

Cotton import to Norway 1835-1920

Import, industrialization and globalization



Master Thesis

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Spring, 2021

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2021

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Abstract

Cotton today is a part of our daily lives. We use it in clothing, beddings, furnishing and more. For many, cotton is often associated with the dark times. Poor living conditions for millions of people working in the European factories, and forced labour picking the cotton that made a few plantation owners very rich. This has been depicted in many movies, like we can see in the popular movie Django Unchained.

This thesis looks at cotton import to Norway and how it developed between 1835 and 1920. Using data collected from the digital archives of Statistics Norway to map out how much and where it came from. Europe and other parts of the world were changing in the nineteenth century. Industrialization and globalization are often words used to describe this period of development. But what exactly does these words mean? And when did these processes happen? This thesis explores different views on industrialization in Norway.

Using digitalised data on the Norwegian external trade to look at cotton import, questions arise, but can they be answered? How much did Norway import? And where did the cotton come from? These questions and more will be discussed in this thesis.

Preface

I would like to thank Ines Prodöhl for inspiring motivation in the final stage of writing this thesis, as well as good advice on history and how to become a better writer. I would also like to give a thanks to Marte Knudsen for proofreading my analysis chapters.

Last, I would like to give credit and thanks to all students who found a way through the pandemic.

Bergen, June 2021

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1. Introduction

Much of what we use today is produced in factories and shipped from far across the globe. We have become accustomed to almost overnight shipping with goods from around the world. Although the world today is connected by a complicated transportation network we do not need to go back to many years before trade was on a much smaller scale. In this master thesis I want to go back to the time when inventions helped transformed the globe. Travel and transportation changed, cities grew, factories appeared, and paid work became the new norm.

The late eighteenth and most nineteenth century brought with them world changing inventions. Most notably the steam engine which became the foundation for a new way of getting energy. It powered steamships, trains, factories and more. It helped made nations and people extremely rich, but also has dark sides which can be connected to it. People, down to very low ages, worked tirelessly for long hours in textile factories. Slaves were used to pick the massive amounts of cotton that fed these factories, and Native Americans forcefully moved from their homes to make room for the plantations.

Norway became a part of this global cotton industry. Textile factories were set up and cotton was imported in large amounts. For this master thesis I am going to explore exactly that, the import of cotton to Norway from 1835-1920. I will present and map out the import of all the cotton to Norway and Bergen, but also to some degree Oslo, or Christiania, as it was called at the time. During the analysis I will compare cotton import from different areas and explore how it was affected by both the domestic and international politics. How the import of cotton is connected to the globalization that was happening at the time will also be explored. The numbers of cotton import can be used to look for an industrial breakthrough in Norway. They can also be used to see how a certain part of the economy was affected by both domestic and international events. At the end of the chosen period World War 1 broke out, and affected countries around the globe, can this also be seen in the import of cotton in Norway? A few selected sources on “Arne Fabrikker”, a textile factory, outside Bergen will be used to look for clues to a more global trade.

1.1 Thesis statement

Great Britain had during the eighteenth become industrialized and were exporting their mass-produced goods to the rest of the world. During the nineteenth century laws changed in both Norway in Great Britain which made trade of these new commodities cheaper and more accessible. I will later in this chapter go further into what these laws were.

Cotton and cotton goods were among these new commodities. Cotton had been part of the trade in Asia and parts of Africa since the fourteenth century¹, and perhaps even traded all the way to Norway. But products produced in industrial factories were however new to the eighteenth and nineteenth century and were introduced to the Norwegian markets. Changes that happened during the nineteenth century made these products more available. Cotton was industrialized in Great Britain during the eighteenth century. They exported it to markets across Europe. For this master thesis I want to look closer at the import of cotton to Norway from 1835-1920. How much cotton came to Norway? Did it change? Where did it come from?

With looking at the shipping records made digitally available by my thesis statement for this project will be:

How did the import of cotton to Norway and Bergen develop from 1835-1920?

Since this is a quite open thesis I will also work out from some smaller questions:

Can the cotton import to Norway tells us when the industrial revolution happened in Norway?

Where did the cotton come from?

Can we find clues to an increasing global market when looking at the import of cotton to Norway?

¹ Riello, 2013, p.23

1.2 Why this period?

The cotton industry was a large part of what we today call the Industrial Revolution. This revolution is not like other political revolutions which we can give the exact time and place for when they happened. Like the French, Russian or American revolutions. Scholars debate back and forth on the topic of the Industrial Revolution.

A general definition of the Industrial Revolution can be found in the history books which are used in the intro to history courses, “A History of World Societies”. According to the definition given in this book, the term Industrial Revolution, describes the burst of major inventions and economic expansion for industries and manufacturing between 1780 and 1850.²

I will later go over different arguments made by different scholars for how they describe and date The Industrial Revolution. For now, I will work with this general definition. Also, the Industrial Revolution did not occur at the same time for every country, nation or area. Scholars also have different opinions for when the industrial development happened in Norway, this I will also explore later. For now, I want to explain my reason for choosing to research and analyse the import of cotton to Norway between 1835-1920.

The year 1835 is also the first year that data on Norwegian import has been digitalized. It was that year “*Tabellkontoret i Departementet for det Indre*” started statistical processing of the material found in the logging books at the different customs offices around Norway.³

I landed on 1920 as my final year because that it is the latest that some of the Norwegian scholars has placed the Industrial Revolution in Norway. I will come back to this when I discuss the different views on the Norwegian Industrial Revolution

² McKay. Et al., 2015, p.687

³ SSB, External Trade, Statestikkgrunnlag

1.3 Laws

As I said in the introduction, during the first half of the nineteenth century laws changed in both Great Britain and Norway that affected trade. The wars in the beginning of the nineteenth century made their impact on the different European countries. Including Norway, which at the time was in union with Denmark, Denmark-Norway (1380-1814), one of the results of this war was the dissolution of this union. Norway went from being in union under Denmark, to a union under Sweden. Laws that banned luxury goods were put in place, this included foreign textiles. The ban on these products, including cotton was lifted in 1813.⁴

Moving on to the 1840s, there was changes made to taxation on import done by Great Britain in 1842. Robert Peel (1788-1850), the British prime minister, presented in 1842 a free trade budget to the House of Commons, in the British Parliament. The high taxation on more than 750 goods was removed which made it possible for Norway to enter the global market on a larger scale than what it had before 1842. High taxes had been in place since the Napoleonic Wars (1803-1815). The taxes had been used to fund expensive wars and after the wars expensive war debts.⁵

The idea of free trade was based on the ideas and theory of the British political economist David Ricardo (1772-1823). He believed that all nations could prosper by free trade. By specializing in production of products where natural occurring advantages are or production of products where there are advantages in competence. So, either produce products made of easily accessible resources, or produce products you have high competence about.⁶

Laws also changed in Norway “Handelsloven” in 1842 The architect behind these new trade laws were the Norwegian politician Anton Martin Schweigaard.⁷ “Handelsloven” made it so that goods could be sold and moved further into the country and away from the cities before being sold.⁸ This enabled products made out of cotton reach more consumers, as a big part of the Norwegian population lived away from the cities. The opening for free trade made goods,

⁴ Parmer, 1981, p.8-9, Even though cotton might not be a luxury product, Parmer argues that a ban on cotton had been in place, but removed together with the luxury products.

⁵ Sandvik, 2018, p. 60-61

⁶ Sandvik, 2018, p.62

⁷ Sandvik, 2018, p.72

⁸ Risen, 1843, p.5

technology and people enter Norway. The textile industry, and both unproduced and produced cotton were among part of this.⁹

Norway had at this point been in union with Sweden since 1814. Trade between the two countries had been fully allowed since 1827, where also Norwegian ships had been equal to Swedish ships.¹⁰ During the nineteenth century countries were expanding the free trade. In 1860 Great Britain and France made the “Cobden-Chevalier Treaty”. This treaty removed almost all taxation between the countries that made the treaty. Norway and Sweden joined in on this free trade treaty in 1865 through France.¹¹

Early in the eighteenth-century Great Britain had put restrictions on skilled workers to move from Great Britain. And from 1785 Great Britain put a ban on the export of machines and tools used in the textile industry. This included the cotton-, wool- and silk industries, but also tools and machines used in the steel and iron industries. This ensured the head start that Great Britain already have on industrial development.

Even though the British authorities attempted to prevent these skilled workers to leave Great Britain, some of the workers still managed to escape. Other countries also sent in recruiting agents to get these skilled workers to come back to their country. If these recruiting agents were caught, they would risk several years in prison. Foreign guests were also invited to study, among other things, the textile manufacturers. The British intended to build a market for their products in the area in which their guests came from.¹² This can relate to the growing global market which was developing around the world. I will come back to talk more about this process of globalization.

The visitors to Great Britain had various intentions. They smuggled out machines, parts, drawings and received oral or written information. This could all be used in the country from where the visitor came from to increase production to try and compete with the imported goods from Great Britain, which flooded the markets.¹³ The ban on skilled workers to move out of Great Britain was lifted in 1825. A year after the Norwegians entered the world of free trade, 1843, Great Britain also lifted their ban on export of machines.¹⁴

⁹ Hovland and Nordvik, 1997, p. 69

¹⁰ Lund, 1977, p.35

¹¹ Sandvik, 2018, p.62

¹² Bruland, 1991, p.43-44

¹³ Bruland, 1991, p.43

¹⁴ Sandvik, 2018, p.16-17

The ban on export of machines did not include the steam engine made by James Watt (1736-1819) and Matthew Boulton (1728-1809). So, the spread of the steam engine and the expertise on it spread in years before the ban on the rest of the machines was lifted in 1843. It created a pattern which would continue to grow when the more specialized machines and technology could be sold. This is what we would today call “consulting services”.¹⁵

With the removal of the ban for export on machines and tools in 1843, the British technology spread. Together with the removal of high taxes on unproduced goods in Norway in 1842, I have the start point for my thesis. I have chosen to look and analyse data from 1835 because as stated in my thesis statement. I want to look for effects international and national laws had on the import of cotton to Norway.

Further into the 1840s, in 1849 Great Britain also removed the Navigation Act of 1651. This Navigation Act, also called “An Act for Increase of Shipping, and Encouragement of the Navigation of this Nation, stated that only British vessels could trade and transport goods from the British colonies.¹⁶ With the removal of this Act the Norwegian fleet was able to enter the global network of trade. And by 1890 Norway had the third largest trading fleet in the world.¹⁷ Norwegian vessels could now trade with the British colonies and bring home and introduce new goods and commodities to the Norwegian market.

1.4 Changing conditions

Among the inventions of the industrial revolution, some of them were revolutionary to the textile industry. I will in this sub chapter shortly describe and date some of the most important inventions that pushed the cotton industry further. I will not include steamships, railroads and canals, although these helped immensely with the transportation of goods in the period.

The first invention was the *cotton gin*, or cotton engine, made by the American law student Eli Whitney (1765-1825) in 1793. Even though this was not a machine driven by mechanical energy. The cotton gin increased the cotton yield in the American South. It simplified the tedious task of separating seeds from the cotton. Cotton became king (King Cotton) in the American South, which rested on plentiful land and labour. The plantation owners of the

¹⁵ Sandvik, 2018, p.16

¹⁶ Sandvik, 2018, p.63

¹⁷ Sandvik, 2018, p.81

realized that their political ability to preserve the institution of slavery.¹⁸ Even though slavery had been outlawed since 1808, by 1860 nearly one in three persons in the South was a slave. The cotton gin made the America rich, but was also the reason for the revitalization of the declining slavery. Cotton picked by slaves and separated from its seed in Eli Whitney's cotton gin was sold and transported back to the ever-increasing number of cotton mills in Europe.¹⁹

The next invention I want to showcase is the *water frame*, it was made by the English inventor Richard Arkwright (1732-1792) in 1769. His machine, powered by running water, allowed yarn to be spun from warping, thus making it possible and economical to produce pure cottons.²⁰

Scottish engineer James Watt (1736-1819) made the *steam engine* together with his English manufacturing partner Matthew Boulton (1728-1809). The design was upgraded over several years, it can be dated to around 1775. Watt improved on the Newcomen engine which was the first engine that converted heat to mechanical energy. This first generation was used to pump water out of coal mines in Great Britain. The concept of the steam engine to convert heat into mechanical power, was the first of many machines, using this principle, which are a part of the industrial revolution.²¹ Important for the textile industry was the power looms, sometimes water powered, but eventually steam powered weaving machines.²²

1.4 Globalization

Norway's entrance on the free trade marked in 1842, when Great Britain removed tariffs on over 750 products, can be connected to a process which is often called globalization.

Globalization is just as the Industrial Revolution defined differently by different scholars.

¹⁸ Beckert, 2014, p.245

¹⁹ Wren and Greenwood, 1998, p.10-16

²⁰ Riello, 2013, p.247-248

²¹ Wrigley, 2018, p.30-32.

Wrigley argues that the need for coal to heat the growing cities of the sixteenth century sparked a chain of events which led to the industrial revolution in Great Britain. The forests had been mostly cut down, to make room for agriculture, use for timber, and heating for the growing cities. Coal was used as a replacement for wood and can be found quite high up in the ground in Great Britain. But as the mines got deeper, they started to fill with water. To get this water out, machines such as the Newcomen engine, which Watt made improvements on, was made. The engines were powered by the coal from the mines which they drained, so it was a very cost-efficient way of draining the mines. Instead of using animal- or manpower.

²² Bruland, 1996, p.13

For this master thesis I have decided to go with the more classic idea of globalization made by American economist Jeffery Williamson (1935-) and Irish economist and historian Kevin H. O'Rourke (1963-). They define globalization like this: "We take globalization to mean the integration of international commodity markets."²³ He describes globalization in three phases; first phase spanned from 1850-1914, which was disrupted by the second phase from 1914-1950. In the second phase countries looked inwards and became more protectionist. After this came the third phase from 1950 to the end of the century, a period where the global trade again flourished.²⁴

Williamson and O'Rourke describe the some of the different views on globalization made by other scholars. They argue that Christopher Columbus stumbling upon the Americas in 1492 and Vasco da Gama making it around Africa to snatch monopoly rents away from the Arab and Venetian spice traders, as the two most important events in recorded history. These two events are according to Williamson and O'Rourke called by some world historians the "big bang" of globalization. These events, Williamson and O'Rourke says Adam Smith also described as "*the two most important events in recorded history*".²⁵ Williamson and O'Rourke continue to argue that their placement of globalization is more correct because of the data on prices, which they connect to the free trade principles from Great Britain in 1842. During the last 500 years show that there was a drastic change in the early decades of the nineteenth century. Steamships, railroads, the demise of mercantilism, the rise of trade liberalisation and disappearance of trading monopolies are all connected to when they argue that the first phase of globalization started.²⁶ All these new inventions are a product of the Industrial Revolution, which I will take a closer look at in the next sub chapter.

The delimitations made by Williamson and O'Rourke have been criticised. They rely heavily on the economic aspects and have a Eurocentric focus on the development patterns in the North-Atlantic hemisphere. Norwegian historian Rolf Hobsen (1961-) has placed the first phase of globalization from 1850 to 1870, and the second phase with countries looking inward, anti-globalization, in Europe to 1870-1880.²⁷

²³ Williamson and O'Rourke, 2000, p.3

²⁴ Saunier, 2009, p.458

²⁵ Williamson and O'Rourke, 2000, p.1-2

²⁶ Williamson and O'Rourke, 2000, p.26

²⁷ Hobson, 2019, p.2-3

1.5 Previous research

In the beginning of this thesis, I showed a general definition of the Industrial Revolution used in the overview of history book “A History of World Societies”²⁸. This definition is challenged somewhat by scholars. In this chapter I will present different opinions made by scholars about the Industrial Revolution.

I also want to present a definition of the word industry. The word industry comes from Latin “Industria” and means diligent, active and zealous. “Industry produces standardized mass products for anonymous consumers in large production facilities (factories) with distinct work processes.”²⁹ This was part of the industrial development that happened in Norway. In 1875 over 5000 people worked in textile factories. The import of cotton, both produced and unproduced increased, and Norwegian entrepreneurs saw their chance in replacing imported goods with home produced goods.³⁰ It is this cotton import that I will look closer at and analyse in this thesis.

There has been done extensive research on what we call the Industrial Revolution. Scholars varies in definition and when they say that it happened. First, I will show some research done by scholars about the period. In the next sub chapter, I will show how scholars also place the industrial development that happened at different times in Norway as well.

1.5.1 Previous research - The Industrial Revolution and Norway in the nineteenth century

In 1884 the first work describing the Industrial Revolution was published. It was a collection of notes made by the British economic historian Arnold Toynbee (1852-1883). It was this book that first popularized the phrase Industrial Revolution.³¹ Arnold Toynbee’s collection of notes is considered a classic on the topic of the Industrial Revolution. As I said before this was not a political revolution, but as British historian Thomas Ashton (1899-1968) wrote in

²⁸ “...the term Industrial Revolution, describes the burst of major inventions and economic expansion for industries and manufacturing between 1780 and 1850.” (McKay. Et al., 2015, p.687)

²⁹ Helle, et al. p.217

³⁰ Helle, et al. P.218

³¹ Wilson, 2014, p.133

his book *Industrial Revolution 1760-1830* (1948), that it was too late to change the name of the period. People had gotten so used to call it the Industrial Revolution.³²

Ashton puts focus on population growth in his book. “The outstanding feature of the social history of the period – the thing that above all others distinguishes the age from its predecessors – is the rapid growth of population.”³³ Population was even growing in countries where there was yet to start industrial development. Ashton told the story of how England changed and dealt with the population explosion that happened in the late eighteenth and early nineteenth century.

Another scholar that has written about the Industrial Revolution is the British historian Maxine Berg (1950-). In her book *The Age of Manufactures 1700-1820* (1991). She agrees with Toynbee that the period was a break point that ushered in the modern world.³⁴ And she has also redirected the focus to include women and children. They had just as an important part to play as men in factories and artisans for the technological developments that happened.

Berg as well as Ashton is interested in the social changes that came with the rapid population growth and changes in productivity. Her book tells the history of the technologies, forms of work organization and the labour forces of Great Britain’s most important industries during the period (textile-, iron- and workshop industries).³⁵

The population in Norway for my selected period grew as well. From 1 180 259 in 1835 to 2 616 274 in 1920.³⁶ This will be important to note when looking at the import of cotton. Increase in population will also often mean increase in demand.

American economic historian Robert Allen (1947-) released *Why was the Industrial Revolution British* (2009). Allen argues that the Industrial Revolution was fundamentally economic. He connects the development as far back as the sixteenth century. “The Industrial Revolution was Britain’s creative response to the challenges and opportunities created by the global economy that emerged after 1500.”³⁷

Nasjonens Velstand (2018) by Norwegian historian Pål Thonstad Sandvik (1967-) has also been used when researching the chosen period of this thesis. He describes the beginnings of

³² Ashton, 1948, p.2

³³ Ashton, 1948, p.2-3

³⁴ Berg, 1994, p.xiii

³⁵ Berg, 1994, p.1

³⁶ SSB, Befolkningen

³⁷ Allen, 2009

the Norwegian textile industry. His focus is on the cotton mills being established near Christiania from 1840 onwards. He shows how the different kinds of cotton was taxed differently.³⁸ I will go more into this when I am analysing the cotton import in later chapters.

1.5.2 Previous research – global history through cotton

Part of my thesis is to connect cotton to the global development that happened in the nineteenth going into the twentieth century. I will present two works made by two different scholars. Both books strive to tell the tale of cotton and connect it to global history.

First off is the book *Cotton: The Fabric that Made the Modern world* (2013) written by the Italian Global History professor Giorgio Riello. It is a three part book that tells the global story of cotton. Riello carefully explains by what he means with global history. “Perhaps, the global is best defined as a lens through which problems – present and past – are analysed. It is a way to observe and consider phenomena and to pose questions.”³⁹ But he says, because of the overabundance of material available for a global historian, choices on what to include and what not to include has to be made.

Riello also disagrees with the previous given definition of globalisation made by Williamson and O’Rourke. He describes globalisation as fragile link made between Asia, some parts of Africa and Europe brought in by cotton. And he places the process to around 1500.⁴⁰ Which is in line with the some of the already explored views on globalization, the “big bang” of Columbus and Vaso da Gama.

By looking at cotton from a global perspective, Riello states that the industrial revolution in Great Britain⁴¹ “are in reality the fruit of complex interactions between different parts of the world (for instance between factories in England and artisans in India; between cotton plantations in the Americas and consumers in Africa.”⁴² With this he also argues for the industrial revolution to be a much more slow process, rather than the more fast paced development presented by other scholars.

³⁸ Sandvik, 2018, p.88

³⁹ Riello, 2013, p.11

⁴⁰ Riello, 2013, p.86

⁴¹ Riello dates the industrial revolution in Great Britain to “c. 1780”

⁴² Riello, 2013, p.3

An interesting point Riello presents, is that the knowledge of what to use cotton for, how to dye and so on, came from outside Europe.⁴³ European traders learned about Indian cotton practises, created consumption habits back in Europe, also traded with Africa and Americas, and eventually imported Asian skills in textile printing.⁴⁴

German historian Sven Beckert released *Empire of Cotton, A Global History* (2014). In this book Beckert tells the story of two major topics, cotton and the story of what he calls war capitalism. My readings have been focusing on the history of cotton part. One of the main arguments he opens his book with is that cotton became the launching pad for the broader Industrial Revolution.

He as scholars before him argues that cotton was the first commodity that was able to use the mechanical energy from James Watt's steam engine, through the power loom. The writing and presentation style in the book makes it quite clear that the book is meant to reach more than the people studying history. He goes as far as calling cotton the cradle of industrialization.⁴⁵

Beckert describes Great Britain, with the factory city of Manchester as the centre for the world spanning empire, the empire of cotton. The empire he describes spanned over Great Britain, Europe, the United States, China, India, South America and Africa. It is the rise and fall of this empire that Beckert describes in his book.⁴⁶

Although critically acclaimed for his book, scholars such as Dutch historian Peer Vries (1953-) has also criticized it. Vries writes that Beckert overestimates cottons importance for the economy of industrializing Britain.⁴⁷ I think it is important to be aware of this when using Beckert's research, facts and statements might need to be double checked.

⁴³ Riello, 2013, p.6

⁴⁴ Riello, 2013, intro

⁴⁵ Beckert, 2014, p.xi-xvii

⁴⁶ Beckert, 2014, p.x-xi

⁴⁷ Viers, 2017, Journal of World History

1.5.2 The Norwegian Industrial Revolution

As I have showed in the previous subchapter, the industrial revolution is not so easy to place or describe exact. Among Norwegian scholars there is also discourse for when the industrial revolution happened in Norway. I will now present five different scholarly arguments for if, and in case, when the industrial breakthrough took place in Norway.

In the book *I Det Lange Løp, Essays i økonomisk historie tilegnet Fritz Hodne* (1997) historians Edgar Hovland (1938-) and Helge Wallum Nordvik (1943-) give an historiographical overview of the period where different scholars have placed the industrial breakthrough in Norway.

There is uncertainty if there even was a breakthrough before 1914. To find answers Hovland and Nordvik have looked at data on employment in the different industrial sectors. The problem that then arise is the question of reliable and good sources about this.⁴⁸ Hovland and Nordvik goes on to say that another possible way in could be to look at numbers on production volume and value in the different industrial branches. And then compare these numbers to equivalent tasks in the rest of the economy.

Their problem with this method, is that the sources in Norway before 1910 is not of good enough quality to calculate economic growth in the different sectors of the economy. The conclusion they present to this case is that before better sources become available, they cannot give a date for the industrial breakthrough in Norway.⁴⁹ Because of this the number of companies, their production and employment together with historical economic knowledge must be used to get closer to an answer for when the industrial breakthrough in Norway happened.⁵⁰

Hovland and Nordvik presents four different views on when the industrial revolution in Norway could have happened before 1814.⁵¹ They finish with including their own view on when it occurred. I will showcase the different economic historians in the same order that Hovland and Nordvik do; *Even Lange* (1946-), *Kristine Bruland* (1950-), *Francis Sejersted* (1936-2015) and *Fritz Hodne* (1932-2009). Common for all the four scholars is that they

⁴⁸ Hovland and Nordvik, 1997, p.61

⁴⁹ Hovland and Nordvik, 1997, p.61-62

⁵⁰ Hovland and Nordvik, 1997, p.61

⁵¹ Hovland and Nordvik, 1997, p.62

place a high value on company growth and the number of workers employed in the factories at the time when they place the technological breakthrough.⁵²

Lange places the industrial breakthrough in Norway to have happened some time during the 1880s and 1890s. He bases this placement on employment data and national accounts data, urbanization, import and export with other countries and qualitative changes in the industrial sector.⁵³ *Lange* himself writes:

“Utviklingen foregikk på bred front på både hjemme- og utemarkedene, og veksten var ikke i samme grad som før konsentrert om en eller to bransjer.”⁵⁴

Bruland argues that the industrial breakthrough occurred in the years before 1875. She underlines the importance the textile industry had in the first industrial wave across Norway. And that the textile industry was rapidly followed up by the iron and metal industries after 1860.⁵⁵ In an article about the Norwegian workshop industry from 1850-1900, she writes:

“In response to general industrial growth and hence increasing demand for machinery, the Norwegian mechanical engineering industry expanded rapidly from the mid-1840s, and continued to do so until the turn of the century. But this occurred through a sharp upturn during the 1860, which was subsequently maintained, with fluctuations in employment reflecting cyclical factors. Employment in the industry rose sharply from the 1860s in absolute terms but also as percentage of the industrial workforce, reflecting the increasingly important place of engineering in the industrial structure of the country.”⁵⁶

Sjersted has numerous times argued for dates in the 1880s and 1890s, much the same as *Lange*. However, in his more recent works, he has accepted the arguments about the importance of the iron and metal industries, and its growing employment made by *Bruland*.⁵⁷ We can see here that *Sjersted* agrees with both *Bruland* and *Lange*. *Sjersted* himself writes:

⁵² Hovland and Nordvik, 1997, p.61

⁵³ Hovland and Nordvik, 1997, p.67

⁵⁴ Hovland and Nordvik, p.67

⁵⁵ Hovland and Nordvik, 1997, p.67

⁵⁶ Hovland and Nordvik, 1997 p.67

⁵⁷ Hovland and Nordvik, 1997, p.67

“Det store kvantumsprang i norsk verkstedindustri kom i 1860-årene. Et fotfeste var vunnet gjennom de offentlige stipendordninger og gjennom reparasjonsverkstedene, som også hadde utviklet kompetanse ved å formidle import av engelske maskiner. *Det karakteristiske for 1860-årene var for øvrig ikke bare kvantumspranget, men at dette foregikk samtidig med en nedgang i maskinimporten.*” (Hovland and Nordvik’s cursive)⁵⁸

Hodne on the other hand is a sceptic. He argues that the industrial development was of modest proportions before 1900, with small numbers of employed workers in factories, and therefore not an industrial breakthrough in Norway pre the twentieth century. He rather argues that the breakthrough happened between 1900-1920, when power demanding large scale industry, that used hydroelectricity, sponsored by foreign capital was developed.⁵⁹ *Hodne* himself writes:

“Elektrisiteten utløste et industrielt gjennombrudd i norsk økonomi i tiden 1900-1920.”⁶⁰

Hovland and Nordvik themselves states that they will need to see more research on the national accounting figures before they take a final stand on when the industrial breakthrough happened. They write:

“Før vi kan ta endelig stilling til datering av det industrielle gjennombruddet innenfor tidsrommet 1880-1920, er det sterkt behov for nye undersøkelser til kontroll av de tilbakeberegnete nasjonalregnskapstallene. De fleste norske historikere er bundet av disse nasjonalregnskapsdataene.”⁶¹

I will in my analysis chapter 3 use these placements of a Norwegian industrial breakthrough and see if the numbers of import of cotton can tell a story about when the breakthrough might have occurred.

