The competitive market in the Dutch healthcare system

Is the competitive market a solution for the problems in the Dutch healthcare system?

Anouk Dijkman
Vechtstede College, Weesp
January 11th 2013
Prologue

My name is Anouk Dijkman, currently a year six student attending the Vechtstede College in Weesp. I am hoping to go to medical school after high school, if I am lucky enough to be given a place after a tough selection procedure. Everything that has something to do with medicine interests me, from new research outcomes on cancer to the television hit-series Grey’s Anatomy. I think healthcare is an amazing subject.

It might not seem logical in my case, but I am very interested in the subject economics as well. I like the calculations that need to be made but I also like reasoning on the effects of certain changes in government policy or exchange rate. It is a broad and interesting subject, and it can be found in many ways in daily life.

As a result, I combined both subjects into a fascinating topic for this research project. Even though I will be focussing on economic aspects, it is about the main problem in the area where I hope to be working in a couple of years, and that is extremely interesting. I know that I am dealing with an actual problem and I am immersing myself in something that is of great importance to people in my future working sector.

It speaks for itself that I enjoyed working on this research project and I hope you will enjoy reading it as well.
Theoretical framework
1.1 Economic markets
   1.1.1 Two different types of markets
   1.1.2 Homogeneous and heterogeneous products

1.2 The competitive market
   1.2.1 Two perspectives
   1.2.2 In undergraduate theory
   1.2.3 The equilibrium
   1.2.4 Characteristics
   1.2.5 Necessary conditions
   1.2.6 The working of competition

1.3 Competition in the Dutch healthcare system
   1.3.1 The Dutch healthcare system
   1.3.2 The homogeneity of the product 'care'

1.4 The positive sides of the competitive market
   1.4.1 Acceptable price
   1.4.2 No surpluses or deficits
   1.4.3 Higher efficiency
   1.4.4 Innovation

1.5 The negative sides of the competitive market
   1.5.1 The negative sides for the producers
   1.5.2 The negative sides for the consumers

1.6 An example

Application
2.1 The 2006 agreement
   2.1.1 Statements listed in the agreement
   2.1.2 Changes made because of the agreement
   2.1.3 Some consequences of the agreement
   2.1.4 How healthcare is financed in the Netherlands
   2.1.5 Welfare loss

2.2 Research
   2.2.1 The development of the economy
   2.2.2 Life expectancy in the Netherlands
2.2.3 Government expenditures  
2.2.4 Costs and expenses in the healthcare sector  
2.2.5 Quality of healthcare  
2.2.6 Productivity in the healthcare sector  
2.2.7 Number of hospitalizations  

2.3 Analysis  
2.3.1 Did the agreement achieve its goals?  
2.3.2 What is going wrong?  

2.4 Solutions  
2.4.1 Specialization of hospitals  
2.4.2 Moderating the wages  
2.4.3 Plans of the government  
2.4.4 Single-payer system  
2.4.5 Specialization and privatization to prevent welfare loss  
2.4.6 More government supervision  
2.4.7 Setting fixed health insurance premiums  

Conclusion  

Epilogue & word of thanks  

List of sources
Introduction

In comparison to other countries, the Dutch government spends a considerable part of its budget on healthcare. The Miljoenennota (a presentation of the government budget) 2013 stated that “two-income households with a total income of one and a half times modal have to contribute almost a quarter of their gross income to collective funding of healthcare.” And, if it continues this way, two-income households will have to pay half of their total income on healthcare in 2040.

In 2006, the former government of the Netherlands decided to implement drastic changes in the Dutch healthcare system because the costs were rising uncontrollably and had to be reduced. These changes were recorded in the healthcare agreement that was signed by the former Dutch minister of Public Health, Hans Hoogervorst, and also by Martin van Rijn, State Secretary on the ministry of Public Health at that time. The agreement stated that healthcare would no longer be completely in the hands of the government, but that competition would be allowed.

A competitive market is a type of market which applies a mechanism of supply and demand. Theoretically speaking, this should lead to more competition within the market resulting in lower costs and also in better care, since the healthcare suppliers will have to innovate to be better than their competitors. To be more profitable, hospitals have to work better and more efficiently, which should, in their turn, shorten waiting lists.

It sounded like a brilliant idea in which the consumer would be better off: improved care, shortened waiting lists and most importantly, lower costs. However, nowadays, there is still a lot of debate on the problems in the healthcare system. It is topical issue, and it was one of the greatest assets in the recent elections. The healthcare system proved to be one of the main problems in forming a cabinet, since the two major parties VVD and PvdA do not share the same opinion on the plans for the healthcare system in the Netherlands.

It speaks for itself that there must be a reason for all this debate, and it could very well be that the reformation of the healthcare system in 2006 proves to be less profitable than expected.

In this research project I will research if and why the competitive market is a solution for the problems, the high costs, in the Dutch healthcare system. If it is not, I will try and define what is preventing the competitive market from working properly. Furthermore I will try and think of changes that can be made in order for the competitive market to improve.

---

1 From: Ministerie van Financiën, Miljoenennota 2013, Den Haag, SDU uitgevers, September 2012
Theoretical framework

1.1 Economic markets
The place where buyers and sellers meet to respectively buy or sell their products is what economists call a market. It is the totality of the supply and demand for a particular product.

1.1.1 Two different types of markets
Economists distinguish two different types of markets: abstract markets and concrete markets. Most of the markets are abstract; they do not actually exist as a place. A concrete market is an actual place where buyers and sellers actually meet. An example of a concrete market is a jumble sale. Obviously, the market for healthcare is an abstract market.

1.1.2 Homogeneous and heterogeneous products
The product that is traded at these markets may be a homogeneous or a heterogeneous product.

A homogeneous product is a product that seems identical to the consumer. The consumer will not be able to tell the difference between a product from one company or another and therefore cannot have a preference.

When considering buying a heterogeneous product, the consumer can have a preference, and he is able to tell the difference between the products from different producers. In other words: there is a distinctive difference between the products.

1.2 The competitive market
Economists approach the competitive market from two main perspectives, which differ from each other. These perspectives are more complicated than the assumptions and explanations given in undergraduate textbooks about the competitive market. The two perspectives will be explained in short and for the remainder of this research project the ‘undergraduate’ theory will be accepted as the right and workable one.

1.2.1 Two perspectives
Robert Aumann was the first one to formalize the Aumann explanation (1964). Aumann is an Israeli-American mathematician and he received the Nobel Memorial Prize in Economics for his work on the game-theory analysis in 2005. In Aumann’s explanation of perfect competition the emphasis lies on the fact that every producer and consumer is a price taker in a competitive market. Compared to the whole market, the power of an individual producer or consumer is so small that they are unable to affect the equilibrium price.
The Walrasian auctioneer is the second perspective and it is used to illustrate the working of the competitive market. It was first introduced by Léon Walras in the nineteenth century. In the Walrasian auctioneer it is accepted that every supplier calculates what the demand is at a certain price and submits this to an auctioneer. When adding up these calculations from all the individual suppliers the total demand will equal the total amount of the good. This is the way in which the equilibrium will be achieved. Economists who support this model believe that price taking is always present, also at non-equilibrium prices. But this assumption has later on, in 1959, been rejected by Kenneth Arrow. Aumann’s theory is the most workable and widely accepted perspective.

1.2.2 In undergraduate theory
A competitive market is a type of market which applies a mechanism of supply and demand. This supply-and-demand model describes how a certain price and quantity are established because of the interaction between supply and demand from buyers and sellers. A market is called a competitive market when each producer within the market is a price taker. The producers are, as individuals, considered to have an insignificant share of the market and are therefore not able to exert influence on the market price: they are all price takers.

The competitive market can be displayed in a graph which looks like this:

![Figure 1: market mechanism](image)

The supply line is ascending because the higher the price, the more products will be provided by the producers. The demand line is descending because the lower the price, the more products will be bought by the demanders.² (Perloff, 2004)

1.2.3 The equilibrium
The point where both lines intersect is called the equilibrium. This is defined as the perfect price and quantity, since all the produced products will be sold against a price accepted by both the consumers and the producers. This price is called the market price or the equilibrium price.

