A Transaction Cost Analysis of Dutch Hospital Care

Contracting between hospitals and health insurance companies in a deregulated environment

Een analyse van de Nederlandse ziekenhuiszorg op basis van de transactiekosten theorie

Contractering tussen ziekenhuizen en zorgverzekeraars in een gedereguleerde omgeving

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Promotiecommissie

Promotoren:

Prof.dr. E.G.J. Vosselman

Prof.dr. J.P.M. Groenewegen

Prof.dr. A.J.P. Schrijvers

Overige leden:

Prof.dr. M. Berg

Prof.dr. M.A. Ezzamel

Prof.dr. J. van der Meer-Kooistra RA

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Preface and Acknowledgements

The relationship between organisations, with its diversity in governance structures, has had my interest since university, where I graduated in Business Administration and in Social sciences. Thereafter, during my career as a management consultant, I was confronted with the way transactions between hospitals and health insurance companies were organised in the Netherlands. The governance structure for these transactions puzzled me and triggered me to choose this empirical object for my PhD thesis. It was a challenge to describe and analyse these transactions and governance structure in a turbulent political environment. Political developments resulted in new rules and regulations in 2004 and 2005, and increased the dynamics and complexity of this study. The tendency towards deregulation will have a considerable impact on the way health insurance company's contract hospital care for their insurants in the Netherlands.

I have found it very interesting during this study to discuss the developments in the Dutch hospital care system with experts in the work field. Desk research was used to understand the complex rules and regulations. Case studies gave me a detailed impression of the transactions between two hospitals and their health insurance company and the concluded contract. A questionnaire was sent to hospitals and health insurance companies in the Netherlands and showed interesting results about expected future developments and the impact of deregulation.

The collected data and theoretical framework given by transaction cost economics gave me the opportunity to develop recommendations for hospitals and health insurance companies to develop an efficient governance structure. The results of this study add propositions to political discussions in the Netherlands about the effect of deregulation in the hospital care market. I hope this will ultimately support the improvement of the Dutch hospital care.

This book was preceded by a demanding period, which was however unique and a sine qua non. It has provided me with an interesting network, knowledge and experience in the field of hospital care.

I would like to thank Ed Vosselman of the University of Nijmegen for his support and the interesting discussions about transaction cost economics during the several meetings we had in Rotterdam and Utrecht. I also would like to thank Guus Schrijvers of the University of Utrecht for sharing his knowledge of the Dutch healthcare market. John Groenewegen is the third professor and coach whom I would like to thank. His patience in reading my draft versions and his expert knowledge of transaction cost economics have supported me in finalising this study.

I also want to thank all the persons whom I have interviewed during this study at the Ministry of Health, in hospitals, at health insurance companies and several other experts in the field. Their input was indispensable.

A special thank is for my parents who taught me that great oaks fall with little strokes. I must say this oak was a challenge. I want to dedicate this book to my husband Arjen. His continuous love and support during the years that I was engaged with this thesis made it a wonderful journey.

Contents

Summary

The Dutch government has started a process of reformation in the Dutch healthcare. The goal of this reformation is cost efficient healthcare in the Netherlands. Hospitals and health insurance companies in the Netherlands experience changes in regulations and funding. They are expected to negotiate about the price and quantities of hospital care. A product-price system for hospital care, called DBC, has been introduced by the government to support these negotiations.
This study shows that transactions between hospitals and health insurance companies are not coordinated efficiently. Hospitals and health insurance companies are looking for more cost efficient ways to coordinate their transactions and organise their contracting process in a deregulated environment. Their experience is limited to the regulated hybrid contracting process. Scientific research on this topic is limited which supports the added value of this study with the next aim:

Formulate recommendations for the management of hospitals and the management of health insurance companies and policy makers, in order to (re) align the transactions between hospitals and health insurance companies with an efficient governance structure in a more market oriented, deregulated, environment.

In this study Transaction Cost Economics (TCE) is used to describe and analyse the transactions between hospitals and health insurance companies and to develop recommendations for an efficient governance structure in a deregulated environment.
TCE is concerned with efficient governance structures for transactions. Williamson (1996, p. 46) describes as the main hypothesis of transaction cost economics: "align transactions (which differ in their attributes) with governance structures (which differ in their costs and competencies) in a discriminating (mainly transaction cost economising) way."
TCE features three generic clusters of governance which can be used to coordinate transactions: (1) markets, (2) hierarchies and (3) hybrids.