⁵⁸ Hovland and Nordvik, 1997, p.67-68

⁵⁹ Hovland and Nordvik, 1997, p.68

⁶⁰ Hovland and Nordvik, 1997, p.68

⁶¹ Hovland and Nordvik, 1997, p.80

1.6 Sources, method and source problems

1.6.1 Sources used in this thesis

The main sources for this master thesis are the digitally available statistics over Norwegian external trade, they were released in the publication “*Tabeller vedkommende Norges handel og Skibsfart (Commerce et navigation)*” between 1835 and 1883 and by *Statistisk sentralbyrå/Statistics Norway* in their publication “*NOS Norsk Handel*” from 1884.⁶² A complete statistic on Norway’s external with goods are available from 1835. From that year on “*Tabellkontoret i Departementet for det Indre*” started statistically processing material from the customs books that came from all the Norwegian customs offices. From 1835 to 1850 statistics were released every three years, but from 1851 they were released yearly. Each year available has different tables with different information in them. For thesis I have used two of the available tables. First the one that logs the quantity of the imported goods to the different Norwegian ports, where they also include a total of all the different customs offices in Norway. Second, are the logs of where the goods came from, and how much came from each place. In 1835 they call these two different tables 1) “*Tabel over indførte udenrigske Varer og Produkter til Norges Toldsteder*” and 2) “*Tabel over indførte Varer og Produkter til Norge fra de forskjellige udenrigske Steder*”⁶³. This classification stayed more or less the same for the entire period that will be covered in this thesis. Tables on the value of the goods imported to Norway were added from 1866 onwards.⁶⁴

Over the course of my period, 1835 – 1920, the publisher of the export statistics changed.⁶⁵ Also, from 1835-1865 the goods were listed in an alphabetical order. From 1866 the goods were categorised within 25 main groups and subcategories to those 25 main groups. I will come back to this during my analysis. This way of grouping the goods imported to Norway stayed the same until 1939.⁶⁶ The weight of the imported cotton to Norway is from 1835-1865 given in pounds or in Norwegian “*skålpund*”, which is measured at 0.498kg. Which I have for the numbers in my analysis rounded up to 0.5kg. From 1866-1878 the weight is given in

⁶² Statistisk sentralbyrå, «Utenrikshandel, Statistikkgrunnlag (Opplegg og omfang)»

⁶³ Statistisk sentralbyrå, Historisk statistikk, Utenrikshandel, ST A. 3 1835.

⁶⁴ Statistisk sentralbyrå, «Utenrikshandel, Statistikkgrunnlag (Opplegg og omfang)»

⁶⁵ As showed above.

⁶⁶ Statistisk sentralbyrå, «Utenrikshandel, Statistikkgrunnlag (Varegrupperinger)»

centner, 1 centner equals 100 pounds, so 49.8kg. In the customs books for the final years, 1879-1920, the measurement for cotton is given in kilograms.⁶⁷ Because there are three different units of measurements in the period that I will be analysing, I have converted all the weight to kilograms.

For this thesis I have collected and registered the amount of the different cotton goods that came into Norway and Bergen. I have also collected the data for how much unproduced cotton that was imported to Christiania. Also, the data of how much cotton, both produced and unproduced, and where the cotton came from have been collected. Both of these data collections make it possible for me to study the import of cotton to Norway from 1835-1920.

The import data of cotton will not tell me anything of what happened with the cotton inland, but I will assume that most of the raw cottons imported went to the closest cotton factory to the customs office in which it was registered. This can of course not be true, depending on what ports certain shipping companies belonged to. And or if the Norwegian cotton industry used specific shipping companies that only delivered goods to certain ports. Cotton could also be sold and transported to another port or city by sea or inland transportation. The domestic trade of cotton will not be looked closer at in this thesis.

The digital available export trade sources are mostly complete. There are missing pages in a couple of the years in which my research takes place. In the year 1854, the page where the cotton import to Bergen should be listed is gone, at least from the digital archive. Same thing is true for the cotton import to Bergen in 1875. The missing pages can be because of mistakes made when digitalising the sources or can be that the pages were missing or damaged before they were digitalised.

Mistakes are human, and mistakes can also have happened in the different Norwegian customs offices when writing down the amount of cotton that came into the country. Either by being careless or writing/reading off the wrong numbers.

Another uncertainty with the import of goods to Norway is that illegal smuggling of cotton goods can have happened, to avoid taxes or for other reasons unknown. There is no way of knowing if or if so, how much cotton was smuggled in. Analysing the numbers made available from the customs books will in any case give a good picture of how the cotton import developed from 1835-1920.

⁶⁷ Table 1, «Attachments»

Research on one of the first Norwegian cotton factories will also be done. *Arne Fabrikker*, which was placed outside the Bergen area and opened in 1846. In chapter 2, I will present a short version of the history of the early Norwegian textile industry. By looking at a few selected sources on Arne Fabrikker I will search for clues that can show whether the textile industry was connected to the growing network of global trade or not. I will come back to this in the second analysis chapter (4).

Sources on Arne Fabrikker can be found in Bergen Byarkiv “BBA/A-0091 Arne Fabrikker A/S”⁶⁸. Here a vast collection of sources from the earlier textile factory can be found. When looking at these sources the problem mentioned earlier by Hovland and Nordvik comes to light. Sources in Norway before 1910 are often lacking or of poor quality.⁶⁹ In the case of Arne Fabrikker, even though it opened in 1946, the earliest available source is invoice lists from 1855.⁷⁰ As stated above, I want to use the sources found in Bergen Byarkiv to look for a global connection. When studying global history, I look to Riello for advice. Riello says, when researching global history, it is important to mention what we include, but also what we exclude.⁷¹ He writes:

*“Method guides historians on ‘what we leave out’, a skill that William McNiell sees as central to the production of historical scholarship of a global type.”*⁷²

The sources selected to use on Arne Fabrikker comes from a few varied categories in Bergen Byarkiv. The categories given by Bergen Byarkiv under the tag to describe what the source contain will be used in this thesis as well. Sources selected on Arne Fabrikker for this thesis are:

Different invoice books, named, “*Inngående fakturalister og utgående ordrebøker*”, will be studied. I will include the invoice list from 1855-1869 and from 1865-1877.⁷³ Letters from 1882-1914, “*Brev*”⁷⁴ where a collection of various documents from this period is sorted. And finally, a box named ‘machines and operating equipment and similar from 1914’, “*Maskiner*

⁶⁸ Bergen Byarkiv, BBA/A-0091

⁶⁹ Hovland and Nordvik, 1997, p.61-62

⁷⁰ Bergen Byarkiv, «Inngående fakturalister/utgående ordrebøker 1855-1869», serie id: Ha

⁷¹ Riello, 2013, p.11-12

⁷² Riello, 2013, p.11

⁷³ Bergen Byarkiv, «Inngående fakturalister og utgående ordrebøker», serie id: 91 Ha 8, 91 Ha 9

⁷⁴ Bergen Byarkiv, «Brev - Arne Fabrikker AS, 1882 – 1904», serie id: 91 Da 1-2

og Driftsutstyr o.l. 1914".⁷⁵ All these sources will be looked at closer and discussed at the end of chapter 4.

As mentioned earlier the sources on Arne Fabrikker does not cover the first period of the factory's life (1846) but starts in 1855. This means that for the first operating decade of Arne Fabrikker I will not be able to look for clues about the Norwegian textile industry joining the global markets. Other problems I was facing when looking through the sources on Arne Fabrikker was that many of the sources were damaged, either by water, time or ink. To get a full overview of and if they had foreign contacts will therefore be harder, at least for the first years available where most of the damage can be found.

1.6.2 Method

Earlier in this thesis I presented different law changes that happened during the nineteenth century. Historian *Arne Solli* tells the importance of looking at laws when studying history. A lot of historical sources have a legal basis (lovgrunnlag).⁷⁶ Questions surrounding laws can also arise. Which for this thesis will be to look for changes in the cotton import in the years after the laws about free trade in 1842 and the British ban on the export of machines was lifted in 1843. To see if there is a change, I will need to look at data from the years before the laws were changed. This is what I showed in my delimitation sub chapter for why my period starts in 1835. Together with that is when the first available source on external trade in Norway is. Solli explains, there can be a delay from when a law is changed or passed to when we can see its effect in practice.⁷⁷

By using the method of close reading (nærlesing), to really see what the sources says.⁷⁸ The close reading of the import lists aimed at seeing how the source could help me get an answer to my thesis statement. By using both the import lists and sources on Arne Fabrikker to research the global aspect of cotton, both sources can help get a clearer view of the other. This is referred to as the hermeneutic circle.⁷⁹

⁷⁵ Bergen Byarkiv, «Maskiner og driftsutstyr o.l. 1914», serie id: Tb1-2

⁷⁶ Solli, 2018, p.95

⁷⁷ Solli, 2018, p.98

⁷⁸ Ryymän, 2018, p.49

⁷⁹ Andersen, Rosland, Ryymän and Skålevåg, 2015, p.61-62

For this thesis I have based most of my analysis on the quantitative method. Where the main part is to record the import of cotton to Norway between 1835 and 1920. The quantitative method is a hallmark of economic history. And is, according to Solli, synonymous with statistics.⁸⁰ I have searched for the import of cotton to Norway and where it came from in the database and plotted the information into Microsoft Excel. In total I created four different tables of various complexity, these tables will be used in the analysis part of this thesis.

With the data on cotton import collected, I will use the comparative method and compare first the cotton import to Norway with the imports to Bergen and Christiania. And I will also compare cotton import from different countries. Historian *Leidulf Melve* writes that almost every form of analysis involves a research object being looked at in relation to something else.⁸¹ Melve has also pointed that a comparative analysis has four important functions; *contrasting, heuristic, distancing* and *analytic*.⁸² Contrasting, the most fundamental part function of comparing, can help to see differences in Bergen and Christiania cotton import. Second function mentioned by Melve, heuristic function, contributes to older phenomena being explained and phenomena being discovered. More on this later chapters. The analytical function will be used to see if the import can answer my thesis. When looking at where the cotton came to Norway from, I will focus on comparing Germany, which during the period of this thesis went through a lot of changes, which I will go over in the analysis chapter, Great Britain and the United States/North-America. When working with the selected sources on Arne Fabrikker, the qualitative research method will be used.

1.7 Structure of the thesis

This master thesis is split into five chapters; one introductory chapter, one chapter about the history of the Norwegian textile industry, two analysis chapters and a last conclusion chapter. The first chapter, Introduction, will be finished with this subchapter. It contains the thesis statement, previous research, definitions for industry, industrial revolution and globalization. And I have presented what sources and methods will be used to try and answer the thesis statement. In chapter two I will go over the history cotton and of the Norwegian textile

⁸⁰ Solli, 2018, p.99-100

⁸¹ Melve, 2018, p.71

⁸² Melve, 2018, p.72-73

industry, focusing on the beginnings of the period when the first textile factories opened in Norway. This will help set the ground work for the period in which my analysis will take place. For chapter three, the first analysis chapter, I will analyse the import of cotton to Norway. Bergen will be looked closer at, as there is where sources on a first generation textile factory are available. But data on the import of unproduced cotton to Christiania will also be used. In the fourth, and second analysis chapter, I will look at data on where the cotton came from. For the fifth and final chapter I will draw my conclusions of the finds that have been made in chapters three and four.

2. The history of the first textile industry in Norway

In 1882 the Norwegian state historian and social economist *Ebbe Hertzberg* (1847-1912) held a lecture where he underlined that the industrialization of Norway had happened in the 1840s. It had, according to Hertzberg, started with the iron, workshop and textile industries. He said: “*en kraftig begynnelse og ingenlunde en afsluttende stagnation.*”⁸³ I have in earlier chapters showed that modern historians challenge the view of Hertzberg. Among the industries that Hertzberg was talking about we find the textile industry. This connects with my thesis, I want to use the data on imported cotton to look for changes, such as strong increases in the Norwegian textile industry. I believe that industrial development in many of the European countries happened because of the first textile factories opening. The factories created a demand for mechanical workshops, which could provide improvements and repairs on the machines in the factories. In this chapter I will in short go over the history of the beginnings of the textile industry in Norway.

Even though Great Britain had a ban on the export on machines and skilled labourers, textile industry came to Norway before the laws were changed and bans were lifted. In 1813 the entrepreneur *Mads Wiel* (1791-1835) opened the first mechanical textile facility, Halden Spinneri. It was placed in four kilometres outside the city of Halden. The factory it was supposed to be finished in 1814 but got delayed until 1815 because of the Napoleonic Wars (1803-1815).⁸⁴ This, however, was not a steam powered cotton mill, but a water powered one. A nearby water fall which made certain features of the cotton mill novel compared to the ones in Great Britain at the time. Historian *Trine Parmer* states that it important to establish what kind of work that was carried out in this “primitive” factory. She says: “At this time two types of artificial power were used in the industrial production, water wheels and steam engines, in principle performing identical processes.”⁸⁵

The history of how Mads Wiel was able to open a cotton mill long before the technology was openly sold by Great Britain is an interesting one. He obtained wooden models of all the cast iron wheels that was needed to make a mill. He got them made at Eidsfoss Works, a Norwegian foundry, in 1815. The technical equipment Wiel had at his mill was almost

⁸³ Hovland and Nordvik, 1997, p.65-66

⁸⁴ Parmer, 1991, p.37-38

⁸⁵ Parmer, 1991, p.39

identical to the contemporary machines in the more advanced economies. The spinning machinery was of a high technical standard and was unique in Norway. Not only was it powered mechanically, though a water wheel in a waterfall, but also built on highly advanced technical principles.⁸⁶ The machines in Wiels mill was of the same type, and did the same jobs as the machines in the British mills. Although the spinning was advanced, the rest of the tasks in the factory was done in the traditional ways, weaving and dyeing was done by manual labour and done with traditional equipment.⁸⁷

Before this, during the union with Denmark, laws in 1783 forbade the import of luxury products and limitations to how much people should use of certain products. The use of foreign textiles should be limited.⁸⁸ Cotton may not be counted as a luxury good, but it can be placed in the category of foreign textiles. Parmer writes that this also included cotton. The ban was lifted 5. April in 1813.⁸⁹

How Wiel managed this feat of copying the advanced British cotton mills before the ban on skilled workers and expertise was lifted is a story of his entrepreneurial will power. Copenhagen in Denmark was the metropolis of the North at the time. The Danish government both encouraged and supported various industrial ventures. And through escaped British skilled workers and people who studied the technology in Great Britain and brought it back to their home countries, factories started to appear outside Great Britain.⁹⁰ The British historian *Herbert Heaton* (1890-1973) wrote: “Foreigners snoop around factories, iron works, and mines, and frequented taverns in search of artisans who might give them information, smuggle them into industrial plants, or be willing to emigrate.”⁹¹ A Danish man Mr. Nordberg were among these people that got technology out of Great Britain and back to their home land. Nordberg opened cotton mills in Copenhagen. It was from Nordberg that Mads Wiel got the knowledge he needed to open his own factory.⁹²

The technology transfer from Britain to Norway via Denmark are described in two phases by Parmer; 1) “The ‘package’ of technology Nordberg brought to Denmark consisted primarily of elements which were easy to carry out of the country, without risking detention and

⁸⁶ Parmer, 1991, p.41

⁸⁷ Parmer, 1991, p.41

⁸⁸ Arkivverket, «Gjestebud og slikeklær – og myndighetenes forsøk på å kontrollere bøndenes forbruk på 1700-tallet.» <https://www.arkivverket.no/utforsk-arkivene/kulturarvaret-2018/gjestebud-silkeklær-og-forbrukskontroll>

⁸⁹ Parmer, 1981, p.9

⁹⁰ Parmer, 1991, p.43-45

⁹¹ Parmer, 1991, p.51

⁹² Parmer, 1991, p.51

imprisonment.” And 2) “The other part of the diffusion process, the transfer of technology from Nordberg’s workshop to Wiel’s cotton factory in Norway, was of a different character. It is important to note that the package Wiel received in 1815 included both complete machinery and expertise – namely two of Nordberg’s apprentices”⁹³

After the ban on exportation of machines and expertise in Great Britain was lifted in 1843, machines started to cross borders on a whole other scale than people like Nordberg had managed. Bruland writes about the process of factories begin sold in packages, much like Nordberg had done with Wiel to open Halden Spinneri. Bruland writes that after the ban was lifted in 1843, the Norwegian mechanized textile industry developed rapidly. She argues that the development happened based on the British textile engineering firms that started to sell ‘packages’ of technology. These packages contained technical information, equipment, skilled labour and managerial expertise.⁹⁴

Selling of packages to other countries was one of the components of a general spread of technology from Great Britain to other countries at the time. Another important part of this spreading of industrialization was the spread of mechanical engineering industries themselves into countries that succeeded in industrialising in the late nineteenth century. Bruland says: “Since mechanical engineering industries ‘undertake technological change and adaptation as a matter of routine’, as Rosenberg puts it, this spread was of central significance on European industrialization.”⁹⁵ Like I argued earlier, mechanical engineers could specialize in the development, upgrades and repairs of the machines used in industries such as the textile industry.

This comes back to the arguments presented by Hovland and Nordvik to when the industrial breakthrough in Norway happened. Bruland continues by saying that it is useful to contrast, comparative method, this technological transfer process in the engineering industry with that which occurred in the emerging textile industry in nineteenth century Norway. The textile industry had received their machinery, expertise, information and labour from in ‘packages’. The entrepreneurs in the textile industry remained lacking in technical expertise. While the in the engineering industry skill developed, and competence building were essential. Technical problem solving and competence became critical in the engineering industry.⁹⁶ For this reason

⁹³ Parmer, 1991, p.51

⁹⁴ Bruland, 1991, p.232

⁹⁵ Bruland, 1991, p.232

⁹⁶ Bruland, 1991, p.266

Burland concludes "...the role of technology transfer in the development of Norwegian engineering is much more a matter of training and education, of access to information about foreign technical developments, and possession of the ability to use that information."⁹⁷

Continuing with the textile industry in Norway. As showed factories came to Norway in packages. But also in the 1840s the population growth had an effect on the developments that happened. Parmer writes about Sjerested's arguments on the population growths effect on the economy during the 1840s. "Sejersted som legger stor vekt på befolkningsøkningen akkurat i disse åra, hevder at man nå hadde fått «en befolkningsstruktur som ga en inntektsfordeling som ga store grupper anledning til å kjøpe i alle fall litt mer enn det aller nødtørftigste, og en usedvanelig gunstig konjunkturutvikling på grunn av den heldige pengepolitikk i disse årene».⁹⁸ This population growth described by Sejersted also gave the growing industry a cheap work force.⁹⁹

In the 1840s cotton factories, utilizing the new modern textile machines, opened in Christiania, Vøien Bomuldsspinderi, Nydalens Bomuldsspinderi and Hjula Veveri.¹⁰⁰ During the next years more opened and during the next 10-15 years there were at least ten cotton mills and cotton weaving facilities in the capital.¹⁰¹ In 1855-1856 large company Christiania Seildugsfabrik was established, for decades it was the largest industrial company in Norway. And its facilities were, except for the royal castle, the largest building in the Christiania Area.¹⁰² It was the In Bergen, the Danish industry entrepreneur *Peter Jebsen* (1824-1892) opened Arne Fabrikker in 1846. Jebsen had stayed in Manchester, England, in six months during 1845 and bought machines there, which he brought back to Arna outside Bergen. His factory started with 36 looms and water as the energy source. Already by 1849 Jebsen's factory expanded and started to spin cotton and used steam as power source.¹⁰³

⁹⁷ Bruland, 1991, p.266

⁹⁸ Parmer, 1981, p.10

⁹⁹ Parmer, 1981, p.10

¹⁰⁰ Sandvik, 2018, p.88

¹⁰¹ Parmer, 1981, p.8

¹⁰² Sandvik, 2018, p.88

¹⁰³ Bruland, 1996, p.13-14

3. Analysis of the cotton import to Norway 1835-1920

In this chapter I will present and analyse the data collected on cotton import to Norway and Bergen from 1835-1920. The data was collected from *Norwegian Statistics (Historical statistics, external trade)*¹⁰⁴ and plotted into a Microsoft Excel spreadsheet. This spreadsheet was converted to a table, Table 1, see attachments. I will go over the data available on cotton import for each of the years in my given period. In Table 2, the statistical data on weight of unproduced cotton is collected, the empty slots are where there is no data available. Table 1 was created using the tables within the customs books available from Norwegian Statistics (Statistisk sentralbyrå). Inside each of the customs books there are tables called “*Tabell over de viktigste innførte utenrikske varer og produkter til de Norske Tollsteder*”¹⁰⁵, in English “Tabel over the most important imported foreign goods and products to the different Norwegian custom offices”.

The Norwegian language developed during the given period. Norway was in union with Denmark from 1380-1814, which during they adapted the Danish written language. This writing tradition joined Norway into the union with Sweden (1814-1905). As this thesis is not a research on linguistics, I will not go into more detail than to point out that the written language used in the different statistical data available from 1835-1920 changed over time. The word “*innført*” was for example in 1835 written as “*indført*” and in 1920 it was written as we write it in Norway today “*innført*”. The Danish language was used from 1835-1916. Norwegian written language, as we know it today, was used from (1917-1919).

The reason for the change to a Norwegian written language can be connected to an increased feeling of national independence in Norway, the written language in Norway also underwent a series of debates in the late nineteenth century. Norway ended up with two official languages in 1929, “*bokmål*” and “*nynorsk*”, with the first being used in the statistics for external trade.

¹⁰⁴ SSB, 8. Utenrikshandel (External trade)

¹⁰⁵ Statistisk sentralbyrå, Utenrikshandel (External trade), «Tabeller vedkommende Norges Handel og SKibsfart (Commerce et navigation, 1835-1859)», «Tabeller vedkommende Norges Handel og Skibsfart (Tableaux du commerce et de la navigation), 1860-1870», «Tabeller vedkommende Norges Handel (Tableaux du commerce), 1871-1887», «Handel (Commerce), 1888-1909», «Norges Handel (Commerce), 1910-1920». Look in bibliography for «Sources used for Tables» for full links.

The text also develops from a the style of *Fraktur hand* style to a modern style. The Fraktur script style was used in these statistical records from 1835-1859.

Before I present and analyse the data collected to Table 1, I will give explanations of abbreviations used. Both the original Danish and Norwegian meaning and the English translation will be presented. As stated in chapter 1.6.1 the products from 1835-1865 were listed in alphabetical order. From 1866-1920 ordered in 25 main groups, with subgroups.¹⁰⁶

Pund is the first word I will set out to explanation. Pund or pound in English is the unit used from 1835-1865 to measure the weight of the cotton imported. In Norway they used “*skålpund*”, 1 skålpund equals 0.498 kilograms. I have in Table 1, converted the total amount of cotton to kilograms. And in Table 2, I have converted the amount of unproduced cotton to kilograms. The unproduced cotton Table 2, had three categories, the total weight of unproduced cotton imported to Norway, and the unproduced cotton registered in the ports of Bergen and Christiania.

Centner is the next measurement unit that is used in the statistical data. This unit was used from 1866-1878. Centner or *quintal* in English, means one hundred of a unit. Which in this case meant 1 quintal equals 100 pounds. When converting the quintal to kilograms we multiply each the amount of quintal given with 49.8. (1 quintal equals 49.8 kilograms.)

Bomuld is the category for unproduced cotton or raw cotton is placed. The weight of this cotton has been converted to kilograms, in the years where the it is listed in pound or quintal, to more easily compare each year.

BG UT UF – Are abbreviations made from the categories given in the statistical data. The Norwegian version of “BG UT UF” is “bomullsgarn utvunnet og ufarget”, which translates to the English “cotton yarn untwisted and uncoloured”.

BG T UF - Are abbreviations made from the categories given in the statistical data. The Norwegian version of “BG T UF” is “bomullsgarn tvunnet og farget”, which translates to the English “cotton yarn twisted and coloured”.

¹⁰⁶ Statistisk sentralbyrå, «Utenrikshandel, Statistikkgrunnlag (Opplegg og omfang)»

BG F - Are abbreviations made from the categories given in the statistical data. The Norwegian version of “BG F” is “bomullsgarn farget”, which translates to the English “cotton yarn coloured”.

BM – flor – Is the first category or product that is listed of manufactured cotton. “BM” in Danish (1835-1916) “Bomuldsmanufacturvarer”, Norwegian (1917-1920) “bomullsvarer” and in English “manufactured cotton”. Flor is a category which I will discuss more later, but it is a category for “tynt stoff” or “thin fabric”.

BL – Is the abbreviation made for, in Danish “Bomuldslærred” and “cotton canvas” in English. A category on sheets of cotton fabric.