It is accepted that, in the short run, only the demand can affect the equilibrium price. Supply can only affect the equilibrium in the long run. This is because changing the quantity suppliers produce requires changes in their production system, and that is a lengthy process.

1.2.4 Characteristics
The competitive market has a number of characteristics:
- There are a lot of demanders and a lot of suppliers
- The market revolves around a homogeneous product
- The market is transparent
- Firms can easily enter and exit the market
- The factors of production are perfectly mobile
- No transaction costs are calculated

All these characteristics ensure that the market is in fact competitive. The large number of suppliers (producers) conducts to more products on the market which leads to higher competition to win the consumers. The transparency of the market ensures that no firm can higher its price without the consumer realizing and thus losing consumers to other firms. When the producer changes his price on a competitive market a large substitution effect away from the firm will occur. The easy entering and exiting of the market in their turn ensure that there will always be a large amount of suppliers and therefore a lot of competition.

1.2.5 Necessary conditions
Competitive markets can only form and function if and when certain necessary conditions are met.

The first condition is the profit motive. There has to be a reason for firms to enter the market, and that reason is the possibility of profit. The market becomes more competitive when more firms join the market. Profit is made when the production costs are lower than the revenue earned from sales of the firms’ products.

The second condition is the principle of diminishability. With this, the diminishability of goods is meant. In a market of perfect competition the demand and supply equal each other. This means that there is no surplus nor deficit. The stocks of the goods will therefore diminish. When there is nothing left in stock, a raise in prices can be expected which leads to more production by the firms. This is explained by the graph on page 6: the higher the price, the larger the quantity supplied by firms.

The third condition is a very important one, the principle of rivalry. Obviously, a competitive market cannot be formed when there is no rivalry. Rivalry occurs on both the supply as well as the demand side of the market. The suppliers compete with each other through prices or product differentiation. The consumers compete with each other to receive the best good or service available. This kind of rivalry occurs for example with the sale of tickets for a popular concert.

The fourth condition is the principle of excludability. Consumers will only compete with each other if there is a chance of excludability. They do not want to be excluded from the concert mentioned above and therefore
compete to obtain a ticket. If there is no possibility of excludability the consumers may become free-riders and these free-riders disturb the market mechanism.

The fifth and last condition is the principle of rejectability. The consumer has to be able to reject a certain product when he/she does not want, like or need the product.³

1.2.6 The working of competition
In a model of perfect competition, competition arises when there are a lot of suppliers active on a market. Each supplier wants to sell as many products as possible and therefore has to ‘win’ consumers for itself. And so every supplier will do whatever it takes to be the most attractive for the consumer. The two most frequently used manners to attract consumers are product improvement or differentiation and more advertising. Improving or differentiating your product, respectively, means that a firm increases the quality of its product or changes it in such a way that it is different from the other products in the sector. The result of product differentiation is that the product of a certain market is no longer as homogeneous as they were before. Attractive advertisements can catch the attention of the consumers.

Competition causes a chain reaction to arise. This works in the following manner: to be the most attractive firm to the consumers, firm A improves its product which leads to more consumers buying firm A’s products. The other firms in the sector lose consumers to firm A and figure that they should improve their products as well. So they innovate and gain back the consumers they lost to firm A. It might be very well possible that during the process of innovation by the other firms in the sector one of these firms (say, firm B) improves the product so much that it is better than the product from firm A. Now firm B is the firm with the farthest innovated product in the sector, and consumers will be attracted by firm B. The other firms lose their consumers again, this time to firm B, and start innovating again. This goes on and is therefore continuously present. We call this continuous process of improvement innovation.

In a model of imperfect competition the suppliers are not necessarily price takers. In such markets competition leads to low prices, because suppliers are able to compete through prices and the lower the prices, the more attractive you are as a firm to a consumer. The firms will work more efficiently which keeps the prices low.

The great advantage of the competitive market is, when the market works properly, that firms produce the best products they can for the lowest price possible. In addition to that, innovation is an advantage as well.

³ Based on: http://economicsonline.co.uk/Competitive_markets/Competitive_markets.html#The_profit_motive
1.3 Competition in the Dutch healthcare system
Since the Dutch healthcare system has demanders, suppliers and a homogeneous product, there is a possibility of applying the competitive market on the Dutch healthcare system.

1.3.1 The Dutch healthcare system
In this case the product would be healthcare. The demanders would be the patients, the inhabitants of the Netherlands. The suppliers would be all the people and institutes that provide medical care. For example doctors and hospitals. However, regarding the healthcare system, there is a third group to take into account. This group consists of the healthcare insurance companies. The three groups in the healthcare system interact with each other.

The demanders (inhabitants) are obliged to insure themselves at an insurance company. They can choose from different insurance companies and these companies compete with each other through prices and the service they offer. In return for the premium the inhabitants pay, they receive the certainty of care from the insurance companies. The insurance companies are obliged to accept everyone that registers at their company. This was stated in the law to prevent insurance companies only accepting the healthy, low-risk inhabitants.

The insurance companies buy the care they offer the demanders. They buy the care from the suppliers: the hospitals and doctors. The suppliers offer the insurance companies good care and the insurance companies offer the suppliers money in return. Hospitals and doctors compete with each other through specialization or innovation.

The demanders pay the insurance companies for healthcare insurance. With this money, the insurance companies pay the suppliers. The suppliers provide the demanders with care.

1.3.2 The homogeneity of the product ‘care’
The homogeneity of the product ‘care’ can be discussed. In some cases care is a homogeneous product. For certain simple treatments or for doctor consultations, ‘care’ can be approached as a homogeneous product. After all, each doctor has had a similar education and though there might be a small difference, the way they diagnose or treat a patient should be more or less the same.

The problem is, however, that each patient is unique. The care that has to be provided is adapted to the patient that has to be treated. Looking at it this way means that ‘care’ is not really homogeneous. Besides that, most doctors are specialized in a particular direction. With the more specialized and complicated care it is therefore not right to call ‘care’ a homogeneous product because it belongs to a certain specialization. In these cases, care should be divided into smaller submarkets.
1.4 The positive sides of the competitive market
This type of market has more than one positive effect.

1.4.1 Acceptable price
One positive effect is the acceptable price. With the market mechanism in the competitive market model the price of healthcare would be decided on grounds of demand and supply. The price would adapt to the amount of demand and the amount of supply in the sector. This would therefore make sure that the market price of the product will be accepted by both the suppliers and the demanders. This will bring satisfaction to the suppliers, who will agree with the established market price as long as it covers their costs. It also brings satisfaction to the patients, who will be satisfied with the market price because it matches their demand.

1.4.2 No surpluses or deficits
A second positive effect is the certainty that any possible surpluses or deficits are prevented from occurring. If the amount of demand or the amount of supply changes, the market price will naturally adapt to the change. As long as the government does not constitute any maximum or minimum prices there will be no surpluses or deficits. This is an advantage for the suppliers because they will not be left with surpluses they cannot sell or store away. And it is an advantage for the demanders because there will always be enough ‘product’ available for them. A deficit is certainly not desirable in this case because then there will be patients who cannot receive the care they actually deserve or need.

1.4.3 Higher efficiency
Furthermore, the competition that arises in this market model will also have positive effects. Competition leads to the necessity to work more efficiently as producers. The higher efficiency leads to more products in a shorter period of time, meaning labour productivity rises. The increase in production makes it possible for producers to spread the fixed costs over more products, which causes the prices to go down.

1.4.4 Innovation
There is a fourth positive effect to this kind of market. The competitive market model stimulates the producers to invest in innovation. If they innovate, and therefore distinguish themselves from others in their field, they attract more buyers. This side effect is slightly more complicated applied to the healthcare sector because most of the ‘buyers’ do not ‘buy’ the product care out of free will. However, innovation has a positive effect on the sector because innovation and quality increase are often combined. Quality increase is a desirable goal in the healthcare sector, because a quality increase will bring the sickness rate down and this will bring satisfaction to Dutch inhabitants.
1.5 The negative sides of the competitive market
The competitive market model also has its negative sides for both the producers as the consumers.

