (2020). Exploratory Research. In C. Elman, J. Mahoney, & J. Gerring (Eds.), *The production of knowledge: Enhancing progress in social science* (pp. 17-41). Cambridge: Cambridge University Press.

Sykes, A. O. (1993). An introduction to regression analysis.

Uenk, N. (2019). Commissioning of social care services.

Walker, H., Knight, L., & Harland, C. (2006). Outsourced Services and 'Imbalanced' Supply Markets. *European Management Journal, 24*(1), 95-105. doi:https://doi.org/10.1016/j.emj.2005.12.011

Weible, C. M., Heikkila, T., deLeon, P., & Sabatier, P. A. (2012). Understanding and influencing the policy process. *Policy Sciences, 45*(1), 1-21. doi:10.1007/s11077-011-9143-5

Welk, J., & Rodriguez Esquerdo, P. (2018). Applied regression analysis for business. *Cham: Springer*.

Websites

R. Bakker. (2022, April 29). *Jeugdhulp 2021* [Report]. Retrieved from https://www.cbs.nl/nl-nl/longread/rapportages/2022/jeugdhulp-2021?onepage=true

ContractsCounsel. (n.d.). *Public Contract*. Retrieved from https://www.contractscounsel.com/t/us/public-contract

It's public. (2021, March 30). *Benchmark tekorten jeugdzorg - hoeveel komt jouw gemeente tekort?* [Report]. Retrieved from https://www.itspublic.nl/materiaal/benchmark-tekorten-jeugdzorg/

Nederlands Jeugdinstituut. (2022, April 29). *Cijfers over jeugdzorg* [Data Table]. Retrieved from https://www.nji.nl/cijfers/jeugdzorg

Rijksoverheid. (n.d.). *Jeugdhulp bij gemeenten*. Retrieved from https://www.rijksoverheid.nl/onderwerpen/jeugdhulp/jeugdhulp-bij-gemeenten

Y. de Koster. (2021, May 27). *Arbitrage: 1,9 miljard naar gemeenten voor jeugdzorg*. Retrieved from https://www.binnenlandsbestuur.nl/sociaal/19-miljard-euro-naar-gemeenten-voor-jeugdzorg

Y. de Koster. (2019a, June 15). *Minister wil af van Open House in jeugdzorg*. Retrieved from https://www.binnenlandsbestuur.nl/sociaal/minister-wil-geen-open-house-jeugdzorg

Y. de Koster. (2019b, September 16). *Zet open house niet bij het oud vuil.* Retrieved from https://www.binnenlandsbestuur.nl/sociaal/schrijf-open-house-niet-af

T. Lucie. (n.d.). *Decentraliseren en bezuinigen: een gevaarlijke combinatie.* Retrieved from https://www.sp.nl/achtergrond/decentraliseren-en-bezuinigen-gevaarlijke-combinatie

N. Megens. (2021, March 27). *Aantal aanbieders jeugdzorg rijst de pan uit: 'Markt is geëxplodeerd'* [News article]. Retrieved from https://www.destentor.nl/home/aantal-aanbieders-jeugdzorg-rijst-de-pan-uit-markt-is-geexplodeerd~a4805fd8/

N. Uenk, M. Wind, J. Telgen (2018). *Monitor Gemeentelijke zorginkoop 2018.* Retrieved from https://pprc.eu/app/uploads/2021/03/Monitor_Gemeentelijke_zorginkoop_2018-1.pdf

F. M. Weerwind, M. van Ooijen. (2022, May 13). *Kamerbrief over visie op stelsel jeugdzorg en noodzakelijke hervormingen*. Retrieved from https://www.rijksoverheid.nl/documenten/kamerstukken/2022/05/13/kamerbrief-hervormingen-jeugdzorg