BM – See above.

Vat – Can be described as a soft half produced cotton fabric. Much like consistency of the cotton pads we find in stores today. This category was sooner or later merged into the BM (manufactured cotton).

Produced and unproduced cotton – During my analysis, I will use the terms “Produced cotton” which will refer to a combination of all the cotton goods, yarn and manufactured. And “unproduced cotton” which will refer to the raw cotton.

In the next subchapters I will go over each decade from 1835-1920 and present and analyse the statistics on cotton import for Norway and Bergen. A subchapter on the raw cotton imported to Christiania is also included. Where the cotton came from will be presented and analysed in the chapter 4.

3.1 Cotton import to Norway 1835-1844

The reason why the first decade is not a full decade is due to the fact that from 1835-1850 statistics on external trade in Norway was only released every third year. Data in this subchapter will therefore include the years; *1835, 1838, 1841* and *1844*.

As illustrated earlier, the production of cotton products happened in Norway before the larger industrial factories imported from Great Britain. Wiel, the entrepreneur behind the first cotton mill in Norway (Halden Spinneri 1815), must have seen a demand for cotton products in Norway before he decided on his venture. Even though the import on cotton was banned until 1813, and the use of such foreign cotton should be limited.¹⁰⁷

3.1.1 The year 1835

In 1835 we can see that the import of raw cotton was lower than the import of produced cotton. This was before the taxation on commodities and the ban on machines was lifted, but nevertheless cotton was imported in significant amounts. The total import of cotton made to Norway in 1835 were 224 833kg, with only 31 755kg or 14% being unproduced cotton.¹⁰⁸ Split equally on each person of the population (1 180 264¹⁰⁹) it would be 0.2kg cotton for each. This shows, that even though Wiels cotton mill was operating at the time, the process of spinning cotton was not a large part of the industry in Norway. Halden, where Wiels cotton mill was located, is close to Sweden. Cotton could have been brought to the factory directly from Sweden. The factory was a product of smuggling, perhaps Wiel also had been introduced to a black market. I will not give a thorough explanation to this, but I believe it is worth mentioning.

The categories for cotton in this first year of data are simple, cotton, yarn (coloured and uncoloured) and manufactured cotton. Out of this Norwegian total, 29 694kg made it to Bergen. That is 13% of the total cotton import. Out of unproduced, 994kg went to Bergen. That is 3%, which can tell us that the demand for unproduced cotton in Bergen was not very high. Christiania received 37% of the unproduced cotton.¹¹⁰ Although I in this thesis connect

¹⁰⁷ Parmer, 1981, p.8-9

¹⁰⁸ See Table 1 and Table 2, «Attachments»

¹⁰⁹ Statistisk Sentralbyrå, «Befolkningen» Table

¹¹⁰ Table 2, «Attachments»

unproduced cotton to large scale factories, it is important to remember that cotton could be spun into thread by more traditional tools, by people working in their homes.

3.1.2 The years 1838, 1841 and 1844

I will now move on to 1838. This year shows much of the same trend as in 1835, but with a small increase in the weight of cotton across the board.

The numbers of cotton import are steadily increasing, and in 1841 the total cotton import to Norway was 777 906kg, which is a 245% increase from 1835,¹¹¹ making the amount of cotton split equally among the Norwegian population in 1841 (1 246 335¹¹²) increase to 0.6kg each. This was one year before the free trade principle was taken in effect. The increase can mean a lot of things, such as for example a stronger Norwegian economy, even though there still were high taxes on British commodities. Norway's purchasing power could become stronger. I am not saying that the cotton had to come from Great Britain, but I will explore this more in the next chapter. Other reasons for this increase can be the population growth that Sejersted mentions. More people can lead to more people buying goods. The efficiency in both cotton growing and manufacturing countries could also have been increased.

As mentioned earlier, the first wave of textile industry in Norway, consisted of establishing factories in Christiania and outside Bergen in 1845-1826. This means that the year 1844 is important to look at. It is the first year after both the laws on free trade removed the taxes on a lot of the British goods and commodities. And the first year after the ban on export of British machines were lifted. Also, the last year before the first wave of textile industry in Norway. By first and last year, I am referring to the first and last year with statistical data available. There are increases in the cotton import across all the categories of cotton registered in the year 1844. The increase from 1838 is not as great as the increase was between the previous years. The total for all cotton imported is at 1 062 665kg, which is a 36% increase (1841 to 1844). And the raw cotton import in 1844 was at 146 329kg (13% of total), a 33% increase in raw cotton.¹¹³ Looking at these percentages, we can see that the demand for both types of

¹¹¹ Table 1, «Attachments»

¹¹² Statistisk Sentralbyrå, «Befolkningen» Table

¹¹³ Table 1 and Table 2, «Attachments»

cotton increased, but they are almost the same, so one form of cotton is getting ahead of the other.

The domestic production and use of cotton increase at the same rate, which can be interpreted as an increase that happened due to population growth. If we look at the population in 1841 and 1844, it was at 1 246 335 and 1 293 646 respectively.¹¹⁴

3.2 Cotton import to Norway 1847-1859

The period that will be analysed in this subchapter is the period after the principles of free trade came into action. Over 750 goods and commodities, at least from Great Britain, were now much cheaper due to taxes on them being cut. The British ban on export of machines and expertise was also lifted in 1843. Factories were now being sold to other countries in ‘packages’, which included textile factories.

3.2.1 The years 1847-1855 – First wave of Norwegian textile industry

The numbers of cotton import to Norway in 1847 can tell us a story of the effect of these law changes. The amount of cotton imported in total was 1 157 207kg, an 8% increase from 1844. The weight of raw cotton tells a different story, in 1847 it was imported 469 474kg, which is a 220% increase from 1844. Raw cotton stood for 40.5% of the cotton import in 1847. Compared to 13% of the total cotton import in 1844¹¹⁵.

We can say that the newly opened textile industries in Christiania and Bergen made a huge impact on these numbers. Making the cotton per capita go up to 0.8kg¹¹⁶. We can also see the effect that this had on the import of cotton yarn, untwisted and uncoloured. In 1844 Norway imported 504 567kg, but in 1847 that number dropped to 304 232kg, an 40% decrease in import.¹¹⁷ If we count that the demand only increased because of the population growth, this number shows that the growing Norwegian textile industry could cover more of the domestic demand.

¹¹⁴ Statistisk Sentralbyrå, «Befolkningen» Table

¹¹⁵ Table 1 and Table 2, «Attachments»

¹¹⁶ Population in 1847, 1 344 984, Statistisk Sentralbyrå, «Befolkningen» Table

¹¹⁷ Table 1, «Attachments»

In the statistical data available, 1850 is the next year. It is from 1850 and onwards that the data on the Norwegian external trade is made available for each year. The trend of increasing numbers in total cotton import continues here. The total cotton import for 1850 was 1 437 116kg, and 800 268kg (55% of total) of this was unproduced cotton, or 55%.¹¹⁸ As we can see from these numbers, 1850 is the first year so far in this analysis in which the raw cotton is imported in greater number than produced cotton. As Parmer said, the 10-15 years after the first wave of Norwegian textile industry, saw in the capital alone a significant increase in cotton mills and cotton weaving factories.¹¹⁹

When looking at the numbers for Bergen we can see the same type drop in import of cotton yarn, untwisted and uncoloured, as we did for Norway's total. But the drop happens some years later for Bergen. In Bergen, the statistics shows, that in 1850, 83 050kg of cotton yarn, untwisted and uncoloured, was imported, but in 1851 only 26 951kg of the same type were imported, a 67% drop in just one year.¹²⁰ This number continues to drop until 1853, where data on the import of this type of cotton yarn to Bergen show 10 557kg, a 87% drop from 1850¹²¹, the previous peak found in the available data for this product. We can guess that this was much thanks to Jebsen's cotton factory Arne Fabrikker.

Through the 1850s the cotton import continued to grow for both Norway and Bergen. In 1851 we can see that it is the first year that the total cotton import grows to over three million pounds (1 619 867kg) in total and over two million pounds (1 065 106kg (65% of total)) for raw cotton, if converted to kg the first year Norway imported over a 1000 tons unproduced cotton.¹²² During 1851, 1852 and 1853, we can see that even though the numbers are increasing, they are increasing at a close to equal rate. But this changes in 1854. The weight of total cotton imported for these years; 1 619 867kg (1851), 1 619 788kg (1852) 1 776 942kg (1853). In 1854 the cotton import made a leap to well over two million kg, 2 430 661kg. A 36% increase in one year. Much of this total came in form of cotton yarn, untwisted and

¹¹⁸ Table 1, «Attachments»

¹¹⁹ Parmer, 1981, p.8-9

¹²⁰ Table 1, «Attachments»

¹²¹ Table 1, «Attachments»

¹²² Table 1 and Table 2, «Attachments»

uncoloured. The yarn import increased from 245 894kg in 1853 to 634 011kg in 1854,¹²³ a 157% increase in import in this type of yarn alone.

Whitin the book of statistical data form 1854 I found an error. One of the pages which I needed to map all the information on the cotton import to Norway and Bergen is missing. In Table 1, this missing page for 1854 is showed by the “n/a” in the coloums. The tables that show what and how much of each commodity went to the different custom offices in Norway, are split over two pages. Second page of the table where cotton import is tracked is missing. In this customs book, pages 27 and 28 are missing, which are the first and last parts of two different tables. Quality of the parts of the tables that are in this book, page 26 and 29, are in great condition. This makes me believe that it is rather an error that has happened during process of making the customs books digital. But as stated, the missing pages were originally next to each other. So, a damage has destroyed both pages. Or a singular page printed on both sides can have gone missing or been damaged. We must remember that these are books from close to 200 years ago. The fact that this page of the table with the data for cotton import to the different Norwegian customs offices is missing makes collecting data for Bergen in 1854 impossible. The data collected on the Norwegian total for 1854 was available in another table. This table, “*Tabell over de viktigste innførte varer og produkter til Norge fra de forskjellige utenrikse steder*”¹²⁴, in English: “Tables over the most important imported goods and products to Norway from the different foreign places”. These tables were used to collect the statistical data on where the cotton that entered Norwegian custom offices came from. More on these tables in the next chapter (4).

Raw cotton import decreased from 1 347 089kg (55% of total) in 1854 to 1 206 400kg (47% of total) in 1855, but the total import of cotton continued increasing. And 1855 marked the first year where the import total had exceeded 3000 tons.¹²⁵ Cotton per capita in Norway (1 467 398) at this time was 1,7kg. Although not a large drop in raw cotton import, I think it is worth noting because it was the first drop in raw cotton import since the beginning of the data collection on imported cotton in 1835. The next year, 1856, however saw a massive

¹²³ Table 1, «Attachments»

¹²⁴ SSB, «Utenrikshandel», look in bibliography

¹²⁵ Table 1, «Attachments»

increase in the import of raw cotton. With over 2000 tons, 2 293 847kg, this was a 70%¹²⁶ increase from the last peak in 1854, only two years prior.

3.2.2 The years 1856-1859 – The Crimean Wars

Cotton import to Norway saw its first drop since 1835 in 1857. The total dropped to a total of 2 065 317kg cotton. The trend of decreasing cotton import to Norway continued in 1858, where the total of 1 346 667kg. The numbers had not been this low since the 1840s. A reason for this can be the economic crisis that hit Norway in 1857. Norwegian traders had loaned their money from Hamburg, but events like the Crimean Wars (1853-1856) led to changes in the economic cycles of the United States and Europe. The Crimean Wars are explained by the Norwegian economic historian *Ola Hinningdal Grytten* (1964 -). The war was between powerful states, Russia on one side and Great Britain, France, Turkey and Sardinia on the other. The expensive war created shockwaves in the economy, and led to a large number of bankruptcies in both the United States and Europe. Bankruptcies led to a stock market crash in USA and the burst of the British railroad industry.¹²⁷ Not being able to borrow money from Hamburg anymore, Norwegian banks started to cover much more of businesses capital requirements.¹²⁸ This shows that the Norwegian textile industry was already 20 years after its beginnings affected by global events and economic cycles of other countries, through the Norwegian economy.

Numbers for cotton import in 1859 can tell us that this new Norwegian bank system worked. The numbers pick up to the levels where they were before the crisis of 1857. In the years 1859, 1860 and 1861, the total cotton import to Norway all stayed over 2 tons. And the import of raw cotton for these years were; 2 120 660kg (80% of the total), 2 060 852kg (80% of total) and 1 637 982kg (76% out of total)¹²⁹. These numbers show relative stability with a small downturn in 1860, where we can calculate that cotton per person in Norway was 1.6kg.¹³⁰

¹²⁶ Table 1, «Attachments»

¹²⁷ Grytten, 2000, p.95-96

¹²⁸ Sandvik, 2018, p.92

¹²⁹ Table 1 and Table 2, «Attachments»

¹³⁰ Population in 1860, 1 583 525, Statistisk Sentralbyrå, «Befolkningen» Table

The last year in the data statistics from Norwegian statistics that use the written style of *Fraktur hand* is 1859. The years after 1859 use the same style that we use today. A thing to note about 1860, the only year between 1835 and 1920 that is split in two. By this I mean that the import lists do not show statistics for the whole year in one table. It shows the data for first the first half year of 1860, then the second half of the year.

The American economic and cultural historian *Gene Dattel* gives a table with statistics on the British raw cotton import and the American raw cotton export to Britain, numbers also shown in per cent. From this table we can see that during the nineteenth century Great Britain got more and more depended on the American cotton. Where slaves used Whitney’s cotton gin to produce massive amounts of cotton to fuel the textile industry that was growing in Europe. I made the decision to show this table before the next subchapter, because it will in some parts mention the American Civil war, which broke out in 1861. Its effect on the cotton import to Great Britain has been studied by others, but I want to use some of that information and compare it to the Norwegian cotton import in the same period.

British and American Raw Cotton Trade (Pounds)

	british cotton imports	american cotton exports to britain (with % of total British cotton imports)
1800	56,010,000	16,180,000 (28%)
1830	263,961,000	201,947,000 (77%)
1840	592,488,000	477,521,000 (81%)
1850	663,577,000	474,705,000 (72%)
1860	1,390,939,000	1,230,607,000 (88%)

Table 8. Statistics of British import and American export.

(Dattel, 2009, loc.786)

Beckert also writes about the American cotton entering Europe in the 1850s and 1860s. By the late 1850s, the cotton from the United States accounted for over 80% of the British

imported cotton, as showed in the table above. It also stood for 90% of the French cotton import, 60% of the German and 92% of the Russian import.¹³¹ As Beckert writes it:

*“American cotton farmers had succeeded in turning themselves into the world’s most important growers of the industrial age’s most important commodity.”*¹³²

As showed earlier, Beckert had been criticized for the weight of importance he places on cotton and textile industry for the era. But as he is an economic historian, I will use facts that he presents, but will be careful with trusting his arguments, but calling cotton the “industrial age’s most important commodity” is perhaps stretching it a bit far. To get a definite answer for this I would have to look at how much the textile industry made out of the total economy of different countries.

3.3 Cotton import to Norway 1860-1869

3.3.1 The American Civil War

Looking at the numbers of cotton import to Norway in the 1860s, we can see that the amount of cotton took a huge drop across the board. It went from being 2 562 320kg in 1860, but during 1861, 1862, 1863 and 1865 it dropped. Reached a low point in 1863 with 572 414kg cotton totally, that is an 65% drop. The statistics on the unproduced or raw cotton for the same years, 1860 and 1863, were 2 060 852kg and 229 032kg, which is an 89% drop¹³³. Cotton per capita in Norway in 1863 dropped to 0.3kg, a number that is almost as low as it was in 1835 (0.2kg).

These numbers show us that something happened to cotton during these years. As shown in the table made by Dattel, by 1860, Great Britain were becoming dependant on the cotton from the United States. Knowing this, I wanted to find out where the in these years the cotton that entered Norway came from. I went into import statistics again to look for answers, I was suspecting that most of the cotton imported were coming from Great Britain, and when

¹³¹ Beckert, 2014, p.243

¹³² Beckert, 2014, p.119

¹³³ Table 1, «Attachments»

looking in the logs from 1859-1870 I found this to be true.¹³⁴ I made a Table (Table 7) out of the statistical data on unproduced cotton imported to Norway from Great Britain. Under, in Figure 1, these numbers are shown graphically.¹³⁵

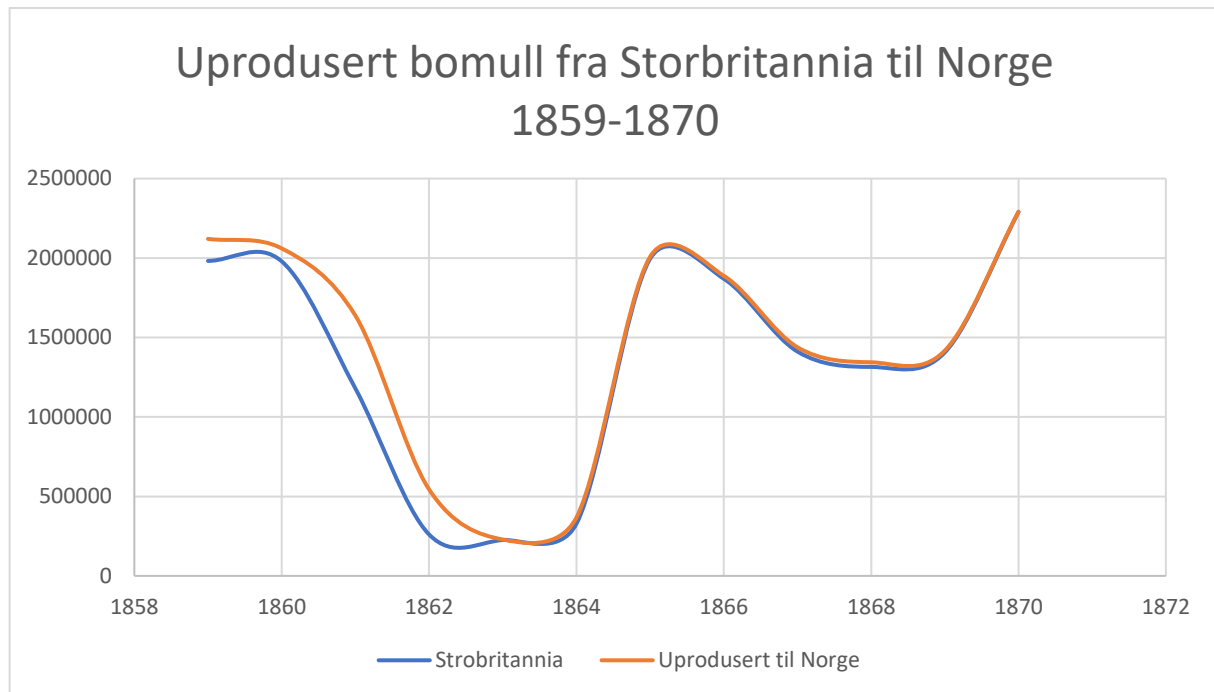


Figure 1. The development of unproduced cotton import to Norway and the raw cotton import to Norway from Great Britain in the years 1859-1870.

In attachments Table 7 that contains the statistical data that was used to make Figure 1 can be found. We can see similarities from this Figure 1, to the table that Dattel created. Like with Britain becoming more and more dependent on the cotton coming out of the United States.¹³⁶ So did Norway with the cotton coming out of Great Britain, at least for the period shown in Figure 1, 1859-1870.¹³⁷ So why did the import of raw cotton drop suddenly? To get the answer we must look at where the cotton came from, the *United States*, to Norway through Great Britain. Many historians, at least those good with dates, will know that the American civil war started in 1861.

American cotton plantations tell the story of one of the dark sides of the cotton and textile industries of the industrial era. Plantations using the cotton gin invented by Whitney were

¹³⁴ Table 7, «Attachments»

¹³⁵ Figure 1, made from the data in Table 7. See attachments for original Table.

¹³⁶ Dattel, 2009, loc.786

¹³⁷ Chapter 4 will be the chapter focusing on analysing where the cotton came from.

using slaves to grow, pick and refine the cotton ready for transport to the cotton mills of America and Europe. Even though international slave trade had been banned in the United States in 1808, the national slave market continued. Slavery had been an institution in America since the first slaves arrived in Jamestown in 1619. Beckert shows that 170 000 or one third of all the slaves entering North America, entered between 1783 and 1808. The need for cheap labour in the cotton industry increased the number of slaves. Whitney's gin, as explained earlier was invented in 1793. Scholars put blame of the invention of this gin for the revitalization of the American slave industry.

Growers of the other American crops, such as tobacco, had not been able to economically support the use of slaves in their farms, only huge yields of cotton made slaves profitable. After the gin, domestic breeding and selling of slaves made hundreds of thousands of slaves ready for the growing cotton plantations.¹³⁸ Farmers of the declining crops, sold their slaves for huge profits.¹³⁹ At the time of the outbreak of the American Civil War in 1861, close to three out of eight people in the American southern states were slaves. And there was a total of four million slaves in the United States.¹⁴⁰

In the early nineteenth century there was not only the problem of slaves, but also the removal of Native Americans from land that the white Americans deemed suitable for their ever-expanding agriculture. I will not explain this in detail, but I think it is an important fact to look at. Like the use of slaves, the removal of the Native Americans from their land and homes, are one of the dark sides to the cotton and textile industries of the nineteenth century. In 1829, American president, Andrew Jackson and the congress, passed the bill about "*Indian Removal*". They called it "the leading measure" and "the greatest question that ever came before Congress, except for matter of peace and war". This "Indian Removal", which we today call *the Trail of Tears*, forced seventy thousand Native Americans east of the Mississippi away from their homes. Thousands died along the way. The newly "freed" territories gave room for the white Americans to settle and cultivate cotton, using slaves as labour force.¹⁴¹

¹³⁸ Dattel, 2009, loc.1047

¹³⁹ Beckert, 2014, p.109

¹⁴⁰ Zinn, 1999 (2015), loc.1962

¹⁴¹ Zinn, 1999 (2015), loc.3139-3146

The use of slaves on the plantations in the American southern states ignited conflict in 1861 which led to the American Civil War (1861-1865). The Southern states seceded from the Union, to form the Confederate States of America. States that seceded from the union were; South Carolina, Mississippi, Florida, Alabama, Georgia, Louisiana, Texas, Virginia, Arkansas, Tennessee and North Carolina. Attempting to get recognition from Great Britain, the Confederate states banned all cotton export in 1861. However, the union had already put up a blockade, to keep the cotton from leaving the south, to hinder the Confederates economy. As a result of this blockade cotton export to Europe from America fell. Early 1862 the total cotton import to Great Britain had dropped with 50%, of which 96% was American cotton.¹⁴²

After knowing that most of the cotton that entered Europe in the nineteenth century came from the slave plantations in the southern American states. I believe that the European textile industries indirectly supported the slave industry that was happening and growing in the United States. Even though they might not have known about the condition on the cotton plantations in the American South. This can be related topics discussed today. The discussion is about the indirect support of child labour if we buy products from certain companies. I think that most people of course do not support child labour, but the cause is complex and distant, so making a definitive stance can for many be difficult. We can think that this was even more true about the European textile industry and the slavery in the United States, a time without internet and the massive flow of information that we have today.

As showed with the earlier table made by Dattel, and the Figure 1, constructed out the statistical data on cotton import to Norway, we see that most likely most of the cotton that came into the Norwegian customs offices were indirectly cotton that came from the United States. So, the most possible explanation that I have for the drop of 65% total cotton imported and 89% raw cotton imported to Norway from 1860 to 1863, is that it was because of the American Civil War. Both sides of the war stopped or blocked the export of cotton to Europe which led to low numbers in the import statistics.

When looking at the statistical data for Bergen in this period, we can see the same trends as for Norway in total. One thing that sticks out in these numbers is that the import of cotton yarn, untwisted and uncoloured. In 1862 it is at 1021kg and 2217kg in 1864, but the number,

¹⁴² Beckert, 2014, p.247-248

although not as high as before the American Civil War, are in 1863 much higher, at 19 399kg.¹⁴³ This can tell us about the demand of cotton goods. Even though the cotton was not coming in the large amounts in which the economy was used to, the demand must have stayed. So perhaps when stores, or even the textile factories got the chance to buy yarn, they jumped on the chance. We must remember that the factories did not only spin cotton, but they also used the thread or yarn to weave cotton textiles. The factories had employees and needed to produce goods to have an income. Perhaps they were willing to pay more for the yarn in 1863, since they desperately needed it.

Moving on from the American Civil War, the amount of cotton imported to Norway went back up again, and by 1865 back to “normal”. The weight of cotton total imported to Norway in 1865 was 2 665 909kg, which is a 4% increase from the 2 562 320kg in 1860 before the blockade was put on the cotton export in the United States. Raw cotton imported in 1865 was 2 008 145kg¹⁴⁴, a number that is higher than for the four following years. This can be explained with the Norwegian textile industry needed to fill up their cotton stores, they had a high demand to get cotton back in their factories to keep them running. But could also be explained with the United States needing capital after the war. The cotton that was unable to leave, due to either the blockade by the Union or the tactical withdrawal done by the Confederate, was now perhaps ready to enter the European markets.

On the international scene the principles of free trade were expanding. Great Britain and France signed a free trade agreement. The *Cobden-Chevalier Treaty* of 1860 removed almost all the tariffs between the two countries. Also, if a third country achieved better terms of trade with either, the terms should count for both Great Britain and France. Norway and Sweden joined this treaty in 1865. Sandvik argues that the treaty, in Norway’s case, had greatest impact on shipping and timber export.¹⁴⁵

¹⁴³ Table 1, «Attachments»

¹⁴⁴ Table 1, «Attachments»

¹⁴⁵ Sandvik, 2018, p.62

3.3.2 Change in unit 1866

The unit used up to and including 1865, was pounds. In 1866 this changed, the unit used in the statistical data from this point is the unit quintal¹⁴⁶. The change of unit used is not the only change to how the import of cotton was tracked. A change in categories happens, as mentioned earlier, the previous sorting of the imported goods had been in alphabetical order. From 1866 onwards, the imported goods and products were sorted into 25 main categories.¹⁴⁷ When looking at the data for cotton, we see that unproduced cotton is now listed under in the main category 7. *Spindestoffe m. m.* The under groups for this category of spinning fabrics are *Uld, Bomuld, Lin og Hamp*, and *Drev*. The various categories of cotton yarn used in previous years are merged. And are now listed in main category 8. *Garn og Rebslagerarbeide*. Cotton yarn is now listed together with wool yarn, linen yarn and rope warehouse work. Products manufactured from cotton are listed in category 9. *Manufakturvarer af Spindestoffe*. The subcategories here are *Helsilkevarer, Halvsilkevarer, Uldvarer, Bomuldsvarer, and Linvarer*. The cotton goods are under this category again split into three categories; *trykkede og flerfarvede, ensfarvede eller blegede* and *ublegede*.¹⁴⁸ When collecting the data in my Table 1, I made the decision to combine all of these smaller groups of manufactured cotton into one. The import of goods and commodities were at this point, 1866, clearly important enough to get their own categories. This can be understood as the textile industry, with cotton, wool and silk combined, were a significant part of the Norwegian economy.