1.5.1 The negative sides for the producers
The advantages of the competitive market are mostly profitable for the consumers, not necessarily for the producers. There are a number of disadvantages to the competitive market for the producers.

Firstly, producers are forced to make products of the highest quality in order to be able to compete with others in their sector. To be able to do so they have to hire capable, highly educated employees (who are quite expensive) and they have to invest in new techniques to renew their product which also costs a lot of money.

Secondly, they are in a better position for competition when prices are low, which places their profit at the expense. The lower their price, the less profitable each product is. In the competitive market they cannot influence the market price and they may be forced to produce their products at a market price that provides them with less profit than they would have liked. In the long run the profitability is zero.

Thirdly, in a system of perfect competition there are a lot of suppliers. The more suppliers there are on a certain market the smaller their market share is. This is of course not desirable for the suppliers, who want to have the largest market share possible. It is for this reason that most of the suppliers desire operating in a monopoly.

1.5.2 The negative sides for the consumers
Generally speaking, there are little negative effects of competition for the consumers. But when the product ‘care’ is marketed, there is a significant negative side. When competition governs the market, the producers fight for their consumers. In this case, the consumers are the patients. But with competition in the healthcare sector patients are no longer viewed as patients, but as buyers. This is not desirable for ethical reasons.

Furthermore, competition leads to higher efficiency. Higher efficiency might not be profitable for the consumers in this case because higher efficiency might lead to less attention from doctors and healthcare of a poorer quality.

1.6 An example
With the following example the theory is brought into practice. The telecom sector in Europe is a good example of a sector in which introducing the competitive market has been very successful and led to new inventions, higher quality and lower prices.
The telecom sector in Europe has been gradually liberalized since 1987. Before that time, most of the businesses in the telecom sector in Europe were government-owned. However, the general idea was that a state monopoly of the telecom sector disturbed innovation in this field. Within ten years, the entire sector was liberalized: the state monopolies were privatized and competition was stimulated.

The companies in the sector started investing and innovation occurred. Companies conducted research and invented new products, for example the broadband Internet access and Internet-television. It is assumed that this invention has been made possible because of the liberalization. In a non-liberalized market it might have been invented, but it is unlikely that it would have had the same high quality and low price it has now. Moreover, these inventions would not have occurred so fast in a non-liberalized market. The high quality and low price is due to the competition in the market.

The telecom sector proves that introducing a competitive market model in a certain sector can successfully lead to more innovation. The next chapter will analyse if this has been the case for the Dutch healthcare sector as well.4

---

4 Based on: De Jong, Mark, Ottow, Annetje and Stil, Robert, Marktwerving en innovatie in de telecomsector, ESB governance, volume 97, September 14th 2012
Application

2.1 The 2006 agreement
Because of uncontrollably high costs in the Dutch healthcare sector the Dutch government decided to liberalize the healthcare sector. In 2006, an agreement for this liberalization was signed by the former Dutch minister of Public Health.

With this liberalization, healthcare would no longer be fully in the hands of the government, but it would be partly privatized. Furthermore, the market for healthcare was changed into a market of perfect competition.

2.1.1 Statements listed in the agreement
The main focus of the agreement was the introduction of the renewed healthcare insurance, on which Hoogervorst had been working since 2004. The old system had been the same since 1941. From now on the insurance would become the same for every citizen in the Netherlands. Hoogervorst hoped that this new law would stimulate the market mechanism and would eventually lower the prices because of the competition that was expected to arise. The government would still be financing the majority of the costs in the healthcare sector.

Furthermore, the agreement stated government would no longer be in control of the healthcare sector in the Netherlands: the different authorities would govern the healthcare for themselves. This liberalization would be gradually implemented, within five years the entire sector should be liberalized.

2.1.2 Changes made because of the agreement
The introduction of the competitive market led to “the detachment of fixed budgets for hospitals, rewarding healthcare providers according to the care they provide, selective ‘care’ purchasing by insurers which leads to more competition among care providers.”

Before 2006, hospitals received a fixed budget from the government, and when that budget was through, doctors had to stop providing healthcare (theoretically). Removing this budget ceiling made sure that patients could always be provided with healthcare.

Furthermore the government and the insurance companies made sure that every citizen in the Netherlands would indeed receive the same basic insurance. Because of this adjustment, 19,1% of the insured switched to another insurance company.

5 From: Commissie Sociale Zekerheid en Gezondheidszorg, Ontwerpadvies naar een kwalitatief goede, toegankelijke en betaalbare zorg: een tussenadvies op hoofdlijnen, Sociaal Economische Raad, September 2012
6 From: http://nl.wikipedia.org/wiki/Zorgverzekering_%28Nederland%29, which refers to www.independer.nl
2.1.3 Some consequences of the agreement
As a consequence of this agreement, the government did indeed gradually stop interfering in the healthcare system. The sector is now partly privatized regarding the organisation of the sector, but the government and its authorities still keep monitoring the developments in the sector.

According to the Dutch doctors the idea of competition has definitely spread in the workplace. Many of the doctors state that this consequence has had a negative influence on the working environment. They claim that doctors were colleagues before, but have now become competitors fighting for ‘clients’. 75% of the Dutch doctors want the competition to disappear in the Dutch healthcare system.\(^7\)

2.1.4 How healthcare is financed in the Netherlands
Since the agreement, healthcare expenditure in its totality is financed in six ways in the Netherlands. It is largely financed by the government and partly by individuals (inhabitants) or municipalities. The six ways of financing healthcare in the Netherlands are:

- With the Zorgverzekeringswet (the regular health insurances). The health insurance constitutes a basic insurance to cover medical expenditures.
- With what is called the Algemene Wet Bijzondere Ziektekosten in the Netherlands (translated as Act of Exceptional Medical Expenses). The AWBZ is an insurance in case of long-term care, for example severe sickness or a handicap.
- With contributions the government provides which are included in the state budget.
- From the resources of municipalities and provinces.
- Via additional health insurances that can be purchased by private individuals if they want to.
- With other private expenditures by individuals. 
  \((\text{Een economische gezonde gezondheidszorg, 2012})\).

2.1.5 Welfare loss
The high costs in the Dutch healthcare system lead to welfare loss in more than one way. Also, the way in which the healthcare sector is organised in the Netherlands leads to welfare loss.

The high costs in the healthcare sector have to be covered by both the government and the inhabitants of the Netherlands. 83-90% of the costs in the healthcare sector are collectively financed.\(^8\) This means that the government pays for these costs. The government receives money from inhabitants through taxes and contributions. To finance healthcare costs, which are continuously increasing, the government is aggravating these

\(^7\) Source: Novum, Artsen willen af van marktwerving, NRC-next, Rotterdam, Tuesday 4 september 2012
\(^8\) Source: Preadvice van de Koninklijke Vereniging voor de Staathuishoudkunde 2012, \textit{Een economisch gezonde gezondheidszorg}, SDU uitgevers, 2012
taxes and contributions continuously as well. This means that people have to pay more, and thus the private spending is repressed. This causes welfare loss.

Over the past years the expenses in the healthcare system have taken up more and more of the gross domestic product in the Netherlands. This means that other collective expenses are repressed, and this is not beneficial for the prosperity. This repression is visible in the graph below.

![Graph showing expenses on collective care threatening to repress other expenditures](image)

*Figure 2: expenses on collective care threatens to repress other expenditures (Source: Miljoennnota 2013, which listed CBS as source)*

Furthermore, the collective financing presses the labour supply in the Netherlands because the incentive to work is less present in a system of collective financing than in a system of private financing. In a system of collective financing people pay for healthcare either way, even without ‘consuming’ it. In a system of private financing people only pay if they use healthcare. To be certain to be able to pay healthcare when they need it there is a stimulus for those people to work hard. This stimulus is present in a lesser extent in the Netherlands because of the system of collective financing. In the end, people are happy to be able to work and earn money and this increases the welfare. So a system of private financing might increase the welfare whereas a system of collective financing leads to welfare loss.