(1) In a market the coordination of transactions is established horizontally between organisations with the price.
(2) In a hierarchy the coordination of transactions is established vertically within one organisation with administrative controls.
(3) A hybrid is a governance structure in which both horizontal and vertical coordination is used for the transactions between two separate organisations.

Organisational failures can result in behavioural uncertainties and financial losses for economic actors. These expected losses are hazards related to a transaction. An important basic assumption in TCE is that economic actors use farsightedness (instead of myopia) when contracting. Individual economic actors are assumed to calculate the expected financial loss due to opportunistic behaviour of contract partners before concluding a contract. Identified hazards can be mitigated with safeguards. Economic actors can reduce the expected loss by mitigating the hazards with an appropriate governance structure with safeguards. Safeguards are the increase of vertical coordination by supplementing the classic contract (with only the price) with credible commitments and credible threats or the insource of production resulting in a hierarchy.

The final conclusion of this study is that ultimately the classic hospital with a full range of services and products which contracts health insurance companies for all hospital products will disappear. The costs related to the coordination of transactions between hospitals and health insurance companies with a hybrid will increase in a deregulated environment as the (impact of) hazards increase(s). Weaknesses in the environment are not expected to disappear. Economic behaviour of hospitals and health insurance companies in a deregulated environment can result in segmentation, specialisation and selective contracting. Large health insurance companies are recommended to vertically coordinate segments of hospital care in a hierarchy. All-in-one contracts and shared ownership are efficient alternatives for large health insurance companies in a hybrid governance structure. Health insurance companies with a limited number of transactions are recommended, from an economic point of view, to use a lean hybrid governance structure or even a classic contract (similar to the Dutch restitution system). However market governance has the disadvantage that instability in transactions is expected and eventually results in financial losses.

The next three questions are starting point for this study:

1. How can we describe the transactions between hospitals and health insurance companies and their governance structure in a regulated environment?
2. Which hazards can be identified for the transactions between hospitals and health insurance companies in a deregulated environment?
3. Which governance structure is most suitable, from an efficiency analysis[1] perspective, for the transactions between Dutch hospitals and health insurance companies in a deregulated environment?

(1) The results of this study confirm the dominant role of rules and regulations in the determination of the transactions and contracting process between hospitals and health insurance companies in a regulated environment (before 2005).

(2) Several hazards can be identified for the transactions between hospitals and health insurance companies in a deregulated environment. These hazards differ across hospital care, resulting in four segments of hospital care.

1 Williamson (1996, p. 307) gives the next definition of efficiency analysis: "efficiency analysis properly encompasses governance costs as well as production costs". Also costs due to excesses of waste, bureaucracy, slack, and the like are addressed as they are related to the alignment problem (Williamson, 1996, p. 311).

1. Hospital care with weaknesses in the environment.	2. Hospital care with weaknesses in the environment and measurement hazards.
3. Hospital care with weaknesses in the environment and maladaptation hazards.	4. Hospital care with weaknesses in the environment, measurement hazards and maladaptation hazards.

Figure S1 Segmentation of hospital care on identified hazards.

The transactions between hospitals and health insurance companies experience hazards due to weaknesses in the institutional environment. These weaknesses are caused by: (1) the elusiveness and limited predictability of rules and regulations and (2) the direct influence of individual hospitals and health insurance companies on politics and the Ministry of Health.
Measurement hazards are identified for hospital care with high variety in treatment, high risks in outcome and with requirements for specific knowledge to review the quality of the delivered hospital care.
Both weaknesses in the environment and measurement hazards result in information asymmetry. A safeguard for these hazards is complete contracting, which is however expensive. Incomplete contracting increases the chance of opportunistic behaviour which results in instability.

Maladaptation hazards are identified for hospital care with limited competition and/or asset specific investments[2]. Both result in an imperfect market with uni- or bilateral dependency which requires coordinated adaptation between hospitals and health insurance companies. Autonomous adaptation is realised through the price system but is only suitable in perfect markets. In imperfect markets coordinated adaptation is required which is more complex as it requires coordination between two organisations (Williamson 1996).