The statistical data for Norwegian export is at this time released in the publication “Tabeller vedkommende Norges Handel og Skibsfart”¹⁴⁹ The total overhaul we see, in the way the statistical data for external trade, can have been part of an overall modernisation of different economic and official parts of the society.

In the four years after 1865, the import of raw cotton to Norway was on a decline again. In 1866, a sum of 1 888 316kg raw cotton was imported. In 1867, the number continued downwards to 1 438 722kg, in 1868 it was at 1 344 201kg and last 1869 it began going back

¹⁴⁶ See earlier chapter three for explanation of the unit quintal

¹⁴⁷ Statistisk sentralbyrå, «Historisk statestikk», «Utenrikshandel, Statestikkgrunnlag, Varegrupperinger»

¹⁴⁸ Statistisk sentralbyrå, «External trade, Tabeller vedkommende Norges Handel (Tableaux du commerce), I C.No.3 1866»

¹⁴⁹ Statistisk sentralbyrå, «Utenrikshandel, Statistikkgrunnlag (Opplegg og omfang)»

up again with 1 417 656kg.¹⁵⁰ These numbers are lower than the ones we can find from before the American Civil War. A reason that can explain this, is the freeing of the slaves, which was the result of the American Civil War. The American plantation owners had to figure out how they should replace their forced labour. Import on all the cotton in total followed the same trend in Bergen for these years. In 1869, the total cotton import had grown with 854% since 1835. We can safely say that cotton was now a product that was demanded by the Norwegian market. The availability for cotton that was changed in 1842 and 1843 seems to have given results in demand.

The population in Norway at the point of 1869 had also grown to 1 729 242¹⁵¹. Time can also have influenced the use of cotton in Norway, the longer time people would have had cotton products available for them, the more they found uses for it. Inspiration in clothing, furnishing and other uses can also constantly have had been imported from other countries like Great Britain where it had been used for a longer time. At the end of this decade, in 1869, the total import of cotton was at 2 146 330kg.¹⁵² A number which is similar to the previous years, except the drop in the mid-1860s. Of this 1 417 656kg or 66% was unproduced cotton.

3.4 Cotton import to Norway 1870-1879

The next decade that I will take a closer look and analyse the statistical data for cotton import to Norway is the 1870s. First I want to show a figure illustrating the population growth in Norway for my period. The statistical data used to make the Figure 2¹⁵³ were retrieved from Statistisk Sentralbyrå, they have a page dedicated to the population growth in Norway, with a table where you can find the registered count of the population for each year. The reason that I show the population growth is to showcase the fact that since the beginning of my period in 1835 to the end in 1920, the population grew in quite a rapid rate, which as stated before would have had an effect on the general demand on goods and products.

¹⁵⁰ Table 1 and 2, «Attachments»

¹⁵¹ Statistisk sentralbyrå, «Befolkningen», Table

¹⁵² Table 1, «Attachments»

¹⁵³ Statistisk sentralbyrå, «Befolkningen», Table

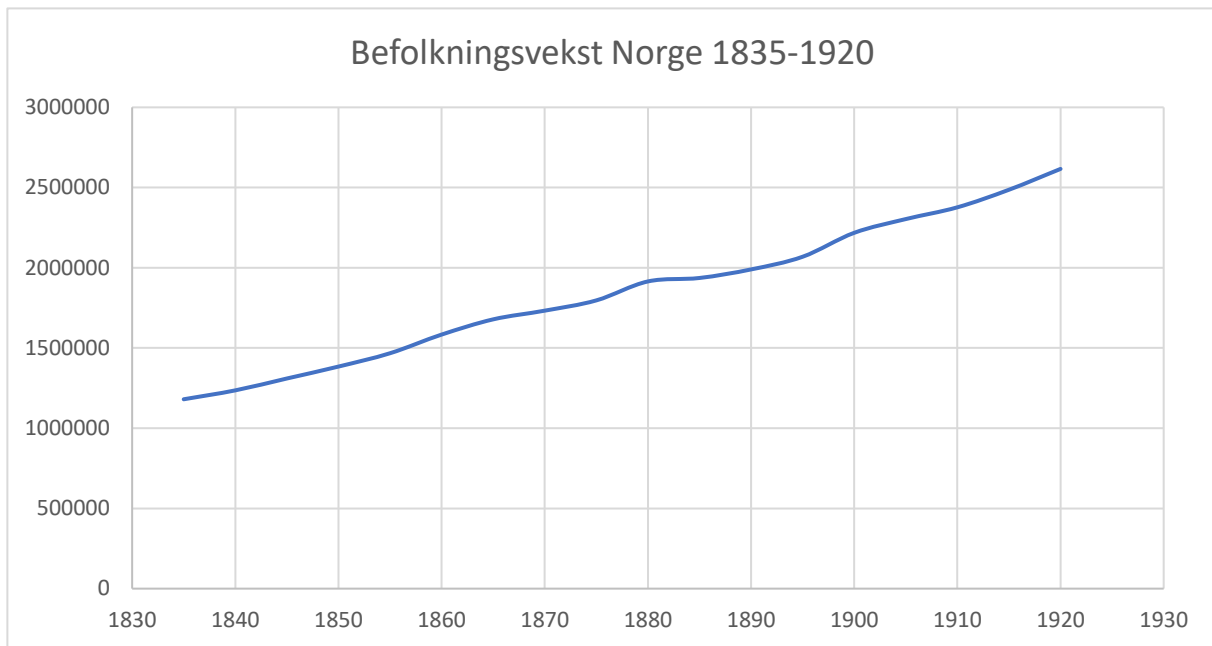


Figure 2. Population growth in Norway 1835-1920. (Statistisk sentralbyrå, Befolkningen)

We see in Figure 2, that the population grew from 1 180 259 in 1835 to 2 616 274 in 1920, in under a hundred years the population doubled, a growth of 121.6% to be exact.

The total cotton import in 1870, 3 175 148kg increased quite a lot from 1869, 2 146 330kg. A growth of almost 48%, a quite noticeable increase in just a year. This growth can perhaps be explained, together with population growth, that the plantations in the United States were starting to figure out how to produce their cotton without the slave labour. Split among the population of 1 732 655 in Norway, cotton per person would be 1.8kg. Unproduced cotton imported in 1870 was 2 292 194kg (72% of total).

Another interesting fact about the textile is that the Norwegian government had placed higher tariffs on produced cotton than raw cotton. They did this to protect and help cultivate the growing textile industry. The tariff rates on raw or unproduced cotton were low, but tariff rates on cotton yarn was at 15-20%, and 30-50% on woven cotton fabrics. By the 1860s the Norwegian textile industry had a domestic market share of approximately 80%¹⁵⁴. As showed in the earlier subchapters of this analysis the percentage raw cotton imported out of the total cotton imported stayed high since the 1840s. These protective tariffs rates were removed

¹⁵⁴ Sandvik, 2018, p.88

around 1870, and lead to, according to Sandvik increased competition between the imported and domestic produced textile goods.¹⁵⁵

As shown above, the percentage of raw cotton import compared to manufactured was still high in 1870 with 72%. In Bergen, the same year, this number was at 41%. Something that can be understood as the textile industry in the Bergen area could not keep up with the demand on the same level as the domestic average. Imports to Bergen were 16 135kg cotton yarn and 153 882kg manufactured cotton. The weight of the same goods imported to Norway in total were 164 340kg yarn and 718 614kg manufactured cotton.¹⁵⁶ What these numbers can tell us is that, even though Bergen had higher imports of manufactured cotton, there were lower numbers of yarn that went to Bergen than the rest of Norway. The textile factory Arne Fabrikker could probably supply much of the demand of yarn to the Bergen Area.

Further into the decade the total import kept growing, the rate of the growth is slow, but steady. Which makes me think of the different scholars that argue that the industrial development is a rather slow development, not a sudden change. The rate of cotton keeps growing and achieving its first year of a total over 4000 tons in 1874, with 4 484 589kg. Out of these 2 531 035kg (56% of total) are unproduced cotton. Compared to the 72% raw cotton of the total in 1870, the number in 1874 shows that the removal of the protective tariffs can have influenced the balance between import of unproduced and produced cotton. The 4.4 million kg cotton imported was a 68% growth from a decade earlier. It is, in the years before 1875 that Bruland argues the industrial breakthrough in Norway occurred. Looking at the numbers on imported cotton we can see that both import of unproduced and produced cotton is increasing, but I am not sure that the increases are enough to call them a breakthrough. This of course is when only looking at the numbers of imported cotton, which does not reflect the entire industrial development that happened in Norway at this time.

In 1875, the statistical data available from Statistisk sentralbyrå has an error. The error is the exact same as for data on external trade in 1854. The page where import to Bergen is listed is missing. This is the second and last time that I found a page missing after looking through the statistics from all the years in the given period.

¹⁵⁵ Sandvik, 2018, p.88

¹⁵⁶ Table 1, «Attachments»

The last year that the data is showing the weight of cotton in the unit quintal is 1878. Import weight from this year are, 3 763 684kg total and 2 297 821kg (61% of total)¹⁵⁷ unproduced. Compared to the numbers from four years earlier the ratio between produced and unproduced stayed somewhat the same.

Quintal becomes a thing of the past, at least for the statistical data reports in 1879. The unit used from this point on is kilograms. The third and last unit used in the selected period. I chose to convert the weight of all the years studied to kilograms for this reason. And most people reading this thesis, myself included, kilograms are a more relatable unit.

3.5 Cotton import to Norway 1880-1899

The next few decades the trend shown in this thesis, and readable in Table 1 and Table 2, was a slow and steady increase in import of both unproduced and produced cotton. Imports to Bergen stay relatively low compared to the domestic total. Earlier I talked about the textile industries in both Bergen and Christiania. To see if there was a big discrepancy between the import to Christiania compared to the domestic total as well, I included the data for raw cotton to Christiania to Table 2. To see how the import to these three entities compared to one another I made the data in Table 2 into a figure (Figure 3¹⁵⁸). When adding the data available on raw cotton import to Christiania, the error of the missing page from 1875, discussed earlier appeared as well. The missing page from 1854, did not affect the statistical data available on

¹⁵⁷ Table 1, Table 2, «Attachments»

¹⁵⁸ Table 2, «Attachments»

import to Christiania. Figure 3 shows the development of unproduced cotton import to Norway from 1835 to 1920. As Figure 3 displays, the development during the 1880s and 1890s, a slow and steady increase. Table 1, shows that this is also true for the imports of all cotton in these decades. As a consequence, I have decided to combine the subchapters of these

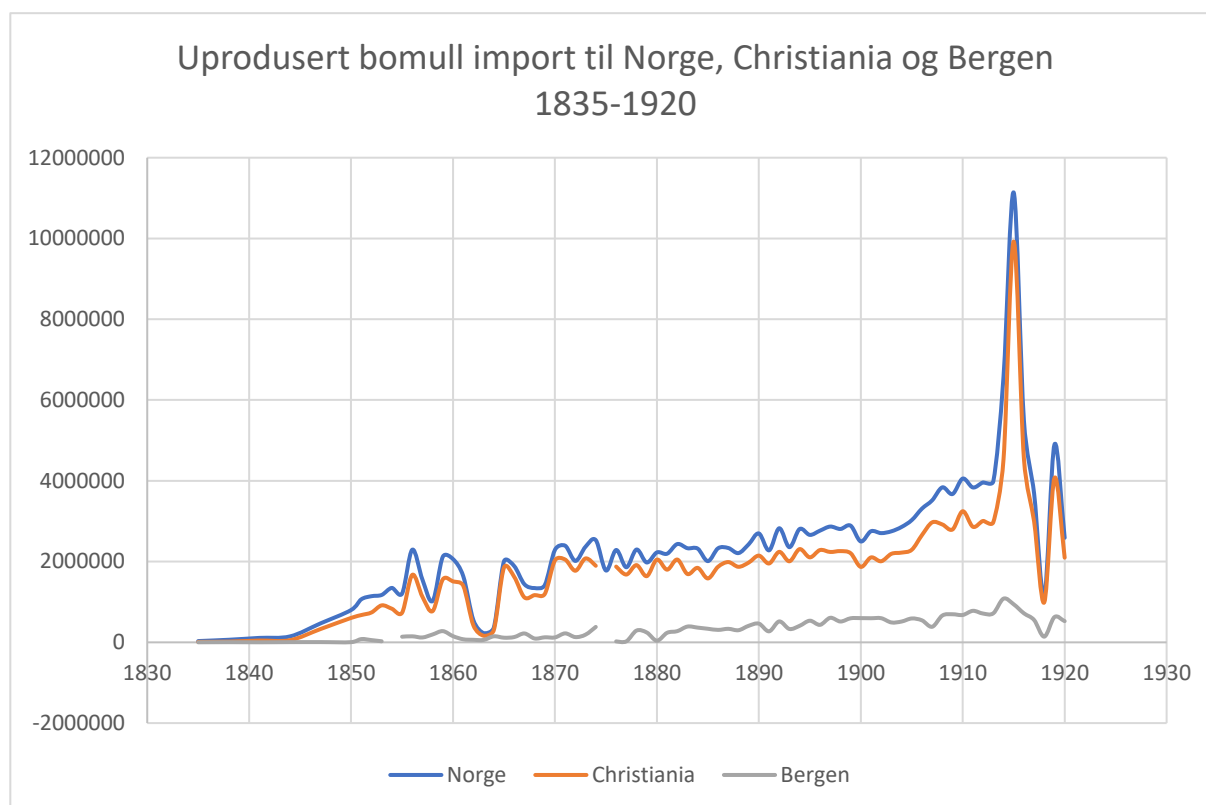


Figure 3. Unproduced cotton import to Norway, Christiania, and Bergen. (Created from data in Table 2, see attachments.)

two decades into one.

From 1881, the total cotton imported again measured over 4000 tons (4 053 210kg)¹⁵⁹, something that had not happened since 1874. This was an increase of 21% from a decade earlier in 1871. Cotton per capita in 1881 had increased to 2,1kg.

If we compare the total of 1881 to the total of 1835, it shows a growth of 1702%, the population, however, for the same years grew with 62%¹⁶⁰. The increase for raw cotton in the same years, comes in at 6810%¹⁶¹. We can safely say that cotton was now a product that was well integrated in Norway.

¹⁵⁹ Table 1, «Attachments»

¹⁶⁰ Statistisk Sentralbyrå, «Befolkningen» Table

¹⁶¹ Table 2, «Attachments»

When comparing upcoming import numbers for cotton, both raw and manufactured, I have decided to use 1851. The first wave of cotton factories would at this point have had a few years to settle in. Also, 1851, as showed, is the first year where we can see the weight of imported raw cotton increase to over 1000 tons. The years from 1835 to 1850 have in earlier subchapter been thoroughly discussed. As showed, and visible in Table 2, the 1851 raw cotton import weighed in at 1 065 106kg. Comparing the import of 2 194 570kg raw cotton in 1881, it had increased with 106%. This shows that the domestic cotton mills in Norway had over the course of 30 years doubled their capacity.

Sandvik describes the industrial sector in Norway. During the 1880s and 1890s, industrial growth played a big part in the economic development. The number of people employed in the different industrial sectors doubled during these decades, reaching 80 000 in 1900.¹⁶² Increase in machines, and constant development of the technology increased the industrial output of products such clothes, shoes, soap, brushes, food, newspapers, books, and a lot more. Increase of total horsepower grew for all industries. Norway, at this point had, had reached a level of industrialization at the same level of Denmark and the Netherlands, but still behind Great Britain, Germany, and Sweden.¹⁶³

In 1884 Norway transitioned to a parliamentary system, all political power now resided in *Stortinget*, the political left was gaining ground.¹⁶⁴ The political movement in Norway was changing. *Arbeiderpartiet*, a left winged party, was formed in 1887. One of their primary demands were for tariffs on primary goods should be removed.¹⁶⁵ Even though in Norway, the interest of developing more of the free trade. The 1880s, and 1890s were on the international level starting to move towards a more protectionist political economies. Sweden established protective tariffs in 1888. And the free trade agreements between Norway and Sweden were discontinued by 1897.¹⁶⁶ We can see from the numbers in Table 3, 4 and 5, that the import of all the different cotton categories continued to increase from 1880 to 1920¹⁶⁷. The Swedish taxes probably effected the import of cotton. Not to the extent that we can see a decrease in amount of cotton exported from Sweden, they continues to rise until World War 1.

¹⁶² Sandvik, 2018, p.115

¹⁶³ Sandvik, 2018, p.115

¹⁶⁴ Sandvik, 2018, p.123

¹⁶⁵ Sandvik, 2018, p.125

¹⁶⁶ Sandvik, 2018, p.128

¹⁶⁷ Table 3, Table 4, Table 5 «Attachments»

Growth in the industrial sector can be seen by the governments regulation of the work environment in factories. *Det stedlige fabrikktilsynet* was created in 1892. It contained rules that were meant to make the work environment better, minimum wages, and rules about children in the factories. No child under the age of 12 could from this point on be hired by a factory.¹⁶⁸

The statistical data from these decades show that the import of cotton, both raw and produced was increasing. In 1884 the total cotton import came in at 4 736 823kg, only a 5% increase from the peak year of 1874¹⁶⁹. Continuing in the 1880s the import increases each year into the 1890s, with small variations from year to year. Some years the number is higher than the previous year, sometimes lower, but the trend of increasing during these decades stays. Reaching for the first time in 1889 over 5000 tons, 5 413 945kg. Of this 2 427 130kg (44%) was raw cotton¹⁷⁰. Compared to the 69% of total cotton imports being raw in 1878, this is a quite significant decrease. Split among the population of 1 978 834¹⁷¹ it would be 2.7kg each. It can show that the Norwegian textile industry could to less extent keep up with the domestic cotton demands, also the competition from textile producers in other countries could influence these numbers.

If we look at the numbers from Bergen, we can see that in 1889, a total of 409 320kg raw cotton was imported, 56% of the total imported. The Bergen textile industry was by this perhaps better at keeping up with the local demand.

Norway experienced a lot of emigration to the United States around these years, second in Europe only to Ireland in the amount of people moving. With reaching a peak in 1882 where 30 000 Norwegians emigrated. A total of 500 000 moved from Norway to the United States before 1900. This of course led to a slower population growth compared to earlier periods.¹⁷² In 1897 the total cotton imports to Norway reaches a new record with over 8000 tons, 8 147 418kg, which would be 3.8kg going to each of the 2 126 024¹⁷³ inhabitants of Norway. Before dropping quite dramatically to 6 453 938kg in 1898, approximately 3kg per capita

¹⁶⁸ Sandvik, 2018, p.127

¹⁶⁹ Table 1, «Attachments»

¹⁷⁰ Table 1, Table 2, «Attachments»

¹⁷¹ Statistisk sentralbyrå, «Befolkningen», Table

¹⁷² Sandvik, 2018, p.132

¹⁷³ Statistisk sentralbyrå, «Befolkningen», Table

(2 157 418¹⁷⁴). A drop of 20% in just one year. The amount of cotton import does not go over 8000 tons again until 1910.

The increase and drop of 1897 and 1888, can perhaps be explained by what we call *Kristianiakrisen*. Sandvik explains it with speculations in the building and housing markets. The population of Christiania grew from about 140 000 in 1890, to 230 000 in 1900. The financial building and housing bubble burst in 1899.¹⁷⁵ Even though this was a year after the drop we see in cotton import, it might be connected. When looking at numbers of imported unproduced cotton to Norway, Bergen and Christiania, Table 2, it shows that Christiania experienced a drop from 1899-1900, Bergen's import values of raw cotton stayed more or less the same. Christiania 1899 and 1900; 2 206 690kg to 1 868 520kg, a 15% drop. Bergen 1899 and 1900; 595 750kg to 599 790kg, a 0.6% increase¹⁷⁶.

Interestingly the decrease of total cotton import to Norway be seen Bergen in the same years, but not as dramatic. A larger decrease however can be seen in Bergen in 1903. Show here in a section of Table 2¹⁷⁷. A reason for this can be that the economic shockwaves from *Kristianiakrisen* in 1899, did not reach Bergen for a couple of years. The decrease we see in Bergen from 1902 to 1903 can be told as a 16% drop. Which is almost the same percentage as the one we can see in the Christiania raw cotton import between 1899 and 1900.

År	Norge	Bergen
1897	8147418	1175688
1898	6453938	1005541
1899	6768342	1110765
1900	6087961	1070469
1901	6472607	1096235
1902	6562762	1059330
1903	6199221	885563
1904	6624625	916076
1905	7154074	1041836

Section of Table 2. 1897-1905. Table 2, "Attachments"

Cotton import, as shown, during the 1880s and 1890s can have been affected by the domestic and international economic cycles. If we look back to the different arguments to when an industrial breakthrough happened in Norway, from chapter 1.5.2. We can see that as Lange stated, the industrial sector grew in these decades. I am, of course, now only looking at the numbers of cotton import. But we can see that these numbers tell a story of a slowly but surely increase of the weight of raw cotton imported to Norway. Raw cotton import can tell us how the textile

¹⁷⁴ Statistisk sentralbyrå, «Befolkningen», Table

¹⁷⁵ Sandvik, 2018, p.130

¹⁷⁶ Table 2, «Attachments»

¹⁷⁷ See picture (table 1897-1905), section taken from, Table 2, «Attachments»

industry in Norway grew. Remember the definition of industry that was presented earlier. Industry takes raw materials and produces goods and products in high quantum using machines in large factory facilities. Data on raw cotton import tells a slow development that crashes around the same time as Kristianiakrisen, but builds up again in the next century.

3.6 Cotton import to Norway 1900-1920

3.6.1 Dissolution of the union between Norway and Sweden

At the turn of the century important changes happened. Norway's union with Sweden is dissolved in 1905. Norway entered a period of strong economic growth. From 1905 to the outbreak of World War 1 in 1914, the country's gross domestic product increased with approximately thirty percent. This growth rate was according to Sandvik the same as could be seen in the United States at the time. And with extreme increases in growth, which will be presented and discussed later, the growth in gross domestic product from 1905-1920 increased by sixty percent.¹⁷⁸

These numbers can also be seen in data on total cotton import to Norway. Starting at 7 154 074kg in 1905.¹⁷⁹ Per capita (2 303 595¹⁸⁰) this would be 3.1kg cotton. Increasing amount of cotton can be seen in the statistical data each year in the period up to war, which will be discussed in next subchapter (3.6.2). Sandvik presents arguments made by the economic historians *Christian Venneslan* (1968 -) and *Jan Tore Klovland* (1949 -) who both calculated the growth in the industrial production to be eighty percent from 1905-1914. Industrial production represented one fifth of Norway's gross domestic product, which was more than agriculture and forestry combined. Most of the increased value creation came from the electrochemical sector, but Sandvik says that progress could be seen in close to all parts of the Norwegian industry.¹⁸¹ From 1875-1920 the employment rate in the industrial sector increased from 125 000 to 650 000.¹⁸² I have not collected the data of how much of the total

¹⁷⁸ Sandvik, 2018, p.129

¹⁷⁹ Table 1, «Attachments»

¹⁸⁰ Statistisk sentralbyrå, «Befolkningen», Table

¹⁸¹ Sandvik, 2018, p.148-149

¹⁸² Sandvik, 2018, p.159

industrial production in Norway that came from the cotton industry, but we can look in the data on raw cotton import to look for a growth.

The growing cotton import we see in the data shows that by 1910 the total weight had again reached over 8000 tons, a number not seen since before Kristianiakrisen. From 1909, 7 956 616kg to 1910, 8 854 814kg, a 11% growth in one year. In Bergen, the data does not show the same growth, with being only 1% for the same years. A total of 13% of all cotton imported to Norway in 1910 went to Bergen.¹⁸³

År	Norge
1905	7154074
1906	7327610
1907	7894908
1908	7773514
1909	7956616
1910	8854814
1911	8373554
1912	9115455
1913	9174579
1914	11611979

As we see from the numbers in this section of Table 2, cotton import increased by 62% from 1905 to 1914. The largest of these yearly increases happened from 1913-1914. The total cotton import went from 9 174 579kg to 11 611 979kg, a 26% increase. Per capita these numbers translate to 3.8kg in 1913 (2 435 178¹⁸⁴)

Section of Table 2. 1905-1914. Table 2, "Attachments".

and 4.8kg in 1914 (2 458 569¹⁸⁵). Raw cotton imports in the period from 1905-1914 increased as well, the numbers we within the data shows 3 026 210kg in 1905, and 6 581 690kg in 1914, a percentage increase of 117%.¹⁸⁶ Together with the growing employment in Norwegian industries, we can surely say that the textile industries as well were seeing a resurgence in the first decades of the twentieth century.

Stortinget in Norway added protective tariffs to industrial goods and products in 1905, just as Sweden had done in 1888. This tariff was lower than many of the other European countries. A common European direction towards more protectionism is clear, just like the definition given on globalisation¹⁸⁷, made by Williamson and O'Rourke. They place the second, protective phase of globalisation between 1914 and 1950. Tension in Europe increased, which would eventually lead to a global war.