Welfare loss also occurs because of the political decision making. Some politicians, depending on their colour, apply a principle of equality and decide on basis of the wants and needs of an average person. Because there are people that deviate from average, in the end not everyone will be satisfied with the political decision making. This leads to welfare loss. *(Een economisch gezonde gezondheidszorg, 2012).*
2.2 Research

2.2.1 The development of the economy

As can be seen in the graph above, the economic growth has faced a serious decrease in 2009 as a consequence of the economic/financial crisis. Not only in the Netherlands, but also in the United States, Asia and Europe the GDP shrunk by 3-4%.

2.2.2 Life expectancy in the Netherlands

The bar chart above shows the increase of the life expectancy in the Netherlands for both men and women in the past years. This means the Netherlands is facing an aging population.
2.2.3 Government expenditures

The previously stated fact that the government spends a relatively high amount of money on healthcare is visible in the bar chart above. In 2013, the government is planning to spend 76.7 billion euros on healthcare. This is 29.4% of the total government expenditure.

The bar chart shows government spends most of her money on healthcare. The healthcare sector needs more money than other sectors because of the extremely high costs that have to be covered. This affects the healthcare sector: people live longer and are longer in need of medical care.
2.2.4 Costs and expenses in the healthcare sector

<table>
<thead>
<tr>
<th>Costs healthcare in comparison to the GDP and the population</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>Average growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross domestic product (billion euro’s)</td>
<td>540,2</td>
<td>571,8</td>
<td>594,5</td>
<td>571,1</td>
<td>588,4</td>
<td>2,2%</td>
</tr>
<tr>
<td>Costs of healthcare (billion euro’s)</td>
<td>40,7</td>
<td>43,3</td>
<td>46,6</td>
<td>48,9</td>
<td>50,5</td>
<td>5,6%</td>
</tr>
<tr>
<td>In % of the GDP</td>
<td>7,5</td>
<td>7,6</td>
<td>7,8</td>
<td>8,6</td>
<td>8,6</td>
<td>3,3%</td>
</tr>
<tr>
<td>Costs hospital care (mln euro)</td>
<td>14.542</td>
<td>15.559</td>
<td>16.595</td>
<td>17.970</td>
<td>19.747</td>
<td>7,9%</td>
</tr>
<tr>
<td>In % of the GDP</td>
<td>2,7</td>
<td>2,7</td>
<td>2,8</td>
<td>3,1</td>
<td>3,4</td>
<td>5,7%</td>
</tr>
<tr>
<td>Population (mln)</td>
<td>16,3</td>
<td>16,4</td>
<td>16,4</td>
<td>16,5</td>
<td>16,6</td>
<td>0,4%</td>
</tr>
</tbody>
</table>

*Figure 6: Costs healthcare in comparison to the GDP and the population*  
(Source: EJZ, DigiMV, CBS)

The gross domestic product has increased with an average of 2,2% over the years 2006-2010. The slight decrease since 2008 is a result of the financial crisis.

Despite the crisis, the costs of healthcare have increased continuously since 2006 with an average growth of 5,6%. This is rather remarkable, because during a crisis the government has less money to spend as well.

The costs of hospital care have increased enormously: 7,9% over a period of 5 years. This is probably caused by the increasing need for care in the Netherlands due to an aging population (see chapter 2.2.2).

Because of the small increase in the number of inhabitants in the Netherlands, there is an extra 300.000 people that is in need of medical care. More patients means more costs and so the population growth also has its effect on the expenses in the healthcare sector.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total (billion euro’s)</td>
<td>52,5</td>
<td>67,6</td>
<td>83,9</td>
<td>87,2</td>
<td>90,0</td>
</tr>
<tr>
<td>Per capita (euro’s)</td>
<td>3 273</td>
<td>4 143</td>
<td>5 076</td>
<td>5 247</td>
<td>5 392</td>
</tr>
<tr>
<td>Percentage of GDP (%)</td>
<td>11,7</td>
<td>13,2</td>
<td>14,7</td>
<td>14,8</td>
<td>14,9</td>
</tr>
</tbody>
</table>

*Figure 7: expenses in the healthcare sector*  
(Source: Publication Gezondheid en zorg in cijfers 2012)

Figure 7 is from a different source but also shows the costs in the healthcare sector. It shows us that the total amount of expenditures in the healthcare sector has indeed increased since 2006. Simultaneously, this means that the amount of expenditures per capita and as a percentage of the GDP has increased as well.
Figure 6 and 7 show different data, but this might be due to the fact that in figure 6 it is not sure whether the totality of the expenditures in healthcare are displayed or whether it is a smaller part of the total.

**Expenses in the healthcare sector per capita and in % of GDP**

![Graph showing expenses in the healthcare sector per capita and in % of GDP](image1)

*Figure 8: Expenses in the healthcare sector per capita and in percentage of GDP (Source: CBS statline)*

The graph above is another way of showing the increasing costs in the healthcare sector. The continuous increase is clearly visible in the graph. Especially the expenses as a percentage of the GDP have increased significantly since the crisis started in 2008/2009.

**Total amount of expenses on care in the Netherlands**

![Bar chart showing total amount of expenses on care in the Netherlands](image2)

*Figure 9: total amount of expenses on care in the Netherlands (Source: CBS statline)*

The bar chart above shows the total amount of expenses on care. Not per capita or as a percentage of the GDP, but in total. The most remarkable thing about this bar chart is that the expenditures have more than quadrupled since the year 1980.
Unfortunately, the information from the CBS (Dutch Statistics Office) was not given on a yearly basis and because of that it is unknown what happened to the total amount of expenses on care after 2006. However, it is clearly visible that the total amount of expenses on care has increased, and nearly doubled, since the year 2000.

Growth of total amount of healthcare expenditures

![Figure 10: growth of total amount of healthcare expenditures](image)

(Source: Miljoennenota 2013, which listed CBS as source)

The graph above shows the total amount of healthcare expenditures as a percentage of the GDP. The increase of the total expenditures is clearly visible. The graph also shows an estimation for the years to come.

What is remarkable in figure 10 is that in the period of 1981 to 2000 the total amount of expenditures was more or less stable. Since 2001 the total amount of expenditures has soared, and this might have something to do with the introduction of the Euro in 2002. The introduction of the Euro caused a general increase in the price level. All the articles listed below with a footnote have noticed a price increase, though their percentages differ. An acceptable explanation for the soaring of the total amount of expenditures is therefore that the price level in the healthcare sector has increased, just like the price level in general. An increasing price level is combined with increasing costs.\(^9\) \(^10\) \(^11\) \(^12\)

---

11 ANP, Prijsstijging voor eenderde door euro, Amsterdam, June 28 2002
12 Prijsstijging: 49%, HP-De Tijd, May 30 2003
Collectively financed care expenditures
The graph below is yet another way of displaying the care expenditures. The graph shows the collectively financed care expenditures as a percentage of the GDP from 1950-2012.

![Graph: Collectively financed care expenditures, 2012](image)

\textit{Figure 11: collectively financed care expenditures, 2012 (Source: Een economisch gezonde gezondheidszorg, CPB)}

In 1950, the collectively financed care expenditures consisted of less than 1% of the GDP, whereas in 2012 it is almost 11%.

Since figure 11 considers healthcare expenditures as a percentage of the GDP, the increase of the GDP since 1950 is negligible. The collectively financed care expenditures did not grow equally with the GDP, because then the graph would show a horizontal line. The care expenditures grew more than the GDP, and this is what causes the ascending line.

In 1965 there was a considerable increase, but the increase has never been as great as it is since the year 2000, because of all the problems mentioned in chapter 2.3.2. If the increase continues like this, the care expenditures will have doubled in 20 years by the year 2020.

2.2.5 Quality of healthcare
The quality of healthcare can be measured in different ways, focusing on different areas. These areas are: innovation, waiting lists, experience of healthcare and death rate.

Innovation
Innovation in the healthcare sector is achieved by improvement programmes which are set up by different government and private institutions. Some of these programmes can be found on \textit{www.zorgvoorbeter.nl}. This is a website which provides healthcare providers with information on how they can improve the quality of the care they provide and how they can innovate and work efficiently.
One of the improvement programmes is called ‘washing with care’ and has proven to be rather successful. The idea of the programme was to wash patients with washcloths and use lotion instead of soap. The lotion would dry naturally and there would not be a need to rinse the patients which would save time. At the same time, the lotion has an extra nourishing effect. After the trial period it turned out duration of washing decreased with 15-25%\(^\text{13}\). The extra time caretakers have is automatically given back to the patients which means patients received more physical care than before. Furthermore the skin quality of patients improved because of the use of lotion and the patients indicated they experience ‘washing with care’ as being more pleasurable than before. A clear improvement was achieved.

