Thesis:

Current and future economic challenges in the Greenlandic economy, with a focus on transfer-pricing.

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To my grandmother

Acknowledgement

My supervisor Birger Poppel (Cand. Polit. - Project Chief, emeritus)

I would like to show my appreciation to my supervisor that helped me to see the path more clearly, and redirected me away from the disorder I experienced during the process in writing this thesis. Even though I did not follow all of your advises, they have helped me to evolve with the work. I am going to miss our intellectual sparring.

My intellectual sparring partner Samo Jacob Nielsen (Cand.Scient.Adm. - Ph.d. student)

I would like to show my gratitude to my invaluable sparring partner, from whom I have acquired an important discipline. A discipline that helped me to focus on my thesis; and my thesis only. Even though there might be dissimilarities between our views on how certain issues should be solved, as seen in any academic work, I will treasure our intellectual conversations, and hope that they may not cease to continue in the future.

To my beloved family

For whom without I would not be able to finish this thesis. You are the reason why I even begin to write this thesis in the first place. You paved the way for me, so that I was able to reflect, write and reason in peace during the whole process. You are the beacon of light during my most dire moments, where I began to doubt myself being able to finish the job. For that I am eternal grateful.

1. Introduction

A post-bachelor interest on the challenges in the economy of Greenland, started with an increasing curiosity on the various informal discussions on whether or not Greenland is a source of raw materials for Denmark. I have personally found these informal discussions to have a tendency to concentrate on the special relationship between Greenland and Denmark. More exactly, the discussions tend to evolve on the value transfers between Denmark and Greenland, namely the block grant. I, especially, am curious about the validity and the reliability on these various myth-like debates in the society on the subject of who benefited the most from this special relationship: Denmark or Greenland.

The overall subject of this thesis is the contemporary challenges that exist in the economy of Greenland, with a focus on the value transfers out of Greenland, more specifically on the concept of transfer-pricing. Transfer-pricing concept defined as a price-setting of goods between Greenlandic companies and foreign companies, in order to achieve the avoidance of exchanging the value of the goods into currency within the economy of Greenland.

2. Problem definition

2.1 Transfer-pricing

The reason why I have chosen to deal with the transfer-pricing first before dealing with the current economic situation is to comprehend the current transfer-pricing in the economy of Greenland first, before beginning the analysis on the nature of the contemporary and future challenges the Greenlandic economy is facing with a reference to transfer-pricing theory. I find it essential to comprehend the aspects of the economy of Greenland first wherein the challenges themselves manifest, before making my remarks on the challenges themselves.

I will start with exploring how the transfer-pricing has been during the colonial period, and then contrast the colonial period with the transfer-pricing since the introduction of the Self-Government in 2009. An attempt to describe the transfer-pricing during the colonial period should not be viewed as an attempt to establish a descriptive narrative of the economic history of Greenland. However, it should be viewed as an attempt to establish a diversification of the debate, from which any interested individuals can work on by specifying, annulling or validating the findings in this thesis.

The following questions are going to be the definition of my comprehension on the subject described above:

Which economic data can be found through formal channels on the economy of Greenland during the colonial period and the period of Self-Government?

In what way do these economic data describe the transfer-pricing in the economy of Greenland?

Can the economic potential in Greenland be identified through the identification of the actual transfer-pricing in Greenland?

2.2 Current economic situation

I will use the term current economic situation, on how the existing economic situation is affecting the economy in general.

Which economic challenges does Greenland face with its actual economic outlook?

During the analysis, the question above will be the guideline in dealing with the current economic situation of the economy of Greenland. I will deal with the current economic situation first, before moving on to the debate on the need for reforms in the economy of Greenland. I have chosen this method because I find it important to make a baseline first, before making an attempt to comprehend the ramifications of the current economic situation where no economic reforms are implemented in the economy.

The transition from the descriptive part to the normative part of the analysis, should be perceived as a smooth transition, and not as two separate analysis per se.

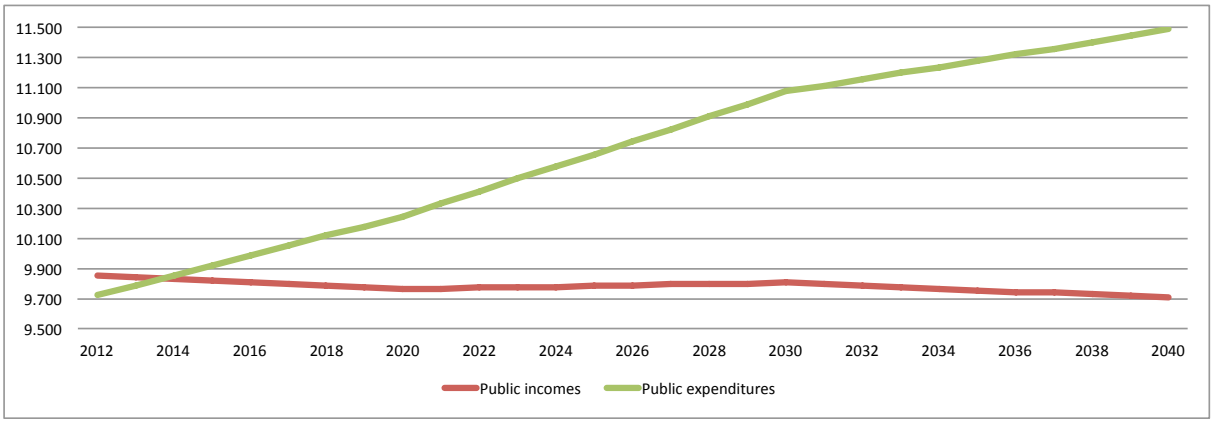
2.3 Normative discourse

There is an ongoing debate on the subject that in order to meet the challenges the development in Greenlandic demography creates, the Greenlandic welfare system needs to be reformed. The Economic Council suggests, that if the current demographic developments should persist, the future public revenues will not be adequate enough to meet the future public expenditures under the current legislation. This is visualized on the figure 2.3.1 below.

After the comprehension of the current economic situation, I will look at the suggested economic reforms. The question below is the guideline to it.

With contemporary economic challenges identified, which reforms are needed to further maximize the greenlandic output?

Figure 2.3.1: The projection numbers of the public finances by the Economic Council - Self made figure.



Source: (The Economic Council, 2014) - (See chapter 9.1 for data).

Note: The figure illustrates the projection numbers made by the Economic Council on the public finances until the year 2040. Numbers are in M DKK.

3. Delimitation of the problem definition

The collection of the historic economic data on Greenland will only be attempted through the use of ordinarily used sources, such as Statistics Greenland, and the Library of the University of Greenland due to obvious reasons. This is to minimize the possibility of substantial errors on the validity of the collected economic data, but also to just limit the use of multiple source that could have the same subject at hand. The analysis will mainly consist of numbers. Moreover, I will to delimit myself from using the comments around these descriptive economic data. This in order to minimize the effects of any personal opinions on the archived economic data surrounding the economy of Greenland. In addition, my establishment of the transfer-pricing during the period of Self-Government will only consist of comparison between the exports in Greenland and exports in Iceland, and in some cases exports in Faroe Islands. The reason why I have excluded the product differentiation and product development in the analysis of the transfer-pricing during the Self-Government period is to limit the width of this thesis.

I will exclude the concept of thin-capitalization. Even though the concept of thin-capitalization is an integrate part of the transferring of values from a country to another, it will not be included, since the main focus will evolve around the normative discourse on the economy of Greenland. The exclusion of thin-capitalization is done due to our lack of access to the contracts made between the Greenlandic companies and foreign companies. Furthermore, it is due to my lack of access to tax accounts and tax balance sheets of the Greenlandic companies that further limit my ability to analyze the concept of thin-capitalization in Greenland.

The monetary policy in Denmark has substantial implications to the financial institutions and their costumers in Greenland. Greenland is very much dependent on the European Central Bank's monetary policy through the peg of DKK to the EUR, thus making the economy of Greenland receptive to the strengths and the weaknesses of the EUR currency. I will limit myself from analyzing any monetary policies and their effects on the economy of Greenland. Furthermore, in order to limit the input of the political opinions, the collection of the reforms needed in the economy of Greenland will be done through the ordinarily used sources as mentioned above.

4. Theories

4.1 Management Control Systems

The theme of this thesis is transfer-pricing in the economy of Greenland.

Robert N. Anthony and Vijay Govindarajan defined in their book called "*Management Control Systems*"[1], chapter 6 & 15 to be exact, that transfer-pricing is a mean to distribute the revenues between two or more profit centers.

There are various reasons to use transfer-pricing in order to distribute the revenues between two or more profit centers. It can be to distribute the revenues to cover the production, administration and the marketing costs in various profit centers. It can be to extract resources in a "cheap way" from a country with export royalties. It can be to maximize the transfers of commodities from a country that had imposed limitations to the amount of foreign exchange available, or to concentrate revenues in countries with low taxation e.g. through multiple joint ventures.

I will use the definition by R.N. Anthony & V. Govindarajan on the revenue distribution arranged as a percentage of costs. I.e. if your share on the production costs of the completed good stands at 40% of the entire cost to produce the finished good, then you get the 40% of the revenues from the completed good, as a definition to the fairness of the transfer-pricing in Greenland.

4.2 Growth in the long run

4.2.1 Present-day Convergence

In order to address the challenges on the actual economic future of Greenland, I will apply a paper on convergence by Andrey Korotayev & Julia Zinkina called "*On the structure of the present-day convergence*"[2]. A. Korotayev & J. Zinkina states that in order for a country to converge to higher income countries, it needs to achieved some variables. According to them the variables that needs to be fulfilled are high investment rate compared to the country's Gross Domestic Product, the absence of restrictions on foreign capital investments, a high manufacturing employment i.e. large secondary industry, democratically legitimated institutions that can withstand what

[1] (Anthony & Govindarajan, 2007)

[2] (Korotayev & Zinkina, 2014)

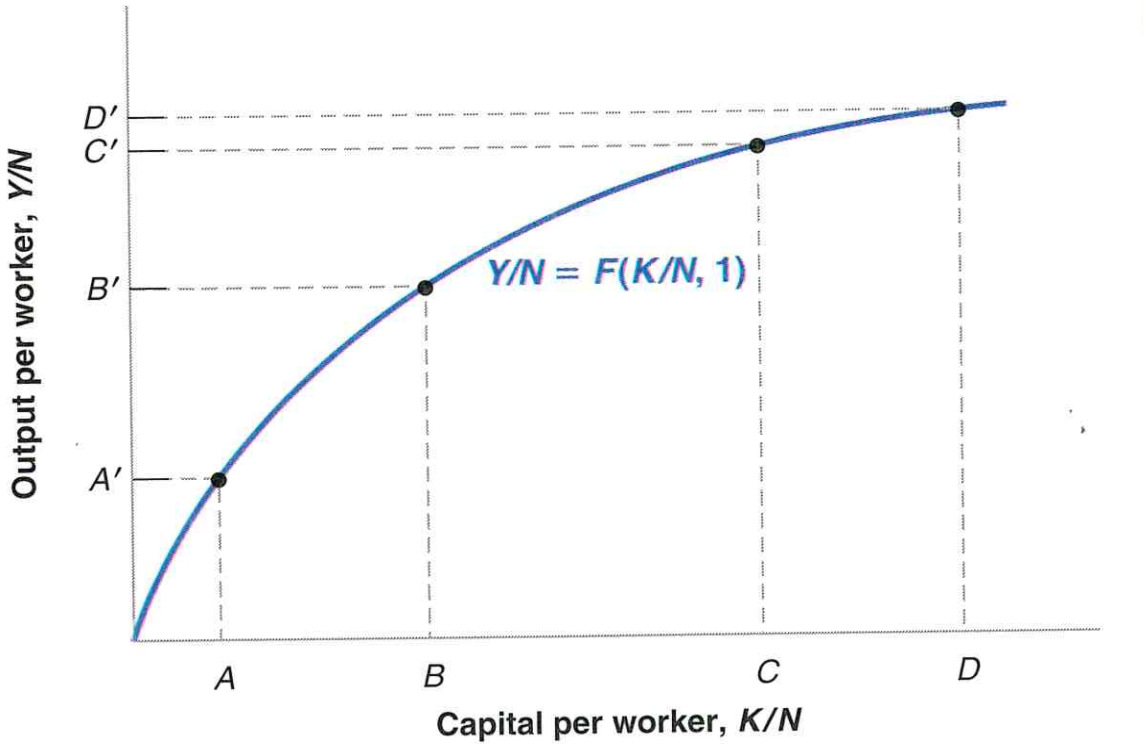
is called a “Middle income trap”, a sufficient amount of well-qualified workforce, and a successful practical implementation of the adopted technology with the use of work-force with professional technical education.

4.2.2 Olivier Blanchard

As a major extension to the convergence theory above, I will be utilizing the long term growth theory encircled by Olivier Blanchard. O. Blanchard in his book “Macro-economics - Fifth edition”[3], chapter 10 to 13 to be exact, encircled what according to him represents as applicable as theory for the growth in the long run.

He based his theory upon the output per worker in a world where convergence is a reality. He recognized that the capital investment, both human and physical, is an in-tegrate part of the long term growth, though he limits the role of the capital invest-ment to the growth in the long run as the marginal increase in productivity per worker per marginal increase in capital. This is shown in figure 4.2.1 below.

Figure 4.2.1: Relationship between capital and output.



Source: (Blanchard, 2011) - (pp. 217).

[3] (Blanchard, 2011)

He uses the saving ratio on both human and physical capital as a function for the future increase on output. However, he limits the use of the savings ratio as a dependent variable with the consumption in the short term thus with the short term growth.

In particular, he emphasized the importance of the technological progress in sustaining the long term growth. He considers the technological progress as a necessity that can lift the productivity per worker, thus making the long term growth potential higher.

He also states that in order for a country to converge towards the higher income countries, it needs to emulate or surpass the state of the technological advancement of those higher income countries.

4.3 Normative discourses

4.3.1 Martin Paldam

Martin Paldam is a Professor emeritus in Economics at the Aarhus University. In 1994 his research book on the economy of Greenland, "*Grønlands økonomiske udvikling - Hvad skal der til for at lukke gabet?*"[4] was published, that entertains the notion of the peculiar construction of the economy of Greenland. On how Greenland is maintaining the consumption oriented economy with the help of the block-grant from the Danish Government. He pointed out the ramifications of the block grant on the economy. Especially, he concentrates on the ramifications on the productivity of the workforce and the competitiveness of the economy. He connected the block grant from the Danish Government to the political passivity and to the recipients of transfer incomes and social security benefits. Furthermore, he connected the block grant from the Danish Government to the lack of economic entrepreneurship.

According to M. Paldam the enlarged and overdeveloped public sector suppresses the idea of research and development, thus also the spirit of entrepreneurship.

M. Paldam also entertain the notion of five different future scenarios Greenland can embark upon. Here M. Paldam focuses on the ramifications that can be derived from these five scenarios. However, he does not draw a clear line between his different scenarios, instead he more or less fluently jump between each scenarios.

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[4] (Paldam, 1994)

- The first scenario if isolated contains the ramifications should Greenland uphold its current economic situation.
- The second scenario contains the ramifications linked to the path of overfishing in the economy of Greenland.
- The third scenario contains the ramifications a mining boom in Greenland will have on the economy.
- The fourth scenario contains the ramifications a boom in the tourism sector will have on the economy.
- The fifth scenario contains the ramifications on what he calls “World Bank diet”. A scenario that depicts the pictures of Greenland where the block grant from the Danish Government is removed. He concentrates on the required adaptation that ought be required to the public sector, should this scenario unfold.

Furthermore, he made an underlining on these five different hypothetical scenarios, on how these scenarios would contribute in closing the gap between the production and the consumption in the economy, namely in a reality where the block grant from the Danish Government has been removed gradually during a long period of time.

4.3.2 Lars Lund

Lars Lund is a MA in Economics from the Copenhagen Business School. He was attached to the University of Greenland in the period of 2002-2006, namely under the Administrative Studies department. In 2011 his book “*Grønland - Makroøkonomiske temaer*”[5] was published that, in parallel to the Martin Paldam, entertains the notion on what is required in order for the Government of Greenland to become fiscally independent from the Danish Government without losing its welfare system, thus be able to achieve independence from The Danish Realm. He presented three different scenarios on what he thought opens the way for Greenland to become fiscally independent from the Danish Government.

- The first scenario is to grow Greenland out the dependency from the Danish Government. Basically, to make the economy grow to an extent, that the percentage of the block grant compared to the economy becomes insignificant.

[5] (Lund, 2011)

- The second second scenario is to save Greenland out of the dependency from the Danish Government. To save a fraction of the block grant from the Danish Government and to invest it through an investment fund, and eventually substitute the block grant from the Danish Government with the interest earned from the invested capital.
- The third scenario is to buy Greenland out of the dependency from the Danish Government. His suggestion in this scenario is to substitute the block grant from the Danish Government using the future revenues from the natural resources, or by attracting the foreign capital through mere seduction.

5. Methodology

The economic data collection will be done through the ordinarily used sources in order to minimize the substantial mismatches between the economical reality in Greenland and the various assertions on how the economy of Greenland looks like, or ought to look like for that matter.

The contemporary challenges in the economy of Greenland should be more tangible than the historical evidence, considering the empirical evidence on the contemporary challenges are more “fresh”. That is why this thesis is limited to only include the period of Self-Government besides the description of the colonial period.

At first I will be analyzing the transfer-pricing during the colonial period, and subsequently move on to the analysis of the transfer-pricing during the Self-Government period. I then will to try to identify the current economic situation of the economy of Greenland, and afterwards try to identify the ramifications of this current economic situation. Moreover, I will simulate the immediate removal of the block grant from the Danish Government, and at the end I will try to categorize the suggested economic reforms according to their level of difficulty in their implementation.

In accordance with the difference in nature between the colonial period and the Self-Government period, I will be using two varying calculation methods in order to calculate the transfer-pricing in each of the periods.

Due to the monopoly of The Royal Greenland Trade Department, the economy of Greenland was very simple during the colonial period. Moreover, the statements on exports of the Greenlandic commodities and the sales in the export markets of these Greenlandic commodities are transparent. This transparency makes us able to comprehend how extensive transfer-pricing was from the economy of Greenland during the colonial period. Figure 5.1 below shows the overview on how I will calculate the transfer-pricing in Greenland during the colonial period.

Figure 5.1: The calculation of the transfer-pricing in Greenland during the colonial period.

$$\text{Transfer-pricing}=\left(\frac{\text{Costs}_{\text{Greenland}}}{\left(\text{Costs}_{\text{Greenland}}+\text{Costs}_{\text{Denmark}}\right)}\bullet\text{Revenue}\right)\text{-First Sales Prices}_{\text{Greenland}}$$

Source: Self made.

In addition, it is also worth mentioning that since the inflation data in Greenland only goes back to the year 1971, the analysis of the data from the colonial period will be with the use of fixed 2013 prices in Denmark. This in order to make data from the colonial period comparable with the data during the Self-Government period.

The economy of Greenland is much more complex during the Self-Government period than it was during the colonial period. Since the colonial period, the monopoly of The Royal Greenland Trade Department has been abolished, and Greenland has begun to export to other countries than Denmark. This is why the estimation of the actual transfer-pricing is more complex. To establish the bottomline, I will establish what I like to call the export potential of Greenland. It is a comparison between the homogeneous commodities between Greenland and Iceland, and in some cases Faroe Islands. The figure 5.2 below shows the overview on how I will calculate the transfer-pricing in Greenland during the Self-Government period. Due to the complexity of the value flow, the calculation of the transfer-pricing during the Self-Government period cannot be executed as seen in figure 5.1 above. E.g. at which point, during the processing of the Greenlandic commodities towards the finished goods, will the Greenlandic commodities become categorized as “different products” than the original ones taken from the sea, or what is the threshold of the foreign debt by the Greenlandic companies before the additional debt can be categorized as thin-capitalization.

Figure 5.2: The calculation of the transfer-pricing in Greenland during the Self-Government period.

$$\text{Transfer-pricing}=\left(\frac{\text{Export value}_{Iceland}}{\text{Export quantity}_{Iceland}}-\frac{\text{Export value}_{Greenland}}{\text{Export quantity}_{Greenland}}\right)\bullet\text{Export quantity}_{Greenland}$$

Source: Self made.

Since it is to be expected that the transfer-pricing in the economy of Greenland to some extent will be present, the assessment of the fairness of the transfer-pricing itself cannot be avoided. That is why I simultaneously will assess the fairness of the transfer-pricing in the economy of Greenland. The assessment will be limited only to the theoretically established fairness, and not what I directly find to be fair, or what others find it to be fair for that matter. This theoretical fairness is elaborated in the

previous chapter. Chapter 4.1 to be exact.

Due to the nature of the data to be collected, it is best to choose the quantitative method. As a theory for this method I have chosen a section from a little handbook made by Thomas Harboe called “Indføring i samfundsvidenskabelig metode”[6]. Direct translation sounds like “Introduction to the methodology in Social Sciences”. I will use his notion on the quantitative methodology on that if the collection of data is to be proceeded with descriptive methods like questionnaires, statistics, numbers, facts and experiments, then the most fitting method ought to be quantitative method. According to Harboe the quantitative method is comprehensive, typically associated with the trial(s) of the big data.

In order to limit the width of this thesis, the transfer-pricing during the Self-Government period will only consist of comparison between the exports in Greenland and exports in Iceland, and in some cases in Faroe Islands. Most of the export of living resources from Greenland consist of semi-finished goods, which makes the comparison of the Greenlandic export with the export from Iceland compatible. That is why I find it sufficient to only use the comparison between the equivalent semi-finished goods in Greenland and Iceland, and call it the export potential of Greenland, rather than trying to come up with my own definitions in a world of product diversification and product development.

The way I will utilize the assumptions by R.N. Anthony & V. Govindarajan in this thesis is by identifying the cause(s) of transfer-pricing in the economy of Greenland. This will be done by gathering the economic data from Greenland, Iceland and in some cases in Faroe Islands, in order to identify the nature of the transfer-pricing in the economy of Greenland. I will compare the prices in Greenland with prices in Iceland, then multiply the difference in prices with the export quantities from Greenland. The Royal Greenland Trade Department kept records of all the revenues made with the Greenlandic commodities during the colonial period, which makes it relatively easy to establish the transfer-pricing during the colonial period. The methodology on the Self-Government period is described above.

In order to apply the theory of A. Korotayev & J. Zinkina, I will assess the implications of the investment rate in the economy compared to the Gross Domestic Product,

[6] (Harboe, 2006)

examine the foreign capital restrictions, measure the secondary industry, investigate the educational level of the workforce, check the technological adoption and the level of legitimacy of the Government of Greenland.

The application of the theory for the growth in the long run made by O. Blanchard in this thesis will be about identifying the empirical data in Greenland contrasted to the theories mentioned above. On how the savings rate in the economy is contrasted to the Gross Domestic Product. To what degree Greenland is emulating the higher income countries, hence converging towards them, specifically the relevance of the "Middle income trap" in Greenland, which is described by Fatih Kirandi in his research project called "The middle-income trap"[7] as a country with decreasing competitiveness due to rising costs, especially in wages. A country that have higher Gross Domestic Product per capita compared to the emerging markets, lower than the rich countries, thus can be categorized as a middle income country. A country that have become unable to converge towards highest income countries due to low growth, with low capital stock i.e. low capital investments, that leads to the slow growth in the secondary industry. F. Kirandi, in parallel to O. Blanchard, also emphasizes the importance of technological progress, in connection with a diversification of the economy. In addition F. Kirandi stresses the importance of the education in relation to the poor labor market conditions. That in line with A. Korotayev & J. Zinkina and O. Blanchard the productivity increases in human capital is integrate part of the long term growth.

In addition, I want to stress that I only will concentrate on the long run when dealing with the normative part of the analysis.

[7] (Kirandi, 2015)

6. Analysis

6.1 Transfer-pricing

6.1.1 Preface

The ruthless whaling in Greenland during the period of 1650-1774 was undertaken by various European nations. However, it was not possible to find any sources that validly shows how much of the products from the various whaling expeditions were taken from the economy of Greenland, let alone how much these products were worth in foreign markets.

Due to the lack of availability of the data on the inflation in Greenland that predates 1971, it is unavoidable to use the data on the inflation from the Statistics Denmark when dealing with the analysis of the transfer-pricing during the colonial period in Greenland. As mentioned the analysis of the transfer-pricing in the economy of Greenland during the colonial period will be done in fixed 2013 prices in Denmark.

In accordance with the accessibility of the economic data and limited resources, the analysis on the colonial period will span from 1907 to 1952. The collectable economic data on the period of 2009-2014 will be summarized in various templates, and afterwards put into an overall template for the analysis.

In parallel to the computation of the economic data, the assessment on the fairness of the transfer-pricing will be attempted. In the assessment, I will be covering the distributions of the revenues derived from the exported resources from the economy of Greenland.

6.1.2 A brief historical outline of the colonial period

Before looking into the empirical evidence on the transfer-pricing during the colonial period in the economy of Greenland, let us first look at the short summary of the colonial period in Greenland. A special relationship between Greenland and Denmark that began when the Norwegian Lutheran missionary came to Greenland in year 1721[8], has always been used as a benchmark when establishing a timeline in Greenland. This is true even though that an Englishman called Martin Frobisher rediscovered Greenland in 1578, and subsequently his fellow Englishman John Davis establis-

[8] (Christianity.com, 2007)

hed contact with the Greenlanders. What happened to consolidate the grip of the Danish Realm in Greenland was that the King of Denmark-Norway, Christian IV, sent an expedition to Greenland with three ships, using an Englishman as a commander, to find valuable minerals. However, they found nothing. Subsequently, the Danes began to use this event as a benchmark in their claims to Greenland further on, including the proclamation in 1691 by the Danish king that barred other nations from the trade in Greenland.

However, due to the ineffective implementation of the proclamation, the Danes could not enforce it. It was especially the Dutch which the Danes had a problem controlling regarding the trade in Greenland. Eventually, a deal was made between the Danes and the Dutch, which barred the Dutch from the trade in Greenland in exchange for the fishing rights for the Dutch in the Greenlandic waters.

Various whaling sites were in existence in Greenland well before the Norwegian Lutheran mission in Greenland, including Hans Egede's own near Sisimiut, but up until the year 1774 the Norwegian Lutheran mission was the only organization that could be categorized as a bureaucratic administrational body in Greenland.

With the profitability issues in the private owned trading company called Det almindelige Handelskompagnie who had the trade monopoly in Greenland, the king of Denmark allowed the state to purchase Det almindelige Handelskompagnie in its entirety from its shareholders in 1774. This subsequently led to a Royal Decree in 1776 that prohibited unauthorized trade with Greenlanders. Thus the year 1774, The Royal Greenland Trade Department was established, and until the year 1950 The Royal Greenland Trade Department more or less upheld the monopoly on trade with most of the resources that came to and from Greenland with an armored ship cruising the Greenlandic waters in order to hunt down illicit traders, such as those problematic Dutch[9].

Something that is also worth mentioning is that, at the start of the WWII, no less than the 1.000.000 metric ton ore had already been exploited in and around Greenland[10]. Since there were no factories in Greenland during the time, the exploited raw materials were exported directly without being processed in Greenland.

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[9] (Tejsen, 1977)

[10] (GEUS, 2005)

With the establishment of the state monopoly by the Royal Greenland Trade Department (KGH), the flow of products from the living resources started effectively. On locations in West-Greenland the colonial stations had been strategically erected with the mindset that were ideal to the exportation of raw materials to Europe through Denmark[11]. The exception to the rule of the Danish state monopoly in Greenland was a private company's concession on the cryolite-mine in Ivittuut[12].

This power superiority by Denmark in Greenland manifested in a bizarre social project that began in 1951, when nine girls and thirteen boys were taken from their disadvantaged families, and sent to Denmark for one and a half years to be schooled and brought up with "Danish values", and afterwards returned to a Red Cross's orphanage, even though the children were not orphans. These children were displayed as role models and spearheads for the new Danish Greenland where Greenlanders were to speak Danish only, thus losing their language and their identity in an assimilated Greenland[13].

6.1.3 The colonial period

Most of the economic data on the exported products that originated from the living resources during the colonial period are in round figures, e.g. per barrel or per cubic fathoms. The conversion of these round figures into currently used measures of capacity was needed[14], and to use these measures of capacity to come to an estimated weight of the export resources[15]. From 1933 and on, the trade statements by The Royal Greenland Trade Department became identical to the actually used measures of capacity. This makes the adjustments of the data that follows 1933 seamless. Moreover, especially the older trade statements by The Royal Greenland Trade Department have no specified values and are shown only by their quantity. This makes it difficult to establish what the revenues have been from the exported resources from the economy of Greenland during the colonial period. Fortunately, with the help from the staff at Groenlandica, I have been able to find standard rates on first sales that

[11] (Tejsen, 1977)

[12] (Den Store Danske, 2012)

[13] (Bryld, 1998)

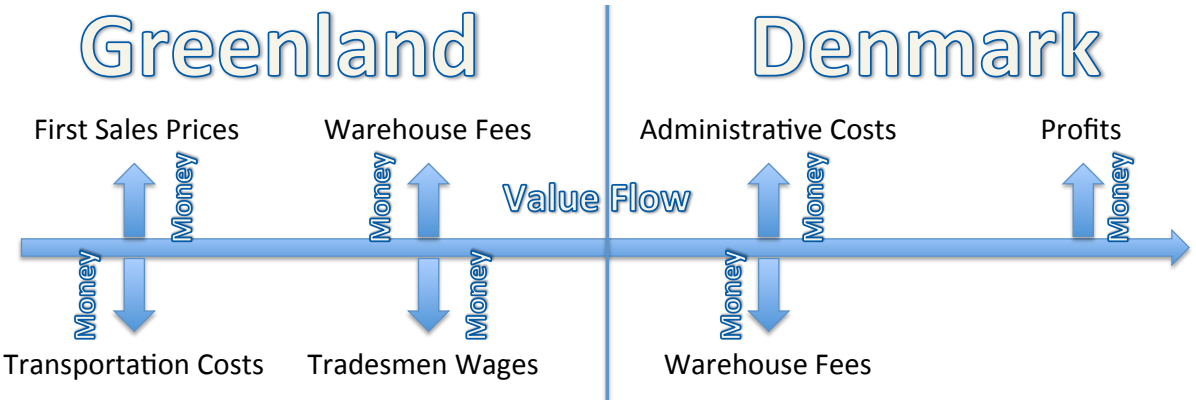
[14] (MiddelalderInfo, 2014)

[15] (DTU, 2013)

were used by the commercial managers. Unfortunately, the available standard rates[16] at Groenlandica started from the year 1881, and had 4-15 years in-between them. I used the standard rates from the year they appear, up until the next issue of standard rates appears, e.g. standard rate on fox skin was 5,92 DKK in a standard rates handbook from 1919 and the next available standard rates handbook is from 1924 where standard rate on fox skin was 8,21 DKK, then I use 5,92 DKK on the period of 1919-1923 until I change it to 8,21 DKK from 1924 until the next one appears, and so on. Even though this method is not perfect, that way at least I could fill in the caps between the available standard rates used by the commercial managers.

In addition, the tricky part is to find sources on the commodity sales on Greenlandic goods in foreign markets before the year 1923. Even though the standard rates on Greenlandic commodities were available all the way back to the year 1881, it was not possible to find any prices on any goods sold outside Greenland before 1907.

Figure 6.1.1: Value flow of the Greenlandic commodities during the colonial period.



Source: Self made.
Note: The figure is an illustration of the value flow from Greenland to Denmark during the colonial period. The figure shows where in the value flow, the value is exchanged into money. The up and down arrows shows the translation of the value into money from the value flow.

The value that is translated into money during the colonial period, is when a traditional hunter or a fisherman sells his catch to the commercial manager's facility owned by The Royal Greenland Trade Department. There were other minor costs associated with Greenland, such as transportation costs, warehouse fees and wages. However, the rest of the value is translated into money outside Greenland, including all the pro-

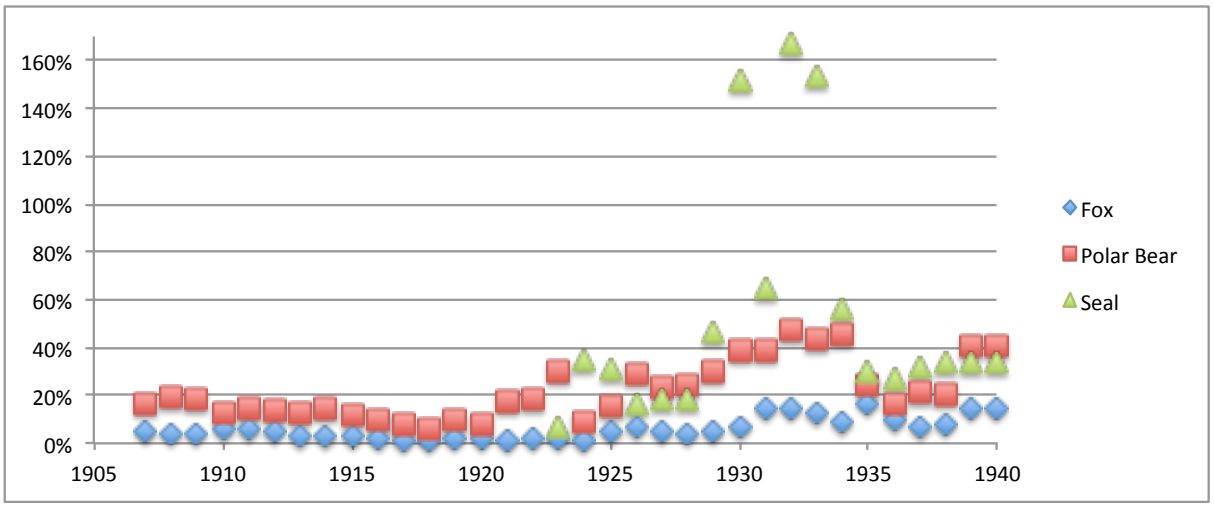
[16] The price list on what the commercial managers should give for the commodities traded by Greenlanders.

fits from the sales of the Greenlandic commodities in foreign markets.