¹⁸³ Table 2, «Attachments»

¹⁸⁴ Statistisk sentralbyrå, «Befolkningen», Table

¹⁸⁵ Statistisk sentralbyrå, «Befolkningen», Table

¹⁸⁶ Table 2 «Attachments»

¹⁸⁷ Sandvik, 2018, p.152

3.6.2 The First World War

World War 1, that lasted from 1914-1918 was a new type of war, it reached a global scale. Norway was a neutral for the duration of the war, so they had the ability to trade with both sides. The outbreak of the war put a halt to the trends of global trade that had been going on in the nineteenth century. Sandvik places the beginning of this global trade development to the 1820s.¹⁸⁸ Which is three decades before the definition given in chapter one of this thesis.¹⁸⁹ But he agrees that the characteristics of globalisation changes with the beginning of the war. The data for cotton import to Norway show an extraordinary spike in 1915. Seen in both Figure 3 and Table 1. Total cotton that came into the different Norwegian customs weighed in at 16 819 806kg, per capita (2 486 269¹⁹⁰) 6.7kg. Total cotton import increased 44% from 1914, which itself was a record year for cotton import. The war had a huge effect on the Norwegian economy, money went into the business and led to industrial growth, as we see from the numbers. Sandvik confirms this:

*“De eventyrlige krigsinntektene skapte helt nye tilstander i norsk økonomi.”*¹⁹¹

Money flowed into the Norwegian industries. When looking at the data for raw cotton we can see that the textile industry also received a boom in the war years. In 1915, the peak for raw cotton import for the period covered by this thesis, a staggering amount of 11 137 020kg¹⁹² crossed the Norwegian boarder. Which is 66% of the total cotton. After the boom of import in 1914 and 1915, the data show a sudden drop in import. Which also must have been due to the war. The final year of the war, 1918, the total weight of total cotton imported is registered at 3 199 025kg¹⁹³, 1,2kg per capita (2 565 994¹⁹⁴). To find a number so low, we must go back to 1870 (3 175 148kg). The drop from the peak in 1915 to the low of 1918 can be seen as an 80% reduction in total cotton imports. Sandvik presents that trouble with getting supplies started in the summer of 1916, which can be confirmed by the data on cotton imports, as we see in Table 1 the, 1916 shows a drop of 24% from 1915. A response to the shortage of supplies was made by the Norwegian government to help the different industries.

¹⁸⁸ Sandvik, 2018, p.165

¹⁸⁹ Williamson and O'Rourke place the first phase of globalisation to 1850-1914

¹⁹⁰ Statistisk sentralbyrå, «Befolkningen», Table

¹⁹¹ Sandvik, 2018, p.167

¹⁹² Table 1, «Attachments»

¹⁹³ Table 1, «Attachments»

¹⁹⁴ Statistisk sentralbyrå, «Befolkningen», Table

Industriforsyningsdepartementet was established in 1917. The state intervened in the process of acquiring goods and products. One year prior they had established a stately department for the acquisition of food and medicine.¹⁹⁵

The highs and lows of cotton import during the First World War does not necessarily come from the increase in Norwegian industries. Cotton, as showed and will be discussed more in the next chapter, came in greatest quantities from Great Britain¹⁹⁶. The British could have dropped the price of cotton to fill their coffers to be ready for war. Which could have led the Norwegians buy cotton in great demand, to stock up, believing that the war would make getting the products harder. Great Britain was opposing Germany, so they must have stopped exporting there, which must have been a huge loss in their exportations.

From Figure 3, Table 1 and Table 2, we can see that the enormous peak for cotton import for the period during and after World War 1 can tell us much about the economic cycles in Norway. The purchasing power of the people buying cotton were great. We can also thin that *Industriforsyningsdepartementet* had something to do with this. As cotton had over almost a century at this point become a product that most people probably used. And also, in the healthcare, bandages, ben linens, uniforms for both nurses, doctors, police, army and others may have been made out of cotton at this point.

One year after the war ended, we can see a huge spike in total cotton import again. This spike however can in the data be seen had a very different nature for the raw cotton and produced cotton goods. Data shows that the total cotton import in 1919 was 17 932 857kg (6.9kg per capita (2 589 463¹⁹⁷)), where 4 897 480kg (27%) is raw cotton. A much lower percentage than what we see in the years before the war. Europe was economically drained, by obvious reasons. So, this massive increase in produced cotton might have come from countries such as Great Britain producing and selling manufactured cotton in massive amounts to get back on their feet. Compared to the numbers in 1851, where the textile industry had taken hold, the total importation had by these 68 years increased by 1007%. Cotton had during the nineteenth century, going into the twentieth century grown a lot in the Norwegian markets. Table 9, below, shows where the cotton in 1919 came from. It can tell us some information about the

¹⁹⁵ Sandvik, 2018, p.175

¹⁹⁶ Table 3, Table 4, Table 5, «Attachments»

¹⁹⁷ Statistisk sentralbyrå, «Befolkningen», Table

economic situation for some of the different countries that were supplying cotton goods and products.

1919	Storbritannia	USA	Sverige	Danmark	Nederland	Frankrike	Italia
Bomull	1093640	3641450		1360	1360	51990	2470
Garn	1077071	166356	5371	1090	524		
Manufaktur	9254060	2035734	39091	53141	179280	68204	113741
Sum	11424771	5843540	44462	55591	181164	120194	116211

1919	Britiske Ostindia	Hollandsk Ostindia	Tyskland	Sveits	Belgia	Spania	Andre
Bomull	83070	21840					250
Garn			325				146
Manufaktur			16235	18026	1932	3260	569
Sum	83070	21840	16560	18026	1932	3260	965

Table 9. Country and amount cotton came into Norway from 1919. (Statistical data collected from Statistisk sentralbyrå: *Norges Handel 1910*. (https://www.ssb.no/a/histstat/nos/nos_v_151.pdf))

As we can see from this Table 9 (split in two to fit the page), most of the cotton came from Great Britain and the United States of America. These two countries were allies during the first World War. Also, as showed in previous subchapters, stood for most of the textile entering Europe and produced in Europe. After the war attempts were made to restore the old order of free trade and globalisation, but it proved to be a difficult task.¹⁹⁸

The final year analysed in this thesis is 1920. We can see from both Graph 3, and Table 1. That neither produced or unproduced seems to go further up, or even stay at the high levels from 1919. The numbers for 1920 are 7 673 201kg (2.9kg per capita¹⁹⁹) total cotton imported to Norway, and 2 588 290kg (33%) raw cotton imported. The low economic cycles Europe and the world faced after the war triggered the deepest financial crisis in Norwegian history.²⁰⁰

¹⁹⁸ Sandvik, 2018, p.165

¹⁹⁹ Statistisk sentralbyrå, «Befolkningen», Table (2 616 274 people in Norway 1920)

²⁰⁰ Sandvik, 2018, p.175

3.7 Raw cotton import to Christiania 1835-1920

When collecting the statistical data on cotton import to Norway and Bergen and placing what I found in Table 1. I soon realized that Bergen only received a low percentage of the total cotton that entered Norway, both unproduced and produced. A number that kept sticking out when looking for Bergen in the data was the imports to Christiania. And when I eventually made a figure that compared the cotton imported to Norway and Bergen, I could see that I also wanted to include Christiania. When starting this project, I believed that the textile industry in Bergen area would have a larger percentage of the total cotton production in Norway. At least for parts of the period, but as we can see in Figure 3, the raw cotton import to Christiania fast excels that of the raw cotton import to Bergen, already from the very beginnings of the mechanical textile industry. In the years after the ban on machine export is lifted and the factories are sent from Great Britain to Norway in packages, we see in the data that cotton imports to Norway steadily increase. Christiania follows the total of Norway quite close throughout the period from 1835-1920.

Imports to Christiania is such a large percentage of the Norwegian total that we can clearly see the effects this one city has on the data of imported cotton to Norway.

3.8 Chapter conclusion

The importation of cotton to Norway between 1835 and 1920 was affected by both international and national events. I have in this chapter used the statistical data that are digitally available through the webpages of *Statistisk sentralbyrå*. The data was put into tables, which in turn I have used to make figures to get a better overview of the development. From the point where export of machines allowed and principles of free trade were realized, the Norwegian cotton import increased. If the data presented in this thesis could be compared to the total import of all industrial sectors. We could see how much the cotton textile industry was out of the total. For now, I will say that the at least for the textile industry, there is no certain industrial breakthrough to be found before 1900. The numbers, of imported raw cotton grows in such a slow rate, that it would be hard to argue for a flourishing cotton industry in Norway that continuously opened more and more factories throughout the nineteenth century.

I think that the drop that happened due to the American Civil War might also have influenced entrepreneurs interested in joining the cotton industry. The scare of such a drop in raw materials can have made people uncertain about the industry.

The use of cotton certainly grew over the period. Norwegians must have become more used to cotton and its uses, which increased the demand. Going from 0.2kg per capita in 1835 to 6.9kg per capita at the peak in 1919. The nineteenth century was full of changes and going from wool and linens to cotton was one of them.

4.2 Where did the cotton between 1835 and 1920 come from?

For my fourth and second analysis chapter I want to present the statistical data collected from Statistisk sentralbyrå on where the cotton that entered Norway between 1835 and 1920 came from. I collected data from every fifth year in the period and placed them in three different tables. Each table represent a different version of cotton. Also, when mentioning import for Great Britain, I would like to include the fact that in the statistical data they list imports to come from *Storbritannia og Irland*, Great Britain and Ireland.²⁰¹

*Table 3*²⁰², contains the data on raw or unproduced cotton.

*Table 4*²⁰³, contains the data on where cotton yarn came from. I decided to combine the earlier categories of twisted, untwisted, uncoloured, coloured together to one category. Much like has been done in statistical data from 1866 onwards.

*Table 5*²⁰⁴, contains the data on where the manufactured cotton came from. Here too I have combined the different types of manufactured cotton. Most of which are different variants of sheets of cotton, coloured, bleached, or patterned. Also, smaller categories like cotton lace and cotton bands. The main bulk of these manufactured products are the one coloured, pressed fabric. As they for example are listed in 1905: “*Andre Varer, helt endfarvede eller blegede*” and “*Andre Varer, ublegede*”²⁰⁵. Exactly what products are in these categories is not always easy to understand, as the data says “other goods” for almost every category, but then separates the goods between coloured, not coloured, bleached and unbleached. For this thesis that particular detail is not that relevant.

²⁰¹ Statistisk sentralbyrå, Utenrikshandel (External trade), «Tabeller vedkommende Norges Handel og SKibsfart (Commerce et navigation, 1835-1859)», «Tabeller vedkommende Norges Handel og Skibsfart (Tableaux du commerce et de la navigation), 1860-1870», «Tabeller vedkommende Norges Handel (Tableaux du commerce), 1871-1887», «Handel (Commerce), 1888-1909», «Norges Handel (Commerce), 1910-1920». Look in bibliography for «Sources used for Tables» for full links.

²⁰² Table 3, «Attachments»

²⁰³ Table 4, «Attachments»

²⁰⁴ Table 5, «Attachments»

²⁰⁵ Statistisk sentralbyrå, Utenrikshandel, *Norges Handel 1910* (https://www.ssb.no/a/histstat/nos/nos_iv_011.pdf)

*Table 6*²⁰⁶, statistical data on cotton import from Great Britain, Germany and the United States of America were converted to kilograms. I did this so I would be able to compare the three. During the nineteenth and going into the twentieth century these three countries were important for the global history. Germany, as I will explain more on later, were among the initiators of the first World War. Great Britain is where the industrial revolution started. They were the far ahead from other countries in the process of industrializing and the home of the mechanical textile factories. The factories started to spread, legally, after they lifted the ban of export on machines and expertise in 1843. The United States, as showed in previous chapters became the country that produced most of the cotton that entered Europe after the Whitney invented the cotton gin.

The area that we today call Germany has a complicated history in the nineteenth century. Several Dukedoms was unified to Germany in 1871. Before this the area that would become Germany was many Dukedoms and Prussia. In the statistical data, not all the Dukedoms appear, but I will now list the Dukedoms that is shown: *Hamburg, Altona, Bremen, Oldenburg, Lübeck, Mecklenburg, Holsten, and Hannover*. When collecting the data, I stored the cotton imports from all these Dukedoms and Prussia. And added them as one, I made the choice of doing this because the variance from what Dukedom Norway got the cotton from varied between all these listed. As this is not a thesis on the history of the Dukedoms, Prussia, or Germany, I found that this would help organize the analysis of where the cotton came from. Even though Germany was unified in 1871, the statistical data on cotton import to Norway does not show Germany in their lists before 1883.²⁰⁷

In Tables 3-6 empty column means that there was no import registered for that year or from that place. I have decided to collect data for every fifth year on where the cotton that entered Norwegian customs came from. I made this choice because the scope of this thesis. Every fifth year should give me an idea on how the import of cotton developed.

For a last subchapter in this chapter, I want to present a few selected finds at from Bergen Byarkiv on Arne Fabrikker. This was, as mentioned earlier the first mechanical textile

²⁰⁶ Table 6, «Attachments»

²⁰⁷ Statistisk sentralbyrå, Utenrikshandel, *Tabeller vedkommende Norges Handel 1883* (https://www.ssb.no/a/histstat/nos/nos_ii_c3a_1883.pdf)

industrial factory in the Bergen area. It was opened by Peter Jebsen in 1846.²⁰⁸ As I am stationed in Bergen this also became the easier option of availability. I selected a few sources to see if the textile industry in Norway was connected to the global trading network that was growing in the nineteenth century. Or if we can say that the textile industry itself did not have contact with the global network, but bought the cotton from domestic tradesmen. More on this in its own subchapter.

4.1 Where the cotton come from 1835-1844

The first period I have decided to present data and analyse is the same as in chapter 3. The period before the free trade principles of 1842 and the removal of the ban in 1843. This is also the period of Mads Wiel's cotton factory in Halden Spinneri. As Halden, by today's borders, is close to Sweden I would guess that much of their cotton could have come from Sweden. The cotton can of course also have come from Christiania, looking at Table 2, we can see that the raw cotton imported to Christiania in 1835 were 11 970kg (38% of the total import to Norway)²⁰⁹.

In 1835 most of the cotton came from either the Dukedoms or Germany.²¹⁰ In Table 3, we see that raw cotton came from countries near to Norway. Transportation by sea from these countries, *Sweden, Denmark, the Dukedoms, Holland* and Great Britain is a quite short travel way a global network cannot be pointed to. This, however, can as I have explained earlier, is connected to the lack of a domestic industrial textile industry in Norway. Spinning of cotton happened in homes and were not on the industrial scale yet. Wiel's factory could have stood for some of the cotton milling.

If we turn our attention then to produced cotton, both yar and manufactured, we see that the number of countries where these goods came from is larger. *Belgium, France, Portugal, Spain, and North America* is now listed as countries that delivered cotton to Norway.

Although it is important to note that most of these countries, especially the ones furthest away from Norway delivered cotton goods in quite small amounts. For cotton yarn, it is the Dukedoms and Great Britain that stands for the main bulk of the delivery. Britain stood for

²⁰⁸ Bruland, 1996, p.14

²⁰⁹ Table 2, «Attachments»

²¹⁰ Table, 3, Table 4, Table 5, «Attachments»

52.5% and the different Dukedoms combined 46.4%. Which in turn leaves around 1% for the other countries. Interestingly the Dukedoms combined, delivered more manufactured cotton to Norway in 1835. Out of the total 273 007 pounds (136 503kg) that entered Norway in 1835, 188 688 pounds (94 344kg) came from the Dukedoms, a total of 69%. Great Britain delivered 74 734 pounds (37 367kg), or 13%.²¹¹ Great Britain and the Dukedoms must have had the most competitive prices, and greatest availability. But it can also show that it was these areas that was most industrialized. The data, however, does not necessarily show the progress of industrialization. Areas where trade is a big part of the income can also be countries that delivered produced cotton to Norway. Buying it and selling it for a profit. My guess is that a lot of the goods coming from Dukedoms were a result of trading.

Goods that came from other countries, such as Spain and Portugal, does not have to be products that were produced in factories. They can have been products that were domestically produced, coloured, and weaved by people in their homes, and sold. These types of products can have been much more expensive. Merchants that came into the different Norwegian ports, be that foreign or Norwegian merchants, could also have brought cotton goods from places they were bringing other goods from. A ship that was really transporting wine, olive oil, or other goods, could have met merchants that sold them cotton goods which they thought would bring profit if sold back in Norway.

In 1844, free trade and machine exportation from Great Britain had been enforced. I will not go into detail on this here, as I have explained it multiple times in previous chapters. Raw cotton, as explained in previous chapter had by this time started to enter Norway in larger quantum than in 1835. Out of the 146 329kg unproduced cotton that entered the Norwegian customs offices, 68 810kg, 47%, came from Great Britain. Holland and the Dukedoms stood for 65 943kg, 45%, split almost evenly. Holland or the Netherlands, at this time, were great traders. Cotton yarn in 1844 came mostly from Great Britain, my guess is that the principles of free trade made it so that Norway was able to buy this product in much greater quantum then they did before. Out of the total 551 256kg cotton yarn, 468 331kg came from Great Britain, a total as high as 84%²¹². British cotton mills must have earned a lot of money when the cotton yarns they spun could be sold in greater quantum to other countries. By being able to sell the cotton to other countries tax free, the products can also have reached a much broader spectrum of the population in the countries they entered. Turning it from perhaps a

²¹¹ Table 4, Table 5, «Attachments»

²¹² Table 4, «Attachments»

product that was viewed as a luxury to a product that more and more people could afford, and by this also found use for. The free trade principles made by Great Britain, would in time create an international demand.

The manufactured cotton goods in 1844 still came mostly from the Dukedoms and Great Britain. The Dukedoms combined, as in 1835, stood for a larger part the total manufactured that entered Norway. With almost half, 49% (180 002kg), coming from the Dukedoms. Great Britain stood for 46% (168 206kg). Leaving the rest to come from Spain, Portugal, Sweden, Denmark, Russia, the Netherlands, Belgium, and France²¹³. As we see from the data, the United States only delivered a small amount of manufactured cotton to Norway in 1835, and not cotton, at least directly, came into Norway from the United States in 1844.

The trend in both 1835 and 1844 is that Great Britain, the great industrialized country, and what I assume to be trading countries (and Dukedoms) delivered most of the cotton. I believe that when looking at the data from 1835 and 1844 we cannot see, at least on the import of cottons part, a global trade network reaching Norway. Much of what we see in the data is a European trading network, which I would think had been in place for centuries, as the coast lines can be followed for the most part, and the distances are not that great.

4.2 Where the cotton came from 1855-1860

Statistical data on import of cotton from both 1855 and 1860 can be found in Table 3, Table 4 and Table 5. I will start again with looking at the import of raw cotton. The Norwegian textile industry, as explained earlier, had at this point been operating for a few years. It was imported 1 206 400kg raw cotton. Out of this 668 415kg (55%) came from Great Britain. Interestingly 454 358kg (38%) came from North America, in the data it is listed as North America, I will assume that this is from the United States. Only 80 992kg (7%) came from the Dukedoms combined. Together these three entities made out a total close to 100% of the total raw cotton imports to Norway. I have rounded up the percentages, but Sweden, Denmark, the Netherlands, France, Caribbean and Italy is also listed to have delivered small amounts of raw cotton to Norway in 1855.²¹⁴

²¹³ Table 5, «Attachments»

²¹⁴ Table 3, «Attachments»

As the data shows, North America, or the United States had by 1855 entered the market for raw cotton themselves. As I have presented earlier, they stood for large amounts of the cotton that entered the European markets, and we can see that this is true for Norway as well. A change from the previous registered years, 1835 and 1844 is that the network of raw cotton now has extended to cross the Atlantic Ocean. Even though the cotton most likely indirectly already came from the other side of the Atlantic, in 1855 it is registered by the Norwegian customs. I think it is also important to mention that the Caribbean is also registered, even though only 2 pounds or 1kg of raw cotton came directly from there. The trading network seems to be expanding by the 1850s.

Moving on to cotton yarn in 1855, we see in the data that Great Britain, as in 1844 stands for a substantial part of the total cotton yarn imports in Norway. With a total of 706 282kg (94.5%) out of the total of 747 208kg. Even though I am only looking at the numbers for import to Norway, Great Britain must have had similar trends in many of the other European countries. The British cotton mills filled much of the demand for cotton yarn that domestic production could not cover. Denmark and the Dukedoms stood for most of the remaining 5.5% of cotton yarn imported. With Danish cotton yarn coming in at 6 576kg and the Dukedoms 33 706kg. Sweden, the Netherlands and France delivered very small amounts of cotton yarn as well in 1855.²¹⁵

Cotton manufactured goods were increasing in 1855. And like previous years presented Great Britain and the Dukedoms represented the largest quantities. British manufactured cotton weighed in at 375 061kg (63%) and German in at 133 327kg (23%). Like earlier, the cotton that entered from the different places did not have to be produced in the area they came from. Other countries that delivered manufactured cotton to Norway in 1855 were; Sweden, Denmark, Russia, the Netherlands, Belgium, France, Portugal, the United States, Sicilia and Brazil. With Denmark and Sweden covering most of the remaining 14%. Denmark 38 247kg (6.5%) and Sweden 41 281kg (7%). As with the import of raw cotton, imports of manufactured cotton came from across the Atlantic. Brazil in registered, but only bringing in 2.5kg. This can be cotton brought on ships brining in sugars, tobacco, coffee or other goods from the South American region.²¹⁶

²¹⁵ Table 4, «Attachments»

²¹⁶ Table 5, «Attachments»

Entering the next decade, 1860, data on raw cotton imports show that Great Britain is closing into what looks like almost a monopoly. With 1 979 373kg of the total 2 060 852kg coming from Great Britain, a staggering total of 96%. Few other regions are listed to deliver raw cotton to Norway in 1860, but Sweden, Denmark, the Dukedoms, the Netherlands, Belgium and France. The Dukedoms coming in with second most exported raw cotton to Norway, with 60 629kg (3%), and Sweden at third with 16 664kg (0.8%).²¹⁷ A change from 1855 is that the trading networks, from the view of imported raw cotton, looks smaller. British prices seem to push out competition, and especially that from across the Atlantic. There is however a category being added in 1855. The category is *unknown*, cotton with unknown origin was placed in this category. In this category the data shows that 2 202kg (0.1% of the total).²¹⁸ I think this category is important, because although the customs offices could not place the cotton to any specific country, we can guess that some of it might have come from very distant places. Being part of cargo ships carrying goods from many different places.

Cotton yarn import data from 1860 shows smaller amounts than that of 1855, a drop of 89% in cotton yarn import. Great Britain, the Dukedoms and Sweden represent the combined largest part of the total yarn import. Out of the total of 77 596kg, 47 252kg (60%) came from Great Britain, 16 336kg (21%) from the Dukedoms, and 10 386kg (13.4%) from Sweden.²¹⁹ This drop in cotton yarn import, can be explained with a domestic production in Norway could now supply the domestic demand much better than they could in 1855.

Manufactured cotton goods import also drop in 1860 from 1855. Most of the import came from Great Britain, but in this category both Sweden, Denmark and the Dukedoms exported noticeable parts of the total as well. The for manufactured cotton can be seen in the statistical data as 483 057kg. Out of this, 255 011kg (53%) came from Great Britain, 102 870kg (22%) came from Sweden, 23 736kg (5%) came from Denmark, and 100 201kg (21%) came from the Dukedoms.²²⁰ In this data, the category of unknown is registered as well, bringing in 221kg. Other countries listed here are; Russia, the Netherlands, Belgium, France, Portugal and Sicily. These last countries are all listed with under 500kg manufactured cotton in the year 1860. All countries are relatively close, so there is no reason to believe that Norway, at least for cotton trade, is included in a global network. But as earlier, the cotton products might have entered the countries listed from other parts of the world, and then been bought and sold off

²¹⁷ Table 3, «Attachments»

²¹⁸ Table 3, «Attachments»

²¹⁹ Table 4, «Attachments»

²²⁰ Table 5, «Attachments»

again. To get an answer for this we would need to go into a much broader selection of sources from a lot more countries.

4.3 Where cotton came from 1865-1870

I have earlier, in *chapter 3.3.1*, explained much of the situation for raw cotton in the 1860s. The American Civil (1861-1865) war effected the cotton imports to the European markets. That being said, I will now present and analyse the data found in the digital archives of Statistisk sentralbyrå on where the cotton came from in 1865 and 1870. See Figure 1 for a graphical display of the data.²²¹

Raw cotton in 1865 entered Norway with a total weight of 2 008 145kg. Out of this the data show that 1 995 567kg came from Great Britain. Which is very close to full monopoly of the imported raw cotton to Norway, a 99.4%. This can as explained be seen in Figure 1. Sweden, Denmark and the Dukedoms share the remaining 0.6% of the registered raw cotton imports.²²² The British export of raw cotton can almost be viewed as hindering Norway from entering a global trade network. But the British Empire at this time, spanning across the globe, can almost be said to be a global network. Trading with the British can indirectly mean that Norway was connected to a global network of trade. Saying this, can of course, also mean that the British has a final decision about what and from where goods that enters Norway comes from. So, any global competition or variation of goods and products will then be shut down if they do not bring in capital to the British Empire. I find this conundrum interesting to think about, but I will not say that trading with the British Empire equals being part of a global network of trade.

For cotton yarn imports in 1865, we see much as the same information as from 1860 in the statistical data available. Great Britain is the leading exporting country of yarn to Norway. Out of the 207 777kg imported cotton yarn in 1865, 195 320kg (94%) came from Great Britain. The Dukedoms are the only other area that exported over 1000 pounds or 500kg cotton yarn to Norway in this year. With a total of 11 634kg (5.6%). Other countries that are registered to export cotton yarn to Norway in 1865 are: Sweden, Denmark, the Netherlands,

²²¹ Figure 1, «Attachments»

²²² Table 3, «Attachments»

Belgium, France and Italy.²²³ Italy is listed as “*Kongeriget Italia*”²²⁴ in the statistical data from 1865. None of the other European kingdoms receives this title of being a kingdom. Which leads me to expect that due to the unification of Italy in 1861, the Norwegians thought of Italy as something different in 1865 than they had before. The international political scene gives marks, even in the tracing of external trade in Norway. Though not yet what I would call global, the Norwegians were aware of great events happening in at least Europe.