**Waiting lists**
The quality of care can also be measured in waiting lists in hospitals and clinics. The shorter these waiting lists, the happier the patient will be. The time a patient needs to wait before he can be treated depends on the kind of treatment, but varies between one to ten weeks. Since September 2008 hospitals are obliged to renew the waiting times on their website each month. A patient can therefore easily find what the waiting time for a certain treatment will be and on the website [www.kiesbeter.nl](http://www.kiesbeter.nl) patients can see an overview of the waiting times for a certain treatment in every hospital in the Netherlands.

In 2012, the CBS, Elsevier and RTL News all concluded that waiting lists in the healthcare sector have virtually disappeared. The article in Elsevier states that the new healthcare system, with the competitive market, is the reason for the disappearance of the waiting lists.\(^\text{14} 15\)

**Experience of healthcare**
The CBS published the experience of healthcare in their report *Gezondheid en zorg in cijfers 2012*. The results they published are from a healthcare survey in 2010.

In general, Dutch inhabitants are happy with their care suppliers. They awarded them with a grade of 7,7-7,9.

The graphs below show that Dutch inhabitants are overall happy with the provided healthcare. It shows that, generally speaking, men are somewhat more satisfied with the provided healthcare than women.

---

\(^{13}\) Source: ZorgVoorBeter, *Resultaten drie rondes verzorgend wassen*, October 2009


\(^{15}\) Source: Visser, Marlou (2012), ‘*Wachtlijsten in de zorg nagenoeg verdwenen*’, Elsevier, July 11 2012
The death rate has been slowly increasing since 2009. The better the quality of healthcare, the lower the death rate should be. However, there are many different death causes, not only sickness. According to Gezondheid en zorg in cijfers 2012, a CBS publication, there has also been an increase in the number of traffic accidents and suicides. This all contributes to an increasing death rate.
2.2.6 Productivity in the healthcare sector

According to *Gezondheid en zorg in cijfers 2012*, the productivity in the healthcare sector is measured by calculating the production/labour ratio. This seems an easy calculation, but it is quite complex because of the many factors that influence the production.

![Graph showing development of production, labour and productivity in hospitals](Source: Gezondheid en zorg in cijfers 2012, CBS, Prisma, Vernet)

Figure 14 shows the development of production, labour and productivity for general care in hospitals. Since 2006, each of these have increased, but they had been increasing before. The increase after 2006 is not necessarily due to the liberalization of the healthcare sector.

![Graph showing development of production, labour and productivity for long-term care](Source: Gezondheid en zorg in cijfers 2012, NZa, CBS, GGZ Nederland, Vernet)

Figure 15 shows the development of production, labour and productivity for long-term care. Since 2001, production and labour have increased significantly. However, the productivity has remained more or less stable over the years and there is no noticeable connection to the agreement.
2.2.7 Number of hospitalizations

The graph above shows an increase in the number of hospitalizations. The pink line indicates women and the blue line indicates men. The number of hospitalizations has increased since the year 2000. Also after the introduction of the agreement the number of hospitalizations has increased.

In 2010, more women were hospitalized than men. The age group in which most people are hospitalized is the group of newborns. After that, most people are hospitalized in the age group of 80+. This group is therefore the second largest group consuming healthcare in the Netherlands.
2.3 Analysis

2.3.1 Did the agreement achieve its goals?
The agreement did not entirely achieve its goals. The agreement had different goals. The most important goal was to reduce the excessive high costs. The competitive market should contribute to a higher labour productivity, better quality of healthcare, shorter waiting lists and more innovation.

This analysis covers each of these goals and by referring to figures in chapter 2.2 the analysis will conclude whether the agreement has achieved its goal or not.

Reduce the excessive high costs
Looking at the research, reducing the excessive high costs is a goal that was certainly not achieved over the last years. Figures 6, 7, 8, 9, 10 and 11 all show us that costs have only increased even more since then. Even though the exact numbers differ from different sources, they all conclude that the expenditures in the healthcare sector have soared since the agreement in 2006.

Figure 6 has shown that the costs of healthcare have increased continuously since 2006. The average growth of costs was 5.6%, while there was an economic crisis at the same time (figure 3). The crisis affected the gross domestic product and caused it to decrease. Meanwhile, the healthcare expenditures kept on increasing. This means that the amount of money spent on healthcare as a percentage of the GDP increased enormously. This increase is clearly visible in figures 8, 10 and 11. Especially figure 10, which is rather detailed, shows expenditures on healthcare as a percentage of the GDP have increased significantly after 2006. The aim of the agreement was to reduce the expenditures after 2006, but with all the data provided I conclude that this aim has not been achieved.

The most obvious reason why the costs have not reduced is because of the increasing need for care in the Netherlands. Figure 4 proves that life expectancy has increased over the last years and, combined with figure 16, I conclude aging population certainly affects the number of hospitalizations. In figure 16 we see an increase in the number of hospitalizations over the years and in figure 17 we find the evidence that the elderly people are the second largest healthcare users in the Netherlands in 2010. The group aged 80+ is the second largest group, and, back in 2001, people rarely even got that old. In graph 16 we also see that since 2001 the number of hospitalizations has increased.

However, the increase of costs also occurs because people want better healthcare and hospitals want to introduce new techniques in their treatment programmes. Better healthcare and new techniques are
expensive, and this increases the expenditures and thus the costs of healthcare. The expectation of healthcare will be discussed as a problem later, in chapter 2.3.2.

It is thus hard to say whether the still increasing expenditures are due to market failure, because of an increasing need for healthcare or because healthcare suppliers are spending more money than they did before on improving the healthcare they provide.

**Improve the quality of healthcare**

It is hard to measure the quality of healthcare. The most general method is to look at the death rate and at patient satisfaction.

Applying this general method, we see an increasing death rate since 2009 (figure 13). However using the death rate would be a generalization. There are many reasons why the death rate is going up, not only a decrease in the quality of healthcare. Most people die a natural death and there is no or little involvement of doctors. Furthermore, the death rate has proven to have risen as a cause of the economic crisis as well (the amount of suicides has gone up), and also the number of traffic accidents has increased.

The 16 341 participants of the healthcare survey in 2010 awarded the healthcare they are provided with, with a 7,7-7,9. The women were a little less satisfied than the men (figure 12). This survey was conducted among a small group of people and may not be entirely representative. Besides that, there is unfortunately no information to make a comparison with previous years. An average grade of 7,8 sounds good, but without comparison I cannot conclude whether this grade increased after 2006 because of the agreement.

Looking at quality of healthcare in a broader perspective, the waiting lists and innovation are a part of the quality as well. Another goal of the agreement was to shorten the waiting lists, which would be achieved because of a higher efficiency due to the competition. The competition should, in theory, also stimulate innovation.

**Shorten waiting lists**

Because of a tightened regulation about uploading waiting times on the hospital’s websites and because of websites like www.kiesbeter.nl, it has become easier for the patients to see in which hospitals there is a short waiting list for a certain treatment. This is definitely an improvement, because the patients know where they need to go in order to be treated as soon as possible.

The Miljoennnota 2013, the Elsevier and RTL News concluded waiting lists in the healthcare sector have virtually disappeared, unfortunately without fact to prove their point. Nevertheless I assume that what they
concluded is true and that means that this is a goal the agreement did manage to achieve.

However, it can be discussed whether shorter waiting lists really improve the quality of healthcare. It means that patients will be helped faster but not necessarily better. Whether the quality did improve or not is hard to measure. Looking at patient satisfaction is the method that comes closest.

Stimulate innovation
Innovation is another process that is hard to measure. The information provided on how to innovate has improved and increased, which can be of great help for care suppliers in learning how they can innovate. Websites like [www.zorgvoorbeter.nl](http://www.zorgvoorbeter.nl) contribute to this increase and improvement of information.

There is proof of improvement programmes that have been rather successful, like the ‘washing with care’ programme that was mentioned in chapter 2.2.5.

Although innovation cannot be measured, the effects of innovation are to some degree measurable. Innovation leads to more efficiency, which leads to a higher productivity and shorter waiting lists. Innovation also improves the quality and is thus more satisfying. An answer to whether innovation has been present or not will come after the analysis of labour productivity.

Increase labour productivity
Figure 14 displays a clear increase in labour productivity in the hospitals. This increase remains off in the long-term care (figure 15). The labour productivity is based on the labour/production ratio. The production in the hospitals increased more than the volume of labour in the hospital, which is indicated by a steeper line. This means labour/production ratio increases a little as well. In the long-term care, the labour and production increased equally. Dividing two equally increasing indices obviously leads to a stable index for the labour productivity.

Besides the graph in figure 14, it can also be concluded that the efficiency in the healthcare sector has increased because there are shorter waiting lists in combination with an increasing number of hospitalizations.

Labour productivity in hospitals has increased, because innovation and/or the competitive market have been successful in the healthcare sector.

The agreement succeeded in increasing the labour productivity, stimulating innovation, shorten waiting lists and thus improving the quality of healthcare a little. However, the agreement failed to achieve its most important goal: reducing the costs.
2.3.2 What is going wrong?
According to Erik Schut, “the healthcare sector is far too complicated to become a regular, normal market. The problems that cause market failure are: asymmetrical information, the dependence of the demanders and the lack of an effective price mechanism.”

However, there are more problems that counter-act with the theory.

Cost reduction or quality conservation
Labour is a fundamental necessity in healthcare. The higher the wages, the better people generally do their work. In the healthcare sector, when people do their job better they also contribute to a higher quality of healthcare. The government has to make a choice between cost reduction, which leads to quality reduction, or quality conservation, with high costs.

No labour saving investments
The healthcare sector is labour-intensive. This means that on the majority of the costs in the healthcare sector it is impossible to save, because the government cannot make labour saving investments, they cannot replace doctors by machines.

Aging population
The aging population also has its effect on the market price. The life expectancy in the Netherlands is much higher than before, this means that more and more older people are dependent on the healthcare facilities in the Netherlands. They are also more dependent on their insurances, and insurance companies have to share out more money to them which leads to higher premiums.

Market power of the insurance companies
The insurance companies have too much power and they interfere with the market mechanism. We can approach healthcare and insurers as complementary goods. Like coffee and creamer. The creamer company will never be able to decide how much coffee is produced or if a consumer will receive money to buy that type of coffee or not. This sounds ridiculous, but it is in fact what happens on the current market of the healthcare sector.

The insurance companies decide whether they will cover the treatment or not. Some people neglect a certain treatment because the insurance company is not willing to cover it for them and these patients will not be cured. Furthermore, the insurance companies negotiate on the prices together with the care providers and the patients are outsiders in this. They have least power in the current system, while the system was actually introduced to improve meeting the public interests.

---

16 From: Schut, Erik (2003), De zorg is toch geen markt?: Laveren tussen marktfalen en overheidsfalen in de gezondheidszorg, Rotterdam, May 9 2003
Market power of care providers
As mentioned above, the care providers and the insurance companies negotiate and decide on the price of healthcare. The demanders have no say in this negotiation and they are therefore in a subordinate position in the current Dutch healthcare system.

There are different institutions that try to prevent the care providers from having too much market power. De Nederlandse Mededingingsautoriteit (NMa, translated as Dutch competition authority) opposes cartel formation and local monopolies. Furthermore, to be able to merge, organisations will have to get the permission of the NMa. De Nederlandse Zorgautoriteit (NZa, translated as Dutch healthcare authority) makes sure that care organisations will not abuse their powerful position.17

Rewards according to care
Healthcare providers are paid according to the number of procedures they perform. They will be tempted to perform more procedures than medically necessary and this leads to unnecessary overproduction, which adds up to extra, unnecessary costs.

Asymmetrical information
For patients and insurance companies it is impossible to assess if a certain treatment is necessary or not. The healthcare providers have an information advantage. The government attempts to reduce the asymmetrical information by publishing data on hospital quality.18

Public opinion
The opinion of the people, and of some politicians, is that care is not suitable for a market. They feel that healthcare should not be a market, because employees in this sector are now approaching patients as clients instead of patients they have to take care of. If the institutions keep on trying to work as efficiently as possible and increasing the labour productivity, doctors are able to handle more patients than they could before. Public opinion is that this can never be an improvement in the quality of healthcare.

Dependence of the demanders
Unlike in regular markets, demanders in the healthcare sector are very dependent on the suppliers. It is not a matter of having jeans or not, it is a matter of being healthy or not. This creates unbalanced relationships within the healthcare sector.

---

17 Based on: Preadvizeen van de Koninklijke Vereniging voor de Staathuishoudkunde 2012, Een economisch gezonde gezondheidszorg, SDU uitgevers, 2012
18 Based on: Preadvizeen van de Koninklijke Vereniging voor de Staathuishoudkunde 2012, Een economisch gezonde gezondheidszorg, SDU uitgevers, 2012
Competition
In their article\textsuperscript{19}, Paul Bijl and Theon van Dijk conclude that competition is not necessarily better for the consumers. They state that there may be other, more important, public interests that oppose competition and that these should be prioritized. Furthermore they say that competition may counter-act innovation instead of stimulating it, because firms would rather save their money than investing it to innovate.

Medicalization
Insurance companies reimburse disorders which are insufficiently evidence based. This is the market power care suppliers have. Over the past years, small disorders have gotten a medical name and suddenly became real diseases. This is called medicalization. Medicalization is a positive thing for the care suppliers because they can earn money from diseases that were not regarded as diseases before. However, for healthcare users and the insurance companies medicalization only leads to higher costs. Health insurance companies should be more careful to only reimburse disorders that are sufficiently evidence based to be actual diseases.\textsuperscript{20}

An example of medicalization is the Sisi-syndrome, named after the Austrian empress Elisabeth. The Sisi-syndrome is a form of depression which is hided from the outside world. Patients with the Sisi-syndrome would seem happy and cheerful but under the surface they would feel miserable. The syndrome caught a lot of media attention and spread through Germany. According to the media, the syndrome was caused by an unbalanced serotonin level and could be treated with a medicine called Seroxat. In 2003, three psychiatrists discovered that the syndrome was invented by GlaxoSmithKline, the firm that produced Seroxat. The firm hired a PR agency to ‘promote’ the syndrome to create more sales. There were no scientific articles supporting the syndrome.\textsuperscript{21} (Nanninga and Heijder, 2004).

Baumol effect
This is more of a fact than a problem. It was formulated for the first time by William Baumol in 1966, and it is named the Baumol cost disease. It describes an observation regarding the labour productivity in certain economic sectors. Baumol noticed that unlike other economic sectors, an increase in wages in a service providing sector does not necessarily lead to a higher labour productivity. This is because a service is not more productive with more machines, since it is labour-intensive. Healthcare is a service and therefore it also suffers from the Baumol cost disease.\textsuperscript{22}

\textsuperscript{19} Bijl, Paul de and Dijk, Theon van (2012), Alleen concurrentie relevant voor nieuwe Autoriteit Consument en Markt, Meljudice, September 25 2012
\textsuperscript{20} Based on: Preadviesen van de Koninklijke Vereniging voor de Staathuishoudkunde 2012, Een economisch gezonde gezondheidszorg, SDU uitgevers, 2012
\textsuperscript{21} Nanninga, Rob and Heijger, Walter (2004), De ziektemakers, Tijdschrift Skepter, volume 17 number 1, 2004
\textsuperscript{22} Based on: Preadviesen van de Koninklijke Vereniging voor de Staathuishoudkunde 2012, Een economisch gezonde gezondheidszorg, SDU uitgevers, 2012
**Expectation of healthcare**

We expect high quality healthcare. To meet these requirements and to be able to offer care of a higher quality, more expenses have to be made. High quality healthcare often goes hand in hand with higher costs, especially with all the new techniques and inventions over the past years. To provide the best healthcare possible these new techniques have to be applied. However, the new techniques are often quite expensive and therefore lead to an increase in costs in the healthcare sector.