When observing the Standard Rates and the annual financial reports made by The Royal Greenland Trade Department during the colonial period, the only variable that significantly fluctuates is the Profits. In line with this information, I assume that the whole the risk of the enterprise with seafood from the economy of Greenland were situated in Denmark, when considering a stable pricing of the commodities in Greenland through Standard Rates, and the trade monopoly by The Royal Greenland Trade Department in Greenland.

If we look at the economic data on the most commonly traded commodities that were the most valuable on figure 6.1.2 below, namely fox skins and polar bear skins, it shows that the foreign market prices started at the year 1907, and that the foreign market prices on seal skins started at the year 1923. What we can observe here is that the first sales prices in Greenland on fox skins never touched the 10% of the foreign market price until the year 1931. By looking at the stability in pricing structure up until 1930's on fox skin, it is possible that the first sales prices on fox skins in Greenland never did come above the 10% mark up until the year 1931.

Figure 6.1.2: Transfer-pricing during the colonial period - Skins.

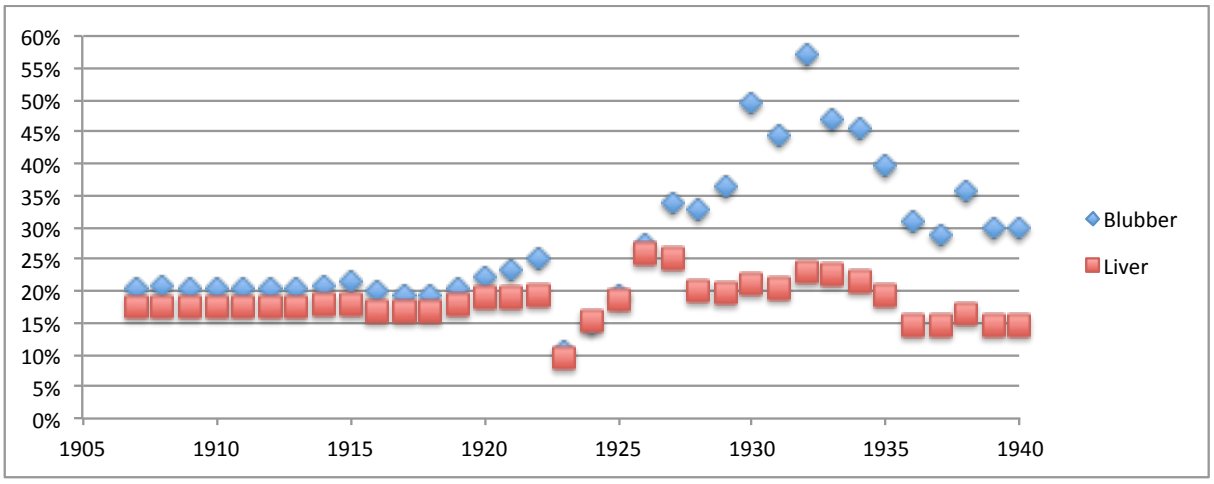


Source: (The Royal Greenland Trade Department, 1903-1950) - (See chapter 9.2 for data).
Note: The figure shows the first sales prices of skins in Greenland, put in comparison with the market sales prices by The Royal Greenland Trade Department, i.e. how much of the revenues from the market sales in Europe goes to traditional hunters/fishermen. >100% means that The Royal Greenland Trade Department runs the sale of that specific commodity with a loss.

When looking at the first sales prices on polar bear skins, we can observe that it never touched the 20% mark until the year 1923. The first sales prices on the polar bear skins fluctuates more before the year 1923 compared to the first sales prices on the fox skins. However, in parallel to the systematic first sales prices on fox skins, the first sales prices on the polar bear skins never went above 30% mark before the year 1923.

It is a different story for the first sales prices on seal skins. What we can observe with the first sales prices on seal skins is that up until the year 1935, the percentage of the value that goes to the traditional hunter is fluctuating significantly. In 1930, 1932 and 1933 high percentages on first sales prices compared to the foreign market prices are due to high increases in the first sales prices and on the slump years in the foreign market on seal skins during the period. First after 1935, the fluctuations went below the 40% mark. This is due to a confinement of the first sales prices, the inflation and the return to a normal state in the foreign markets. It is especially noticeable that The Royal Greenland Trade Department was not able to rapidly adjust the first sales prices on seal skins, so that they in time could dampen the deficit on seal skins sales in the foreign market. This is either due to the lack of response mechanisms in the organization, or on the wish to maintain the supply of seal skins by not making a too much of a fluctuation on the first sales prices in Greenland, or both.

Figure 6.1.3: Transfer-pricing during the colonial period - Blubber & Liver.

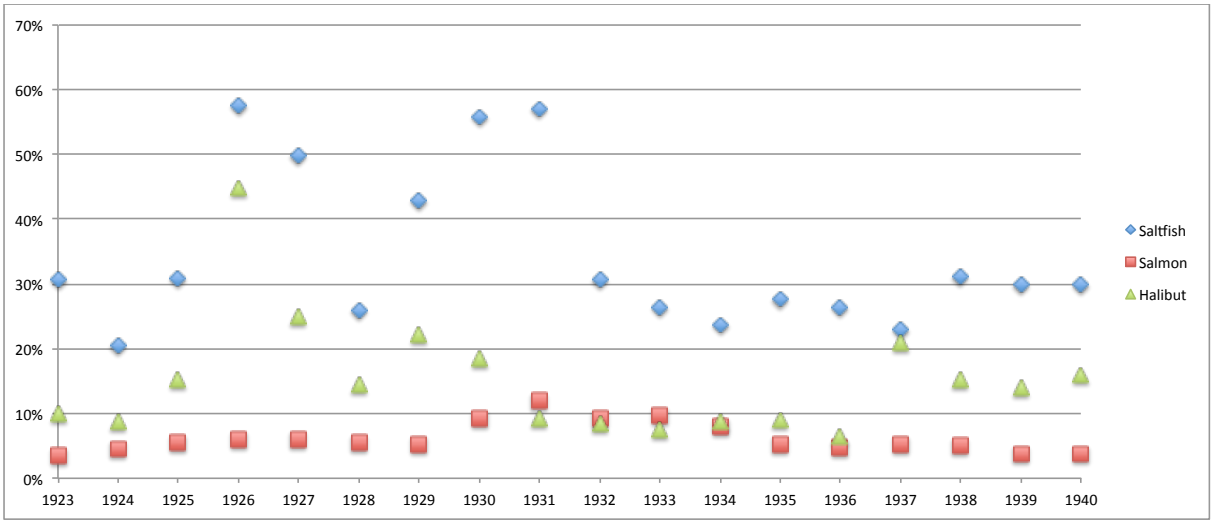


Source: (The Royal Greenland Trade Department, 1903-1950) - (See chapter 9.2 for data).
Note: The figure shows the first sales prices of blubber and liver in Greenland put in comparison with the market sales prices by The Royal Greenland Trade Department, i.e. how much of the revenue from the market sales in Europe goes to traditional hunters/fishermen.

When looking at the figure 6.1.3 above, we can observe that blubber and liver, which is of low value as a commodity, begun fluctuating rather noticeably after the year 1923. If we factor in the slump foreign markets during the period of 1930-1935 together with the inflation, we get the somewhat recognizable notion of the period from the late 1920's to the mid-1930's; fluctuations. Fluctuations that with no doubt must have pushed the makers of the Standard Rates into headaches in coming to a comprehensive solutions to the pricing structures in the economy of Greenland.

If we move on with the first sales prices on fish. What we can observe from the figure 6.1.4 below is somewhat recognizable picture from figures 6.1.2 and 6.1.3. With the exception of the first sales prices on polar bear skins, the first sales prices in Greenland on the high end value commodities never went above 20% mark of the foreign

Figure 6.1.4: Transfer-pricing during the colonial period - Cod, Salmon & Halibut.



Source: (The Royal Greenland Trade Department, 1903-1950) - (See chapter 9.2 for data).
Note: The figure shows the first sales prices of salt-fish (cod), salmon and halibut in Greenland put in comparison with the market sales prices by The Royal Greenland Trade Department, i.e. how much of the revenue from the market sales in Europe goes to traditional hunters/ fishermen.

market prices, and that the low value commodities up until the year 1935, were fluctuating. When considering that the quality of the skin is at its best when it is dried in a frosty weather[17], mixed with the knowledge that the huge warehouses owned by The Royal Trade Department in Copenhagen were only used as an intermediate sto-

[17] (Pedersen & Pedersen, 2008)

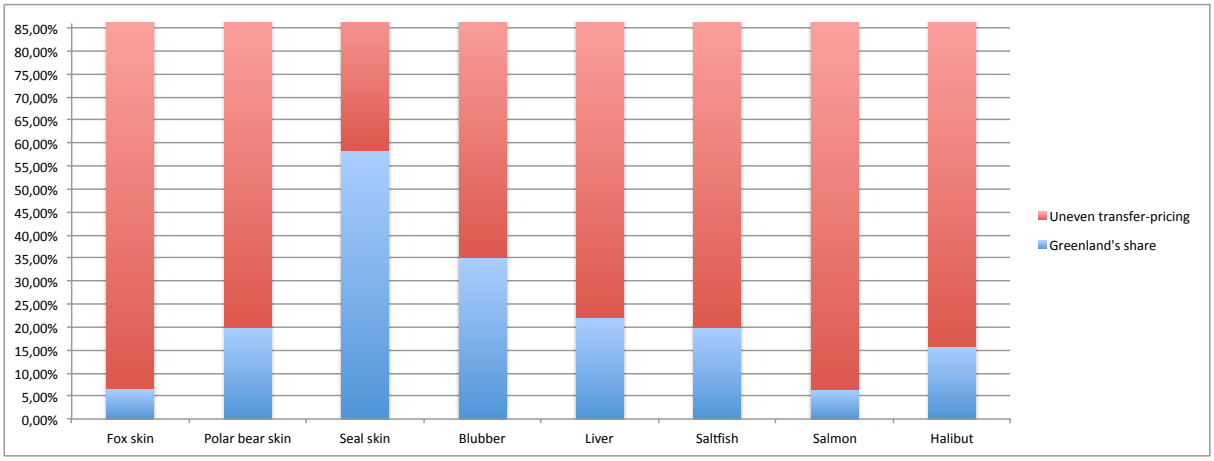
rage houses for Greenlandic commodities to be sold in Europe[18], it is easy to assume that all of the finished products, or semi-finished products for that matter, were processed in Greenland before they were shipped to Copenhagen to be sold in Europe. This shifts the costs of the production to Greenland rather than to Denmark. The official reports concerning Greenland by the Ministry of Greenland, shows no readily available data on the net transportation costs of the commodities sent from Greenland to be sold in foreign markets. There is, however, an overview of the operations and maintenance costs by The Royal Greenland Trade Department in Greenland. The operations and maintenance costs were equivalent to about 10% of the revenues from the sales of Greenlandic commodities in foreign markets. Half of the operations and maintenance costs were the transportation costs of any goods sent from Greenland. To be fair, I will apply the transportation costs of all goods sent from Greenland to Denmark as the benchmark for the transportation costs for the commodities to be sold in foreign markets. The entire cost of the production of the Greenlandic commodities represents about 37% of the revenues from the sales in foreign markets. 5% in transportation costs and 37% production costs, puts us to the difference of costs in Greenland and costs in Denmark on a ratio 5:37, or around 1:7. In other words, approximately 86% of the total costs lies in the Greenlandic economy. It is important to keep in mind that the first sales prices in Greenland are embedded into the production costs in Greenland. According to our theory on transfer-pricing, the revenues should then be distributed according to the costs. If we follow our theory, it puts us to around 1:7 ratio distribution of the revenues from the Greenlandic commodities during the colonial period; 14% to Denmark and 86% to Greenland.

After establishing a theoretical fair transfer-pricing of the living resources during the colonial period, let us look at the empirical data. Figure 6.1.5 below shows Greenland's share of the revenues from the sales of the Greenlandic commodities in foreign markets, and the level of uneven transfer-pricing in the economy of Greenland during the colonial period after the application of the theory on transfer-pricing. What we can observe in figure 6.1.5 is that salmon and fox skin, being the high value commodities, barely scraped 7% mark, while low value commodities such as blubber, liver and seal skins have a much higher percentage mark. The anomaly here is the very high end commodity polar bear skin. Supply and demand seems to be the rea-

[18] (Nordatlantens Brygge, 2016)

son why the polar bear skin releases much higher percentage share than the rest of the high end commodities. The reason seems to be that a very low supply and high demand; including the domestic demand, that presses the commerce managers at The Royal Greenland Trade Department to implement bonuses in order to meet the domestic demand.

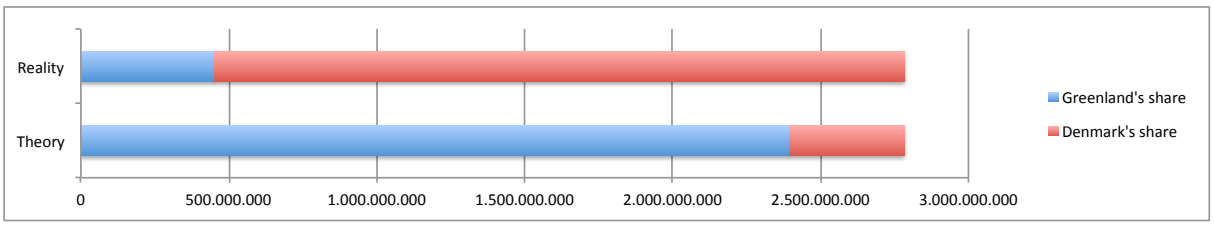
Figure 6.1.5: Transfer-pricing during the colonial period - Totals.



Source: (The Royal Greenland Trade Department, 1903-1950) - (See chapter 9.2 for data).
Note: The figure shows Greenland's share of the revenues from the sales in foreign markets (blue color), and the level of uneven transfer-pricing in the economy of Greenland during the colonial period (red color) after the application of the transfer-pricing theory.

Figure 6.1.6 below shows the comparison between the applied theory, 1:7 ratio, and how the picture really looks like in the reality. We can observe from the figure 6.1.6 below is that the reality is strikingly different from the applied theory, even when con-

Figure 6.1.6: Transfer-pricing during the colonial period.

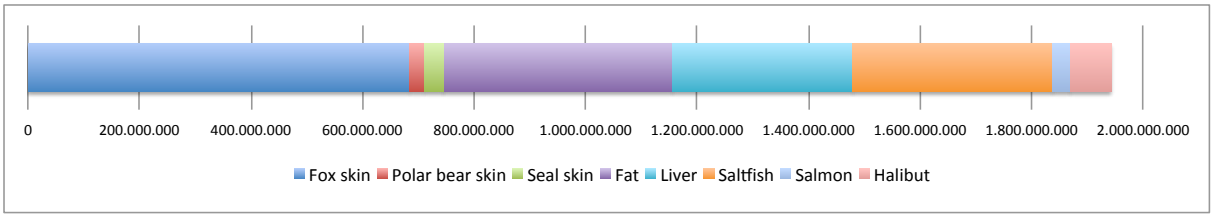


Source: (The Royal Greenland Trade Department, 1903-1950) - (See chapter 9.2 for data).
Note: The figure shows the distribution of revenues from the living resources during the period of 1907-1945. Here we can observe a comparison between the reality and what reality ought look like after the application of the transfer-pricing theory. The numbers are in DKK, and in fixed 2013 prices.

sidering that the perfectly constructed theory always deviates from the reality. The difference between the applied theory on transfer-pricing and the reality is 1.943M DKK in fixed 2013 prices during the period of 1907-1945, which means that 70% of all the values from the living resources have been unevenly transfer-priced from the economy of Greenland during the period of 1907-1945. A figure that very much likely to be enlarged by accessing the foreign market prices, and the statements on quantities of exported Greenlandic commodities before 1907.

Figure 6.1.7 below shows the specification of the transfer-pricing in the economy of Greenland during the period of 1907-1945. The uneven transfer-pricing is 685M DKK on Fox skin, 25M DKK on Polar bear skin, 36M DKK on Seal skin, 410M DKK on Blubber, 323M DKK on Liver, 358M DKK on Salt fish, 32M DKK on Salmon, and 74M DKK on Halibut. When considering that the exploitation of the Greenlandic commodities during the period is primarily done with the use of manual labor, the quantity of the low end value commodities such as blubber, liver and saltfish is massive. What changes the picture is the transfer-pricing of Fox skins during the period of 1907-1952. Considering the verifiable total amount of the exported fox skins from the economy of Greenland during the period of 1907-1952 being total of 171.424, an unevenly transfer-pricing on 685M DKK is somewhat an overkill from the side of The Royal Trade Department.

Figure 6.1.7: Transfer-pricing during the colonial period - Specification.

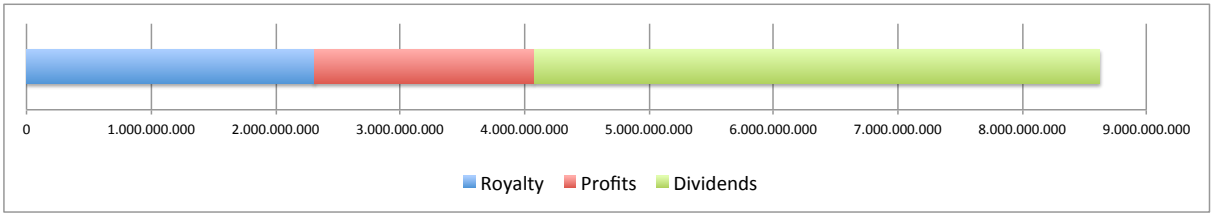


Source: (The Royal Greenland Trade Department, 1903-1950) - (See chapter 9.2 for data).
Note: The figure shows the specification of the overall uneven transfer-pricing in the economy during the period of 1907-1952. The numbers are in DKK, and in fixed 2013 prices.

Now let us look at the transfer-pricing of the exploited natural resources in Greenland during the colonial period. The mining for coal existed since 1780 in Greenland, but the only mineral that significantly were exported from the economy of Greenland is a mineral called cryolite. During the colonial period a total of 1.673.544 metric tonnes of

cryolite ore was exported. All of the profits and royalty payments from the mining of cryolite went directly to the Danish Government during the colonial period.

Figure 6.1.8: Transfer-pricing during the colonial period - Cryolite mining in Ivittuut.



Source: (Kryolitselskabet Øresund A/S, 1990) - (See chapter 9.3 for data).
Note: The figure shows the revenues made by the Danish Government from the cryolite mine at Ivittuut during the period of 1865-1952. The numbers are in DKK, and in fixed 2013 prices.

Figure 6.1.8 above shows the total payments by the mining enterprises in Ivittuut to the Danish Government during the entire life of the mining operation during the colonial period; 2.315M DKK in royalties and 4.543M DKK in dividends. The mining enterprise acquired only a little over 20% of all the profits from the cryolite mining, whilst the Danish Government drew nearly 80% of all the profits, 1.766M DKK to be exact.

6.1.4 Self-Government period

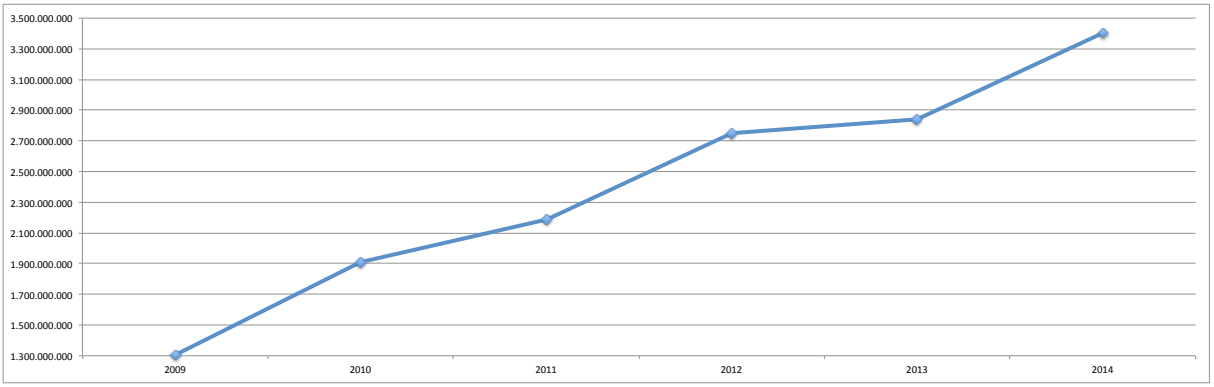
At the introduction of this thesis I mentioned that I am curious about finding out whether or not Greenland is a source of raw materials for Denmark. We have to keep in mind, that it was relatively easy to establish how much transfer-pricing has been due to the simplicity of the economy and due to the monopoly by The Royal Greenland Trade Department on Greenlandic commodities during the colonial period. Contemporary aspects surrounding the transfer-pricing in Greenland are much more numerous than those from the colonial period. Aspects such as product differentiation, product research and development, the effects of the transition from the trade monopoly by The Royal Greenland Trade Department to the introduction of the oligopoly, where Royal Greenland, Polar Seafood and Halibut Greenland have become economic powerhouses that controls the access to the foreign markets. Not to mention what would happen to the export prices if Greenland should be able to catch up with the advanced product differentiation of Iceland and “flood the market” with the identical seafood products.

The export figures in Greenland during the Self-Government period on the seafood products are from the Statistics Greenland and the source on the export market prices are generally from the Statistics Iceland. This simple comparative analysis between Greenland and Iceland is what I find the most interesting, when considering that both countries share the same North Atlantic resources at sea and export homogenous raw materials from the sea. However, the differentiation of the seafood products in Iceland is more advanced, with more advanced centralized public research capabilities[19] and more organized value creation through synergy[20], to name few, than that in Greenland.

It is nearly impossible for the current actors in the fisheries sector in Greenland to expose their transfer-pricing concepts due to the competition, not to mention the possible ramifications the disclosure would have for the fisheries companies considering what tax authorities would use the disclosure to.

Due to the advanced market economics, I will only be using this simplified approach in order to identify the actual obtainable export potential of the Greenland. In that order, I have merged the transfer-pricing concept with the product differentiation. The result is the sum of Greenland's export potential that is disconnected to the supply and demand in various export markets for the North Atlantic seafood.

Figure 6.1.9: Transfer-pricing during the Self-Government period - Export potential.



Source: (Statistics Greenland, 2016), (Statistics Iceland, 2016), (Hagstova Føroya, 2016) - (See chapter 9.4 for data).

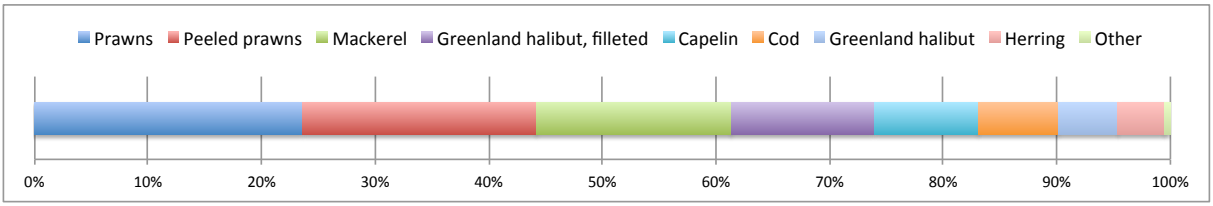
Note: The figure shows the annual sums of the actual obtainable export potential in Greenland, i.e. the difference on export prices in Greenland and Iceland or Faroe Islands, multiplied with export quantities in Greenland. Numbers are nominal, and in DKK.

[19] (Matís, 2015)

[20] (Iceland Ocean Cluster, 2015)

Figure 6.1.9 above shows the export potential of Greenland, if Greenland should choose to combat the direct transfer-pricing in its economy and converge towards export prices in Iceland, or in some cases in Faroe Islands. The sum of the export potential consists only of comparable seafoods between Greenland and Iceland or Faroe Islands. So what we are talking about here are homogenous semi-finished seafood exports. The Greenlandic export potential that was not exchanged into currency in the economy of Greenland rose from 1.300M DKK to 3.400M DKK during the period of 2009-2014. It is an increase on transfer-pricing of values by 162%.

Figure 6.1.10: Transfer-pricing during the Self-Government period - Increases in transfer-pricing.

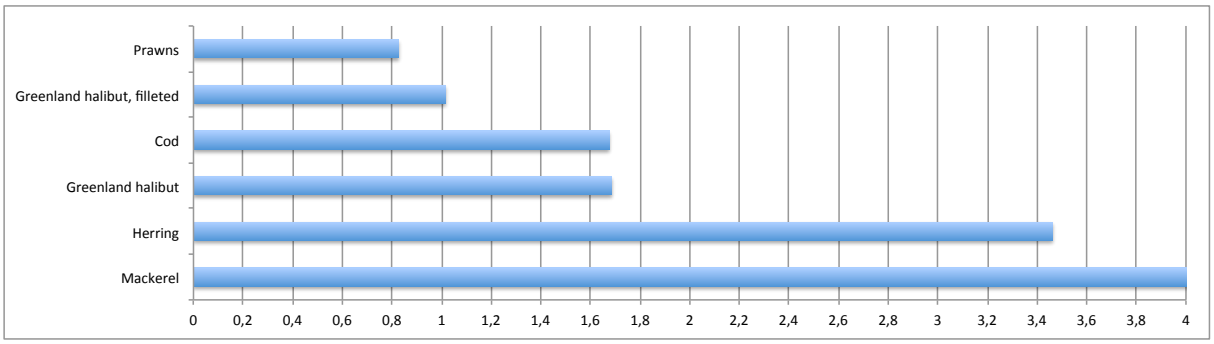


Source: (Statistics Greenland, 2016), (Statistics Iceland, 2016), (Hagstova Føroya, 2016) - (See chapter 9.4 for data).
Note: The figure shows what the 162% increase on transfer-pricing during the period of 2009-2014 consist of.

Figure 6.1.10 above shows that 44% of the increase in transfer-pricing during the period of 2009-2014 came from prawns, 30% came from the increase in transfer-pricing on the pelagic fishes, 18% came from the increase in transfer-pricing on Greenland Halibut, 7% from the increase in transfer-pricing on cod and 1% from other species of seafood.

The export volumes on mackerel in the advent of the pelagic fisheries have skyrocketed. In fact export volumes on mackerel in 2014, have increased by 161 times compared the export volumes in 2009. Figure 6.1.11 below shows that export volumes on herring have more than tripled, and that export volumes on cod increased with 67% during the period.

Figure 6.1.11: Transfer-pricing during the Self-Government period - Changes in export volumes.

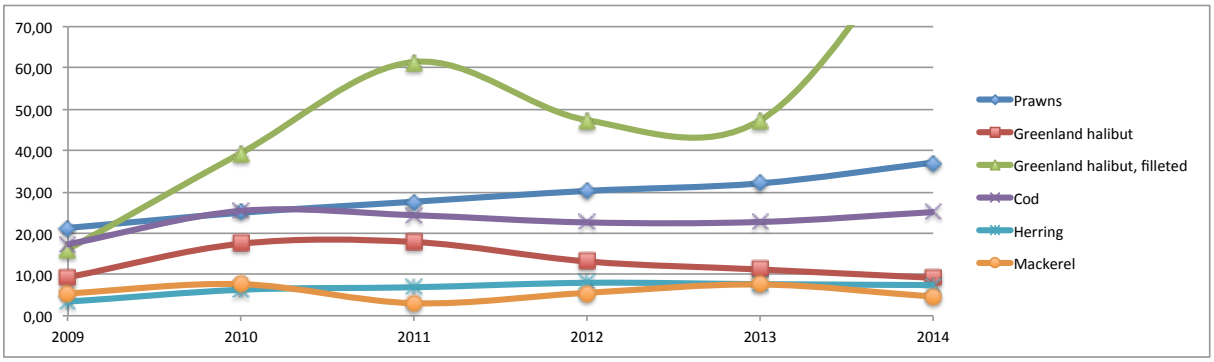


Source: (Statistics Greenland, 2016), (Statistics Iceland, 2016), (Hagstova Føroya, 2016) - (See chapter 9.4 for data).

Note: The figure shows the changes in export volumes from 2009 to 2014. 1,0 means unchanged volumes, whilst <1,0 means lower volumes and >1,0 means increased volumes.

It seems that Greenland have increased the export of Greenland Halibut as well. The increase in transfer-pricing on prawns, which accounted for about 44% of the increase in transfer-pricing during the period of 2009-2014, and the sizable decrease in export volumes can only mean that the profit margins in Greenland are much lower compared to the profit margins in recipient countries to the Greenlandic prawns. This assumption is supported by the figure 6.1.12 below.

Figure 6.1.12: Transfer-pricing during the Self-Government period - Commodity price fluctuations.



Source: (Statistics Greenland, 2016), (Statistics Iceland, 2016), (Hagstova Føroya, 2016) - (See chapter 9.4 for data).

Note: The figure shows the difference between export prices of Greenland and export prices of Iceland or Faroe Islands. The numbers are in nominal DKK, and are per Kg.

What we can observe from figure 6.1.12 is that transfer-pricing on prawns have increased with 75%. This means that profit margins per kilo prawns in Greenland either

are in a steady state or are decreasing, whilst the profit margins per kilo in recipient countries to the Greenlandic prawns either are increasing or are in a steady state. The same goes for Cod and Herring, which increased with 45% and 123%, respectively. Meanwhile Greenland Halibut have decreased with 1%, which means that the profit margins per kilo Greenland Halibut have increased with 1% in Greenland compared to the recipient countries of the Greenland Halibut from Greenland. The same goes for the mackerel, which decreased with 16%.

6.1.5 Partial conclusion

After the completion of the analysis on the colonial period of the economy of Greenland, we have established three things.

- The first one is that in accordance to our applied theory of transfer-pricing the ratio of distribution of revenues from the living resources ought to be around 1:7.
- The second one is that after applying the ratio, we found out that the level of the uneven transfer-pricing of living resources from the economy of Greenland during the period of 1907-1945 were 1.943M DKK.
- The third one is that all of the income, 8.624M DKK to be exact, from the mining enterprise on cryolite during the colonial period went directly to Denmark, not Greenland. Once applying our theory on the transfer-pricing, the unevenly transfer-pricing in the cryolite mining enterprise was on 7.417M DKK from the economy of Greenland during the entire colonial period. This puts us to the total of a verifiable uneven transfer-pricing on 9.360M DKK in fixed 2013 prices during the colonial period.

The transfer-pricing during the colonial period would undoubtedly become higher if it had been possible to access the export quantities and foreign market prices on the Greenlandic commodities before the year 1907. This assumption is supported by the empirical evidence on a systematic underpricing of the first sales prices in Greenland by the commerce managers and other employees at The Royal Greenland Trade Department during the colonial period.

After the completion of the analysis on the transfer-pricing during the Self-Government period we have established differentiated observations.

- When combining figure 6.1.10, 6.1.11 and 6.1.12 we can observe that even though

export volumes on prawns have diminished significantly, the transfer-pricing have increased.

- We can observe that Greenland have begun to fillet more of Greenland Halibut, which in turn have been translated into higher transfer-pricing.
- We can observe that the export volumes on Cod increased with 67%, coincided with 45% decrease of profit margins in the economy, the Cod represents about 7% of the total increase in transfer-pricing during the period of 2009-2014.
- We can observe that the export volumes on Herring more than tripled simultaneously with a decrease on profit margins with 123%.

The sum of all annual export potentials of Greenland during the period of 2009-2014, stands by 14.401M DKK in nominal value. This sum of 14.401M DKK can be exchanged into various measures in the economy of Greenland.