Moving on again, to manufactured cottons in 1865. We can see in the data many different places that exported manufactured cotton goods to Norway. With this we can perhaps say that cotton is spreading through, for now Europe. Cotton of course at this time had long been a part of the Asian markets since at least the fourteenth century. And been traded by Egypt across the Red Sea since the first century AD.²²⁵ But for now, I will focus on what the data on external trade in Norway can tell us. Manufactured cotton was in 1865 imported from: Great Britain, Sweden, Denmark, the Dukedoms, Russia, the Netherlands, Belgium, France, Portugal, Spain, the United States, Italy and Iceland.²²⁶ I think the fact that import from Iceland happened, even though only 1kg shows that cotton spread to even some of the most remote parts of Europe. Great Britain stands for most of the manufactured cotton imports this year, with 320 162kg (72%) out of the 445 033kg. Which is quite a bit less than their dominating export of raw cotton and cotton yarn. The remaining 28% is split among the rest of the countries mentioned, with the Dukedoms representing 89 695kg (20%), and Sweden 28 474kg (6.4%).

Effects of the gradually removal of the protective tariffs from 1870 can be part of the explanation to the data presented from 1870 onwards. I have already in chapter 3.4 explored this in more detail, but I think it is worth mentioning. The tariffs on raw cotton had previous been much lower than that of cotton yarn and manufactured cottons.²²⁷

We see in the data that raw cotton was imported at 2 292 194kg to Norway in 1870. Raw cotton only came from Great Britain, Sweden, the Dukedoms, and the Netherlands. With 45 986 quintal or 2 290 103kg (99.9%) coming from Great Britain. The trend of monopoly of

²²³ Table 4, «Attachments»

²²⁴ Statistisk sentralbyrå, Utenrikshandel, *Tabeller vedkommende Norges Handel og Skipsfart 1865* (https://www.ssb.no/a/histstat/nos/nos_i_c3_1865.pdf)

²²⁵ Riello, 2013, p.17

²²⁶ Table 5, «Attachments»

²²⁷ Sandvik, 2018, p.88

raw cotton exports to Norway is becoming very clear. The Dukedoms stood for 1 793kg (0.07%), Sweden 249kg (0.01%) and the Netherlands 1 quintal or 49.8kg (0.002%).²²⁸

Cotton yarn imports is also listed as being imported from very few countries, the only one being added from the raw cotton import list is Denmark. Total import of cotton yarn can be read in the data as 3300 quintal or 164 340kg. Of these 145 914kg (88.8%) came from Great Britain, 12 798kg (7.8%) from the Dukedoms, 2 988kg (1.8%) from Sweden, 2 241kg (1.36%) from Denmark and lastly 398kg (0.24%) from the Netherlands.²²⁹ As stated earlier trading companies in the different European areas could have exported cotton goods that had been manufactured in other countries. But seeing these low percentages being from other places than Great Britain makes me believe that the British could demand such a low price. That it would not be profitable for many of the European trading companies to buy at least British cotton manufacturers. For then to sell them at a higher price to traders in a different country or area. Also, as stated above, the taxes for protective tariffs for raw cotton was much lower, so the domestic textile industry in Norway could at this point be supplying much of the domestic demand.

Manufactured cottons have similar pattern as the cotton yarn. Few places are registered as having exported manufactured goods into Norway. Sweden noticeably is at this point exporting more of these goods than the Dukedoms, but as before Great Britain is the cotton giant. Of a total of 806 760kg imported manufactured cotton Great Britain in the data can be read to have stood for 574 194kg (71%), Sweden the new second place had 121 661kg (15%) and the Dukedoms came with 92 777kg (11.5%). Although British manufactured goods makes out well over half of the total, they did not have the same percentages as they did on cotton yarn and raw cotton. From this we can understand the data in two ways. The British focused on export of quantum, raw material, and yarn, but also the protective tariffs made it much more cost efficient to mill and produce cotton domestically in Norway.

²²⁸ Table 3, «Attachments»

²²⁹ Table 4, «Attachments»

4.4. Where the cotton came from 1875-1880

For the next two points, 1875 and 1880, where data on cotton imports are going to be explored and analysed, we see that raw cotton imports still is being much controlled by the British. Worth mentioning is that cotton imported from Sweden is split into two, cotton that comes through the mainland and cotton that comes in ships from sea.

In 1875, the United States appears as a supplier itself again. The United States has not been registered as a raw cotton supplier since 1855. Great Britain exported 1 435 285kg (81% of total raw) raw cotton to Norway in 1875, the United States 209 558kg (12% of total raw) and Sweden 104 181kg (6% of total raw). Other countries or areas listed are: Denmark, the Dukedoms, the Netherlands, France and 1 quintal (49.8kg) from *Andre land*, a new category.²³⁰ The total dominance of the market that we can see in the data from Great Britain has been changed by 1875. This of course can be explained by the lowering of the protective tariffs in Norway. The domestic production in Norway would experience competition from goods coming from abroad.

Yarn of cotton was imported at the total weight of 374 197kg to Norway in 1875, more than double of what we see in 1870. Out of these 282 864kg (76%%) came from Great Britain and 51 941kg (14%) from the Dukedoms.²³¹ The rest came from Sweden, Denmark and France. Even though the protective tariffs in Norway were lowered it seems like the other European countries and areas had a hard time competing with the British market.

Manufactured cotton goods follows the same trend in 1875 as cotton yarn. Great Britain accounts for 1 138 428kg which was 74% of the total (1 529 407kg). And the same countries, including Belgium and the Netherlands exported manufactured cottons to Norway.²³²

For 1880 the same types of percentages as 1875 can be seen for all the three categories. Great Britain stands for the largest part of all things cotton imported to Norway. The Dukedoms and Sweden stands for most of the remaining percentages.²³³ Also, it is worth mentioning that the category *Andre land* in 1880 gets a small marker 1) and under the table the 1) is explained

²³⁰ Table 3, «Attachments», and Statistisk sentralbyrå, Utenrikshandel, *Tabeller vedkommende Norges Handel 1875* (https://www.ssb.no/a/histstat/nos/nos_i_c3b_1875.pdf)

²³¹ Table 4, «Attachments»

²³² Table 5, «Attachments»

²³³ Table 3, Table 4, Table 5, «Attachments»

with being Iceland and the Faroe Islands.²³⁴ Norway at this point had a deal of free trade with Sweden.

4.5 Where the cotton came from 1885-1900

The trends we see in the data where Great Britain is the leading exporter of all cotton goods and products to Norway continues in 1885, 1890, 1895 and 1900. Some changes that we see from 1885 onwards is that the United States now directly contributes to a bigger part of the Norwegian cotton import. With having 488 760kg (24%) of the raw cotton import in 1885, where Great Britain had 1 307 650kg (64%). France is also growing from its close to nothing numbers pre-1885, to bringing 169 730kg (8%) raw cotton into Norway.²³⁵

Another change that I find important is that from 1883 the Dukedoms disappear from the statistical data, but Germany appear.²³⁶ I explained by decision for gathering the separated Dukedoms in the statistical data two one greater group, and later translate those number under the name of Germany in Table 6.²³⁷ Germany did not, to begin with, export the same levels of raw cotton that the Dukedoms had done previously. In 1885 only 1570kg (0.08% of total entering Norway) raw cotton came from Germany.²³⁸ We can however see increasing numbers in the three cotton categories of cotton entering Norway in the last few decades of the nineteenth century and the first decade of the twentieth century.²³⁹

Competition increases in the final decades of the nineteenth century. The total dominance of Great Britain seems to be challenged by not only the Americans and Germans, but also other countries like Belgium. The raw cotton import in 1895 totals out at 2 660 280kg, from which Great Britain delivered 1 368 880kg (51.4%), close to half of the percentage they controlled of the Norwegian raw cotton market in 1870. Belgium delivered 621 980kg (23.4%), the

²³⁴ Statistisk sentralbyrå, Utenrikshandel, *Tabeller vedkommende Norges Handel 1883* (https://www.ssb.no/a/histstat/nos/nos_ii_c3a_1883.pdf)

²³⁵ Table 3, «Attachments»

²³⁶ Statistisk sentralbyrå, Utenrikshandel, *Tabeller vedkommende Norges Handel 1880* (https://www.ssb.no/a/histstat/nos/nos_ii_c3a_1880.pdf)

²³⁷ See chapter 4.2

²³⁸ Table 3, «Attachments»

²³⁹ Table 3, Table 4, Table 5, «Attachments»

United States 210 880kg (8%), Germany 178 310kg (6.7%), the Netherlands 90 760kg (3.4%), Sweden 25 570kg (1%) and Denmark 21 120kg (0.8%).²⁴⁰

Not only did the British get competition in the Norwegian raw cotton market, but also in cotton yarn and manufactured cottons markets. In 1895 the total import of cotton yarn in Norway was 1 502 653kg. Of which 864 091kg (57.5%) came from Great Britain, 490 454kg (32.6%) came from Sweden, 120 356kg (8%) came from Germany, and 23 924kg (1.6%) came from Belgium. The rest was smaller amounts split between Denmark, the Netherlands, France, and the United States.²⁴¹

Manufactured cottons in 1895 was imported mainly from Great Britain, Sweden and Germany. Out of the 3 011 268kg total manufactured cotton goods imported in 1895, like previous years the biggest bulk came from Great Britain 1 368 061kg (45.4%), but met in this year strong competition from Sweden with 1 186 829kg (39.4%). The import from Germany came in at 393 850kg (13%). The remaining 2.2% was imported from: Denmark, Russia, the Netherlands, Belgium, France, Portugal, the United States, Switzerland and Austria.²⁴²

Even though we see more European countries join the list of countries exporting cotton goods to Norway, I would not say that it can be called a global network of trade yet in 1895. Worth to mention is that in 1890, a total of 10kg manufactured cotton that came to Norway has in the statistical data been registered to have come from Afrika,²⁴³ no more information is given. But my guess is that it must have come from one of the European colonies, most likely a British colony.

The competition done on the British manufactured cotton, done by Sweden in 1895. Peaks in and ends during the final years of the 1890s. The deal of free trade between Norway and Sweden ends in 1897.²⁴⁴ As a result the imports of manufactured in 1900 is back to being dominated by the British. They stood for 72% of the total, manufactured cotton from Sweden dropped to covering 5.4%. Germany, however, was in 1900 becoming a bigger part of the cotton market, with 19.4% of the manufactured cotton that entered Norway.²⁴⁵

²⁴⁰ Table 3, «Attachments»

²⁴¹ Table 4, «Attachments»

²⁴² Table 5, «Attachments»

²⁴³ Table 5, «Attachments»

²⁴⁴ Sandvik, 2018, p.165

²⁴⁵ Table 5, «Attachments»

The competition over the Norwegian cotton market continued going into the twentieth century. In 1900 Norway imported 2 497 900kg raw cotton. 1 119 260kg (44.8%) came from Great Britain, 514 200kg (20.6%) came from Germany, 459 920kg (18.4%) came from Belgium, 100 980kg (4%) came from the United States, 93 100kg (3.7%) came from Denmark, 89 940kg (3.6%) came from the Netherlands, 87 500kg (3.5%) came from France, 26 500kg (1%) came from Sweden and finally 6500kg (0.3%) came from Spain.²⁴⁶ All countries being from central or western Europe, which I think is worth noting. Cotton grown in the United States mostly fuelled the cotton industries of Europe. But as Riello writes, the South American cotton and cotton from the West Indies, were slowly coming back to the market in the twentieth century.²⁴⁷

Imports of cotton yarn to Norway is also a factor worth looking at. Out of the total 1 547 751kg yarn imported in 1900, 1 million kilos lower than that of the unproduced cotton imports. Of these 1.5 million kilos, 1 071 383kg (69%) came from Great Britain. The competition that we see in the raw cotton market has not yet come as far in the markets of yarn and manufactured. Sweden stands in the data for 253 790kg (16.4%), and Germany 183 167kg (12%).²⁴⁸ Further into the nineteenth century the competition in the cotton market increases. When I say competition that is my view of the numbers that will be presented in the next subchapter.

4.6 Where the cotton came from 1905-1920

Sandvik and the duo Williamson and O'Rourke presents a time a protectionism in the beginning of the twentieth century. From the data on cotton imports to Norway I would say that also competition is a factor that might have made some tension between countries. Great Britain was used to having full control over certain cotton markets, like the Norwegian. Of course, I am looking only at data from the Norwegian cotton imports, but we can imagine that this was true for other smaller European countries as well.

²⁴⁶ Table 3, «Attachments»

²⁴⁷ Riello, 2013, p.293-295

²⁴⁸ Table, 4, «Attachments»

I used the data from Table 3, Table 4 and Table 5 to create Table 6, which I used to convert into Figure 4 and Figure 5.²⁴⁹ Next, the Figure 4 will be displayed, then discussed.

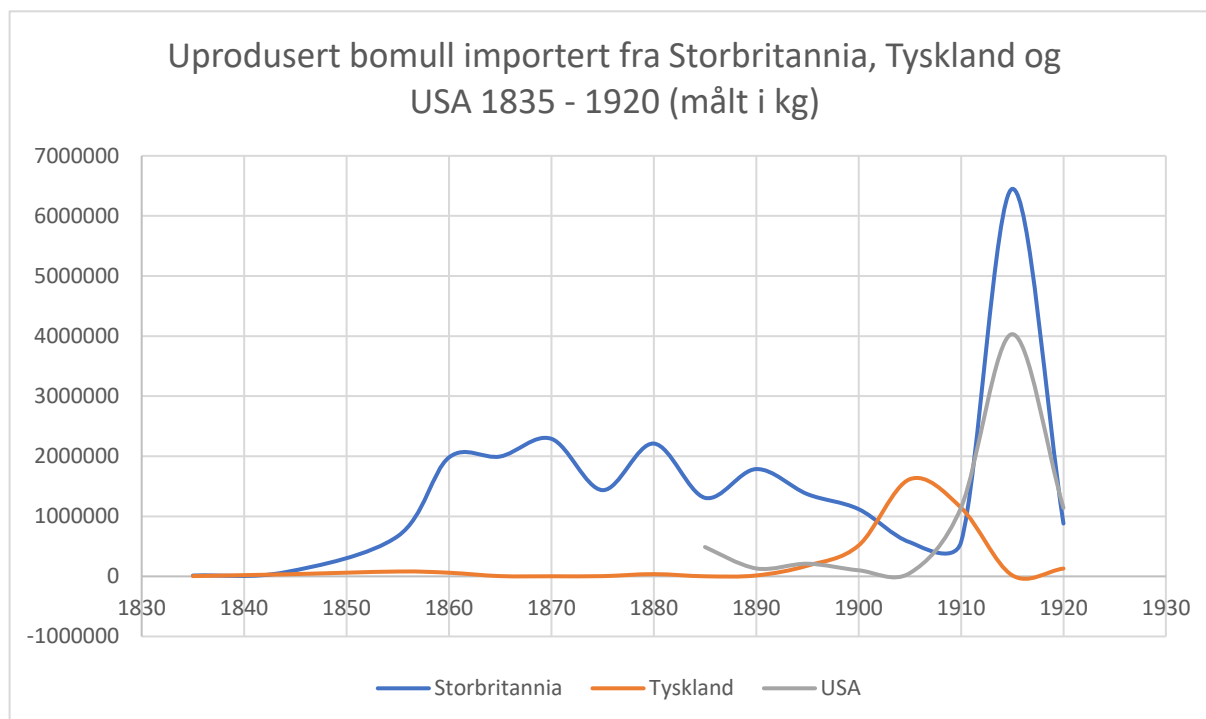


Figure 4. Unproduced cotton imported from Great Britain, Germany and the United States between 1835 and 1920. (Data from Table 6, see attachments, used to create figure).

As said earlier I choose to look at the period from 1905, the year of the dissolution of the union between Norway and Sweden, to 1920 as one period, same as Sandvik does in his book *Nasjonens Velstand*.

When we look at the numbers for where the imported cotton in the years from 1905 leading up to the First World War, we can see that the import of raw cotton from Germany increased, while the import of raw cotton from Great Britain decreased. I have previously showed the numbers from 1900. There we could see that Great Britain had lost its almost monopoly of the Norwegian raw cotton import market. In 1905 these numbers look different, a total of 3 026 210kg raw cotton entered the different Norwegian custom offices. Out of this only 569 120kg (19%) came from Great Britain, but a total of 1 617 800kg (53.5%) came from Germany. The role of having the largest percentage of cotton export to Norway shifts from

²⁴⁹ Table 6, «Attachments»

Great Britain to Germany. Other countries, like Belgium traded 248 830kg (8.2%) raw cotton to Norway, 202 770kg (6.7%) came from Denmark, 136 270kg (4.5%) came from the Netherlands, 109 730kg (3.6%) came from Sweden, 54 700kg (1.8%) came directly from the United States and 86 940kg came from France. Small amounts also came from Switzerland and Austria in 1905.²⁵⁰ This shift in where the cotton came from can clearly be seen in Figure 4. Although not showed in my Table 5 or 6, or Figure 4. The same is true for the years 1906, 1907, 1908, 1909 and 1910.²⁵¹ Germany controlled the largest percentage of raw cotton import to Norway for six years. We see in 1910, that this changes.

Of course, these numbers can also show that countries such as Great Britain. Were at this point using the cotton they imported in their own cotton mills, but I am proposing that perhaps the growing Germany were using among others cotton to push their economic cycles to become richer. They could perhaps offer cotton at a lower price than Great Britain, which made Norway buy more from them. This can be an attempt from Germany to gain more control over markets, but also to show Great Britain and the rest of Europe their economic power.

When looking at the numbers for cotton yarn in the same year, 1905, Great Britain is still the controlling part. Which makes me think that one reason for Germany's role in the unproduced cotton market is that Great Britain is using the cotton they import to themselves. Norway imported 1 547 751kg cotton yarn in 1905. Of this, 828 921kg (53.5%) came from Great Britain. Germany exported 229 928kg (15%) cotton yarn to Norway in 1905. Sweden is the greatest competitor for British cotton yarn, with 348 417kg (22.5% of total). Smaller amounts this year that can be seen in the data came in from Denmark, the Netherlands, Belgium, France, the United States and 22kg that are listed under other countries.²⁵²

In Figure 5 (next page) I combined the weight of cotton yarn and manufactured cotton seen in Table 6. There was imported 2 377 310kg manufactured cotton into Norway in 1905. Of these 1 517 330kg (64%) came from Great Britain. Germany supplied 517 270kg (22%), Sweden 131 980kg (5.5%), the Netherlands 106 110kg (4.5%), Denmark 68 450kg (3%). Smaller

²⁵⁰ Table 3, «Attachments»

²⁵¹ Statistisk sentralbyrå, Utenrikshandel, *Handel 1906-1909*, (https://www.ssb.no/a/histstat/nos/nos_v_035.pdf), (https://www.ssb.no/a/histstat/nos/nos_v_063.pdf), (https://www.ssb.no/a/histstat/nos/nos_v_087.pdf), (https://www.ssb.no/a/histstat/nos/nos_v_116.pdf), Table 3, «Attachments»

²⁵² Table 4, «Attachments»

amounts were imported from Belgium, France, and Switzerland. 1010kg are registered as imported from other countries and 650kg from unknown.²⁵³

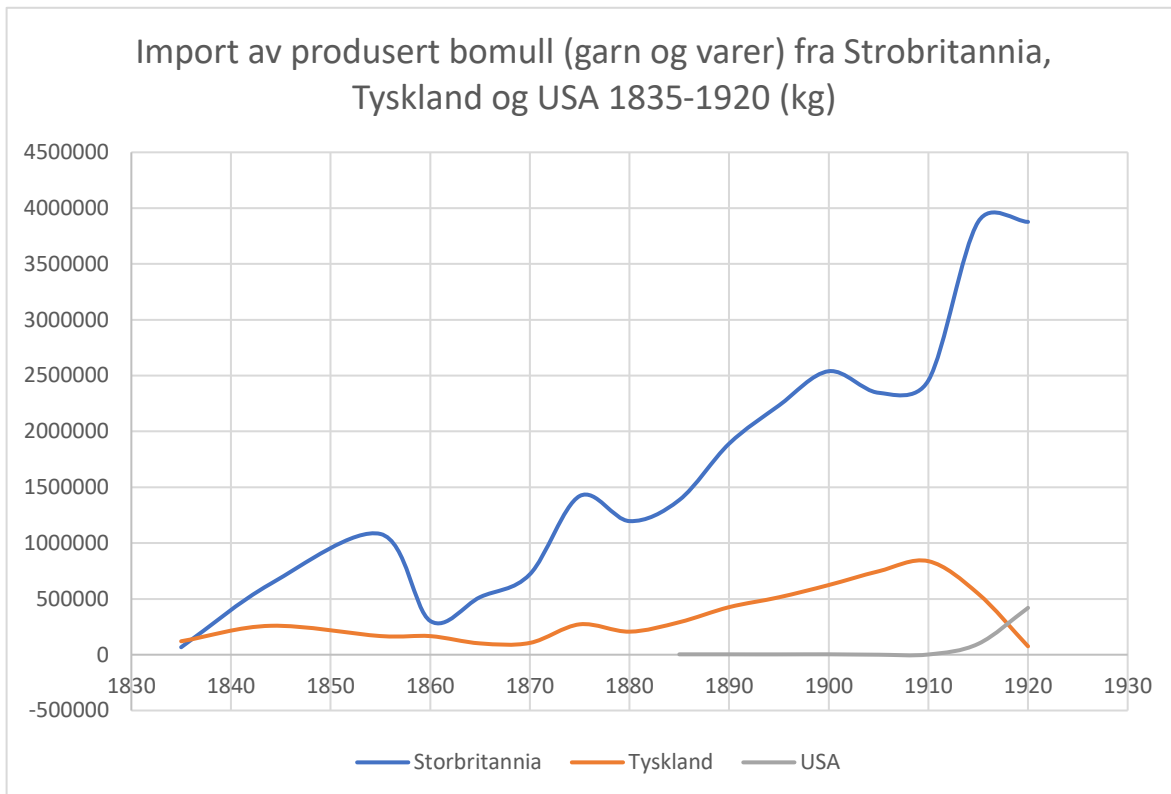


Figure 5. Produced cotton (yarn and manufactured) imported from Great Britain, Germany and the United States between 1835 and 1920. (Data from Table 6, see attachments, used to create figure).

As we see in this Figure 5, already from the 1880s import of produced cotton were increasing from Germany. But what I find interesting, even though Great Britain supplies Norway with produced cotton in far greater numbers. From the turn of the century, the import of British produced cotton stops growing, but the import from Germany continues to rise. I think that from these numbers we can clearly see a Germany that might have had a goal of competing with Great Britain on the international market.

In 1910 Norway imported 4 054 610kg raw cotton. An interesting development in the data happens here. More countries than the ones seen in the previous presented data show up. Areas like the *Britiske Ostindia* (British East India) 67 100kg (1.7% of total raw cotton), *Argentina* 23 500kg (0.6%) and *Mexico* 92 400kg (2.3%) are now registered as countries

²⁵³ Table 5, «Attachments»

where raw cotton came from.²⁵⁴ Even though these are low numbers, they are important. Competition, but perhaps also an interest or demand for different types of cotton appear in the Norwegian cotton industry. Since 1855, no country or area outside North America or Europe can be seen to have exported cotton to Norway. Of course, as shown earlier, there has been times where the category other countries have been used. But in 1910, areas in North- and South America, Asia and Europe are catalogued to have traded raw cotton to the Norwegian market.

Out of the mentioned 4 054 610kg imported raw cotton in 1910, the majority came from the United States with 1 145 740kg (28.25% of total raw import), just a bit more than the 1 144 170kg (28.22%) that came from Germany. Great Britain falling behind the two countries with 570 200kg (14%), a giant stoop from their over 99% in 1865.²⁵⁵ By the looks of it, it could seem like this was the end of the British raw cotton trade. Either outcompeted by the Germans and the American cotton traders, or different economic plan, by using the cotton that entered Great Britain the in factories. Numbers of imported produced cotton can hint at the latter.

When looking at the data for imported cotton yarn to Norway in 1910, we see that the total is 1 623 934kg. Great Britain supplied 918 062kg (56.5%) of this total, Sweden supplied 242 099kg (15%), Germany 186 043kg (11.5%), France 117 993kg (7.3%) and Denmark 127 302kg (7.8%). Other countries that we see in the data supplied Norway with smaller amounts of cotton yarn in 1910 were: Russia, the Netherlands, Belgium, Italy, Austria and Switzerland, small amounts are also listed in other countries, but only 70kg.²⁵⁶ These 70kg would have been interesting to see if came from places in Asia, South America or Afrika, to find more clues of a global trade network.

In 1910, 2 677 214kg manufactured cotton was also imported. From this total we can see in the data that 1 538 996kg (57.5%) came from Great Britain, as well as 651 587kg (24.3%) from Germany, which at this point were the main suppliers of manufactured cotton to Norway. The third biggest supplier of manufactured cotton in 1910 was the Netherlands with 271 521kg (10%). These manufactured cotton goods also came from other countries, but in

²⁵⁴ Table 3, «Attachments»

²⁵⁵ Table 3, «Attachments»

²⁵⁶ Table 4, «Attachments»

much smaller numbers, they came from: Sweden, Denmark, Belgium, France, the United States, Italy, Switzerland and Austria. Also, 969kg came from other countries.²⁵⁷

We can see from the data, that in 1910 changes were happening. Germany was on the rise, but most of the produced cotton still came from Great Britain. Changes that were in development halted and in 1914 the First World War began.

With the First World War the numbers shift for all the three categories of cotton that I have presented. By the second year of the war, 1915, cotton imports to Norway skyrocket. I have presented and analysed this development in chapter 3.6.2. Norway imported 11 137 020kg raw cotton in 1915. As we can see from the Figure 4, and what I have presented, in the years leading up to the war, both Germany and the United States surpassed Great Britain in the export of raw cotton to Norway. But in 1915, the total weight of unproduced cotton that entered Norway from Great Britain was 6 450 350kg (58% of the total). The majority of unproduced cotton once again came from Great Britain. Raw cotton from Germany dropped to 17 850kg (0.16% of the total).²⁵⁸

This number can be guessed at with a few reasons. Even though Norway was neutral in this war and could in theory trade with both sides. A trade blockade was put in place by Great Britain, who tried to starve Germany and Austria-Hungary out of the war. By this reason, it was hard to get anything in and out of Germany. Another reason could be that the British flooded the markets, with goods and products at a low price to earn capital for the war. Another reason can be that the economic growth in other industries and parts of the Norwegian society, led to increased purchasing powers for all, which led to demand and resources to buy more cotton.

