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Sweden's budgetary responses to the Covid-19 pandemic

A multilevel governance perspective

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Abstract

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Abstract

In the beginning of 2020, the world was struck by the Covid-19 pandemic that inhibited many economies. Sweden was chosen because of its unique case when responding to the Covid-19 spread by applying an open policy in contrast to the implementation of total lockdowns.

The aim of this study is to explore the governmental budgetary responses to the Covid-19 pandemic in Sweden. To fulfil this aim, the study focuses on the multi-level governance relationships between different national and local actors in Sweden. In order to explore Sweden's unique case, an inductive approach was carried out through netnography, mass-media analysis and document analysis in the period between January 31 and May 15. The theoretical frame of reference is based on multi-level governance and actor network theory.

The study concludes that technology as a non-human actor has played a vital role when enhancing collaborations between different actors such as government, regions, municipalities, companies and universities, in order to minimize the infection spread and economic consequences of Covid-19. The study is a basis for continued research on the unexplored topic of crisis management of Covid-19 in Sweden.

Keywords

Multi-level governance, actor network theory, budget, budget uncertainty, covid-19, crisis management, actors, governmental budgetary responses, Sweden

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1. Introduction

This chapter begins with an introduction to the Covid-19 pandemic and a brief description of previous research of crisis management and budgeting. Thereafter the problematization will be presented followed by the purpose of this paper.

1.1 Background

Covid-19, that is caused by a new coronavirus named SARS-CoV-2, had its breaking point in a city called Wuhan in China. The virus was probably transmitted from animals at a market but has not been fully confirmed. The disease thereafter spread to many countries. Because it is a new disease, there is no immunity developed among people, therefore many are in need of hospital care (1177 Vårdguiden, 2020). Covid-19 is transmitted through direct and indirect contact with humans and through various materials. Depending on the material, the virus has a different survival rate. The quarantine period for the Covid-19 is 14 days, meaning that it will take 14 days from a person has the virus in their body until the patients' start showing symptoms. World Health Organization (WHO) declared Covid-19 as a global pandemic in spring 2020 due to its rapid spread all around the world (WHO, 2020).

The virus has caused copious contaminations and deaths all around the world and various prognosis has calculated that approximately 70 % of the population will be infected, which has tested different countries' health system and challenged governments in the whole world, especially when it comes to political and financial challenges (Söderlund, 2020, March 11). Chan (2020) writes that the economic disturbance and shock created by the pandemic is bigger than the global financial crisis of 2008. In order to reduce the negative consequences on the economics, the central banks have included policies to relax the debt rules and countries have included funding and resources for the healthcare system and emergency response services, subsidies for businesses and subnational governments, and extra unemployment benefits. This to deal with the short-term consequences of the pandemic. However, it is unclear what the long-term consequences the pandemic will have on the economics.

With the current pandemic, Sweden has become a unique case when responding to the Covid-19 spread. While other countries have responded by implementing total lockdowns, Sweden has chosen to apply an open policy. The open policy allows the countries economical finances to continue on with less damages in comparison to other countries because the citizens continue to work as usual and businesses are less affected. One of the reasons for Sweden's moderate response to the pandemic could be that the country wants to soften the blow on the economy. OECD (2020) explained that the effect of businesses closing could result in a 15 % reduction or more in the amount of output in the leading economies and advanced emerging-market economies. The output would decline up to 25 % for median economies (OECD, 2020).

However, the conditions for the state budget of 2020 and the economic policy of the Swedish government has changed greatly with the pandemic, thus having large effects on the economy. Some of the budgetary responses and proposals are that overall, the allocated funds will increase with 60.1 billion Swedish crowns (SEK) and the increase in subsidies will amount to 61.1 billion. However, the subsidies reductions will amount to 0.8 billion SEK. One of the largest expenditure is the support to the municipal sector with funds increasing up to 20.0 billion SEK, support for short term work of 17.1 billion SEK, activity support and unemployment benefits up to 7.5 billion SEK, state-owned companies will be accommodated with capital contributions up to 3.3 billion SEK. These are just some of the many proposals made by the government. The support also includes SMEs in forms of operational support, investment support and access to finances (Regeringen, 2020). As a result, the proposals are expected to raise the states revenue with 28 million SEK.

Nevertheless, due to Sweden's low public debt, the country's economy is well prepared for unexpected events and the government has already proposed five proposals for changes to the budget of 2020, in order to mitigate the effects of Covid-19 in terms of budget. The proposals are also anticipated to affect the state budget in the years to come. The state's financial savings and budget balance are expected to weaken by 14,7 billion SEK in 2021, 13,4 billion SEK in 2022 and 13,0 billion SEK in 2021 because of the budgetary changes to Covid-19 in 2020.

Moreover, the government has allocated funds for costs for the regions and municipalities that are most affected by the disease and amounted to a total of 20 billion SEK (Regeringen, 2020). The amount is distributed depending on the affected persons in each region. For example, the Stockholm region has 55 % of the Covid-19 cases and has gotten a total of 2 012 441 855 SEK

(Regeringen, 2020). According to Petersen (1995) the phases of emergency management include activities that focus on sustaining or restoring a community's condition before the disaster and not distribute the funds across communities.

1.2 Problematisation

According to Donahue & Joyce (2001) disasters are described as

“natural or human-caused emergency events that suddenly results in extensive negative economic and social consequences for the populations they affect”. One of the primary consequences is the effect of the state budget and the allocation of the funds. When a disaster occurs, it is expected by the government to intervene to minimize the consequences. Schneider (1992) elaborates “When a natural disaster occurs, few people stop to ask whether the government should intervene. Instead, citizens tend automatically to view the situation as a serious public problem requiring immediate governmental action”.

Whenever a major crisis occurs, such as terrorist attacks, natural disasters or diseases, there is an effect on the public management. Crisis management belongs to the government responsibility and can be challenging to fulfil (Boin & ‘t Hart, 2003; Boin, Stern, ‘t Hart , & Sundelius, 2005). To have a well-functioning and robust crisis management system, there is a need for both governance capacity and government legitimacy. Crises require government capacity that is built from legitimacy and trust (Christensen, Lægreid & Rykkja, 2016), in order to have a well-functioning democracy (Olsen, 2013). However, government arrangements for crisis management depends on structural and institutional elements (Christensen & Lægreid, 2007; Olsen, 2010) and what type of crisis the government has to deal with (Christensen *et al.*, 2016). Moreover, Doern, Maslove and Prince (2013) describe a crisis to be hasty, meaning that unexpected events occur in a short period of time, which in turn can create disorder in society for a longer period of time. They also explain that a crisis often emerges from a repeated failure to act and recognize an unexpected event and that crisis is a form of political-economic reality.

Furthermore, when a crisis occurs, it becomes a challenge for the government to respond to the citizens demands. Because of the need of an immediate response, the response options available

are limited. This because the decision-making and service-delivery system are not effective enough and, in these situations, decisions need to be made rapidly and out of their jurisdiction. The actions chosen to handle the crisis and the consequences of it, may be both complex and uncertain and unfortunately, a general guide of crisis management does not exist (Christensen *et al.*, 2016). According to Donahue & Joyce (2001) the administrative and resource capabilities of the community's government becomes overwhelmed by the community's demands in a crisis. When the demands exceed the government's jurisdiction, higher levels of jurisdiction will assist the lower levels by either supporting or replacing their activities. This is decided by the budget and how to allocate the funds. Doern *et al* (2013) explains that there are many budgetary areas which look at the multiple political-economical structures and how they handle passivity, policy, power, governance and choice.

In this study, the crisis will focus on the Covid-19 pandemic that has occupied the whole world in 2020. It is important to investigate the budgetary responses to Covid-19 through the lens of Actor Network Theory (ANT) since many actors are involved such as human actors such as politicians, public managers, national, regional and local governments. These actors are responsible for allocating the resources in the fairest way for different purposes such as to schools, health cares, non-profit and profit organizations.

In order to follow crisis management, the attention should be diverted to the governmental actions and the assessment of these actions by citizens and stakeholders. The government can better perform their tasks if they receive legitimacy (Rothstein 1998). The connection between governance capacity and legitimacy is the match between citizens' expectations and bureaucratic management (Schneider, 2011). According to Christensen *et al* (2016) "the size of the gap between organizations' response to a crisis and citizens' expectations determine the success and failure of governmental crisis management performance". If the governmental crisis management pairs up to the citizens' expectations, the response actions work appropriately, and the government crisis management performance is perceived as satisfying. If instead the government capacity and citizens' expectations collide, the government crisis management performance is perceived as worrying. The gap mentioned by Christensen *et al* (2016) can be closed by enhancing the governmental capacity and/or reducing the citizens' expectations. The government is responsible for providing transparent and updated information about the ongoing event of the pandemic through various technologies, which are

the non-human actors according to ANT (Kling, 1980). Also, the transparent information provided is through the governmental discourses and the state budget.

As mentioned before, many countries have taken stringent measures such as lockdowns to slow the spread of Covid-19, and according to OECD's new projections (2020) this will lead to considerable short-term declines in GDP for many economies. Angel Gurría, OECD Secretary General, revealed that the latest estimates on March 25 show that the lockdowns will affect the sectors directly and up to one third of the major economies' GDP. The estimations show a loss of two percentage points in the annual GDP growth, for every month of containment. Solely the tourism sector will have a decreased output of 70 %. OECD predicts that many economies will fall into recession, which cannot be avoided because of the fight against the pandemic has to continue (OECD, 2020). One of the measures the government can take to constrain the economic effects that a crisis has created, is by creating and changing the budget by how to distribute the resources in the most beneficial way possible. This because a crisis drains most of the government's supplies, equipment and money (Donahue & Joyce, 2001).

A crisis can have various effects in different countries' economy depending on their resources. For example, on one hand countries in which tourism is somewhat significant could possibly be severely affected by lockdowns and travel limitations. On the other hand, countries with comparatively sizeable mining sectors, agriculture and oil production, can encounter smaller initial effects from the containment measures, however output will be subsequently hit by the reduced demand of global commodity (OECD, 2020).

Additionally, Angel Gurría said on the G2 Virtual Summit that "Our analysis further underpins the need for sharper action to absorb the shock, and a more coordinated response by governments to maintain a lifeline to people, and a private sector that will emerge in a very fragile state when the health crisis is past." (OECD, 2020). Gurría underlined that the significance of annual GDP growth will depend on factors such as the degree and duration of national lockdowns, the degree of reduced demand for services and goods in other pieces of the economy and the speed of critical fiscal and monetary support takes effect (OECD, 2020). In Sweden, there has been no lockdowns or mandatory shutdowns of companies. Instead, all restaurants and coffee shops are still crowded as usual. Perhaps the reason for Sweden's moderate response to the pandemic is that the country wants to soften the blow on the economy. Even though the Swedish government have not implemented a mandatory lockdown, they still

proposed changes in the spring state budget since the economic policy has changed due to the spread of the Covid-19 virus. OECD (2020) explained that the effect of businesses closing could result in a 15 % reduction or more in the amount of output in the leading economies and advanced emerging-market economies. The output would decline up to 25 % for median economies (OECD, 2020).

As many countries, the Government of Sweden is the national cabinet and has the highest executive authority of Sweden. The Government functions as an interdependent constitution with shared responsibilities. In Sweden, there is a multi-level governance (MLG) system that comprises state and non-state actors that are located at different levels, such as the national, regional and local levels (Saito-Jensen, 2015). Even though Sweden is a monarchy, the King of Sweden has no authority but has a purpose to still serve as the ceremonial head of State. Instead the Government is run by the Prime Minister. The prime minister is chosen by cabinet ministers and the Speaker of The Riksdag. and the Government answers to the Riksdag (Landguiden, 2020). With the current pandemic, Sweden has stood out with how the country choose to cope with the spread of the virus. The Swedish government decided to have an open policy with softer restrictions than lockdowns. One example is that social gatherings is limited to 50 persons which is more generous than Germany's restriction of minimum two persons. Also, all restaurant, gyms, bars and other hotspots are still open and crowded.

The conditions for the economic policy of the government and the state budget for 2020, has changed drastically with the spread of Covid-19 and has had large effects on Sweden's economy. However, because Sweden has a low public debt, the country is prepared for the challenges that the virus brings. The Swedish government has suggested five proposals for changes to the budget for 2020, in order to mitigate the effects of Covid-19 in terms of budget and reduce the infection spread. The proposals include credit guarantees to airlines ((prop. 2019/20:136, bet. 2019/20:FiU52, rskr. 2019/20:188), income and expenditure measures to manage the effects in society such as the state, citizens and finances due to the virus spread (prop. 2019/20: 132, bet. 2019/20: FiU51, par. 2019/20: 199-202), further tax measures (prop. 2019/20: 151, bet. 2019/20: FiU55, (2019/20: 204) and additional measures to reduce the damaging effects of the spread of the virus on both organizations and individuals (prop. 2019/20: 146, bet. 2019/20: FiU56, 2019/20: 207-212) (Regeringen, 2020).

The government is trying to ensure that the authorities that are managing the Covid-19 outbreak have the required resources. Also, measures have been taken to ease the impact on affected businesses and individuals by allocating 1.6 billion SEK to salary guarantee compensation and 1.2 billion SEK to expand labor market policy programs (Regeringen, 2020). Also, funds have been allocated for costs for municipalities and regions that are greatly affected by the virus outbreak, for example the region Stockholm whereas 55% of the resources are allocated (Regeringen, 2020). Because of the fact that there has been limited research on Covid-19, this paper will focus on the Swedish government's response to Covid-19 pandemic through the lens of actor-network theory by focusing on the MLG system, with a netnographic, mass media analysis and document analysis approach.

1.3 Purpose

The purpose of this research is to explore the governmental budgetary responses to the Covid-19 pandemic in Sweden. To fulfil the research's purpose, the authors will focus on the multi-level governance relationships between different national and local actors in Sweden.

2. Theoretical framework

This section presents a review of previous literature on crisis management, budgeting and multi-level governance. This is followed by a description of the chosen theory, Actor Network Theory, and an explanation to why the theory is relevant for this study.

2.1 Literature review

In a period of crisis, resources in public budgets become notably insufficient and uncertain. In such time, the government has to manage trade-offs, cutbacks, reallocations, programme terminations, organisational corrections, changes in non-negotiable rights and contracts (Levine, 1978). With this being said, government and agency responses to budget uncertainties affect timing of spending. According to United States Government Accountability Office (GAO) (2017) agency managers try to be flexible when conducting their budget and in the US the agencies follow controls by the Congress to ensure financial control and accountability. Due to several constraints such as purpose and amount of the funds, affect how the funds are distributed throughout the year. Examples of constraints include the time frame of the availability of the funds and the financial features of how the funding affect how resources are managed by the agencies. Another example is the *bona fide* rule which argues that an expenditure proposed by an agency or government must have a legitimate need for future financial years. A third example is that agencies must consider avoiding over-obligating and under-obligating funds within the budget (GAO, 2017).

Moreover, there are several budgetary domains, and each domain look across multiple departmental governance and how they interact with the other domains. Also, the budgetary domains look at the multiple political-economical structures of passivity, policy, power, governance and choice (Doern, *et al.*, 2013). With this being said, governmental departments can interact with more than one domain at the same time and there are five elements within a budgetary domain that help describe the field of activity, passivity and choice; i) confirmed and shifting systems of *public and private power*, ii) combinations and contending *agendas, discourses and ideas*, iii) *Multi-departmental/agency governance institutions* at the federal level, iiiii) pack of *spending and taxation* and governing instruments and, iv) combinations of

federalism and multi-level and multi-scale governance (Doern *et al*, 2013). The concept of MLG explains the distribution of authority being both vertical or horizontal between different levels of government such as regional, local, and national. Also, the distribution across different sectors such as markets, states and society (Daniell & Kay, 2017; Spencer, 2018).

Furthermore, Doern *et al* (2013) describe a crisis to be speedy and uncertain, meaning that unexpected events occur in a short period of time, hence creating disorder in society. They also explain that a crisis often emerges from a repeated failure to act and recognize an unexpected event and that crisis is a form of political-economic reality. Because of this, there is uncertainty in how to allocate the funds of the budgets. According to GAO (2017) budget uncertainty also affect the characteristics of spending, but continuing resolutions (CR) allows agencies to continue their operations by providing funds, until the official agreement of the decision is reached. Agencies who conduct the budgets are often obligated to use the most limited funding actions. However, CR also create budget uncertainty for those conducting the budget. If an official agreement is not reached or CRs are not passed, it can result in government shutdown which in turn can affect the resources the agencies manage when conducting a budget. Hence, creating a delay in budget and other activities. Additionally, planning during a government shutdown may act as a distraction when distributing obligating funds until the end of the financial year (GAO, 2017).

In addition, the idea of crisis is a process of how the situation advance from a severe turning point (Delbecque & de Saint Rapt 2016). With a societal safety science perspective, crisis management deals with situations of events that are threatening towards the security and safety of the society or managing the conditions after such crisis has occurred. Crisis management was defined by Oizumi, Oizumi and Corporate Crisis Management Research Group. (2015) as “Predict and prevent dangers that can break out anytime and at anyplace in unexpected forms and if they take place, quickly counter them with ‘initial actions’ to minimize the damages”. The government arrangements for crisis management derive from structural and institutional elements of the crisis that is faced by the government (Olsen, 2010; Christensen *et al.*, 2007; Christensen *et al.*, 2016).

Furthermore, Jones (2010) states that public managers among others, need to find better alternative methods for developing the management of fiscal and economic stress through reorganization. Typical features in public sector reorganization is the centralisation of planning

and the reassessment of priorities. However, there are variables that seem to be more important than centralisation per say, which are smoothing the impact of cuts, politicised reorganization, continuity of leadership, the ability to communicate and define organisational goals and missions, the extent to which priorities in service are established and budgeted, and the kind of government and degree of cooperation between legislative and executive arms (Jones, 2010).

Moreover, the meaning of corporate crisis management is that corporations respond correctly to unexpected changes in the environment, natural disasters, major accidents or emergency breakouts. Actually, occurrences such as war, terrorism, earthquakes, nuclear plant accidents, tsunamis and volcanic eruptions are exceptions with normal insurance policies, meaning that premiums will not be compensated against such events. Therefore, these events are not risk management topics since they derived from insurance management, instead these events are crisis management topics. Corporate crisis management is different from that of nation or administration, because in worst case scenario if something would go wrong, it could lead to bankruptcy and organizations would cease to exist (Kamei, 2019).

According to Schick (2009) crisis budgeting has four linked lineaments of traditional budgeting with the first lineament being that the routines and special procedures are influenced by the expedite action. Thereafter, the effective budget power is usually influenced by specific actors who manage the process and secure various interests to political leaders. This because political leaders often have a higher policy concern. Hood (2010) writes that, when a policy fails (especially in a time of crisis), governments usually tries to avoid getting the blame delegating certain responsibilities to public managers and officials (Peters, Pierre & Randmaa-Liiv, 2011). The third lineament of crisis budgeting is that there are significant changes in spending outcome and revenue and that is differs from normal patterns from regular budget practices. Lastly, the fourth lineament of crisis budgeting paves the way of how to deal with different conflicts because when a normal budget process shifts to a crisis mode, new conflicts emerges (Schick, 2009). These four lineaments can be used to handle budget uncertainty in a time of crisis.

It is hard to pinpoint the essential changes in the budgeting process and the majority of budgeting since budget uncertainty occurs, therefore management reforms have emerged from the pressures to reduce public expenditures and from crisis (OECD, 2010; Schick, 2009). A study by Caiden (2010) writes about how current budgetary reforms should and will need to relate to changes in organisational cultures and to management. Schick (2009) on the other

hand explains that a “performing budget” needs to be implemented by a government in order to achieve a “performing state”, and that without a budget capacity, it is impossible to govern well. With this being said, the government need to multiply options so that they can expand revenue sources. Furthermore, to ensure budgetary stability in a crisis, it is vital that governments implement sustainable policies and continually argue them (Kamei, 2019).

However, despite their efforts, the majority of governments find it challenging to present good quality, relevant and credible information to the decision-makers, and also the incentives of using the information in budgetary decision-making (OECD, 2007), making the budget uncertain. Furthermore, Padney (2010) disclosed that using a performance management system and collecting extensive amount of information, does not provide improved performance, unless the derivation of the data usage is provided. Nevertheless, Christensen *et al* (2016) states that there is no general theory of how crisis should be handled or by a specific organisation. A crisis is a perception and includes subjective elements. The government must respond decisively, rapidly and show leadership when the value and pillars of the society are threatened. However, the options are limited because the government must act quickly. Additionally, the choices chosen to deal with the crisis and the followed consequences can be both uncertain and complex (Christensen *et al.*, 2016).

In sum, crisis management performance is more or less about how the government’s actions are evaluated by citizens and stakeholders. The government authorities can better perform their tasks if they receive legitimacy from the society (Rothstein, 1998). If the government’s actions are a match to the society’s expectations, the crisis management performance is perceived as sufficient. However, if there is a mismatch and gap between the expectations and actions, then the response process of the government is seen as insufficient. Therefore, the size of this gap between the government’s crisis response and the expectations of the citizens, determine if the governmental crisis management performance is a success or failure (Christensen *et al.*, 2016). As this literature review have shown, majority of studies are dealing with national responses to different crises, however this study will be dealing with crisis responses on a national level with a multi-level governance perspective in Sweden, because of Sweden’s unique open policy approach.

2.2 Actor Network Theory

In order to study the governmental budgetary responses to the Covid-19 pandemic by focusing on the MLG relationships between different national and local actors in Sweden, we have chosen to use the Actor-Network Theory (ANT) since both human and non-human actors are involved in the budgetary process. MLG focuses on the relationship between different levels of government where responsibility for policy and its implementation overlaps (Piattoni 2010; Stephenson, 2013; Saito-Jensen, 2015). Moreover, the concept focuses on vertical and horizontal relationships between the different levels and where non-governmental actors fit in the government process (Bache & Flinders, 2004).

ANT is a methodological and theoretical approach to social theory. In the social theory, the natural and social worlds exist in continually alternating network of relationships and nothing else exists outside of the relationships. The theory points out that all factors entangled in a social situation are on an equal level, therefore external social factors does not exist outside of the relationship network. Firstly, the term 'network' is used by Latour (2005: 131) to describe the smeared borders between characters and deals with arranging how actors distribute and define roles and organize others to play these roles. Secondly, the term 'actor' pinpoints that something acts or that the activity performed is accepted by others (Latour, 1996: 373). The roles can be characterized as technical, political, social or bureaucratic and may be organizations, people or machines. Thus, the term 'actor-network' mean that the actor is a network and his/her actions and character are altered by human and nonhuman actors (Justesen and Mouritsen, 2011).

The main idea of ANT is that a network of devoted relationships need to be formed to actors intentions and fulfil their goals (Lowe, 2001). Nowadays, individual governments or government departments lack the sole authority over power, resources and government structures, that are needed to appropriately respond to public policy challenges. This means that different actors are required to work with each other to overcome these challenges. The actors can be public actors, non-governmental organizations or private actors. However, not all MLG systems are working together because some actors such as engineers and ministers have authority to create different decisions that affect the rest of the MLG system and its negotiations. These actors are key agents for system change (Daniell & Kay, 2017).

One important trait of the ANT is that both human, such as personal relationships and political power, and nonhuman actors, such as technology, information systems, control and governance mechanisms (Lowe, 2001), create the studied network (Latour, 1996; Callon, 1981). The theory explore actions and motivations of human actors that adjust their commitment about the nonhuman actors' requirement and the ANT concept contribute to emphasize the simultaneously technical and social character of a social arrangement (Dwivedi, Wade & Schneberger, 2012).

One of the main studied actions in this study is how the human choose to create a budget in order to allocate the right funds in a crisis. Especially, since the purpose of this research is to study the budgetary government budgetary responses to the Covid-19 pandemic in Sweden. Accordingly, this theory differs from other of institutional school with the focus of technologies and social components and technology determinism discipline (Kling, 1980). Moreover, ANT can be applied to examine how the interests of diverse human and nonhuman components are coordinated into technological and social artifact. According to Walsham (1997) an artifact is created by humans and refers to a fact in the technological construction in literature.

ANT is built up by propositions such as network building, that includes the concept of "Inscription" and "translation". On one hand, Inscription has many aspects for example: (1) what is inscribed? (2) What is its strength or how difficult is it for actors to realize the inscription? (3) Who or which type of actors tries to inscribe it? (Callon 1991) etc.

On the other hand, translation explains how an actor interacts, appropriate and reinterprets with other human actors. Also, it explains the interest and interaction with non-human actors and how these interests are embedded in the inscription. Sweden has created an official website called "Krisinformation.se" to deliver up to date information about the current pandemic and various measures to follow up the crisis. This ensures transparency and legitimacy towards the society which is one of the human actors. Monteiro & Hanseth (1996) explains how the actor's interests can be translated and flexible, hence enhancing the maintenance of actor-network. Walsham & Shay (1999) defines it further by stating that "Successful networks of aligned interests are created through the enrolment of sufficient body of allies and the translation of their interests so that they are willing to participate in particular ways of thinking and acting that maintain the network".

In this study it is important to investigate the budgetary responses to Covid-19 through the lens of ANT since many actors are involved such as human actors like politicians, public managers, national, regional and local governments. These are responsible for creating a new and relevant budget for allocating resources to schools, health cares, non-profit and profit organizations as budgetary responses to Covid-19. This study aims to contribute to the literature on ANT, by investigating the behaviours of human and non-human actors that play a vital role during the budgetary responses to Covid-19. The budget aligns the interest of the actors regarding which demonstrate how ANT can be used to analyse the budgetary responses and provide insight into social and technological contexts that are dynamically connected (Hui, 2012).

The non-human actors in this case are the technologies that governments are using to communicate about the Covid-19, which in this case is a website called Krisinformation.se, which deals with ongoing information about the number of Covid-19 cases reported as well as the mortality rate and focus on age and geographical locations. The information provided increase transparency to the public and at the same time avoid the creation of panic. Additionally, the non-human actors are included in ANT, which allows a more coherent examination of the accounting technologies' role in an organisational context (Hui, 2012). ANT also supports that individual actors are grouped in order to reduce complexity of network (Law, 1992). According to Sarker, Sarker and Sidorova (2006), ANT can serve as a useful theoretical lens to understand socio-political phenomena.

In sum, ANT is suitable when it comes to dependent empirical knowledge about accounting because the theory focuses on various actors in an actor network system. Within the budget setting process, a power relationship exists and through the lens of ANT an explanation can be provided to explain how the mechanism of power is created in an organization. The process is a collaboration between various actors that try to assemble resources (Hui, 2012). The budget in Sweden is changing due to the Covid-19 pandemic in terms of the allocation of funds and additional expenditure relating to the budget. The budget is geographically allocation resources to more affected regions, such as Stockholm that has 55 % of the Covid-19 cases in Sweden. The pandemic has at the same time affected many domains in Sweden such as SMEs, education, health care and businesses. Through the lens of ANT, this study aims to examine the budgetary responses to the Covid-19 pandemic by focusing on the MLG relationship between different national and local actors in Sweden.

As seen in Figure 1, the human actors are defined as the MLG on different levels such as national, regional and local. MLG explains how power and responsibility is distributed vertically and horizontally between levels of government, organizations and actors. Sweden has developed multiple levels of government including national, regional and local levels. Also, MLG explores the relationship between various state levels and interactions with different type of actors (Cairney, Heikkila & Wood, 2019; Schiller, 2018). Furthermore, the non-human actors are defined as technology such as the media and internet. The model explains how MLG use and distribute different technologies in a crisis and how they manage it. The governance actions and measures are built upon the budgetary responses and the nature of the crisis. The budgetary responses include proposals of different measures, regulations on implemented proposals such as subsidies and expenditures related to the state budget.

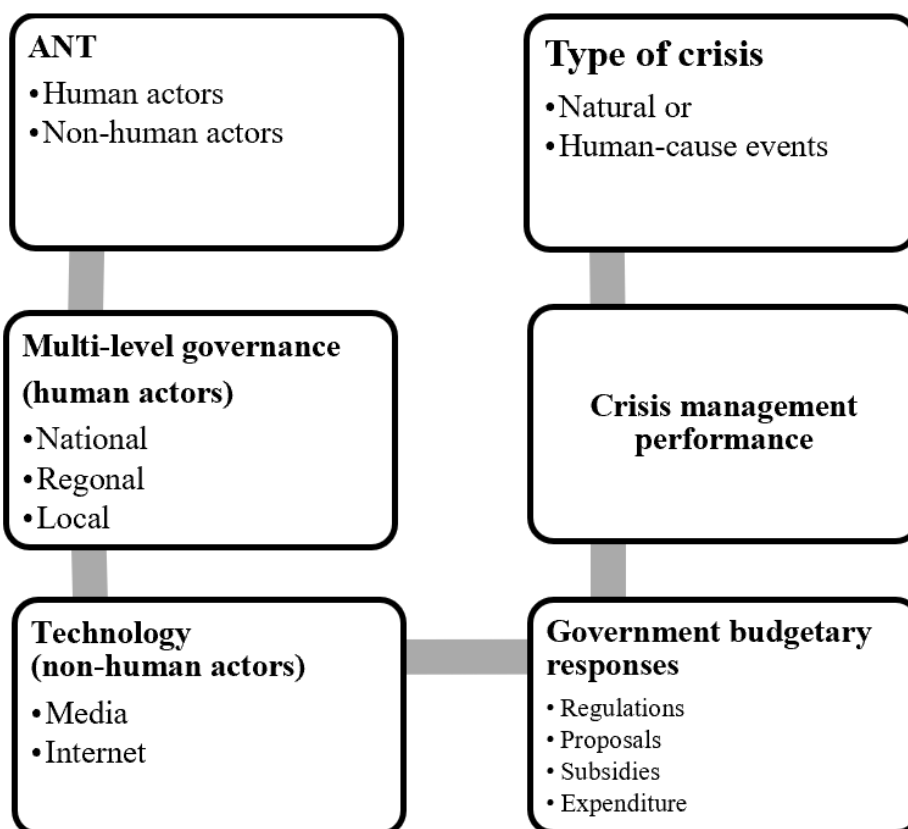


Figure 1. Model of ANT in relation budgetary responses in Sweden

3. Method

In the third chapter of the paper, the research approach and method of the study will be presented and argued for. We will present our inductive research approach and qualitative research method. In addition, we will describe what methods we used to collect the study's empirical data, which were netnography, mass-media analysis and a document analysis. This is followed by limitations of the study.

3.1 Research Approach

According to Bryman & Bell (2015) a research approach can either be deductive, inductive or abductive. An inductive approach is more suitable approach than a deductive one in this thesis (Bryman & Bell, 2015), since the thesis is based on collected empirics about the governmental budgetary responses, which are then analysed through lens of the actor network theory.

3.2 Research method

The chosen research method for this thesis is qualitative, because this study aims to search for content and meaning in a study object, which is budgetary responses to Covid-19. According to Widerberg (2002) the qualitative method is characterized by complexity because of reader's different views. Since the results can be manipulated by the researcher's interpretation, the obtained results are not objective (Toro, Requena, Duarte & Zsmorano, 2013). In order to gain higher validity and reliability in the results, a qualitative study can create in-depth knowledge about the research area (Denscombe, 2016). With this study, we want to study the Swedish government budgetary responses to the Covid-19 pandemic, by focusing on the multilevel governance relationship between different national and local actors in Sweden. Moreover, the empirics were collected between January 31th and May 15th.

3.2 Netnography

Kozinets (2002, p. 62) defined netnography as “Netnography, or ethnography on the Internet, is a qualitative research methodology that adapts ethnographic research techniques to study the cultures and communities that are emerging through computer-mediated communications”. Hine (2000) published a book in the beginning of this century called *Virtual Ethnography* that introduced the idea of using the internet as a research area and where researchers could use traditional ethnographic approaches in the virtual space. The internet is a virtual space, where

the researcher could record and observe communities' behaviour and culture that are similar to the traditional field studies in ethnography (VanMaanen, 2011; Hammersley & Atkinson, 2007). This type of virtual ethnography is basically an application of the ethnographic principles to a internet-based research area, that was named "netnography" by the marketing professor Robert Kozinets. Using an internet-based approach is highly effective, since the Covid-19 pandemic prevents the usage of primary data through interviews for example. The information on the internet is constantly being updated, which allows the study to gain relevant data.

In order to understand what netnography really is, it is important to explain what netnography is not. Netnography is not the use of internet to distribute online surveys or email-mediated interviews. Additionally, it is not downloading data or reports from an internet site. Instead, netnography is the research of an online community and groups of people that come together through a common interest, in order to share information through a virtual forum. Thus, it is method that has its origins in ethnography and includes the observations of the communities over a feasible time period to understand the relationships (Kozinets, 2015). Even though the most common form of social interactions is text based, netnography also contain a vast content such as photography, sound files, drawings, images and presentations (Jeacle, 2020). In this study, we will also use press releases and press conferences from different politicians on TV4 Play to gain updated information about Covid-19 in Sweden. This because the purpose of this study is to study the government budgetary responses to the Covid-19 pandemic, by focusing on the multilevel governance relationships between different national and local actors in Sweden.

Furthermore, the stages involved when conducting a netnographic research is the planning stage, collection of data, the stage of analysis and consideration of ethical aspects. The planning stage is the entrée into the online community and Kozinets (2015) advice is to determine the appropriate online communities for the purpose of the research. It is preferred to use an online community with a focused topic that has diverse members so that there can be diversified opinions such as politicians, media and society. Thereafter, the recommendation is to become familiar with the site. This stage is about becoming involved in the culture online and understanding the context (Jeacle, 2020).

Moving forward into our research, it is time for the data collection when adopting netnography. There are three different types of data that can be gathered (Kozinets, 2015). The first one is the archival data that refers to postings and communications of the members online that is available to study. This type of data is a category of passive netnography that includes monitoring and observation (Costello, McDermott, & Wallace, 2017). The second one is the co-created data, which is data that the researcher creates together with online members and interactions with the community, such as online surveys and interviews. It is an active form of netnography where the researcher is part of a real-time conversation (Costello *et al.*, 2017). The third one is the produced data that relates to the researcher's field notes that has been documented during an observation of the online community. There are various methods to capture data available to the research, which depends on the kind of data that is searched for. If the data is textual, then it can be captured with a computer readable file. Visual images call for techniques to capture still images, whereas video content can be captured using a motion screen capture software (Jeacle, 2020).

The advantages of using netnography is the ease of collecting data. One apparent advantage is that data can be easily downloaded from the internet and then transcribed. Also, the costs of data access are low, since there is mostly no need to travel to gather the field data. The researcher can, in addition, access the data 24/7 and the fact that there is a generous supply of data on the internet that is global and has different opinions and views across countries. This is very useful, especially for a researcher that is investigating a global phenomenon such as Covid-19. Moreover, netnography gathers information with litter or no disturbance to the members of the online community and therefore avoid taking a participant's time or ask someone to complete a survey (Jeacle, 2020).

Nonetheless, netnography has its challenges. The virtual world consists of a extensive amount of data, which can lead to an overload of information for the researcher. This causes the researcher to carefully select and evaluate relevant data for the research question. Recommendations from Kozinets (2015) is to initially get an overview of the data, before deciding what data should be used. The data collection using netnography, as all research methods, should continue until no new insights are developed (Jeacle, 2020). However, netnography gives in this case good access to both primary and secondary data, which results in a rich understanding of public sector accounting (Aleksandrov, Bourmistrov & Grossi,

2018). Especially in times of a pandemic where most of the information is internet-based and one can observe press releases.

3.3 Mass-media analysis

Political parties and governments have perceived mass media as a source of powerful influence. Both businesses and organisations have recently acknowledged the importance of media as not only a channel for advertising, but also as influential content (Macnamara, 2003). News in media can for example affect stock prices, cause falls in sales, lead to corporate downfalls and so on (Macnamara, 2005). Also, media provides up-to-date information about state changes such as the new budget proposal in Sweden that derived from the current Covid-19 diseases.

Mass-media analysis is a part of a content analysis, that is an accepted research methodology. Content analysis is a research method used to study an extensive scope of texts, that can be documents from different organizations, content from newspapers and magazines (Macnamara, 2005). Berelson (1952) described mass-media analysis as a research method that is “objective” (p.18). Mass-media can provide information about regions affected by Covid-19 and the allocation of resources to these areas. However, Berger and Luckman (1967) pointed out that it is not really possible to produce totally objective results, especially when it comes to media since media are open to different interpretations, thus cannot be objective. A mass-media analysis can provide insights into popular culture represented in the media and allow the researcher to explore how media content portray the society and potential effect that mass-media can have by identifying trends and through a competitor analysis. Also, media analysis can provide evaluation to measure effectiveness of the communication of an organization through the media (Macnamara, 2005). Figure 2 show an overview of the uses of mass-media analysis within the areas of gaining strategic information and for evaluation, by displaying the four roles: client, sources, public and issues (Macnamara, 2005).

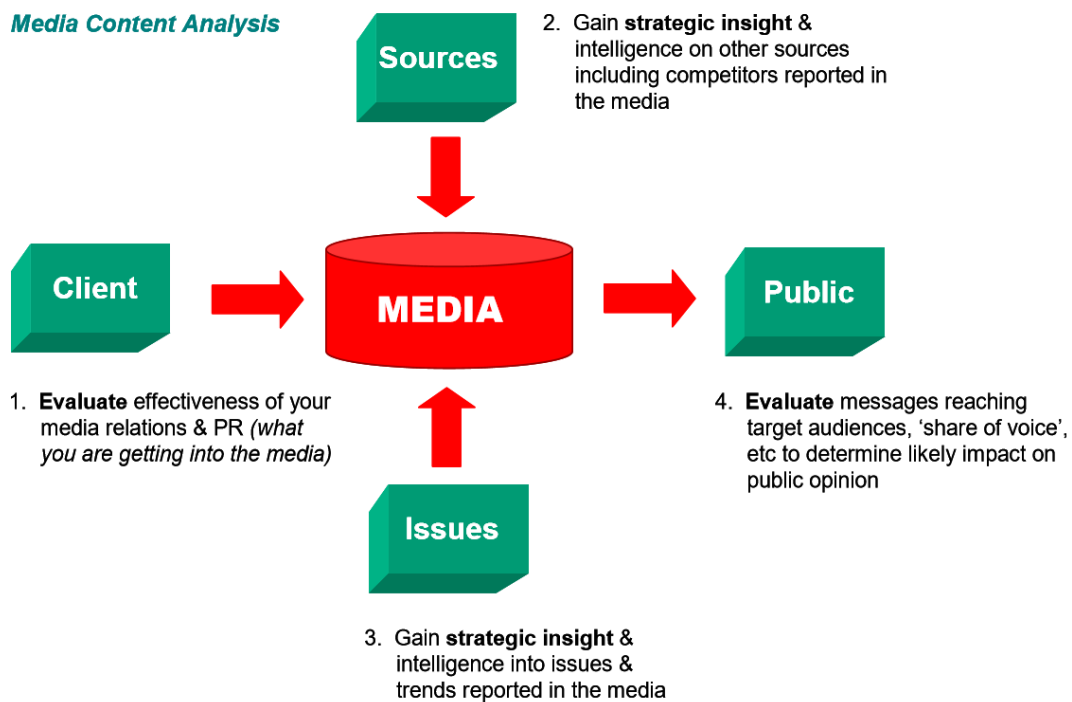


Figure 2. The four roles of mass-media analysis. (Macnamara, J. (2005). Media content analysis: Its uses; benefits and best practice methodology. *Asia Pacific Public Relations Journal*, 6(1), 1–34.)

The sampling process for mass-media analysis consists of three steps according to Newbold, Boyd-Barrett & Van Den Bluck (2002). The first step is the selection of media forms and genre. In this study the media forms will be newspapers and radio, and the genre will be news. The newspapers and radio that we collected the empirics from are SVT Nyheter, TV4 Play, Sydsvenskan, Svenska Dagbladet, MP, Folkhälsomyndigeten, Youtube, Göteborgs Posten, Dagens Industri, Expressen, Dagens Nyheter, Aftonbladet and Dagens PS. The second step is the selection of time-period, that in this study will be from the first Covid-19 case in Sweden, which was January 31 until May 15. The third and last step is sampling relevant content from the selected media, which will be presented in the empirics. When sampling content for the analysis, the simplest form is called “census”, which means to include all information about a topic thus providing the best representation. However, census is not always possible since cases with large volume of media coverage can take several months or years to be analysed. In many cases, such as this one, time is a limitation and therefore media content has to be selected in an objective way that ensures reliability (Newbold *et al.*, 2002). We used keywords such as *corona*, *Covid-19*, *consequences*, *budget*, *economic*, *SEK*, *policy*, *changes*, *proposal* and *decrease*. We are using these keywords to find articles, press releases and documents that includes relevant information in order to study the governmental budgetary responses to the

Covid-19 pandemic, by focusing on the multilevel governance relationships between different national and local actors in Sweden.

Nevertheless, the reliability of a mass-media analysis for making predictions regarding likely effects of the mass-media communication, depends on the employed methodology. Reliability focuses on if the qualitative study have been conducted in a neutral way and on the quality of the researcher (Eriksson & Wiedersheim-Paul, 2011). Therefore, to increase reliability, we present how we conduct the mass-media analysis step by step and explain our choices, limitations and selections, and the interpreted material. By doing this, the study can be repeated and tested for similar results.

Moreover, validity, like reliability, also focuses on internal and external parts. The internal validity is described as a skilful link between the study's theoretical ideas and observations (Bryman & Bell, 2015) while the external validity focuses on the potential generalization of the study. The intentions of this study are not to gain a generalizable results, instead gain a higher internal validity and reliability. As a result, this study can serve as a support for further research of the Covid-19 pandemic and the Swedish government's budgetary responses.

To summarize, mass-media analysis worked as a complement to document analysis for gathering empirics about the current pandemic and the Swedish government response. In these troubled times, it is important to see how the media portrays the Covid-19 pandemic and how this may affect the emergency crisis responses of Sweden, that in turn affect the budgetary responses, that is why this study will use a mass-media analysis approach. Since Covid-19 is a new research area with limited information, most of the information in this paper will derive from mass-media. Due to the pandemic changing the society very rapidly, mass-media coverage will provide the most updated information on this topic. In order to minimize the problems with interpretations, we chose to work with the same document separately to later compare our findings with each other and find a common ground by discussing the material.

3.4 Document analysis

Document analysis is a procedure for evaluating or reviewing documents, both in an electronic form such as internet-transmitted material, but also in a printed version. Document analysis involve data being interpreted and examined in order to gain understanding and develop

knowledge about the empirics (Corbin & Strauss, 2008; Rapley, 2007). The document analysis was applied to understand government reports, especially those in regard to budgeting. Document analysis serves mostly as a complement to diverse research methods (Bowen, 2009), and will be the case in this study. The document analysis will serve as a complement to mass-media analysis to follow up the government's proposals.

Moreover, document analysis allows us to quantify relevant content of the government reports which is an advantage (Denscombe, 2016). Milne and Adler (1999) also talk about how important it is to choose relevant parts to analyse and to take into account the various aspects when analysing words, the number of pages, texts and sentences. Nevertheless, according to Esaiasson, Gilljam, Oscarsson & Wängnerud (2012), a disadvantage with document analysis is that the analysis can be interpreted differently than the interpretations of the researcher and that two researchers with contrasting experiences, may have different understandings of the documents, thus draw diverse conclusions from the same material. Another disadvantage is that there is a slight risk of excluding relevant content for the study as there is a free choice of choosing parts to analyse (Esaiasson *et al.*, 2012).

The documents that will be analysed in this study will be government documents such as the spring budgetary proposal document that can be found on the government's official page "Regeringen.se". To choose relevant parts to analyse, we chose to use keywords such as *Covid-19, consequences, budget, economic, SEK, public policy, changes, proposal* and *decrease*. This to gather the relevant empirics in order to study the Swedish government's budgetary responses to the Covid-19 pandemic.

As mentioned before, mass-media analysis provides an overview of how the crisis is viewed by society, while the document analysis provides the government's views and budgetary responses to the pandemic. As with the mass-media analysis, we chose to work with the same document separately to later compare our findings with each other and find a common ground by discussing the material. This to minimize the various interpretations that can occur.

3.5 Limitations

Data that is provided is limited and constantly changing since the pandemic is relatively new and unexplored. This is one of the reasons that interviews were excluded from the study

because of the recommendations of social distancing and that it is time-consuming for the interviewees. For further studies, interviews should be conducted to add credibility to the study. Another limitation is the time frame of data collection. Our study was conducted during a two-months period and has included Covid-19 cases since January 31st until May 15th.

4. Empirics

This section will provide collected empirics on budgetary responses to Covid-19 in Sweden. It will begin by presenting general information about Covid-19 in Sweden, the infection spread and general recommendations. This is followed by a presentation of governmental measures in society, economic consequences and adopted budgetary responses. The budgetary responses are divided into allocation of funds to municipalities and regions, measures taken to support companies affected and investments in the field of education.

4.1 Covid-19 in Sweden

The Covid-19 pandemic was caused by the SARS-CoV-2 and had its outbreak in Sweden in 2020. The symptoms that separate Covid-19 from a regular flu are symptoms such as, dry cough, respiratory distress and fever. However, the severeness of the illness can vary, for example some experience only mild cold symptoms such as fever, headache, sore throat and fatigue (Doktorn, 2020: KRY, 2020: WHO, 2020).

On January 31st 2020 in Jönköping, the first case of Covid-19 in Sweden was confirmed, and the first domestic infection spread was confirmed on March 6 in Stockholm. Just 5 days after the first domestic spread was confirmed, one patient died from the diseases in Stockholm. On that same day several government measures in Sweden were taken because the World Health Organization declared the virus a pandemic. One of these government measures were implemented on March 19 and included a general advice on non-essential travel because of an EU-coordinated action that was issued on March 17. The issue restricted entry from non-EU/EEA countries for non-citizens. Another Swedish government measure was implemented on March 27, which prohibited public events and gatherings with more than 50 people (Aftonbladet, 2020). Consequently, citizens were asked to stay at home with the slightest symptoms and to frequently wash their hands with soap and water. Also, people at risk groups and people over 70 were advised to stay inside.

As a consequence of the mobility restrictions globally and within Sweden, many industries were affected financially, especially on March 12 which also had the highest recorded decline

(OMX30). To accommodate the affected industries, considerable support measures were announced by the government and the parliament in Sweden.

4.2 Infection spread

The first Covid-19 case in Jönköping, Sweden, was verified on January 31. The person had been to Wuhan in China, where the Covid-19 had its origin (Folkhälsomyndigheten, 2020). The Swedish government classified Covid-19 as a socially dangerous disease on February 1, at the request of the Public Health Authority (Löfvenberg, 2020, March 3). The Swedish Public Health Authority is called Folkhälsomyndigheten. The infectious rate curve had a hump after holiday travellers returned from countries that had a severe infection spread such as Italy and Switzerland, to the Stockholm region on March 1 (Åkesson, 2020, March 6). The day after, March 2, the Public Health Authority increased the risk level in Sweden and the risk of discovering new cases was considered very high.

However, the risk of general distribution of the virus in the country was assessed as moderate (Mirch, 2020, March 2). On March 6, the first domestic infection spread was detected in two patients that sought care in Stockholm, and the infection spread could not be tracked (Erlandsson, 2020, March 9; SVT Nyheter, 2020, March 9). The level of general infection spread was raised to very high on March 10 (Heyman & Blomh, 2020, March 10). Already the day after, the first death occurred in Stockholm (Claesson, 2020, March 11). The state epidemiologist Anders Tegnell announced on March 26 that only the Stockholm region, and not the whole country, may have reached day zero, that is the day when the number of persons affected begin to rapidly increase (Bergman, 2020, March 26) Just 69 days after the first confirmed case of Covid-19 in Sweden (April 9), the number of infected persons in Sweden was 9 141 with a mortality rate at 793 (Folkhälsomyndigheten, 2020). In figure 3, the total amount of cases per region in Sweden is displayed. As seen in the figure, as of May 15th, the most affected region is Stockholm with approximately 10 000 cases and 2000 deaths. Figure 4 shows a timeline of Covid-19 cases per date since January 31st until May 15th. The figure shows that amount of cases escalated after March 23rd and has had highs and lows since then.

Total_amount_of_cases_, Cases_per_100000_inh, Total_amount_intensivcare och Total_amount_deceased

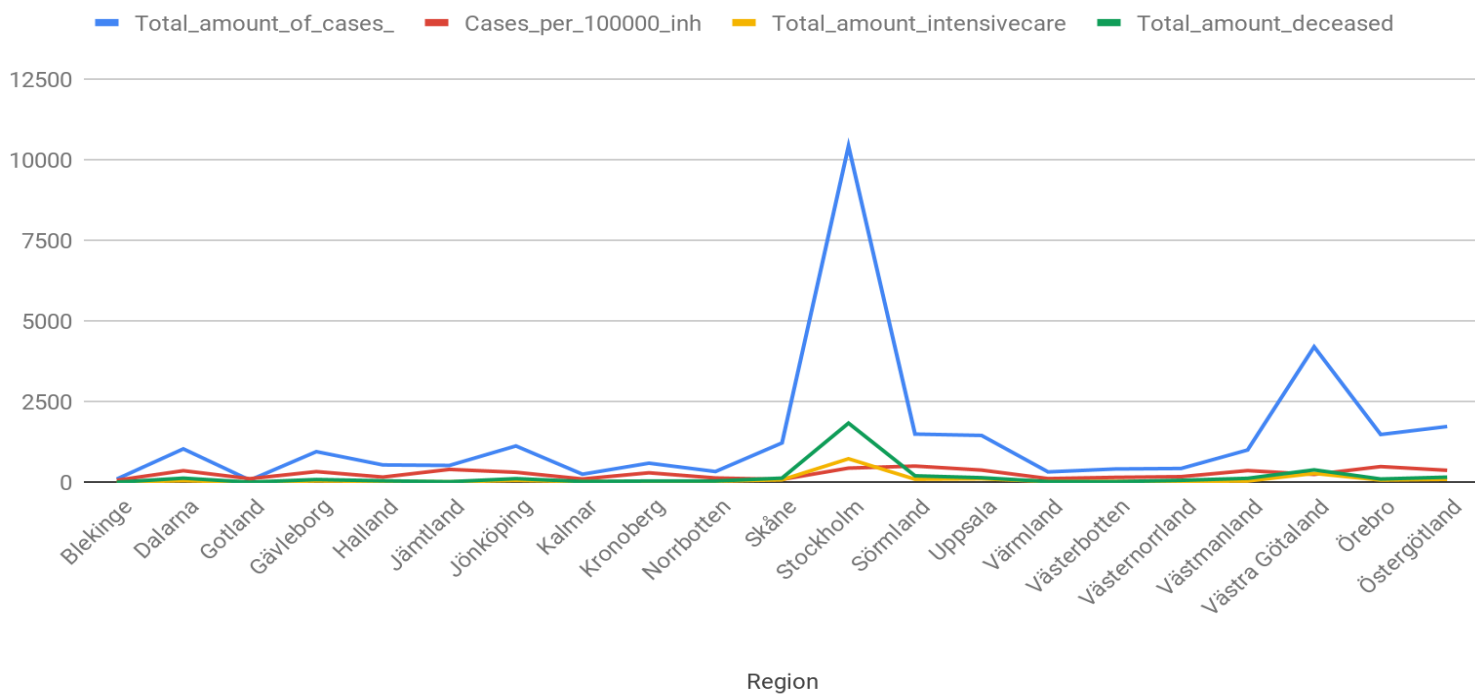


Figure 3. Total amount of cases per region. (Folkhälsomyndigheten Sverige)

Total_amount_of_cases per date

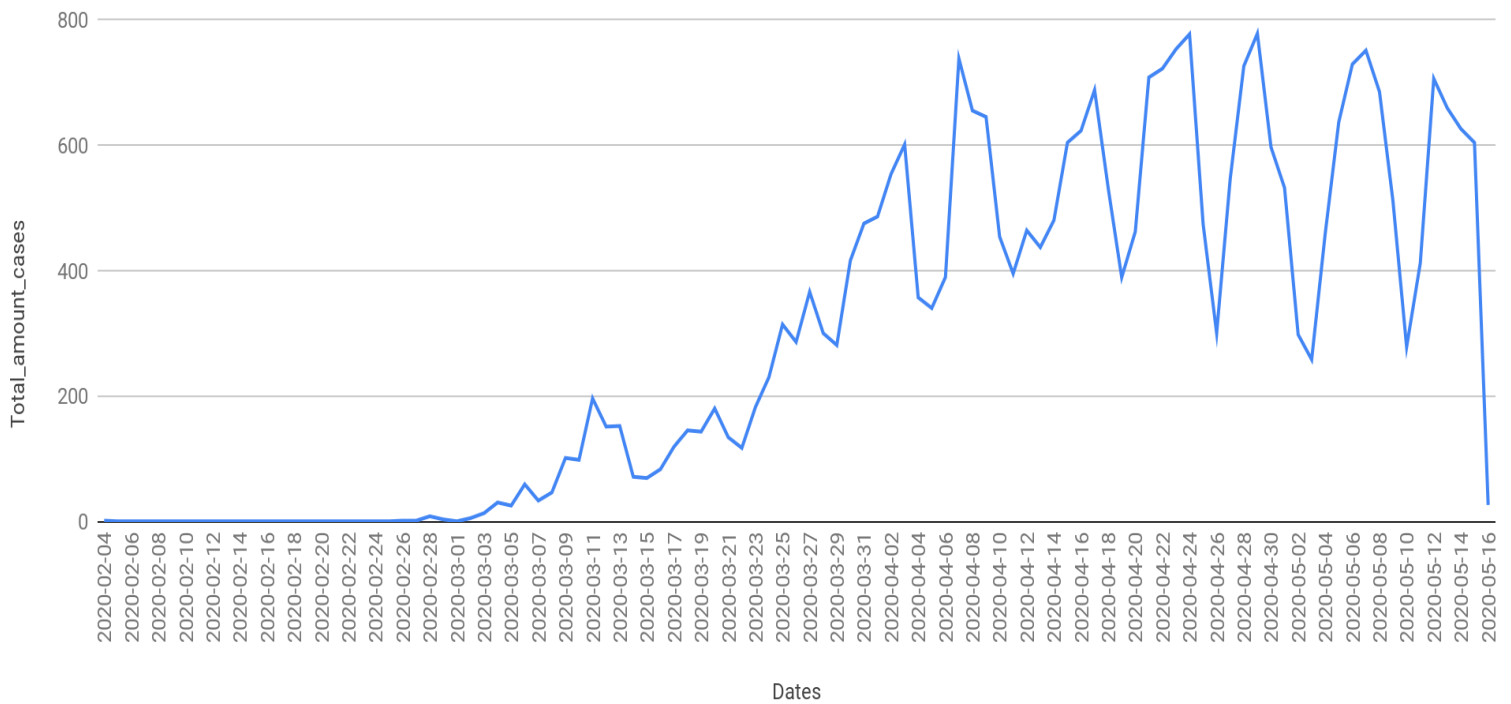


Figure 4. Total amount of cases per date. (Folkhälsomyndigheten Sverige)

4.3 General Recommendations

As mentioned before, several measures were issued by the Swedish government and parliament due to the recommendations issued by World Health Organization (WHO). One of the main recommendations was to keep a distance of at least one meter, avoid contact with nose, mouth and eyes and frequently and thoroughly wash your hands with soap and water for about 20 seconds. Additionally, people was asked to stay at home is they suffered from the slightest symptoms (WHO, 2020).

Furthermore, The Public Health Authority urged infected people to stay inside their homes additionally two days after they have been symptom-free. This because they are still at risk of spreading the diseases. Also, to avoid further infection spread, people were urged to stay away from meeting with elderly or at-risk groups. The Public Health Authority also encouraged to avoid public transportation and limit physical contact with other people as much as possible (Folkhälsomyndigheten, 2020).

Moreover, all risk groups have not yet been thoroughly identified but can include people with high blood pressure, chronic lung disease, cardiovascular diseases and people with diabetes (SVT Nyheter, 31 March 2020). People with multiple complications (multi-sick people) are considered to have a higher risk.

Furthermore, the government will instruct the Swedish Agency for Social Protection and Preparedness (MSB) to instantly prepare a material of national information and communicate it to all households. MSB is therefore assigned to ensure that the information of the authorities' is clear, coordinated and establish effective information channels. In this pandemic, it is important that knowledge is distributed and the fact that the infection spread can be prevented only together (Regeringskansliet, 2020).

4.4 Governmental measures in society

Unlike many other countries, Sweden has not enforced quarantine. In order to prevent nursing staff from working, preschools and primary schools are open so that their children have someone to take care of them (Eriksson, 2020, March 31).

According to the Swedish Constitution, the Public Health Authority, and not the ministerial government, is the institution that has to commence measures to prevent the infection spread of the virus, since most of the measures are voluntary in Sweden. Also, the government often assign the responsibility to the Public Health Authority, despite the fact that the Public Health Authority is under the government's authority and despite the limited liability of the Public Health Authority (Cederblad, 2020, March 28).

Sweden's state epidemiologist, Anders Tegnell, described on March 24 in *Aktuellt* that the strategy of Sweden consists of two parts: to reduce meetings with the sick and healthy, and to protect and isolate the old and sick (Wicklén, 2020, March 24). The rumours of the Swedish goal being herd immunity was denied by Tegnell, because immunity will be achieved sooner or later regardless of the politics intentions. The goal is instead to decrease the rapid infection spread, in order to prevent the loading of the healthcare system, which could save thousands of lives. Simultaneously, it is crucial that the society is not shut down unnecessarily for a long time, which could cost lives as well. Nevertheless, experts speculate that if the process is

extended over time, the infected percentage of the population could be 60 %, in comparison to 70 % if no actions are taken, meaning that more lives can be saved. However, these estimates are highly uncertain (Söderlund, 2020, March 11).

The government has, with the advice of the public health authority, only implemented these prohibitions: On March 11, gatherings of over 500 participants, even cultural and sporting events, were forbidden (SVT Nyheter, 2020, March 11); six days later, on March 17, non-citizen arrivals from non-EU/EEA countries were stopped; The initial ban for gatherings was extended on March 27 at a government meeting, to all gatherings of more than 50 people (Olsson, Desai & Ewald, 2020 March 27); Table service only was allowed at restaurants and bars on March 24 (Obminska, 2020, April 10). County councils have enforced visiting restrictions in hospitals and elderly care of some municipalities. On March 31, a national ban was introduced on visiting elderly care (Malmén, 2020, March 31).

Additionally, various authorities and the government have made a number of recommendations and decisions: Decision made on January 26 and February 17 that non-essential trips are discouraged to parts of China (Krisinformation, 2020). March 3 to Iran, March 6 to Italy and on March 14 it was changed to all countries. Another recommendation was that people returning from abroad or these countries, are encouraged to spend two weeks at home in voluntary quarantine with infectious carrier allowance (Johansson, 2020, February 26). On March 11th, “Karens dag” was temporarily abolished to ensure that people with the slightest symptoms of Covid-19 would stay home from work. The time period of the sick leave without a medical certificate was extended from seven to 14 days (Regeringskansliet, 2020). Employees in Stockholm were advised to work from home if possible, since Stockholm is one of the more affected regions. On March 16th, people over the age of 70 years were recommended to stay at home. However, walks were still allowed as long as there is a distance from others (Folkhälsomyndigheten, 2020). On March 18th, distance education was recommended for colleges and universities. Also, schools will have the possibility to extend the semester. Both the university exam in April (Bednarska, 2020, March 13) and national exams is set (Skolverket, 2020). On March 19, the government discouraged unnecessary trips within Sweden (Makar, 2020, March 15).

4.5 Economic consequences

The Covid-19 pandemic may have considerable economic and societal consequences, both the direct consequence of the virus and indirectly through restrictions taken by different countries to stop the infection spread. The Stockholm Stock Exchange crashed on March 12 2020 by 11,13 % (NasdaqOmxNordic, 2020), after Donald Trump's decision to stop all flights from the Schengen area to the United States. This is the highest recorded decline in a day, measured on the OMX30. From the start of the year until March 19, the stock exchange has fallen by 24,53 % (Brewitz, 2020, March 19).

The global financial market has been negatively affected by introduced travel bans, closed borders and lockdowns (Hällegårdh & Goksör, 2020, March 18). By the closure of many sectors, more and more companies are forced to quickly reduce their operations. A debate article on Svenska Dagbladet by Stefan Fölster calculated that 14 % of Swedish companies would be bankrupted within three months of the current insulation, and if the insulation would be extended to six months, 22 % of the companies would be bankrupt. Fölster thought that the effect of this would be a general credit crisis (Fölster, 2020, March 24) . The CEO of the Third AP Fund Kerstin Hessius requested that the world and Sweden ended the shutdown, with the argument that people would die more from the financial and economic consequences than the actual pandemic (Hessius, 2020, March 22).

The government responded to the financial consequences on March 16 by presenting a support package to affected companies on a short-term notice, where the states overtakes the responsibility for sick pay and acknowledges deferral of tax payments (Larsson, 2020, March 16). The Government even abolished "Karensdag" on March 11, so that those that are feeling unwell do not hesitate to stay at home (Regeringskansliet, 2020). "Karens dag" in Sweden is a non-paid sick day. By abolishing this day, everybody that has the slightest symptom will not hesitate to stay at home, since they will be paid 80 % of their salary for the days that they stay at home. Mikael Damberg, who is the Interior Minister noted in Aktuellt that one should examine possibilities for further measures aimed at small and medium-sized businesses, since these businesses can have difficulties utilizing the measures taken on March 16 and that operate in the vulnerable sectors, such as hotels, tourism and restaurants (Aktuellt, 2020).

Moreover, the Riksbank in Sweden need to have full capacity of taking action to support the Government and Riksdagen (parliament) in the process of relieving the economic

consequences of the crisis. However, because of the Riksbank Inquiry' legislative proposals, Riksbank's capacity is limited and prevents them from taking action in a crisis. As a consequence, there becomes an increased risk to the Swedish economy. To monitor if the Riksbank's responsibility for financial stability is confirmed in law and to support the objectives for monetary policy, The Executive Board of the Riksbank is chosen. As of 16th of April, the Executive Board of the Riksbank has approved a loan of 500 billion SEK to companies via banks in order to constrain and avoid companies being closed during the pandemic. The aim is to limit the effects of the COVID-19 pandemic and to maintain the supply of credit to Swedish companies (Riksbank, 2020).

Moreover, additional crisis package aimed at small and medium-sized businesses was presented on March 25 and included 150 billion SEK. The package contained temporary reduced deductibles and employer fees, reduced rental costs, a state loan guarantee that 70 % of loans from banks to companies, reduced tax to small business owners and for self-employed persons, postponement of tax payments (Nordenskiöld, 2020, March 25). The proposal is set to be enforced on April 7th (Magnusson, 2020). The Government announced on March 31 that the unemployment is anticipated to rise in 2020 to 9 % and the GDP fall by 4 %. In March 2020, 36 800 Swedes were notified of their jobs, which is the highest number ever in Sweden (Malmén, 2020, March 31).

4.6 Budgetary responses adopted by the Swedish State

As mentioned before, the government proposed several bills that will increase the allocated funds by 60.3 billion Swedish crowns (SEK). The increase in subsidies amounts to 61,1 billion SEK and reduction in subsidies to 0,8 billion SEK. 41.6 billion SEK are directly attributed to measures following the outbreak of the COVID-19 and 5.8 billion SEK are assigned to the security and welfare investment presented in January 2020. Additionally, 11 billion SEK will be assigned to direct effects of changed macroeconomics conditions and changes in regulated appropriations. Moreover, 1.9 billion SEK will be assigned to unexpected expenditures (Vårändringsbudget, 2020).

As a consequence, the municipal sector will be assigned 22.0 billion SEK, short-term work will be supported by 17.1 billion SEK, activity support and unemployment benefit 7.5 billion SEK,

parental insurance 1,7 billion SEK, which was enacted on April 23rd, capital contributions to state-owned companies 3.3 billion SEK, salary guarantee compensation 1,6 billion SEK and expansion of labor market policy programs up to 1,2 billion SEK, see Appendix 1. These supports will in turn increase the the largest expenditures. However, these expenditures are estimated to increase the state revenue with 28 million SEK (Vårändringsbudget, 2020), see Appendix 1.

As a result of the proposals in the spring changing budget, the budget balance of the central government decays by 59,2 billion SEK and the financial savings of the public sector by 55,3 billion SEK. The discrepancy between the expense effect and balance effect, can be explained by the exploited appropriation credit that influenced the balance in 2019. Additionally, the discrepancy between the impact on financial savings and the budget affect is somewhat explained by the proposals for capital contribution to companies and an intra-state payment of a tax liability that has little effect on financial savings (Regeringen, 2020).

Overall, the state budget are forecasted to be affected in the coming years by these proposals (Chan, 2020, March 23). For example, the state's financial savings and budget balance are predicted to weaken by 14.7 billion SEK in 2021, 13.4 billion SEK in 2022 and 13.0 SEK in 2023. The main parts of these amounts are the permanent contribution to the municipal sector of 12.5 billion SEK. The changes proposed amount up to a total of 18,3 billion SEK. The largest central government commitment of 10,5 billion SEK is to investments revolving the congestion tax in Stockholm (Tegnell, 2020, March 26; Regeringskansliet, 2020).

In order to limit the effects on people's' health and economy, the infection spread need to be contained. There are several research groups in Sweden that are continually working on the Covid-19 virus and the government has proposed that 100 million SEK be allocated to research institutions connected to the virus. The purpose is to make resources available to research so that the pandemi can be quickly contained and help stop the spread and strengthen the society's preparedness and resilience. The focus remains on the efforts that can produce fast results in terms of new methods or products that can limit the virus spread (Regeringskansliet, 2020).

Budgetary responses adopted by the Swedish State	Allocation of funds to municipalities and regions of 2020
	Measures taken to support companies that are financially affected
	Investments in the field of education

Figure 5. A summary of the budgetary responses adopted by the Swedish State.

4.7 Allocation of funds to municipalities and regions

In Sweden, Covid-19 has been rapidly spreading, as in many other countries. The confirmed cases in Sweden amounts to 15 000 and number of deaths until April 22 is 1700. In order to mitigate the infection spread of Covid-19, the government has implemented different measures such as social distancing measures and travel restrictions. In addition, the majority of universities and secondary schools use distance learning. As a result of the new Covid-19 virus, municipalities and regions are heavily financially affected, therefore the government have proposed a crisis package aimed at municipalities (Regeringskansliet, 2020). Authorities and infection protection should have all the tools necessary for fighting the infection and minimizing the socio-economic costs of the infection (Regeringskansliet, 2020).

The Swedish Riksdag adopted this proposal and the government expects that the costs will exceed the initially estimated ones. For that reason, the government presented on April 2 a proposition of additional two billion SEK will be distributed, meaning that a total of three billion will be distributed as a reason for the Covid-19 pandemic. Above all, there is an immense need for protective equipment and intensive care sites that are expected to increase costs for health care (Regeringskansliet, 2020; Bergman, 2020, March 26).

On April 2nd it was proposed that regions and municipalities will receive a 22 billion SEK and as a consequence, the general government grants will increase within the years to come

compared to previous proposal of 5 billion SEK. Out of total 20 billion SEK, 12.5 billion SEK are permanent grant increases and the municipalities and regions will have to share it. Furthermore, to strengthen municipalities ability to maintain vital functions such as, school, healthcare and public transportation, a supplement of 15 billion SEK will be provided (Regeringskansliet, 2020; Zachariasson, 2020, April 2). The compensation will be divided as previous allocations, with that being said, 70 % to municipalities and 30 % to regions (Zachariasson, 2020, April 2).

The proposals for the additional amending budget includes proposals that cover four different areas: compensation for extraordinary costs to the municipalities and regions, the strengthening of government authorities affected, financial support for individuals and measures taken to support companies that are financially affected (Regeringskansliet, 2020)

4.7.1 Compensation for extraordinary costs to the municipalities and regions

The government proposed on March 11th that municipalities and regions should be compensated for extraordinary costs. The compensation will include both increased general government grants and extraordinary costs and amount up to 22 billion SEK (KPMG, 2020). The state is then given the opportunity to compensate regions and municipalities for extraordinary measures and increased costs related to Covid-19 in the healthcare system. This compensation may include higher costs to ensure the staffing of the 1177 Care Guide, higher payment for staff, additional material consumption, laboratory analyzes, infection tracking and more (Regeringskansliet, 2020; Cederblad, 2020, March 28). The Spring Amending Budget proposes an expansion of the crisis package to health care with two billion SEK to compensate for costs related to Covid-19 (Regeringskansliet, 2020).

4.7.1.1 The five most affected regions

As mentioned before the compensation will be divided as previous allocations, with that being said, 70 % to municipalities and 30 % to regions (Zachariasson, 2020, April 2). In total 10 500 000 000 SEK will be allocated to affected regions. The five most affected regions that are receiving the majority of funds are the Stockholm region, Västra Götaland, Skåne, Uppsala and Östergötland. The Stockholm region will receive 1 035 467 121 SEK and Stockholm city will receive 991 186 517 out of this amount. Västra Götaland will receive 752 013 257 SEK and Göteborg will receive 589 040 400 SEK out of the amount. The third affected region is Skåne

that will receive 600 318 010 SEK, whereas 349 835 743 SEK will be distributed in Malmö. The fourth region is Uppsala that will receive 167 033 530 SEK and the city will receive 234 446 856 SEK. The fifth region is Östergötland with an amount of 202 865 301 SEK, whereas 165 835 213 SEK will go to Linköping. The five most affected regions in Sweden will receive a total of 2 757 697 219 SEK, which is 26,3 % of the total allocated resources (Regeringskansliet, 2020).

4.7.2 The strengthening of government authorities affected

Firstly, the Public Health Authority will receive, through a proposal, a reinforcement of 41 million SEK for mainly personnel costs. Secondly, the National Board of Health and Welfare will receive a subsidy of 20 million SEK for primarily training efforts, personnel costs and equipment. Thirdly, the Swedish Medicine Agency will receive an allowance of 5 million SEK for its collaboration with regions to secure drug supply in Sweden. The supplements correspond to the authorities own assessment of what is presently needed. For example, the National Board of Health and Welfare tripled their loans from 100 million SEK to 300 million SEK to be able to purchase protective and sampling equipment, among other things (Regeringskansliet, 2020; Regeringskansliet, 2020, April 8).

4.7.3 Financial support for individuals

As mentioned before, the Swedish “karensdag” was abolished and instead the state now compensates its citizens for the first day of sickness case. Also the allowance for infectious carriers was increased. As a result, these measures are estimated to decrease the infection spread and the burden on health care (Regeringskansliet, 2020; Johansson, 2020, February 26). The state will provide 1,7 billion SEK for individual benefit for sick pay standard deduction, see Appendix 1.

4.8 Measures taken to support companies that are financially affected

On May 1st 2020, the proposal for short-term work will be proposed and it aims to allow companies to get started again after the pandemic and avoid unnecessary layoffs (Fölster, 2020, March 24). Additionally, a proposal for companies to postpone payment of employer and employees preliminary taxes, however, with a postponement of maximum two months (Regeringskansliet, 2020; Magnussonslaw, 2020).

Because of the uncertainty and limited information about the ongoing situation, many measures are being investigated and created which can be taken quickly if needs arise. As previously mentioned, the government constantly communicate with the Riksdag so that measures requiring parliamentary decisions should be decided as soon as possible (Regeringskansliet, 2020). Riksdagen has enacted an increased lending to SMEs through Almi Företagspartner that will receive 3 billion SEK as a support (KPMG, 2020; Larsson, 2020, March 16). Another enacted proposal was the state credit guarantees for loans to companies up to 100 billion SEK. Furthermore, airline companies received on March 19 5 billion SEK as a credit guarantee for the airlines (Regeringskansliet, 2020; Makar, 2020, March 15).

4.8.1 Reduced costs for companies

On April 3rd, the proposal for a limited time reduction of social security contributions was adopted by the Riksdag which means that between March 1 and June 30 2020, employers and individuals traders contributions will be reduced. As a results of the reductions, the economic consequences will be more moderate (Regeringskansliet, 2020; Folkhälsomyndigheten, 2020, May 15).

The reduction of the employer contributions means that companies between March 1 and June 30, will only pay old-age pension contributions which reliefs the employer of up to 5.300 SEK per employe per month. This reduction will will soften the blow on companies who are hit with a sudden loss of income. As for the individual traders' contributions, the new rule states that they too only have to pay for the old-age pension contribution and no other fee (Regeringskansliet, 2020, Folkhälsomyndigheten, 2020, May 5).

Furthermore, these reductions were implemented on April 6th, 2020 and the economic consequences for these rules are estimated to have a gross public financial effect of 33 billion SEK (Regeringskansliet, 2020).

4.8.2 Temporary discount for fixed rental costs

As previously mentioned, the Covid-19 virus has had a rapid economic consequence in Sweden, especially for industries such as hotels and restaurants. In order to mitigate the economic consequences for companies due to the virus outbreak, the government has presented a proposal for a regulation that includes discount for fixed rental costs in industries that are

specifically exposed (MP, 2020, March 25). The government allocates 5 billion SEK in the extra amending budget, in order to support for reduced fixed rents for exposed industries such as hotels, grocery stores, restaurants, retail trades and events of congresses or fairs. The allocation also includes customer services such as physiotherapy activities, dentists, body and hair care. This proposal has been sent to the European Commission and the state aid investment must be approved by EU (Regeringskansliet, 2020).

This proposal states that between the period of April 1 and June 30th, fixed rents must be lowered for the tenants by the landlord in these exposed industries. However, the landlord will be supported to soften their sudden loss of income. The compensation will be a maximum of 50 % of the discount, ie the reduced fixed rent, while a maximum of 25 % will be handed out of the original fixed rent. The landlords will seek the compensation afterwards through county administrative boards at the latest August 31 2020 (Regeringskansliet, 2020).

4.8.3 Ability to short-term leave to reduce labour costs

On April 7th, a new law for a system for short-term permits was implemented by the Parliament. Even though it was implemented on April 7th, the support can be applied retroactively from March 16th. This law is estimated to strengthen the system according to the government since working hours can be reduced up to 80 percent (Regeringskansliet, 2020).

Moreover, short-term permits mean that the state provides financial support to the employer when employees reduce their working hours for a period due to unexpected financial problems within the company. As a result, the employer can get up to 80-90 % of their regular salary during the layoffs and at the same time lower the personnel costs within the company. However, short-term allowance can only be used if both parties (employer and employee) agree on it. The aim of this law is that companies can retain their staff instead of dismissing them (Regeringskansliet, 2020).

In order to understand the proposal fully, an example will be provided. If an employee has a monthly salary of 32 700 SEK, is allowed to reduce working hours by 40 % and retains 92,5 % of the monthly salary, which is approximately 30 250 SEK. The employer's cost is simultaneously reduced by 52,5 % from roughly 43 000 SEK for salary and employer contributions to 20 425 SEK. The state will then account for the remaining 19 350 SEK of the

costs, which agree with the 75 % of the total cost of reducing the working hours for employees, see table 2.

Table 2. Cost allocation for working hours reduction as proposed by the government on April 14 2020. Regeringskansliet. (2020). *Korttidspermittering*. Retrieved 2020-05-02 from <https://www.regeringen.se/artiklar/2020/03/om-forslaget-korttidspermittering/>

<i>Level</i>	<i>Work reduction</i>	<i>Salary reduction</i>	<i>Employer</i>	<i>The State</i>	<i>Employer's reduced salary cost</i>
1	20	4%	1%	15%	19%
2	40	6%	4%	30%	36%
3	60	7,5%	7,5%	45%	53%
4	80	12%	8%	60%	72%

4.9 Investments in the field of education

When it comes to the field of education, the government is also proposing additional measures to ease the economic consequences of the pandemic. Several initiatives are proposed in order to meet the demand and need for change and training in the labor market (Regeringskansliet, 2020).

4.9.1 Komvux (regional professional schools)

Since many people are losing their jobs due to the new coronavirus, they are given the opportunity to educate themselves instead through komvux (Fölster, 2020, March 24). Komvux is an education for people that lack a complete high school diploma and is interested in a vocational education (Ya, 2020). To meet these demands, municipalities should therefore be

given additional support to offer upper secondary vocational educations to adults. Therefore, the government has proposed an increase of 25 million SEK as allocation for regional vocational adults in 2020 and also 25 million SEK as study support for additional places. (Regeringskansliet, 2020; Folkhälsomyndigheten, 2020, May 7).

4.9.2 Polytechnic

Polytechnic offers people the opportunity to develop within their industry or a new industry by offering courses within different colleges. Since the demand has risen due to the new coronavirus, the government has proposed an expansion of places by allocating 250 million SEK to 5000 more places in 2020. Student support is also included in that proposal. In addition, 80 million SEK has also been proposed in order to meet the demands for reorganization within the labour market. This by increasing course packages and courses at the universities. As a result, approximately 3500 students will have an opportunity to participate in such education this year (Regeringskansliet, 2020; Folkhälsomyndigheten, 2020, April 16).

Another proposal, that has yet to be introduced, is an experimental activity that focuses on people who already have vocational qualifications relevant to a college degree and how they can quickest find their way to a college degree. An example of this is a nurse with vast experience that makes a move to become a specialist nurse. The budget proposed includes study funding in 2020, 2021 and 2022 and amounts up to 35 million SEK (Regeringskansliet, 2020).

Finally, the budget proposes 5 million SEK for distance education within the Authority's area of responsibility, meaning that the proposal will assist and ensure quality to the Public Health Authority to create and offer more distance education. This by also including extended support from the Agency for Vocational college. The grant for administrated is proposed to be increased by 4 million SEK for the managemet of combined investement (Regeringskansliet, 2020; Folkhälsomyndigheten, 2020, May 7).

4.9.3 Adult education

An increased volume of people will be given different changes at the Swedish “Folkhögskola” that is a school for people with a lack of basic competence to be given a second chance at studying. This results in an increased educational need of adults and in order to meet this new demand, the schools will be allocated 76 million SEK, which also includes the study funding

in 2020. This amount is equivalent to 500 places on the “folkhögskolans” general course, giving adults the possibility to complete primary and secondary school, but also vocational education and post-secondary or secondary level. There will not be any regional co-financing, instead the state is responsible for the entire costs of this investment in “folkhögskola” (Regeringskansliet, 2020; Folkhälsomyndigheten, 2020, April 16). Furthermore, in 2020, the study associations are to be received 30 million SEK to enhance their efforts at distance, in order to develop skills in adults such as economics, language and courses in IT (Regeringskansliet, 2020).

4.9.4 Universities and colleges eliminated “fribelegg” in 2020 so that more people can relieve the care

The government aim to ease the pressure on the Swedish health care by making possibilities for students studying to be doctors and nurses to work and relieve the pressure (Regeringskansliet, 2020). In Sweden, in order to get study funding the student has to have an income up to a certain amount, which is called “fribelegg” in Swedish. “Fribelegg” regulates the student’s income. If the student’s income is above this amount, the study funding is affected (CSN, 2020). To relieve the pressure in the health care sector, the government therefore proposes to abolish the “fribelegg” in 2020 temporarily, meaning that the student has the right to receive study funding in 2020, despite their income being above “fribelegget”. The aim is to create possibilities for students to relieve the health care without being affected negatively. This investment is calculated to amount up to 1 billion SEK and was implemented on April 23rd. The allocation will be distributed on May 15 2020 (Regeringskansliet, 2020; Folkhälsomyndigheten, 2020, April 16).

Furthermore, the outbreak of the Covid-19 has lifted the need for special legislation in such extraordinary events, as socially dangerous diseases. In such an event, the study funding may differ during a period of time in order to mitigate the societal effects that the disease brings. The Ministry of Education has formulated changes in the current student aid act, allowing the government to declare regulations regarding the students’ income in extraordinary events.

4.9.5 Equip colleges to accommodate more students

The government evaluates that there will be an increased need for education due to the current Covid-19 pandemic. Education is needed to develop previous skills, to adjust into a different area or profession, or to obtain knowledge through online-based education. The evaluation

includes resources needed for colleges and universities to enable more students to apply for summer courses or evening courses, or even start a longer education in order to enhance future possibilities in the labor market. As a whole, it is proposed that investment in education at university level to around 9 300 more places in 2020 (which is 4 800 full-time students) and 6 600 places in 2020 (which is 6 600 full-time students). The proposed resources allocated is 683 million SEK in 2020 and 862 million SEK in 2020, which also includes the study funding (Folkhälsomyndigheten, 2020, May 15).

Furthermore, the situation in the labor market is changing due to the current pandemic, indicating that more people will be in need of education in a short period of time. A possibility is to already in the summer of 2020, study summer courses. By studying summer courses, the students are given an opportunity to, in a faster pace, enrol in education, but also to extend studies to other fields or complete courses for more advanced education. In order to ensure that more people study summer courses and to add information on the scope of courses that run during the summer, the government suggests that 127 million SEK be allocated to colleges and universities in 2020. This resource supply corresponds to roughly 6 000 places in summer courses, which is approximately 1 500 full-time students. The overall amount proposed to be invested is 177 million SEK, which includes study funding, so an increasing number of students can study summer courses in 2020 (Regeringskansliet, 2020).

In addition, it is expected that in the years to come that more people will apply to the university to re-educate themselves or begin an education or just develop previous skills. The amount of increase in students is calculated to roughly 1 300 full-time students. For this reason, the government suggests that 111 million SEK will be allocated to colleges and universities from 2020. The primary usage of the funds should be for education where there is a lack of competence, however the funds can have another usage, which is to expand education where there seem to be an increased pressure. In addition, the funds can be used to facilitate for people that need change. Totally, the government proposes that 154 million SEK, including student aid, should be invested in order to increase possibilities for people to study at the university. It is expected that approximately 308 million SEK be allocated and supplied to students at the university, including student aid, which corresponds to roughly 2 600 full-time students (Regeringskansliet, 2020; Skolverket, 2020).

Moreover, the base year gives the opportunity to complement knowledge and be accepted into the university. To encourage people to study the base year and apply for technical education and health education for example, the government's proposal is that colleges and universities be awarded with 210 million SEK in 2020 and 420 million SEK in 2021 for qualifying education and university introductory education. The estimation is that the students will be approximately 2 000 full-time students in 2020 and 4 000 in 2021. This means that a total of 277 million SEK including tuition will be invested in 2020 and 554 million SEK in 2021. The measure is imperative to enable re-education, but also that more new students are able to begin an undergraduate education (Regeringskansliet, 2020; Folkhälsomyndigheten, 2020, May 15).

Additionally, people with higher education should be able to re-educate to subject teachers through supplementary educational education, called *kompletterande pedagogisk utbildning* (KPU) in Swedish. With this, the government's proposal is that colleges and universities receive a total of 15 million SEK as funding in 2020, to increase the validation of previous work and educational experience, which increases the possibility to become subject teachers. The funds would be distributed to *Vidareutbildning av obehöriga lärare* (VAL) so that more people can be admitted to VAL. Additionally, the government anticipates that the rules may change to help facilitate the transitions to the teaching profession.

With the Covid-19 spread during the spring in 2020, many colleges and universities converted to distance education (Wicklén, 2020, March 24). The government proposed to strengthen the quality of distance education by providing funds. Online educations are called *moocars*, and through these colleges and universities can provide education that is open to the public and at the same time free of charge. *Moocar* will not grant higher education credits (so called *högskolepoäng* (hp)), however the education may be credited within a upcoming college education. Therefore, people should be given the opportunity to participate in such education if this type of education increases. To empower an increased supply and information about available *moocars*, the government proposes additional funds of totally 50 million SEK. The funds should be invested to enhance possibilities for distance education and online-based education in 2020. Also, the government proposes that the Swedish University Computer Network that provide platforms and infrastructure for distance education, will receive additional 10 million SEK in 2020 in order to enhance the work connected to the transition to distance education (Regeringskansliet, 2020).

4.9.6 University and University Council should be reinforced with 10 million SEK

The government has proposed that the University and Higher Education Council, called Universitets- och Högskolerådet (UHR) in Sweden, should receive 10 million SEK in 2020. This because UHR has received raised workload, due to colleges and universities diverted to distance education in spring 2020 to limit the spread of Covid-19. In addition, during the spring, the university test was canceled to reduce the infection spread, meaning that UHR probably will receive an increased workload at the next test period in summer and autumn. The 10 million SEK will therefore be used to manage UHR's increased workload (Regeringskansliet, 2020).

4.9.7 10 million SEK to strengthen the Central Student Aid Committee

The Central Student Aid Committee is called Centrala Studienämnden (CSN) in Sweden. As a result of Covid-19, CSN has acknowledged an increased workload. New reforms must be implemented during a short period of time, which requires considerable information efforts and development. Additionally, CSN will need to manage increased number of student support cases and questions about student grantees. Therefore, in order to handle these extended resources in a sufficient way, the government assess that 10 million SEK be allocated to CSN in 2020 (Regeringskansliet, 2020; Folkhälsomyndigheten, 2020, May 5).

5. Discussion

This section will present an analysis of the collected empirics through the lens of ANT and MLG perspective in order to explore the governmental budgetary responses to the Covid-19 pandemic in Sweden. The analysis will begin with the allocation of funds to municipalities and regions, measures taken to support companies that are financially affected and lastly investments in the field of education.

5.1 Allocation of funds to municipalities and regions

As mentioned before, municipalities and regions received a crisis package of 22 billion SEK from the government due to the rapid spread of Covid-19 in Sweden (Regeringskansliet, 2020: Zachariasson, 2020, April 2). This is an early stage of the MLG system because the highest level (the government) is aiding the lower level (municipality sector and regions) (Daniell & Kay, 2017) in order to mitigate the infection, spread of Covid-19. Both are public actors in this case (Saito-Jensen, 2015; Stephenson, 2013; Piattoni, 2010). This is also an example of a vertical relationship (Daniell & Kay, 2017) between the different levels. This can also be explained by ANT because the government department in Sweden lacks authority over power, resources and government structures that are a must when responding to public policy changes (Daniell & Kay, 2017). Therefore, different actors and levels are required to collaborate to overcome these changes that derives from the pandemic (Piattoni 2010; Stephenson, 2013). On April 2nd, the crisis package was implemented with an addition of 15 billion SEK to strengthen municipalities ability to maintain vital functions (Regeringskansliet, 2020: Zachariasson, 2020, April 2). The proposal may have been implemented during this time due to the rapid spread of Covid-19 as seen in figure 4 (Folkhälsomyndigheten, 2020).

Furthermore, as seen in figure 3 Stockholm has been the most affected region and therefore majority of funds have been allocated there. The Stockholm region received a total of 1 035 467 121 SEK, the majority was distributed to Stockholm city. (Regeringskansliet, 2020). According to GAO (2017), government responses to budget uncertainties affect timing of spending in terms of time frame of the availability of funds and the financial features of how the funding affect how resources are managed by the different levels. Due to the budget uncertainty and the fact that Stockholm region is most affected by the pandemic (Folkhälsomyndigheten, 2020), the government has prioritized financial aid to this region

(Jones, 2010). According to Jones (2010) public managers need to develop methods for the management for fiscal and economic stress through organizations, for example typical public sector reorganization is the centralization of planning and reassessment of priorities.

However, the government must also consider avoiding over and under obligating funds within the budget (GAO, 2017). This by aiding other regions as well, but not in the same scale as Stockholm (Jones, 2010). The allocation of funds can be seen as a tool in the network because it arranges how actors distribute and define roles, and that the act or the activity performed is accepted by others (Latour, 1996). The actions are altered by human and non-human actors (Justesen & Mouritsen, 2011). In this case, the human actors are the government, municipalities, regions and politicians, whereas the non-human actors is the budget (Stephenson, 2013; Piattoni, 2010; Saito-Jensen, 2015). The budget that is created as response to the pandemic should be aligned with the interest of the actors (the government), for example the *bona fida* rule which argues that an expenditure or budget proposed by a government or agency (Daniell & Kay, 2017), must have a legitimate need for future financial years (GOA, 2017).

Additionally, there are different government authorities that have also been affected by the pandemic and that have received financial aid in order to strengthen their authority (Regeringskansliet, 2020). One of the most affected authority in Sweden is the Public Health Authority which received a reinforcement of 41 million SEK, mainly for personnel cost. The National Board of Health and Welfare received a subsidy of 20 million SEK and lastly the Swedish Medicine Agency have received an allowance of 5 million SEK. These are the most affected authorities because their field of expertise is health and medicine, which in this case lack the right equipment and drug supply (Regeringskansliet, 2020; Regeringskansliet, 2020, April 8). One of the reasons for these financial aids is for their collaborations with regions to distribute equipment and drug supply in Sweden, being different actors in the network (Latour, 1996; Callon, 1981; Lowe, 2001). To ease the burden on health care, “Karensdag” was abolished and instead the state compensate its citizens for the first day of sickness care (Regeringskansliet, 2020; Johansson, 2020, February 26). Individuals play a vital role as actors in this network to minimize the infection spread by their collaboration (Dwivedi *et al.*, 2012).

As mentioned before, Sweden has developed a MLG system including national, regional and local levels, this to explore the relationships between various state levels and interactions with

different type of actors (Spencer, 2018). For example, the government has abolished “Karensdag” (Regeringskansliet, 2020) in order to create collaborations between individuals and the government (Dwivedi *et al.*, 2012). To summarize, these budgetary responses are not only affecting regions and municipalities, but also public and private companies, universities, and central government agencies (Saito-Jensen, 2015; Daniell & Kay, 2017). These will be further elaborate below.

5.2 Measures taken to support companies that are financially affected

One of the most affect actors in this pandemic has been companies, due to the recommendations of social distancing and implemented constraints (Folkhälsomyndigheten, 2020, May 5). To allow companies to get started again after the pandemic and avoid unnecessary layoffs a proposal of short-time work was proposed on May 1st (Fölster, 2020, March 24). Also, a proposal was also made for the employers to postpone payments of preliminary taxes (Regeringskansliet, 2020; Magnussonslaw, 2020). This is seen as a vertical relationship between government, regions, municipalities and lastly companies and individuals since financial aids are distributed through these actors (Bache & Flinders, 2004), The collaboration between these actors need to be dedicated in order to fulfil these actors’ intentions and common goals (Lowe, 2001; Jones, 2010; Hui, 2012), in this case minimize the infection spread of Covid-19 and at the same time mitigate the economic consequences (Regeringskansliet, 2020; Folkhälsomyndigheten, 2020, May 15).

Due to the steep curve seen in figure 4, many measures were created and proposed, however being limited due to the lack of information during this crisis. Many proposals have been rapidly approved even though the MLG system in Sweden has constraints (Regeringskansliet, 2020), this due to the constant communication between the government and Riksdag (Riksbank, 2020). This is another example of the collaboration needed during a pandemic between different actors in the network (Jones, 2010). Because of the rapid changes of different measures being proposed, there is limited information available in terms of dates of the proposals and government bills, which can be seen in Appendix 1. Since there is an ongoing pandemic, information is constantly changing making it difficult to pinpoint relevant and implemented proposals. Moreover, a non-human actor (Hui, 2012) that has played a crucial role in this study has been technology in terms of media, press-conferences, digital education tools and different websites that are constantly updated such as Krisinformation.se

(Regeringskansliet, 2020). The information provided through technology tends to increase transparency and at the same time avoid panic to the public (Hui, 2012). As a result, communication and collaboration between different actors are possible through various technologies. For example, a budget created by human actors is an artifact that aligns the interest of human and non-human actors (technological and social) (Kling, 1980; Walsham, 1997).