(3) The efficiency of governance structures differs across segments of hospital care and depends on the share of the health insurance company in the relevant market.
A market governance structure was found to be inappropriate for hospital care due to the weaknesses in the environment. Health insurance companies with a limited number of transaction are recommended, from an economic point of view, to use a lean governance structure and if possible a classic contract. In the Netherlands this is fits with the `restitution` system. Eventually these transactions will however experience instability as the identified hazards are not mitigated properly with the governance structure. When weaknesses in the environment dissolve in the next years there are more possibilities for

2 Asset specific investments are investments which cannot be redeployed without loss of productive value if contracts should be interrupted (Williamson 1975).

efficient coordination of transactions between hospitals and health insurance companies with a classic contract. However the expectation of both hospitals and health insurance companies is that this will not happen. Hospital care which experiences problematic measurement and maladaptation hazards is most efficiently organised in a hierarchy. Precondition is that the health insurance company is able to achieve the necessary economies of scale in the production of hospital care.
In a hybrid the commonly used detailed contract will result in high transaction costs for the coordination of transactions between hospitals and health insurance companies. Alternatives like all-in-one contracts and shared investments/ownership are recommended. All-in-one contracts are used for transactions with high variety or complexity. In these contracts all treatments for a certain patient group or a specialism are contracted to prevent hospitals selecting only the profitable treatments. All-in-one contracts include agreements about average performance, contract ending and renewal, financial punishments or hostages for underperformance and regular audits.

Literature used in this study shows that the effectiveness of benchmarking as instrument to support the coordination of the transactions between hospitals and health insurance companies is controversial. Quality certificates can be helpful for complex care but increase transaction costs. Voicing on reputation effects can be used as credible threats but are less suitable for contract partners with dependency issues as they results in conflicts and rivalry.
Shared investments, shared ownership and certain types of leasing are efficient safeguards for hazards caused by asset specificity.

Weaknesses in the environment can be mitigated in a hybrid with a contract including possible future scenarios in rules and regulations taking into account the financial consequences for hospitals and health insurance companies. These contracts should include credible commitments like punishments or hostages. Also agreements should be made about the use of individual influence on politics. How more detailed the contract the higher the transaction costs. An alternative mitigate this hazard is to use shared investments resulting in shared interests.

Transaction Cost Economics and more specific the three layers model as presented by Williamson (1996) were used in this study to describe the transactions between hospitals and health insurance companies and to identify the hazards. Data gathered with desk research and additional interviews, case studies and a questionnaire were used to describe and analyse the layers and the parameters and variables in the three layers model. The model was appropriate to describe and analyse the transactions in a regulated environment. The model was made more specific to describe and analyse the transactions between hospitals and health insurance companies in a deregulated environment. This resulted in an extended model which is based on TCE principles.

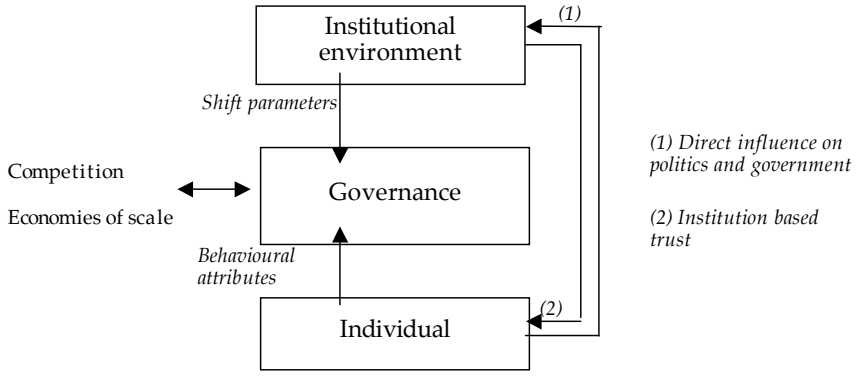


Figure S2 The extended three layers model.

The results of this study show that an analysis of the transactions between hospitals and health insurance companies with an extended TCE model was appropriate for the aim of this study. The recommendations can be used to transform the current regulated hybrid governance structure into an efficient governance structure for different segments of hospital care in a deregulated environment.