The United States also reached new highs in delivering raw cotton to Norway, with 4 031 910kg (36.2%).²⁵⁹ We can assume that most of the cotton that came from Great Britain had been grown in the United States. If so, the total of American cotton entering Norway was perhaps as high as 94.2%. Other countries also delivered raw cotton to Norway during the war. Registered in the data, with much lower quantities, are Sweden, Denmark, the Netherlands, France, British East India, Argentina, Iceland, *China*, and Mexico.²⁶⁰ This is the first time China is mentioned in any of the different types of cotton import in Norway in all

²⁵⁷ Table 5, «Attachments»

²⁵⁸ Table 3, «Attachments»

²⁵⁹ Table 3, «Attachments»

²⁶⁰ Table 3, «Attachments»

the statistical data, starting in 1835. With now Europe, Asia, North- and South America contributing to the total of all raw cotton imported to Norway. I would say that we can see a *network of global trade*. Looking through the eyes of Norwegian cotton import.

Cotton yarn also reached new heights of import in 1915, with 2 232 718kg. Not as big of a jump as the unproduced cotton, but enough to notice as a leap. Great Britain delivered 1 794 917kg (80.4% of total yarn) to the different Norwegian custom offices. Sweden is the other country that in the data has a substantial enough amount of cotton yarn shipped to Norway in 1915, with 346 579kg (15.5%). Germany only stood for 48 032kg (2.2%). Other countries with smaller amounts of cotton yarn export to Norway in 1915 are: Denmark, the Netherlands, France, Italy, and the United States, 570kg is listed under other countries, which I have stated my ideas for in earlier paragraphs.²⁶¹

Manufactured cotton was imported in great quantities as well. With a total of 3 350 948kg noted in the statistical data. Of these, 2 083 016kg (62.2%) came from Great Britain, 498 456kg (15%) came from Germany, which means that even though Great Britain trade blocked Germany in World War One, some trade with them occurred. Sweden delivered 334 758kg (10%) of manufactured cotton in 1915, the Netherlands 168 227kg (5%), Denmark 126 323kg (3.8%) and the United States 95 809kg (3%).²⁶²

Combined in Figure 5, we see the development of cotton yarn and manufactured cotton from Great Britain, Germany, and the United States. I have in my Table 4, and Table 5, only tracked every fifth year, so Figure 5 does not show the full picture of the economic cycles of the war. But we know from data presented from Table 1 and Table 2, that there was a hard fall in the import of all things cotton after 1915. We also know from Table 9²⁶³ that the import of cotton increased a lot again the first year after the war, 1919. We know from earlier that the raw cotton import in 1919 was 4 897 480kg, of this 3 641 450kg (74.4%) came from the United States.²⁶⁴ Cotton may be part of the reason of why the United States became extremely rich during the war. To know the exact numbers, we would of course have to look closer at a lot more data. The presence of the United States in the Norwegian. Therefore most likely European markets can be seen when looking at numbers for cotton import to Norway. Great Britain would still in the year after the war supply Norway with great amounts of cotton,

²⁶¹ Table 4, «Attachments»

²⁶² Table 5, «Attachments»

²⁶³ Table 9, «Attachments», and in chapter 3.6.2.

²⁶⁴ Table 9, «Attachments»

1 093 640kg (22.3%) to be exact. Germany as we know was broke after the war and the *Treaty of Versailles*. No raw cotton from Germany is registered in 1919. The remaining 3.3% came mostly from France, but also small amounts from Denmark, the Netherlands, Italy, British East India, Dutch East India, and 250kg from other countries.²⁶⁵

Cotton yarn and manufactured cotton also entered Norway in great amounts in 1919. These too, like the raw cotton came predominantly from Great Britain and the United States.

1 250 933kg cotton yarn, and 11 784 994kg manufactured cotton was imported to Norway. With Great Britain exporting 1 077 071kg cotton yarn (86% of total yarn), and 9 254 060kg (78.5% of total manufactured) manufactured. And from the United States there came 166 356kg (13.3% of total yarn) yarn and 2 035 734kg (17.3% of total manufactured) manufactured cotton.²⁶⁶ This shows that Great Britain and the United States stood for 99.3% of all cotton yarn imports, and 95.8% of all import of manufactured cotton. We can guess that these numbers looked, if not the same, but very similar, across Europe. The two countries were filling up their coffers after the devastating war.

The year 1920, as stated earlier, marked the beginning of Norway's deepest financial crisis (as of 2018). Unproduced cotton import dropped to levels seen before the dissolution of the Swedish-Norwegian union; 2 588 290kg. The United States had now become the main supplier of raw cotton, even if the cotton that had come to Norway in a long time had been from the United States, now the imported it directly, and not through Great Britain. With 1 141 450kg (44%). Great Britain delivered 879 880kg (34%), France 204 520kg (8%), Germany 130 390kg (5%), Sweden 95 620kg (3.7%), British East India 73 830kg (2.9%), Belgium 45 280kg (1.7%). Argentina and the Netherlands also delivered some, though very small amounts.²⁶⁷

Cotton yarn delivery was in 1920 truly dominated by Great Britain, who supplied Norway with 712 467kg (91%) out of the 782 208kg total yarn.²⁶⁸ Manufactured cotton imports were still high in 1920, with 4 302 694kg. Great Britain exported 3 164 583kg (73.5%) of this to Norway, the Netherlands exported 410 562kg (10%), the United States 396 349kg (9.2%), Italy 69 917kg (1.6%), Denmark 64 853kg (1.5%), Germany 62 467kg (1.4%) and even

²⁶⁵ Table 9, «Attachments»

²⁶⁶ Table 9, «Attachments»

²⁶⁷ Table 3, «Attachments»

²⁶⁸ Table 4, «Attachments»

smaller amounts came from Sweden, France, Switzerland, and 8470kg (0.2%) has been noted as coming from other countries in the data.²⁶⁹

4.7 Arne Fabrikker, trading networks and industry

In this subchapter I will present a few selected sources found at Arne Fabrikker. They are found under section *BBA/A-0091* in Bergen Byarkiv.²⁷⁰ I was interested in finding clues that would help me answer the question:

“Was the Norwegian textile industry in direct contact with suppliers of cotton and machines or did they purchase their goods and products through merchants?”

Although not a part of my original thesis statement, or under statements. I would like to get an idea of how the cotton industries perhaps operated. As showed in both chapter three and four, cotton entered Norway in greater and greater quantum during the nineteenth century, and around the World War 1. By looking at a few selected sources on Arne Fabrikker, I will perhaps be able to if they were in direct contact with cotton suppliers outside Norway, or if they bought it domestically.

The first source I selected was the oldest source available from Arne Fabrikker, at least among the vast selection at Bergen Byarkiv, was *Inngående fakturalister/utgående ordrebøker 1855-1869 and 1865-1877*.²⁷¹ This is a name given to the source by the archivists when sorting the material. When looking in the book, I could find lists giving information about how much cotton were in storage. But as mentioned earlier, a lot of the text were very hard to read and the pages which seemed like containing information of cotton in storage are badly damaged.

When looking at some pages later in the book I found lists of invoice overviews. The heading of the page said: “*Faktuarer 1855*”, and under I found lists of invoice records made to Arne Fabrikker. The invoices came from *Manchester, Liverpool, Hull and New Orleans*.

²⁶⁹ Table 5, «Attachments»

²⁷⁰ Bergen Byarkiv, BBA/A-0091

²⁷¹ Bergen Byarkiv, «Inngående fakturalister og utgående ordrebøker», serie id: 91 Ha 8, 91 Ha 9

The invoice from New Orleans really caught my eye. It is written in English, but there was also notes on how much cotton was supposed to come, or they had received. In November 1855, we can read “*21 111 Balls Cotton*”, and in the margin the numbers “*25, 243 and 25’ 054*””. Which seems like either the price first, or the weight, then the height given in inches.

Moving on to a find is the same book, at the date July 1863. On this page we can see that Arne Fabrikker lists the credit they have to that company. The company: “*Fred Julth & Co Liverpool*”, cotton, *5 Bales*, it says will go through Hull and arrive in Bergen. Again, in the margin is noted “*£ 172 4-10*”, where the 4-10, I do not understand. But what I take from this is that Arne Fabrikker bought cotton bales from British companies themselves and had them delivered to Bergen by sea. The fact that we see the symbol for British Pounds being used in these records can also show that they were very much in contact with traders outside Norway. Similar finds, later in the same book, show the symbol for American Dollars.²⁷²

Next, I went a few years up, 1865-1877. Here they use page numbers, something I did not find in the last book presented. On pages *12* and *13* of this book I found a list with numbers in the margin, and then a line which explained the numbers. These numbers and explanations are number of bales of cotton, and what type of cotton it was, or more precisely where it originated. Information on who it was bought from is not given. Examples of this dated to 1865 is “*2 Baller Kinesisk Bomuld*”, “*5 Baller Indisk Bomuld*”, “*4 Baller Amerikansk. J. Toote*”.²⁷³ As we see in these examples, Arne Fabrikker noted their cotton to be from different parts of the world. Looking back at chapter four, and the statistical data from 1865, we find that no record of cotton being directly imported from either of these places. So, my guess is that the Chinese, Indian and American cotton that Arne Fabrikker logged was purchased through British trading companies. Later in the same book most of the cotton listed with number of bales is marked as being American. Delivery notes are marked here, “*Georgia*”, “*East India*”, and “*Ostindia*”.²⁷⁴ The use of both English and Norwegian mixed on the same pages is prominent. My first thoughts of seeing Georgia being listed as responsible for delivery, was that they might have received the cotton directly from the United States, this however, does not match with the statistical data. So, I figured, since East India is mentioned, they list what trading companies is transporting the cotton they are ordering. The East India Trading company being the biggest

²⁷² Bergen Byarkiv, «Inngående fakturalister og utgående ordrebøker», serie id: 91 Ha 8

²⁷³ Bergen Byarkiv, «Inngående fakturalister og utgående ordrebøker», serie id: 91 Ha 9

²⁷⁴ Bergen Byarkiv, «Inngående fakturalister og utgående ordrebøker», serie id: 91 Ha 9

trading company at the time. My reasoning for not showing what I found in some of the later years is that my quest to find out if Arne Fabrikker had contact with cotton suppliers themselves was already completed. As showed with these few selected finds, we can see that both American and British currency was used, so they must have been in contact with both American and British traders.

The next finds I would like to present was found in a box of unsorted letters dated, by Bergen Byarkiv, to 1882 – 1904.²⁷⁵ In this box I found receipts from purchases Arne Fabrikker made. First example is: “*Eskildsen & Alexsen, Hamburg, Comptoir und Lager*” dated to “3.4.1890”, clearly a German company located in Hamburg, which seems to me to be a company they could order office and storage equipment from. Next, “*Leisler, Bock & Co. Glasgow*” dated to “1.10.1894”. A company that Arne Fabrikker traded with, located in Scotland. “*Pferdmenges, Preyer & Co – Liverpool, Bremen, New Orleans, Savannah, Galveston*” is the next letter, and is dated to “12.x.1903”, the x, presumably the number of day in the month of December, not being filled in. the title and date is printed. This company is interesting, since they list cities from England, Germany and the United States. A company spanning three countries and two continents. Next, is “*Gruning & Co – Gruning, Liverpool*” dated to “12.4.1899” a English company located in Liverpool, England. And last example of the companies I want to present is; “*Daniel Foxwell & So, exporters of Machinery of all Kinds, Accessories, Mill Furnishings, Oil, Ec*” and dated to “4.December 1899”. What Arne Fabrikker bought from these different is not always easy to figure out, as the letters or receipts contains notes of “thank you”, information that the credit is now in balance.²⁷⁶

However, what I take from these receipts is that Arne Fabrikker were in fact in contact with both production and trading companies outside Norway. Which they traded with directly and not through Norwegian trading companies. A network, perhaps not global, of trade can be said to be found in the sources from Arne Fabrikker at Bergen Byarkiv.

The last source that I want to present from my search at Bergen Byarkiv is a catalogue containing industrial level water turbines. The catalogue was found in a box named *Maskiner og driftsutstyr o.l. 1914*. The catalogue was probably sent to Arne Fabrikker from the company

²⁷⁵ Bergen Byarkiv, «Brev - Arne Fabrikker AS, 1882 – 1904», serie id: 91 Da 1-2

²⁷⁶ Bergen Byarkiv, «Brev - Arne Fabrikker AS, 1882 – 1904», serie id: 91 Da 1-2

that made the machines: “*Escher Wyss & Cie. Zürich & Ravensburg*”.²⁷⁷ Which when researching online showed to be a Swiss former textile industry which evolved into a mechanical engineering firm as well. They sold water and steam engines²⁷⁸, which we can see from this catalogue as well. I will add a picture of the catalogue below. Earlier in this thesis I presented Bruland’s arguments that factories were bought and transported from Great Britain in the 1840s. So, what this catalogue can tell us, is that by 1914 (when this catalogue is dated to by Bergen Byarkiv), textile industries in Norway, such as Arne Fabrikker had become independent from these packages. Expertise and machines no longer necessarily came from Great Britain. The competition that I argued in earlier subchapter can perhaps be with this catalogue be argued. Great Britain no longer was not only country where industrial levels of machines came from. Other parts of Europe had become industrialized.



Picture of *Escher Wyss & Cie* catalogue.

Picture taken by Martin Haugland, Bergen Byarkiv, August 2020.

(*Maskiner og driftsutstyr o.l. 1914*)

²⁷⁷ Bergen Byarkiv, «Maskiner og driftsutstyr o.l. 1914», serie id: Tb1-2

²⁷⁸ Stadler, «Historisches Lexicon der Schweiz HLS»

4.8 Chapter conclusion

I have in this chapter presented where cotton that entered Norway between 1835 and 1920 came from. The statistical data digitally available shows where the different customs offices in Norway registered the cotton to be transported from.

Great Britain was the truly dominant cotton partner for Norway in the period of this thesis 1835-1920. Although Germany, first as the Dukedoms, then as a united Germany tried to compete. As we can see from the data presented in this chapter, much of the manufactured cotton came from Sweden, a stable amount up until World War One. The Dukedoms can be said to have large shipping ports, which bought cotton, both unproduced and produced. Norway has a history of having offices of the *Hanseatic League* in some of their cities. These connections can have led to the high numbers of cotton we see in the data coming from the different Dukedoms. Great Britain faced some increasing competition from Germany in cotton trade the first years of the 1900s, but with and perhaps because of World War 1, both Great Britain and the United States remained as the leading exporters of all things cotton.

A global network of trade is hard to find before the twentieth century. Although cotton was transported across the Atlantic Ocean, the data show no cotton coming from Asia or Africa before the 1900s. I would say that a truly global network of trade can be seen in the years between the dissolution of the union between Norway and Sweden in 1905 and World War 1. We see from both the statistical data collected, and the few selected sources on Arne Fabrikker that Norway traded with other countries. From the sources presented on Arne Fabrikker, we see that Indian, Chinese, and American cotton were registered. This can perhaps be argued as them indirectly be part of a global network of cotton trade. Cotton from different regions arrived in Europe and was most likely sold by one of the trading companies. These trading companies must have marked where the cotton came from, so that Arne Fabrikker could write down that information in their register of invoices.

5. Conclusion

In this thesis I have presented and analysed the statistical data on cotton import, available digitally from Statistisk sentralbyrå (Statistics Norway) in the period from 1835 to 1920. I have presented a few selected sources from Arne Fabrikker found at Bergen Byarkiv. With these sources I have aimed at answering the following thesis statement and sub statements: *How did the import of cotton to Norway and Bergen develop from 1835-1920? Can the cotton import to Norway tell us when the industrial revolution happened in Norway? Where did the cotton come from? Can we find clues to an increasing global market when looking at the import of cotton to Norway?*

I have looked at the development of cotton entering Norway, and where it came from and in what quantum. Separating cotton into three main groups, unproduced or raw, cotton yarn and last manufactured cotton. The research has given me insight into how cotton became a commodity in Norway. Also, how a domestic cotton industrial sector was able to supply some of the increasing domestic demands. It would also, for future research on this topic, be interesting to know how much one kilogram of raw cotton becomes when twisted to yarn. Is it a one-to-one situation, or are the numbers completely different? That way a more precise estimate of how much of the domestic demand was supplied by the Norwegian cotton industry.

When looking for an industrial breakthrough in Norway while looking through the eyes of imported cotton, I would say that no real breakthrough happened before the turn of the century. The increase in cotton imports increased slowly, but I think most of this was because Great Britain pushed cotton on to the markets to earn money. We also must remember that Norway, even though great in area, has quite a small population. Which means less capital going into different markets, and less available workforce for the different industries. If we do not say that a breakthrough is needed to say when the industrial revolution happened in Norway, I would say that it was a slow process happening from the 1840s. Like Bruland argues, we can see that in the constantly increasing amount of raw cotton imported. Industries grew in Norway, but at a slow pace.

It is difficult to place a breakthrough when only looking at cotton and the textile industries. But if I should place one, I would place it in 1905, the economic cycles after the dissolution of

the union seems to go in favour for Norway. The numbers we see for cotton in the years during and around World War 1, gives an almost fake view of the textile industry in Norway, there were increases in all imports and markets, but that does not necessarily mean that great growth happened in the industrial sectors.

After this study of cotton imports to Norway 1835-1920, I have learned that studying the imports of a single commodity can tell us much about both national and international politics. The American Civil war, the Crimean War, Christianiakrisen and WW1 can all be seen in the data, they influenced the cotton imports. Using data of a commodity, we can see how the economic cycles in Norway was affected by different events, it can help us understand the developments that happened.

Although I think cotton industry brought about much of the changes that happened during the nineteenth century, I think it is important to remember those humans that suffered because of the industry. The factories were dangerous to work in and the workers often lived in very poor conditions. We can link this to today when we look at “Fast Fashion”, debates about child labour and poor work and living conditions for the people making cheap clothes is very relevant today. In North America, the institution of slavery was revitalized because of the growing cotton industry, and the Native Americans were forced from their homes to make room for plantations to grow cotton on.

When it comes to globalization, it is hard to place a definitive answer when looking at the numbers for cotton. As I argued in my analysis, I believe that in the first decades of the twentieth century we see more of a global network of trade than before. Cotton from Asia and Africa is not seen in the data on external trade before this time. As showed, much of both unproduced and produced cotton came from Great Britain, throughout the period. We could say that when trading with the British Empire, which at the time spanned the large parts of the globe, “*the empire on which the sun never sets*”, that Norway was in fact indirectly part of a global network of trade.

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6.2.2 Bergen byarkiv

Bergen Byarkiv: BBA/A-0091

91 Da 1-2

91 Ha 8

91 Ha 9

91 Tb 1-2

6.3 Attachements

6.3.1 Tables 1-9

Table 1: Data on cotton import to Norway and Bergen 1835-1920

År og sted	Måleenhe	Bomuld	BG UT UF	BG T UF	BG F	BM - flo	BL	BM	Vat	Sum:	I kg:
1835	pund	63510	95162		17028	273077			889	449666	224833
Bergen, 1835		1989	3223		1603	52496			77	59388	29694
1838	pund	127439	285801		28104	283901			1101	726346	363173
Bergen, 1838		7291	6927		1698	51278			96	67290	33645
1841	pund	219670	611172		50430	426146	247520		875	1555813	777906
Bergen, 1841		2365	24056		4666	93765	38257		483	163592	81796
1844	pund	292659	1009135	18026	75351	252	291901	436058	1948	2125330	1062665
Bergen, 1844		10502	23196	3023	5779	5	70784	71992	988	186269	93134
1847	pund	938949	608465	12971	68883	19	191284	493088	756	2314415	1157207
Bergen, 1847		11362	96920	2595	6512	4	24329	58848	1	200571	100285
1850	pund	1600536	590776	23928	60625	25	108392	489507	443	2874232	1437116
Bergen, 1850		8697	166100	5623	5480	14	49631	96800	21	332366	166183
1851	pund	2130213	425749	27930	57869	23	57360	540295	296	3239735	1619867
Bergen, 1851		162199	53903	4623	4137	8	20826	80202	48	325946	162973
1852	pund	2285085	349523	29851	51981	32	42248	480466	391	3239577	1619788
Bergen, 1852		110493	26553	5395	4657	24	17732	104038	16	268908	134454
1853	pund	2347494	491789	38261	55811	18	33260	586927	325	3553885	1776942
Bergen, 1853		51188	21115	8079	5463	7	9518	104161	53	199584	99792
1854	pund	2694178	1268022	36099	62012	37	84550	715491	934	4861323	2430661
Bergen, 1854	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1855	pund	2412800	1385363	36479	72602	95	268459	909104	523	5085425	2542712
Bergen, 1855		278677	63491	8374	4784	2	41670	128438	0	525436	262718
1856	pund	4587694	473311	34500	56101	45	280912	793782	1288	6227633	3113816
Bergen, 1856		298759	50969	5804	4883	0	57747	110068	299	528529	264264
1857	pund	3102740	170230	30342	53592	52	60782	712826	70	4130634	2065317
Bergen, 1857		166256	64340	8078	4759	0,1875	3879	124528	0	371840,19	185920
1858	pund	2050495	43042	22446	37782	59	95715	443742	74	2693355	1346677
Bergen, 1858		241790	17256	4552	3816	0	10009	67908	13	345344	172672
1859	pund	4241321	95590	33322	66257	282	124761	692522	141	5254196	2627098
Bergen, 1859		390698	9957	6983	4560	0	19498	103587	0	535283	267641
1860	pund	4121704	76283	31808	47102	13		847575	156	5124641	2562320
Bergen, 1860		554003	28606	6375	4222	2067		129728	0	725001	362500
1861	pund	3275964	42801	28363	42489			882284	257	4272158	2136079
Bergen, 1861		304596	16904	6965	6816			175516	13	510810	255405
1862	pund	1088895	44042	20063	31872			695790	364	1881026	940513
Bergen, 1862		151532	2042	4166	3600			85464	122	246926	123463
1863	pund	458065	103771	19584	16352			544730	2326	1144828	572414
Bergen, 1863		125208	38798	4184	2732			88556	11	259489	129744
1864	pund	734156	84851	19915	17671			659443	206	1516242	758121
Bergen, 1864		120061	4434	2205	1534			92404	25	220663	110331
1865	pund	4016290	351140	36479	27916			899427	567	5331819	2665909
Bergen, 1865		229703	104556	7459	4055			211905	145	557823	278911

Bergen, 1865		229703	104556	7459	4055			211905	145	557823	278911
1866	centner	37918	5044					11725		54687	2723412
Bergen, 1866		2619	1084					3442		7145	355821
1867	centner	28890	5031					13051		46972	2339205
Bergen, 1867		4414	824					3011		8249	410800
1868	centner	26992	3625					12519		43136	2148172
Bergen, 1868		1909	222					2154		4285	213393
1869	centner	28467	3269					11363		43099	2146330
Bergen, 1869		2498	259					2260		5017	249846
1870	centner	46028	3300					14430		63758	3175148
Bergen, 1870		2451	324					3090		5865	292077
1871	Centner	48043	4056					14752		66851	3329179
Bergen, 1871		4456	441					2437		7334	365233
1872	centner	40484	4325					19701		64510	3212598
Bergen, 1872		2604	510					3843		6957	346458
1873	centner	47546	6587					23798		77931	3880963
Bergen, 1873		3824	749					3664		8237	410202
1874	centner	50824	8644					30584		90052	4484589
Bergen, 1874		7667	1336					4432		13435	669063
1875	centner	35710	7014					30187		72911	3630967
Bergen, 1875	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1876	centner	45911	9425					24242		79578	3962984
Bergen, 1876		470	636					3121		4227	210504
1877	centner	37333	8766					31886		77985	3883653
Bergen, 1877		496	782					4467		5745	286101
1878	centner	46141	6356					23079		75576	3763684
Bergen, 1878		5848	1015					3077		9940	495012
1879	kilog.	1977560	419063					1048020		3444643	3444643
Bergen, 1879		244030	55852					149510		449392	449392
1880	kilog.	2226320	458536					1180950		3865806	3865806
Bergen, 1880		41590	72554					125190		239334	239334
1881	kilog.	2194570	496780					1361860		4053210	4053210
Bergen, 1881		236520	34353					157580		428453	428453
1882	kg.	2433510	539072					1437890		4410472	4410472
Bergen, 1882		277000	77331					186260		540591	540591
1883	kg.	2330130	629991					1437080		4397201	4397201
Bergen, 1883		390730	91891					167950		650571	650571
1884	kg.	2320420	749213					1667190		4736823	4736823
Bergen, 1884		364260	84953					225040		674253	674253
1885	kg.	2011120	722948					1330360		4064428	4064428
Bergen, 1885		335990	75346					151560		562896	562896
1886	kg.	2329190	753336					1263339		4345865	4345865
Bergen, 1886		308101	83650					139986		531737	531737
1887	kg.	2335540	791626					1284486		4411652	4411652
Bergen, 1887		334600	71897					155914		562411	562411
1888	kg.	2209890	946896					1619260		4776046	4776046
Bergen, 1888		300180	86537					165450		552167	552167
1889	kg.	2427130	1015605					1971210		5413945	5413945
Bergen, 1889		409320	111547					202030		722897	722897
1890	kg.	2696440	1164884					2018740		5880064	5880064
Bergen, 1890		463030	133648					204820		801498	801498
1891	kg.	2277360	1136897					1925700		5339957	5339957
Bergen, 1891		272880	177113					194960		644953	644953
1892	kg.	2825210	1118620					1999190		5943020	5943020
Bergen, 1892		517850	180486					172660		870996	870996
1893	kg.	2356050	1118025					2058610		5532685	5532685
Bergen, 1893		330860	189914					179210		699984	699984
1894	kg.	2806470	1313701					2393400		6513571	6513571
Bergen, 1894		409190	190971					231460		831621	831621
1895	kg.	2660280	1478532					2719300		6858112	6858112
Bergen, 1895		535510	47101					254630		837241	837241
1896	kg.	2766100	1528135					2887890		7182125	7182125
Bergen, 1896		433310	243268					262190		938768	938768
1897	kg.	2866640	1814328					3466450		8147418	8147418
Bergen, 1897		607360	286608					281720		1175688	1175688
1898	kg.	2807020	1354208					2292710		6453938	6453938
Bergen, 1898		515670	244691					245180		1005541	1005541
1899	kg.	2889010	1512033					2367299		6768342	6768342
Bergen, 1899		595750	260895					254120		1110765	1110765
1900	kg.	2497900	1547751					2042310		6087961	6087961
Bergen, 1900		599790	255999					214680		1070469	1070469