- According to the Statistics Greenland the employment multiplier is 1,38 for every 1.000.000 DKK consumed in the economy. With an employment multiplier at 1,38, you get a theoretical employment addition on 1.802 employed in 2009, 2.634 employed in 2010, 3.024 employed in 2011, 3.795 employed in 2012, 3.922 employed in 2013, and 4.697 employed in 2014. Theoretical numbers on the additional employed are non-cumulative.
- Fisheries sector in Greenland has favorable depreciation rates. 5% on buildings, 10% on vessels, 30% on other assets that costs more than 100.000DKK, and 100% on other assets that costs less than 100.000DKK[21], which is why the average paid corporate tax is on 4,8% in fisheries compared to the turnover of the sector. If we utilize the export potential shown in figure 6.1.9 we get a direct theoretical increase in corporate tax revenue on 63M DKK in 2009, 92M DKK in 2010, 105M DKK in 2011, 132M DKK in 2012, 136M DKK in 2013, 163M DKK in 2014. Annual numbers are cumulative. A total of additional theoretical corporate tax revenues on 691M DKK during the period of 2009-2014.
- If we make a comparison between the nominal transfer-pricing and the Gross Domestic Product during the period of 2009-2014, we get nominal transfer-pricing in 2009 that is equivalent to 11% on the Gross Domestic Product in 2009, 15% in 2010, 16% in 2011, 20% in 2012, 21% in 2013, and 25% in 2014. Not some insigni-

[21] (Parliament of Greenland, 2006)

ficant numbers with huge implications on the short term growth during the period of 2009-2014, albeit they are non-cumulative.

6.2 Contemporary challenges

6.2.1 Current economic situation

Before I move to the normative discourse on how the economy of Greenland ought be organized, let us first take a look into the current state of the economy in Greenland. Societal structural problems are one of the actual hot issue on the contemporary discourse in Greenland.

According to the technical background note 2014-3[22] by the Economic Council that sits under the Department of Finance in the Government of Greenland, Greenland will annually need just over 900M DKK in extra income and/or lower expenditures to have a break-even between the year 2012 and the year 2040 in its budget. The need for extra income and/or lower expenditures at the Government of Greenland on 900M DKK per year, is actually 100M DKK lower than the previously stated “jaw of death” by the Department of Finance at the Government of Greenland, which according to the Department’s view is what is needed to be acquired to maintain the welfare as we know it in the future under the actual economic future and the projected demographic developments. It is obvious that no one can predict the future. That is why any variables used in the projections on the economy of Greenland is debatable. The same goes for the various opinions in other normative discourses.

Ever since the Greenlandic Finance Minister in 2011 announced[23] that Greenland needs 1 billion DKK in budget cuts/revenue throughout the next 30 years in order to maintain the same level of welfare as we currently experience, the mindset amongst the politicians has been clear: Greenland needs 1 billion DKK in budget cuts/revenue throughout the next 30 years.

It is a common knowledge that the contemporary Greenland is known as an export-oriented country. That in itself seems not be a predicament. Greenland, however, has been and is now an exporter of only one type of goods, and that is seafood. That is why the economic growth in Greenland should be susceptible to fluctuations in the

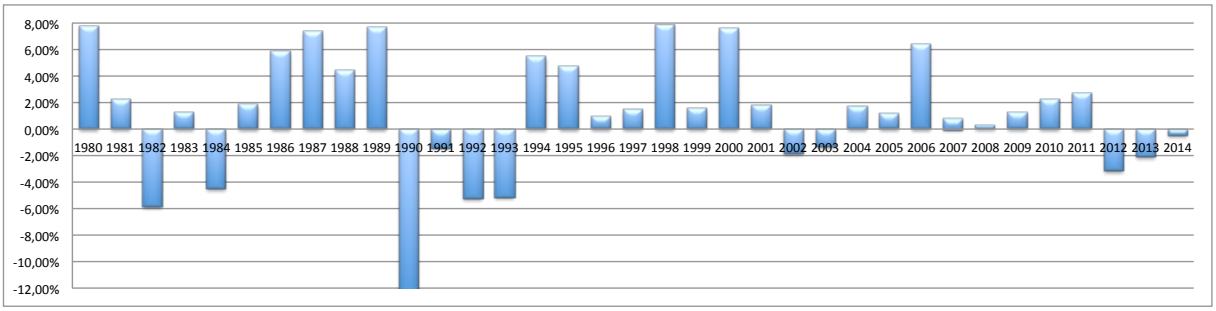
[22] (The Economic Council, 2014)

[23] (Sermitsiaq.ag, 2011)

seafood export markets. And as we can observe in figure 6.2.1 below, the economic growth in Greenland is fluctuating rather notably to say the least.

The export in 1988 is equivalent to 44% of the Gross Domestic Product of the economy. That number came down to 21% in 2007, and 15% in 2009[24]. This diminishing share seems to be indicative to the diminishing fluctuations we can observe in 2000's.

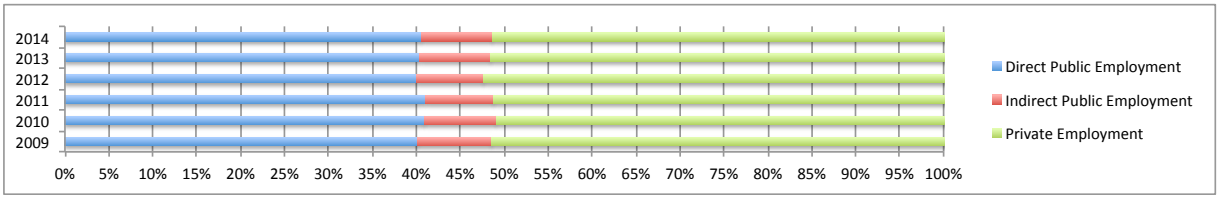
Figure 6.2.1: The Greenlandic economic growth in real terms.



Source: (Statistics Greenland, 2016) - (See chapter 9.5 for data)
Note: The figure shows the annual changes of the Gross Domestic Product in Greenland.

If we look at the actual public sector in Greenland it is unsurprisingly at least as big as the one in Denmark. When observing the figure 6.2.2 below the public employment, that consist of the public administration, public services and public utility workers, fluctuates between 40%-41% of the total employment in the economy. If we compare the Greenlandic ratio on the public employment to the International Labour Organization's data on public sector employment, Greenland has the highest ratio on

Figure 6.2.2: Overall employment in the Greenlandic economy.



Source: (Statistics Greenland, 2016), (Royal Greenland, 2009-2014), (Tele Greenland, 2010-2015), (Royal Arctic Line, 2010-2015) - (See chapter 9.6 for data).

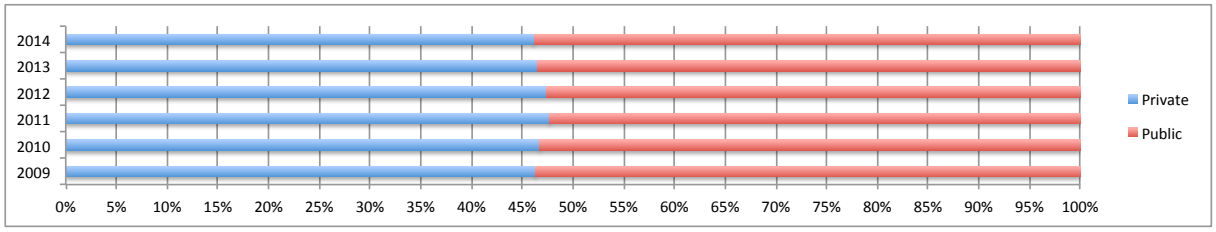
[24] (Statistics Greenland, 2016)

public employment compared to every country listed on the ILO's statistical data, including Denmark and Norway[25].

In addition, the public sector indirectly employs approximately a few thousand people in its companies. With these additional numbers the public employment fluctuates between 47%-49% of the total employment in the economy.

Figure 6.2.3 below shows the fluctuations of the consumption during the period of 2009-2014. The public consumption ratio to the private consumption was unchanged in 2014 compared to the 2009. There was however, a minor decrease on 1%, before it came back to the 54% mark.

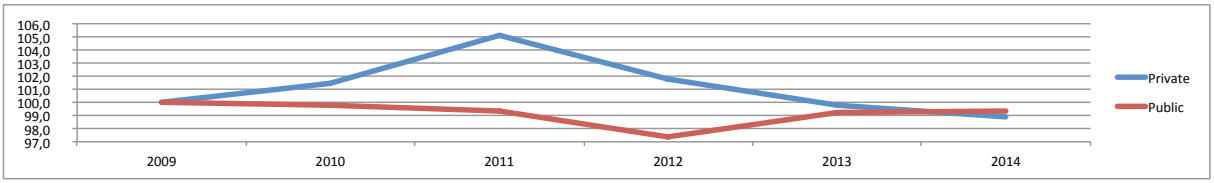
Figure 6.2.3: Consumption in the economy of Greenland - Formation.



Source: (Statistics Greenland, 2016) - (See chapter 9.7 for data).

This minor fluctuation is caused by an increase in consumption in the private sector followed by a decrease in the public consumption as shown in figure 6.2.4 below.

Figure 6.2.4: Consumption in the economy of Greenland - Index.



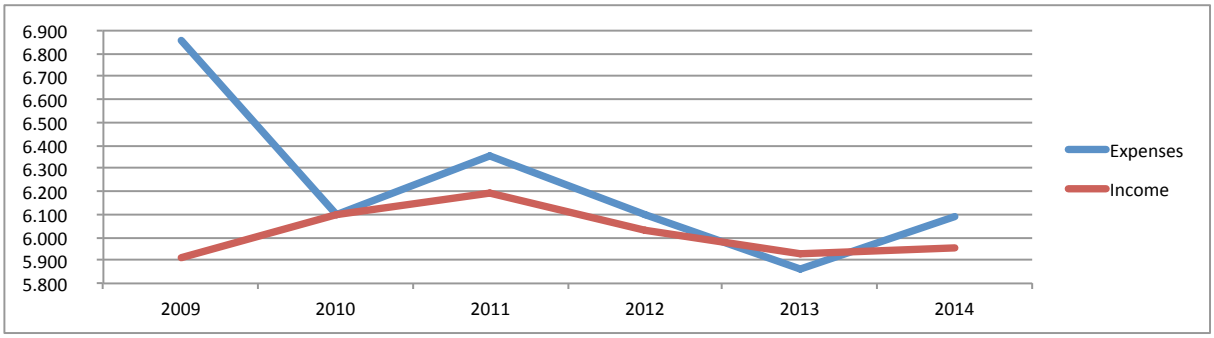
Source: (Statistics Greenland, 2016) - (See chapter 9.7 for data).
Note: The index on consumption is based on numbers in fixed 2009 prices.

If we look at the annual income and annual expenditures by the Government of Greenland during the period of 2009-2014, we can observe in figure 6.2.5 below that the overall annual expenditures declined during the period, whilst income stayed almost

[25] (ILO, 2016)

the same. According to the Financial Statement by the Department of Finance at the Government of Greenland from 2009, the enormous gap between incomes and expenditures in 2009 is due to various sources. A single deposit on 500M DKK to a bankruptcy threatened corporation owned by the Government of Greenland called Royal Greenland, 53M DKK loan to a municipality, and other economic initiatives to boost the economy through a so-called expansive fiscal policy, through increasing the subsidies and the spending on public operating expenditures, that all adds up to a total of 952M DKK in deficit in 2009.

Figure 6.2.5: Government finances - The balance.



Source: (The Government of Greenland, 2010-2015) - (See chapter 9.8 for data).
Note: Numbers are in M DKK and in fixed 2009 prices.

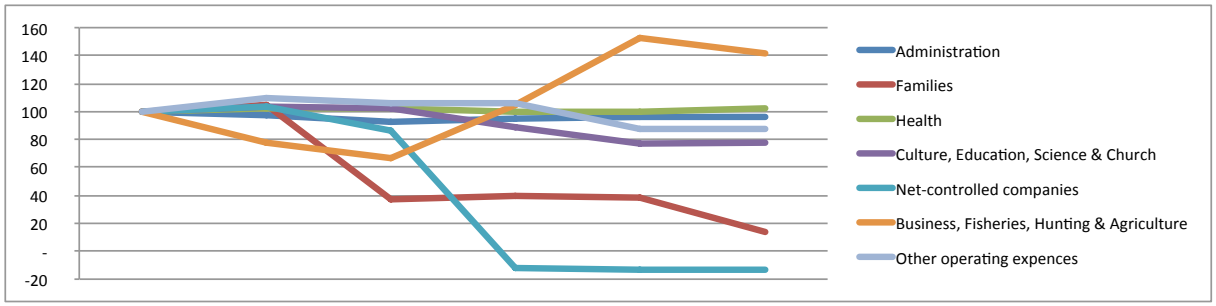
If we specify the public expenditures, we can observe that overall public operating expenses has fallen. As we can observe in figure 6.2.6 below this is due to the lower operating expenditures from the Department for Families, coincided with some sudden surpluses in the net-controlled public companies. The Government of Greenland transferred the field of responsibility from the Department of Families to the municipalities in 2011, from which we can observe on the sudden drop in expenditures from the Department of Families. By introducing the requirement for dividends in the net-controlled public companies, mainly in Mittarfeqarfiit[26] and Nukissiorfiit[27], the Government of Greenland abolished some of the public indirect subsidies, hence harvesting 87M DKK overnight from its citizens. When observing the public operating expenses, it is worrying to observe that something as mundane as the public administration remained untouched, whilst the relatively more important Department of Cul-

[26] Airports in Greenland

[27] Public utilities

ture, Education, Science & Church declined with 22 percentage points during the same period.

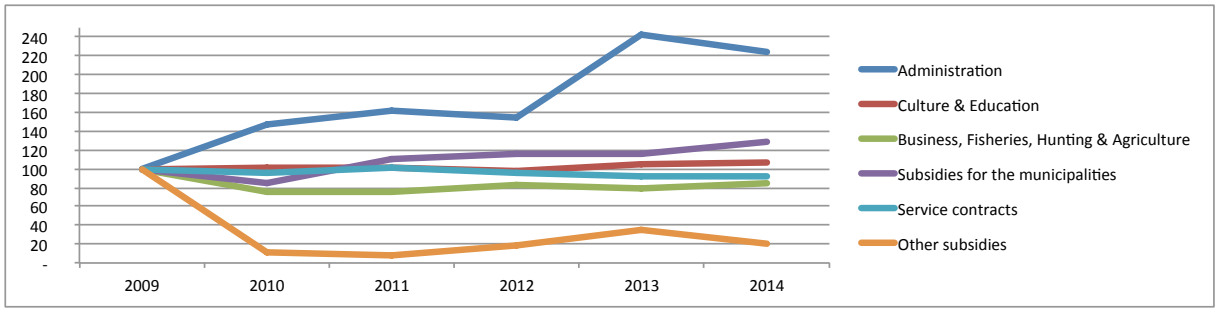
Figure 6.2.6: Government finances - Index on operating expenses.



Source: (The Government of Greenland, 2010-2015) - (See chapter 9.8 for data).
Note: The index is made with the use of numbers in fixed 2009 prices.

This is further elaborated in figure 6.2.7 below where subsidies for the mundane public administration noticeably increased, whilst subsidies to the Department for Business, Fisheries, Hunting & Agriculture, Service contracts and Other subsidies declined. Subsidies for the municipalities rose 30 percentage points. The increase in subsidies for the municipalities is understandable considering the newly acquired responsibilities on the field of responsibility on Families.

Figure 6.2.7: Government finances - Index on subsidies.

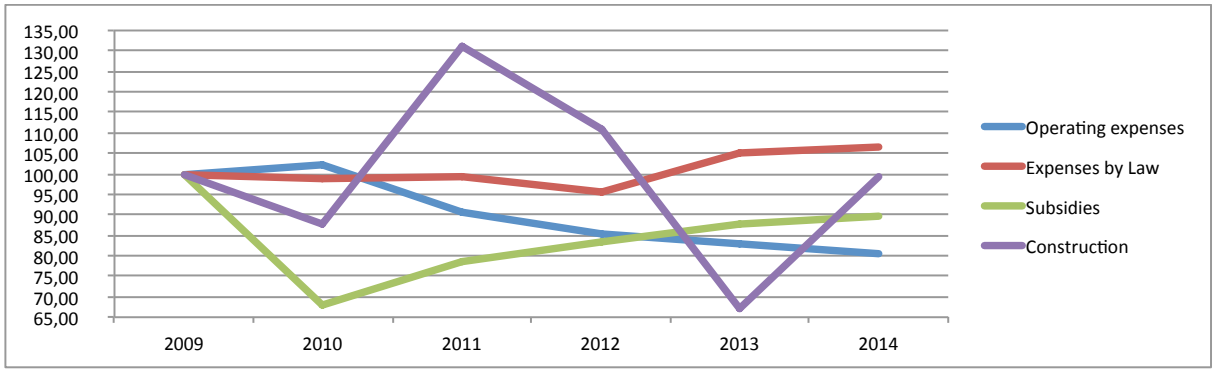


Source: (The Government of Greenland, 2010-2015) - (See chapter 9.8 for data).
Note: The index is made with the use of numbers in fixed 2009 prices.

As we can observe on the overall expenditures by the Government of Greenland below in figure 6.2.8 below, Operating expenses have declined, Expenses necessitated by the Law have slightly increased, Subsidies have bounced back after a major drop

in 2010, and the Construction have zig-zagged during the period. The decline in Operating expenses came from the transfer field of responsibility on Families from the Government of Greenland to the municipalities, rationalizations on the Department for Culture, Education, Science & Church, abolition of indirect subsidies through net-

Figure 6.2.8: Government finances - Index on overall expenditures.



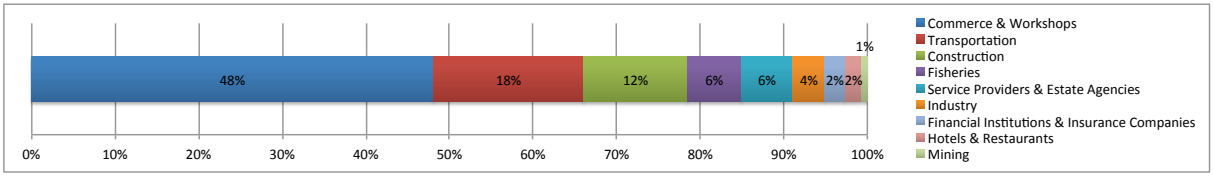
Source: (The Government of Greenland, 2010-2015) - (See chapter 9.8 for data).
Note: The index is made with the use of numbers in fixed 2009 prices.

controlled public companies and through rationalizations in other operating expenses. What we can assume is that the decline in Operating expenses is not caused by a decrease in expenditures on the public administration. The only reason for the slight increase in Expenses by Law is higher expenditures on education.

The huge drop in Subsidies on 530M DKK in 2010 compared to the year before, is caused by a slight decrease on the subsidies for the municipalities, and by the abolition of subsidies to the net-controlled public companies. The bounce back in Subsidies during the period of 2010-2014 is mainly caused by subsidies for the public administration and subsidies for the municipalities.

Now if we take a look at the income statement statistics in Greenland during the period of 2009-2013, we can observe in figure 6.2.9 below that two third of the economy consist of non-export activity, and that only 11% of the overall activity in the economy is dealing with direct export oriented activity, which is Fisheries, Industry and Mining.

Figure 6.2.9: The composition of the economic activity in the economy.



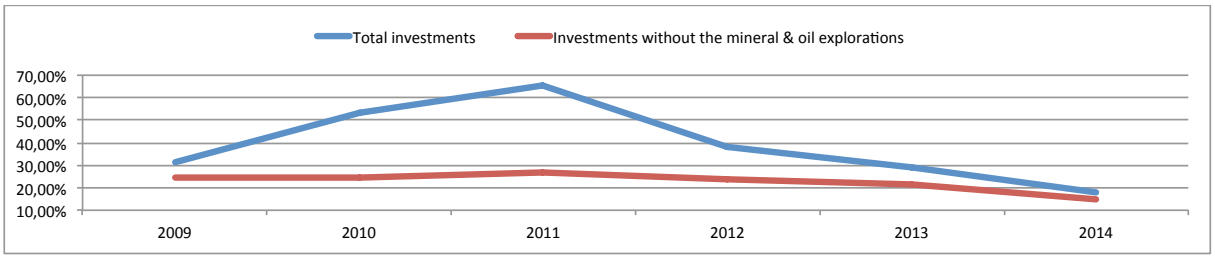
Source: (Statistics Greenland, 2016) - (See chapter 9.9 for data).
Note: The numbers used on the figure are average numbers during the period of 2009-2013.

The magnitude of the Commerce & Workshops compared to the export-oriented part of the economy is something that is to be expected from the economy of Greenland. For when we factor in the trade deficit of Greenland, that averaged well above 2 Billion DKK during the period of 2009-2013, that consisted much of consumer goods, we can deduce the Commerce & Workshops sector would be significant in comparison with the rest of the economy.

Fisheries, that is considered to be the most important business of Greenland, forms about 10% of the whole activity in the economy compared to the 18%[28] in Faroe Island and 12%[29] in Iceland.

Another issue that ought to be noticed is the secondary industry in Greenland, that forms only 4% of the whole activity in the economy. This is problematic when considering the theory of present-day convergence that specified the need for a sizable manufacturing sector in the economy, in order for a country to converge to higher income countries.

Figure 6.2.10: Investments in the economy of Greenland - Total investments.



Source: (Statistics Greenland, 2016) - (See chapter 9.10 for data).
Note: The figure shows the level of the total investments put in comparison with the Gross Domestic Product. The numbers are in fixed 2009 prices.

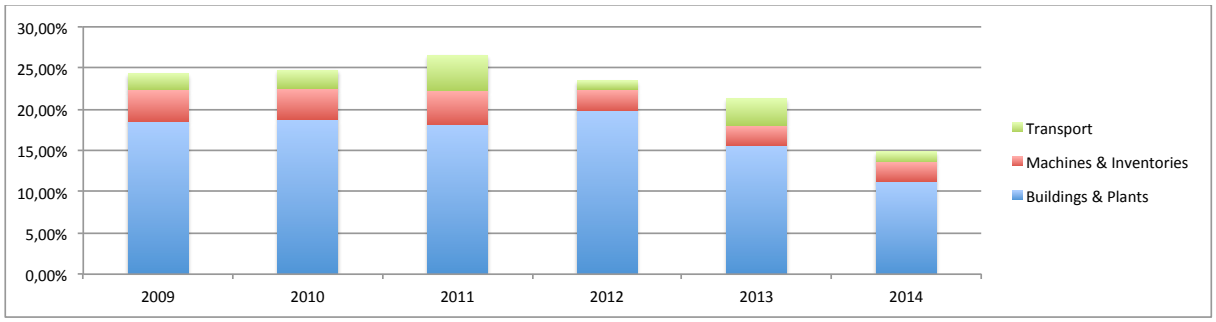
[28] (Hagstova Føroya, 2016)

[29] (Statistics Iceland, 2016)

Figure 6.2.10 above shows the annual sizes of the capital investment in the economy of Greenland related to the Gross Domestic Product. Solely due to the massive investments in mineral and oil explorations, the total investments in the economy doubled from 2009 to 2011. From 2011 to 2014 these massive investments in mineral and oil exploration diminished to nearly zero. If we add the fluctuations in public expenditures, namely Construction and Subsidies, with the changes in investments related to the Gross Domestic Product, we get a picture of growth shown in figure 6.2.1 during the period of Self-Government. The link between the development in growth on the Gross Domestic Product with the massive influx, and subsequently retreat, of the investments in mineral and oil explorations is observable.

Figure 6.2.11 below shows the investments in fixed assets in the economy compared to the Gross Domestic Product. The investments in machines and inventories, that gives us an idea on how fast Greenland is adopting the technological advancements from other nations, accounts for only a fraction compared to the Gross Domestic Product.

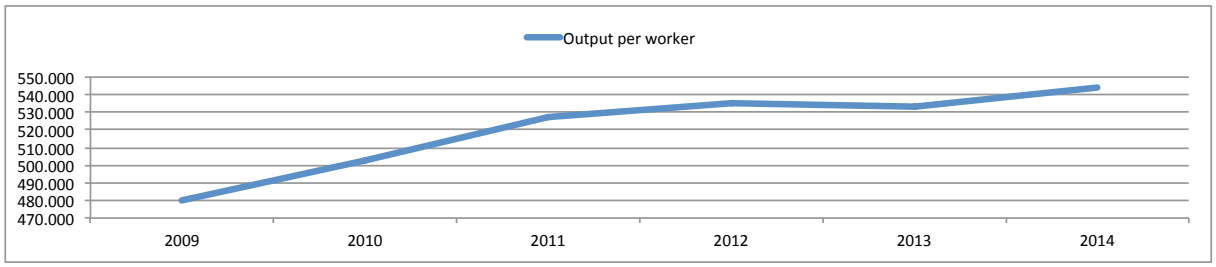
Figure 6.2.11: Investments in the economy of Greenland - Fixed assets.



Source: (Statistics Greenland, 2016) - (See chapter 9.10 for data).
Note: The figure shows the level of investments on fixed assets put in comparison with the Gross Domestic Product. The numbers are in fixed 2009 prices.

During the period of 2009-2014, Greenland experienced a 13% increase in output per worker as shown in the figure 6.2.12 below. This is due to a lower employment in the economy. It is likely that there is an increase in productivity to be had when dealing with what is seemingly an excess employment relative to the invested capital in the economy. Especially when considering that 8 out of 10 of the unemployed does not have an education at all.

Figure 6.2.12: Productivity in the economy of Greenland.



Source: (Statistics Greenland, 2016) - (See chapter 9.11 for data).
Note: The numbers are in DKK, and in fixed 2009 prices.

A structural unemployment which is the core of the mismatches between the workforce and the jobs available is defined by Investopedia[30] as:

- The mismatch between the skills needed by the businesses and the skills available in the workforce.
- The mismatch between the availability of workers and availability of jobs.
- Unemployment due to the mismatch between what the workers want in wages and what the employers are willing to give in wages.

The three definitions mentioned above on the structural unemployment are intensified by three factors. Government policy, technology and competition.

The implications of the government policy on the structural unemployment can range from the instability of a government policy that positively and/or negatively discriminate(s) certain part(s) of the country, e.g. the lack of supply of skill-training to certain parts of the country in relations with the actual and/or future demand of skills in businesses. Or it can be the lack of, or even restrictions on, a platform where workers can enforce a strike on their employers.

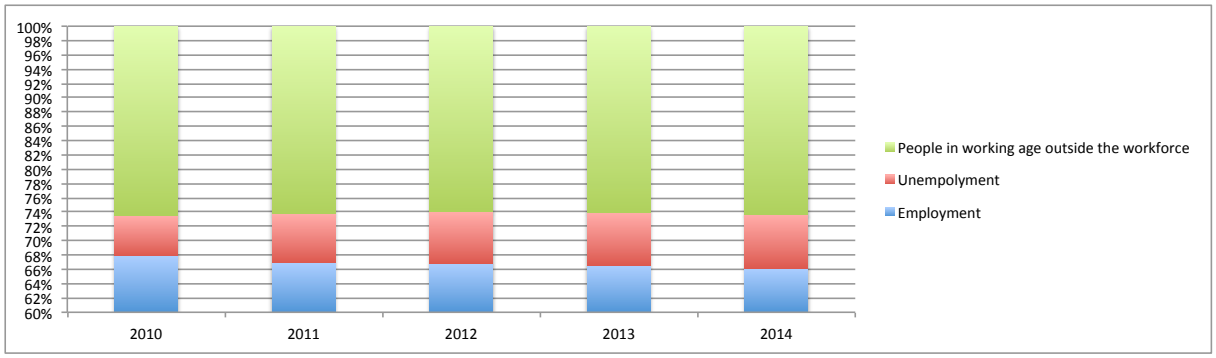
The implication of the technology on the structural unemployment can be that a technological advancement replaces a worker, e.g. a filleting machine that replaces the manual filleting by workers. This replacement of a worker by machines eliminates the demand on certain type of workers and the demand for a wage from these certain type of workers.

The structural unemployment will be upheld if the workers do not renew their skills,

[30] (Investopedia, 2015)

e.g. an acquisition of skills to operate the new machinery or an acquisition of new skills needed by service oriented businesses.

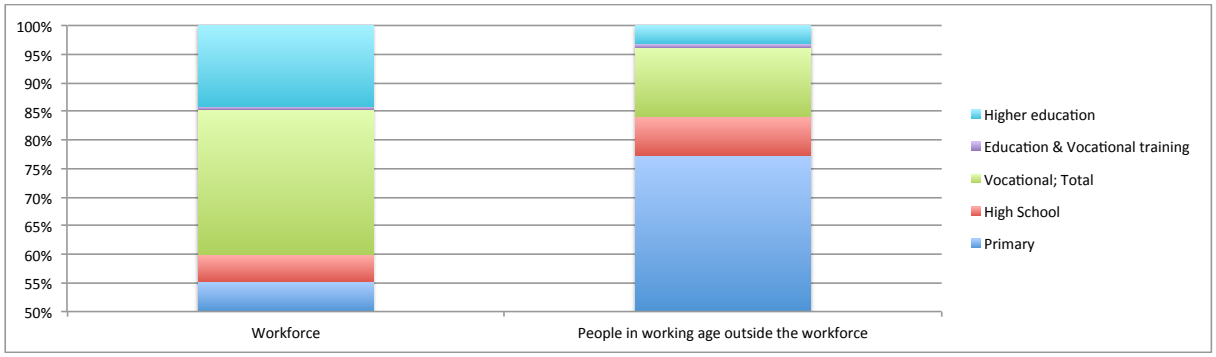
Figure 6.2.13: The workforce of Greenland - Related to the employment in the economy.



Source: (Statistics Greenland, 2016) - (See chapter 9.12 for data).

Figure 6.2.13 above shows the composition of the Greenlandic population in a working age. 2 out of 3 in a working age are in employment, 6-7% are unemployed and are seeking for a job, and more notably, 1 out of 4 in a working age is outside the workforce and are not seeking for a job. The welfare system in Greenland is available to all of those who seeks it.

Figure 6.2.14: The workforce of Greenland - Educational background.



Source: (Statistics Greenland, 2016) - (See chapter 9.12 for data).
Note: The definition of the workforce in this figure is the people in a working age that currently are in employment or are looking for a job.

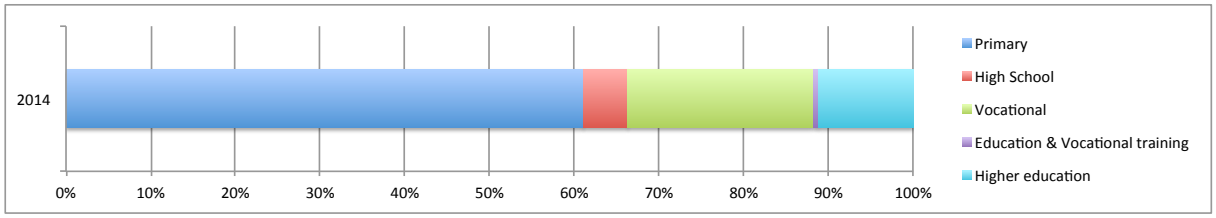
Figure 6.2.14 above shows the configurations of both the workforce, and the population in working age that is outside the workforce. The figure shows that 55% of the

workforce does not have a skills training, 4% have started working after gaining a high school degree, and that 40% of the workforce have a formal education.

On the other hand, if we look at population in working age that is outside the workforce, we can observe that 77% of them does not have a skills training. In addition, something that is compelling is that around 16% of the people in a working age currently situated outside the workforce has a formal skills training, especially the ones with the a higher education, that represents the 3%, or around 300 people.

Figure 6.2.15 below shows the composition of the entire population in a working age in 2014. 61% does not have a skills training, 5% have a high school degree, and 33% have a formal skills training. If we add the variable with low level of capital investment in the secondary industry to the mixture of the 66% employment, which is a low level, and the low level of skills training in the working age, you get a very inefficient and costly economy.

Figure 6.2.15: The workforce of Greenland - An overview.



Source: (Statistics Greenland, 2016) - (See chapter 9.12 for data).

When considering a population of 55.847 in 2016, Greenland is a very tiny country. The only reason why any foreign capital investment in Greenland will take place is due to the enormity of the country itself. With 2.166.086 square kilometers, of which 19% is ice-free, Greenland is a huge potential source to the exploitation of natural resources.

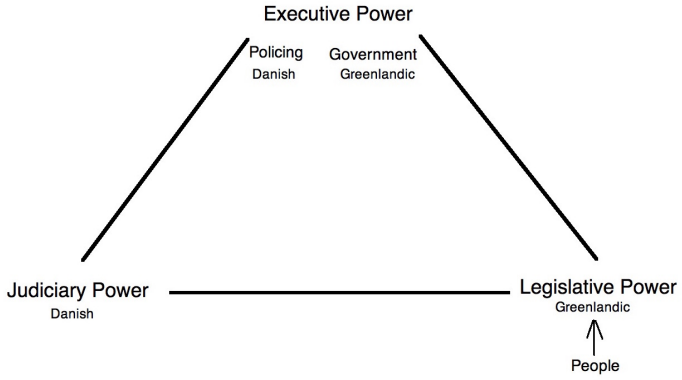
The only restriction on foreign capital investment in Greenland is in the fisheries sector, where the foreign investors are only allowed to own 33% of the equity[31].

The influx of foreign capital is seemingly low or brief as we saw in figure 6.2.10. There is no doubt that global markets will play a big role for the foreign investments in

[31] (Parliament of Greenland, 1996)

Greenland, considering the population size in Greenland and the remoteness of the country. However, there might also be another variable that sets the willingness of the investors, to risk their investments in Greenland, and that is political stability of the country.

Figure 6.2.16: Structure of Power in Greenland.



Source: Self made.

Above in figure 6.2.16 can we observe the separation of power in Greenland. Judiciary Power together with Policing is still under the jurisdiction of the Danish Government. Every 4 years the people in Greenland elects a legislative body containing 31 souls. It is an unwritten rule that the political party with the most popular votes gets to be the one that stands for the formation of the Government.