**Politics**

In many different sectors, including the healthcare sector, there is a problem with politics. Politicians decide on a four-year-basis and the idea that they have to satisfy their voters is ever-present. This means that they might be easily tempted to apply certain changes with the goal of retaining their voters, and not the goal of making improvements.

In the Dutch healthcare system this shows in insurance packages. De Koninklijke Vereniging van Staathuishoudkunde believes that politicians have kept the insurance packages too broad because they are afraid of losing aging voters. These broad insurance packages require high premiums, which increase the costs in the healthcare sector.\(^2^3\)

### 2.4 Solutions

The analysis concluded that the healthcare sector knows more than one problem. The two main problems are high costs and welfare loss. These problems are caused by all the factors that were mentioned before in chapter 2.3.2.

These problems cannot be fixed all at once because there are so many factors that influence them. Combining different solutions will come close. The solutions below focus on the different problems. None of them solves all problems because none of them can rule out all the influential factors.

#### 2.4.1 Specialization of hospitals

The government has been busy with gradually specializing Dutch hospitals over the past year. In July 2011, minister Edith Schippers (Public Health) signed an agreement which stated that Dutch hospitals and private clinics will no longer perform all treatments. The advantages of this specialization are considerable.

First of all, treatment related equipment will be transported to the hospital that actually uses it and new equipment no longer needs to be bought by every hospital but only by the ones that are specialized in that certain area. This will reduce the costs for individual hospitals significantly.

Furthermore, with this specialization, doctors in specialized hospitals will get to practice more on a certain treatment. There will be an increase in the division of labour, which leads to the doctors becoming more specialized as well. This would allow them to work more efficiently and we may then assume that prices go down because of the higher efficiency. However, in chapter 2.3.2 the Baumol cost disease was explained, and this apparently occurs in the healthcare system. Thus, costs will only reduce with a certain degree and not as much as may be desired.

The disadvantage of this specialization is that patients will have to travel further if they need help on a certain treatment. Furthermore they cannot choose the hospital where they want to be treated anymore because they will have to go to the hospital that offers the treatment they need. On the other hand, the costs of healthcare are expected to decrease because of the specialization. Moreover, doctors are able to provide better healthcare because they became more experienced. The lower costs and better care probably outweigh the disadvantageous increase of travel distance.

To make it possible for hospitals to specialize, the government will have to permit a certain kind of cartel formation between hospitals. In principle, cartel formation is prohibited in the Netherlands but in this case it is necessary. It is very important that hospitals are allowed to consult, cooperate and exchange information with each other. This ensures that the best healthcare is provided at the specialized hospitals.

The 2011 agreement that allows hospitals to specialize has been a step in the right direction, but to notice a substantial cost reduction and quality improvement there has to be more specialization. A good solution would be for the government to see to it that hospitals indeed start specializing. This needs time, and therefore it will take some time before there is a noticeable difference. Nonetheless, it is probably the best solution for the problems in the Dutch healthcare system.

### 2.4.2 Moderating the wages

To manage the costs in the healthcare sector, decreasing the wages might seem a good solution from an economic perspective. The wages are 60% of the total costs in the healthcare sector. Moderating these would therefore make a big difference.

However, it is not the most achievable option. The quality of healthcare will decrease. The quality of healthcare depends on how good the care providers work, and they will work better when they receive more money. Cutting their wages means professionals will probably start to put less effort into their work because they feel that the government thinks it is less valuable. Besides that, there is also a chance of employee strikes or

---

24 Source: Schut, Erik (2003), *De zorg is toch geen markt?: Laveren tussen marktfalen en overheidsfalen in de gezondheidszorg*, Rotterdam, May 9 2003
redundancies in the sector. Furthermore, when professionals will be offered lower wages they go abroad: the so called ‘brain drain’. Lower wages result in a loss of highly skilled workers, which is also not desirable.

2.4.3 Plans of the government
In the Miljoenennota 2013 the CBS proposes to put together a so called Taskforce which indicated the following three solutions to make the healthcare more payable and the costs more controllable.

- Healthcare has to be brought back to the core. This is connected to the previous stated problem that doctors are tempted to charge and perform unnecessary treatments since they get paid according to the number of procedures they perform. The government should see to it that it only pays for essential healthcare and the guidelines have to be tightened. The doctors have to keep to these guidelines and the authorities have to monitor this.
- Care has to be provided in the proper place. The proper place is the place where the healthcare is good and at a reasonable price. Nowadays healthcare is often provided for a high price and not necessarily better than someplace else. Specialization could be a good way to solve this problem.
- Patients will have to deal with more personal responsibility in their healthcare insurances and payments. The government should reduce the amount of money they pay on healthcare and leave more of it to the inhabitants of the Netherlands.

The Taskforce wants to structurally lower the care expenditures until the growth of the care expenditures equals the growth of the GDP. The Taskforce does state premiums and taxes have to be raised in order to be able to reach maintainable government expenditures. (Miljoenennota 2013, 2012).

2.4.4 Single-payer system
The single-payer system was opted as a solution for the problems in the healthcare system of the United States in 2008. It was a bill that was presented to the House and the website www.healthcare-NOW.org promoted that bill.

A single-payer system is a type of financing system in which a government run organisation collects all healthcare fees and pays out all healthcare costs. Healthcare providers will receive a ‘global budget’ with which they will pay their expenses. The money for this global budget will come from “fair shares” divided over employers and employees. They pay a “modest pay roll tax” and, according to the website, in the end “95% of the people will pay less for their healthcare than they are currently paying”25.

---

The biggest profit is gained because this system saves a lot of administrative work. According to the website, the administrative savings in the United States will be around $150 billion. The website informs about a study published in 2004 that stated that a single-payer healthcare system will reduce the costs by more than $400 billion a year. (www.healthcare-NOW.org, 2008)

2.4.5 Specialization and privatization to prevent welfare loss

In chapter 2.1.5, welfare loss was explained as being a problem caused by the Dutch healthcare system as well. It is caused by the high costs and by the organisation of the healthcare system in the Netherlands.

To reduce the high costs, solutions 1 and 2 should be introduced. However, to reduce the possibility of welfare loss as much as possible the government should privatize the healthcare sector even more than it already did in 2006. This privatization will not lead to lower costs in itself, but, in combination with more specialization, it can prevent the welfare loss that was described in chapter 2.1.5.

With lower costs and more privatization, the government will be responsible for a smaller amount of costs. This means that the government can lower the taxes and premiums and the effect of this will be an increase in purchasing power of the Dutch inhabitants, which increases the welfare as well.

When the costs of healthcare are reduced and the GDP remains as it is now or grows, the percentage of the GDP that is spent on healthcare will be lower. This means that there is a larger part of the GDP left to spend on other collective purposes and these purposes are no longer repressed.

To increase the incentive to work in the Netherlands, the government should increase the extent of private financing in the Dutch healthcare system. To make the system entirely privately financed is too big a step to make and probably not desirable as well because people with lower incomes will then encounter problems with paying for their healthcare.

It is almost impossible to take away political decision making in the Dutch healthcare system. This means that care would be entirely liberalized and then the government would have no say in it anymore. If the healthcare sector had to be governed by private institutions only it would also cause many problems. Nevertheless, the principle of equality that is applied by politicians does lead to welfare loss. However, there is not much to be done about it, it is more of an undesirable side effect.

2.4.6 More government supervision

The only thing that can solve the current market power in the Dutch healthcare system is more supervision. This supervision has to come from
the government because appointing another private institution might lead to that institution taking the market power.

This is counter acting the 2006 agreement, since the government decided to liberalize the sector back then. Admitting more government supervision means reversing this liberalization to a certain degree.

2.4.7 Setting fixed health insurance premiums
The newly formed coalition between PvdA and VVD wanted to reduce the costs by setting fixed health insurance premiums. These fixed premiums should lead to a ‘fairer’ distribution of income: lower income inequalities. After several protests from part of the inhabitants of the Netherlands and some political parties the decision was reversed: it turned out that this was not a good solution.

From an economic perspective, setting fixed health insurance premiums is not a good solution either. Insurance companies compete on their premiums and the amount of healthcare they cover. The new levelling agreement the government wanted to enforce would take the competition on premiums away since the government wants every health insurer to offer the same premium. This means that there will not be much difference between the different insurers anymore.

This would actually reverse the competitive market idea. Competition is taken away from the market and eventually this will counteract innovation and working efficiently. Patients that would be willing to pay more to be able to choose their own hospital or doctor, will now have less opportunity to choose because there is no possibility of paying more. This does not improve the quality of healthcare as patients experience it. The agreement that the coalition wanted to enforce would not improve the quality of healthcare and it would interfere with the market mechanism.
Conclusion

A competitive market is a market in which the market price is determined by the market mechanism. The demanders and the suppliers as individuals cannot influence this market price and they are therefore price takers. With the competition in this market model it is assumed that, in order to be able to compete with the others, firms will innovate and work as efficiently as possible.

Since 2006, the government allowed competition in the healthcare market with the hope of reducing the high costs and improving the quality. In theory, competition should lead to these results. However, has this been the case in the Dutch healthcare sector? Did the competitive market solve the problems?

I would say no, although it partly solved the problems. Competition did increase the quality and the innovation, as was shown in this research project. However, the largest problem in the healthcare sector, the high costs, have not diminished; they have increased. This research project contains numerous graphs showing that the expenditures have increased, also in the years after the introduction of the competitive market, and are expected to increase even more. The competitive market has not been a solution for the high costs in the Dutch healthcare system.

There are a lot of reasons for this market failure. These reasons include: market power, labour-intensiveness, medicalization, aging population, technological advances, higher expectation of healthcare, politics, the Baumol cost disease and the fact that the healthcare sector is a difficult, extraordinary market. It is hardly possible to achieve both quality increase and cost reduction at the same time because the quality of health care increases with a larger budget. The dilemma is whether the government wants cost reduction, which leads to quality reduction, or quality conservation/improvement, which is more expensive.

The best solution to reduce the high costs in the healthcare sector is to admit more specialization than was already agreed on in 2011. More specialization will lead to a better distribution of knowledge and materials. There will be less hospitals making the same expenses, which saves money. Besides that, doctors will get a chance to specialize as well which makes them more experienced and presumably better doctors. Both problems will be solved. The role of the government in this solution will be as described in solution 2.4.3: supervise the specialization, reduce the amount of money she spends on health care, increase the personal responsibility in the healthcare insurances and prevent market power, asymmetrical information and medicalization.
Epilogue & word of thanks

...And that was it. After eighty-nine hours of work, many cups of coffee and a lot of chocolate bars this research project is finished. To be honest, I was a bit reluctant at the start of the project. You see an enormous pile of information and a large project which has to be finished in a few months. However, I noticed that it was really a matter of getting over that threshold and just start working. As the project gradually began to take shape, it became more fun and enjoyable to work on. At the end I really wanted to continue working and it was wonderful to see the project grow.

First of all, I would really like to thank Mr de Jong, who supervised my research project, for the enormous amount of work and effort he put into my project. He supplied me with articles and books, explanations and good feedback on my progress. He encouraged and motivated me to work hard on the project, but on the other side gave me freedom regarding content and planning. I think I learned a lot about working independently on a large project like this. I think it is for a great deal thanks to his efforts as well that the project became what it is now. He brought out the best of me and I am really, really thankful for that!

Furthermore I should and would really like to thank my father, Hans Dijkman, because he came up with the idea of this research project. In April 2012 I discussed possible subjects at home, but none of them felt like a great one. I said I wanted to combine economics with biology/healthcare but could not really think of a good topic. Then my dad asked me about maybe considering competition in the healthcare system and I knew that that would be the perfect subject. And it was. Thank you!

And finally, I thank my mom and dad for reading the entire project to check for spelling, lay-out and other mistakes. I also thank them for helping me with the project and looking out for newspaper articles on the subject. It took them quite some time and effort, so thanks a lot again!
List of sources

Newspaper and magazine articles
ANP, Prijstijging voor eenderde door euro, Amsterdam, June 28 2002, [http://www.refdag.nl/nieuws/hoofdpunten/prijstijging_voor_eenderde_door_euro_1_194918]

Prijstijging: 49%, HP-De Tijd, May 30 2003. Also ANP-message in response to the research of HP-De Tijd
Maillette, Lucas and Wenninger, Buy (2012), 'Iedereen wordt beter van marktwerking in de zorg, behalve de patiënt’, De Volkskrant, January 6 2012
Meijer, Petra (2012), In de zorg is fraude oké, Elsevier, May 12 2012
Weeda, Frederiek (2012), Zij verdelen het ziekenhuisgeld, NRC Weekend, May 26 and May 27 2012
Weeda, Frederiek (2012), De mannen van de 23 miljard, NRC Weekend, May 26 and May 27 2012
Cohen, Iris (2012), Klinieken kleden zorgverzekeraars uit, De Telegraaf, June 1 2012
Olsthoorn, Sandra and Groot, Gaby de (2012), Ziekenhuizen krijgen langzaam weer wat vet op de botten, ondanks fikse korting van de overheid, Het Financieele Dagblad, June 8 2012
Novum (2012), Artsen willen af van marktwerking, Rotterdam, NRC-next, September 4 2012
ANP (2012), Fraude met medicijnen neemt toe, Den Haag, Het Parool, September 11 2012


Bakker, Maartje and Pous, Irene de (2012), *Belangrijkste afspraken uit het regeerakkoord*, De Volkskrant, October 30 2012


Boer, Arnoud and Boon, Patricia (2012), *Patiënten dupe van zorgplan*, Amsterdam, De Telegraaf, November 3 2012


Schuitemaker, Lidwien (2012), *Gezondheidszorg is verziekt door almachtige commercie*, Groningen, Het Parool, December 7 2012

**Scientific articles**


Trienekens, Joost, Vlugt, Gijs van der, Jeurissen, Patrick and Germin, Margriet (2012), *Analyse stijging zorguitgaven*, ESB gezondheidszorg, volume 97, September 14th 2012

Ministerie van Financiën (2012), *Miljoenennota 2013*, Den Haag, SDU uitgevers, September 2012,

Centraal Bureau voor de Statistiek (2012), *Gezondheid en zorg in cijfers 2012*, Den Haag/Heerlen, Drukkerij Tuijtel, September 2012,

Schut, Erik (2003), *De zorg is toch geen markt?: Laveren tussen marktfalen en overheidsfalen in de gezondheidszorg*, Rotterdam, May 9 2003,

Vakcentrale MHP, *Nieuw zorgstelsel 2006*, November 2005
Commissie Sociale Zekerheid en Gezondheidszorg, *Ontwerpadvies naar een kwalitatief goede, toegankelijke en betaalbare zorg: een tussenadvies op hoofdlijnen*, Published by Sociaal Economische Raad, September 23 2012

Nederlandse Zorgautoriteit, *Visiedocument: Theoretisch kader liberalisering vrije beroepen in de zorg*, Utrecht, 2006
http://www.nza.nl/104107/10057/Visiedoc_Theoretisch_kader_1.pdf

**Video’s**

*Single-payer healthcare*, April 24 2008, commissioned by

*Hoe werkt marktwerking in de zorg?*, January 25 2011, commissioned by NZA and the Ministry of Public Health,
http://www.youtube.com/watch?v=1z6bsJwf0Ys

**Books**


**Internet**

  http://www.cbs.nl/nl-NL/menu/cijfers/default.htm
  www.dutchhospitaldata.nl
  http://tutor2u.net/economics/content/topics/competition/competition.htm
  http://economics.about.com/od/perfect-competition/ss/Introduction-To-Competitive-Markets.htm
  http://economicsonline.co.uk/Competitive_markets/Competitive_markets.html
  http://economicsonline.co.uk/Competitive_markets/Competitive_markets.html#The_profit_motive
- For cartoon Je Geld of Je Leven. Consulted on: January 8th 2013. 
  http://breed23.blogspot.nl/2012_04_01_archive.html
- For cartoon Insurance Companies. Consulted on: January 8th 2013. 