Samenvatting

De overheid is gestart met de hervorming van het Nederlandse zorgstelsel. Het doel van deze hervorming is een efficiënt en betaalbaar zorgstelsel. Ziekenhuizen en zorgverzekeraars in Nederland ondervinden veranderingen in regels en bekostiging. Zij moeten gaan onderhandelen over de prijs en volumes van ziekenhuiszorg. Een product-prijs systeem voor ziekenhuiszorg, genaamd DBC´s, is door de overheid geïntroduceerd om deze onderhandelingen te ondersteunen.
Deze studie laat zien dat transacties tussen ziekenhuizen en zorgverzekeraars niet efficiënt worden gecoördineerd. In deze veranderende omgeving zijn ziekenhuizen en zorgverzekeraars op zoek naar efficiëntere manieren om de transacties te coördineren en de contractering te organiseren. In Nederland hebben zowel ziekenhuizen als zorgverzekeraars beperkte ervaring met het coördineren van transacties in een gedereguleerde omgeving. Wetenschappelijk onderzoek is beperkt beschikbaar wat de toegevoegde waarde van deze studie, met volgend doel, onderschrijft:

Formuleer aanbevelingen voor het management van ziekenhuizen, het management van zorgverzekeraars en beleidsmakers om de transacties tussen ziekenhuizen en zorgverzekeraars te stroomlijnen met efficiënte coördinatie mechanismen in een meer marktgerichte, gedereguleerde omgeving.

De transactiekosten theorie wordt in deze studie gebruikt om de transacties tussen ziekenhuizen en zorgverzekeraars te beschrijven en te analyseren en om aanbevelingen te ontwikkelen voor efficiënte coördinatie mechanismen in een gedereguleerde omgeving.

De transactiekosten theorie houdt zich bezig met efficiënte coördinatie mechanismen voor transacties. Williamson (1996, p.46) geeft als belangrijkste hypothese van de transactiekosten theorie: “stroomlijn transacties (met verschillende kenmerken) met coördinatie mechanismen (die verschillen in kosten en competenties) op onderscheidende (hoofdzakelijk transactiekosten efficiënte) manieren.”

De transactiekosten theorie onderscheidt drie hoofdcategorieën voor de coördinatie van transacties: (1) markt, (2) hiërarchie en (3) hybride.

(1) In een markt wordt de coördinatie van transacties tussen organisaties horizontaal gerealiseerd met de prijs.
(2) In een hiërarchie wordt de coördinatie van transacties verticaal gerealiseerd binnen één organisatie met administratieve maatregelen.
(3) Een hybride coördinatie mechanisme heeft zowel horizontale als verticale coördinatie mechanismen om transacties tussen twee organisaties te coördineren.

Het falen van coördinatie mechanismen kan resulteren in niet gecontroleerd gedrag en financiële verliezen voor economische actoren. Deze verwachte verliezen zijn knelpunten gerelateerd aan een transactie. Economische actoren kunnen de verwachte verliezen reduceren door deze knelpunten weg te nemen met geschikte coördinatie mechanismen (veiligheidsmaatregelen).

Een belangrijke basis veronderstelling binnen de transactiekosten theorie is dat economische actoren vooruit denken als zij contracteren. Voordat zij een contract afsluiten berekenen individuele economische actoren de verwachte financiële verliezen ten gevolge van opportunistisch gedrag van contract partners. Geïdentificeerde knelpunten kunnen worden weggenomen met veiligheidsmaatregelen. Veiligheidsmaatregelen kunnen zijn: (1) het verhogen van de verticale coördinatie door het klassieke contract aan te vullen met geloofwaardige afspraken en geloofwaardige dreigementen of (2) het binnen de organisatie brengen van de transacties (insourcing).