1901	kg.	2751140	1658037				2063430		6472607	6472607
Bergen, 1901		596760	276195				223280		1096235	1096235
1902	kg.	2703960	1695872				2162930		6562762	6562762
Bergen, 1902		597690	234940				226700		1059330	1059330
1903	kg.	2749140	1357671				2092410		6199221	6199221
Bergen, 1903		492300	178523				214740		885563	885563
1904	kg.	2856610	1222285				2545730		6624625	6624625
Bergen, 1904		515320	182186				218570		916076	916076
1905	kg.	3026210	1532584				2595280		7154074	7154074
Bergen, 1905		590750	219636				231450		1041836	1041836
1906	kg.	3310690	1640690				2376230		7327610	7327610
Bergen, 1906		544530	226994				234400		1005924	1005924
1907	kg.	3515800	1719668				2659440		7894908	7894908
Bergen, 1907		385360	304537				273360		963257	963257
1908	kg.	3837750	1533323				2402441		7773514	7773514
Bergen, 1908		663950	258319				254415		1176684	1176684
1909	kg.	3672220	1711944				2572452		7956616	7956616
Bergen, 1909		695190	233203				254850		1183243	1183243
1910	kg.	4054610	1623034				3177170		8854814	8854814
Bergen, 1910		677810	254998				263662		1196470	1196470
1911	kg.	3834940	1654446				2884168		8373554	8373554
Bergen, 1911		780250	301122				291287		1372659	1372659
1912	kg.	3960350	1980059				3175046		9115455	9115455
Bergen, 1912		712330	317975				368391		1398696	1398696
1913	kg.	3986780	2017438				3170361		9174579	9174579
Bergen, 1913		719390	324383				327382		1371155	1371155
1914	kg.	6581690	2002189				3028100		11611979	11611979
Bergen, 1914		1081760	261368				333135		1676263	1676263
1915	kg.	11137020	2232718				3450068		16819806	16819806
Bergen, 1915		940780	332227				383522		1656529	1656529
1916	kg.	5497390	2711077				4437426		12645893	12645893
Bergen, 1916		718890	386565				524186		1629641	1629641
1917	kg.	3688870	1980871				3427574		9097315	9097315
Bergen, 1917		553160	284139				507649		1344948	1344948
1918	kg.	1142030	878491				1178504		3199025	3199025
Bergen, 1918		141310	49637				112884		303831	303831
1919	kg.	4897480	1250883				11784494		17932857	17932857
Bergen, 1919		626150	119335				1374765		2120250	2120250
1920	kg.	2588290	782208				4302703		7673201	7673201
Bergen, 1920		524143	137139				474859		1136141	1136141

Table 2: Unproduced cotton imports 1835-1920

År	Norge	Christiania	Bergen
1835	31755	11970	994
1838	63719	17992	3645
1841	109835	45034	1182
1844	146329	53192	5251
1847	469474	329144	5681
1850	800268	604704	4348
1851	1065106	675576	81099
1852	1142542	739694	55246
1853	1173747	915097	25594
1854	1347089	831418	
1855	1206400	733605	139338
1856	2293847	1670913	149379
1857	1551370	1126430	120895
1858	1025247	773918	195349
1859	2120660	1560813	277001
1860	2060852	1507323	152298
1861	1637982	1400194	75766
1862	544447	416637	62604
1863	229032	163480	60030
1864	367078	303802	149379
1865	2008145	1852282	114851
1866	1888316	1621239	130426
1867	1438722	1112781	219817
1868	1344201	1169553	95068
1869	1417656	1198188	124400
1870	2292194	2030595	122059
1871	2392541	2048871	221908
1872	2016103	1773178	129679
1873	2367790	2077407	190435
1874	2531035	1895637	381816
1875	1778358		
1876	2286367	1876065	23406
1877	1859183	1679007	24700
1878	2297821	1911124	291230
1879	1977560	1638440	244030
1880	2226320	2048370	41590

1881	2194570	1799890	236520
1882	2433510	2049470	277000
1883	2330130	1691610	390730
1884	2320420	1843530	364260
1885	2011120	1582340	335990
1886	2329190	1871790	308101
1887	2335540	1987320	334600
1888	2209890	1870480	300180
1889	2427130	1974600	409320
1890	2696440	2147060	463030
1891	2277360	1952790	272880
1892	2825210	2240480	517850
1893	2356050	2007410	330860
1894	2806470	2308180	409190
1895	2660280	2104460	535510
1896	2766100	2285360	433310
1897	2866640	2237480	607360
1898	2807020	2258610	515670
1899	2889010	2206690	595750
1900	2497900	1868520	599790
1901	2751140	2102170	596760
1902	2703960	2007840	597690
1903	2749140	2191770	492300
1904	2856610	2221920	515320
1905	3026210	2291780	590750
1906	3310690	2655500	544530
1907	3515800	2970170	385360
1908	3837750	2918000	663950
1909	3672220	2795490	695190
1910	4054610	3246730	677810
1911	3834940	2861120	780250
1912	3960350	3006040	712330
1913	3986780	2975140	719390
1914	6581690	4533290	1081760
1915	11137020	9924770	940780
1916	5497390	4553930	718890
1917	3688870	2996950	553160
1918	1142030	991270	141310
1919	4897480	4068750	626150
1920	2588290	2096790	524143

Table 3: Raw cotton from place

Bomull Sted	År og enhet		1855, pund	1860, pund	1865, pund	1870, centner	1875, centner	1880, kg.	1885, kg.	1890, kg.	1895, kg.	1900, kg	1905, kg.	1910, kg.	1915, kg.	1920, kg.
	1835, pund	1844, pund														
Sverige	142	1687	35	33328	14	5	2092	130	2810	6750	25570	26500	109730	247640	152890	95620
Danmark	1368		729	8	13488		235	10290	550	7540	21120	93100	202770	29690	72280	12000
Hertugdømmene	9693	68312	161985	121259	8939	36	85	37170								
Holland/Nederland	1547	63575	1456	6487		1	68	4090	15970			90760	136270	153060	69670	3320
SB og Irland	27760	137620	1336831	3958746	3991135	45986	28821	2211290	1307650	1786170	1368860	1119260	569120	570200	6450350	879880
Belgia		9876		18				30	66380	465310	621980	459920	248830	246150		45280
Frankriket		11589	1731	160			200	10	169730	157600	142800	87500	86940	334910	21640	204520
Preussen			112			8										
Karibia				2												
Italia				282												
USA/Nord-Amerika			908717				4208		488760	132100	210880	100980	54700	1145740	4031910	1141450
Tyskland									1570	140970	178310	514200	1617800	1144170	17850	130390
Sveits													40			
Østerrike													10	50		
Spania												6500				
Britisk Ostindia														67100	165270	73830
Argentina														23500	50910	2000
Island															1000	
Kina															21080	
Mexico															92400	82170
Andre land							1	39600	7700							
Ukjent				4404												
Sum:	40510	292659	2411880	4124410	4013584	46028	35710	2302610	2061120	2696440	2660280	2497900	3026210	4054610	11137020	2588290

Table 4: Cotton yarn from place

Sted år, enhet	1835, pund	1844, pund	1855, pund	1860, pund	1865, pund	1870, centner	1875, centner	1880, kg	1885, kg	1890, kg	1895, kg	1900, kg	1905, kg	1910, kg	1915, kg	1920, kg.
Sverige	669	846	612	20773	125	60	730	56553	113985	310795	490454	253790	348417	242099	346579	19052
Danmark	158	1179	13153	7047	357	45	59	1770	829	585	695	6182	9005	127302	35153	
Hertugdømmene	52102	157900	67412	32673	23268	257	1043	36690								
Russland	37													1285		
Holland/Nederland	325	5	63	51	853	8	1059	477	477	6070	2134	10903	6560	13152	3377	
SB og Irland	58838	936663	1412592	94505	390641	2930	5680	362338	534595	695268	864091	1071383	828921	918062	1794917	712467
Belgia	2	3137			21				1413	62073	23924	18845	36540	16804		9150
Frankriket	43	2759	612	133	288		2	1	230	304	290	82	73181	117993	1534	3665
Preussen	3	17		11												
Portugal	2															
Spania		5														
Karibia																
Italia					2									743	1100	
USA/Nord Amerika									436	1637	709	3274	5		1456	23100
Tyskland									70961	89745	120356	183167	229928	186043	48032	12437
Østerrike														13	1	
Sveits														380		
Andre land									22				22	70	570	2337
Ukjent		1														
Sum:	112179	1102512	1494444	155193	415555	3300	7514	458411	722948	1166477	1502653	1547751	1532579	1623934	2232718	782208

Table 5: Manufactured cotton from place

Sted/år, enhet	1835, pund	1844, pund	1855, pund	1860, pund	1865, pund	1870, centner	1875, centner	1880, kg.	1885, kg.	1890, kg.	1895, kg.	1900, kg	1905, kg.	1910, kg.	1915, kg.	1920, kg.
Sverige	5323	24049	82562	205740	56948	2443	2716	273041	384117	637079	1186829	109070	131980	81036	334758	26248
Danmark	3205	5355	76494	47472	9560	331	595	8559	15717	145195	22642	26360	68450	74891	126323	64853
Hertugdømmene	188688	360044	266654	200402	179391	1863	4419	169591								
Russland	11	813	51	38	10			97	18	20	1					
Holland/Nederland	642	462	235	820	2417	17	62	2607	16230	43252	17361	14410	106110	271521	168227	410562
SB og Irland	74734	336412	750122	510022	640324	11530	22860	834298	851318	1195240	1368061	1467830	1517330	1538996	2083016	3164583
Belgia	30	21	7	165	139		9	744	7851	17065	16346	1080	25780	27157		61650
Frankriket	283	633	50	894	1073	16	50	1659	1325	5889	4141		6270	21927	4331	24315
Preussen	30	71	21	53	167											
Portugal	15	48	64	30	7			10		30	2					
Spania	9	16			5											
USA/Nord-Amerika	82		4		2				2915	1594	1989	190		1831	95809	396349
Karibia																
Italia					19					21				4042	33044	69917
Sicilia			2	37												
Brasil			5													
Island					2											
Tyskland									220050	336169	393850	412140	517270	651587	498456	62467
Sveits										18	36	780	2460	1108	2320	13280
Østerrike										6	10			2149	2944	
Afrika										10						
Andre land								382	1			320	1010	969	1720	8470
Ukjent	25			442	2					14			650			
Sum:	273077	727924	1176271	966115	890066	16200	30711	1290988	1499542	2381602	3011268	2032180	2377310	2677214	3350948	4302694

Table 6: Cotton imports from Great Britain, Germany and USA

Sted/årstall, enhet	1835, pund	1844, pund	1855, pund	1860, pund	1865, pund	1870, centner	1875, centner	1880, kg	1885, kg	1890, kg	1895, kg	1900, kg	1905, kg	1910, kg	1915, kg	1920, kg
Tyskland bomull	9693	68312	161985	121259	8939	36	85	37170	1570	140970	178310	514200	1617800	1144170	17850	130390
Tyskland bomull i kg.	4846	34156	80992	60629	4469	1792	4233	37170	1570	140970	178310	514200	1617800	1144170	17850	130390
Tyskland garn	52102	157900	67412	32673	23268	257	1043	36690	70961	89745	120356	183167	229928	186043	48032	12437
Tyskland varer	188688	360044	266654	200402	179391	1863	4419	169591	220050	336169	393850	412140	517270	651587	498456	62467
Tyskland totalt prod. (kg)	120395	258972	167033	166537	101329	105576	272007	206281	291011	425914	514206	624068	747198	837630	546488	74904
Tyskland total i kg.	125241	293128	248025	177167	105799	107368	276240	243451	292581	566884	692516	1109507	2364998	1981800	564358	205294
Storbritannien	27760	137620	1336831	3958746	3991135	45986	28821	2211290	1307650	1786170	1368860	1119260	569120	570200	6450350	879880
Storbritannia bomull	13880	68810	668415	1979373	1995567	2290102	1435285	2211290	1307650	1786170	1368860	1119260	569120	570200	6450350	879880
Storbritannia bomull i kg.	58838	936663	1412565	94505	390641	2930	5680	362338	534595	695268	864091	1071383	828921	918062	1794917	712467
Storbritannia garn	74734	336412	750122	510022	640324	11530	22860	834298	851318	1195240	1368061	1467830	1517330	1538996	2083016	3164583
Storbritannia varer	66786	636537	1081343	302263	515482	720108	1421292	1196636	1385913	1890508	2232152	2539213	2346251	2457058	3877933	3877050
Storbritannia total i prod. (kg)	80666	705347	1749759	2052126	2511050	3010210	2856577	3407926	2693563	3676678	3601012	3658473	2915371	3027258	10328283	4756930
Storbritannia total i kg.																
USA bomull			908717				4208		488760	132100	210880	100980	54700	1145740	4031910	1141450
USA bomull i kg.			454358				209558		488760	132100	210880	100980	54700	1145740	4031910	1141450
USA garn									436	1637	709	3274	5		1456	23100
USA varer	82		4		2				2915	1594	1989	190		1831	95809	396349
USA totalt i prod. (kg)	41		2		1				3351	3231	2698	3464	5	1831	97265	419449
USA total i kg.	41		454360		1		209558		492111	135331	213578	104444	54705	1147571	4129175	1560899

Table 7: Unproduced cotton from Great Britain to Norway 1859-1870

År	Storbritannia	Uprodusert til Norge
1859	1982261	2120660
1860	1979373	2060852
1861	1179481	1637982
1862	260754	544447
1863	225905	229032
1864	327847	367078
1865	1995567	2008145
1866	1869741	1888316
1867	1411531	1438722
1868	1315018	1344201
1869	1406451	1417656
1870	2290102	2292194

Table 8: Norway and Bergen total cotton 1897-1905

År	Norge	Bergen
1897	8147418	1175688
1898	6453938	1005541
1899	6768342	1110765
1900	6087961	1070469
1901	6472607	1096235
1902	6562762	1059330
1903	6199221	885563
1904	6624625	916076
1905	7154074	1041836

Table 9: Where cotton came from in 1919

1919	Storbritannia	USA	Sverige	Danmark	Nederland	Frankrike	Italia
Bomull	1093640	3641450		1360	1360	51990	2470
Garn	1077071	166356	5371	1090	524		
Manufaktur	9254060	2035734	39091	53141	179280	68204	113741
Sum	11424771	5843540	44462	55591	181164	120194	116211

1919	Britiske Ostindia	Hollandsk Ostindia	Tyskland	Sveits	Belgia	Spania	Andre
Bomull	83070	21840					250
Garn			325				146
Manufaktur			16235	18026	1932	3260	569
Sum	83070	21840	16560	18026	1932	3260	965

6.3.2 Figures 1-5

Figure 1:

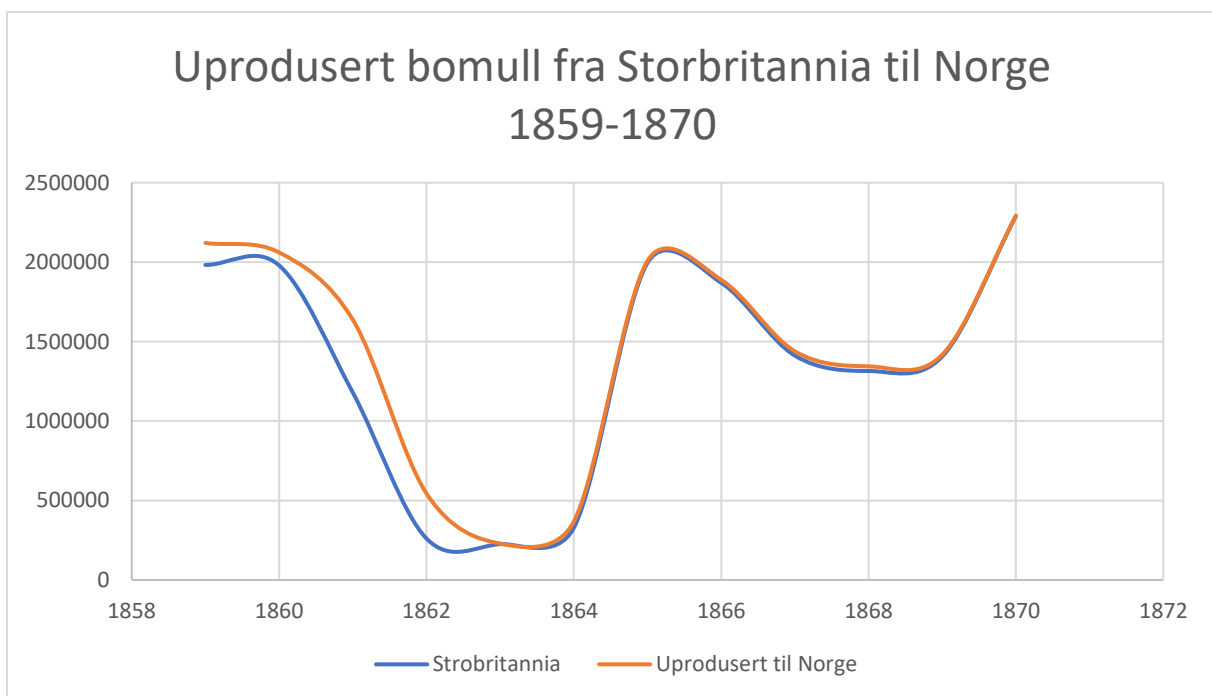


Figure 2:

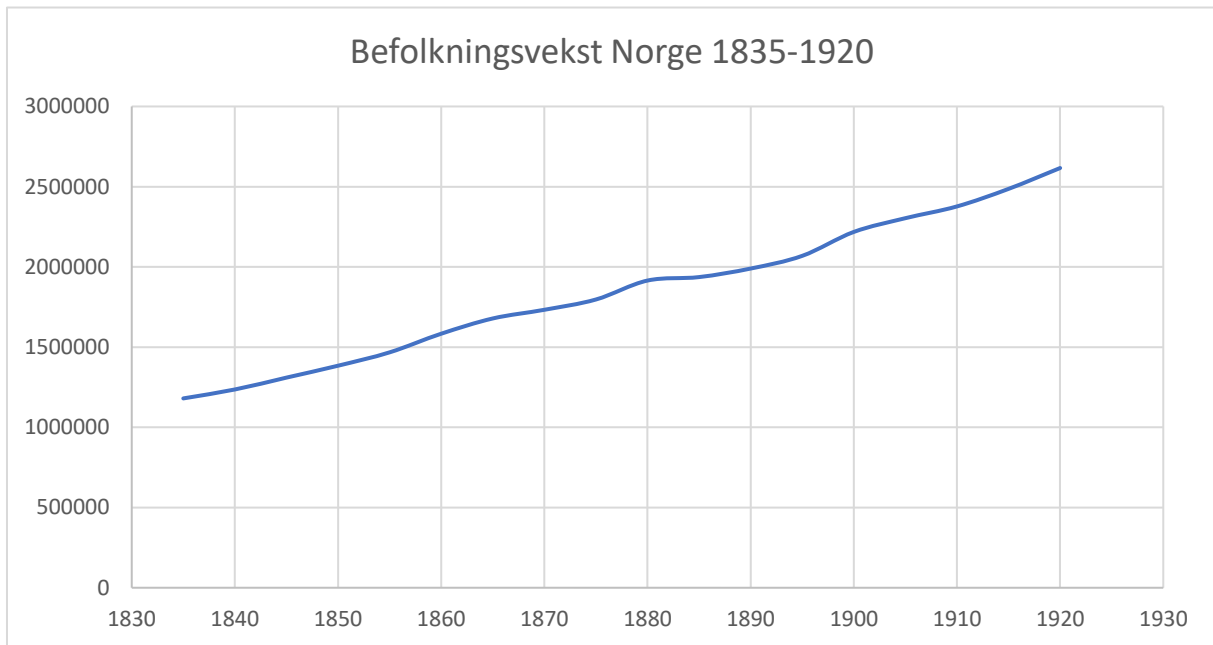


Figure 3:

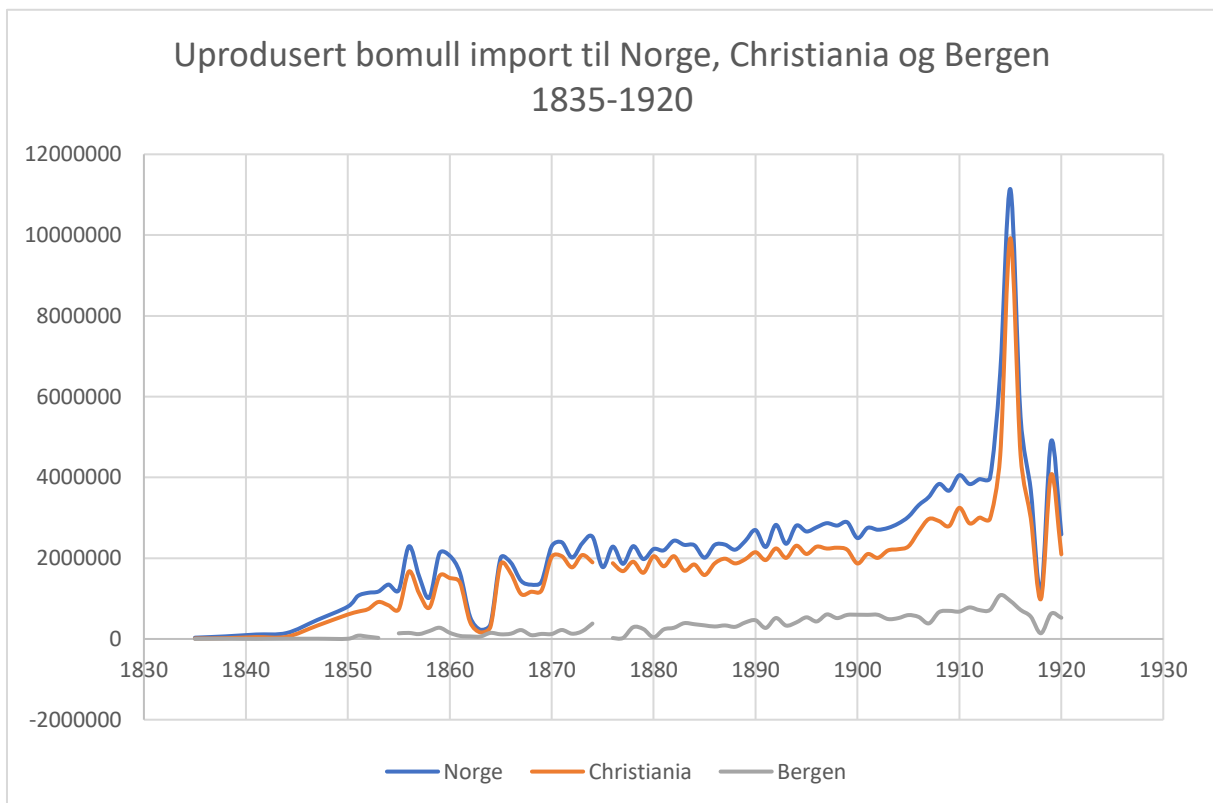


Figure 4:

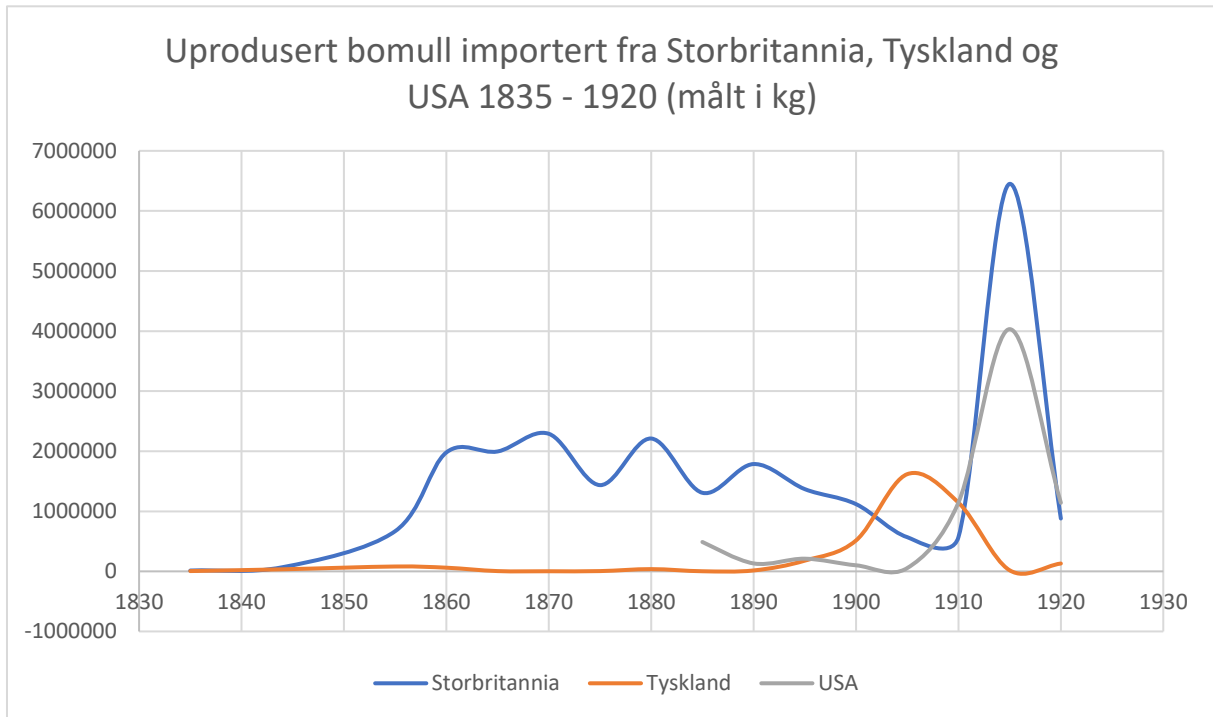


Figure 5:

