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The Determinants of a Pension Policy Reform

A Multiple Streams Framework analysis on Nordic pension reform cases

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Abstract

The five Nordic countries have been comparable for a longer period of time. One aspect that is going to be studied in this research is if the different pension reform processes lead to the similar outcome, which explains the success of approving a policy proposal. 20 pension reform cases in the Nordics have been selected, which is based on the fact that they are different from one another.

By using the theoretical assumptions of the Multiple Streams Framework (MSF) and implicitly the theory of historical institutionalism (HI), the research will be constructed by using the methodology of fuzzy-set Qualitative Comparative Analysis (fsQCA) method. The research tries to identify if Kongdon's three streams can fulfill the theoretical assumption by opening a policy window.

This thesis can conclude that the MSF approach does partially explain some cases' outcome, 8 of 20 cases. Both stream of problem and stream of politics is necessary and sufficient conditions, and the stream of policy is a sufficient condition. However, in 12 of 20 cases, the theoretical assumptions are being contradicted. This result is questioning the logic that all three streams are needed to be included to open a policy window.

Keywords: Fuzzy-set QCA, pension policy reforms, MSF, the Nordics, MDSO design

Words: 20261

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1 Introduction

The role of the pension systems has been part of the most heated debated topic in many advanced welfare states, this may be due to the fact that pensions are becoming one of the future challenges to maintain a sustainable society. However, since the 1980s many advanced welfare states in Europe have made several pension reforms to decrease the old-age dependency ratio (or known as OADR) and to reduce the number of pensioners with low-incomes.

Amongst the public policy theories, Kingdon's theoretical model of the MSF (Multiple Streams Framework) approach tries to explain that there are three elements (referred as streams) that are to be needed in order to explain a policy process in an agenda-setting process. These three streams will when they are at an intersection, with each other, create an opportunity of agenda-setting. This is referred to as a policy window. This thesis is about putting this theoretical model into a hypothetical test and if it can be suited to explain the determination that the three streams can combinedly open a policy window. This thesis will analyse 20 pension reforms from the five Nordic countries that were occurring between 1987 and 2019. These 20 cases are categorized as they show that the Nordics have gone into different paths to accomplish various pension policy reforms. Many pension policies have not occurred simultaneously, they have occurred in different periods of time, which is one reason to expand the time range.

Secondly, this means that the thesis will try to analyse if the policy processes could have been functional with the presence of the three streams or could a policy window have been successful without one stream or two streams. To conduct an analysis, the method of fuzzy-set Qualitative Comparative Analysis (QCA) is being used to determine which streams are required to the outcome of interest that leads to the emergence of a policy window.

1.1 The aim with the thesis

This thesis is going to analyse more closely on the pension reforms in Denmark, Finland, Iceland, Norway and Sweden (or as all these countries together are known in common as the

Nordic countries). Because the thesis is mainly about major and minor pension reforms in the Nordic countries the theoretical part will focus on the successful outcome of a pension policy reform. Thereby the theoretical assumptions are based on the Multiple Streams Framework (MSF) but meanwhile it will at same time implicitly use historical institutionalism (HI) as to understand certain path dependencies in the reform process.

1.2 Research question

As it has been introduced earlier, this thesis will be about to hypothetically test Kingdon's model by combining the theoretical framework with the fuzzy-set QCA research method. With earlier description the research question of this thesis will be as follows:

Is it possible to find a causal explanation based on Kingdon's model and in combination of the fuzzy-set Qualitative Comparative Analysis (QCA) that these three streams are necessary and/or sufficient conditions to open a policy window?

1.3 Using the QCA research method

To conduct a research with these theoretical assumptions, the thesis will use qualitative and quantitative methods to strengthen each method's weaknesses. The QCA research method can use several combinations of different causal configurational perspectives in the theoretical framework. This type of mixed-method approach is new in this field and its main contribution is to analyse if the MSF approach can explain if the different reform cases has a similar outcome, i.e. opening of a policy window. The use of QCA is not to be compared with other mathematical or statistical methods, for example with OLS (Ordinary Least Square) regressions. The differences between OLS regressions and QCA is mainly to find causal processes and how to interpret the outcome. In a regression, it is frequently to use equations to find a single causal

connection to an outcome, or referred as "concomitant variation". QCA uses instead "packages" of set relations: union, intersection, inclusion or negative.[1]

Secondly, a regression is trying to find a causal association between a single variable and the outcome at a certain time in the equation. QCA is trying to analyse different combinations of conditions and the outcome of interest.[2]

Thirdly and lastly, the regression method can only use a single variable to be best fitted in the data. Meanwhile, QCA has a possibility to use multiple pathways to the outcome of interest. This means that multiple causal combinations of conditions are needed to receive an outcome. A combination of conditions do not always need to be a necessary condition to receive the outcome of interest, in some cases it is more possibilistic that these conditions may be needed to be sufficient to detect the outcome of interest.[3]

With these different definitions between the regression model and the QCA method, it is now time to go into a more basic understanding of the outcome of interest in QCA definition. An outcome would be to analyse if all of the streams need to create an intersection with each other, in order to open a policy window (i.e. which casual combination of conditions fulfilled this implication). This means that hypothetically some of Kingdon's streams are perhaps more equally necessary to the outcome of opening a policy window, and other streams can become equally sufficient conditions to the outcome of interest. To determine this, more of the process will be stated later on in the methodological chapter.

1.4 Overview of the Nordic countries

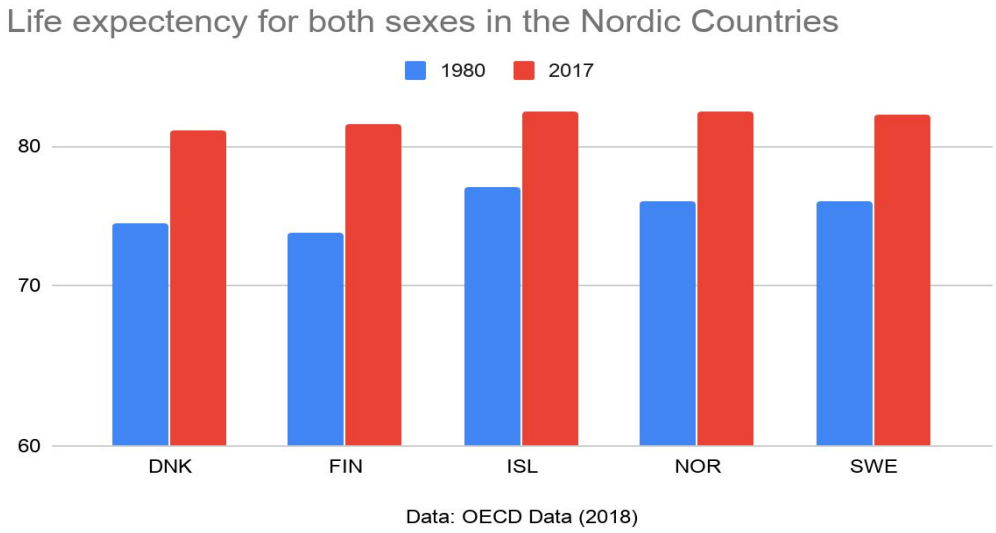
The demography in the Nordic countries have changed during the last 38 years. One factor that may explain this trend is that the Nordic population has become healthier, in return this has led to a higher life expectancy. From 1980 and to 2017, the life expectancy had increased across both

[1] Befani, B. (2016). "Pathways to Change: Evaluating development interventions with Qualitative Comparative Analysis (QCA)" *Rapport 2016:05 till Expertgruppen för Biståndsanalys*. Stockholm: Elanders Sverige AB, p. 225.
[2] Seawright, J. (2005). "Qualitative Comparative Analysis vis-à-vis Regression" in *Studies in Comparative International Development*. Vol. 40, No. 1, p. 17-19.
[3] Seawright, J. (2005)., p. 8-18.

sexes (for males and females). From the expected average age of 75 in 1980, the expected average age in the Nordic countries had increased to 82 in 2017.[4]

The retirement security in the Nordic countries have had high standard compared with a global perspective. In the Global Retirement Index of 2019 it was shown that 4 out of 5 Nordic countries were ranked in the top 10 countries: Iceland (1st), Norway (3rd), Sweden (6th) and Denmark (7th). Finland was outside the top 10 countries but was ranked as the 12th best.[5]

Figure 1: Life expectancy in the Nordic countries



In several studies it is estimated that the aging population will continue to grow in the Nordic countries, this may in return lead to a higher pressure on the Nordics economies and welfare systems. What is common amongst the Nordic countries is that all citizens have a legal right to receive a guaranteed/minimum pension. All the five Nordic countries have also since 2002 an international agreement between each other to coordinate the state of public pension rights in the same way as pensions are earned through work. The international agreement between the Nordic countries has the aim that the pensioners who have worked in another Nordic country do have the same right to receive pension from this country. If the pensioner is moving

[4] OECD Data (2018). "Health status - Life expectancy at Birth".
[5] Natixis (2019). *2019 Global Retirement Index*., p. 11, 15 and 20.

to another Nordic country, this pensioner's employment in the first Nordic country will not have any negative effect on the pension rights in the second Nordic country.[6]

Historically, the pension reforms in Finland, Norway and Sweden have been carried out to detain financial stability. Finland and Sweden had to do rapid welfare reforms in the 1990s, as Norway kept struggling with the reform process. The Norwegian reform process happened gradually before a new pension system was fully implemented in 2011.[7]

Iceland was in the same situation as Finland and Sweden during the 1990s and went into an economic recession. However, Iceland chose a different path in the policy process and made a rapid liberalization of the welfare state. Iceland introduced an option of voluntary pension schemes in 1997, but this was to be regarded to not solve all problems.[8] Because of it, Iceland has made several attempts to reform its pension system. The reform of the Icelandic pension system eventually became a success in 2016 when the Icelandic parliament (the Althing) approved to reform the public old-age pension system. These reforms included that the retirement age will gradually increase from 67 to 70 over a period of 24 years.[9]

Meanwhile in Denmark, the Dansih parliament approved a new legislation in 2017 to reform its state pension system. It would mean that the retirement age is gradually increased from 65 to 67 between 2019 and 2022.[10]

The Nordic countries are not to be comparable with other advanced welfare states in the Western world. This is because the countries have various welfare models which are not to be similar with the Nordic welfare model. The Nordic countries have in similarities with each other have created an advanced welfare state in combination with a high economic growth and labour market efficiency.[11]

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[6] SÖ 2001:53.
[7] NOMESCO 106:2017. *Health and health care of the elderly in the Nordic countries - From a statistical perspective*. Copenhagen., p. 161.
[8] Ólafsson, S. (2003). "Welfare trends of the 1990s in Iceland" in *Scandinavian Journal of Public Health*. Vol. 33., p. 401-403.
[9] Ólafsson, S. (2018). *Iceland: 2018 reveal of previous reforms in the state old-age pension system*. European Social Policy Network., p. 1.
[10] NOMESCO 106:2017., p. 159-163.
[11] Andersen, T. et. al. (2007). *The Nordic Model - Embracing globalization and sharing risks*. Helsinki: The Research Institute of the Finnish Economy., p. 11-21.

1.5 Disposition

The structure for the thesis is going to be outlined as follows: In chapter 2 the definitions of the pension policy reforms will be outlined and to why the selected cases lead the Nordic countries into different directions. The background chapter will also have a possibility to discuss under which circumstances was made in the policy process and to what purpose made these pension policy reforms between the five Nordic countries and the rest of advanced welfare regimes in Europe. Chapter 3 is starting to do a literature review of previous research in the field of pension reforms and will particularly try to understand the policy reforms within the Nordic countries from the beginning of the 1990s and to today. Chapter 4 will go through with the theoretical framework, the main method is to use the fuzzy-set QCA and implicit theoretical assumption of historical institutionalism. Chapter 5 is the methodological chapter and will go through the epistemological and ontological assumptions of the QCA method. There is more information on what the QCA research can be used for and how it will be useful to test the theoretical framework of the MSF approach. Chapter 6 is going to analyse the selected cases and if these different pension policy reforms are able to receive a similar outcome, as foretold by the MSF approach. Finally and lastly, chapter 7 will summarize the findings from the previous chapter and what conclusions can be drawn. There will be some recommendations to future research projects in similar research to what to think about when using the fuzzy-set QCA method.

2 Background

In this chapter, the history of pension reforms begin to outline. This is mainly about the pension systems in the five Nordic countries. First, the research is going to define the differences within the pension systems in the Nordic countries. To get an understanding of these pension policy differences there will be a more in-depth look into each country's history of their pension system and its pension reform processes from the 1960s and to present.

2.1 Pension policies in definition

The five Nordic countries have commonly been seen as a global phenomenon when it comes to the old-age pension systems. However, these five countries do have differences in their pension policy reform processes and the five Nordic countries will be analysed by comparing a series of different sections. These selected sections have been previously discussed by the Nordic Social-Statistical Committee of 2008 (NOSOSCO) and with their definition it is possible to do a comparison between the countries. The definition from NOSOSCO is to be a baseline to analyse which countries have recently implemented, or have already completed the process to implement policy reforms in their pension systems. NOSOSCO made following discoverices that showed the differences between the Nordic countries: (1) the level of basic protection, (2) the earning rules for earning-related pensions, (3) the pensions fund and the pay-as-you-go model (PAYG), (4) taxation and pension insurance schemes and (5) retirement age and arrangements to leave employment before this age.[12]

(1) the level of basic protection, first of all the basic/guarantee pension minimum is similar amongst the Nordic countries when it comes to the residence requirement.[13] What is of greatest interest regards the supplementary pension requirement. This requirement is not similar

[12] NOSOSCO (2008). *Old-age Pension Systems in the Nordic Countries*. Copenhagen: Nordic Social-Statistical Committee., p. 9-22.
[13] NOSOSCO (2008)., p. 10-11.

to the Nordic countries and in a closer look, Denmark is the only Nordic country that still has an ATP-system (lifelong employment) meanwhile many other Nordic countries do have multiple different supplement benefits. This is an example of the Swedish case when Sweden reformed its pension system by replacing its ATP-system during the 1990s.[14]

(2) the earning rules, because there are different supplementary pension requirements in the Nordic countries, the earrings rules have automatically become more different. It has also been found that the income-base supplementary pension requirements and their age requirements to receive pension benefits are different between the Nordic countries.[15]

(3) the pensions fund and PAYG models, the funding of the pension systems have changed in the Nordic countries since the 1990s. As Sweden demolished their ATP-system and implemented a new funded pension system, Denmark chose to keep its current ATP-system. This is one of many examples that the Nordic countries have chosen different paths in changing the fundings of their pension systems.[16]

(4) taxation and pension insurance schemes, the Nordic countries have had different approaches to tackle taxation on pensions. Some pension reforms are more political than others and may even have had some disadvantages or advantages to the pensioners. Some reforms have opened for pensioners to voluntarily create a private pension scheme, as other cases are involving political promises to introduce generous benefits for early retirement. A third category has been to introduce tax deductions for workers that are at the age of 65 or higher.[17]

(5) the retirement ages, Iceland have the highest retirement age meanwhile Denmark will gradually increase its retirement age after having a high number of danish workers who went to early retirement in the past.[18] Other countries in the Nordics have introduced more flexible retirement ages, such as in Finland[19] and Norway.[20] Sweden has had few reforms that can

[14] NOSOSCO (2008)., p. 11.
[15] NOSOSCO (2008)., p. 12-13.
[16] NOSOSCO (2008)., p. 13-17.
[17] NOSOSCO (2008)., p. 17-22.
[18] Büdenbender, M. (2018). "2006 Welfare Agreement in Denmark".
[19] Finnish Centre for Pensions (2018). "The Finnish Pension Reform in 2005".
[20] West Pedersen, Axel (2018). *Norway: Agreement on occupational pension reform in the public sector*. ESPN Flash Report 2018/45., p. 1-2.

be similar to this category and will fully implement a pension policy reform that leads to an increase in the early retirement age, from 61 to 62 years of age.[21]

As these different pension reform processes are defined, it is now time to present the 20 selected cases that have been taken to consideration to the research. Several reforms are in major or minor pension packages and therefore it is possible to find several reforms from the same legislative reform packages.[22] Table 1 shows an overview on different pension reforms in the Nordic countries that has occurred during the years of 1987-2019. It is also possible to find that some pension reforms are only minor packages, this includes especially policy reforms with an aim to either reform the earnings related pensions or the retirement age.