De conclusie van deze studie is dat de klassieke ziekenhuizen met een volledig productenpakket dat volledig door zorgverzekeraars wordt gecontracteerd gaan verdwijnen. De kosten gerelateerd aan de coördinatie van transacties tussen ziekenhuizen en zorgverzekeraars met een hybride structuur zullen stijgen in een gedereguleerde omgeving omdat de (impact van) knelpunten en risico´s voor contractpartners toeneemt. De verwachting is dat de zwakheden in de huidige institutionele omgeving niet zullen verdwijnen. Economisch gedrag van ziekenhuizen en zorgverzekeraars in een gedereguleerde omgeving kan resulteren in segmentatie, specialisatie en selectieve contractering. Grote zorgverzekeraars wordt geadviseerd om delen van de ziekenhuiszorg in de eigen organisatie onder te brengen (hiërarchie). Alles-in-één contracten en gemeenschappelijk eigendom zijn efficiënte alternatieven voor grote zorgverzekeraars in een hybride structuur. Zorgverzekeraars met een beperkt aantal transacties wordt vanuit een economisch perspectief, geadviseerd om beperkte hybride coördinatie mechanismen of zelfs een klassiek contract te gebruiken (vergelijkbaar met het restitutie systeem). Een markt structuur heeft echter het nadeel dat de knelpunten niet worden weggenomen en instabiliteit te verwachten is wat uiteindelijk tot financiële verliezen leidt.

In deze studie staan drie vragen centraal:

1. Hoe kunnen we de transacties tussen ziekenhuizen en zorgverzekeraars en de gebruikte coördinatie mechanismen in een gereguleerde omgeving beschrijven?
2. Welke knelpunten treden op in de transacties tussen ziekenhuizen en zorgverzekeraars in een gedereguleerde omgeving?
3. Welke coördinatie mechanismen zijn efficiënt voor de transacties tussen ziekenhuizen en zorgverzekeraars in een gedereguleerde omgeving?

(1) De resultaten van deze studie bevestigen de dominante rol van regels voor de transacties en de contractering tussen ziekenhuizen en zorgverzekeraars in een gereguleerde omgeving (voor 2005).

(2) In een gedereguleerde omgeving kunnen verschillende knelpunten worden onderscheiden voor de transacties tussen ziekenhuizen en zorgverzekeraars. Deze knelpunten variëren binnen de ziekenhuiszorg wat resulteert in vier segmenten.

1. Ziekenhuis zorg met zwakheden in de omgeving.	2. Ziekenhuiszorg met zwakheden in de omgeving en meetproblemen.
3. Ziekenhuis zorg met zwakheden in de omgeving en aanpassingsknelpunten.	4. Ziekenhuiszorg met zwakheden in de omgeving, meetproblemen en aanpassingsknelpunten.

Figuur S1 Segmentatie van ziekenhuiszorg op basis van geïdentificeerde knelpunten.

Knelpunten in de transacties tussen ziekenhuizen en zorgverzekeraars ontstaan door zwakheden in de institutionele omgeving. Deze zwakheden zijn het gevolg van: (1) onduidelijkheden en beperkte voorspelbaarheid van wet- en regelgeving en (2) de directe invloed die individuele ziekenhuizen en zorgverzekeraars hebben op de politiek en het Ministerie van VWS.
Meetproblemen zijn het gevolg van de hoge variëteit in behandelingen, hoge risico´s in de uitkomsten en de specifieke kennis die noodzakelijk is om de prestaties van een ziekenhuis te beoordelen. Zowel de zwakheden in de omgeving als de meetproblemen resulteren in informatie asymmetrie. Dit knelpunt kan worden weggenomen door een compleet contract af te sluiten. Dit is kostbaar maar incomplete contracten verhogen de kans op opportunistisch gedrag wat resulteert in instabiele transacties.

Transacties tussen ziekenhuizen en zorgverzekeraars waar beperkte concurrentie en/of transactie specifieke investeringen[3] een rol spelen resulteren in aanpassingsknelpunten. Dit heeft éénzijdige of bilaterale afhankelijkheid tot gevolg. Dit knelpunt kan worden weggenomen door aanpassingen tussen contractpartijen te coördineren. Autonome aanpassingen (met de prijs) zijn alleen bruikbaar in perfecte markten. In imperfecte markten is coördinatie tussen organisaties nodig om aanpassingen te realiseren. Gecoördineerde aanpassingen compliceren de transacties (Williamson 1996).

(3) In een gedereguleerde omgeving varieert de efficiency van coördinatie mechanismen tussen verschillende segmenten van ziekenhuiszorg en is afhankelijk van het aandeel van de zorgverzekeraar in de relevante markt.