In 2009 the 30-year rule of the leading party Siumut collapsed, leaving Inuit Ataqatigiit with the most popular votes[32]. In 2013 election the Siumut party regained the power back from the Inuit Ataqatigiit. However, due to the so-called Annex scandal within the group of Ministers in what is known as the Aleqa-Government, the announcement in 2014 was made on early elections[33] With a margin of 325 popular votes[34], Siumut retained the position as the party with the most popular votes amongst the parties.

In the middle of the budget negotiations in 2015, the leader of the supporting party of the Government, Demokraatit, de facto removed himself from the position as a Fi-

[32] (Qinersineq, 2009)

[33] (Inuit Ataqatigiit, 2014)

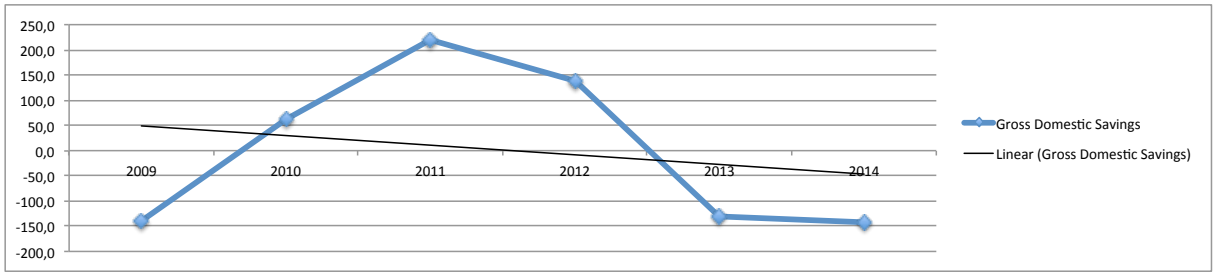
[34] (Qinersineq, 2014)

nance Minister[35]. Subsequently, the Parliament approved a reshuffle of Ministers. In 2016 the reshuffle of Ministers happened again, in which the Finance Department was regained by the supportive party Demokraatit in Government[36]. This irregular shuffling of Ministers alone can scare off foreign investments, especially in a country where the Arctic nature and the remoteness of the country in relations to other countries alone causes limitations in extracting natural resources.

The long term savings rate in Greenland comes from only one source. Contributions to the sole existing Greenlandic private pension fund called "*Sulinermik Inuussutissarsiuteqartut Soraarnerussutisiaqalernissamut Aningaasaateqarfiat*", direct translation sounds like "The Pension Fund of the Employees".

The level of the contributions to the fund stands at 1,3% of the Gross Domestic Product in 2014, whilst pension payouts from the fund stands at 0,1% of the Gross Domestic Product[37]. If we put these two numbers together we get a long term savings rate at around 1,2% of the Gross Domestic Product.

Figure 6.2.17: Gross Domestic Savings of Greenland.



Source: (Statistics Greenland, 2016) - (See chapter 9.7 for data).
Note: The numbers are in M DKK, and in fixed 2009 prices.

If we look at the gross domestic savings during the period of 2009-2014 at the figure 6.2.17 above, that according to the World Bank consists of Gross Domestic Product deducted with the total Consumption in the economy, we can observe that the trend is downward sloping. The positive Gross Domestic Savings during the period of 2010-2012, seems to be attributable to the massive influx of foreign capital investments during that period. If we remove this massive short term influx of foreign capi-

35 (Greenlandic Broadcasting Corporation, 2015)

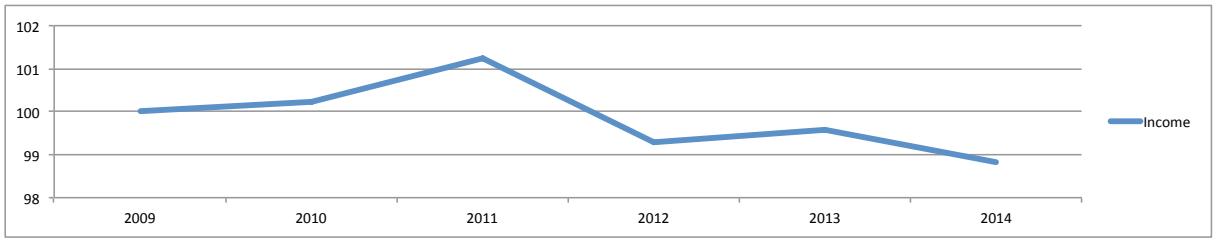
36 (Greenland Broadcasting Corporation, 2016)

37 (SISA, 2015)

tal investments, the normal level of the Gross Domestic Savings seems to be around minus 150M DKK, or around -1,2% compared to the Gross Domestic Product, which according to the World Bank statistics puts Greenland between Haiti and Grenada[38].

Now let us look at how fitting it is to use the term “Middle income trap” in a Greenlandic context. The “Middle income trap” is theorized as a country with a decreasing international competitiveness due to the growth in wages. A country with a low investment rate, a slow growth in the secondary industry, a limited industrial diversification, and a poor labour market condition.

Figure 6.2.18: Average income in Greenland - Index.



Source: (Statistics Greenland, 2016) - (See chapter 9.13 for data).
Note: The index is made with the use of numbers in fixed 2009 prices.

Figure 6.2.18 above illustrates the development of the real wages in the economy during the period of 2009-2014. Up until 2011 the real wages have been increasing. Afterwards, a somewhat recognizable pattern emerges, a retreat. 2012 was the year where the foreign capital investment in the economy substantially retreated. This puts Greenland in a slightly more competitive position internationally.

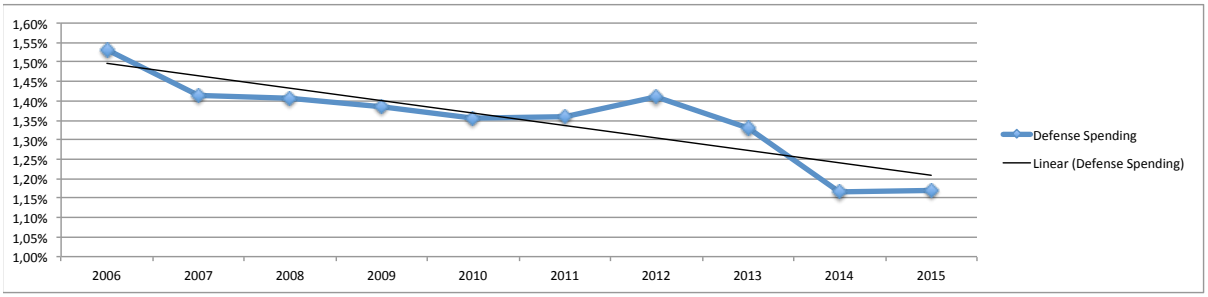
We have observed that the total investments relative to the Gross Domestic Product decreased from 31% in 2009 to 18% in 2014. We have also observed that the secondary industry is very little compared to the rest of the economy, and that there are little capital investments in this sector. There are no indications that the diversification of the secondary industry is underway, due to the low level of capital investments in the export oriented production and massive transfer-pricing in the economy. Due to the very low formal skills training in the workforce, the future prospects of the labour market are poor. Overall Greenland is actually ensnared by the “Middle income trap”.

[38] (World Bank, 2016)

Another aspect of the current economic situation in Greenland is the military base of the United States of America in Thule. According to an agreement between member states in NATO or North Atlantic Treaty Organization in 2006, a member state needs to spend at minimum 2% of its Gross Domestic Product on military in order to be considered as a member of the organization[39].

The assumption is, that Denmark gets a substantial discount in its military spending relative to the required minimum of 2% spending of its Gross Domestic Product, with the accommodation of the United States military base in Thule, Greenland.

Figure 6.2.19: American military base in Thule - Defense spending of Denmark.



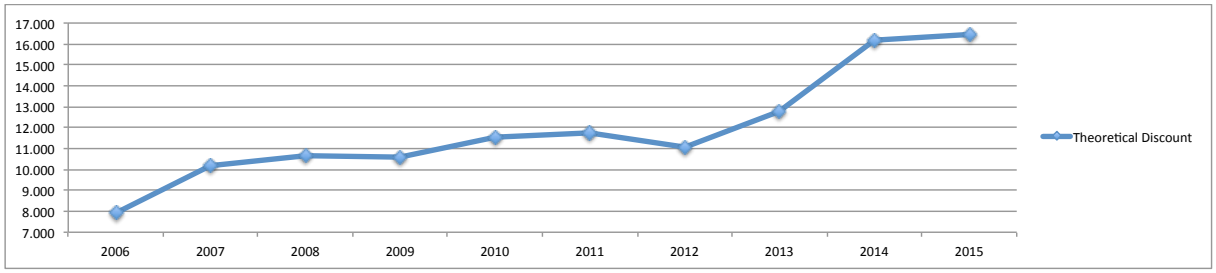
Source: (Statistics Denmark, 2016) - (See chapter 9.14 for data).
Note: The figure is made with the use of nominal numbers. The defense spending of Denmark is shown as a percentage of the Gross Domestic Product of Denmark.

Figure 6.2.19 above shows the total defense spending by the Danish Government during the period of 2006-2015. What we can observe is that Denmark indeed is spending less than the required of minimum 2% spending on military. In fact we can observe that the trend is a decreasing spending on military relative to the Gross Domestic Product.

If we translate the difference between the required minimum of 2% military spending in the NATO or North Atlantic Treaty Organization and the actual military spending by Denmark, we get a theoretical discount as shown in figure 6.2.20 below. Due to the decreasing defense spending relative to the Gross Domestic Product, the theoretical discount has doubled during the of 2006-2015. The total theoretical discount during the period is around 119.000M DKK.

[39] (NATO, 2015)

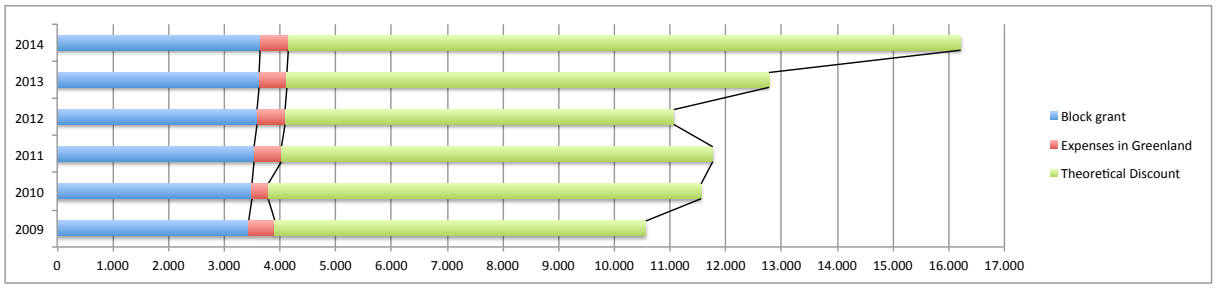
Figure 6.2.20: American military base in Thule - Gross theoretical discount.



Source: (Statistics Denmark, 2016) - (See chapter 9.14 for data).
Note: The numbers are nominal, and in M DKK.

If we factor in the block grant to Greenland and other expenditures from the Danish Government in Greenland, we get a picture as shown in figure 6.2.21 below. After removing the total of expenditures concerning Greenland by the Danish Government, the total of the theoretical discount received by Denmark is around 50.000M DKK during the period of 2009-2014. That is an average of around 8.300M DKK per year during the period. Not an insignificant number.

Figure 6.2.21: American military base in Thule - Net theoretical discount.



Source: (Statistics Denmark, 2016) - (See chapter 9.14 for data).
Note: The numbers are nominal, and in M DKK.

6.2.2 Partial conclusion

The current economic situation in Greenland is discouraging. According to the Economic Council the Treasury will need just over 900M DKK annually in extra income and/or lower expenditures to have a break-even between the year 2012 and the year 2040 in its budget.

The economy is in a recession with three consecutive years with a decline in the Gross Domestic Product.

The public sector is overdeveloped, and are interfering with the market dynamics by bailing out its corporations, thus distorting the free market principle in the economy.

11% of the activity in the economy is export oriented, of which mere 4% can, with faith, be classified as the secondary industry.

The trade deficit averaged around 2 billion DKK, indirectly paid for by the block grant from the Danish Government.

The capital investments in the economy have decreased from 31% of the Gross Domestic Product in 2009, to 18% in 2014.

The recession has shown that the economic output stayed almost the same even though the employment have decreased. This suggests that the employment level relative to the invested capital is too high. 2 out of 3 in a working age are in employment, 6-7% are unemployed and are seeking for a job, and 1 out of 4 in a working age is outside the workforce and are not seeking for a job. 61% in a working age does not have a skills training, 5% have a high school degree, and 33% have a skills training. If we add the variable with low level of capital investment in secondary industry to the mixture of the 66% employment, and the low level of skills training in a working age, you get a very inefficient and costly economy.

With an early election and a couple reshuffling of Ministers in the course of two years, the actual political stability of the Government of Greenland is questionable.

To make matters worse a value with a magnitude of around 14.401M DKK in nominal value have been transfer-priced during the period of 2009-2014. That value alone would have injected around 691M DKK in addition,al corporate tax revenues, upheld 4.697 jobs, and would have increased the Gross Domestic Product with around 25%.

The economy has a long term savings rate on 1,2%. However, in the absence of the foreign capital investments in the economy, Greenland has a Gross Domestic Savings rate on -1,2%, which conveniently offsets the long term savings rate from the contributions to the pension fund.

Greenland with a low capital investment rate, a sluggish growth and limited diversification in the secondary industry, and a poor labour market conditions, namely the very low level of formal skills training in its workforce, is ensnared by the “Middle income trap”.

In accordance with the assumption, Denmark seems to receive a discount in its membership of the North Atlantic Treaty Organization from the military base in Thule. Denmark received around 50.000M DKK in theoretical discount after deducting the overall expenses concerning Greenland during the period of 2009-2014. This is equivalent to an annual average of around 8.300M DKK in theoretical discount. What we need to stress here is that it is only theoretical.

6.3 Normative Discourse

6.3.1 Ramifications of the current economic situation

Let us start the normative part of this thesis by looking at the comprehended ramifications of the current economic situation in the economy. According to the Economic Council, Greenland cannot uphold the level of its welfare system without finding about 900M DKK in extra income and/or lower expenditures annually until 2040. According to the Economic Council, the ramifications of the current economic situation in the economy is the erosion of the welfare system as we know it. The public sector, as the Economic Council puts it, will in the future not be able to accommodate the growing expenditures caused by the challenges the demography in Greenland creates.

The prospect of the economic growth in Greenland is discouraging, to say the least. The theoretical variables that are required in order for Greenland to converge towards higher income countries are not met, albeit except one, which is the low restrictions on foreign capital investments. Capital investments consists only of 18% of the Gross Domestic Product in 2014, and especially the secondary industry that represents about 4% of the Gross Domestic Product, gets very low capital investments.

61% of the population in a working age does not have any skills training, and 1 out of 4 enjoys being provided for by the welfare benefits without bothering looking for a job. 77% of these people that are situated outside the workforce, does not possess a formal skills training whatsoever. This puts pressure on both the economic growth and the public expenditures.

The technological adoption rate on the production side is seemingly low. This puts the international competitiveness of the economy under pressure, especially in an economy with an overdeveloped public sector that is significantly financed by the

block grant from the Danish Government[40].

The recent development of the political stability is unnerving. Especially considering what effect that will have on the foreign investors' willingness to invest their capital in the economy of Greenland.

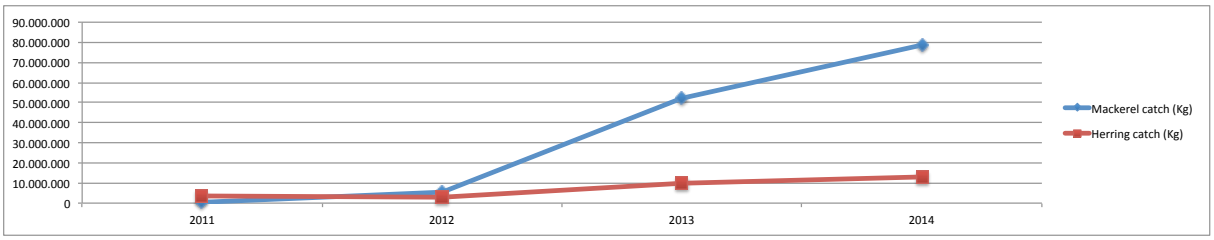
Productivity per worker is increasing, even though it is only due to a lower employment in the economy. This development on the productivity per worker indicates that the employment compared to the invested capital is too high, and that further increases on productivity per worker can be achieved through formal skills training for the unskilled workers and/or on increases in production capital investments.

With a net long term savings rate on 1,2% of the Gross Domestic Product, Greenland stands at the very low end of the theoretical maximum steady state on consumption at 50%[41]. Such a low rate in long term savings will eventually lead to negative effects on the prospects of a long term economic growth.

Greenland has a problem with "Middle income trap", thus having a hard time converging towards higher income countries. In the absence of formal skills training in its workforce, Greenland needs capital investments to in order to grow, especially in the secondary industry.

The advent of pelagic fisheries in Greenland, shown at figure 6.3.1 below, and higher prices on cold-water prawns, leads to the increase in transfer-pricing at three times the rate in 2009. This shows that Greenland needs investments in the secondary industry to get enough capacity to process the newly established pelagic fisheries.

Figure 6.3.1: Transfer-pricing during the Self-Government period - Pelagic fisheries.



Source: (Statistics Greenland, 2016) - (See chapter 9.4 for data).
Note: Numbers are in kilograms.

[40] (Lund, 2011)

[41] (Blanchard, 2011)

The current economic situation according to Martin Paldam would mean that the low level business startups amongst Greenlanders would be maintained, that in turn would maintain the level of recipients of transfer incomes and social security benefits. He specifically emphasized that if the people in the traditional occupation, hunters/ fishermen, should choose to abandon their trade, the recipients of transfer incomes and social security benefits would increase significantly, due to their specialized informal skills training concentrated on their trade. This, according to him, would mean that the capital investments in the secondary industry would not be directly compatible with the informal skills training by the hunters/fishermen.

Another notion from Martin Paldam is what according to him is a wrong priority in developing certain sectors in the economy. He emphasized the problems with investing in sectors with low potential of growth, such as fisheries instead of mining or tourism. However, he emphasized the importance of avoiding too much reliance on mining prospects as the future growth sources, considering the empirical evidence that according to him suggests that the mining only created few percentage points growth in both the employment and the economy. Instead, he would rather see the development in the tourism sector, as he considers it to be Greenland's opportunity to secure the long term growth. He thinks that the low level of formal skills training in the workforce would be compatible with the low level requirements in the tourism sector.

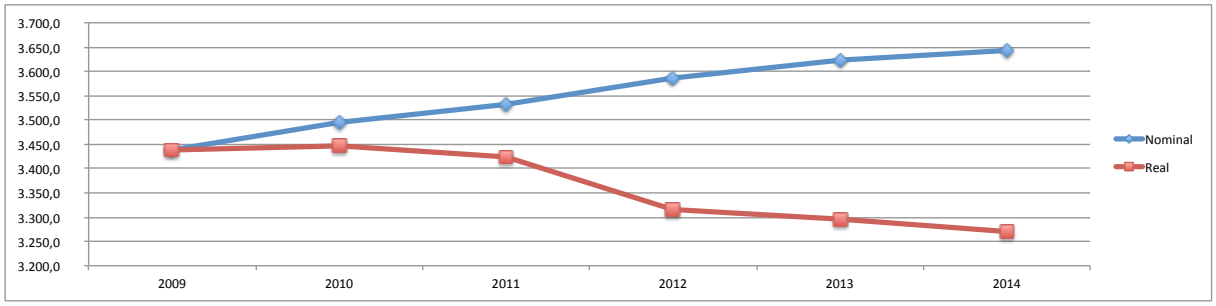
Furthermore, Martin Paldam specifically targets the Danish public workers by connecting them directly to the costly public administration in the economy.

The current economic situation according to Lars Lund would mean the maintenance of the overdeveloped public sector, that keeps the population having a higher purchasing power than would be allowable without the block grant from the Danish Government, thus keeping the country in a state of dependency from the Danish Government.

According to Lars Lund, Greenland would eventually become less dependent from the block grant if the economy grows, or the block grant gets eroded by inflation as it is actually taking place now which we can observe in the figure 6.3.2 below.

What Lars Lund also emphasized is what he sees as a connection between population size, block grant from the Danish Government, productivity and wages. He especially emphasized that any increases in productivity in the economy will lead to

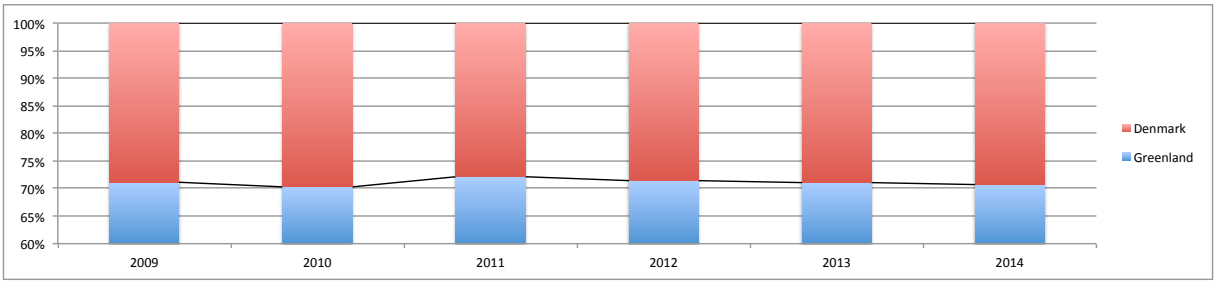
Figure 6.3.2: The block grant from the Danish Government.



Source: (Statistics Greenland, 2016) - (See chapter 9.15 for data).
Note: Numbers are in M DKK.

people moving from Greenland to Denmark due to lower employment in the economy. However, he somehow avoids factoring in the capital investments in the economy. That e.g. higher capital investment in the secondary industry will lead to higher productivity and higher employment, not to some exodus as the media would have us to believe[42].

Figure 6.3.3: Gross Domestic Product per capita in Greenland compared to the one in Denmark.



Source: (Statistics Greenland, 2016), (Statistics Denmark, 2016) - (See chapter 9.16 for data).
Note: The figure is made with the use of nominal numbers on the average income per capita in both Greenland and Denmark.

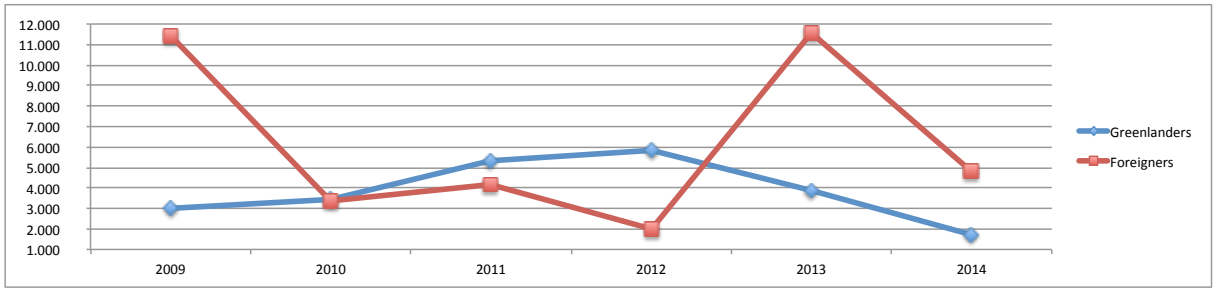
Figure 6.3.3 above shows the level of Gross Domestic Product per capita in Greenland, contrasted with the Gross Domestic Product per capita in Denmark. We can observe that the Gross Domestic Product per capita in Greenland fluctuates between 70%-72% compared to the Gross Domestic Product per capita in Denmark. This is seemingly the equilibrium of production per capita in Greenland under the sum of va-

[42] (Avisen.dk, 2008)

riables such as the low growth in the capital investment in the secondary industry, the low level of formal skills training of the workforce, the relative size of the block grant from the Danish Government, and the increasing transfer-pricing in the economy.

Lars Lund also mentions the income inequality between ethnic Greenlanders and foreigners, he namely concentrates on the income inequality between the Danes in the public administration and the average income by the ordinary Greenlanders.

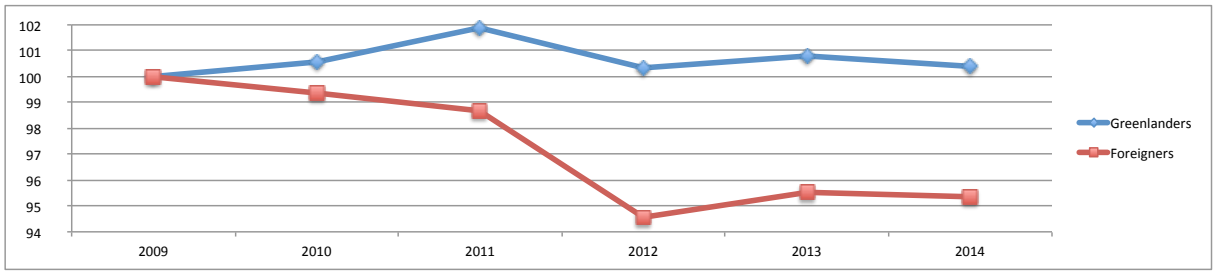
Figure 6.3.4: Average income according to the ethnicity - Annual increases.



Source: (Statistics Greenland, 2016) - (See chapter 9.17 for data).
Note: The numbers are nominal, and in DKK.

Figure 6.3.4 above shows the annual increases on average incomes of Greenlanders and foreigners during the period of 2009-2014. In total the average income by Greenlanders increased with around 23.000 DKK from 168.000 to 191.000 during the whole period, whilst the average income amongst foreigners increased with around 37.000 DKK from 409.000 to 446.000 during the whole period.

Figure 6.3.5: Average income according to the ethnicity - Index.



Source: (Statistics Greenland, 2016) - (See chapter 9.17 for data).
Note: The index is made with the use of numbers in fixed 2009 prices.

If we look at the development of the purchasing power of the average income above

in figure 6.3.5, we can observe that it has increased a little for the Greenlanders, whilst it has decreased with around 5 percentage point for the foreigners during the period of 2009-2014.

What we can observe here is that foreigners, that is seemingly composed of Danes working in the public sector, still dominates both the average income level and the average annual increases on the average income level.

There is no definitive answer to what encompasses the term Middle Class. However, according to the so-called fact tank called Pew Research Center, the middle class encompasses the population that makes two-thirds to two times the median income[43].

According to the Statistics Greenland the median income was around 123.000 DKK, which is to say that the Middle Class in the economy of Greenland consists of those with an income that ranges between 82.000DKK and 246.000DKK.

Figure 6.3.6 below shows the distribution of the Greenlandic population that has an income according to the definition of The Middle Class by the Pew Research Center. We can observe that the number of people in the Upper Class has been steadily increasing until 2012 and afterwards have leveled around 13.000. With an average income of foreigners between 409.000DKK and 446.000DKK, and the low level of formal skills training of the Greenlandic workforce, I can safely assume that most of the foreigners most be in the Upper Class. The Middle Class fluctuated between 14.500 people and 15.250 people, which is the equivalent of around 40% of the population. A promising development is seen with the fall of the poorest part of the population, which fell from around 15.100 in 2010 to around 13.100 in 2014. This fall is equivalent to a fall from 42% of the population in 2010 to 36% in 2014. However, this promising prospect of fewer in the Lower Class is still eclipsed by the high increase on the average income amongst foreigners, compared to the increases on the average income amongst Greenlanders with a ratio of around 3:5. With other words, if the increases on the average income had been mainly attributable to those in the Lower Class rather than those in the Upper Class, many more would come out of the Lower Class and up to the Middle Class.

[43] (Pew Research Center, 2015)

Figure 6.3.6: Classification of the Greenlandic population that has an income.

Source: (Statistics Greenland, 2016) - (See chapter 9.18 for data).
Note: The figure includes only those who has an income amongst the population. However, it is very likely that most of those with no income and are not included in the statistic are children. This would enhance the representativity of the figure.

What Lars Lund also emphasized is what according to him, Greenland's inability to accommodate a larger industrial production. He directly compared Greenland with Denmark in order to accommodate his emphasis. What Lars Lund did not include in his notion on Greenland's inability to accommodate a larger industrial production, is the incompatibility of Greenland in comparison with Denmark. He directly translated Greenland's inability to accommodate a larger industrial production, by directly inputting the Greenlandic population into the whole Danish economy, which in itself is needless to say the least. His statement on Greenland's inability to accommodate a larger industrial production becomes ambivalent if we factor in the low growth in capital investment in the secondary industry, low formal skills training of the workforce, and the increasing transfer-pricing in the economy. Even with only these three variables we can observe that there is a huge unutilized growth potential, that when utilized ought be enough to start converging the economy of Greenland to higher income countries, including Denmark.

The most exceptional ramification of the current economic situation is indeed transfer-pricing in the economy of Greenland. A potential value of around 14.401M DKK has been transfer-priced during the period of 2009-2014. If nothing is being done to substantially minimize this seemingly increasing transfer-pricing in the economy, Greenland will refrain itself from utilizing this massive source of economic growth potential. In order to tap this huge source of economic growth potential that can let Greenland to converge towards the countries with the highest output per capita, the capi-

tal investment in the secondary industry is crucial, and it has to be substantial.

Furthermore, the workforce being unskilled, thus being untapped potential source that can be shaped with any formal skills training, ought be trained in operating the capital investments in the secondary industry, and eventually into the tourism industry. Put together they are both untapped huge sources of economic growth potentials.

Another issue when talking about the ramifications of the current economic situation, is the notion of the military base situated in Thule. In a sense the only fiscal significance of the military base to the economy of Greenland, is the taxes paid by the employees working at the base. However, the ramifications of the military base is the continuing positioning of Greenland as an ally in the North Atlantic Treaty Organization. Something that Greenlanders cannot alter, even if they should choose to wish for it.

6.3.2 Notion of Greenland without the block grant

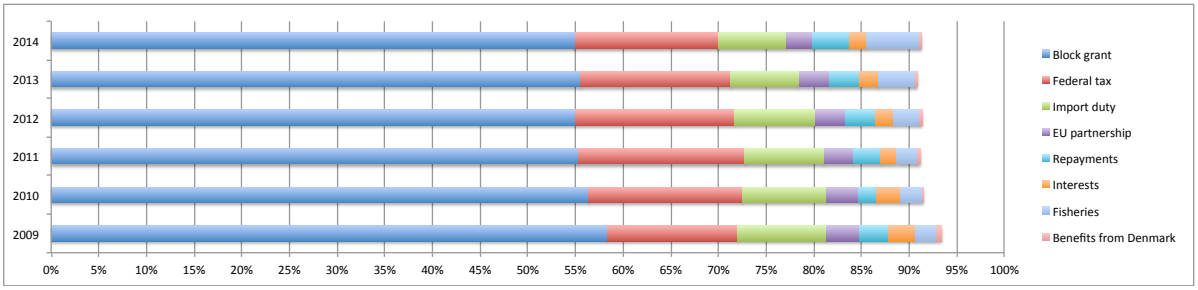
Before we move on to the notion on what needs to be reformed in the economy, let us entertain the notion from Martin Paldam and Lars Lund, on that Greenland is receiving a gift from the Danish Government each year in the form of the block grant. Here I will try to simulate the overall ramifications of an immediate removal of the block grant, and an immediate introduction of independence to the economy. This will be done from an eagles view and will only contain a notion of macroeconomic ramifications, and not some deeper empirical analysis. The reasoning of this is to entertain this notion on whether or not, Greenland is a source of raw materials for Denmark. I will stress that I do not have sufficient resources to undertake an empirical excursion to better understand the local ramifications that an immediate removal of annual block grants from the Danish Government will lead to, which is why this issue will be processed from an eagles view. Remember that we are only talking about the growth in the long run.

At first I will be looking at the immediate ramifications on the public sector, which is the recipient of the block grant from the Danish Government, and subsequently entertaining the notion on which part of the system needs to be reduced in order to meet the new realities with the removal of the block grant. Next I will look into the possible substitutions to the block grant from the Danish Government. Afterwards, I will

look into the notion on how long it would take for Greenland to adjust and reach its natural economic equilibrium, and on how the results could be in the end.

The core in finding the immediate ramifications of the immediate removal of the block grant from the Danish Government, is to identify the distribution process of the block grant to the entire public sector in Greenland. The block grant that the Danish Government transfers to Greenland annually, is directly delivered to the Government of Greenland without any imposed requirements on the grant itself. The funds from the block grant are then incorporated into the overall budget of the Government of Greenland, called Inatsisartut Aningaasanut Inatsisaat, i.e. the block grant cannot be directly traced to any expenditure in the public sector unless you gain the access to the person responsible on the core budget data, or the bank transfers for that matter, in the Government of Greenland. But what we can do in order to find out the most probable usage of the block grant from the Danish Government, is to hypothesize which sectors in the public sector rely most on the block grant itself.

Figure 6.3.7: Sources of income by the Government of Greenland.



Source: (The Government of Greenland, 2010-2015) - (See chapter 9.19 for data).
Note: The figure is made with the use of nominal numbers.

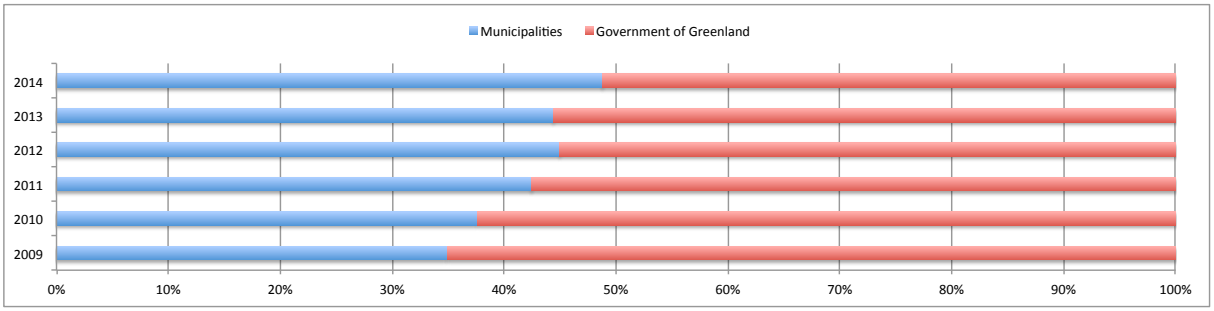
Let us first look at the composition of the revenues by the Government of Greenland that is recipient for the block grant from the Danish Government. In figure 6.3.7 above we can see that the block grant from the Danish Government retreated from around 58% to around 55% during the period of 2009-2014 due to the introduction of Act on Self-Government in Greenland, that froze the block grant at 3.439,6M DKK in 2009 prices and regulates it according to the inflation in consumer-prices and wages in Denmark[44]. Federal tax revenues have gone up with a few percentage points due

[44] (Lovtidende A, 2009)

to a shrinking lower class and a bigger upper class. Import duties have retreated with a couple of percentage points. Revenues from the EU partnership have gone down with a 1 percentage point. Repayments and interests are in a balance as would be expected. And in the advent of the pelagic fisheries, royalties from the fisheries have gone up with 3 percentage points, that offsets some of the retractions in revenue during the period.

Figure 6.3.8 below shows the allocation of the block grant from the Danish Government between the municipalities and the Government of Greenland.

Figure 6.3.8: Allocation of the block grant from the Danish Government.

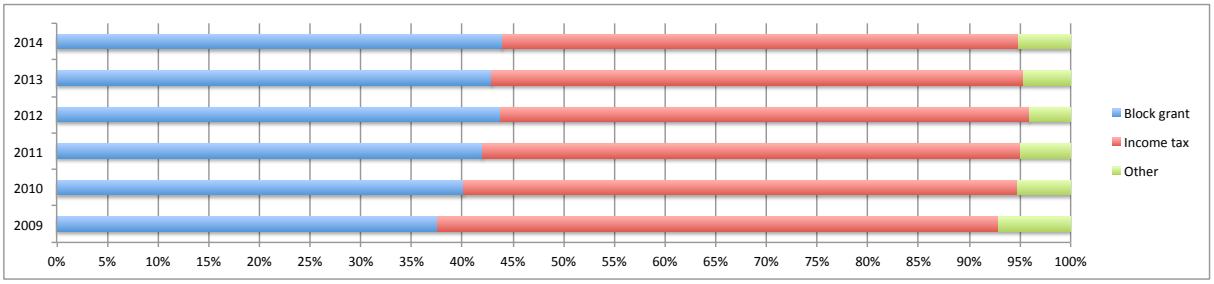


Source: (Statistics Greenland, 2016) - (See chapter 9.20 for data).
Note: The allocation shown in the figure is calculated by subtracting the block grant to the municipalities from the block grant from the Danish Government. The figure is made with the use of nominal numbers.

The share of the municipalities has grown from 35% in 2009 to 49% in 2014. The rise of the municipalities' share from 38% in 2010 to 42% in 2011 can be explained by the reallocation of the responsibilities from the Families Department to the municipalities. However, the rise of the municipalities' share from 42% in 2011 to 48% in 2014 cannot be explained by anything other than the 26% rise of the block grant from the Government of Greenland to the municipalities during the period of 2011-2014.

Figure 6.3.9 below shows how much the block grant represents the total income of the municipalities. The fluctuations in figure 6.3.8 on municipalities' share and the fluctuations in figure 6.3.9 on the block grant to the municipalities are nearly identical. This is indicative on that municipalities did not gain any new income sources other than the increases in the block grant from the Government of Greenland during the period of 2009-2014.

Figure 6.3.9: Sources of income by the municipalities.

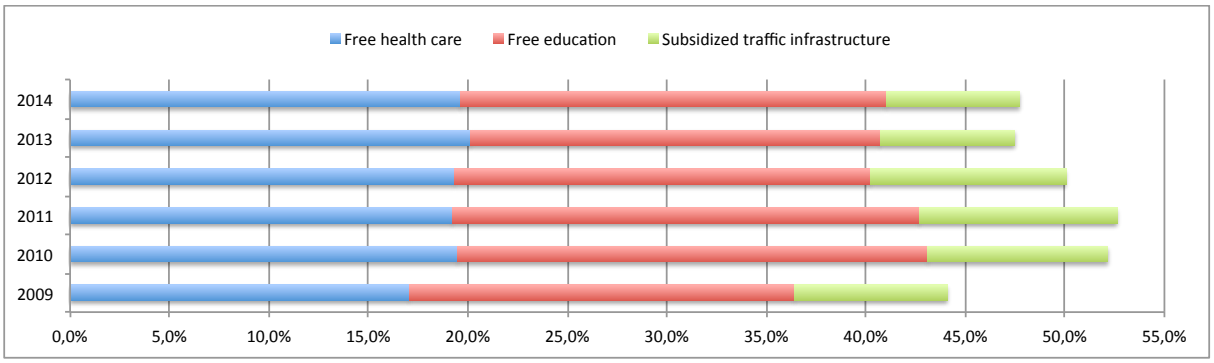


Source: (Statistics Greenland, 2016) - (See chapter 9.21 for data).
Note: The figure is made with the use of nominal numbers.

The welfare system in Greenland is providing a high level of an universal service in the economy. The Government of Greenland provides free health care, free education, and subsidized traffic infrastructure.

Figure 6.3.10 below shows how high a percentage this universal service represents the total expenditures by the Government of Greenland. Free health care have gone up with a few percentage points during the period of 2009-2014. The free education expenses gone up with 4 percentage points from 2009 to 2010, and partially bounced back with 2 percentage point in 2013, and sub-sequently increased with 1 percentage point in 2014. The expenditures to the subsidized traffic infrastructure have gone up with 1 percentage point each year until they reach 10% in 2011, and subsequently been leveled down to form around 7% of the total expenditures by the Government of Greenland in 2013 and 2014.

Figure 6.3.10: Government finances - Welfare program by the Government of Greenland.



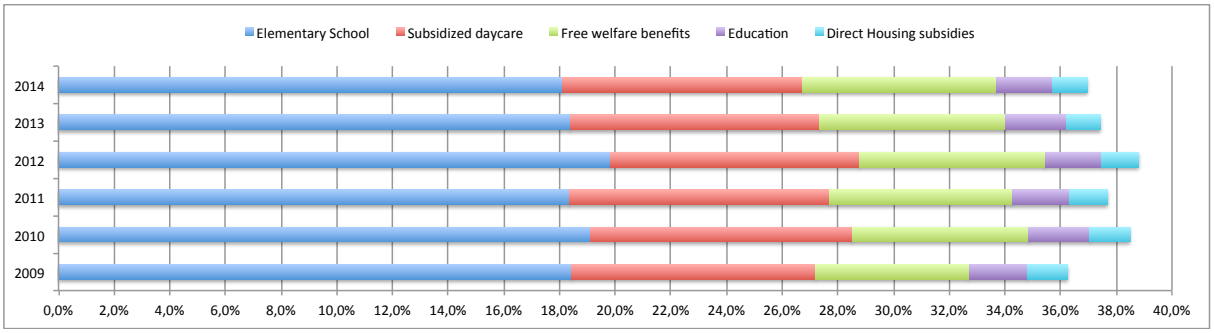
Source: (The Government of Greenland, 2010-2015) - (See chapter 9.8 for data).
Note: The figure is made with the use of numbers in fixed 2009 prices.

When looking at the figure 6.3.10 above, we can observe that the provided universal service represents about half of the expenditures by the Government of Greenland.

The municipalities provides free elementary school, subsidized daycare, free welfare benefits, free education, and direct housing subsidies.

Figure 6.3.11 below shows that the elementary school represents around 18%-20% of the expenditures by municipalities. If we exclude elementary schools and free education that together represents around 20%-22% of the total expenditures by the municipalities, we get the total of direct welfare benefit expenditures that represents around 16%-17% of the total expenditures by the municipalities.

Figure 6.3.11: Welfare program by the municipalities.



Source: (Statistics Greenland, 2016) - (See chapter 9.22 for data).
Note: The figure is made with the use of nominal numbers.

According to the Statistics Greenland, the overall taxable income in 2014 was around 9.473M DKK. This means that one percentage point increase on income tax will give an extra revenue of around 95M DKK. The block grant from the Danish Government in 2014 was around 3.642M DKK. Without any restructuring of the income taxation system, it would require an increase of the income tax rate with 38 percentage points. Nearly twice as much as the current tax rate.

According to Lars Lund the non-existence of the block grant from the Danish Government would mean, Greenland having to accept either much lower real wages or much lower employment. His notion is that the pool of available income would be decreased substantially, thus making Greenlanders to choose either to employ fewer to the same real wages or the same number of workers on a much lower real wage. Anyhow, according to Lars Lund this would mean an exodus to Denmark that has a considerable higher living standards, but also a much smaller public sector due to the

55% funding of the Government of Greenland with the block grant from the Danish Government.

According to Martin Paldam the nonexistence of the block grant from the Danish Government would mean, Greenland having to accept the abolition of the high level of universal service. According to him the Greenlandic population would have to flock in much fewer settlements in order to accommodate the much lower level of the universal service. His notion also contains the exodus of Danes.

Martin Paldam also gives a notion on, that there is a risk of overfishing due to the tendency of the inclination by the politicians in listening to the hunters/fishermen rather than the biological advise on the biomass. Something of a challenge that will be to the politicians in a new life without the block grant from the Danish Government.

Anyhow, Martin Paldam emphasized that the block grant ought be removed gradually rather than suddenly.

Now let us take a look at the possible substitutions for the block grant in its immediate removal from the economy of Greenland. The block grant from the Danish Government represents 27% of the Gross Domestic Product in 2014.

According to the notion of Martin Paldam Greenland ought be able to find 2% from the mining sector. Furthermore, Martin Paldam emphasized the growth potential in tourism, which according to his calculations the number of tourists that is equivalent to the population of Greenland on 56.000 would mean an increase that is equivalent to around 6% of the Gross Domestic Product. The latest projections from the Government of Greenland states that the longterm effects of the tourism sector holds about 6,7% of the Gross Domestic Product.[45] A slightly improved projection. Overall, a possible substitution of around 32% of the block grant from the Danish Government, if we use the calculations by Martin Paldam.

The notion by Lars Lund that can be linked to the possible substitution for the block grant from the Danish Government is, the use of the renewable energy resources in order to build an aluminum smelter. According to his calculations the annual operational expenditures from the smelter would be the equivalent of around 5% of the Gross Domestic Product, or around 20% of the block grant from the Danish Government.

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[45] The Government of Greenland, 2016.

If we add all the suggestions on possible substitutions to the block grant from the mining sector, the tourism sector and from the aluminum sector, we are short with around 1.750M DKK, or 48% of the block grant from the Danish Government. That is equivalent to about 12% of the Gross Domestic Product that needs to be substituted in the long run, in order to fill the void left by the immediate removal of the block grant from the Danish Government.

With the introduction of the independence, Greenland will start negotiations with other states. It is likely that one of the first negotiations will consist of the military base by the United States of America in Thule. The theoretical discount given to Denmark is around 16.000M DKK in 2014. Let us play with the idea, and say that the presumably ignorant Greenland can only make a deal that is only equivalent to the 3% of this theoretical discount, 480M DKK in nominal terms.

In total the jaw of death will be at around 1.300M DKK or 9% of the Gross Domestic Product in 2014 in nominal terms after including the theoretical deal with the United States of America, which is the equivalent to around 36% of the block grant from the Danish Government in 2014. With the application of the suggestions by Martin Paldam and Lars Lund, it means that the Government of Greenland would have to downsize its expenditures with around 19 percentage points in the long run, in order to reach its natural equilibrium without the help of the block grant from the Danish Government. The 19 percentage point retraction will be “the only one” that will be required of the public sector, if it is the public sector that creates all the suggested substitutions made by Martin Paldam and Lars Lund. That 19 percentage point will have to be much bigger if the public sector chooses to let the private sector do the developing of these substitution sectors. However, initially the abolition of the block grant from the Danish Government would mean downsizing the Government budget with around 55%, and the municipalities’ budget with around 45%. A significant blow to the actual overdeveloped public sector, that is currently dependent on the transfers from the Danish Government.

Now, the time it will take for Greenland to adjust to the reality where the block grant from the Danish Government has been removed, depends upon numerous variables. In order to come up with an educated guess on this matter, I will look at the empirical evidence in Iceland and Ireland, namely on the empirical evidence on how long it took for these two countries to overcome the obstacles of an economic crises.

Due to the subprime crisis[46] Iceland experienced a painful economic crises that lasted three years. The Gross Domestic Product of Iceland retracted with around 9 percentage points during two to three years. Besides the imposed painful austerity measures, that Martin Paldam would call as the World Bank diet, the Government in Iceland had to run with a deficit equivalent to the 10% of the Gross Domestic Product of Iceland the first year of the economic crisis, and subsequently had to reduce the deficit to 0% during the following four years. This World Bank diet helped the Icelandic economy to stabilize in the course of three years, and subsequently allowed it grow again[47].

In parallel to Iceland, Ireland also experienced a painful economic crises during the subprime crisis.

In Ireland's case, the economic crises lasted six years. The Gross Domestic Product retracted with 14% the initial year and with 6% the next year before stabilizing[48]. In 2013, Ireland's debt relative to its Gross Domestic Product has shot up to a massive 125%. At the end of 2014 the Irish Government still had a deficit that is equivalent to around 3% of its Gross Domestic Product. The unemployment rate had grown with 8 percentage points during the six years with the economic crises. The rise on the unemployment is worst in the construction sector. In line with Greenland the welfare system in Ireland provides welfare benefits to the unemployed. Ireland is also dealing with a population in a working age that are currently outside its workforce that is equivalent to around 26% of the population in a working age[49].

The block grant from the Danish Government is 27% compared to the Gross Domestic Product in 2014. An immediate removal of the block grant will initially contract the Gross Domestic Product with 27 percentage points. How long it would take for Greenland to recover from the immediate removal of the block grant will depend on numerous variables. However, by looking at the empirical evidence from Iceland and Ireland, we can give an educated guess on how long it would take for Greenland to overcome the ramifications on the immediate removal of the block grant.

The welfare system in Greenland provides welfare benefits to the unemployed as in

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[46] (Investopedia, 2015)

[47] (Statistics Iceland, 2016)

[48] (World Bank, 2016)

[49] (Central Statistics Office of Ireland, 2016)

Ireland. Greenland will no doubt suffer painfully with an immediate removal of the block grant from the Danish Government, considering its provision of the welfare benefits. The construction sector in Greenland, that represents 12% of the economy would suffer, partly due to its interdependence with the demand from the public sector. Furthermore, the structure of the Greenlandic society resembles Ireland more than it does Iceland. This suggests that it would take a long time before the economy of Greenland begins to grow again. That is if Greenland should choose to uphold the actual level of its welfare system. If Greenland should choose to uphold the level of its welfare system, the government debt would skyrocket in no time. That in itself would be unsustainable in the long run.

According to Lars Lund, the choice for Greenland would be between much lower wages or much lower employment. In any case the Construction sector with its 2.146M DKK annual turnover, and Commerce & Workshops sector with its 2.398M DKK annual turnover would suffer the most. It is especially the construction sector that will suffer the most, due to the prospect of massive defaults in mortgaging, since mortgages are created with the equilibrium based on the actual level of income in the economy and the housing subsidies.

The trade deficit in 2014 is around 1.285M DKK. This massive trade deficit that is equivalent to around 9% of the Gross Domestic Product, is an indicator for an overconsumption in the economy. The export of seafood in 2014 represents around 95% of all the exports on 3.029M DKK. A quick calculation shows that it requires around 1.425M DKK to cover the trade deficit after inputting only the seafood exports. That is equivalent to around 10% of the Gross Domestic Product.

If we assume that the trade deficit has to be abolished with the removal of the block grant from the Danish Government, the initial retraction of the Gross Domestic Product on 27%, would mean that the retraction in non-importing part of the economy has to be around 17%.

No matter the starting point, it would be rationally preferable for Greenland to choose the path taken by Iceland rather than the one taken by Ireland. If Greenland should follow the path of World Bank diet taken by Iceland to the letter in case of the immediate removal of the block grant from the Danish Government, the Government of Greenland will have to immediately downsize its expenditures with around 2.446M DKK in 2009 prices in 2014, and subsequently with around 241M DKK in 2009 prices

each year the next 4 years. In parallel to this massive contraction of the government expenditures, Greenland will have to diverge the production in the economy, away from the subsidized and distorted market fragmentation, towards the development of the production in the economy based on the free market principal in areas such as tourism, mining, and the utilization of the massive renewable energy resources, namely the construction of the aluminum smelter, in accordance with the suggestions made by Martin Paldam and Lars Lund.

According to the Statistics Iceland, 35% of the Icelandic workforce has no formal skills training other than the basic education. That is about half compared to the level of no formal skills training in Greenland. However, as the notion of Martin Paldam goes, the development of the tourism sector ought be compatible with the low level of formal training of the workforce in Greenland, since the only formal requirement being able to communicate with the incoming tourists.

This prospect of adjustment that is construed according to the empirical evidence in Iceland and Ireland, and with the help of notions from Martin Paldam and Lars Lund, has a timeline of 5-10 years at best if done properly, and accordingly to the best practice in the international community, namely from the Icelandic case.

The end result is an independent Greenland with a Gross Domestic Product that is around 9% lower than that in 2014. And if the public sector itself implements the substitutions suggested by Martin Paldam and Lars Lund, a public sector that is 19 percentage point smaller than its size in 2014. In total an economy that sustain itself with a modest trade balance, and possibly converging toward higher income countries, should it be able to overcome the “Middle income trap” effectively.

6.3.3 “Status quo is not an option”

In 2011 the public commission called “Akileraartarneq atugarissaarnerlu pillugit Isumalioqatigiissitaq”, roughly translated as “Tax and Welfare commission”, published a report called “Pigissaarnissarput atugarissaarnissarpullu massakkut iliuuseqarfigineqartariaqarput”[50], roughly translated as “It is now that we have to do something about our future well-being”. The report describes social problems, lack of education, distorted housing market, elderly care, welfare benefits, vulnerable groups in the so-

[50] (Tax and Welfare commission, 2011)

ciety, public pensions, taxes, natural resources, and the public sector economics.

Ever since the Finance Minister in 2011 announced that Greenland will be needing on average 1 billion DKK per year until 2040, the Government of Greenland, namely Reform-group situated under the Department of Finance, started forming what can be perceived as reforms needed in order to maintain the level of welfare in the economy of Greenland.

In 2007 the Parliament raised the retirement age from 63 to 65, and the retirement age will again be raised from 65 to 66 in 2017, and again from 66 to 67 in 2021[51]. Another change is the lower deduction rate for a recipient, if the recipient's partner have an extra income. The deduction rate was lowered from the 50% of the extra income to the 30% of the extra income. The intention of these two changes beside the increase in retirement age, is to incentivize working for an extra income besides the public pension.

Besides the Pension Law that is already passed in the Parliament, there are numerous reforms underway to the Parliament. Mandatory contribution by all workers to a pension fund at 10% of the taxable income by 2023[52]. Introduction of a direct taxation on the contributions to foreign pension funds, on pension fund dividends, and stock market profits[53]. And Budget Law that ought to limit the public spending[54]. Furthermore, the Finance Minister herself has two distinctive proposals in her sleeves. EITC or earned income tax credit, and reduction of the corporate tax rate[55].

In order to counter the 100% direct financing of the public pensions, the Government of Greenland plans to propose a mandatory contribution by all workers at 10% of their income. Through this restructuring of the pensions, the Government of Greenland will be able to slash a chunk of the future funding problems of the welfare system. Another issue concerning the pensions are the untaxed transfers of the contributions to the foreign pension funds. In order to limit the untaxed transfers from Greenland to foreign pension funds, the Government of Greenland plans to propose a Law that directly will tax the transfers to the foreign pension funds. Thus limiting the

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[51] (Parliament of Greenland, 2015)

[52] (The Government of Greenland, 2015)

[53] (The Government of Greenland, 2015)

[54] (The Government of Greenland, 2015)

[55] See chapter 9.23 for the interview.

transfers of untaxed income from the economy to foreign entities. The same goes with the upcoming proposal of taxation on capital profits, namely stock market profits which currently is not taxed by the tax authorities in Greenland.

Overall the Government of Greenland with the proposals mentioned above plans to tighten the regulation of the unregulated part of the economy, and collect new taxes at the same time.

During the analysis of the current economic situation of the economy, we observed that the public sector is distorting the free market principal in the economy, by bailing out Royal Greenland with 500M DKK in 2009. With the proposal on a new Budget Law, the Government of Greenland plans to achieve budget limitations, thus limiting the growth in public expenditures. The proposal is, that any 4 year budget will always be balanced when it comes to incomes and expenditures. The growth on expenditures in real terms in the public administration is to be maximum 1,5% per year, with a total real growth on 2% during the 4 year budget period.

The position as a Finance Minister is currently occupied by a member of a party called Demokraatit, that is an advocate of low corporate tax rate[56] and EITC or earned income tax credit[57]. The intention of lowering the corporate tax rate from its current rate on 30%, is that the economy of Greenland ought get more inviting for any capital to stay in the economy. Compared to corporate tax rate on 20% in Iceland[58], 18% in Faroe Islands[59], and 22% in Denmark[60] the Greenlandic corporate tax rate is very high. Anyhow the lowering of the corporate tax rate in Greenland would have to be substantial in order for it to be effective, as the key factor here will be the construction of its signal value compared to the intended effect.

As mentioned above the EITC or Earned Income Tax Credit is something the party Demokraatit is the advocate of. Earned Income Tax Credit would no doubt incentivize work. But in an economy where employment per invested capital is too high and a low level of capital investments on the secondary industry, and not to mention the poor labor market condition, the implementation of the Earned Income Tax Credit

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[56] (Greenland Broadcasting Corporation, 2014)

[57] (Greenland Broadcasting Corporation, 2013)

[58] (KMPG Iceland, 2015)

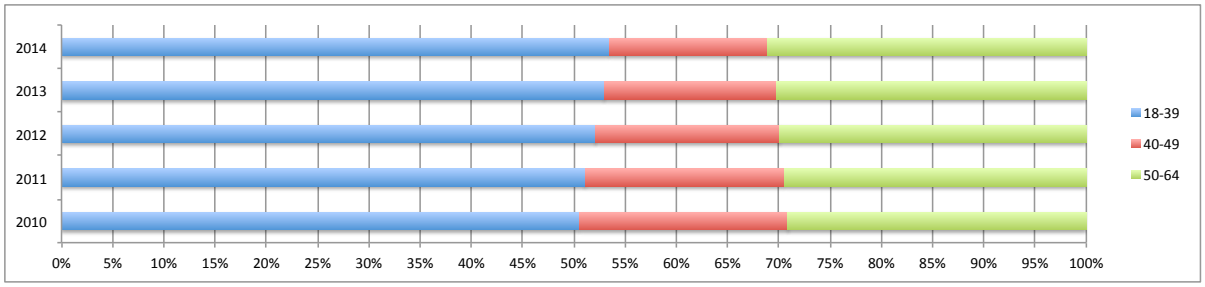
[59] (Ministry of Trade and Industry of Faroe Islands, 2016)

[60] (Ministry of Foreign Affairs of Denmark, 2015)

would have little effect due to the disproportionality between the cost and the intended effect. However, there is another way the Minister of Finances can incentivize work with little economic cost. That is by removing the tax deductibility of the welfare benefits received from the public sector. By converting the Personal Allowance into Earned Income Tax Credit. This means that all of the recipients of transfer incomes and social security benefits will lose their Personal Allowance, and would have to start working in order to get it back.

Tax and Welfare commission has also some distinctive proposals on what ought be done in order to ensure the prevalence of the welfare system as we know it, and that is reactivation of the unskilled part of the workforce. With a 61% of the population in a working age having no formal skills training, it is understandable that the Tax and Welfare commission proposing that the public sector have to do something about this issue. According to the commission the keyword is **early intervention**. The commission proposed that early intervention on youth ought equip them with better tools to function better in any educational lines, and subsequently in the workforce.

Figure 6.3.12: People in a working age outside the workforce.



Source: (Statistics Greenland, 2016) - (See chapter 9.24 for data).

Figure 6.3.12 above shows the composition of the recipients of transfer incomes and social security benefits of the welfare benefits that is currently positioned outside the workforce. What we can observe from the figure is that there has been an increase of <39 years of age recipients of the welfare benefits. If we contrast the figure 6.3.12 with the figure 6.2.14, we can observe the correlation between the lack of formal skills training and an increase of a younger population in a passive mode due to the benefits received from the welfare system. A development that with the right strategy can be overturned.

Another distinctive proposal from the Tax and Welfare commission was a reformation of the housing sector in the economy. Tax and Welfare commission proposed that all of the direct and indirect subsidies such as availability of the favorable mortgage loans from the public sector, tax deductions on the interest paid on the mortgage loan(s), and direct public housing subsidies, that allow people with low income to rent for a much higher monthly fee than would be possible without it due to their low income level, ought be removed entirely. According to the calculations made by the Tax and Welfare commission, the annual direct and indirect public subsidies for housing in Greenland totaled at around 440M DKK. Around 110M DKK for the direct public housing subsidy, and around 330M DKK in indirect subsidies on the favorable mortgage loans, the tax deductions on the interest paid on the mortgage loans, and a return on capital from "the investment"[61] in public housing that according to the Tax and Welfare commission is theoretically too low. The abolition of all the subsidies on housing would slash around half of all the funds needed to uphold the welfare system until 2040 as the Economic Council puts it. No wonder why the Tax and Welfare commission wants to abolish all of the subsidies on housing.

The suggestion from Martin Paldam is as simple as Greenland becoming an ordinary country. By that he means that Greenland ought to remove itself from being economically dependent from the Danish Government and its block grant transfers. His suggestion goes as shrinking the public sector to its natural[62] economically viable equilibrium, prioritizing any private business initiatives, prioritizing the educational programs in commercial, mercantile and business sectors, removing the universal service that prevent the free market principle with cross-subsidies on utilities or subsidized supply lines for the economically nonviable settlements, and an introduction of fair play[63] in all sectors in the economy.

In his suggestion on shrinking the public sector, Martin Paldam points out two distinctive expenditure cuts that can be made in order to meet his recommendations. The first one is by replacing the usage of the foreign labor in the Government of Greenland with Greenlanders. The second one is saving expenditures on the high level universal service by allowing people to naturally move to bigger settlements, thus

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[61] The Government of Greenland took over the public housing in Greenland from the Danish Government for free.

[62] By natural he means, without the help from the block grant from the Danish Government.

[63] E.g. he would not have agreed with the 500M DKK bailout of Royal Greenland from the Treasury in 2009, that shifts the competitive advantage towards Royal Greenland.

minimizing the number of settlements. Another notion of his is that there ought be a concentration from the public administration of educating the workforce into commercial, mercantile and business sectors, thus point the direction towards a bigger private sector compared to the public sector in the economy that is basically 50:50 at the moment.

Martin Paldam has seemingly overrated the level of the acquisition of formal skills training amongst the Greenlandic population in his proposal on shrinking the public sector. If his proposal should be immediately implemented Greenland will not achieve anything other than a decrease in productivity amongst the public workers.

In 2012 the public sector introduced the need for dividends in its net-controlled companies and its corporations, thus abolishing many indirect subsidies from the Treasury that upholds some parts of the high level universal service compared to the Gross Domestic Product. However, there is still a long way to go in order to complete the list of proposals made by Martin Paldam on shrinking the public sector. Considering the numerous direct, indirect and cross subsidies in goods and passenger transportation sector, wholesale business sector, and telecommunications. Not to mention the inclination of the Government of Greenland in bailing out its corporations, thus distorting the free market principle.

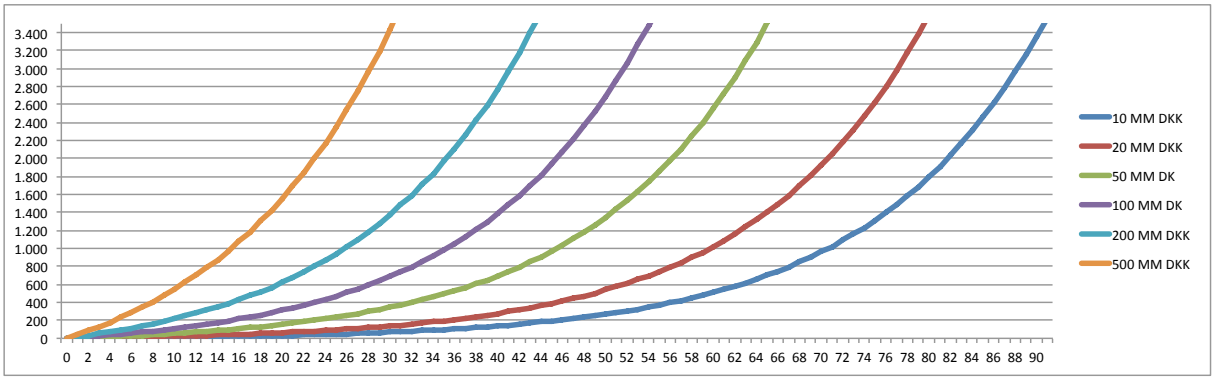
Lars Lund suggests three different scenarios in which Greenland can become less dependent, or even fully independent, from the Danish Government and its block grant(s). The first one is to grow Greenland out of the dependency, the second one is to save Greenland out of the dependency, and the third one is to buy Greenland out of the dependency.

If we look at the first one, Lars Lund suggests that Greenland should introduce what he calls a third sector. A new export sector that according to him should be organized as a service sector, and should be organized according to the formal skills training and wages of the workforce. A gradually increasing third sector compared to the other sectors, that eventually will lead to higher employment rate in the economy. A fitting suggestion considering the poor labor market condition and the low level of skills training of the workforce. In addition, he suggests that Greenland should be better at exploiting its massive renewable energy reserves. He specifically concentrate on utilizing the massive renewable energy reserves in building an aluminum smelter. A massive capital investment in the secondary industry, that can provide Greenland

with a couple thousand jobs, thus strengthening the tax base and making the dependency from the block grant from the Danish Government smaller.

The most exciting proposal from Lars Lund came from his notion of Greenland's ability to save itself out from the dependency from the block grant from the Danish Government. That instead of using the entire block grant from the Danish Government every year, Greenland ought set aside a lump of the block grant in an investment fund. An investment fund, that can also be capitalized with the tax revenues, that in the future will eventually have an interest earned that matches the entire sum of the block grant from the Danish Government. A contrast if you like, to Lars Lund's proposal came in 2016 from the minority leader in the Parliament. She suggests that Greenland should slash 10M DKK in nominal terms each year from the block grant, thus gradually remove the economic dependency from the block grant[64]. This proposal is directly rejected by the actual Finance Minister from which she explained that the block grant has already been eroded by inflation since the introduction of the Self-Government in Greenland[65].

Figure 6.3.13: Theoretical projection of the interest earned in the investment fund[66].



Source: Self made.

A simple mathematical computation as shown in figure 6.3.13 above, with the variables such as an average inflation rate on 1,7% that is equal to the one during the period of 2013-2015, and an average interest earned on 8,24% from the pension fund

64 (Sermitsiaq, 2016)

65 (Sermitsiaq, 2016)

66 $Amount_{(t)} = Amount*(1+r)^{(t)}$

during the period of 2010-2014[67], lets us observe how long it will take for an investment fund to reach a level of interest earned that matches the block grant from the Danish Government. Even though this simulation is only theoretical, it lets us to observe the aspect of time that is required in order for the interest earned to reach the level of the block grant from the Danish Government. If the wish on economic independence is strong enough amongst Greenlanders, there is no stopping them from implementing this theoretical trick suggested by Lars Lund. Especially considering how insignificant 10-20M DKK a year in cutbacks from the public expenditures would be, compared to the total of the annual public budget. But also considering that it would go much faster if all of the extraordinary incomes made by the Government of Greenland goes to the investment fund, or Independence fund if you like.

The third option according to Lars Lund is to buy Greenland out of the dependency from the Danish Government and its block grant. According to him Greenland should make an effort to find massive amount of natural resources, namely oil and gas, and that way become able to replace the block grant from the Danish Government with huge revenues from oil and gas. This source will off course would be finite source of income compared to the seemingly infinite source of income the block grant is.

Greenland can also choose have these three differing theoretical scenarios at once, and boil it down into a single theoretical scenario. What we have to keep in mind here, is that we are on a macroeconomic level. With a massive influx of capital investment on the construction of an aluminum smelter, and with a huge human capital investment on the so-called third sector, the economy of Greenland grows. Instead of consuming the whole block grant every year, the Government of Greenland set aside around 10-20M DKK each year to an investment fund that has adopted the Greenlandic pension fund's investment portfolio, and add the capital funding to the investment fund with an increase in the personal taxation with 1 percentage point. Moreover, Greenland inject all the extraordinary revenues from the exploited natural resources into the investment fund, to speed up the accumulation of the capital in the investment fund, thus shorten the time required for the interest earned from the accumulated capital to replace the block grant from the Danish Government. We then have an isolated formula, that eventually can speed up the process of Greenland becoming economic independent from the Danish Government.

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[67] (SISA, 2015)

Now let us look at each proposals on reforms above, and assess their individual level of difficulty they ought have in being implemented in the economy of Greenland.

From the Tax and Welfare commission we have suggestions such as abolition of subsidies that distorts the housing market, and restructuring of the welfare benefits so they would incentivize work more than they would incentivize being a recipient of transfer incomes and social security benefits.

From the Government of Greenland we have suggestions such as restructuring of public pensions, introduction of the compulsory pension savings, restructuring of the Budget Law, introduction of the taxation on capital income, introduction of EITC or Earned Income Tax Credit, and the reduction of the Corporate Tax rate.

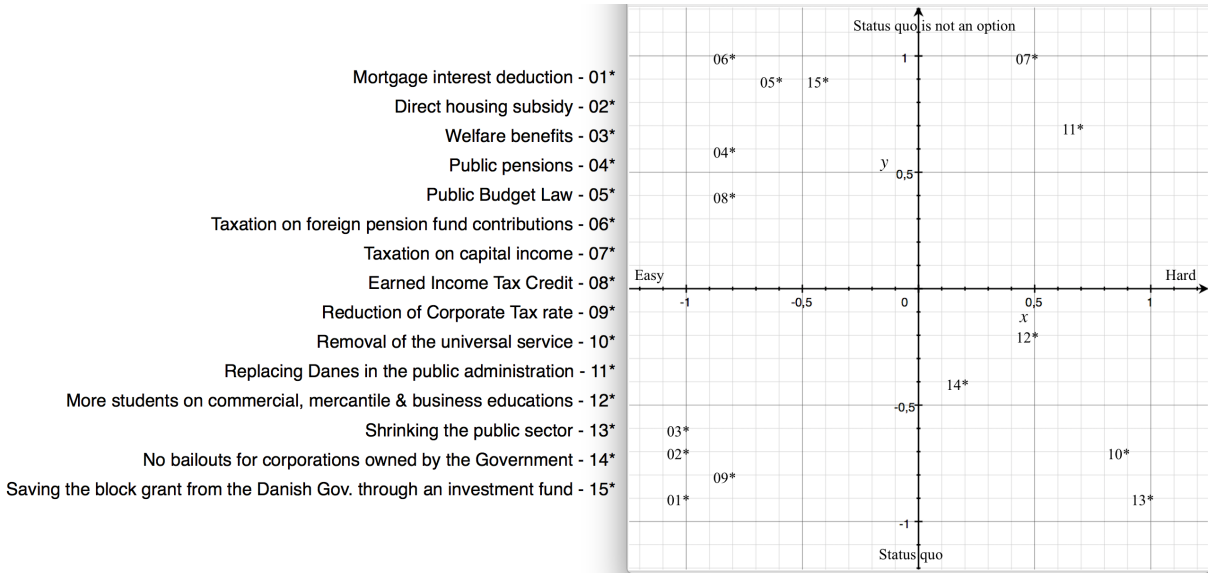
According to the notion of Martin Paldam the reforms should be removal of the high level of the universal service, replacing Danes in the public administration with Greenlanders, focus on the commercial, mercantile and business educations, shrinking of the public sector to its “natural” equilibrium, and the abolition of any kinds of bailouts to corporation, namely to those owned by the Government.

Lars Lund made a very interesting notion on the creation of an investment fund that eventually will lead to an economic independence of Greenland from the block grant received every year from the Danish Government.

Figure 6.3.14 below shows what I perceive as the classification of the reforms suggested by Tax and Welfare commission, The Government of Greenland, Martin Paldam and Lars Lund.

According to the latest statistics (2010) from the Statistics Greenland, the homeownership in cities were 26% compared to the homeownership in settlements on 60%. However, the number of privately owned households in cities were 4.965 compared to the number of privately owned households in settlements on 2.208. Approximately for each publicly owned home is build, there are two privately owned households build each year. If the suggestion on the abolition of housing subsidies by the Tax and Welfare commission is to be implemented, around 7.200 households will be affected. All 7.200 households will lose their ability to deduct their interest payments on their mortgage loans from the income tax.

Figure 6.3.14: Plotting of the suggested reforms according to their level of difficulty.



Source: Self made.

Note: The x-axis represents the level of difficulty the implementation of the said reform will have on the public administration, whilst the y-axis represents the level of consensus the said reform could have amongst the population.

Furthermore, considering the actual amounts used to the direct public housing subsidy, around 110M DKK annually, many tenants will be forced to pay more. Considering around 13.000 people that are currently situated in the lower class, the removal of the direct housing subsidies will mean that either increase in homelessness or more people owing rent to the Government of Greenland, or both. This will put a pressure on the Treasury that already has an outstanding debt from its citizens that is fluctuating about 850-1.100M DKK annually[68]. The abolition of mortgage interest deductions will be quite easy since it will only require a tweak in the already existing taxation system, and the abolition of the direct public housing subsidy will ease the burden of the public administration. However, the political ramifications will be tremendous, since it concerns at least 7.200 households.

The welfare benefits that are given to the people according to their disposable income level consist of two welfare benefits. General welfare benefits and Child benefits.

Currently a single mom gets twice as much in benefits than the woman with no children. In addition, there is a disproportional welfare benefits between couples with children and couples without children, if the partner is in employment. If your partner

[68] (Greenland Broadcasting Corporation, 2013)

becomes employed and you do not have any children, you will lose 88% of your welfare benefits compared to the loss of only 5% if you have children and your partner becomes employed.

Furthermore, in an income interval 100.000-200.000 DKK, there are numerous so-called “poverty traps”, where the marginal tax can be very high. A poverty trap where you lose a high percentage point of the child benefit or where you begin to pay for the daycare for your children. According to the Tax and Welfare commission around 7.200 people, around half of them under the age of 40, are the recipients of the welfare benefits distributed in around 5.600 households. In addition, around half of the 7.200 recipients does not have children. The sum of the expenditures on welfare benefits totaled around 89M DKK[69]. In parallel to the abolition of the direct housing subsidies, the abolition of the welfare benefits will ease the burden of the public administration. But then again, we are talking about many voters to the politicians here. Numerous voters that can cause a significant political damage to the sitting Government that wishes to implement an abolition of the said welfare benefits.

In 2015 the public pension reform was passed in the Parliament. This means that the actual retirement age will be raised from 65 to 67 during the period of four years. The extra administrational burden should be limited due to the integration of the new rules into the already existing income taxation system. However, the payouts of the public pensions are administered by the municipalities. This can eventually lead to a differentiated processes, due to differing practices amongst municipalities. This can eventually lead to inefficiencies, however, small they may be. The process in passing of the Law on the pension reform seems to have been relatively painless, with the main opposition party Inuit Ataqatigiit only referring to how fast the process in raising the retirement age ought be[70].

The upcoming suggestion on compulsory pension savings on 10% of the income is seemingly politically unproblematic, with no alarming indicators in the media. The administrative burden should to be minimal, with the widening of the already existing system of payments to the pension fund, by the inclusion of the workers that currently does not pay contributions to any pension funds.

The direct ramifications of the upcoming suggestion on a new Budget Law on the pu-

[69] (Tax and Welfare commission, 2011)

[70] (Greenland Broadcasting Corporation, 2015)

blic sector should only be felt by the public administration itself. Any indirect ramifications should not be directly discernible, until some public sector becomes in immediate need for funds. At that point the Law itself, should it become implemented in its unchanged form, allows for any extraordinary expenses by the Government of Greenland to stabilize the important parts of the economy[71]. The administrational burden that can be discerned here is the upcoming limitation on the public workers ability to negotiate in order to get their respective Departments a higher expenditure than the new Budget Law would allow.

The upcoming suggestion on the introduction of a taxation on contributions to the foreign pension funds has not met resistance, yet. Even when considering the many highly paid foreigners working at the Government of Greenland that ought to have an interest in not letting the Bill passed. In the light of nationalistic inclinations by Partii Inuit that got 6,4% of the votes in the 2013 Parliamentary election[72], and Partii Naleraq that got 11,6% of the votes in the 2014 Parliamentary election[73], it is possible that the suggestion on the introduction of a taxation on contributions to the foreign pension fund[74] will be met with open arms amongst some parts of the population that mainly pays, or will pay with the introduction a compulsory contributions, to the domestic pension fund.

The broadening of the tax base with the introduction of the taxation on capital income should not be dramatic amongst lower and middle income classes, with incomes that ranges from 82.000DKK to 246.000DKK, since their income level limits their options in trading stocks, bonds etc. However, it is another matter in how the administration of this taxation will work. For instance, is it going to be the banks that normally administer the deposits of stocks, bonds etc., that will have this extra administrational burden, or how will the tax authorities going to secure that the individuals trading stocks actually pays their taxes on capital income(s). This can become an administrational predicament, especially considering on how the tax authorities is going to identify the individuals that trades stocks, bonds etc., and isolate them so they will pay their taxes accordingly to the new Law.

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71 (The Government of Greenland, 2015)

72 (Qinersineq, 2013)

73 (Qinersineq, 2014)

74 Contributions that Greenland hardly will ever see again.

The introduction of the Earned Income Tax Credit will be relatively painless for the tax authorities, since it can be integrated into the already existing administrational system. And it will surely be welcomed by the workforce that is currently employed.

In parallel to the introduction of the Earned Income Tax Credit, the lowering of the corporate tax rate will be seemingly painless on the public administration, since it can be integrated into the already existing taxation system. However, the signal value is another story. During the last election to the Parliament in 2014, the liberal parties Demokraatit and Atassut got only 18,3% of the popular votes, from which we can safely assume that Greenland is mainly a socialist nation. That is why I think that it will be hard for most of the Greenlander to comprehend why Greenland has to get a lot less, e.g. 75M DKK less at the 15% Corporate Tax rate, in order to get massively more. The challenge here is to communicate the dynamics behind the actual transfer-pricing in everyday language, so that most of the Greenlanders can understand it. If it cannot be mediated correctly, the Government of Greenland will have a hard time in order to let Greenlanders to back the lowering of the Corporate Tax rate up. However, the Government of Greenland can also choose to ignore the popular opinion, and just lower the Corporate Tax rate through their majority in the Parliament. But this depends on the political resilience by the majority in the Parliament to the popular opinion. Something that might be hard to uphold, considering the actual political landscape in the Parliament.

The notion on the removal of the universal service by Martin Paldam is the reform that will have the most difficulty in being implemented by them all. Every individual in the economy requires a certain level of basic services in order to survive, e.g. the peripheral Greenland needs maintenance in its traffic infrastructure in order to maintain its lifeline to “the civilization”. And even though all of the cross subsidies that maintain the inefficient market(s) have been abolished, there would still exist a need amongst the population to uphold a certain level of universal service, however, low that may be. In addition, each city and settlement in the peripheral Greenland will become harder to reach, thus becoming harder to administer.

The educational line called *Inuiaqatigiilerineq* at the University of Greenland[75] is an academic line that has been created in order to replace the foreign public workers at the Government of Greenland. According to Statistics Greenland there are 297 Gre-

[75] (University of Greenland, 2016)

enlanders that has a minimum education at Master-level, compared to 739 amongst foreigners in 2014. That is equivalent to around 5 foreigners for every 2 Greenlanders that has a minimum educational level as Master. With only 5 people becoming Masters at the University of Greenland[76], there is at the moment little indication on Greenland's ability to replace Danes at the Government of Greenland without losing efficiency. This makes replacing Danes at the public sector a very hard challenge, no matter how big the wish is amongst the population that consists of 89% of Greenlanders. In addition, the natural equilibrium of the competition between the lower educated Greenlanders and the higher educated foreigners, would always favor foreigners if the structural unemployment in the economy is not handled properly.

Greenland has two colleges that offers educational lines in commercial, mercantile and business sectors. A total of 93 people started their education at the educational line in these three sectors in 2014, of which 74% were in mercantile area. There were 176 active students in all of these three sectors in 2014. 50 students prematurely left their education from these three educational lines, of which 47 of them are from the mercantile educations. 53 students completed their education, of which 42 of them are from the mercantile educations. When considering that 61% of the entire population in a working age having no skills training, and a current success rate of 50% in completions, mixed with the low level of domestic participation in commercial, mercantile and business educations, it is difficult to comprehend how educational lines in commercial, mercantile and business sectors would be able to accommodate a massive influx of students during a short period of time. Furthermore, there is a matter of finding and utilizing the right incentives in order to lure people into such educational lines, when also considering the negative incentives that exist that promotes people into the welfare due to the level of the welfare system in the economy.

The matter of shrinking the public sector to its natural level as Martin Paldam suggests it, will be the most challenging reform of all, considering the high level of interdependency between the private sector and the public sector. The public sector is not only acting as a stabilizer for the economic fluctuations in the economy, but it is also overwhelmingly present in all of the economic sectors in the economy. Once cut, this relay of vital economic subsidy if you like, will introduce timidity in the economic sectors that otherwise would not be able to sustain themselves without it, thus de-

[76] (University of Greenland, 2016)

stabilizing most of the economy. In addition, the economic retraction of the overdeveloped public administration should leave a significant void in bureaucracy. This would decrease the level of the universal service in the peripheral Greenland significantly enough to notably worsen the overall service sector. Furthermore, the retraction of the public sector would make the implementation of the Governmental policy difficult, that eventually could lead to feuds between the public sector and the ordinary population, e.g. on allowances in fisheries for the individuals. In general, for a generation or two, Greenlanders have become accustomed to a life where the public sector is not only sizable compared to the Gross Domestic Product, but also as a possible source of welfare benefits. That is the reason why I consider the retraction of the public sector to its natural equilibrium as Martin Paldam suggests it, as the most difficult and challenging reform of all.

Another notion by Martin Paldam is the abolition of any bailouts by the Government of Greenland to its corporations. In this case, the 500M DKK bailout of the Royal Greenland by the Government of Greenland in 2009 is a good example. The size of the bailout alone indicates that Royal Greenland would not have remained liquid without the bailout. We can perpetuate on the economic ramifications that would follow if the Government of Greenland had chosen to let Royal Greenland go bankrupt. However, what we can know for sure is that the bankruptcy of Royal Greenland would mean an abolition of the relatively new oligarchical dominance of Royal Greenland, Polar Seafood and Halibut Greenland. This would re-introduce duopoly consisting of two private corporations. Even though the idea of the public, with its economic ability and power, pulling back from the fisheries sector is in itself preferable, the introduction of the duopoly in exchange for the abolition of oligopoly will only be counter-productive, when considering the culture of passivity that is associated with the recipients of transfer incomes and social security benefits amongst the population. A state with numerous recipients of transfer incomes and social security benefits that is seemingly suggesting that we should expect the level of startups in fisheries will be quite limited once the announcement of bankruptcy of Royal Greenland is made. In addition, the idea itself of no bailouts to the illiquid yet systemically important corporations owned by the Government of Greenland, might be difficult to comprehend for some politicians considering the lists of possible economic ramifications that will follow the announcement of bankruptcy by a corporation owned by the Government of

Greenland. Not to mention the issue on how many popular votes will be lost due to this allowance of the bankruptcy by the politicians.

The notion of Lars Lund on saving a portion of the block grant from the Danish Government in an investment fund in order to achieve a replacement of the block grant through the interest earned in the investment fund, is an exiting proposal that definitely will put an approximated date on the wanted economic independence in Greenland from Denmark[77]. Saving even a fraction of the block grant from the Danish Government has seemingly never been tried in Greenland, that is why it would be difficult for the Government of Greenland to find expenditure savings in order to fund the investment fund during an actual economic recession. However, the most difficult part of saving Greenland out of the block grant from the Danish Government as Lars Lund suggests it, is to effectively organize the investment fund. The investment fund will want to avoid embedding the economic deadweight losses that otherwise is normally associated with the public sector economics. The matters at hand are for instance, the question on whether the investment fund should be a net-controlled or a corporation, or on how high the level of indulgence the Parliamentarians should give to the caretaker of the investment fund to take risks in his/her investments. There is also the question on whether to pull interest earned out from the investment fund annually or not. Considering the relatively need of achieving the economic independence from the Danish Government in Greenland, it is seemingly easy to accommodate the idea of an investment fund, where the interest earned will eventually replace the block grant from the Danish Government. This idea would be easy to absorb and to approve for the population, as long as the annual savings in the public expenditures are not too high during the recession off course. The exception here will be those that do not want to see Greenland becoming economically independent from the Danish Government.

The total cost of implementing all of the reforms mentioned in figure 6.3.14 above, depends upon numerous variables. However, the most outstanding variable is the political resilience to the popular opinion that is trying to repress any prospect of economic reformation of the economy of Greenland. Politicians, especially Parliamentarians, should be particularly resilient to any popular opinions that threatens the pro-

[77] The informal debate on independence tends to concentrate on when, and not if, Greenland becomes an independent state.

spect of implementation of any reform in their entirety. E.g. Inuit Ataqatigiit's surrender to the popular opinion on raising the retirement age[78].

Variables that defines the costs/savings are as such. The savings that can be discerned from the difference between the future level of increases in the public expenditures without the Budget Law compared to what is allowed by the new Budget Law. The prospects of savings in future direct pension payouts in the advent of compulsory personal pension savings on 10% of the income. The level of the future trading in stocks, bonds, etc. after the introduction of taxation on capital income. The construction of the Earned Income Tax Credit. The level of decrease in Corporate Tax rate that eventually will cause an accumulation of capital in the economy of Greenland, thus increase the tax base. The politically allowed extend of reduction of the universal service. The annual percentage point increases in graduates with Masterdegree. The willingness by the unskilled people in a working age to enter the commercial, mercantile and business educational lines that concentrates the students into the tourism sector. The willingness by the population, politicians and the public workers in shrinking the public sector to its natural equilibrium as Martin Paldam puts it, and the individual cost-benefit analysis in future bailouts that resembles the one with the Royal Greenland bailout.

If the reforms mentioned in figure 6.3.14 above should be passed and implemented, the total savings/incomes cannot be fully comprehended due to many insecure variables. However, we can at minimum estimate the total savings/incomes according to the already calculated numbers from the Tax and Welfare commission. With the abolition of housing subsidies and the welfare benefits, the Treasury will save around 529M DKK annually in future expenditures, plus one or two major bailouts in the long run besting the three digit M DKK. Furthermore, the removal of any net-controlled public companies from the few competitive markets in Greenland, will decrease consumer prices with around 23% according to the calculations by Martin Paldam, thus removing some of the cross-subsidies that is producing deadweight losses in the economy.

If we look at the perception in figure 6.3.14 above, we can observe that the most needed economic reforms such as abolition of the housing subsidies, abolition of welfare benefits, reduction in Corporate Tax rate, removal or massively lowering of the uni-

[78] (Greenland Broadcasting Corporation, 2015)

versal service, shrinking the public sector to its natural equilibrium, abolition of any bailouts to corporations owned by the Government of Greenland, is seemingly hard for the population to approve of, thus subjecting the politicians to public scrutiny should they dare to endeavor into the implementation process. The matter at hand is then whether the politicians, namely the Parliamentarians, can resist this public scrutiny, before any productive outcome is achieved concerning the economic reforms in the economy. When looking at the seemingly preferred reforms in figure 6.3.14 above, we can observe that it is the easily achievable[79] reforms that is seemingly preferred by the Greenlanders. The preferred reforms are seemingly the ones that necessarily does not worsen the living conditions of the Lower and Middle Class.

6.3.4 The mention of the un-utilized export potential

During the period of 1907-1945 around 1.943M DKK in fixed 2013 prices, or 70% of all the revenues, from the living resources in the economy of Greenland has been unevenly transfer-priced from the economy of Greenland. Furthermore, if we isolate the extraction of natural resources, around 2.315M DKK in royalties, 4.543M DKK in dividends, and 1.766M DKK in profits in fixed 2013 prices has been unevenly transfer-priced from the economy of Greenland. A massive total of around 10.476M DKK in fixed 2013 prices has been unevenly transfer-priced from the economy of Greenland during the colonial period, from which the assumption on whether the Greenland is a source of raw materials by Denmark or not, can be answered. And especially when considering the low level of production capital and a high level of manual labor that characterizes the colonial period.

When comparing the unprocessed and semi-finished seafood products that are being exported from Greenland during the period of 2009-2014 with the homogenous products from Iceland, and in some cases in Faroe Islands, we can observe that around 14.401M DKK in nominal values has been directly transfer-priced from the economy of Greenland. It is the equivalent of 11% of the Gross Domestic Product in 2009, 15% in 2010, 16% in 2011, 20% in 2012, 21% in 2013, and 25% in 2014. Not some insignificant numbers.

According to the calculations the jaw of death is around 9% of the Gross Domestic

[79] Except the one on replacing Danes in the public sector.

Product. The joker here if you like, is the actual transfer-pricing, that averaged at around 2.400M DKK annually during the period of 2009-2014. Even when excluding the advent of the pelagic fisheries, the direct transfer-pricing averaged around 2.228M DKK annually during the period of 2009-2014. Moreover, the baseline if you like, is around 1.300M DKK, that suggests that even though with the absence of export market price increases on prawns and the absence of pelagic fisheries during the period of 2009-2014, Greenland could without hardship cover the jaw of death in the long run, if it chooses to combat the actual transfer-pricing. The only “predicament” in all of this equation is the shrinkage of the public sector to its natural equilibrium. The problem that lies on the public sector’s seemingly inability to comprehend its role in this whole equation, or chooses not to look at.

6.3.5 Partial conclusion

The ramification of the current economic situation in the economy of Greenland is an annual deficit of around 900M DKK until 2040 on the public expenditures. Greenland does not meet the theoretical variables that are required in order to converge towards higher income countries. Secondary industry represents only about 4% of the production. 61% of the population in a working age does not have any skills training. 1 out of 4 is being provided for by the welfare benefits without bothering in looking for a job. 77% of these people currently situated outside the workforce does not possess a formal skills training whatsoever. The technological adoption rate on the production side is seemingly low. This puts the international competitiveness of the economy under pressure. Overdeveloped public sector financed partly by the block grant from the Danish Government, is interfering with the free market principal. The recent development of the political stability is not consistent with a safe investment environment. The increasing productivity per worker due to lower employment indicates that the employment per invested capital is too high. Further increases in productivity can be achieved through formal skills training for the unskilled workers and/or increase in capital investments in the secondary industry. The long term savings rate is equivalent to 1,2% of the Gross Domestic Product, which is a low prospect of a long term economic growth. Greenland is currently ensnared by the “Middle income trap”, thus having a hard time converging towards higher income countries. In the advent of pelagic fisheries in Greenland and due to higher prices on cold-water prawns, the

actual transfer-pricing has increased almost three times the rate in 2009. This indicates that Greenland does not have the capital capacity to process the newly established pelagic fisheries by integrating it into the secondary industry. The block grant from the Danish Government is equivalent to 27% of the Gross Domestic Product of Greenland. In the long run, around 64% of the block grant from the Danish Government can be replaced by the suggested reforms by the Tax and Welfare commission, and Martin Paldam. In the absence of the investment fund suggested by Lars Lund, around 36% of the block grant from the Danish Government, or equivalent to 9% of the Gross Domestic Product, is not financed by any suggested economic reforms. However, this gap can be filled with gains from combatting the actual transfer-pricing in the economy of Greenland. Not to mention the economic growth potential that exists should Greenland choose to invest heavily on the secondary industry.

7. Discussion

7.1 Transfer-pricing

During the colonial period, the Danes have more or less maintained their monopoly on trade in Greenland, and it is this monopoly on trade in Greenland that seemingly made the commerce managers at The Royal Greenland Trade Department to reduce the trade in Greenland to a system. A system with strictly controlled pricing structure on all the traded goods in Greenland. Something to be expected of, by a monopolist. With the use of available economic data, we have established that in accordance with the applied theory of transfer-pricing, around 9.360M DKK in fixed 2013 prices have been unfairly transfer-priced from the economy of Greenland during the period of 1907-1952. That number would undoubtedly become higher if we had the opportunity to access the export quantities and foreign market prices on the Greenlandic commodities before the year 1907, considering the inclination by the commerce managers to underprice their purchases of the Greenlandic commodities on which they have monopoly on. What is striking here is the seemingly inactivity to counter the monopolist by the Greenlanders. Something that might be explained by looking at the possible substitutions Greenlanders had back then on the Danes, i.e. nothing. Furthermore, Greenlanders lacked the right qualifications and technology to take the matters in their own hands, and start to find other buyers for their commodities.

However, this massive unfair transfer-pricing during the colonial period is eclipsed with the transfer-pricing in the economy that stands around the total of 14.401M DKK from 2009 to 2014. Something that is equivalent to 4.697 extra employed, 691M DKK in extra corporate tax revenues to the Treasury, and 25% increase to the Gross Domestic Product. Compared to the colonial period, the contemporary Greenland has gained a territorial autonomy with the right to all the internal matters, including the economy. After observing the massive transfer-pricing during the period of 2009-2014, the two assumptions come along. The first assumption is that Greenland is actually experiencing a systematic direct unfair transfer-pricing in its economy. The second assumption is that the Government of Greenland is knowingly avoiding the issue of the massive transfer-pricing in the economy. If we look at the first assumption, Greenland is experiencing an unfair transfer-pricing in its economy. However, whether it is systematic or not, is a more complicated question. There are three diffe-

rent variables that can give a suggestion on whether the current transfer-pricing in the economy is systematic or not.

- The first one is the level of the Corporate Tax rate. The Corporate Tax rate in Greenland, 31,8%[80] is relatively high compared to the 20% in Iceland, 18% in Faroe Islands, and 22% in Denmark. Most of the exports on seafood from Greenland go through Denmark, that means that for each 100M DKK value you have transfer-priced from the economy of Greenland to Denmark, you save 9,8M DKK in Corporate Tax that you would be forced to pay in Greenland. If we factor in the transfer-pricing during the period of 2009-2014, we get savings by the various seafood companies that is equivalent to 1.411M DKK in avoided Corporate Tax in Greenland.
- The second one is mercantilism. The oligopoly consisting of Royal Greenland, Polar Seafood and Halibut Greenland is individually run with profits in mind. That is why it is senseless to assume that each of them are run with bad mercantilism, i.e. with disadvantage in the international competitive market.
- The third one is joint ventures. When looking at the oligopoly, you cannot miss noticing that they each have numerous subsidiaries and associate companies. This puts pressure on the Greenlandic seafood companies when coming to an agreement on how the transfer-pricing should look like.

With these three variables in mind, we can assume that the transfer-pricing in the economy of Greenland is more systematic than non-systematic.

Our second assumption is whether the Government of Greenland is knowingly avoids the issue of the massive transfer-pricing in the economy or not. During the last Parliamentary election the Premier Kim Kielsen[81] took on the issue of transfer-pricing in the economy of Greenland[82]. Even though he seemingly understood the process of transfer-pricing, he did not directly mentions the term. However, since the Premier is seemingly interested in combatting the transfer-pricing in the economy of Greenland, and have not yet begun to do so, means that either he has neglected his notion from the election or that the Government of Greenland does not have the capacity nor the required pool qualifications in order to combat the transfer-pricing in the economy. The latter being more probable than the first. So Greenland has massive problems

[80] Corporate Tax rate on 30% is added with another 6% due to the norm in Greenland.

[81] Before he got to be the Premier of the Government of Greenland.

[82] (Greenlandic Broadcasting Corporation, 2014)

with the transfer-pricing in its economy, at least 1.300M DKK annually being transfer-priced from the economy, and the Government of Greenland is not yet equipped with the right capacity and accumulated qualifications to combat it. A notion that is unnerving considering the current state of the growth in the economy; recession.

7.2 Current economic situation

The economic future of Greenland is not bullish, to say the least. Greenland needs 900M DKK in extra income and/or lower expenditures to have break-even between the year 2012 and the year 2040 in its budget. This huge number, however, exaggerated it may be, says something about the structural problems in the economy.

The economy is currently experiencing a recession, that puts a political strain on implementation of the required reforms.

The public sector in Greenland is oversized compared to the rest of the economy. This excessive size of the public sector puts pressure on the free market dynamics in the economy.

Only 11% of the activity in the economy is export oriented, of which 4% of it can be classified as the secondary industry. Greenland has skipped the industrialization process[83] as a nation, and went directly becoming a consumption oriented nation; a consumption economy paid partly for by the block grant from the Danish Government. This can be observed on Greenland's trade deficit that averaged around 2 billion DKK. A trade deficit as sizable as this would have pushed Greenland into a debt crisis in the long run, if it was not for the financing of it from the block grant.

The economy is experiencing a low tide in capital investments, especially in the secondary industry that Greenland lacks immensely. If nothing happens there the current economic situation should persist.

61% in a working age does not have a formal skills training. Compared to Denmark and other high income countries, this massive lack of skills training in the workforce creates an inefficient and costly economy. With the right strategy, this inefficient production can be made more efficient by investing more heavily on the secondary industry, and educating the workforce. The keyword in making the economy more efficient

[83] With growth and diversification in the secondary industry included.

through these two variables is diversification.

- Diversification of the secondary industry can be made through e.g. market research and subsequently product diversification based on that research and the adoption, or even creation, of the newest production technology as is seen in Iceland.
- Educating people in diverse educational lines, e.g. creating tourism oriented educational lines with small business modeling and language trainings, and creating educational lines for engineers that deal with the production processes in seafood production. However the strategy is formed, there is one constant, 61% of the workforce that currently is uneducated, is an untapped source from which you can form any desired educational profile of, and make the economy more efficient.

Another reason why the economic future of Greenland is uninviting, is the actual long term savings rate on 1,2%. This low level is hurting the prospect of future growth in the economy. Especially considering that much of the consumption is imported. With higher long term savings rate, you will downsize the trade deficit through lower consumption, and at the same time ensuring a higher long term growth.

Overall, the current state of the economy of Greenland is maintained by the Greenlanders themselves. More than 36 years have passed since the introduction of the Act of Home-Rule. 36 years is time enough to alter the preceding economic system with a more efficient economy that converges the higher income countries. However, during all these years Greenland has seemingly lacked the ability to comprehend the ramifications of the preceding economic system that had been maintained by the Danish Government.

Furthermore, Greenland has been, and still is, lacking the ability to comprehend the dynamics behind the transfer-pricing in its economy. This insufficient capacity together with a welfare system that incentivizes passivity amongst the workforce, creates the currently experienced unsustainable economic situation.

7.3 Suggested reforms

Greenland is currently ensnared by the “Middle income trap”, thus having a hard time converging towards higher income countries. With political resilience to the popular opinion, the Government of Greenland can maneuver Greenland out of the this trap.

In order to achieve this, Greenland needs to ramp up the capital investments, preferably in the secondary industry by constructing an aluminum smelter for example, combat the actual transfer-pricing that averaged around 2.400M DKK during the period of 2009-2014, educate its entire workforce, including those in a working age but are currently situated outside the workforce, and diversify its secondary industry. Once these problems have been substantially diminished, or even abolished, can Greenland begin to converge toward higher income countries.

Oversized public sector is the elephant in the room, so to speak. It offers numerous services that exist in the economy, such as welfare benefits that incentivize passivity, high wages and other goods for the educated workforce, and instead of just securing the framework for conducting business in the economy, is actively engaging in it and distorting the free market principal. The public sector is so much integrated into the economy, that its companies cannot go bankrupt without creating systemic failure. However, if anything, the public sector can gradually remove itself as an important actor in the economy, and create incentives and frameworks wherein the private sector can gradually take over the activity in the economy where ever that is possible, and sustain the parts of the economy where it is not economically viable to sustain a market, through direct subsidies and not through indirect or cross subsidies.

Overall, I think that all of the subsidies in the economy should be abolished, except for those that maintain a certain level of universal service for all the citizens in Greenland. However, I think that those subsidies should be characterized and construed as direct subsidies paid for via taxation in the economy, and not through consumption. That way everyone will pay their fair share of taxes, that will be used to maintain a certain level of universal service. An equal opportunity if you like, for every citizens to make something out of themselves in a competitive yet equal market, that is not distorted by the public sector that every now and then bailing out its corporations.

7.4 The optimal solution

With the empirical economic data and a couple of inputs on normative discourse on the economic challenges that exist in the economy of Greenland at hand, a question emerges;

What is the right mixture of reforms, economic structural changes, and the current economic situation?

In this chapter I will examine the rational course of action for the economy of Greenland in order to further maximize its potential.

But first let us first take a look at the overall outlining of the economy of Greenland according to the findings in this thesis.

Greenland is currently experiencing an economic recession. 47%-49% of the employment in the economy is in the public sector, which is compatible with the 54% public spending relative to the private spending. The public sector that predominantly employs foreigners, is overdeveloped compared to the rest of the economy.

There is little capital investment in the secondary industry. Employment per invested capital is too high. 61% of the population in a working age does not have a skills training. The low level of skills training amongst the population in a working age and low capital investment in the secondary industry creates an inefficient and costly economy.

Greenland is experiencing a turbulent political landscape, that might lead to a decrease in willingness by the investors to risk their investments in Greenland.

There is a low long term savings rate on 1,2% of the Gross Domestic Product, that extensively limits the long term growth potential of the economy.

After the introduction of the Self-Government in Greenland, the real term value of the block grant from the Danish Government to the Government of Greenland has fallen with around 5 percentage point during the period of 2009-2014.

The Gross Domestic Product per capita in Greenland fluctuates between 70% and 72% compared to the Gross Domestic Product per capita in Denmark. The purchasing power of the average income amongst foreigners in Greenland has fallen with 5 percentage point during the period of 2009-2014, whilst the purchasing power of the average income amongst Greenlanders have stayed level. However, during the period of 2009-2014, the average income of Greenlanders increased with around 23.000 DKK from 168.000 to 191.000, compared to the increase in average income amongst foreigners with around 37.000 DKK from 409.000 to 446.000. A trend that has persi-

sted since 1990's[84]. During the period of 2009-2014 the lower class has shrunk with 12 percentage points, the middle class has increased with 1 percentage point, and the upper class has increased with 14 percentage points.

In 2014 55% of the income at the Government of Greenland came from the block grant from the Danish Government, compared to 44% of the income at the municipalities that indirectly came from the block grant. Around 48% of the expenditures by the Government of Greenland goes to universal health care, free education, and subsidized traffic infrastructure, whilst around 37% of the expenditures by the municipalities goes to the elementary schools, subsidized daycare, welfare benefits, education, and direct housing subsidies.

Overall the economy of Greenland has entered a state of being in the Middle Income Trap, with a grim prospect in its long term economic growth, due to the structural problems such as welfare benefits to the recipients of transfer incomes and social security benefits, and the dependency from the block grant received annually from the Danish Government.

Due to the width of the public subsidies in the economy, most of the reforms that are required by the Tax and Welfare commission, Martin Paldam, and Lars Lund cannot be implemented in their entirety without triggering any resentment amongst the population, to say the least.

What we know for sure is that the current economic system in Greenland has not become overnight. It has gradually become what it is today with numerous intermediate equilibriums. That is why incrementalism is the key in order to implement various reforms in their entirety.

We observed that the easier economic reforms, such as the Public Budget Law that to some degree ought limit the expansion of the public sector, Compulsory Pension Savings that will remove some of the tax burden in the future, Earned Income Tax Credit that to some degree should incentivize work, and the creation of an investment fund that should set a latest date to the economic independence for Greenland from the Danish Government, are the ones that should receive smallest amount of scrutiny from the popular opinion. Those reforms that can be implemented with minimal political and popular fuss.

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[84] (Paldam, 1994)

The harder ones, such as taxation on capital income that will broaden the tax base, replacing the foreigners in the public administration with Greenlanders in order to minimize the public expenditures, abolition of housing subsidies, abolition of the welfare benefits, having more students on commercial, mercantile and business educational lines, decreasing the Corporate Tax rate, shrinking the public sector, and abolition of any bailouts to corporations owned by the Government of Greenland, are the ones that are most likely to be subjected to political scrutiny and popular fuss.

With the current economic situation of the economy of Greenland and the suggested reforms at hand, we can now come to my optimal solution.

- At first, the Government of Greenland needs to create an investment fund that is funded accumulative with around 100M DKK annually, 90-95M DKK from a 1 percentage point increase on income tax and 5-10M DKK from public expenditure savings. This, if run properly, will set an approximated date on when Greenland will become economically independent from the Danish Government and its block grant.
- The next step should be the implementations of as many relatively easy reforms as possible, in order to make way for the harder ones to implement. At the same time, and probably more important, Greenland should accumulate knowledge and expertise on transfer-pricing, and start combatting the actual transfer-pricing that reached 3.404M DKK in nominal terms in 2014. The economic reforms that are seemingly harder to implement should be handled with more finesse than the urgent and abrupt ones described above. An overall strategy has to be formed first, in order to convince the population on why these reforms, that most likely will worsen their disposable income, are necessary to implement. Moreover, the necessary economic reforms has to be attributable to all of the people in the economy of Greenland, this in order to make sure the legitimacy of any said economic reform.
- All of the subsidies, and bailouts for that matter, should be abolished in Greenland. In the end, the economy should be structured so that the level of the universal service is the same for all the citizens. This has to be financed through the direct and transparent public subsidies financed by taxes, not the consumption. This in exchange, if done properly, should eliminate the economic deadweight losses in the economy, and at the same time level the plain field for the actors in the private sector to compete in equal terms with each other.

8. Conclusion

8.1 Problem definition

The intention of this thesis is to find out the answers to five different questions that are embedded into the problem definition of this thesis:

Which economic data can be found through formal channels on the economy of Greenland during the colonial period and the period of Self-Government?

With the application of the first question during the analysis, I have found out that it is relatively easy to access the economic data on the economy of Greenland during the colonial period and the period of Self-Government. Due to obvious reasons, I found the economic data on colonial period written down in books, which is why it took me quite a long time to type them into Excel. The economic data on the Self-Government period on the other hand are accessible in, and importable as, Excel sheets from the databases from the Statistics Greenland, Statistics Iceland, and in some cases Hagstova Føroya.

In what way do these economic data describe the transfer-pricing in the economy of Greenland?

With the application of the second question during the analysis, I have found out that the uneven/unfair transfer-pricing during the colonial period has been systematic and significant. I also found out that the actual transfer-pricing is massive, and is more systematic than non-systematic.

Can the economic potential in Greenland be identified through the identification of the actual transfer-pricing in Greenland?

With the application of the third question during the analysis, I have found out that the transfer-pricing in 2014 is nearly equivalent to the block grant received from the Danish Government that particular year, and that the Government of Greenland with the right tools to combat the transfer-pricing, can abolish much of the transfer-pricing in

the economy of Greenland, thus letting the economy grow again, away from the recession. Possibly letting it converge towards higher income countries, such as Denmark.

Which economic challenges does Greenland face with its actual economic outlook?

With the application of the fourth question during the analysis, I have found out that Greenland is ensnared by the Middle Income Trap, with low capital investments and poor labor market condition, and that the employment level compared to the invested capital is too high. All these put together creates a costly and inefficient economy.

I also have found out that the public sector is overdeveloped, and are interfering with the market dynamics by bailing out its corporations, thus distorting the free market principle in the economy, and that only 11% of the activity in the economy is export oriented, of which mere 4% can with faith be classified as a secondary industry.

In addition, the economy has a long term savings rate that is equivalent to 1,2% of the Gross Domestic Product. However, in the absence of the foreign capital investments in the economy, Greenland has a Gross Domestic Savings rate on -1,2%, which conveniently offsets the long term savings rate from the contributions to the pension fund in the long run.

Furthermore, to make matters worse, a value with a magnitude of around 14.401M DKK in nominal value have been transfer-priced during the period of 2009-2014. That value alone would have injected around 691M DKK in additional corporate tax revenues, upheld 4.697 jobs, and would have increased the Gross Domestic Product with around 25%.

With contemporary economic challenges identified, which reforms are needed to further maximize the greenlandic output?

With the application of the fifth question during the analysis, I have found out that there are at least around 15 suggested reforms that can be classified as economic reforms, of which 5 or 6 of them can be classified as difficult to implement, and 7 of

them can be classified as abolition of subsidies. Overall, the suggested economic reforms has something to do with either activation or abolition of some economic variables in the economy[85].

Subsequently, after the application of all five questions mentioned above, another question emerged:

What is the right mixture of reforms, economic structural changes, and the current economic situation?

The optimal solution as I have called it, contains the notion of Government of Greenland creating an investment fund that is funded accumulative with around 100M DKK annually, 90-95M DKK from a 1 percentage point increase on income tax and 5-10M DKK from public expenditure savings. This, if run properly, will set an approximated date on Greenland becoming economically independent from the Danish Government. Furthermore, my notion contains that Greenland should accumulate knowledge and expertise on transfer-pricing, and start combatting the actual transfer-pricing that reached 3.404M DKK in nominal terms in 2014.

In addition, I have called for the action that all of the subsidies, and bailouts for that matter, should be abolished in Greenland. The economy should be structured so that the level of the universal service is the same for all the citizens of Greenland. This has to be financed through the direct and transparent public subsidies. It is the taxation that should accommodate the level of the universal service, not the consumption of any particular service in the economy through cross subsidies. This in exchange, if done properly, should eliminate the economic deadweight losses in the economy, and at the same time level the plain field for the actors in the private sector to compete in equal terms with each other, and indirectly help the economy to converge to higher income countries.

[85] See chapter 6.3.3

8.2 Perspective[86]

If I should put the findings in this thesis into the perspective, I would say that the findings, or rather the acquired knowledge, in this thesis should be distributed amongst Greenlanders. Only when talking about the subject of transfer-pricing, can Greenlanders gradually comprehend the ramifications that can be associated with not combatting the actual transfer-pricing in the economy of Greenland. Moreover, with the distribution of the findings in this thesis and with the subsequent public discussion about the findings, can the assessment of the transfer-pricing in the economy of Greenland become more specified, annulled or validated.

I have refrained myself from including the county period (1953-1978) and the Home-Rule period (1979-2008) in the analysis of the transfer-pricing in the economy of Greenland. With the findings in this thesis, it has become very interesting to find out how extensive the transfer-pricing has been during the period of 1953-2008.

In addition, it should also be interesting to analyze on how much extra value can be added, if all of the seafood exports from Greenland are processed from semi-products to finished products. Something this thesis has been refrained from.

Something that I dearly regret is that I, in the very late part of the process came across publications that resembles my analysis of the current economic situation in the economy of Greenland. If I have found out about them early in the process, then I would have used these publications early in the process in order to establish the current economic situation, and have concentrated more on the transfer-pricing in the economy of Greenland. That way, I might have been able to include a simulation on massive capital investments in the secondary industry in the economy of Greenland, namely in the fisheries sector.

[86] Relative to the task completed.

9. Appendixes

9.1 Projection numbers of the public finances by the Economic Council.

The Economic Council's projections	M DKK	Pct. Of GDP	
Public income	9.855	71,5 %	
Public expenditure	9.723	70,5 %	
Projections (Percentage of GDP)	**Income**	**Expenditure**	
2012	71,5 %	70,5 %	
2020	70,8 %	74,3 %	
2030	71,1 %	80,3 %	
2040	70,4 %	83,3 %	
Projections (M DKK)	**Income**	**Expenditure**	
2012	9.855	9.723	
2020	9.761	10.244	
2030	9.803	11.071	
2040	9.706	11.485	
Projection-based annual average growth	**Income**	**Expenditure**	
2012-2020	-0,12 %	0,67 %	
2021-2030	0,04 %	0,81 %	
2031-2040	-0,10 %	0,37 %	
Projection-based year-to-year-line	**Income**	**Expenditure**	**Balance**
2012	9.855	9.723	132
2013	9.843	9.788	55
2014	9.832	9.853	-22
2015	9.820	9.918	-98
2016	9.808	9.984	-175
2017	9.797	10.049	-252
2018	9.785	10.114	-329
2019	9.773	10.179	-406
2020	9.761	10.244	-483
2021	9.766	10.327	-561
2022	9.770	10.409	-640
2023	9.774	10.492	-718
2024	9.778	10.575	-797
2025	9.782	10.658	-875
2026	9.786	10.740	-954
2027	9.790	10.823	-1.033
2028	9.795	10.906	-1.111
2029	9.799	10.989	-1.190
2030	9.803	11.071	-1.268
2031	9.793	11.113	-1.319
2032	9.784	11.154	-1.370
2033	9.774	11.195	-1.421
2034	9.764	11.237	-1.472
2035	9.755	11.278	-1.524
2036	9.745	11.319	-1.575
2037	9.735	11.361	-1.626
2038	9.726	11.402	-1.677
2039	9.716	11.444	-1.728
2040	9.706	11.485	-1.779
Average annual deficit			**-904**

9.2 Transfer-pricing during the colonial period

DKK (Fixed 2013 prices)	First sales prices			Market prices			Percentage		
Year	Fox	Polar Bear	Seal	Fox	Polar Bear	Seal	Fox	Polar Bear	Seal
1907	165,38	1.544,38	-	3.667,90	9.266,26	-	5 %	17 %	-
1908	163,83	1.529,94	-	4.207,35	7.904,71	-	4 %	19 %	-
1909	162,31	1.515,78	-	3.789,44	8.210,46	-	4 %	18 %	-
1910	160,83	1.501,87	-	2.878,59	11.576,93	-	6 %	13 %	-
1911	160,83	1.501,87	-	2.753,43	10.387,94	-	6 %	14 %	-
1912	155,13	1.448,71	-	3.259,59	10.503,13	-	5 %	14 %	-
1913	151,12	1.411,24	-	4.880,54	11.348,73	-	3 %	12 %	-
1914	147,31	1.375,66	-	5.502,66	9.515,01	-	3 %	14 %	-
1915	125,21	1.169,31	-	3.946,44	9.744,29	-	3 %	12 %	-
1916	106,24	992,15	-	5.250,10	9.962,79	-	2 %	10 %	-
1917	91,78	857,09	-	7.142,41	10.713,61	-	1 %	8 %	-
1918	78,61	734,10	-	12.418,50	12.754,96	-	1 %	6 %	-
1919	152,96	1.038,65	-	7.751,14	10.954,94	-	2 %	9 %	-
1920	128,19	870,49	-	5.954,84	11.108,49	-	2 %	8 %	-
1921	150,67	1.023,15	-	9.773,37	5.981,10	-	2 %	17 %	-
1922	177,11	1.202,65	-	8.675,83	6.551,75	-	2 %	18 %	-
1923	170,38	1.156,98	20,15	8.921,98	3.856,60	283,88	2 %	30 %	7 %
1924	223,11	1.092,45	36,41	15.680,15	12.065,83	103,50	1 %	9 %	35 %
1925	229,51	1.123,79	37,46	4.975,98	7.100,55	121,15	5 %	16 %	31 %
1926	343,69	1.324,66	44,16	4.679,14	4.514,38	270,77	7 %	29 %	16 %
1927	355,72	1.371,02	45,70	6.752,79	5.831,96	247,28	5 %	24 %	18 %
1928	357,50	1.377,91	45,93	9.288,90	5.587,05	245,61	4 %	25 %	19 %
1929	482,29	1.384,87	51,67	10.334,85	4.616,23	111,63	5 %	30 %	46 %
1930	507,95	1.458,53	87,08	7.836,89	3.809,60	57,45	6 %	38 %	152 %
1931	536,48	1.540,47	91,97	3.563,78	4.023,62	141,66	15 %	38 %	65 %
1932	539,51	1.549,18	92,49	3.660,99	3.237,08	55,20	15 %	48 %	168 %
1933	584,12	1.514,94	90,44	4.672,95	3.467,03	58,82	13 %	44 %	154 %
1934	562,37	1.458,53	87,08	6.095,36	3.192,81	155,63	9 %	46 %	56 %
1935	501,83	1.399,00	94,31	2.958,09	5.846,57	317,49	17 %	24 %	30 %
1936	394,10	1.384,87	93,36	3.858,34	8.543,47	342,45	10 %	16 %	27 %
1937	380,65	1.337,58	90,17	5.623,17	6.188,81	283,85	7 %	22 %	32 %
1938	574,02	1.568,50	89,30	7.249,37	7.611,84	266,55	8 %	21 %	34 %
1939	557,85	1.524,32	86,78	3.778,77	3.778,77	253,25	15 %	40 %	34 %
1940	446,96	1.220,60	69,49	3.025,86	3.025,86	202,84	15 %	40 %	34 %
1941	389,80	1.064,52	60,61	2.638,94	2.638,94	176,90	15 %	40 %	34 %
1942	377,43	1.030,73	58,68	2.555,17	2.555,17	171,28	15 %	40 %	34 %
1943	373,87	1.021,01	58,13	2.531,06	2.531,06	169,67	15 %	40 %	34 %
1944	365,82	999,01	56,88	2.476,55	2.476,55	166,01	15 %	40 %	34 %
1945	362,47	989,88	56,36	2.453,90	2.453,90	164,49	15 %	40 %	34 %

DKK (Fixed 2013 prices)	Bought for	Sold for	Bought for	Sold for	Bought for	Sold for
Year	Fox skin	Fox skin	Bear skin	Bear skin	Seal skin	Seal skin
1907	554.179	12.291.120	336.674	2.020.046	-	-
1908	470.852	12.091.912	188.183	972.279	-	-
1909	575.243	13.429.791	234.946	1.272.622	-	-
1910	417.503	7.472.812	82.603	636.731	-	-
1911	389.358	6.666.057	154.693	1.069.958	-	-
1912	409.550	8.605.325	149.217	1.081.823	-	-
1913	513.507	16.584.085	272.370	2.190.305	-	-
1914	364.447	13.613.570	242.117	1.674.641	-	-
1915	402.313	12.679.898	136.810	1.140.081	-	-
1916	326.270	16.123.066	108.144	1.085.945	-	-
1917	307.830	23.955.638	108.850	1.360.629	-	-
1918	391.870	61.906.234	154.161	2.678.542	-	-
1919	573.431	29.059.010	156.836	1.654.196	-	-
1920	408.931	18.995.944	226.327	2.888.206	-	-
1921	433.335	28.108.221	121.755	711.751	-	-
1922	527.247	25.827.956	244.138	1.330.005	-	-
1923	409.596	21.448.447	99.500	331.668	259.768	3.660.316
1924	570.044	40.062.777	193.363	2.135.652	604.851	1.719.164
1925	786.530	17.052.668	146.092	923.071	489.335	1.582.584
1926	1.039.307	14.149.720	184.127	627.499	426.849	2.617.551
1927	1.334.288	25.329.715	196.056	833.970	356.831	1.930.752
1928	1.320.257	34.303.906	192.907	782.187	509.184	2.722.779
1929	3.053.397	65.429.926	206.346	687.819	588.156	1.270.566
1930	3.657.217	56.425.634	153.146	400.008	701.750	463.030
1931	2.748.940	18.260.813	132.481	346.032	1.290.778	1.988.245
1932	3.826.234	25.963.732	140.975	294.575	1.735.632	1.035.867
1933	3.604.013	28.832.103	140.889	322.434	1.970.508	1.281.481
1934	2.730.867	29.599.076	37.922	83.013	2.114.742	3.779.596
1935	2.240.172	13.204.899	116.117	485.265	1.994.295	6.713.569
1936	1.575.227	15.421.799	164.799	1.016.673	1.581.300	5.800.399
1937	1.600.993	23.651.036	152.484	705.524	1.943.440	6.117.871
1938	2.916.588	36.834.059	196.063	951.480	1.865.904	5.569.660
1939	2.554.948	17.306.766	173.772	430.780	1.604.282	4.681.640
1940	1.823.129	12.342.471	128.163	317.715	1.688.381	4.928.079
1941	1.395.106	9.444.782	100.065	248.061	1.824.612	5.325.713
1942	1.779.576	12.047.618	80.397	199.303	1.284.202	3.748.355
1943	2.045.058	13.844.914	70.449	174.643	372.895	1.088.414
1944	1.478.626	10.010.206	44.956	111.445	787.287	2.297.947
1945	1.402.757	9.496.579	101.957	252.751	909.311	2.654.115
Sum	**52.958.736**	**857.874.285**	**6.070.850**	**36.429.328**	**26.904.293**	**72.977.693**

DKK (Fixed 2013 prices)	First sales prices		Market prices		Percentage	
Year	Blubber	Liver	Blubber	Liver	Blubber	Liver
1907	2,57	1,93	12,57	11,03	20 %	18 %
1908	2,55	1,91	12,38	10,89	21 %	18 %
1909	2,53	1,89	12,31	10,84	21 %	17 %
1910	2,50	1,88	12,28	10,80	20 %	17 %
1911	2,50	1,88	12,36	10,84	20 %	17 %
1912	2,41	1,81	11,91	10,40	20 %	17 %
1913	2,35	1,76	11,48	10,02	20 %	18 %
1914	2,29	1,72	10,99	9,67	21 %	18 %
1915	1,95	1,46	9,12	8,14	21 %	18 %
1916	1,65	1,24	8,26	7,34	20 %	17 %
1917	1,43	1,07	7,36	6,42	19 %	17 %
1918	1,22	0,92	6,31	5,42	19 %	17 %
1919	2,58	2,07	12,69	11,46	20 %	18 %
1920	2,17	1,73	9,81	9,15	22 %	19 %
1921	2,55	2,04	10,89	10,68	23 %	19 %
1922	2,99	2,39	11,97	12,50	25 %	19 %
1923	2,88	2,30	27,29	24,40	11 %	9 %
1924	4,08	3,26	27,09	21,37	15 %	15 %
1925	4,19	3,35	21,67	18,10	19 %	19 %
1926	4,94	3,95	18,20	15,30	27 %	26 %
1927	6,14	4,09	18,08	16,18	34 %	25 %
1928	6,17	3,43	18,93	17,15	33 %	20 %
1929	6,20	3,44	17,09	17,47	36 %	20 %
1930	6,53	3,63	13,25	17,16	49 %	21 %
1931	6,13	3,07	13,80	15,03	44 %	20 %
1932	6,17	3,08	10,81	13,54	57 %	23 %
1933	6,03	3,01	12,87	13,34	47 %	23 %
1934	5,81	2,90	12,79	13,43	45 %	22 %
1935	5,57	2,78	14,06	14,55	40 %	19 %
1936	5,51	2,76	17,75	18,91	31 %	15 %
1937	5,32	2,66	18,59	18,41	29 %	14 %
1938	5,93	2,97	16,62	18,18	36 %	16 %
1939	5,76	2,88	19,28	19,68	30 %	15 %
1940	4,62	2,31	15,44	15,76	30 %	15 %
1941	4,03	2,01	13,46	13,75	30 %	15 %
1942	3,90	1,95	13,04	13,31	30 %	15 %
1943	3,86	1,93	12,91	13,19	30 %	15 %
1944	3,78	1,89	12,63	12,90	30 %	15 %
1945	3,74	1,87	12,52	12,78	30 %	15 %

DKK (Fixed 2013 prices)	Bought for	Sold for	Bought for	Sold for
Year	Blubber	Blubber	Liver	Liver
1907	4.764.215	23.261.145	1.679.425	9.593.844
1908	5.522.823	26.819.260	1.450.644	8.260.319
1909	4.198.571	20.459.889	1.798.714	10.291.430
1910	4.620.677	22.671.992	2.177.228	12.527.981
1911	4.715.285	23.277.438	1.910.979	11.032.532
1912	5.468.726	26.979.330	1.737.838	9.981.664
1913	4.195.886	20.473.648	1.553.404	8.825.383
1914	4.811.945	23.073.667	1.231.481	6.924.190
1915	3.743.539	17.516.101	821.515	4.575.132
1916	2.993.938	14.955.755	1.033.028	6.115.810
1917	2.149.291	11.080.239	1.033.760	6.195.040
1918	1.898.923	9.792.681	667.053	3.942.856
1919	3.779.407	18.560.865	1.490.480	8.265.189
1920	3.610.965	16.367.173	1.488.879	7.860.909
1921	3.388.016	14.491.666	1.492.019	7.823.594
1922	4.802.784	19.216.536	1.701.805	8.885.596
1923	3.722.010	35.295.822	1.751.313	18.559.538
1924	5.793.911	38.498.605	3.254.516	21.330.639
1925	5.308.758	27.439.203	3.408.169	18.387.073
1926	5.063.901	18.645.282	4.661.652	18.040.594
1927	5.382.656	15.848.932	4.731.035	18.707.301
1928	6.387.123	19.594.274	3.906.389	19.547.569
1929	6.804.178	18.749.292	3.944.691	19.999.583
1930	5.648.328	11.456.692	4.395.223	20.789.403
1931	6.221.524	13.998.430	3.198.598	15.685.125
1932	7.879.724	13.809.216	3.562.483	15.643.754
1933	6.579.852	14.039.758	3.242.203	14.350.802
1934	6.605.429	14.552.586	2.933.408	13.574.348
1935	5.345.591	13.497.616	2.827.923	14.779.433
1936	3.769.020	12.136.245	2.728.850	18.726.732
1937	5.100.444	17.810.111	2.306.792	15.951.468
1938	5.054.793	14.161.844	1.863.521	11.423.383
1939	4.994.713	16.704.539	1.801.586	12.304.829
1940	4.065.433	13.596.616	1.435.062	9.801.477
1941	3.603.071	12.050.272	1.244.969	8.503.138
1942	3.096.266	10.355.291	1.359.562	9.285.807
1943	2.604.670	8.711.173	1.348.782	9.212.181
1944	1.903.969	6.367.720	1.298.511	8.868.833
1945	2.304.951	7.708.781	1.539.806	10.516.878
Sum	**177.905.306**	**684.025.685**	**86.013.296**	**475.091.357**

DKK (Fixed 2013 prices)	First sales prices			Market prices			Percentage		
Year	Saltfish	Salmon	Halibut	Saltfish	Salmon	Halibut	Saltfish	Salmon	Halibut
1919	1,55	-	-	12,32	-	-	13 %	-	-
1920	1,30	-	-	12,00	-	-	11 %	-	-
1921	1,53	-	-	11,47	-	-	13 %	-	-
1922	1,80	-	-	11,29	-	-	16 %	-	-
1923	1,73	1,30	2,30	16,00	36,40	23,07	11 %	4 %	10 %
1924	1,63	1,85	1,90	10,81	40,84	21,61	15 %	5 %	9 %
1925	1,68	1,90	1,96	8,01	34,18	12,92	21 %	6 %	15 %
1926	2,31	2,24	2,31	10,95	36,84	5,15	21 %	6 %	45 %
1927	2,73	2,32	2,73	15,91	38,91	10,91	17 %	6 %	25 %
1928	2,06	2,33	2,74	14,44	42,36	19,07	14 %	6 %	14 %
1929	3,10	2,34	3,44	9,10	43,63	15,47	34 %	5 %	22 %
1930	2,54	2,47	3,63	6,70	27,02	19,72	38 %	9 %	18 %
1931	1,92	2,61	3,45	10,04	21,96	37,59	19 %	12 %	9 %
1932	1,54	2,62	3,47	11,39	28,00	40,92	14 %	9 %	8 %
1933	1,51	2,56	3,39	12,24	26,37	44,54	12 %	10 %	8 %
1934	1,45	2,47	3,27	10,09	30,55	37,40	14 %	8 %	9 %
1935	1,39	2,37	2,44	10,43	44,42	26,94	13 %	5 %	9 %
1936	1,38	2,34	2,41	11,55	49,54	36,92	12 %	5 %	7 %
1937	1,33	2,26	2,33	11,67	43,58	11,17	11 %	5 %	21 %
1938	1,81	2,24	2,31	11,73	43,91	15,16	15 %	5 %	15 %
1939	1,76	2,18	2,24	9,40	59,42	16,01	19 %	4 %	14 %
1940	1,41	1,74	2,05	8,19	47,58	12,82	17 %	4 %	16 %
1941	1,23	1,52	1,79	7,93	41,50	11,18	16 %	4 %	16 %
1942	1,19	1,47	1,73	7,86	40,18	10,83	15 %	4 %	16 %
1943	1,18	1,46	1,72	7,69	39,80	10,72	15 %	4 %	16 %
1944	1,15	1,43	1,68	7,62	38,94	10,49	15 %	4 %	16 %
1945	-	1,41	1,66	-	38,59	10,40	-	4 %	16 %

DKK (Fixed 2013 prices)	Bought for	Sold for	Bought for	Sold for	Bought for	Sold for
Year	Saltfish	Saltfish	Salmon	Salmon	Halibut	Halibut
1919	283.974	2.257.061	-	-	-	-
1920	171.850	1.587.137	-	-	-	-
1921	237.863	1.786.516	-	-	-	-
1922	343.979	2.164.197	-	-	-	-
1923	497.524	4.610.826	31.974	898.759	1.020.388	10.223.008
1924	439.699	2.915.910	38.644	853.980	721.947	8.200.291
1925	594.504	2.839.278	53.556	962.982	762.938	5.037.573
1926	1.758.305	8.347.893	78.097	1.283.897	993.697	2.218.783
1927	3.230.199	18.841.476	47.488	796.682	1.277.790	5.107.966
1928	2.951.079	20.717.396	100.869	1.833.149	1.309.373	9.105.049
1929	7.365.905	21.618.147	94.915	1.767.929	1.700.900	7.638.742
1930	7.762.992	20.486.074	115.370	1.263.303	1.454.866	7.905.742
1931	6.528.233	34.217.385	183.156	1.543.626	580.156	6.323.059
1932	4.566.108	33.734.586	297.597	3.179.476	665.492	7.852.065
1933	4.348.934	35.317.392	242.641	2.496.706	539.769	7.088.964
1934	4.343.889	30.207.756	210.670	2.608.282	454.079	5.200.212
1935	3.490.516	26.156.304	240.561	4.515.827	352.100	3.894.229
1936	3.368.885	28.243.417	200.711	4.244.733	316.143	4.839.695
1937	4.577.040	40.149.431	171.843	3.309.742	293.588	1.407.545
1938	3.248.164	21.029.141	113.238	2.218.966	354.730	2.331.084
1939	3.767.462	20.097.386	87.701	2.393.063	243.606	1.740.044
1940	3.505.897	20.369.187	52.332	1.427.981	130.385	814.904
1941	3.484.157	22.473.967	30.035	819.548	32.997	206.228
1942	4.638.250	30.607.674	4.490	122.530	37.735	235.844
1943	5.041.930	32.864.977	3.177	86.696	40.868	255.424
1944	4.895.983	32.317.829	25.492	695.596	500.289	3.126.809
1945	-	-	32.857	896.565	116.914	730.710
Sum	**85.443.321**	**515.958.343**	**2.457.414**	**40.220.018**	**13.900.750**	**101.483.970**

9.3 Transfer-pricing during the colonial period - Cryolite mining in Ivittuut.

DKK (Fixed 2013 prices)			
Year	Royalties	Profits	Dividends
1865	7.624.072	0	19.800.392
1866	7.335.025	0	15.286.663
1867	7.680.132	0	12.636.337
1868	6.385.915	0	10.351.436
1869	8.055.266	0	12.487.665
1870	6.190.214	0	8.057.085
1871	7.466.833	0	14.750.793
1872	8.420.370	0	20.050.273
1873	5.747.022	0	10.893.387
1874	5.703.854	0	11.730.933
1875	14.679.657	0	52.080.562
1876	7.009.126	15.985.173	15.959.940
1877	6.748.583	15.325.332	15.363.266
1878	6.186.807	9.587.703	9.566.905
1879	6.801.237	18.279.377	18.243.037
1880	7.041.961	22.097.399	21.871.146
1881	8.142.724	24.587.408	24.043.409
1882	7.469.123	13.949.218	12.176.815
1883	7.080.761	16.945.269	13.810.325
1884	7.746.091	26.449.017	21.514.927
1885	8.248.174	26.424.718	22.695.149
1886	8.709.041	20.817.821	19.932.805
1887	10.632.892	29.477.023	25.396.631
1888	7.942.414	20.034.759	19.627.841
1889	7.766.606	29.742.012	23.229.897
1890	7.298.404	22.270.729	22.841.774
1891	8.021.448	24.275.584	23.225.095
1892	7.586.103	26.900.651	22.373.705
1893	9.270.659	38.610.810	26.845.021
1894	9.868.410	39.991.431	30.339.443
1895	10.133.706	41.126.622	30.317.443
1896	6.237.482	28.782.703	28.068.949
1897	10.399.824	40.578.801	32.619.615
1898	7.150.884	28.906.566	25.995.113
1899	7.208.889	30.905.246	28.025.614
1900	7.058.234	28.941.503	23.873.500
1901	6.643.586	23.573.376	20.463.000
1902	7.754.734	25.251.207	20.260.396
1903	7.181.095	21.057.305	16.883.663
1904	2.322.350	10.733.044	10.030.882
1905	2.523.770	19.780.900	13.374.510
1906	4.340.010	25.615.173	19.866.990
1907	5.439.297	27.728.008	22.522.170
1908	4.969.258	23.408.142	20.717.991
1909	5.002.825	30.763.973	23.684.028

DKK (Fixed 2013 prices)			
Year	Royalties	Profits	Dividends
1910	6.818.497	39.399.097	28.160.092
1911	8.191.207	53.716.939	28.160.092
1912	7.115.088	40.895.819	27.163.274
1913	7.009.166	46.235.796	26.460.776
1914	34.027.046	22.222.703	20.061.765
1915	22.626.231	30.470.381	17.052.500
1916	32.087.638	22.786.274	14.468.788
1917	21.522.576	10.220.786	8.928.010
1918	18.706.669	7.729.447	7.646.861
1919	10.526.043	7.149.131	7.105.208
1920	16.957.223	18.455.677	10.826.984
1921	16.518.528	12.753.743	10.180.597
1922	16.064.353	19.403.950	14.958.333
1923	30.485.553	57.287.766	51.805.063
1924	36.376.040	79.387.200	40.762.948
1925	118.249.303	491.676.689	125.436.513
1926	75.409.944	176.505.732	114.203.970
1927	61.007.024	152.558.486	108.924.549
1928	83.898.300	196.653.886	104.947.426
1929	80.708.277	180.443.010	120.276.967
1930	94.358.376	204.223.643	118.326.209
1931	54.713.617	125.199.838	89.546.701
1932	53.149.849	132.030.667	85.493.720
1933	73.870.299	189.480.597	113.322.813
1934	87.577.286	227.338.851	140.512.600
1935	104.013.290	251.402.571	121.479.922
1936	123.832.155	251.949.826	137.601.618
1937	258.758.794	353.104.870	190.092.952
1938	251.909.086	368.304.343	181.224.414
1939	179.088.077	516.019.858	137.595.262
1940	0	143.635.900	80.775.000
1941	0	195.223.729	67.091.803
1942	0	130.614.571	64.961.905
1943	0	129.566.825	56.305.425
1944	0	121.951.085	47.222.308
1945	0	118.525.273	109.177.591
1946	0	32.249.102	181.248.198
1947	0	126.072.441	153.981.530
1948	0	0	149.054.713
1949	0	0	148.885.765
1950	0	0	123.607.533
1951	0	0	123.359.931
1952	0	177.171.979	120.549.910
Sum	**2.314.800.403**	**6.308.922.484**	**4.542.835.060**

9.4 Transfer-pricing during the Self-Government period.

GL=Greenlandic export OUT=Icelandic or Faroese export	2009	2009	2010	2010	2011	2011	2012	2012	2013	2013	2014	2014
DKK/Kg	**GL**	**OUT**	**GL**	**OUT**	**GL**	**OUT**	**GL**	**OUT**	**GL**	**OUT**	**GL**	**OUT**
Prawns with shell on, frozen	10,89	32,15	11,60	36,53	15,80	43,41	16,16	46,39	17,28	49,33	18,62	55,72
Peeled prawns, frozen	-	-	-	-	-	-	35,18	66,35	35,69	62,17	39,20	65,65
Cod, frozen whole	11,24	28,54	11,28	36,67	13,77	38,11	13,65	36,24	11,47	34,18	11,60	36,70
Cod, dried or salted	23,68	47,81	17,30	49,00	18,21	45,72	24,28	45,45	25,32	40,58	23,43	41,60
Cod, frozen filleted	20,04	25,91	19,51	32,86	28,45	33,19	22,06	33,04	21,29	36,08	15,15	34,42
Second cod	15,12	29,79	6,03	26,93	14,00	33,06	29,37	31,02	5,79	21,67	33,77	21,00
Greenland halibut, frozen whole	17,85	27,13	18,46	35,90	21,58	39,44	23,71	36,85	23,64	34,83	24,61	33,79
Greenland halibut, filleted	25,98	41,89	30,24	69,64	30,55	92,00	32,06	79,40	-	-	38,72	135,46
Greenland halibut, smoked	-	-	32,00	95,63	-	-	119,90	109,79	103,50	112,16	-	-
Scallops	63,95	32,47	72,82	48,46	103,07	21,77	87,34	22,25	51,41	22,08	67,47	89,86
Crabs	32,51	28,03	30,38	38,78	34,92	33,65	40,27	35,39	39,37	30,98	39,33	33,22
Lumpfish roe	36,45	58,36	46,56	92,25	53,79	89,57	54,47	77,36	53,28	23,17	37,95	17,24
Capelin	-	-	-	-	1,10	8,60	1,11	7,34	1,10	8,75	1,10	9,65
Wolffish	11,06	26,03	11,19	34,22	11,66	37,46	19,28	33,78	14,31	35,12	13,50	32,98
Halibut	21,78	29,86	20,34	43,49	34,31	52,19	16,88	39,17	20,84	37,94	21,42	49,34
Haddock	17,35	19,98	16,88	30,41	17,49	33,01	19,15	34,39	24,46	38,20	14,85	42,34
Redfish	12,31	14,56	16,80	18,98	23,40	23,57	19,98	22,53	16,26	21,05	16,15	20,57
Pollack	8,58	16,55	13,88	22,24	21,60	24,32	14,88	23,61	18,33	23,39	11,60	25,11
Herring	1,76	5,08	-	-	1,80	8,69	1,80	9,78	1,80	9,45	1,80	9,22
Mackerel	2,17	7,66	-	-	7,27	10,30	2,50	8,05	1,35	8,92	4,16	8,79
Fishmeal	3,59	8,74	3,65	9,04	3,48	7,79	3,74	12,32	3,87	8,43	4,46	14,57

Export of Greenland	2009	2010	2011	2012	2013	2014
	Kg	Kg	Kg	Kg	Kg	Kg
Shrimp with shell on, frozen	43.011.806	44.830.902	43.830.535	40.573.110	36.387.860	38.007.103
Peeled shrimp, frozen	21.244.531	22.924.373	22.488.279	21.653.060	18.944.525	16.295.683
Cod, frozen whole	6.029.729	6.069.193	6.207.004	7.363.462	6.599.187	10.098.709
Cod, dried or salted	804.029	455.181	294.781	461.158	753.553	1.091.131
Cod, frozen filleted	2.074.864	1.845.529	2.175.504	2.471.532	2.353.330	1.639.293
Second cod	89.403	16.339	17.787	101.433	124.350	53
Greenland halibut, frozen whole	17.623.210	22.901.968	24.444.740	26.305.903	26.081.092	29.667.832
Greenland halibut, filleted	3.207.265	2.773.842	2.479.382	1.094.303	2.125.390	3.262.822
Greenland halibut, smoked	0	5	0	20	54	0
Scallops	121.416	92.976	111.969	45.129	137.578	151.214
Crabs	1.380.217	1.141.803	952.849	1.051.356	1.167.795	1.020.216
Lumpfish roe	590.522	846.358	1.203.588	1.212.653	1.129.053	770.363
Capelin	0	0	18.005.924	24.106.095	27.745.926	22.364.600
Wolffish	554.962	769.403	606.963	560.272	481.715	481.543
Halibut	208.119	14.556	11.360	35.193	10.681	15.561
Haddock	497.913	537.239	534.195	639.601	228.886	324.786
Redfish	500.904	3.884.339	2.991.171	2.662.096	3.014.338	2.172.724
Pollack	748.636	543.467	163.836	173.264	116.708	101.172
Herring	3.810.295	0	3.426.189	2.582.593	11.961.562	13.187.959
Mackerel	486.000	0	296.000	4.301.000	52.296.000	78.405.359
Fishmeal	707.930	786.569	1.099.613	692.842	847.864	725.435

Export potential DKK Nominal	2009	2010	2011	2012	2013	2014
Prawns with shell on, frozen	914.088.580	1.117.726.850	1.210.056.920	1.226.563.266	1.166.378.685	1.409.929.478
Peeled prawns, frozen	0	0	0	674.985.454	501.676.368	431.077.784
Cod, frozen whole	104.322.780	154.086.861	151.107.259	166.332.604	149.825.280	253.496.829
Cod, dried or salted	19.398.190	14.426.735	8.110.410	9.761.885	11.503.831	19.834.850
Cod, frozen filleted	12.175.297	24.629.395	10.313.196	27.123.024	34.801.213	31.589.874
Second cod	1.311.449	341.380	339.094	167.039	1.975.590	-677
Greenland halibut, frozen whole	163.512.196	399.366.168	436.476.032	345.627.217	291.894.742	272.452.346
Greenland halibut, filleted	51.031.058	109.283.634	152.363.261	51.802.911	0	315.635.811
Greenland halibut, smoked	0	318	0	-202	468	0
Scallops	-3.822.460	-2.264.573	-9.103.286	-2.937.680	-4.034.847	3.385.574
Crabs	-6.177.262	9.591.800	-1.204.999	-5.122.568	-9.803.136	-6.233.285
Lumpfish roe	12.940.057	38.671.650	43.069.044	27.760.516	-33.994.009	-15.953.163
Capelin	0	0	135.119.073	150.283.837	212.212.657	191.112.269
Wolffish	8.307.881	17.713.960	15.658.794	8.126.455	10.023.211	9.381.652
Halibut	1.680.728	336.952	203.069	784.239	182.623	434.500
Haddock	1.309.792	7.273.749	8.290.513	9.747.485	3.145.283	8.927.315
Redfish	1.124.345	8.461.676	527.270	6.785.853	14.419.580	9.612.958
Pollack	5.968.933	4.541.499	445.555	1.511.537	590.973	1.367.581
Herring	12.649.613	0	23.616.099	20.610.126	91.548.408	97.813.300
Mackerel	2.667.556	0	897.219	23.872.195	395.725.985	362.684.363
Fishmeal	3.647.690	4.240.721	4.742.251	5.939.565	3.866.360	7.333.324
Export potential	**1.306.136.422**	**1.908.428.775**	**2.191.026.772**	**2.749.724.758**	**2.841.939.265**	**3.403.882.683**

9.5 The Greenlandic economic growth in real terms.

Year	Gross Domestic Product	Priceindex 1971=100	Fixed Gross Domestic Product	Growth in real terms
1980	2.683,0	245	1.095,1	7,78 %
1981	3.104,0	277,5	1.118,6	2,14 %
1982	3.353,0	318,3	1.053,4	-5,82 %
1983	3.806,0	356,9	1.066,4	1,23 %
1984	3.929,0	385,7	1.018,7	-4,48 %
1985	4.375,0	421,8	1.037,2	1,82 %
1986	4.879,0	444,5	1.097,6	5,82 %
1987	5.386,0	457,4	1.177,5	7,28 %
1988	6.049,0	492,1	1.229,2	4,39 %
1989	6.797,0	513,8	1.322,9	7,62 %
1990	6.306,0	543,6	1.160,0	-12,31 %
1991	6.502,0	568,3	1.144,1	-1,37 %
1992	6.265,0	577,6	1.084,7	-5,20 %
1993	6.010,0	584	1.029,1	-5,12 %
1994	6.399,0	589,8	1.084,9	5,43 %
1995	6.773,0	596,2	1.136,0	4,71 %
1996	6.945,0	605,9	1.146,2	0,90 %
1997	7.080,0	609	1.162,6	1,42 %
1998	7.706,0	614,4	1.254,2	7,89 %
1999	7.894,0	619,8	1.273,6	1,55 %
2000	8.633,0	630,3	1.369,7	7,54 %
2001	9.040,0	648,7	1.393,6	1,74 %
2002	9.230,0	674,6	1.368,2	-1,82 %
2003	9.238,9	684,1	1.350,5	-1,29 %
2004	9.688,9	705,8	1.372,8	1,65 %
2005	9.896,6	713,3	1.387,4	1,07 %
2006	10.771,0	729,5	1.476,5	6,42 %
2007	11.105,7	746,3	1.488,1	0,79 %
2008	11.736,2	786,6	1.492,0	0,26 %
2009	12.408,9	822,1	1.509,4	1,17 %
2010	12.863,5	833,8	1.542,8	2,21 %
2011	13.441,9	848,1	1.584,9	2,73 %
2012	13.647,2	889,1	1.534,9	-3,15 %
2013	13.586,1	903,8	1.503,2	-2,07 %
2014	13.701,3	915,6	1.496,4	-0,45 %

9.6 Overall employment in the Greenlandic economy.

People	2009	2010	2011	2012	2013	2014
Public Administration & Services	9.973	10.044	10.052	9.804	9.895	9.826
Fishermen, Hunters & Farmers	3.731	3.531	3.415	3.532	3.548	3.640
Commerce	3.094	3.016	3.009	3.086	3.045	2.918
Transportation	2.641	2.623	2.616	2.629	2.583	2.499
Construction	2.064	1.958	1.872	1.952	1.872	1.720
Business Services	1.300	1.298	1.344	1.426	1.500	1.422
Other Services	790	807	817	844	865	890
Hotels & Restaurants	754	769	785	756	806	742
Uncategorized	705	744	789	705	591	792
Public Utility Workers	411	423	410	390	392	382
Industry	283	251	242	233	235	225
Mining	120	119	137	143	128	110
Total	25.866	25.583	25.488	25.500	25.460	25.166
Of which are employed in public corporations	2.183	2.098	1.974	1.950	2.036	2.039
Direct Public Employment	40,15 %	40,91 %	41,05 %	39,98 %	40,40 %	40,56 %
Indirect Public Employment	8,44 %	8,20 %	7,74 %	7,65 %	8,00 %	8,10 %
Private Employment	51,41 %	50,89 %	51,21 %	52,38 %	51,60 %	51,34 %

9.7 Consumption & Gross Domestic Savings in Greenland.

M DKK	2009	2010	2011	2012	2013	2014
Nominal - Private	5.810,5	5.980,2	6.304,8	6.398,0	6.376,7	6.398,5
Nominal - Public	6.738,6	6.819,1	6.911,4	7.100,7	7.351,5	7.461,2
In real terms - Private	5.810,5	5.894,8	6.110,0	5.912,4	5.799,5	5.743,7
In real terms - Public	6.738,6	6.721,7	6.697,8	6.561,8	6.686,1	6.697,6
Index - In real terms - Private	100,0	101,5	105,2	101,8	99,8	98,8
Index - In real terms - Public	100,0	99,7	99,4	97,4	99,2	99,4
Gross Domestic Product - In real terms	12.408,9	12.679,7	13.026,6	12.611,5	12.356,4	12.299,1
Gross Domestic Savings - In real terms	-140,2	63,3	218,7	137,2	-129,2	-142,2

9.8 Government finances.

Treasury	M DKK - Nominal					
	2009	2010	2011	2012	2013	2014
Operating expenses	**2.975**	**3.078**	**2.785**	**2.743**	**2.715**	**2.661**
Administration	559	549	534	573	594	599
Families	408	435	154	173	173	61
Health	1.116	1.158	1.180	1.203	1.232	1.272
Culture, Education, Science & Church	621	652	654	596	526	540
Net-controlled companies	88	92	78	-12	-13	-13
Business, Fisheries, Hunting & Agriculture	38	30	26	43	64	60
Other operating expenses	145	162	159	167	139	142
Expenses by Law	**850**	**852**	**870**	**879**	**984**	**1.009**
Families	618	621	628	626	645	648
Education	200	208	223	233	320	342
Housing	2	2	2	2	2	2
Other expences by Law	30	21	17	18	17	17
Subsidies	**2.227**	**1.534**	**1.808**	**2.008**	**2.150**	**2.220**
Administration	6	9	10	10	16	15
Families & Health	-	-	10	10	10	10
Culture & Education	277	284	291	293	318	327
Business, Fisheries, Hunting & Agriculture	188	143	147	167	162	177
Block grant for the municipalities	896	772	1.027	1.133	1.146	1.289
Service contracts	260	255	273	270	262	267
Other subsidies	600	71	50	125	236	135
Construction	**809**	**720**	**1.095**	**969**	**597**	**895**
Families & Health	54	46	70	62	56	50
Education	231	317	370	258	162	243
Public works	266	304	380	378	175	186
Housing	216	67	224	287	248	365
Other construction	42	-14	51	-16	-44	51
Income	**5.909**	**6.185**	**6.390**	**6.526**	**6.523**	**6.631**
Agreed incomes	3.787	3.828	3.876	3.922	3.976	3.967
Direct taxes	828	1.018	1.135	1.143	1.051	1.027
Indirect taxes	776	772	800	860	824	936
Return on invested capital	284	290	322	321	406	390
Repayments on loans	173	112	177	210	207	252
Other income	61	165	80	70	59	59

Treasury	M DKK - In real terms					
	2009	2010	2011	2012	2013	2014
Operating expenses	**2.975**	**3.034**	**2.699**	**2.535**	**2.469**	**2.389**
Administration	559	541	518	530	540	538
Families	408	429	149	160	157	55
Health	1.116	1.141	1.144	1.112	1.120	1.142
Culture, Education, Science & Church	621	643	634	551	478	485
Net-controlled companies	88	91	76	-11	-12	-12
Business, Fisheries, Hunting & Agriculture	38	30	25	40	58	54
Other operating expences	145	160	154	154	126	127
Expenses by Law	**850**	**840**	**843**	**812**	**895**	**906**
Families	618	612	609	578	587	582
Education	200	205	216	215	291	307
Housing	2	2	2	2	2	2
Other expences by Law	30	21	16	17	15	15
Subsidies	**2.227**	**1.512**	**1.752**	**1.856**	**1.955**	**1.993**
Administration	6	9	10	9	15	13
Families & Health	-	-	10	9	9	9
Culture & Education	277	280	282	271	289	294
Business, Fisheries, Hunting & Agriculture	188	141	142	154	147	159
Subsidies for the counties	896	761	995	1.047	1.042	1.157
Service contracts	260	251	265	250	238	240
Other subsidies	600	70	48	116	215	121
Construction	**809**	**710**	**1.061**	**895**	**543**	**803**
Families & Health	54	45	68	57	51	45
Education	231	312	359	238	147	218
Public works	266	300	368	349	159	167
Housing	216	66	217	265	226	328
Other construction	42	-14	49	-15	-40	46
Income	**5.909**	**6.097**	**6.193**	**6.031**	**5.933**	**5.952**
Agreed incomes	3.787	3.773	3.756	3.624	3.616	3.561
Direct taxes	828	1.003	1.100	1.056	956	922
Indirect taxes	776	761	775	795	749	840
Return on invested capital	284	286	312	297	369	350
Repayments on loans	173	110	172	194	188	226
Other income	61	163	78	65	54	53

Treasury	Index - In real terms					
	2009	2010	2011	2012	2013	2014
Operating expenses	**100**	**102**	**91**	**85**	**83**	**80**
Administration	100	97	93	95	97	96
Families	100	105	37	39	39	13
Health	100	102	102	100	100	102
Culture, Education, Science & Church	100	103	102	89	77	78
Net-controlled companies	100	103	86	-13	-13	-13
Business, Fisheries, Hunting & Agriculture	100	78	66	105	153	142
Other operating expences	100	110	106	106	87	88
Expenses by Law	**100**	**99**	**99**	**96**	**105**	**107**
Families	100	99	98	94	95	94
Education	100	103	108	108	146	153
Housing	100	99	97	92	91	90
Other expences by Law	100	69	55	55	52	51
Subsidies	**100**	**68**	**79**	**83**	**88**	**89**
Administration	100	148	162	154	243	224
Culture & Education	100	101	102	98	104	106
Business, Fisheries, Hunting & Agriculture	100	75	76	82	78	85
Subsidies for the municipalities	100	85	111	117	116	129
Service contracts	100	97	102	96	92	92
Other subsidies	100	12	8	19	36	20
Construction	**100**	**88**	**131**	**111**	**67**	**99**
Families & Health	100	84	126	106	94	83
Education	100	135	155	103	64	94
Public works	100	113	138	131	60	63
Housing	100	31	100	123	104	152
Other construction	100	-33	118	-35	-95	109
Income	**100**	**103**	**105**	**102**	**100**	**101**
Agreed incomes	100	100	99	96	95	94
Direct taxes	100	121	133	128	115	111
Indirect taxes	100	98	100	102	97	108
Return on invested capital	100	101	110	104	130	123
Repayments on loans	100	64	99	112	109	131
Other income	100	267	127	106	88	87

9.9 The composition of the economic activity in the economy.

	2009	2010	2011	2012	2013	
Commerce & Workshops	7.463.398	7.473.148	8.349.622	8.597.730	8.575.713	
Transportation	2.763.679	2.837.832	3.257.353	3.198.273	3.067.739	
Construction	2.015.451	2.146.366	2.018.311	2.323.726	1.897.501	
Fisheries	858.731	995.319	1.092.229	1.273.217	1.217.255	
Service Providers & Estate Agencies	1.040.977	1.023.472	1.059.726	983.535	1.049.598	
Industry	629.306	687.440	709.769	589.501	580.887	
Financial Institutions & Insurance Companies	337.066	336.485	391.549	511.926	503.750	
Hotels & Restaurants	336.657	328.450	350.750	338.384	305.993	
Mining	295.518	24.055	55.225	89.337	95.033	
	2009	**2010**	**2011**	**2012**	**2013**	**Average**
Commerce & Workshops	47 %	47 %	48 %	48 %	50 %	**48 %**
Transportation	18 %	18 %	19 %	18 %	18 %	**18 %**
Construction	13 %	14 %	12 %	13 %	11 %	**12 %**
Fisheries	5 %	6 %	6 %	7 %	7 %	**6 %**
Service Providers & Estate Agencies	7 %	6 %	6 %	5 %	6 %	**6 %**
Industry	4 %	4 %	4 %	3 %	3 %	**4 %**
Financial Institutions & Insurance Companies	2 %	2 %	2 %	3 %	3 %	**2 %**
Hotels & Restaurants	2 %	2 %	2 %	2 %	2 %	**2 %**
Mining	2 %	0 %	0 %	0 %	1 %	**1 %**

9.10 Investments in the economy of Greenland.

M DKK - In real terms	2009	2010	2011	2012	2013	2014
Fixed assets	**3.021,0**	**3.137,3**	**3.455,7**	**2.963,3**	**2.629,1**	**1.825,0**
Buildings & Plants	2.298,2	2.384,2	2.360,6	2.502,8	1.931,7	1.388,1
Transport	247,1	276,1	558,0	129,3	397,0	150,1
Machines & Inventories	475,7	477,0	537,0	330,7	300,1	286,8
Intangible assets	**885,9**	**3.676,7**	**5.032,9**	**1.866,4**	**979,3**	**385,1**
Mineral & Oil Exploration	865,8	3.657,1	5.015,8	1.849,7	976,5	382,4
Computer software	20,1	19,6	17,2	16,7	2,8	2,7
Total Investments	**3.906,9**	**6.813,9**	**8.488,6**	**4.829,7**	**3.608,4**	**2.210,1**

	% of the Gross Domestic Product - In real terms					
	2009	2010	2011	2012	2013	2014
Fixed assets	**24 %**	**25 %**	**27 %**	**23 %**	**21 %**	**15 %**
Buildings & Plants	19 %	19 %	18 %	20 %	16 %	11 %
Transport	2 %	2 %	4 %	1 %	3 %	1 %
Machines & Inventories	4 %	4 %	4 %	3 %	2 %	2 %
Intangible assets	**7 %**	**29 %**	**39 %**	**15 %**	**8 %**	**3 %**
Mineral & Oil Exploration	7 %	29 %	38 %	15 %	8 %	3 %
Computer software	0 %	0 %	0 %	0 %	0 %	0 %
Total Investments	**31 %**	**54 %**	**65 %**	**38 %**	**29 %**	**18 %**

9.11 Productivity in the economy of Greenland.

DKK	2009	2010	2011	2012	2013	2014
Gross Domestic Product - In real terms	12.409M	12.683M	13.030M	12.619M	12.358M	12.302M
Number of workers	25.864	25.583	25.489	25.501	25.461	25.167
Output per worker	479.775	502.814	527.361	535.163	533.604	544.415

9.12 The workforce of Greenland.

People	2010	2011	2012	2013	2014
The workforce	**26.482**	**26.820**	**26.994**	**27.021**	**26.764**
Employment	24.426	24.302	24.339	24.296	24.010
Unempolyment	2.056	2.518	2.655	2.725	2.754
In a working age - Currently outside the workforce	**9.502**	**9.498**	**9.438**	**9.489**	**9.539**
The real workforce	**35.984**	**36.318**	**36.432**	**36.510**	**36.303**
The workforce					
All	**26.482**	**26.820**	**26.994**	**27.021**	**26.764**
Primary	15.619	15.605	15.442	15.245	14.794
High School	974	1.051	1.121	1.186	1.255
Vocational; Total	6.397	6.465	6.609	6.679	6.792
Education & Vocational training	103	107	125	140	149
Higher education	3.389	3.592	3.697	3.773	3.775
People in working age outside the workforce					
All	**9.502**	**9.498**	**9.438**	**9.489**	**9.539**
Primary	7.647	7.492	7.397	7.396	7.371
High School	430	507	536	593	645
Vocational	1.074	1.124	1.112	1.112	1.152
Education & Vocational training	47	50	60	65	69
Higher education	304	325	333	321	301
The real workforce					
All	**35.984**	**36.318**	**36.432**	**36.510**	**36.303**
Primary	23.266	23.097	22.839	22.641	22.165
High School	1.404	1.558	1.657	1.779	1.900
Vocational	7.471	7.589	7.721	7.791	7.944
Education & Vocational training	150	157	185	205	218
Higher education	3.693	3.917	4.030	4.094	4.076

9.13 Average income in Greenland.

DKK	2009	2010	2011	2012	2013	2014
Average income	198.510	201.817	207.349	213.126	217.299	218.491
Average income - In real terms	198.510	198.985	200.992	197.065	197.656	196.179
Index - In real terms	100,00	100,24	101,25	99,27	99,57	98,83

9.14 American military base in Thule.

M DKK	Defense Spending	Required	Defense Spending compared to the Gross Domestic Product	Theoretical Discount	Block grant	Expenses in Greenland	Net Theoretical Discount
2006	25.752	33.654	1,53 %	7.902			
2007	24.577	34.785	1,41 %	10.208			
2008	25.296	35.951	1,41 %	10.655			
2009	23.720	34.284	1,38 %	10.564	3.437	472	6.655
2010	24.417	35.973	1,36 %	11.556	3.495	292	7.769
2011	24.903	36.668	1,36 %	11.765	3.533	492	7.740
2012	26.586	37.653	1,41 %	11.067	3.587	504	6.977
2013	25.296	38.070	1,33 %	12.774	3.624	499	8.651
2014	22.639	38.852	1,17 %	16.213	3.642	506	12.065
2015	23.240	39.688	1,17 %	16.448			

9.15 The block grant from the Danish Government.

M DKK	2009	2010	2011	2012	2013	2014
Nominal	3.436,7	3.495,0	3.533,4	3.586,5	3.624,1	3.642,2
Real	3.436,7	3.446,0	3.425,1	3.316,2	3.296,5	3.270,3

9.16 Gross Domestic Product per capita in Greenland compared to the one in Denmark.

DKK	2009	2010	2011	2012	2013	2014
Greenland	220.800	227.900	237.400	240.500	241.000	243.400
Denmark	310.400	324.200	329.100	336.700	339.100	344.200

9.17 Average income according to the ethnicity.

DKK	2008	2009	2010	2011	2012	2013	2014
Greenlanders - Nominal	168.145	171.183	174.612	179.971	185.813	189.714	191.436
Foreigners - Nominal	409.236	420.656	424.010	428.208	430.206	441.757	446.609
Increases - Greenlanders		3.038	3.429	5.359	5.842	3.901	1.722
Increases - Foreigners		11.420	3.354	4.198	1.998	11.551	4.852
Average income		**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
Greenlanders - In real terms		171.183	172.162	174.454	171.811	172.565	171.887
Foreigners - In real terms		420.656	418.060	415.081	397.787	401.824	401.002
Index - Greenlanders		100	101	102	100	101	100
Index - Foreigners		100	99	99	95	96	95

9.18 Classification of the Greenlandic population that has an income.

	2009	2010	2011	2012	2013	2014
Low Class	14.873	15.104	14.662	14.633	13.334	13.119
Middle Class	14.990	14.502	14.882	14.620	15.222	15.164
Upper Class	11.373	11.748	12.264	12.873	13.016	12.971

9.19 Sources of income by the Government of Greenland.

M DKK	2009	2010	2011	2012	2013	2014
Block grant	3.436,7	3.495,0	3.533,4	3.586,5	3.624,1	3.642,2
Federal tax	807,2	997,1	1.114,8	1.091,2	1.026,3	992,5
Import duty	551,5	549,8	531,6	554,0	466,4	475,7
EU partnership	200,6	210,8	198,7	199,1	205,3	182,0
Repayments	178,4	112,2	177,0	209,8	207,7	251,8
Interests	166,7	159,1	110,6	123,4	130,2	124,0
Fisheries	133,6	142,4	137,9	173,7	251,9	367,2
Benefits from Denmark	31,5	5,3	21,6	23,3	16,9	13,0
Total incomes	**5.894,4**	**6.199,4**	**6.387,9**	**6.522,2**	**6.523,3**	**6.625,2**
Block grant	58,30 %	56,38 %	55,31 %	54,99 %	55,56 %	54,97 %
Federal tax	13,69 %	16,08 %	17,45 %	16,73 %	15,73 %	14,98 %
Import duty	9,36 %	8,87 %	8,32 %	8,49 %	7,15 %	7,18 %
EU partnership	3,40 %	3,40 %	3,11 %	3,05 %	3,15 %	2,75 %
Repayments	3,03 %	1,81 %	2,77 %	3,22 %	3,18 %	3,80 %
Interests	2,83 %	2,57 %	1,73 %	1,89 %	2,00 %	1,87 %
Fisheries	2,27 %	2,30 %	2,16 %	2,66 %	3,86 %	5,54 %
Benefits from Denmark	0,53 %	0,09 %	0,34 %	0,36 %	0,26 %	0,20 %
Total incomes	**100 %**	**100 %**	**100 %**	**100 %**	**100 %**	**100 %**

9.20 Allocation of the block grant from the Danish Government.

Consumption in K DKK	2009	2010	2011	2012	2013	2014
Municipalities	1.199.626	1.314.467	1.500.605	1.612.510	1.609.824	1.777.404
Government of Greenland	2.237.074	2.180.533	2.032.795	1.973.990	2.014.276	1.864.796
Block grant from the Danish Government	3.436.700	3.495.000	3.533.400	3.586.500	3.624.100	3.642.200

9.21 Sources of income by the municipalities.

Municipalities' income in K DKK	2009	2010	2011	2012	2013	2014
Income tax	1.763.631	1.789.152	1.897.149	1.924.416	1.964.675	2.059.082
Block grant	1.199.626	1.314.467	1.500.605	1.612.510	1.609.824	1.777.404
Other	226.756	170.468	175.897	149.006	175.469	205.929
Total	3.190.013	3.274.087	3.573.651	3.685.932	3.749.968	4.042.415
Block grant	37,6 %	40,1 %	42,0 %	43,7 %	42,9 %	44,0 %
Income tax	55,3 %	54,6 %	53,1 %	52,2 %	52,4 %	50,9 %
Other	7,1 %	5,2 %	4,9 %	4,0 %	4,7 %	5,1 %

9.22 Welfare program by the municipalities.

Municipalities' consumption in M DKK	2009	2010	2011	2012	2013	2014
Elementary School	628	633	633	711	702	700
Subsidized daycare	299	312	321	320	342	335
Free welfare benefits	188	210	227	240	256	269
Education	72	72	70	73	84	79
Direct Housing subsidies	49	48	47	47	47	48
Total consumption	**3.411**	**3.315**	**3.447**	**3.582**	**3.821**	**3.867**
Elementary School	18,4 %	19,1 %	18,4 %	19,8 %	18,4 %	18,1 %
Subsidized daycare	8,8 %	9,4 %	9,3 %	8,9 %	8,9 %	8,7 %
Free welfare benefits	5,5 %	6,3 %	6,6 %	6,7 %	6,7 %	6,9 %
Education	2,1 %	2,2 %	2,0 %	2,0 %	2,2 %	2,0 %
Direct Housing subsidies	1,4 %	1,4 %	1,4 %	1,3 %	1,2 %	1,2 %

9.23 Interview with the Finance Minister

The interview with the Finance Minister Randi Vestergaard Evaldsen

-The party Demokraatit is known as the advocate for the introduction of Earned Income Tax Credit and the reduction of the Corporate Tax rate. Do you consider these two as your main priorities concerning any economic reforms?

-Yes I do. However, they will be included in an overall tax reform package on which we are currently calculating on. And I would like to stress here, that the income tax will not be raised due to this overall tax reform package.

-Earned Income Tax Credit can be expensive depending on its structure. Have you decided what the structure will look like?

-We are looking at various options at the moment. But as I said, it will be included in an overall tax reform package, that should incentivize work instead of pacifying it. Earned Income Tax Credit will be mixed with the existing personal tax deductions in some way.

-How about the reduction of the Corporate Tax rate, how low do you want it?

-I am thinking about a rate between 20%-25%. We are planning on incremental adjustments each year until we reach a certain level, because each percentage point decrease costs us 5M DKK in lost revenues, so we want the lowering of the rate to be gradual.

9.24 People in a working age outside the workforce.

	2010	2011	2012	2013	2014
18-19	949	940	927	932	930
20-24	1.571	1.601	1.615	1.602	1.591
25-29	1.056	1.083	1.098	1.144	1.179
30-34	675	710	748	818	843
35-39	548	518	527	528	558
40-44	907	804	673	598	526
45-49	1.028	1.045	1.028	996	943
50-54	974	1.013	1.006	1.043	1.051
55-59	904	917	956	952	977
60-64	889	867	860	876	938
18-39	4.799	4.852	4.915	5.024	5.101
40-49	1.935	1.849	1.701	1.594	1.469
50-64	2.767	2.797	2.822	2.871	2.966

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