Table 1: Legislated pension policy reforms in the Nordic countries, 1987 - 2019

	Denmark	**Finland**	**Iceland**	**Norway**	**Sweden**
Level of basic protection reforms	1990[1]	2003[9]	1997[12], 2016[13]	2009[15]	1994[16], 2019[19]
Earning related pension reforms	1990[1], 1993[3], 1999[4]	1991 and 1995[10], 2003[9], 2015[11]	1997[12], 2016[13]	2009[15]	1994[16]
Funding and PAYG reforms	1993[3], 1999[4], 2011[7]	2015[11]	1997[12]	2005[14], 2009[15]	1994[16]
Taxation and pension scheme reforms	1987[2], 1991[1], 2011[7], 2017[8]	2003[9]	1997[12]	2005[14]	1994[16], 2007[17], 2016[18]
Retirement age reforms	1999[5], 2003[6], 2006[6], 2011[7], 2017[8]	2003[9], 2015[11]	2016[13]	2009[15]	2019[19]

[21] Regeringen (a) (2019). "Höjt bostadstillägg, höjd garantipension och sänkt skatt för pensionärer från årsskiftet".
[22] Table 1: Legislative pension policy reforms in the Nordic countries, 1987 - 2019.

In total	1987(1), 1990(3), 1993(2), 1999(3), 2003(1), 2006(1), 2011(3), 2017(2)	1991 and 1995(1), 2003(4), 2015(3)	1997(4), 2016(3)	2005(2), 2009(4)	1994(4), 2007(1), 2016(1), 2019(2)

1: Farbøl et. al. (2018), 2: A. Elkjær Sørensen et. al. (2018 (a)), 3: A. Elkjær Sorensen (2018 (b)), 4: The Danish Ministry of Social Affairs, file nr. 040-267 (2002), 5: Ibid., 6: A. Sørensen et al. (2018 (b)), 7: Kvist (2014), 8: Kvist (2017), 9: Hietaniemi (2018), 10: Kangas et. al. (2010), 11: Finnish Centre for Pensions (2019), 12: Gudmundsson (2001), 13: Ólafsson (2016), 14: Regjeringen (2020), 15: A.West Pedersen (2014), 16: Palmer (2000), 17: Laun et. al. (2012), 18: Regeringen (b) (2019), 19: Regeringen (a) (2019).

2.2 The different routes of pension policy reforms in the Nordic countries

The five Nordic countries have in a global context a unique position when it comes to welfare economics. After the Second World War the Nordic countries did do several reforms in the welfare state by introducing reforms into the pension systems. Between 1958 - 1973, historians labeled the period as the "long Sixties". The Nordic countries could implement new pension systems that could give the population generous pay-as-you-go funding and expand the welfare state by increasing the public expenditure.[23] In the early 1970s, the economies within the Nordics started to slow down and the countries started to go different paths to tackle the upcoming challenges. Some of these different paths included how to stop the increased costs for public expenditures of welfare. To get a more in-depth understanding of the Nordic countries and their pension systems, it is important to understand the circumstances to why the Nordics chose different pension policy routes.

[23] Andresen, M. (2006)."Pension reform in Norway and Sweden" in *Nordiska Försäkringstidskrift*. Vol. 87. No. 4., p. 303.

2.2.1 Denmark

After the Second World War, Denmark became inspired by Sweden and Norway to reform its own pension system. The Danish pension reform had several speed-pumps and three public commissions had to be commissioned, even though this would not lead to the Danish government being able to put forward a legislative proposal. Many Danish politicians had in mind to implement their version of the Swedish model but instead the politicians decided to do a compromise by approving a "Rolls-Royce" version. The legislative proposal was to be approved in 1964 by the Danish parliament (the Folketing) and was fully implemented in 1970. The Danish ATP system could be compared with the Swedish model, but the Danish version did not have a earning-related component as for the Swedish model. Instead the Danish pension system implemented an employment-related pension benefit.[24]

By 1970, the economy of Denmark was negatively affected by economic shocks and the government increased the income tax. During that time, the Danish government was led by the Social Democrats and introduced two reforms that would enhance the pension improvements and lay the minimum standards amongst Danish pensioners.[25]

However, a pension reform that still was needed to come was the inclusion of labour market pensions in collective agreements. This reform would first be discussed in 1985 and the Dansish trade unions would initiate the debate that a pension reform was needed.[26] The pension reform would have political consequences and would have a major impact on the future pension system. In 1987, the Danish government and the Danish LO (Confederation of Trade Unions) agreed in a joint agreement to accept a competition-enhancing wage policy. This led to the agreement for the government to support the establishment of AMP.[27] In 1990 and 1993, the

[24] Andersen, J. G. and Larsen, C. A. (2002). "Pension politics and policy in Denmark and Sweden: Path Dependencies, Policy Style, and Policy Outcome" in Aalborg University, CCWS., p. 1-7.
[25] Andersen, J. G. and Larsen, C. A. (2002)., p. 8-10.
[26] Pedersen, A. W., et. al. (2018). "Trade unions and the politics of occupational pensions in Denmark and Norway" in *Transfer*. Vol. 24(1), p. 112-114.
[27] Due, J. J. et. al. (2016). "Fælleserklæringen af 8. december 1987".

government and several labour interest groups made gradual changes in the pension system by introducing a new occupational pension scheme.[28]

In other pension reforms Denmark have had high ideological influence in the outline of pensions reform, this has been found in the cases of 1999 and 2003. Other pension reforms were made in the coming years to change the pension system according to the life expectancy of the Danish people, which was highly influential in the welfare agreement of 2006 and 2011, and in the newest pension reform of 2017.[29]

2.2.2 Finland

In the post-war era Finland implemented a new pension system in 1957 as the previous system could not be fully funded. The pension reform of 1956 was approved by the parliament as a way to introduce a universal basic pension by combining income-related pensions for employees. The New National Pension Act of 1956 was a universalistic approach, which made every citizen of Finland that was older than 65 eligible for a national pension. This also meant that the Finish pension system introduced pay-as-you-go principles and as the pension contribution was distributed between the employee and the employer. In 1961, Finland passed a second pension reform, the employment-related pension act for private employees.[30]

As several other pension reforms was introduced in the 1970s and 1980s it was soon to became troublesome as Finland in the early 1990s plunged into a recession. To tackle the recession several cut-backs were needed. In 1991 and 1995, Finland had approved several reforms which means that the unemployment pensions and the pension schemes became less generous. This was the beginning of the new path for Finland that gradually changed the pension

[28] Elkjær Sørensen, A. et. al. (a) (2018). "Arbejdsmarkedspensioner, 1849-". & Elkjær Sørensen, A. et. al. (b) (2018). "Folkepension, 1956-".
[29] Kvist, J. (2017). "Denmark: Reform aimed at raising the effective retirement age and removing disincentives to private retirement savings" in *ESPN Flash Report*., p. 1-2.
[30] Kangas, O. (2005). *Pensions and Pension Funds in the Making of Nation-State and a National Economy*. UNRISD. p. 5-10.

system as the Finnish people started to become healthier and reduced the working-age population. This led to the cause of the pension reforms of 2003 and 2015.[31]

2.2.3 Iceland

The icelandic welfare state is perhaps the least similar by comparing the welfare states in the Nordic countries. The origin of the pension funds in Iceland was approved in the 1960s by the Independent Party-Social Democratic coalition government. As the icelandic society was changing the pension reform of 1963 helped many icelandic workers in the labour movement to get supplementary social security. Next reform was in 1969, when new occupational funds were founded for workers. Memberships in these funds were compulsory for the employees in 1974 and in 1980 for the self-employed.[32] Iceland was having a longer period of the "golden age of post-war economic growth" compared with other European and Nordic countries. This was because the public sector was smaller in size and it was until the 1970s when the expenditures on welfare programmes started to increase. A new Social Security Act was passed in 1971 and it led to the introduction of the two-tie pension system. However, even though Iceland made massive public expenditure into the welfare system the economy would soon go into a downswing between 1988 and 1995.[33]

In 1991, the cabinet of Oddsson I was taking office and Iceland made a "U-turn" in the political leadership. The cabinet was based on the formation of a coalition government between the Independence Party and the Social Democratic Party. However, because of a political shift in the country, Iceland shifted its ideological path. Instead of keeping to the social democratic version of the welfare model, Iceland became highly influenced by liberalization and

[31] Hannikainen, M. and Vauhkonen, J. (2012). *Earning your Keep: The History of Finnish Earning-related Pension in the Private Sector*. Finish Literature Society. Helsinki. p. 10-12.
Finnish Centre for Pensions (2019). "Pension Reform in 2017".
Finnish Centre for Pensions (2018). "The Pension Reform in 2005".
[32] Jonsson, G. (2010). "The Icelandic Welfare State in the Twentieth Century" in *Scandinavian Journal of History*. p. 258-263.
[33] Jonsson, G. (2010)., p. 263-267.

Thatcherism.[34] This would mean that Iceland went from economic recession to economic success. In 1995, the Independence Party created a new coalition government with the Progressive Party after the Social Democratic Party had made a poor performance in the parliamentary election of 1995. In 1997 the coalition government of Oddsson II introduced a series of new welfare reforms, amongst them was the pension reform: the Pension Act of 1997. This did not lead to solving all problems in the Icelandic pension system and it would take until 2016 before a massive pension reform package would be approved by the Icelandic parliament.[35]

2.2.4 Norway

Norway had its first pension reform in the post-war era in 1957 as the income test was abandoned for the old-age pension. As in the 1960s the political parties from both the left and the right became a part of the politics of the "highest bidder".[36]

Public expenditures increased and in 1967 a new Norweigan pension system was Fully implemented. The pension system was constructed as a pay-as-you-go system and the pension benefits could be combined with different supplementary benefits. However, in the 1970s and 1980s the Norweigan pension debate started to shift and both politicians and policy experts started to become concerned that the pension system needed to be reformed in order to constrain the increased public expenditures, this led to the beginning of privatization. It was in the 1990s when the debate over "restructuring" of the pension system began to find momentum. Concerns with the aging population became a challenge as the demography in Norway had

[34] Irving, Zoë (2011). "Waving not drowning: Iceland, kreppan and alternative social policy futures" in Farnsworth, K. and Irving, Z. (Eds). *Social Policy in challenging times - Economic crisis and welfare systems*. The Policy Press., p. 199-203.
[35] Icelandic Ministry of Finance. *The Pension Act, No. 129/1997*.
Ólafsson, Stefán. (2018). *Iceland: 2018 reveal of previous reforms in the state old-age pension system*. European Social Policy Network., p. 1-2.
Ólafsson, S. (2003). "Welfare trends of the 1990s in Iceland" in *Scandinavian Journal of Public Health*. Vol. 33., p. 401-404.
[36] Sørvall, J. and Stoltenberg's, J. (2015). *The Norwegian Welfare State 2005-2015: Public attributes, political debates and future challenges*. p. 3-6.

changed dramatically. This led to the first talks of reforming the entire pension system and which led to the cabinet of Stoltenberg I appointed the Pension Commission 30th March of 2001.[37]

This lead to the political movement within the government to take a stand against the higher costs of the pension system, and which eventually lead to the reform of the pension system in both 2005 and 2009.[38]

2.2.5 Sweden

Sweden has had several big shifts in their pension system after the Second World War and this became one of the heated debate topics in the late 1950s. In 1959, Sweden was implementing a new pension system, ATP. This pension system was highly political as this was predominantly driven by the Social Democratic party. The implementation of ATP was one of the biggest successes for the Social Democratic party. However, the golden ages of the Swedish economic growth would not be continuous as the country entered an economic recession after the first oil crisis of 1973. The growth of GDP per capita started to decrease and the generous pension system was not in the long run sustainable. In the mid-1980s several projections started to show weaknesses in the ATP system as productivity became less efficient because of the aging population, which resulted in the economic growth in Sweden starting to decline. This led to the creation of a governmental commission which would evaluate the pension system. In 1990, the pension commission was finished with its report but the members of the commission could not propose a reform proposal. Instead the current system would be gradually changed by increasing the retirement age and increasing the number of years requirement to get full pension.[39]

In 1991, the Social Democrats lost the parliamentary election and a center-right government took office. The new government rejected the gradualist approach from the previous commission and pension reforming became a top priority. However, the question was to find a possible compromise proposal that would get parliamentary approval. In 1994, the cabinet of

[37] Sørvall, J. and Stoltenberg's, J. (2015)., p. 5.
[38] Regjeringen (2020). "Milepæler for pensjonsreformen - De viktigste milepælene for pensjonsreformen".
[39] Kangas, Lundgren and Ploug. (2010). "Three Routes to Pension Reforms: Politics and Institutions in Reforming Pensions in Denmark, Finland and Sweden". *Social Policy & Administration*. Vol. 44, No. 3, p. 268.

Carl Bildt could introduce a pension legislation act that had been compromised between the government and the social democratic party. The pension reform led to a radical change and has for many been seen as a "big bang"-change in the pension system of Sweden.[40]

Sweden was going to do more pension reforms as in line with the initial reforms of 1994. By 1999, the pension policy proposals that were approved between 1994 to 1998 were fully implemented into the Swedish pension system.[41] However, as demography was changing and even political movements, new ways to reform the pension system was initiated. Some policy proposals were to give earned income tax credits[42], while others were to increase the early retirement age and increase some supplementary benefits for the most vulnerable groups of pensioners.[43]

[40] Kangas, Lundgren and Ploug. (2010)., p. 275-277.
[41] Aspegren, M. et. al. (2019). *Pension Reform in Sweden: Sustainability & Adequacy of Public Pensions*. Luxembourg: European Commission., p. 3.
[42] Prop. 2007/18:22 s. 14.
[43] Prop. 2018/19:134 s. 1, 14-26.

3 Literature Review

In this chapter, the literature review is going to bring up previous research that has been brought up in the field of pension policy reforms within the Nordic countries. Several studies have had the Nordic countries in their case selection. However, not all previous research has used a selection of all the five Nordic countries. Some research has used partial similar selection but what they all have in common has been to analyse the differences in the Nordic countries pension reform processes and the current status of the pension systems.

3.1 Pension and Social Policy Reforms Research

In this subchapter, it is possible to understand previous research about the pension and social policy reform process within the Nordic countries. This is to understand specific changes of the policy evaluation during different time periods and how these reform profiles were changed.

3.1.1 Pension reforms in the 1990s

The literature on pension policy reforms has been research long before the 1990s, and it has been much more research since then. However, during the 1990s most of the research literature that was concerning the Nordic countries did have a focus on the different paths the countries were taking during the 1990s. For many studies, Sweden was an interesting case study as the country made a "big bang" reform of its pension system.[44] What some literature is discussing is the development of the Nordic welfare model. A common theme is to analyse if the Nordic welfare model becomes less generous and even drop its values from the principles of universalism.

When it comes to the process of reforming the pension systems in the Nordic countries there can be signs that several countries have chosen different routes in their processes. According to Kangas, Lundgren and Ploug, the pension reforms in Sweden, Denmark and

[44] Kangas, Lundgren and Ploug. (2010)., p. 265-280.

Finland can be analysed through a perspective of historical institutionalism: Sweden (the case of abolition), the Finnish case (conversion) and the Danish case (policy drifted). This is because this approach is useful to understand formal and informal rules within the institutional changes. The authors argue in favour of historical institutionalism as this theoretical framework can find an explanation to why the Nordic countries have chosen different routes to change their previous welfare programmes. The Nordic countries have different pension designs and the political making of the pension policies.[45]

According to a comparative case study made by Pauliina Havakka, the Swedish and the Finnish pension systems have been compared as an ideal type of welfare state. This typical viewpoint might have become challenged when the countries have fully implemented the pension reforms that were introduced in the late 1990s. Both the Swedish reform and the Finnish reform is a downscaling of the principles of universalism. A second element of these reforms are changing the way to let pensioners receive supplementary benefits. However, these new changes does not mean that the minimum safety-net has disappeared.[46]

3.1.2 Pension reforms before the financial crisis of 2008/09

After the 1990s many researchers started evaluating the pension reforms in the Nordic countries. Particularly by comparing the changes in Denmark, Finland and Sweden as they can be analysed to be different outcomes because of the nature of the welfare state development. One aspect that came to mind was the path dependency within the development of the welfare states and how the pension reform processes were affecting the Nordic countries.

Firstly, several studies that have analysed about the pension reforms in the Nordic countries are trying to understand why these reforms had to be implemented. As earlier there have been concerns that the systems are not sustainable or that the expenditure is increasing more rapidly. Furthermore, as it comes to possible understanding of the situation, the main reason for a changed pension system is because of economic unsustainability. Because the five

[45] Kangas, Lundgren and Ploug. (2010)., p. 265-280.
[46] Havakka, P. (2003). "Lagstadgade ålderspensioner i Finland och Sverige - en jämförelse" i *Nordiskt Försäkringstidskrift*. No. 2., p. 119, 123-124.

Nordic countries do not have a similar pension system, the process of reform is less crucial, compared with the position of political parties. As other researchers put it, path dependence does have an effect on the pension reforms. In the Swedish reform process it was clear for many political parties that the reform of the pension system would be best to be done through consensus, and not create political disagreement over the future version of the pension system.[47]

Secondly, other researchers have in their research tried to analyse similarities and differences in the Nordic countries pension reforms. For example Martin Andresen has used a case study by comparing the pension reforms in Norway and Sweden. According to Andresen, the motivation behind the reform of the pension systems was urgent as the system's previous conditions were economically unsustainable. This shows that the thesis needs to take into account the Norweigian pension fund as it is financed by the petrol exports. This shows that Norway was lacking behind by reforming the pension system because of the fortune in petrol. This is partly true as Norway transformed the petrol fund to a pension fund which can help the country to finance the new pension system meanwhile the pension fund will be useful as a financial buffer against an economic crisis.[48]

Thirdly, Others have done other types of combinations in theoretical frameworks, such as Kusima and Nygård, when they studied the welfare models in the EU (European Union) and the Nordic countries. They would study if the policy reforms in three Nordic countries (Denmark, Finland and Sweden) in the 1990s have to do with policy harmonization or if it is any path dependency in welfare development. This shows that it is important for the thesis to be aware of risks when trying to analyse the pension reforms. The reforms in pension systems may happen in internal policy processes but it can be in some cases because of external shocks or external influence. This may become important in the cases for Denmark, Finland and Sweden as they are members of the EU. Finland may even become more significant as it is the only Nordic country that has introduced the euro currency.[49]

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[47] Green-Pedersen and Lindblom. (2006). "Politics within paths: trajectories of Danish and Swedish earnings-related pensions" in *Journal of European Social Policy*. Vol. 16(3)., pp. 245-255.
[48] Andresen, M. (2006). "Pension reform in Norway and Sweden" in *Nordiska Försäkringstidskrift*. Vol. 87. No. 4., p. 303-307.
[49] Kuisma, M. & Nygård, M. (2015). "The European Union and the Nordic models of welfare - path dependency or policy harmonisation?" in Grøn, C. H., Nedergaard, P. & Wivel, A. (red.). *The Nordic Countries and the European Union. Still the Other European Community? - The Nordic Countries and the European Union*. London: Routledge.

Fourthly, Timonen and Kautto have studied about policy reforms in the Nordic countries and asks if the reforms can have changed the ideals of the Nordic model. They have in their study analysed if the aging and social challenges of the Nordic welfare states maybe is unsustainable. As Timonen and Kautto is mainly focusing on the aging population, their study is mostly aimed to analyse the important differences in the five Nordic countries pension systems. In their own conclusions it is clear that the Nordic countries do have some "warning signals" about the sustainability of the model and that several recent reforms have not targeted the controlling growth of long-term care expenditures. The development in the Nordic countries has partly led to less generous pension funding. On the other hand, these recent reforms have introduced more flexible and better initiatives for people to continue working.[50]

Fifthly, Rune Ervik made a study about the European pension policy initiatives and made an interesting comparison of what are the challenges for the existing systems and its affection for its institutional foundations. However, this is only in comparison to one out of five Nordic countries (Norway) but it is in line with the argument that the Norwegian pension reform has been consensus-oriented and that the reform was to prevent an economic crisis.[51]

Lastly, the pension systems in the Nordic countries can be said to be different when they are compared by each other. Norway and Sweden are those who have made a complete change meanwhile Finland only have made a gradual change. Denmark is to be the only system which has made minor reforms. It should be clear that the Nordic countries are not comparable with other European welfare or pension models and that the Nordics have made several progress compared with European countries that are in early development of their multiple pension pillar system. As this shows, the pension reforms in the 1990s might need to be studied from a broader perspective and even take into account the financial crisis of 2008/09.

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[50] Timonen, Virpi. and Kautto, Mikko. (2014). "23. Sustaining the Nordic welfare model in the face of population ageing" in Harper, Sarah. and Hamblin, Kate. *International Handbook on Ageing and Public Policy*. p. 289-291,297-299.

[51] Ervik, R. and Skogedal Lindén, T. (2015). "The Shark Jaw and the Elevator: Arguing the Case for the Necessity, Harmlessness and Fairness of the Norwegian Pension Reform" in *Scandinavian Political Studies*. Vol. 38, No. 4., p. 387-388, 398-406.

3.1.3 Pension reforms after the financial crisis of 2008/09

When it comes to Europe it is not impossible to define that the Nordic countries have been portrayed as an unique pension system. After the financial crisis of 2008/09 many scholars focused their studies on the European pension policies. Ebbinghaus and Whiteside analysed what happened after the economic crisis of 2008 and made at the same time a comparison on the Nordic countries as they had recently introduced new pension reforms.[52] Furthermore, Ebbinghaus has earlier studied the changes inside the welfare states and how it is affecting the old-age pension system. Earlier studies found that the welfare state in Europe has transformed since the 1980s to become more privatized and less generously funded. Ebbinghaus could find a transformation in the Nordic countries (Sweden, Norway, Finland and Denmark). These countries have made several pension reforms that were not in line with the Beveridge-tradition. Since the financial crisis of 2008 affected several European countries (the Nordic countries were among them) the implemented pension reforms increased the poverty-rate. Ebbinghaus found that there was no rapid increase in poverty-age amongst the Nordic countries. The Nordics were amongst the best countries that had a low poverty rate after the economic crisis.[53]

Other researchers as Marcin Brycz do take into consideration that the five Nordic countries' pension systems have evolved after the financial crisis of 2008 by interpreted with labour market efficiency. Brycz argues that Iceland, Norway and Sweden do form a cluster and that there is a correlation between the pension systems and its efficiency within the labour market. However, this was not the case for either Denmark or Finland. The pension system efficiency was one way to detect that the paths between the countries had deepened and the pension systems were not to be the same with one another. This was in line that the Nordic countries are not compatible with Esping-Andersen's welfare model of 1990. As Brycz research shows, the Nordic countries are becoming more different from each other.[54]

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[52] Ebbinghaus, B. and Whiteside, N. (2012). "Shifting responsibilities in the Western European pension systems: What future for social models?" in *Global Social Policy*. 12(3), p.

[53] Ebbinghaus, Bernhard. (2012). "Europe's transformation towards a renewed pension system" in Bonoli, Giuliano and David Natali (Eds.). *The New Welfare State in Europe*. Oxford University, p. 182-202.

[54] Brycz, Marcin. (2018). "Does efficiency of the Nordic countries pension systems evolve after crisis?" in *Journal of International Studies*. Vol. 11(4), p. 228, 231-234.

4 Theory

In this section there will be more detailed information about the theoretical framework. In this research the Multiple Streams Framework is to be explicitly in focus. Furthermore, historical institutionalism will be considered to be an implicit part of this research as this is to link the selected cases and why it may have been some path dependency in the reform process. This chapter will go through major definitions in the MSF approach and to what degree they are to be interpreted in comparison to Kingdon's own thoughts and assumptions.

4.1 The Multiple Streams Framework

The Multiple Streams Framework (MSF) is the theoretical assumption made by John Kingdon as he modifies the original Garbage Can Model from 1972. In Kingdon's book *Agendas, Alternatives and Public Policy*, the theoretical framework suggests that policy changes are initiated when three crucial elements are available. These elements are referred to as streams and will in combination create a "window of opportunity" to change the agenda and to thereby successfully implement a new policy. This window is an opportunity to determine political agenda-settings, and Kingdon himself defined this agenda as: "the list of subjects per problem which government officials, and people closely associated with those officials, are paying serious attention".[55] The three streams do not need to work with each other, and according to Kingdon these streams can be interpreted as three independent elements. These three elements (stream of problem, stream of policy and stream of politics) have different characteristics and are operated through different channels.[56]

During a certain time, these three streams will eventually interact with each other. When

[55] Kingdon, J. (2014). *Agendas, Alternatives and Public Policy*. 2nd Edition. Pearson Education Limited., p. 3.
[56] Kingdon, J. (2014)., p. 84-86.

they do, they open a policy window. The policy window is at a certain time a "window of opportunity" and it is initially a possibility to present if these opportunities are advocated.[57]

4.1.1 Kingdon's Three Streams

As earlier mentioned, Kingdon had a particular explanation of the three streams as they have different characteristics. To get an understanding of these streams, it is time to do a small research and an in-depth into the theoretical assumptions of the MSF approach. With definitions from Kingdon and Herweg et. al., it is possible to get an understanding of the theoretical assumptions and to establish the hypotheses that are going to be helpful to elaborate the criteria to the conditions in the fuzzy-set QCA estimation.

The problem stream is described to be perceptions of a problem as they are a "public" interaction. This is because the policymakers become aware of the problems and if they want to resolve the problems they need to initiate governmental action. People may come to be aware or view a "problem" based on different variances of perspectives.[58] The condition to what is defined as a problem can have different context and it might take time before someone relices the condition is starting to become a problem. The MSF approach considers problems as a social construction and not as an objective fact. A problem is only accouring if someone is framing it as a problem and not as an acceptable condition.[59]

The policy stream is described to be the component of experts and analysts that tries to find an output to the examined problem and to propose a proposal to resolve it. In the stream of policy there are policymakers that are involved in the policy-making. Policymakers can be civil servants or "hidden participaters". Policies can be highly linked to the stream of politics and a policy proposal can fast be approved if there is a political majority that is promoting the proposal. If not, it is going to be a hard path to get the policy proposal approved. This includes when policy influences can make changes in policy proposals, for example path dependency can

[57] Kingdon, J. (2014)., p. 122-131.
[58] Herweg, et. al. (2017). "The Multiple Streams Framework" in Weible, C. and Sabatier, P. (Eds.). *Theories of the Policy Process*. 4th Edition. Taylor & Francis Group, p. 22.
[59] Herweg, et. al. (2017), p. 21-22.

in some cases lead to some progress in the reform process. One example when path dependency has had some major implications in the policy process was several European countries' transformation from the previous pay-as-you-go pension system to a funded pension system.[60]

The political stream has been described to be comprised of three factors that will influence the political structure. These factors have been described by Kingdon as (1) the national mood, (2) turnover of key personnel, and (3) interest-groups campaign. Because of the small scale research, the thesis is using the simplified definition which was originally based by Zahariadis assumption that the three elements are composed of the variable "party politics". This assumption argues that it is the government and the legislatures that are key actors to introduce and change policy proposals and can thereby be the only actor that can make changes into the agenda-setting.[61]

4.1.2 The Policy Window: Different paths, but similarities in its outcome

The outcome of the interaction between Kingdon's three streams is when a policy window is opened. As Kingdon himself said: "The separate streams of problems, policies and politics come together at certain critical times".[62] Kingdon also suggested that the opening of a policy window could be triggered by external events, such as crisis, accidents, or the presence/absence of policy entrepreneurs either within or outside of governments. This means that the external shocks in the streams of problem or/and politics might trigger to open a policy window. However, policy windows are rare and can be predictable (elections, budgets) or unpredictable (disasters). Policy windows have different window openings because its coupling differs. A main point is that the window is opened either from the stream of problem or by the stream of politics. However, there is also important to not forget the role of the policy entrepreneur. This key actor can be essential for the policy outcome or to initiate actions that will eventually lead to emergence of the policy

[60] Herweg, et. al. (2017), p. 23-24.
[61] Herweg, et. al. (2017), p. 25.
[62] Kingdon, J. (2014)., p. 122-131.

outcome. This is because this actor can have more access to the legislatures or is more persistent to promote the policy proposal.[63]

4.2 Historical Institutionalism in relation to the MSF approach

Historical institutionalism (HI) is one of the three approaches from Neoinstituionalism. According to Ishiyama et. al. (2014), the theory of HI is based on theoretical assumptions that "institutional rules, constraints and the responses to them is going to guide the behaviour of political actors during the policy-making process".[64] With these assumptions the theoretical framework of the theory of HI is going to seek and explain specific definitions and real-world outcomes. These assumptions can be founded by analysing the historic legacy of institutional structures that are available to them.[65]

The MSF approach is for example a theory that cannot find any explanation to policy stability or path dependency, which indicates that some political developments are hard to reverse when they are initiated. If Kingdon's theory should work it is a concern for some that the institutions may shape participants' thoughts and ideas to determine which solution could reach the agenda. The combination of using the MSF and historical institutionalism have been used in several studies. Two research examples are made by Florian Spohr, the research has been useful to combine the two theoretical frameworks in a way to compare the labour market policy processes in Sweden, Germany and the UK.[66]

However, the theory behind HI has faced some criticism as institutions may not always perform efficiently as they are designed in earlier times and that internal institutional rules may even be hard to change over time.[67] In counteraction to the criticism, proponents of HI argue that

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[63] Herweg, et. al. (2017), p. 26-30.
[64] Ishiyama, J. et. al. (2014). "Historical Institutionalism".
[65] Ibid.
[66] Spohr, F. (a) (2016). "Explaining Path Dependency and Deviation by Combining Multiple Streams Framework and Historical Institutionalism: A Comparative Analysis of German and Swedish Labour Market Policies" in *Journal of Comparative Policy Analysis*. Vol. 18, No. 3., p. 257-260.
Spohr, F (b) (2016). "Path-Departing Labour-Market Reforms in the United Kingdom and Sweden: An Analysis Combining the Multiple-Streams Framework and Historical Institutionalism" in *Decision-Making under Ambiguity and Time Constraints: Assessing the Multiple Streams Framework*. Harbour House: ECPR Press., p. 251-269.
[67] Ishiyama, J. et. al. (2014).

politics is a competition over scarce resources and will thereby highlight differences within political power that is between the institutions. Path dependency is a key term as it means the effects of a decision has to limit the available future choices from political actors and/or institutions. Other key terms behind the theoretical framework are critical junctures, intercurrence and modes of gradual changes.[68]

4.3 Combining the MSF approach and the fuzzy-set QCA

By doing a combination of the MSF approach and the fuzzy-set QCA there has been a study about the urban water infrastructure in the Netherlands. These two theories have both configurational perspectives and will in this combination be useful to test which political conditions are necessary for long-term governance. This study has been shown to be unique as it is one of the few research articles that is combining these two approaches. Therefore, the article aims to make three contributions. One of these contributions is to show how the MSF approach can be combined with a QCA research approach to explain a specific policy outcome. The researchers conducted this theoretical framework by taking a sample of 40 municipalities in the Netherlands and how the municipalities are enabled to make forward-looking investment decisions. In this research they analyse if there were any differences between small and medium-to-large municipalities.[69] With the QCA approach it was possible to identify configurational explanations from the MSF, i.e. combining of conditions from the problem stream, the political stream and the solution stream [the policy stream]. In their conclusion it was found that the municipalities did not have to necessarily fulfill all criteria to the requirements of the MSF. The MSF approach was partially true as one condition was required to have an intersection of the three streams to open the policy window.[70]

Secondly, Fritz Sager, Christian Rüefli and Eva Thomann have in their research used the

[68] Ibid.
[69] W.D. Pot., et. al. (2019). "What makes decisions about urban water infrastructure looking-forward?" in *Elsevier*. Vol. 82, p. 781 - 783.
[70] W.D. Pot, et. al. (2019), p. 787-789.

multiple streams approach to a multilevel implementation setting to understand the Swiss labour market policy reforms between 2000 - 2003. This research is mainly focusing on the integration of asylum seekers. This research is to study the integration of targeted groups into the problem stream and at the same time complementary the policy stream with inherited policy path.[71]

By applying a fuzzy-set QCA approach and an institutional aspect in the analysis, the researchers found that the member states of the Swiss Confederation have different implementation choices. As it shows the different implementation strategies in the Swiss cantons is about institutional policy paths. In other words, policy path trump politics. As in this case the authors concluded that the social construction of the target group and with a combination of absence of strong left defending the welfare state play a vital role in a cantons strategy to integrate asylum seekers to the labour market.[72]

4.4 The hypotheses of the MSF approach

To conduct the research, several elements of the streams are going to be estimated with the fuzzy-set QCA method. As the QCA method is using Boolean algebra, it is possible to calibrate the streams after having made some criteria based on theoretical hypotheses. As the streams and the membership scores are going to be outlined in the methodological chapter, this subchapter will go through which criteria and hypotheses are being used. To get an understanding of Kingdon's and others assumptions of the three streams, each stream will be independently categorized through their hypotheses. All the three streams will be estimated with both Kingdon's theoretical framework and from other researchers' studies about the Multiple Stream Framework.

[71] Sager, F. et. al. (2019) "Fixing Federal Faults. Complementary Member States Policies in Swiss Health Care Policy" in *International Review of Public Policy*. Vol 1, No. 2., p. 148-153.
[72] Sager, F. et. al. (2019), p. 163-164.

4.4.1 The Problem Stream

The first stream in Kingdon's theoretical framework is the stream of problems. The theoretical assumptions of the stream is to find a focusing event that is expressing concerns in the existing pension system. This stream is thereby concerning the "public" issues and/or problems. The awareness from public attention or even feedback regarding the existing welfare programmes can be viewed as a problem. However, a problem can be based on variance of understanding. It is therefore the government needs to solve the issues and problems.[73]

The hypothesis to the stream of problem is to estimate the focusing event and its impact on the current pension system. As this hypothesis is concerning the focusing event it may be some variances between the involved actors. Concerns and the attention from the public, but it can also be the socio-economic factors affecting the pensioners. One way would be to use the old-age dependency ratio as a way to estimate the status of the workforce and how many pensioners are there compared with the working population. An increased old-age dependency ratio will have a negative effect on the welfare challenges, this includes a slower growth on savings, consumptions, pensions and taxation.[74] A way to establish if the old-age dependency ratio has increased from the previous five years. All these five countries can be comparable with data from the World Bank as it has data of the dependency ratio between 1960 - 2018.

The second part would be to estimate the concerns of the old-age dependency ratio from a national comparison. According to Kingdon, an international comparison is a functional way to determine a problem: "if one is not achieving what others are achieving, then the relative disadvantage constitutes a problem".[75] One way would be to compare other advanced welfare states that are comparable with two other typologies of welfare regimes: the conservative and the liberal welfare typologies. If the old-age dependency ratio is higher compared with Germany, France, the UK and Switzerland it is possible to determine if the society is facing a growth of an aging population.

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[73] Kingdon (2014)., p. 94-115.
[74] Henkens, K. and Schippers, J. (2012). "The Interplay between Active Ageing and Silver Economy - a QCA Analysis" in *International Journal of Manpower*. Vol. 33, No. 6., p. 1-7.
[75] Kingdon (2014)., p. 111.

H1: The problem have caused a negative impact on the society

4.4.2 The Policy Stream and the Policy Entrepreneur

The second stream in Kingdon's model, the stream of policy is going to be estimated by finding the purpose to solve "public" problems or issues. The hypothesis of the policy stream is to estimate in what regard it targeted concerning the current pension system. The policy reform may have a major impact that is affecting a high number of pensioners. This policy process can have different influences as the stream of policy is about various "survival criteria".[76]

As the policy proposal may lead to discussion amongst different actors in the society a potential policy entrepreneur may use its "resources, time, money and even reputation to influence the policy processes".[77] To the stream of policy, the role of policy entrepreneur does play a factor to strengthen the probabilities to push a policy proposal to the legislatures. The policy entrepreneur does not need to be an actor within the government, it is possible to find these policy entrepreneurs outside the government. In a way to estimate this impact, a policy entrepreneur that either is directly connected to the legislatures and will affect the outcome of a policy proposal. Policy entrepreneurs can be politicians and those in governmental positions. Entrepreneurs need to interact by seizing the opportunity to initiate action by introducing the policy proposal at least one year after the government in power came into office.[78]

The stream of policy and the policy entrepreneur is to be considered to be implicitly influenced by the theory of HI. This has been stated from the researcher Florian Spohr. According to his research, the structure of the policy community may provide the reasons behind path dependency. The theory of HI argues that institutions can shape values and value acceptance, and therefore the policy entrepreneur plays an important role as to trigger change.[79]

With this element in mind, it is possible to establish one hypothesis about the

[76] Herweg, et. al. (2017)., p. 23-24.
[77] Herweg, et. al. (2017)., p. 28.
[78] Herweg, et. al. (2017)., p. 28-30.
[79] Spohr, F. (a) (2016)., p. 258-259.

stream of policy and the role of the policy entrepreneur. The policy stream can be estimated by the importance to fulfill the policy legislation. This can be to estimate the effect on the pensioners; a targeted group amongst the pensioners or all pensioners, and for the government and amongst the taxpayers. As the dependency ratio will be involved to determine the growth of an aging population and if may have an effect on the age dependency ratio for the working population. The policy entrepreneurs can be estimated by analysing the interest from actors to influence the policy processes. The potential policy entrepreneur can be an involved actor as politicians or civil servants within the government or the parliament. These are also the actors that can have direct influence to the policy makers. What this stream is trying to measure is if an actor could take on the challenge of trying to push forward a policy proposal and led the process to propose the legislation to parliament and actively push to implement its policy proposal.[80] The policy entrepreneur can through the theory of HI be considered to be an actor that may lead the path dependency process and lead the way to actively implement the policy reform. The importance to implement the reform is a measurement to determine if the hypothesis is valid. If there is no policy proposal that is put forward, after a year the government took office, the hypothesis is invalid.

H2: If the policy proposal is put forward in a year when the government took office, chances are high to find a Policy Entrepreneur.

4.4.3 The Political Stream

The third and last stream in the theoretical model is the stream of politics. This stream can be hypothesised to identify the factors that might explain the political actors involvements and impact into the policy reform. According to Kingdon and Herweg et.al., there are three core elements that are identified in the stream of politics: the national mood, interest groups campaign and the government and legislatures.[81] Because of the small scale in this research, the core

[80] Herweg, et. al. (2017), p. 29-30.
[81] Herweg, et. al. (2017), p. 24.

element of the government and legislatures is becoming a main part to identify the hypothesis of the political condition.

However, a main difference to Kingdon's model is the political system differences between the Nordic countries. This is because all the Nordic countries are liberal parliamentary democracies, compared with Kingdon's federal state version and to the presidential system of the USA. The criteria to the stream of politics will need to consider the parliament impact in the legislation process.[82]

A second consideration is the supreme executive authority, or known as the government. In many cases, the governments of the Nordic countries are answerable to the parliament and the government is formed by either the majority parties, coalitions or minority parties in the parliament. This element is a main part of this setup as the government and the majority of the parliament sets the political agenda. This means that the criteria for the stream of politics is to analyse conflicts within the government and the ideological agenda and if it fits the purpose with the legislation that has been put forward to the parliament.[83]

The hypothesis in the stream is to analyse the theoretical assumption of the key personnel. One way to determine key personnel is if the government is ideologically predominant by the social democratic party. This means that the key personnel are ideological influenced by the social democratic values. This is in line with previous assumptions that the social democratic parties have had high influence in politics of the Nordic countries.[84] This criteria is to analyse if the political beliefs has an effect on the approval of the policy proposal. If a cabinet government would not be ruled by a social democratic party, either if it is not the predominant party in a coalition, majority or minority government, the hypothesis is invalid.

The second hypothesis is to estimate the power of support from the legislatures. This means that the second hypothesis is the option for political parties to influence the outlines of a policy proposal. One way to measure a government's power in parliament is if they hold a working majority or a relative majority within the parliament. Kingdon says that the turnover of key personnel is a part of this stream because that members of parliament may hold ideas that are

[82] Herweg, et. al. (2017), p. 36.
[83] Herweg et. al. (2017)., p. 24-26.
[84] Kingdon, J. (2014)., p. 153-155.

in line with their ideological beliefs. If a political party is holding a relative majority it is possible that these policy proposals will be approved by the parliament.[85] A policy proposal can be drafted by political parties or is given during the election campaigns. This means that the main parliamentary party or parties that win the general election will be tested by analysing previous policy proposals and the electoral manifesto and if they have proposed a pension policy reform. If this shows to be true that the political party or parties have given these promises, the hypothesis is valid. If not, the hypothesis is invalid.

H3: The cabinet government in power is social democratic and have a relative majority in the parliament

H4: The political actors try to change policies by introducing new policy proposals

[85] Kingdon, J. (2014), p. 153-155.

5 Methods

In this chapter, the methodological assumptions will be a key interest. To do an empirical research, it is with highest interest to understand how the fuzzy-set QCA will be operated and how this method will be useful to fulfill the theoretical framework. The first part of the subchapter is to go through the epistemology and ontology of the fuzzy-set QCA method. The second part of this chapter will be to explain the main purpose with the QCA and it general functions to detect necessary and/or sufficient conditions.The third part of the chapter is to explain general parts of the fuzzy-set QCA method, how it is used and what type of conditions are we able to find with different softwares and why this selection may explain the interest to find a similar outcome. The fourth part will become more into the operationalization and which definitions are to be used when studying the three streams as they are calibrated as conditions. Finally, the methodological chapter will end with discussion of possible limitations and how the method may be useful as a complementary method to regression models.

5.1 Epistemological and Ontological understandings of QCA

Causality, or referred to as causes and effects, is simply put a key term in the construction to detect causal explanation. There are several ways to detect causality and have been a suited method for creating case studies or even to use causality as an attempt to have a mixed-method approach. Causality has been seen in different case studies designs and have been detected within the QCA method.[86]

According to Garcés Velástegui, the QCA has become a method that has moved beyond the positivism approach. Instead the method has been considered to be a pragmatist approach. Pragmatism is a research method that, ontologically, argues that there is no absolute objectivity or absolute subjectivity. Pragmatic ontology does not consider to follow the assumption made

[86] Lucas and Szatrowski (2014). "Qualitative Comparative Analysis in Critical Perspective" in *American Sociological Association*. Vol. 44(1), p. 8.

from the classical Newtonian law.[87] Other researchers have argued that QCA is a complexity analysis, and do agree that the method is taking different assumptions compared with the classical Newtonian viewpoint. According to Gerrits and Verweij, the ontological assumption is to find events that contain non-linear causality rather than linear causality. However, a major difference in Gerrits and Verweij's argument in comparison with Garcés Velástegui, is that QCA is following the principles of critical realism. This means that critical realism is distinguished on the basis between the real world, the actual and the empirical world and our experience of it. This means that critical realism is accepting the notion of causality, this means that QCA can be used to find complexity cases and thereby a use to observe and discover mechanisms that yields a certain outcome.[88]

Causality can be useful in different ways to interpret theoretical assumptions with empirical findings. This leads to the concept of QCA and its epistemological understanding. The epistemological part of this method is still having some debates as it has been interpreted as a deterministic method and as a stochastic method. According to Mahoney, QCA can be considered to be a deterministic method due to the use of sufficient and necessary causations. The deterministic model assumes that the causal patterns are predictable, even when those patterns are counted with probabilistic terms. Determinism refers to explaining variables that are assumed to affect the outcome, i.e. it is possible to identify different possible patterns of associations. When a certain combination of patterns are identified, an outcome is caused by a necessary and/or sufficient cause.[89] According to determinism, there are several possible patterns of association. If a sufficient cause is founded, the outcome will be founded. If sufficient cause is absent, the outcome will either be founded or absent. If a necessary cause is found, the outcome is also going to be founded. If a necessary cause is absent, the outcome can be either founded or

[87] Garcés Velástegui, P. (2016). "Beyond Positivism: Fuzzy Set Qualitative Comparative Analysis and Pragmatist Research" in *Revista Puce*. Vol. 103, No. 3, p. 445-456.
[88] Gerrits, L. & Verweij, S. (2015). "Critical Realism as a Meta-Framework for Understanding Relationships between Complexity and Qualitative Comparative Analysis" in *Journal of Critical Realism*. Vol. 12. Issue 2, p. 168-179.
[89] Mahoney, (2000). "Strategies of Causal Inference in Small-N Analysis" in *Sociological Methods & Research*. Vol. 28(4)., p. 391-392.

absent. Hence, the deterministic approach does not need to reveal all invariant associations between cause and outcome.[90]

For those researchers who disagree with determinism would argue that the QCA is to be seen as a stochastic method. This is because deterministic analysts would find any perfect solution to a case and therefore lack knowledge to find a solution. A second criticism is that the deterministic approach has no considerations to measurement error, the higher the risks someone will misidentify the causes.[91] Stochasticism argues that the outcome of interest can have a probabilistic distribution to explain the outcome. This means that stochasticism can be interpreted to provide generalizations. An example is to find the changes of probability within a finite population. By indicating the probability, it is possible to find the amount of uncertainty in the predictions. According to the stochasticism, when QCA is used, some amount of uncertainty can be expected in the function. This would mean that a sufficient and/or necessary condition could no longer make sense.[92]

What these two approaches can determine is that there is an element of uncertainty that is a major difference factor between the approaches of determinism and stochasticism. This means as follows, determinism argues that the QCA can find an outcome caused by a sufficient and/or necessary cause, as stochasticism argues that these assumptions are no longer possible to discuss terms of conditions if an outcome is contradicted.[93] However, Ragin argues that the fuzzy-set QCA method is not comparable and is not in line with the deterministic way to identify patterns of associations. Ragin attempts to establish an epistemological definition of fuzzy-set QCA method, by trying to find a "middle position" of the stochastic approach.[94] Ragin argues that "common data and evidence problems provide strong motivations to employ analytic techniques to the use of probability theory".[95]

As QCA is based on configurational thinking these various understandings of the method

[90] Mahoney, (2000)., p. 392.
[91] Lucas and Szatrowski (2014)., p. 8-11.
[92] Rohwer, G. (2011). "Qualitative Comparative Analysis: A Discussion of Interpretations" in *European Sociological Review*. Vol. 27, No. 6., p. 736-738.
[93] Rohwer, G. (2011), p. 735-738.
[94] Lucas and Szatrowski (2014)., p. 9-10.
[95] Lucas and Szatrowski (2014)., p. 9-10.

show how the research method has developed over the years. This subchapter has gone through the epistemological and ontological assumptions of the research method and the two main schools: determinism and stochasticism. To understand if a condition is either necessary or/and sufficient, the research is to follow the arguments based on stochasticism. The conditions will be tested based on the measurement of consistency and coverage. These two measurements will be discussed later on into details.

5.2 Variables for the Conditions of Fuzzy-set QCA

This subchapter will define what is mainly used with the QCA method. According to researchers as Legewie, the main principle advantage to using the QCA method is to find complex causality and causalities underlying assumption. Furthermore, the QCA method can be used within-case analyses and to formalize cross-case comparison.[96] Both these two principles of the QCA methods will first be tested to find if it does fulfill the aim to analyse the pension policy reform processes within the five Nordic countries.

By using the fuzzy-set QCA method it is possible to find conditions that are either necessary and/or sufficient. The typology of the fuzzy-set QCA is to find configurational causality, that is either empirically observed or unobserved. With this approach it is possible to find the plausibility of given multiple counterfactual conditions and their outcomes. When these multiple counterfactual conditions are founded, they are to be put into a truth table. With a truth table, an identified minimal number of configurations will explain the occurence of the outcome. The number of minimal conditions depends on the minimization algorithm and will also give a minimal number of outcomes. The analysis will be useful to understand the cases and when a condition lacks empirical instances but is still logically possible. With this in mind, it is possible in a next stage to determine if a condition should have a "lower plausibility bound" or a "upper

[96] Legewie, N. (2013). "*An Introduction to Applied Data Analysis with Qualitative Comparative Analysis (QCA)*" in *Forum: Qualitative Social Research / Forum: Qualitative Sozialforschung*. Vol. 14(3), Art. 15.

plausibility bound" by minimizing the number of conditions to determine the outcome.[97] Because the QCA method focuses on the set relationships instead for correlations, this is to create conditions with degrees of membership scores. These degrees of membership scores are in an interval between 0 (fully out) and 1 (fully in). With the Boolean logic behind the fuzzy set method, a set relationship can be interpreted as either a set intersection or a set union.[98] Because the research is about finding similar outcomes from different paths, it is more likely to use the Boolean logic of set intersection.

The second advantage of the QCA method, within-case comparison and cross-comparison, can be a guide for the research. This is done as the cases can show a development from a social phenomenon or if the phenomenon is existing. One way is to use logical operators and if these can find different conditions that will receive the outcome of interest. If more than 10 cases are involved in a sample, it is possible to analyse the complex patterns that will explain how the conditions are needed to be present, or even need to be absent to receive the outcome of interest.[99]

5.2.1 Finding necessary or/and sufficient conditions in policy reforms

To use the fuzzy-set QCA method it is important to find the outset of any investigation and an area with heterogeneity (or called a "domain of investigation"). As the investigation is about the five Nordic countries and the theoretical assumption from Kingdon's three streams, this analysis can be analysed through a cross-country analysis. Because these five Nordic countries are to be studied for their pension policy reforms, the potential outcome of these reforms are to be the same. This is because these pension policy reforms are following the

[97] Soda and Furnari (2012). "Exploring the topology of the plausible: F/sQCA counterfactual analysis and the plausible fit of unobserved organizational configurations" in *Strategic Organization*. Vol. 10(3)., p. 287-292.
[98] Ragin, C. (2009). "Qualitative Comparative Analysis using Fuzzy Sets (fsQCA)" in Rihoux, B. and Ragin, C. (Eds). *Applied Social Research Methods: Configurational Comparative Methods: Qualitative Comparative Analysis (QCA) and Related Techniques*. Thousand Oaks., p. 88-90.
[99] Legewie, N. (2013).

theoretical assumptions of the MSF approach and because of that the different paths should lead to a similar outcome, i.e. an opening of a policy window.[100]

As it is earlier stated, the QCA research method will be used as the methodological approach. This research method was first conducted by Charles Ragin and is used to find casual combinations or configuration of aspects in a condition. First of all, the purpose of using the QCA research method is to test an existing theory, i.e. the Multiple Streams Framework. A aim is therefore to test the MSF approach if there is a theoretical hypothesis about the outcome of pension reforms in the Nordic countries. Secondly, the QCA method can be used in a complementary way to find causality (cause and effect). Thirdly, as the components in this study are Kingdon's three streams and in this section the first step is to identify the analytical conditions. Fourthly and finally, the QCA method can be coded in data processes as a fuzzy set consists of membership score in sets. The terminology of fuzzy-set QCA is therefore to use set theory and Boolean and fuzzy algebra. As these several conditions of the QCA method are fulfilled it is then possible to introduce the analytical moment and the criteria for a condition to be necessary and/or sufficient.

Before getting into the details of a necessary condition, it is time to define what a necessary condition is and what it will tell in this research. A necessary condition is an example when the outcome needs to have the presence of the condition to exist. For example, if there is a condition called X and the outcome of Y, if the outcome of Y should occur, the condition of X needs to be present. The condition of X cannot itself produce the outcome of Y. This example can thereby tell us that the membership score in Y needs to be equal or less to the membership score in X ($Y \leq X$).[101]

Before getting into the details of what to find in a sufficiency analysis it is best to define what a sufficient condition is, and what it can tell us in a fuzzy-set QCA research. A good example for what is a sufficient condition is when the hypothesis is explaining the outcome. If we have an outcome of Y and the sufficient condition is X it is possible to receive the following analysis; Y will occur when X is also occurring ($X \leq Y$). This means that the condition of X is

[100] Berg-Schlosser and De Meur. (2009). "Comparative Research Design: Case and Variable Selection" in Rihoux, B. and Ragin, C. (Eds). *Applied Social Research Methods: Configurational Comparative Methods: Qualitative Comparative Analysis (QCA) and Related Techniques*. Thousand Oaks., p. 19-24.
[101] Legewie, N. (2013).

either constantly less or equal to the outcome of Y.[102] A second example is that a sufficient condition can have a specific "intersection" of conditions to produce an outcome. This intersection does not alway need to be necessary in order to produce a causation or that is partly the same.[103]

After this brief introduction of necessary and sufficient conditions it is now time to understand what this condition can tell what is happening in the fuzzy-set research. According to Ray Kent, when using the fuzzy-set QCA method and after collecting data and estimated each membership score for each condition it is time to create a "truth table". This truth table will then be used to simplify the causal combinations between the selected cases and if any cases are matching with each other.[104] To this result it is possible to receive a consistency score and a coverage score for these causal configurations and it is with those two measurements that will test if the conditions are sufficient or not. The consistency score is compared as the "p-value" in statistical inference and tells which cases with the effect have the causal characteristic. High consistency score leads to more likely to have a set-relationship. The consistency score that is equal or higher than 0.9 is considered to be valid, less than 0.8 or 0.75 should be ignored and is inconsistent.[105] When a "sufficient" condition is to be analysed, the coverage score will determine the degree of how the cause explains all cases of the effect.[106]

Now as the definition for both necessary and sufficient conditions are established it is time to estimate if the causal configurations are necessary or sufficient conditions. To determine if a condition is either necessary or sufficient, two different processes are needed: (1) a necessary analysis, and (2) a truth table analysis to find sufficiency.

To do a necessary analysis it is possible conduct the test with the software of fsQCA version 3.0. This test will analyse the single conditions with the outcome of interest. To determine if a condition is necessary, both consistency score and coverage scores will be

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[102] Lee, Sophia S-y. (2014). "Using fuzzy-set qualitative comparative analysis" in *Epidemiology and Health*. Vol. 36., p. 2-3.
[103] Berg-Schlosser et. al. (2009) "Qualitative Comparative Analysis (QCA) as an Approach" in Rihoux, B. and Ragin, C. (Eds). *Applied Social Research Methods: Configurational Comparative Methods: Qualitative Comparative Analysis (QCA) and Related Techniques*. Thousand Oaks., p. 10-13.
[104] Kent, R. (2008). *Using fsQCA - A Brief Guide and Workshop for Fuzzy-set Qualitative Comparative Analysis*. University of Stirling., p. 6.
[105] Ragin, C. (2000). *Fuzzy-set Social Science*. Chicago and London: The University of Chicago Press., p. 110-113.
[106] Ragin, C. (2009)., p. 109-119.

provided through the software. If the necessary analysis is receiving high consistency and high coverage score, the condition is expected to be necessary to the outcome. If the consistency score is high, and is at same having low coverage, it is expected that the condition is not necessary to the outcome.[107]

To determine sufficient conditions, it is possible to create a truth table analysis. This fuzzy-set truth table analysis (FSTTA) will show a limited diversity of the logical combinations that is provided by the selection of cases. With the FSTTA a consistency score of the multiple combination will show which possible combinations are possible to receive the outcome of interest. Consistency score that is less than 0.75 or 0.8 is to be considered as inconsistent values. Those scores that are equal to 0.9 or higher is to be considered as sufficient conditions to the outcome.[108] With the FSTTA, the research can produce a Boolean minimization and to find out the overall solution consistency score and the overall solution coverage score of the research. In this estimation it is possible to include which conditions are logical reminders or are not logical reminders. If the formula is using the estimation without logical reminders, it is possible to establish a "descriptive" formula for which conditions will lead to the outcome of interest, which is also known as the complex solution.[109] By finding the logical reminders, the "core coordination", it is possible to produce the outcome of interest. The solution formula with the logical reminders is showing non-observed cases and can tell which necessary conditions need to be present to explain the outcome of interest.[110]

5.2.2 Previous research on the Fuzzy set QCA

The literature on the QCA research method is focused on policy-making and policy design. An aspect which has been common in the research design is to analyse the socio-economic policy process, or more specifically into different various socio-economic designs. One aspect of the

[107] Elliot, T. (2013). *Fuzzy set qualitative comparative analysis: An introduction*. Research notes, Statistics Group: UCI., p. 6.
[108] Kent, R. (2008)., p. 6.
[109] Wagemann, C. and Schneider, C. (2010). "Standards of Good Practice in Qualitative Comparative Analysis (QCA) and Fuzzy-Sets" in *Comparative Sociology*. Vol. 9., p. 11-12.
[110] Wagemann, C. and Schneider, C. (2010)., p. 11-12.

socio-economic policy design process has been to analyse the local, subnational, national or international levels, but there are different ways to conduct this design with the fuzzy-set QCA method. In this subchapter there will be a brief summary of why this research is going to use the socio-economic policy design process and specifically the aspect which was inspired by the research of Jon Kvist in 1999.[111]

As it was earlier mentioned, a specific method that has operationalized the fuzzy-set QCA into analytical concepts is the research of Jon Kvist and his study on welfare policies reform (or referred as ideal policy type) over time. By using longitudinal data, Kvist made an opportunity to identify changes in the policy orientation in the specific time period (1990 - 2019). This identification of changes can be used to compare policy diversity across the countries and over time.[112] Kvist argues, with the fuzzy-set method it is possible to use qualitative in-depth cases meanwhile it can be complementary by using quantitative geralizations. Kvist uses the QCA research method to study the diversity in the Nordic countries and to find a configuration to explain if the Nordic welfare model has changed its core values to the universality principles.

Table 2: Kvist's four hypothetical countries

	Universality (U)	Generosity (G)	Nordic welfare model (U*G)
Equallygal	1.00	0.71	0.71
Transitionstan	0.84	0.28	0.84
Meritius	0.36	0.88	0.36
Dollarland	0.14	0.00	0.00

Source: Kvist (1999)[113]

[111] Rihoux, B., et. al. (2011). "Qualitative Comparative Analysis (QCA) in Public Policy: an Extensive Review" in *German Policy Studies*. Vol. 7, No. 3, p. 34-35.
[112] Rihoux, B., et. al. (2011).,p. 34-35.
[113] Kvist, J. (1999). "Welfare Reform in the Nordic Countries in the 1990s: Using Fuzzy-Set Theory to Assess Conformity to Ideal Types" in *Journal of European Social Policy*. Vol 9(3)., p. 232-237, 250-251.

As Jon Kvist did in his research, the fuzzy set method was constructed to analyse three welfare areas; generosity, universality and quality. These three welfare areas were defined to be unique to the Nordic welfare model. Kvist pinpointed that these welfare areas are to be a part of the idea-typical Nordic welfare state. These three welfare areas were analysed over time during the 1990s and was graded with a degree of membership scores. As these programmes were getting membership scores on the three welfare areas they could find a conformity score for the Nordic countries in the Nordic welfare model. The conformity score that was used to find the minimal value of the cases (this is the intersection value between the three analysed areas). In Table 2 a similar hypothetical result has been made by construing four different hypothetical countries. According to this hypothetical table, which was also used by Kvist, the conformity score is the intersection of the two conditions of "U" and "G". The conformity degree leads to the outcome if interest; "U*G".[114]

This introduction is going to be helpful in the research, and this is an alternative way to estimate the value for the outcome of interest, i.e. the policy window. The three streams will have a minimal value which is intersected with each other. Thereby these three streams are determining the value to the policy window.

5.3 Case Selection

The case selection is based on the differences of the pension policy reform processes between the Nordic countries. A second consideration is that these five Nordic countries are together commonly known to have been an ideal welfare model to other countries in a global perspective. Previous researchers have made arguments that the Nordics are the "bumble-bee that can fly". Which means that the Nordic countries have been successful in reaching economic growth even by having high tax wedges and high social cohesion.[115] Some would argue that the Nordic welfare model is based on ideological criteria, due to the historical role of social democratic dominance and the characteristic approach of social universalism in welfare development.

[114] Kvist, J. (1999)., p. 232-234.
[115] Andersen, T. et. al. (2007)., p. 11-21.

However, others would argue that the many similarities amongst the Nordic countries has changed over time as the countries have taken differential paths in the policy reform processes of their development of the welfare state.[116]

The case selection does have comparable dimensions with each other, and this may have some useful advantages to conduct the research with the QCA. According to Berg-Schlosser et. al, a study may not be a best idea if cases are comparable with "apples and oranges". The selection of cases should have an area of homogeneity/heterogeneity, or a "domain of investigation". The five Nordic countries share a common background in history and culture and do have similarities in the progress of their different welfare programmes. A second argument is that these five Nordic countries have made different pension policy paths and will be useful to determine if they can have similar outcomes in their policy processes.[117]

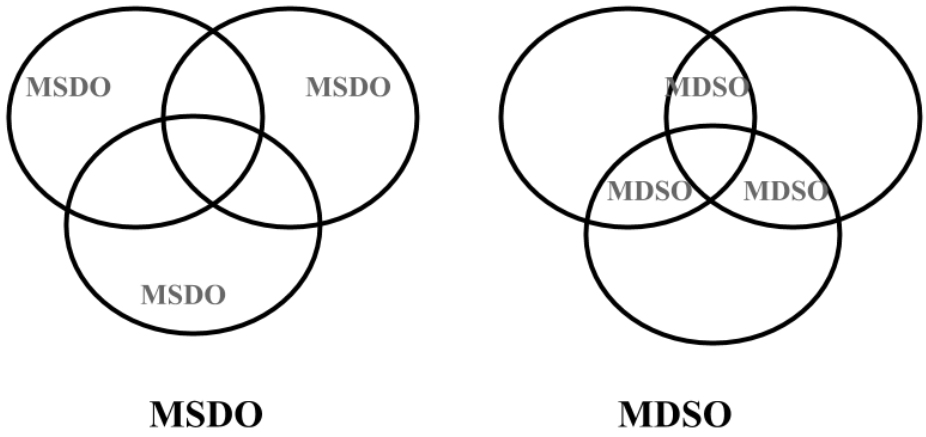
Because of the similarities in the welfare states there would be interesting to analyse the differential outcomes in the policy processes. According to the fuzzy set QCA method, cross-case analyses can have two different system designs, MDSO (Most Different, Similar Outcome) and MSDO (Most Similar, Different Outcome).[118] In Figure 3, each circle represents the designs of MDSO and MSDO. In this example there are three cases, when these cases intersect with each other it is possible to find their commonalities. The MDSO design has a commonality when the different explained situations are having similar outcomes to respective cases. The MDSO design can be compared with a larger number of cases, and that theses number of cases that have similar systematic matches.[119] The MSDO design has several cases that have most similar situations, but the outcome is different to each other. This means that the MSDO design can be useful to understand the crucial factors that may explain these differential outcomes.[120]

As the Nordic countries have a high degree of similarity with each other, a suited system design would be the MSDO design. However, this is not the case as one factor is that the design can be useful to analyse the similar policy processes between the countries. The five countries

[116] Andersen, T. et. al. (2007)., p. 19-23.
[117] Berg-Schlosser et. al. (2009)., p. 3.
[118] Berg-Schlosser et. al. (2009)., p. 4-5.
[119] Berg-Schlosser, D. and De Meur, G. (2009)., p. 23-25.
[120] Berg-Schlosser, D. and De Meur, G. (2009)., p. 28-32.

that will be analysed in this thesis have different paths and to usefully find similar outcomes, the MDSO design is most useful to analyse the theoretical framework.[121] However, these pension reforms are having some degree of similarity but they are not a likelihood that all the pension cases are targeting the same specific section of the pension systems.

Figure 3: MSDO and MDSO



Based on the Most Similar Different Outcome and the Most Different Similar Outcome design.[122]

5.4 The Calibration Setup

The data to this research is based on secondary data and has been used to estimate the calibration of the three chosen conditions. Main collection of sources have been different types of documents. These documents have been collected from governmental green and white papers and published working papers from academic articles and books. These data collections are useful to get qualitative information about the atmosphere during a certain time and how it may help to estimate the impact in the outcome of a new pension policy reform. The calibration of the streams are based on the five hypotheses in the theoretical chapter in subchapter 4.3.

[121] Ibid.
[122] Berg-Schlosser, D. and De Meur, G. (2009)., p. 23.

For the condition to the outcome of "opening a policy window", there will be no selection of material or data collection. The outcome of interest is based on the elaboration from the conditions of the three streams. Because the selection of cases is based on finding a similar outcome, the outcome of interest is based on the minimal value (set intersection). In other words, the outcome of interest is based on the logical AND operator.[123] To find a combination of causal conditions, the estimations are based on to find any implications that the conditions can together find a configurational outcome. These configurations may reveal if a pension policy reform needs all three streams to each other to open a policy window, or if one stream alone or a combination of two streams have a better probability to open a policy window.

These three streams can be calibrated in a way to receive a membership score for each condition. When these conditions are scored, it is possible to use several different ways to calibrate a value scale, there are from three, four, six and continuous value scales to use in these circumstances. When the membership score for each condition is determined, it is thereafter possible to find any outcome of interest. In Figure 2, different types of value scales show how different the membership scores are possible to be calibrated. For example, if a stream has four categories in a membership score the range is between [1, 0.67, 0.33, 0]. A second example can be used if we use the three value scale; the streams would have had two criteria, the range would be then between [1, 0.5, 0]. A continuous value scale would allow different variation of the value scales, as not all streams can be estimated with only the use of the three or four value scale.[124]

With the following discussion about the strengths with the different value scales, the research is going to follow the four value scale to score the criteria which is made for each stream. More details about the membership score and the range of these three streams is going to be discussed in the subchapter of 5.4.

[123] Schneider, C. Q. and Wagemann, C. (2012). *Set-Theoretic Methods for the Social Sciences - A Guide to Qualitative Comparative Analysis*. Cambridge University Press., p. 42-44.
[124] Ragin, C. (2009)., p. 87-90.

Figure 2: Some example of different Fuzzy-set QCA value scale options

Three-value fuzzy set	Four-value fuzzy set	Six-value fuzzy set	Continuous fuzzy set
1 = fully in	1 = fully in	1 = fully in	1 = fully in
0.5 = neither fully in or not fully out	0.67 = more in than out	0.9 = mostly but not fully in	Degree of membership: more in than out. 0.5<X<1
0 = fully out	0.33 = more out than in	0.6 = more or less in	0.5 = neither fully in or not fully out
	0 = fully out	0.4 = more or less out	Degree of membership: more out than in. 0<X<0.5
		0.1 = mostly but not fully out	0 = fully out
		0 = fully out	

Based on C. Ragin's own calibration of the Membership Scores.[125]

5.5 The Operationalization of Kingdon's three Streams

From the subchapter 4.3, four theoretical hypotheses have been taken into account from Kingdon's model. These hypotheses are now to be part of the calibration of the three streams (or referred to in QCA terms as conditions). Based on these four theoretical hypotheses it is possible to produce enough criteria that will be analysed through a four value scale. These criteria are based on a membership score, according to the structure of a four value scale which is shown in

[125] Ragin, C. (2009)., p. 90-92.

Figure 2. Because of the limited possibilities, the criteria to the conditions will be calibrated in a small scale and will be based on secondary data sources. The second aim with this subchapter is to give an understanding of the operationalization to the three streams and how the criteria are to be considered to be fulfilled (true) or not (false). This can also be analysed in the tables 3-6. Table 3 shows an overview of the three streams, as Tables 4-6 show a more detailed outline to each stream's fulfillment to the criteria.

5.5.1 The Stream of Problem

As earlier mentioned, the first theoretical hypothesis is based on the stream of problem. To create criteria that is based on the hypothesis, the criteria to the condition is based on causing a negative impact on the society. The causing of a negative impact can be analysed from different perspectives. For the stream of problem, the data sources and data collection will mainly focus on changes in the pension policies. These will be looked into before, during and after a pension reform and there will be a key focus into the impact of previous events. According to Kingdon, "problems are not entirely self-evident. How people define something as a problem is worth some consideration".[126] Problems could be seen as focusing events and these events could be the social state of affairs, such as inflation, pollution, crisis, disasters or recession. Furthermore, the focusing event can also be powerful symbols or personal experience for policy makers. The problem stream is going to be measured by finding possible focusing events that are present over time. The problem stream can be defined by three tasks: values, comparison and categories. This means that if a problem is founded, a cause is to recognize someone's concept of an ideal solution.[127] The problem stream is going to be estimated by the old-age dependency ratio, an economic measurement to determine the population that is not part of the working population and that this "dependent population" may cause a negative pressure on productivity growth.[128]

Before starting to estimate the calibration of the problem stream, it is time to define the

[126] Kingdon (2014)., p. 90.
[127] Kingdon (2014), p. 110-115.
[128] Pettinger, T. (2017). "Implications of high dependency ratio".

dependency ratio and what it can be used to estimate. The dependency ratio measures the percentage of population that is part of the dependent people, i.e. is not a part of the working population. This measures the impact of an dependent population, the dependent people are the people younger than 15 years old and people over 65 years old. The old-age dependency ratio is the measurement with only the people over 65 years of age. The old-age dependency ratio may have a weakness as it measures that all elderly people are becoming "the dependent population". According to several researchers and experts such as Johannes Kottel, is reporting a research that people are getting healthier and are living longer compared with previous generations.[129] However, the dependency ratio can be taken with seriousness. If the dependency ratio is increasing, a high risk will lead to a lower productivity growth. Several negative implications may be caused by an increased dependency ratio, all from a lower tax revenue, higher public spending, higher taxes, higher retirement age and inequality.[130] To make sure to reduce the growth of an aging population, the government has potentially several policy solutions: increase retirement age, increase taxes, targeted means-tested pensions and encourage private pension saving.[131]

In this operationalization of the stream of problem, the calibration and methodological criteria is based on the World Bank database and its statistics on the old-age dependency ratio. According to the World Bank, the old-age dependency ratio is based on age distributions of the United Nations Population Division's World Population Prospect of 2019. As the source is using a five-year group and five-year period data, a five year interval will be best useful to structure age compositions.[132] The stream of problems will be estimated with preexisting data as the source has statistics of the five Nordic countries from 1960 - 2018. The threshold to estimate the stream of problem is as follows: full-out membership is determined if the ratio is decreasing compared to the previous five year. The crossover point is if the ratio is increased between 0-1 percentages. The threshold for full-in membership is if the ratio is increased over 1 percentage, this is in definition this would be a high increase. To estimate the comparative criteria, the chosen country will be compared with other European countries (Germany, France, the UK and

[129] Koettl, J. (2015). "Did we get the 'old-age dependency' of aging countries all wrong?" in *Brookings*.
[130] Pettinger, T. (2017). "Implications of high dependency ratio".
[131] Pettinger, T. (2014). "How to deal with an aging population"
[132] World Bank Group (2019). "Age dependency ratio, old (% of working-age population)".

Switzerland) as a way to determine if the chosen country has a disadvantage, this is translated to a higher old-age dependency ratio compared to the compared countries.

In this brief summary, the stream of problem can be calibrated with a qualitative analysis. To use this qualitative information will afterwards be transformed to quantitative scores. The stream of problem have been analysed by estimating the following factors: the possibility is to create new focusing attention to the problem, changing values amongst key stakeholders and to make people aware of the focusing attention. With these definitions it is possible to find the criteria to the condition and its fulfillments in Tables 3 and 4.

5.5.2 The Policy Stream and the Policy Entrepreneur

For the condition of "policy stream", there will be a stage process to enable a potential combination of conditions. In the stage, there will be first an additional importance to the policy entrepreneur, as which is similar to the second theoretical hypothesis made from subchapter 4.3. According to Kingdon, the policy entrepreneurs are "willing to invest resources, energy, reputation, money and time" to advocate a policy proposal.[133]

The stream of policy and the policy entrepreneur is based on a four-value scale. The first criteria is fulfilled if the policy proposal was passed within a year, otherwise it is false.

The second criteria can be determined if a policy entrepreneur is directly involved in the policy making. This can be a politician or civil servant that is taking more of a role in the policy process and pushed to fulfill the policy proposal. A main implication of this can be caused by path dependency, as the policy entrepreneur is forming the values of the institution. These policy entrepreneurs can be in the context of being experts and politicians, and it is possible that these potential actors may "frame alternatives in ways that could increase their popular support".[134] If this is not a true condition, that no potential policy entrepreneur tries to influence the policy proposal, the condition is false. The second criteria is mainly based on secondary data, such as newspapers, and academic reports and articles. The last criteria is to be fulfilled if a policy proposal is passed through parliament within a year when the policy proposal is emerged.

[133] Kingdon (2014), p. 122-130.
[134] Spohr, F. (a) (2016)., p. 260.

To summarize this stage, the task is to identify possible criteria and to transform this qualitative data into the quantitative scores. By analysing the stream of policy it is of importance to find a way to define the role of the policy entrepreneur. One way to find factors that may explain the involvement is to introduce path dependency. This would mean to analyse if the policy entrepreneur have had any benefits from a policy change or how the policy process was progressed amongst the legislature within the parliament. To find the condition, the research is going to collect documents and articles, mainly secondary sources, to analyse if the theoretical assumptions and hypotheses fulfill the criteria of the stream of policy and indirectly the involvement of a policy entrepreneur. The criteria to this stream is found in Tables 3 and 5.

5.5.3 The Political Stream

For the stream of politics, the criteria for this condition is estimated by assumptions about electoral, partisan or pressure group factors. However, compared with Kingdon, the Nordic countries are not comparable with the political system of the USA. A difference is that these countries are parliamentary democracies and the political systems are commanded to have confidence from the legislative parliament. The stream of politics can change the attitudes if there is a turnover of key personnel, parliament and government. As these turnover can occur, the policy agenda within the institutions can be changed. This automatically leads to that the priority over the agenda is being changed.[135]

The third stream (politics), is measured if the government in power was predominantly a social democratic party. If it is not, the condition is false. The condition can be analysed in the support form the legislatures, the condition is true if the government has a relative majority in the legislature chamber. Relative majority includes a scenario of a political party or political parties that have a confidence and supply agreement with the government. If the government does not have a confidence and supply agreement and does not at same time have a relative majority, the condition is false.

According to Kingdon, the political stream can be estimated by the jurisdictions, the

[135] Kingdon (2014)., p. 153-155.

committees in parliaments and the consensus building in legislative processes. To estimate the political stream, the criteria to this condition is going to analyse the actors within the government and the actors in the parliament. A main consideration to be made is the political and ideological factors, and an element that is partially connected to these factors is the willingness of the legislative parliament to support the legislation of a pension policy reform.[136] The criteria to this stream and its fulfillment can be found in Tables 3 and 6.

Table 3: The Criteria for each Condition[137]

	True (1)	**False (0)**
Stream of Problem		
The Problem caused an increase in the old-age dependency ratio		
The increase in old-age dependency ratio happened rapidly		
The problem caused a disadvantage comparison with other European welfare states		
Stream of Policy and the Policy Entrepreneur		
The policy proposal was passed after a year the government took office		
The Policy Entrepreneur had direct connection to the policy-making		
The Policy Entrepreneur was promoting the policy		

[136] Kingdon (2014)., p. 157-162.
[137] For more information about the fulfilled criteria, look into the table in Appendix.

proposal, the policy was passed by parliament within a year it emerged		
Stream of Politics		
The Government was predominantly social democratic		
The Government had a relative majority in the parliament		
The Government in office have in previous proposals promised to implement a pension policy reform		

Tables 4-6: The Calibration of the Streams

Stream of Problem	**0**	**0.33**	**0.67**	**1**
The number of Criteria are fulfilled	**1999(D), 2005(N), 2009(N)**	**1993(D), 1997(I), 2003(D), 2006(D)**	**1987(D), 1990(D), 1991(F), 1994(S), 1995(F), 2003(F), 2007(S), 2011(D), 2016(I), 2017(D), 2019(S)**	**2015(F), 2016(S)**

Based on the calculation from the old-age dependency ratio.[138]

[138] World Bank Group. (2019). "Age dependency ratio, old (% of working-age population) - Denmark, Finland, Iceland, Norway, Sweden, Germany, France, Switzerland, United Kingdom".

Stream of Policy and PE	**0**	**0.33**	**0.67**	**1**
The number of Criteria are fulfilled			**1987(D)[1], 1990(D)[2], 1994(S)[4], 1997(I)[6], 2003(F)[8], 2005(N)[9], 2009(N)[9], 2015(F)[12], 2016(I)[13], 2016(S)[14]**	**1991(F)[3], 1995(F)[3], 1993(D)[5], 1999(D)[7], 2003(D)[7], 2006(D)[10], 2007(S)[11], 2011(D)[10], 2017(D)[15], 2019(S)[16]**

The calculation of the cases in this condition is based on multiple sources, based from legislature proposals, academic reports and secondary sources from literature:

1: Due, J. J. et. al. (2016), 2: Elkjær Sørensen et. al. (a) (2018), 3: Kangas et. al. (2010), 4: Aspegren et. al. (2019), 5: Elkjær Sørensen et. al. (b) (2018), 6: Hardarson (1998), 7: Farbøl et. al. (2018), 8: Rantala (2005), 9: Regjeringen (2020), 10: Büdenbender (2018), 11: Prop. 2007/08:22, 12: Finnish Centre for Pensions (2019), 13: Ólafsson (2018), 14: Regeringen (b) (2019), 15: Kvist (2017), 16: Prop. 2018/19:134

Stream of Politics	**0**	**0.33**	**0.67**	**1**
The number of Criteria are fulfilled	**1987(D), 1990(D), 1994(S), 2003(D), 2005(N), 2006(D)**	**2011(D), 2017(D)**	**1991(F), 1993(D), 1997(I), 2003(F), 2007(S), 2009(N), 2015(F), 2016(I), 2016(S), 2019(S)**	**1999(D), 1995(F)**

Based on information from Parlgov[139] and the European Election Database.[140]

[139] ParlGov (2020). "Parliaments and Governments database Project description".
[140] Norwegian Centre for Research Data (2020). "European Election Database (EED)".

5.6 The Step by Step Manual of the Fuzzy-set QCA

As the operationalization of the process and the methodological criteria for each stream is outlined, it is time to go through the steps in the process to access the knowledge which streams are necessary and/or sufficient conditions to the outcome of interest. This will be useful to understand the structure of chapter 6 and the empirical analysis.

In the first stage and after the data collection, it is time to calibrate which cases that will be used in the analysis. Earlier mentioned, the strems will have a membership score that is between an interval of [0,1]. The streams will be analysed independently and not in combination with each other. As in the theory chapter, the research has already determined the theoretical hypotheses behind each stream, which is a useful part to determine which factors are going to be analysed. This also helps to determine when a methodological criteria is either true or false. In this stage it is also possible to use one of the three Boolean operators (which is the logical AND, or known as the set intersection) and to determine which combinations of conditions are forming the outcome of interest. The Boolean operator that can determine this formation is the logical AND (*). This operator will determine a set intersection between the three conditions and what is the lowest membership score between the conditions. For example, if we have condition A and condition B and we know that A membership score is 1 and B have a membership score of 0.33, the logical AND tell us that the set intersection is equal to 0.33.[141]

When the three streams are finally calibrated, it is time to go to step 2. In this stage it is time to create a truth table in the software fs/QCA.[142] This software will create a Fuzzy-set Truth Table Analysis (FSTTA) and it will estimate the degree of limited diversity in the selection of cases. This is to be estimated by changing the scores for each partial membership to 0 or 1. A simple way of determining which partial membership scores are to be coded 0 or 1 is determined by a threshold of 0.50. This is similar to the process in a crisp-set QCA research, which means that every condition that is more out than in is to be coded as 0 (<0.50), as for conditions that are

[141] Legewin, N. (2013), p. 7-8.
[142] Ragin, C. and Davey, S. (2017). *fs/QCA [Computer Programme]*, version 3.0. Irvine, CA: University of California.

more in than out is coded as 1 (>0.50).[143] With the FSTTA it is possible to simplify the conditions in each case and they can be used to determine how many cases are to be found with similar patterns. This principle is based on a 2^k logical combination of the k conditions. Because the selection of causal conditions is only 3 (stream of problem, stream of policy and stream of politics), the k conditions is equal to 3. The number of rows and logical combinations can thereby be simply determined as 8 ($2^3 = 2*2*2 \leftrightarrow 8$). If a logical combination is not to be found in the FSTTA, the logical combination will not be visible in the conducted truth table and will not be analysed by not receiving any consistency score.[144]

In the third step of the construction, it is time to determine which conditions are necessary and/or sufficient in the relationships with the outcome of interest. With the FSTTA estimation, it is possible to reduce the number of logical causal combinations as the conditions that are fulfilling the theoretical framework that is of most interest. By meaning fulfilling the theoretical framework is another definition of argue that these cases are opening a policy window.[145] In the FSTTA, the estimation is going to show a consistency score, and as it previously been said, this score will determine the causal configurations displayed to the outcome of interest.[146]

In the fourth step the evaluation of the estimated consistency score can be analysed. The estimated consistency score can either confirm or not if the conditions are consistent or inconsistent. If this test is not to compromise any findings, a complementary test has been added, which is the measurement of the coverage score. The coverage score is used to determine the empirical relevance of the consistency score. By creating a solution formula based on the estimation in FSTTA, a possibility is to find the overall solution of consistency and the overall solution of coverage.[147] This is not to be done in the same software, and will instead be tested with the software of QCA Add-in. The software will be able to create an overall solution of consistency respective to the overall solution of coverage.[148]

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[143] Grofman, B. and Schneider, C. (2009). "An Introduction to Crisp Set QCA, with a Comparison to Binary Logistic Regression" in *Political Research Quarterly*. Vol. 62(4)., p. 662-663.
[144] AHRC (2013)., p. 2-3.
[145] AHRC (2013)., p. 2-3.
[146] Legewie (2013).
[147] Legewie (2013).
[148] Cronqvist, Lasse (2019). QCA Add-In [Version 1.1]. University of Tier.

To determine the overall solution score, it is time to estimate which cut-off threshold should be used to the expected consistency score. This is done to determine if a condition is sufficient and to prove that the condition is consistent, the score of consistency should be high. When this stage is done it is time to analyse the solutions by analysing the logical reminders. The logical reminders can simplify the solution formula and can create a formula that is in line with the theoretical knowledge and will only find outcomes that are not contradicting. This means that the logical reminders can find conditions that are necessary to get the presence of the outcome. If the test is created without any logical reminders the results will show the complexed solution formula. Without the logical reminders, the researcher can only explain which conditions are sufficient to the outcome.[149]

5.7 Limitations

As stated in the previous parts of the chapter there are several possibilities to use the QCA method as a new way to understand policy outcomes by using Kingdon's theoretical assumptions. However, some may argue that there are some weaknesses with the method and the upcoming research. This subchapter has an aim to explain several limitations that may occur, but also explain how the QCA method can be a complemented research method to regression models.

Firstly, to analyse the limitations with the QCA method, it is a possibility to compare the method with the methods used with the OLS regression method. Regarding regressions, this method does have an advantage to uncover net-effects of variables. According to Sean Tanner, the QCA method is an unique tool to estimate public policy processes, some concerns is that the method does add little value in the current method of policy processes. This is because the measurement of membership score is unlawfully used to uncover variations in outcomes. This means that quantitative methods are better to reveal effects at the margins.[150] However, as this

[149] Atwell Seate, et. al. (2015). "Necessary and Sufficient Conditions for Positive intergroup Contact: A Fuzzy Set Qualitative Comparative Analysis Approach to Understanding Intergroup Attitudes" in *Communication Quarterly*. Vol. 63, No. 2., p. 141.
[150] Tanner, S. (2014). "QCA is a questionable value in policy research" in *Policy and Society*. 33:3, p. 295-297.

may be a weakness in this case for the QCA method, there is still some advantage that the method does not estimate there are any missing variables. If this is compared with a regression model, missing variables do exist and the independent variables can still be statistically uncorrelated to any omitted variables. The QCA method will be useful to fill in the blanks when a regression model fails to estimate a causal inference, this is vice versa when regression analysis are having better precision to detect multicollinearity.[151]

Secondly, a common critique of the QCA method is that this research method is using logical reminders. Some have argued that the use of non-observed configurations (logical remainders) can be dangerous and is a way to speculate different ways to imagine which combinations would be suited for causal configurations. The logical reminders try to explain some patterns that may not even occur in the real world.[152] In counterargument of this critique, De Meur argues that there is a way to diminish the effect of a logical reminder by distracting it between the "plausible" and "non-plausible" logical reminders. Furthermore, logical reminders are not able to affect the elaboration of a truth table and are a possible way to simplify the assumptions made by the observed outcomes. These logical reminders are not even creating solutions that are contradicting, it merely gives more simplified answers to the solutions.[153]

Thirdly and lastly, one of the most frequent critiques of the QCA is the selection of cases and the "black box problem". For some researchers the selection of cases can become crucial to the elaborating with the QCA method. It could even be difficult to choose relevant conditions or cases. Critiques would say that this is a disadvantage to the QCA method, while others say it is the advantage of the QCA. Because of the development of the MSDO/MDSO design, the selection of cases are becoming clearer in the analysis and excludes the use of randomization.[154] A part of this argument comes back to the "black box problem", the method is criticized because the lack of not describing "how" the causal combinations can explain the outcome of interest. However, the QCA is not trying to reveal "black boxes" (or known as

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[151] Seawright (2005)., p. 16-22.
[152] De Meur, G. et. al. (2009). "Addressing the Critiques of QCA" in Rihoux, B. and Ragin, C. (Eds). *Applied Social Research Methods: Configurational Comparative Methods: Qualitative Comparative Analysis (QCA) and Related Techniques*. Thousand Oaks. SAGE. Vol. 51., p. 147-150, 153.
[153] De Meur, G. et. al. (2009), p. 153-156.
[154] De Meur, G. et. al. (2009), p. 156-160.

"causal mechanisms") and is a complementary research method to understand cases based on the task of investigating.[155]

To summuries, the QCA method does have some limitations that cannot be ignored but the method also has some advantages as a complementary study to the regression analysis. The use of logical reminders is going to be used in this research but it will not affect the elaboration of the truth table analysis.

[155] De Meur, G. et. al. (2009), p. 160-166.

6 Analysis

In this chapter, the theoretical and methodological framework will be analysed and to answer the research question. This chapter will go through the empirical results and will follow the same order of the operationalization and the step by step manual which was introduced in the previous chapter, together with its interpretation of the theoretical hypotheses.

6.1 The Fuzzy-set QCA results

As the five Nordic countries have faced different paths in the pension policy reforms, it is possible to analyse these paths if they have challenges to theoretical assumptions made by Kingdon's model. The three streams have been analysed by introducing several criteria to each stream and it is now time to reveal the estimation of these conditions and if they prove the liability of the reform process.

The cases are being calibrated in Table 7, the matrix is showing it is possible to find an overall result of the membership score for each stream and for the individual cases in the Nordic countries. The cases are ordered from 1987 - 2019, and the result shows that none case has a fully out or fully in estimation in all three streams. This means that neither streams are having all three conditions with the same score of 0 or that the three conditions are all including a score of 1. In all the 20 cases, a number of 9 cases have a condition that shows either a membership score of 0 (fully out) for either the stream of problem or the stream of politics. In the three cases with a fully out of the stream of problems. In Table 7, the stream of policy and the role of the policy entrepreneur is highly present (fully in membership score) in 10 out of 20 cases. If this was to include the cases with a membership score that is more in rather than out (i.e. 0.67), the number of total cases with this estimation is 20 out of 20 cases. The stream of policy and the role of the Policy entrepreneur is an important condition in the formula and for all the selected cases.

Table 7: Matrix over the 20 cases and their conditions in the streams

Cases	Problem	Policy and PE	Politics
1987(D)	0.67	0.67	0
1990(D)	0.67	0.67	0
1993(D)	0.33	1	0.67
1999(D)	0	1	1
2003(D)	0.33	1	0
2006(D)	0.33	1	0
2011(D)	0.67	1	0.33
2017(D)	0.67	1	0.33
1991(F)	0.67	1	0.67
1995(F)	0.67	1	1
2003(F)	0.67	0.67	0.67
2015(F)	1	0.67	0.67
1997(I)	0.33	0.67	0.67
2016(I)	0.67	0.67	0.67
2005(N)	0	0.67	0
2009(N)	0	0.67	0.67
1994(S)	0.67	0.67	0
2007(S)	0.67	1	0.67
2016(S)	1	0.67	0.67
2019(S)	0.67	1	0.67

(D): Denmark, (F): Finland, (I): Iceland, (N): Norway, (S): Sweden

6.2 Determining the outcome of interest

As the fuzzy-set QCA is now estimated, the resulting tables can now be used to estimate the difference degree between the minimum value for respective cases. To determine these differences degrees of fuzzy-set logic it is possible to find each stream's value score by the use of logical AND. This means that the outcome of interest is the solution for the minimized score in the causal combination of the three conditions. The Boolean operator of logical AND requires that mean or average scores are rejected in the study. This is mainly because a use of these typical statistical measurements would have drastically changed the membership scores and misled the true value of the outcome.[156]

[156] Schneider, C. Q. and Wagemann, C. (2012)., p. 42-44.

In Figure 4 it is possible to find each minimal value (logical AND), or the intersection of the three conditions (or sometimes even known as the "weakest link").[157] For example, for case 2017(D) the conditions have a score range which is min{0.67, 1, 0.33}. The stream of problem has a score of 0.67, the stream of policy and policy entrepreneurs is fully in (1.00) and the stream of politics is fulfilling only one criteria of the condition (0.33). If we want the intersection of 2017(D) it is required to identify a minimal common value, which in this case is 0.33, therefore the outcome of interest is 0.33. Figure 4 is presenting the overall fuzzy-set membership of cases in the causal combinations that are founded. The outcome from these intersections, which is in Boolean logic is based on S1*S2*S3, is the conformity degree of the policy window. The interpretation of the conformity degree is that a few cases have a high degree in its membership score to be more in than out (0.67) in the current elaboration. Figure 4 findings can be interpreted that a total of 8 cases is having a partially more in than out scores. What this means is that there can only be 8 out of 20 cases that are fulfilling the outcome of interest.

In order to test if the conformity degree is truthful it is now time to introduce the necessary analysis and the fuzzy-set truth table analysis (FSTTA). These both tests are used to either confirm or deny that these 8 cases are trustworthy and if these cases can either be necessary and/or sufficient conditions to the outcome of interest.

[157] Schneider, C. Q. and Wagemann, C. (2012)., p. 44-45.

Figure 4: Logical AND

Cases	Problem	Policy and PE	Politics	Window
1987(D)	0.67	0.67	0	0
1990(D)	0.67	0.67	0	0
1993(D)	0.33	1	0.67	0.33
1999(D)	0	1	1	0
2003(D)	0.33	1	0	0
2006(D)	0.33	1	0	0
2011(D)	0.67	1	0.33	0.33
2017(D)	0.67	1	0.33	0.33
1991(F)	0.67	1	0.67	0.67
1995(F)	0.67	1	1	0.67
2003(F)	0.67	0.67	0.67	0.67
2015(F)	1	0.67	0.67	0.67
1997(I)	0.33	0.67	0.67	0.33
2016(I)	0.67	0.67	0.67	0.67
2005(N)	0	0.67	0	0
2009(N)	0	0.67	0.67	0
1994(S)	0.67	0.67	0	0
2007(S)	0.67	1	0.67	0.67
2016(S)	1	0.67	0.67	0.67
2019(S)	0.67	1	0.67	0.67

Before continuing with the FSTTA estimation, each set conditions are to be analysed if they are necessary conditions to the outcome of interest. What the elaboration of the necessary analysis, this test will verify if any streams (or referred in the software as conditions) can show which of those three streams have the necessary elements to the outcome of interest. However, even though all three streams have high consistency the necessary analysis is also using the coverage score as a complementary test. The overall coverage score shows that one stream is not able to be a necessary condition in the solution formula. The stream of Policy and the Policy Entrepreneur do have a consistency score of 1, but at same time receiving the coverage score of 0.4. This is a low score in comparison to the high consistency score, thereby it is possible to say that the condition is not a necessary condition. Both the stream of Problem and the stream of Politics are

having high consistency and have a coverage score that is higher than 0.5. Both these conditions can be considered to be necessary conditions to the outcome of interest.[158]

With the complete test of necessity, it is now time to elaborate the sufficiency analysis. This will be tested by creating the FSTTA.

Figure 5: Analysis of Necessary Conditions

Outcome: Window	Consistency	Coverage
Problem	1.00	0.62
Policy and PE	1.00	0.40
Politics	1.00	0.71

Based on calculation in the software of fsQCA version 3.0.[159]

With the elaboration of the sufficiency test, it is possible to create a truth table. In Figure 5 it is possible to find that the selection of cases creates four possible solution formulas. Because of limited diversity, four other solution formulas are not found in the truth table analysis. One simple reason to receive this result is because of the limited number of cases in this research.[160]

In the second stage of the FSTTA, it is possible to estimate the consistency score. As earlier said in chapter 5, the consistency score covers the assumption of the empirical evidence that the cases are consistent to the set relationship. In a FSTTA, the consistency score is to estimate a condition's likelihood to be a sufficient condition to the outcome of interest. To determine if a condition is likely to be sufficient, a reliable threshold for the consistency score would be 0.75 or higher. If a consistency score is 0.75, or even as close or equal to 1, the condition is sufficient to the outcome.[161] In the elaboration of the FSTTA, 8 cases are following the theoretical assumptions of Kingdon's three streams, which means that only 8 cases have all the three streams in the formula to create the outcome of interest. These 8 cases have a consistency score of 1.00. This is a high score and do successfully confirm that the condition is

[158] Schneider, C. Q. and Wagemann, C. (2012)., p. 139-150.
[159] Ragin, C. and Davey, S. (2017). *fs/QCA [Computer Programme]*, version 3.0. Irvine, CA: University of California.
[160] Schneider, C. Q. and Wagemann, C. (2012)., p. 91-93, 96-105.
[161] Legewie, N. (2013).

sufficient to the outcome of interest. The three other conditions that have been found in the FSTTA have a low consistency score, which is lower than the threshold and are therefore considered to be inconsistent scores.

Figure 6: Fuzzy-set QCA Truth Table Analysis

Problem	Policy and PE	Politics	Number	Raw Consistency
1	1	1	8 (40%)	1.00
1	1	0	5 (65%)	0.52
0	1	1	4 (85%)	0.58
0	1	0	3 (100 %)	0.47
1	0	1		
1	0	0		
0	0	1		
0	0	0		

Based on the software of fsQCA version 3.0[162]

With the estimations from the FSTTA it is possible to create a complementary test in the software of QCA Add-in. This test is to confirm the previous results but it is also to introduce a new measurement, to determine the overall solution consistency and the overall solution coverage score. In Figure 7, the FSTTA have been constructed in the software of QCA Add-in and it shows that we have similar consistency scores, which vertifice the scores of the software of fsQCA version 3.0.

However, there is a major difference in these two software as the truth tables are being created. In the software of QCA Add-in, the consistency scores have been added with the presence of the cut-off value of a threshold for the consistency score, which is equal to 1. The cut-off value will lead to extract the solutions for only the condition when all three streams are involved in the formula, which is the 8 cases that have earlier been discussed. With the software of QCA Add-in, the logical reminders are added into the solution formula and it is possible to

[162] Ragin, C. and Davey, S. (2017). *fs/QCA [Computer Programme]*, version 3.0. Irvine, CA: University of California.

simplify which conditions are necessary in the formula to receive the outcome of interest. In a first attempt by including the logical reminders the FSTTA estimates that there are 3 solutions to the implication, which is when two conditions are included in the solution formula. In Formula (1) the logical reminders are included and show a simplified solution formula to the outcome of interest, when the policy window is opened. What it indicates is that the stream of Problem and the stream of Politics are necessary conditions that are needed to open the policy window. Without the presence of these streams would lead to that the policy window would not emerge. According to Ragin if the logical reminders are added, it is possible to include the "theoretical knowledge" into the solution formula.

Formula (1), PROBLEM*POLITICS ⟶ Window

In Figure 8, the same procedure has been made but except one detail. This time the logical reminders are excluded in the FSTTA, this can be found in Formula (2). There is the same implication but the solution formula is different from the previous FSTTA results in Figure 7. Because the logical reminders are excluded, it is possible to determine if any conditions are a part of a complex solution. A difference in the Formula (1) and (2) are to be found when comparing the solutions with and without the logical reminders (or known as the complex solution formula).[163] Without the logical reminders it can be revealed that the stream of Policy and the Policy Entrepreneur is a sufficient condition. Formula (2) also explains that the stream of Problem and stream of Politics is sufficient conditions to the outcome. This reveals that both the stream of Problem and the stream of Politics are necessary and sufficient conditions to receive the outcome of interest.

Formula (2), PROBLEM*POLICY AND PE*POLITICS ⟶ Window.

[163] Ragin, C. (2009)., p. 110-120.

Figure 7: The truth table the outcome of Window and with Logical Reminders

Cases			Problem	Policy and PE	Politics	Window	Consistency
2003(D), 2006(D), 2005(N)			0	1	0	0	0.47
1993(D), 1999(D), 1997(I), 2009(N)			0	1	1	0	0.58
1987(D), 1990(D), 2011(D), 2017(D), 1994(S)			1	1	0	0	0.52
1991(F), 1995(F), 2003(F), 2015(F), 2016(I), 2007(S), 2016(S), 2019(S)			1	1	1	1	1.00
Outcome: Window							
Implicants: 1	Consistency	Coverage					
PROBLEM*POLITICS	1	1					
Solutions: 3							
PROBLEM*POLITICS							

Based on the software of QCA Add-in.[164]

Figure 8: Truth Table with the outcome of Window and without Logical Reminders

Cases	Problem	Policy and PE	Politics	Window	Consistency
2003(D), 2006(D), 2005(N)	0	1	0	0	0.47
1993(D), 1999(D), 1997(I), 2009(N)	0	1	1	0	0.58
1987(D), 1990(D), 2011(D), 2017(D), 1994(S)	1	1	0	0	0.52
1991(F), 1995(F), 2003(F), 2015(F), 2016(I), 2007(S), 2016(S), 2019(S)	1	1	1	1	1.00
Outcome: Window					
Implicants: 1					
PROBLEM*POLICY AND PE*POLITICS					
Solutions: 3					
PROBLEM*POLICY AND PE*POLITICS					

Based on the software of QCA Add-in.[165]

[164] Cronqvist, Lasse. (2019). QCA Add-In [Version 1.1]. University of Tier.
[165] Cronqvist, Lasse. (2019). QCA Add-In [Version 1.1]. University of Tier.

6.3 Discussion

The fuzzy-set QCA theory application has been used to estimate the empirical development for the pension policy reform processes between the five Nordic countries. The empirical result explains that the Nordic countries took different roads in their policy reform processes. With the theoretical framework of the MSF approach it is possible to understand a changed path dependency within the Nordic countries and their pension policy development. Some changes have been made according to a top-down approach, from the government or within the parliament. However, if the theoretical assumptions made by the MSF approach would have been fully fulfilled, a high considering number of cases would have had the outcome of interest. Only 8 cases have a high consistency score and a coverage score to explain that the condition is sufficient to reach the outcome of interest. Even if the MSF approach is not completed to the selected cases, some are functional to the theoretical assumptions and there are two discoveries that have been made.

Now as the empirical results have been made it is possible to concluded that not all cases are corresponding similarly in good or bad economic times. Even when the country in question even has a low old-age dependency ratio, some cases have shown that it is not the case to only have a negative caused problem to initiate a policy process. In all of the cases, one factor is standing out: the stream of policy and the role of the policy entrepreneur. This condition has been present in all of the cases, but in return it is only sufficient to the outcome of interest.

A second discovery is that the stream of problem and stream of politics is both necessary and sufficient conditions to the outcome of interest. These two streams need to be present, otherwise the outcome of interest will not occur. What this merely means is that the policy window can either be driven by political motivations or by the occurrence of a caused problem. What is impossible to understand is which of these two streams are more important than the other. The empirical results show that no other option is consistent, this means that both these two streams are required into the solution formula.

7 Conclusion

In this chapter, the results from chapter 6 will be concluded. There will be a possibility to determine if the founded empirical analysis have shown any signs that may contradict or strengthen the theoretical assumptions of the MSF approach. The solutions that have been found in the necessary analysis and the truth table analysis are going to be discussed and what it means. What is needed to analyse is if the consistency scores are either consistent or inconsistent. It is also possible to study those options which includes when the coverage score is higher than the consistency score. The final remarc will be to answer the research question and how the empirical analysis will be interpreted, in relation to the theoretical model of Kingdon.

7.1 The Multiple Streams Framework and its relevance

The aim in this research has been to identify the three streams and if these three conditions can be enabled to estimate if a policy window would have emerged according to the MSF approach. To identify this possibility, the research has been conducted by using 20 selected pension policy reforms that occured in the Nordic countries between 1987 - 2019.

The research has applied the fuzzy-set QCA method is used to identify the contributions from the three streams of theoretical assumptions made by the MSF approach. What can be founded as a conclusion is that 8 out of 20 cases are fulfilling the theoretical assumptions of the MSF approach. However, 12 out of 20 cases can be understood as contradicting the assumption that all three streams are consistent conditions. What these contradicting cases are to be understood as is that they do not need to interact with each other. Not all three streams need to be a part of the model to find the emergence of the policy. It is even found that the stream of problem and stream of politics are both necessary and sufficient conditions. It is only confirmed that the presence of the stream of policy and the Policy Entrepreneur is a sufficient condition, it is not to be a necessary condition. All these three streams can partially explain the outcome of

interest in 8 cases, but this is not to be occurred in 12 cases. The 12 cases are to be inconsistent due to a low consistency score (<0.75). It is not possible to estimate if the stream of problem or stream of politics have been more of importance to the solution formula.

This means that depending on the circumstances on the cases that is fulfilling the theoretical assumptions of the MSF approach, a strong will from the policymakers and a promoting policy entrepreneur can be a sufficient condition to open a policy window. What matters to the outcome of interest is the presence of the stream of problems and the stream of politics. Both these conditions are both necessary and sufficient conditions to open a policy window. That would mean that if the two streams are absent from the model, most likely the policy window is also going to be absent from the solution.

7.2 Further Research

With this thesis research, a main interest has been to expand a potential research method and its potential use to "quantify" qualitative research. As the fuzzy-set QCA methods have been used to test a previously established theoretical framework by adding the combination of the MSF approach and the framework of historical institutionalism, a new way of using a mixed method approach can be discussed into the development of the research method. This use of the fuzzy-set QCA method has been on a small scale and even can be expanded and hypothetically tested in other policy areas.

Because there are few studies and research by combining the pension policy reforms and the MSF approach is a good idea-pitch to find more understanding how changing behaviour within the government can lead to changing attitudes to promote new policy proposals.

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9 Appendix

Table of the Criteria for each Stream Condition

	True (1)	**False (0)**
Stream of Problem		
The Problem caused an increase in the old-age dependency ratio	1987(D), 1990(D), 1991(F), 1994(S), 1995(F), 1997(I), 2003(D), 2003(F), 2006(D), 2007(S), 2011(D), 2015(F), 2016(I), 2016(S), 2017(D), 2019(S)	1993(D), 1999(D), 2005(N), 2009(N)
The increase in old-age dependency ratio happened rapidly	1991(F), 1995(F), 2003(F), 2011(D), 2015(F), 2016(I), 2016(S), 2017(D), 2019(S)	1987(D), 1990(D), 1993(D), 1994(S), 1997(I), 1999(D), 2003(D), 2005(N), 2006(D), 2007(S), 2009(N)
The problem caused a disadvantage comparison with other European welfare states	1987(D), 1990(D), 1993(D), 1994(S), 2007(S), 2015(F), 2016(S)	1991(F), 1995(F), 1997(I), 1999(D), 2003(D), 2003(F), 2005(N), 2006(D), 2009(N), 2011(D), 2016(I), 2017(D), 2019(S)
Stream of Policy and the Policy Entrepreneur		
The policy proposal was passed after a year the government took office	1987(D), 1990(D), 1991(F), 1995(F), 1993(D), 1999(D), 2003(D), 2006(D), 2007(S), 2011(D), 2015(F), 2017(D), 2019(S)	1997(I), 1994(S), 2003(F), 2005(N), 2009(N), 2016(I), 2016(S)
The Policy Entrepreneur had direct connection to the	1987(D), 1990(D), 1991(F), 1995(F), 1993(D), 1994(S),	

policy-making	1997(I), 1999(D), 2003(D), 2003(F), 2005(N) 2006(D), 2007(S), 2009(N) 2011(D), 2015(F), 2016(I), 2016(S), 2017(D), 2019(S)	
The Policy Entrepreneur was promoting the policy proposal, the policy was passed by parliament within a year it emerged	1991(F), 1993(D), 1994(S), 1995(F), 1997(I), 1999(D), 2003(D), 2003(F), 2005(N), 2006(D), 2007(S), 2009(N), 2011(D), 2016(I), 2016(S), 2017(D), 2019(S)	1987(D), 1990(D), 2015(F)
Stream of Politics		
The Government was predominantly social democratic	1993(D), 1995(F), 1999(D), 2009(N), 2011(D), 2016(S), 2019(S)	1987(D), 1990(D), 1991(F),1994(S), 1997(I), 2003(D), 2003(F), 2005(N), 2006(D), 2007(S), 2015(F), 2016(I), 2017(D)
The Government had a relative majority in the parliament	1991(F), 1993(D), 1995(F), 1997(I), 1999(D), 2003(F), 2007(S), 2009(N), 2015(F), 2016(I)	1987(D), 1990(D), 1994(S), 2003(D), 2005(N), 2006(D), 2011(D), 2016(S), 2017(D), 2019(S)
The Government in office have in previous proposals promised to implement a pension policy reform	1991(F), 1995(F), 1997(I), 1999(D), 2003(F), 2005(N), 2006(D), 2007(S), 2009(N), 2011(D), 2015(F), 2016(I), 2016(S), 2017(D), 2019(S)	1987(D), 1990(D), 1993(D), 1994(S), 2003(D)