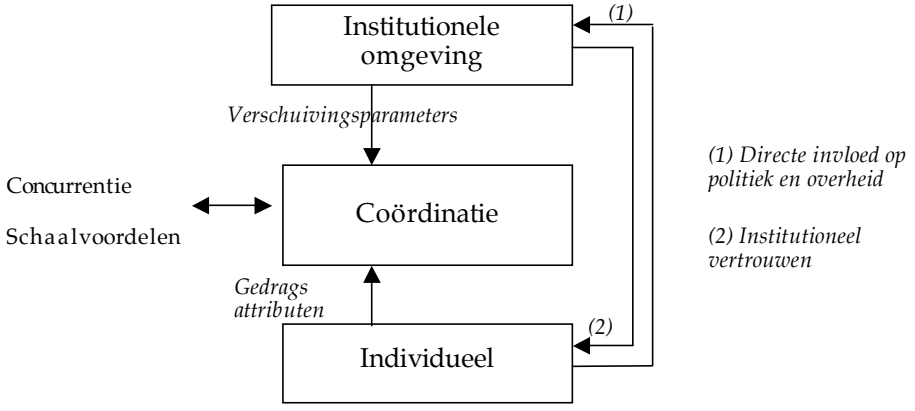
3 Transactie specifieke investeringen zijn investeringen die als het contract wordt beëindigd niet voor andere doeleinden kunnen worden gebruikt zonder dat de productiewaarde daalt (Williamson 1975).

De resultaten van deze studie laten zien dat ziekenhuiszorg door de zwakheden in de omgeving geen perfecte markt is. Zorgverzekeraars met een beperkte afname van een ziekenhuis worden, vanuit een economisch perspectief, geadviseerd om beperkt coördinatie mechanismen in te zetten of mogelijk zelfs een klassiek contract. Dit laatste is in Nederland vergelijkbaar met het restitutie systeem zoals dat door bepaalde zorgverzekeraars wordt gehanteerd. Beiden leiden echter tot instabiliteit in de transacties omdat de knelpunten en gevaren die gerelateerd zijn aan de transacties niet worden weggenomen door adequate coördinatie mechanismen.
Meer mogelijkheden om transacties tussen ziekenhuizen en zorgverzekeraars efficiënt te coördineren met een klassiek contract ontstaan als de zwakheden in de omgeving in de volgende jaren verdwijnen. De verwachting van zowel ziekenhuizen als zorgverzekeraars is echter dat dit niet gaat gebeuren.
Ziekenhuiszorg met meetproblemen en aanpassingsknelpunten kan efficiënt worden gecoördineerd binnen een hiërarchie. Voorwaarde is dat de zorgverzekeraar voldoende schaalvoordelen kan realiseren in de productie van de ziekenhuiszorg.
In een hybride structuur worden vaak gedetailleerde contracten gebruikt. Deze resulteren in hoge transactiekosten voor de coördinatie van transacties. Goedkopere alternatieven die gebruikt kunnen worden voor de coördinatie van de transacties tussen ziekenhuizen en zorgverzekeraars met een hybride structuur zijn (1) alles-in-één contracten en (2) gemeenschappelijke investeringen of eigendom. Bij alles-in-één contracten worden contracten afgesloten voor transacties met een grote variëteit of complexiteit. Over de volle breedte van een patiëntengroep, aandoening of specialisme wordt gecontracteerd om te voorkomen dat ziekenhuizen alleen de winstgevende behandelingen uitvoeren. In deze contracten worden afspraken opgenomen over de gemiddelde prestaties, de contractduur en vernieuwing, financiële gevolgen bij onderpresteren en reguliere audits.

Literatuur waaraan in deze studie wordt gerefereerd laat zien dat de effectiviteit van benchmarking als instrument om de transacties tussen ziekenhuizen en zorgverzekeraars te ondersteunen controversieel is. Kwaliteitscertificaten kunnen de coördinatie van complexe ziekenhuiszorg ondersteunen maar verhogen de transactiekosten. Het gebruik van pers en media om de reputatie van partijen te beïnvloeden kan door zowel ziekenhuizen als zorgverzekeraars worden gebruikt als geloofwaardige bedreigingen. Reputatie-effecten zijn echter minder geschikt voor contractpartijen die van elkaar afhankelijk zijn omdat het gebruik ervan leidt tot conflicten en competitie.