Furthermore, one of the most affected industry in Sweden and the world, is the airline companies because of the current travel prohibition in the world (Regeringskansliet, 2020). On March 19, airline companies received 5 billion SEK as a credit guarantee for the airlines (Regeringskansliet, 2020; Makar, 2020, March 15). Because of the stay-at-home recommendations (WHO, 2020), many companies reported a decrease in revenues, which in severe cases lead to layoffs or dismissals (Fölster, 2020, March 24; Hessius, 2020, March 22). In order to avoid these outcomes, a proposal for limited time-reduction of social security contributions was adopted by the Riksdag on April 3rd, meaning that individual traders contributions will be reduced and the economic consequences will be more moderate (Regeringskansliet, 2020). As mentioned before, companies are also a component in the MLG system and in order to have a functioning MLG through collaborations, all parties need to be taken into consideration in a period of crisis (Spencer, 2018; Doern *et al*, 2013; Daniell & Kay, 2017). Furthermore, the government implemented a regulation that includes discount for fixed rental costs in industries that are specifically exposed in terms of lost revenues and dismissals (Regeringskansliet, 2020; MP, 2020, March 25). Companies in Sweden play a vital role when it comes to the network of actors, since they contribute to Swedish economy in terms of labor (Spencer, 2018). When seen through the MLG system, companies are on a local level (Daniell & Kay, 2017).

Because of the many layoffs and dismissals that occurred during this pandemic, another regulation was implemented to strengthen the system according to the government since working hours can be reduced up to 80 %, both for the individuals and companies. The regulation is a support that could be applied retroactively from March 16th, which means that an employer can get up to 80-90 % of their regular salary during the layoffs and the companies lower their personnel cost at the same time (Regeringskansliet, 2020). As mentioned before, companies as an actor provide labor and minimize the expenditures for the states in terms of

subsidies (Latour, 1996), which moderates the pressure from the government to intervene (Daniell & Kay, 2017).

5.3 Investments in the field of education

To further elaborate, layoffs and dismissals have increased the demand of education due to the change and training the labor market (Regeringskansliet, 2020; Folkhälsomyndigheten, 2020, May 7). The demand has increased because individuals that have been financially affected by the Covid-19 virus, are given an opportunity to educate themselves through various educations such as regional professional, polytechnic, adult education and universities and colleges (Fölster, 2020, March 24; Folkhälsomyndigheten, 2020, April 16). To meet the increased demand, municipalities are therefore given additional support to distribute to the educational sector. One of the proposals has been an increase of 50 million SEK for regional and vocational adults and support for additional places, 250 million SEK has been allocated for 5000 more places in 2020 which also includes student support. The result of this is that roughly 3500 students can participate in such education this year, mainly polytechnic education. Additionally, study funding for future years of 35 million SEK has been proposed (Regeringskansliet, 2020; Folkhälsomyndigheten, 2020, May 7). As seen in Appendix 1, it is not clear if the proposal has been enacted yet (Regeringskansliet, 2020). As previously mentioned, the educational sector is another component in the MLG system (Daniell & Kay, 2017; Saito-Jensen 2015) and an actor in the network (Lowe, 2001). The educational sector functions on a national-local level and receives funding from the government through regions and municipalities (Daniell & Kay, 2017). Even though it functions on a local level, individuals who educate themselves will eventually continue to the higher levels in society and hopefully contribute with their knowledge on the local level again.

As a result of the recommendations of social distancing and constraints (WHO, 2020; Folkhälsomyndigheten, 2020), 5 million SEK were proposed for distance education meaning that this proposal will ensure quality to the Public Health Authority to create and offer more distance education (Regeringskansliet, 2020: Folkhälsomyndigheten, 2020, May 7). Technology is one of the reasons that education is still possible, even though schools have basically been shut down. Through various platforms such as Zoom, it is possible for students to receive the same education previous to the pandemic (Folkhälsomyndigheten, 2020, May 7). Technology is therefore a vital non-human actor (Walsham, 1997) in this study.

Additionally, in Appendix 1 the proposal of eliminated “fribelopp” has been enacted (Regeringskansliet, 2020). The main reason may be that the health care is in need of extra labor. According to Jones (2010) collaboration between different actors is crucial, therefore students should not be limited to support in a time of crisis, due to financial constraints (Folkhälsomyndigheten, 2020, April 16; CSN, 2020). One of the actors in the investments in the field of education is the Ministry of Education which have also developed changes in the current student aid act, meaning that the government is allowed to declare regulations regarding the students income in these extraordinary times. This is one example of how to strengthen a current collaboration in a period of crisis (Jones, 2010). In order to go through with this proposal, 1 billion SEK was distributed to CSN by the government (Regeringskansliet, 2020). The bill was enacted on April 23rd which had one of the highest amounts of Covid-19 cases in Sweden, as seen in figure 4.

In sum, one of the most important actors within the investments in the field of education has been technology in terms of summer courses, various platforms, study funding and expansion of places. Summer courses give students an opportunity to enrol in education in a faster pace and also deepen student’s current knowledge in a specific field (Regeringskansliet, 2020; Skolverket, 2020). Due to layoffs, dismissals and travel prohibitions, many take the opportunity to educate themselves (Folkhälsomyndigheten, 2020, April 16; Folkhälsomyndigheten, 2020, May 15; Wicklén, 2020, March 24). Moreover, 10 million SEK has been distributed to the Swedish University Computer Network to develop platforms and enhance digital distance education (Regeringskansliet, 2020). One of the most used platforms during the pandemic is Zoom. Similar to companies, schools operate on a local level meaning that higher levels such as the government and different authorities need to financially aid the lower levels, in order to have a working MLG system (Daniell & Kay, Piattoni, 2010; Stephenson, 2013) in these uncertain times.

6. Conclusion

This section will begin with a brief presentation of the study's purpose, theoretical framework and methodology. Thereafter will a summary of the results, theoretical and practical contributions as well as future research agenda be presented.

The purpose of this study was to explore the governmental budgetary responses to the Covid-19 pandemic in Sweden. In order to fulfil this purpose, we focused on MLG relationships between national and local actors in Sweden through the lens of ANT. First, the study introduced budget uncertainty in a period of crisis and how the budget is implemented during such time. Secondly, MLG and ANT were introduced in order to explore the relationship between human and non-human actors involved in a budgetary process. Thirdly, the study had a qualitative approach by using netnography, mass-media analysis and document analysis to collect the empirics. Based on the analysis, the Swedish government has taken a more open approach when implementing measures to minimize the spread and economic consequences of Covid-19.

The analysis showed that the highest level of Sweden's MLG system (the government), rapidly distributed a crisis package to the lower levels of the MLG systems (municipalities and regions). These levels are different actors in the network described in ANT, which during the pandemic have to effectively collaborate in order to adequately allocate the necessary funds to affected areas on a local level. The study showed that due to budget uncertainty, Stockholm region was prioritized when distributing allocation of funds to municipalities and regions. This to mitigate the financial effects of Covid-19 because most of the cases were located in this region. Due to collaboration between government, regions, municipalities, companies and universities, decisions can be accepted and enacted by Riksdagen. As a result, a decision can be seen as a tool in the network because the decision should align interests of different actors. The alignment of interest is possible by having a devoted relationship between different actors (Lowe, 2001). An example of such decision can be the budget and how to distribute the funds within the budget. Furthermore, different government authorities have also received financial aid for their collaboration with regions, in order for them to effectively distribute equipment and drug supply in Sweden (Regeringskansliet, 2020). The funds are considered as non-human

actors that are then distributed through the non-human actor technology to human actors, in this authorities, companies and individuals (Kling, 1980).

Moreover, actors that has received funds are companies and individuals (employer and employees). As mentioned before, in order to ensure the survival of affected companies and allow them to get started again after the pandemic many measures were taken, one of them being to avoid unnecessary layoffs and compensation for those that have already been affected by layoffs (Regeringskansliet, 2020). An example of measures is that individuals (employees) can get up to 80-90 % of their regular salary and that companies (employers) lower their personnel cost at the same time, this on the behalf of the government (Folkhälsomyndigheten, 2020, May 7). Due to the constant communication between different actors in the MLG system during the pandemic, many proposals of measures have been rapidly approved, because of the needed action in a period of crisis (Jones, 2010). Another non-human actor that has helped to mitigate the effects of the pandemic and simplified communication between actors in the network has been technology in terms of media, press conferences, digital education tools and different websites (Kling, 1980; Walsham & Shay, 1999).

Lastly, the study showed that education has been the centre of attention as a result of the pandemic and the decreased labor. Individuals are given an opportunity to educate themselves through various educations, which has led to an increase in the investments in the field of education, especially digital education since social distancing is a current recommendation. As mentioned before, technology is an important non-human actor especially in education because of this recommendation. More funds are being invested in expanding the digital platforms used. At the same time, 1 billion SEK was distributed to CSN by the government in order for them to abolish the “fribelopp” regarding the student's' income during these extraordinary times. Again, similar to companies, schools operate on a local level and are in need of financial aid from higher levels such as government and different authorities, making collaboration and communication a priority in these uncertain times.

This study is a contribution to the field of budgeting in a period of crisis since there has been minimal previous research on Covid-19 in Sweden. This study contributes with a new perspective in this field because not only does it focus on Covid-19 cases, but also the governmental budgetary responses in Sweden. The theoretical contribution of this study is that few studies are using ANT in an MLG system to explain budgetary responses to extraordinary events. In terms of practical contribution, governmental budgetary responses were not only

affecting one organization in Sweden, but different organizations and levels and it may be a basis for future research on economic consequences due to the Covid-19 pandemic.

Furthermore, this study contributes with alternative on how to mitigate the economic consequences in a period of crisis, hence avoiding budget uncertainty. Since this is an unexplored topic and an ongoing pandemic, the data has been limited and constantly updated, which resulted in data collection from different websites, press conferences, mass-media and documents. Additionally, our study was conducted during a two-month period, hence limiting our collection of empirics, which should be considered in future studies on Covid-19 in Sweden. Also, because of the limited time frame, this study has not analysed the effects of the Swedish governmental responses, whether they are negative or positive. Further studies will be needed to analyse these effects.

Lastly, since Sweden has had a unique response to the pandemic, this study can be used in future research to compare budgetary responses with different countries that implemented different responses, especially the neighbouring countries Denmark, Finland and Norway, and different effects on the economies. For future studies, interviews can be implemented to add credibility and in-depth knowledge on the topic from another perspective.

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Appendix 1 - Budgetary measures

	Date	Government bill	Measure	Funds (SEK million)	Beneficiary
Limiting the spread of the virus	Not available	2019/20:132 & 2019/20:99	Targeted funding for health and social care	3 000	Health care
	Not available	2019/20:132	Individual benefit for sick pay standard deduction	1 700	Individual/ Businesses
Impact on Swedish jobs and businesses must be pushed back	3/4	2019:20:151	Reduced employers' social security contributions (gross)	30 500	Businesses
	Not available	2019:20:151	Reduced individual contributions (gross)	2 180	Businesses
	25/4	Not available	Crisis package	1 500	SME
	Not available	Not available	Increased ledning to SME through Almi	3 000	SME
	Not available	Not available	Capital contributions to state-owned companies	3 300	State-owned businesses

	Not available	Not available	Expansion of labor market policy programs	1 200	Labour market
Short-Term layoffs and short-time work	1/4	2019:20:15 1	Discount for fixed rental costs in vulnerable sectors	5 000	Businesses
	7/4	2019/20:13 2	Suspended sick pay responsibility for employers	6 500	Businesses
	Not available	Not available	Short-time work	1 700	Businesses
	Not available	Not available	Activity support and unemployment benefit	7 500	Businesses
	6/4	Not available	Reduced social security contributions	0, 0053/per employe per month	Businesses
Security and transition for people who become unemployed	8/4	2019/20:14 6	Suspended income ceiling	1 000	Education

	Not available	SAB2019/20:99	Investment in higher vocational education	369	Education
	Not available	2019/20:99	Expansion of folk high school	76	Education
	5/5	2019/20:99	Regional vocational adult education	700	Education
	Not available	2019/20:99	Distance education initiatives in several forms of education	95	Education
	Not available	Not available	More students in higher education	154	Education
	23/4	Not available	Parental insurance	1 700	Families/individuals
	Not available				
Continued fight against societal problems	Not available	Not available	Higher general government grants to local government sector	20 000	Government sector
	Not available	2019/20:99	National Board of Institutional Care	250	Government sector

	Not available	2019/20:99	Other reinforcement of the judicial system	120	Government sector
	Not available	Not available	Extra financial aid to municipalities and regions	2 200	Municipalities
	Not available	Not available	Riksbank loans to companies	500 000	Banks
	20/3	Not available	Support package	1 000	Culture Sector & Sports movement
Guarantees	1/4	2019/20:Fi U54	State credit guarantees for loans to companies	100 000	Companies
	19/3	2019/20:Fi U52	Credit guarantees for airlines	5 000	Airlines companies