Knelpunten of gevaren die het gevolg zijn van transactie specifieke investeringen kunnen worden weggenomen door (1) gemeenschappelijke investeringen, (2) gemeenschappelijk eigendom en (3) bepaalde soorten van leasing.
De knelpunten die het gevolg zijn van zwakheden in de omgeving kunnen worden weggenomen in een hybride met contracten waarin toekomstige scenario´s van wet- en regelgeving en de financiële gevolgen hiervan voor ziekenhuizen en zorgverzekeraars zijn opgenomen. Deze contracten moeten worden aangevuld met geloofwaardige afspraken over strafmaatregelen bij het niet nakomen van de afspraken. Tevens zouden ziekenhuizen en zorgverzekeraars afspraken moeten maken over hoe ze hun invloed richting de overheid en politiek gebruiken. Transactiekosten worden hoger naarmate de contracten gedetailleerder worden. Gemeenschappelijke belangen die ontstaan door bijvoorbeeld gezamenlijk investeringen kunnen de gevaren van de zwakheden in de omgeving voor de transacties tussen ziekenhuizen en zorgverzekeraars reduceren.

In deze studie is de transactiekosten theorie en meer in het bijzonder het drie lagen model zoals gepresenteerd door Williamson (1996) gebruikt om de transacties tussen ziekenhuizen en zorgverzekeraars te beschrijven en inzicht te krijgen in de knelpunten en gevaren voor contractpartijen gerelateerd aan deze transacties.
Data voor deze studie zijn verzameld met bureau-onderzoek aangevuld met interviews, gevalstudies en een vragenlijst. Op basis van deze informatie zijn de lagen en parameters in het drielagen model ingevuld voor de transacties tussen ziekenhuizen en zorgverzekeraars. Het drielagen model was geschikt om de transacties tussen ziekenhuizen en zorgverzekeraars in een gereguleerde omgeving te beschrijven. Om de transacties tussen ziekenhuizen en zorgverzekeraars te beschrijven en te analyseren in een gedereguleerde omgeving is voor deze studie het drielagen model op bepaalde punten aangevuld. Dit heeft geresulteerd in een uitgebreid drielagen model gebaseerd op de principes van de transactiekosten theorie.



Figuur S2 Het uitgebreide drielagen model.

De resultaten van deze studie laten zien dat een analyse van de transacties tussen ziekenhuizen en zorgverzekeraars met een uitgebreid drielagen model gebaseerd op de transactiekosten theorie geschikt is voor het doel van deze studie. De aanbevelingen geven voldoende aanknopingspunten om de gereguleerde hybride coördinatie van de transacties tussen ziekenhuizen en zorgverzekeraars te transformeren naar efficiënte coördinatie mechanismen voor verschillende segmenten van ziekenhuiszorg in een gedereguleerde omgeving.

Chapter 1 Research Problem and Design

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1.1 Introduction of the study

In the Dutch health care system the relationship between hospitals and health insurance companies is heavily regulated. The government has started a reform process to establish deregulation and more market mechanisms in the health care market. These changes have an effect on the transactions between hospitals and health insurance companies. Before 2005 health insurance companies were obliged to contract all hospitals to divide the national budget for hospitals as set by the government. Changes in rules and regulations since 2005 have given health insurance companies the opportunity to selectively contract hospitals (Brandenburg 2007).
The complexity of the transactions between hospitals and health insurance companies in a dynamic institutional environment is an interesting empirical object for a transaction cost economic analysis. The discussions between experts in the field about the advantages and disadvantages of the introduction of a more market oriented system for hospital care and the ambiguity of the future transactions between hospitals and health insurance companies were the most important triggers for this study.

1.2 Practical relevance of the study

A short introduction to the Dutch situation concerning hospitals and health insurance companies and their transactions is given below to explain the practical relevance of this study[1].

Hospitals and health insurance companies are separated organisations in the Netherlands. Nearly 100% of the provided hospital care is insured. Patients are free to choose a hospital. Hospital care bills are restituted by health insurance companies to the insurant or paid directly to the hospital. Health insurance companies have an annual contract with hospitals to ensure that their insurants receive the necessary hospital care. The transactions are governed by rules and regulations set by the government, which restrict the degrees of freedom for hospitals and health insurance companies to realign transactions.
During the past decades the health care system in the Netherlands has developed itself into a complex hybrid system. This complexity is the result of the many rules and regulations concerning the funding of hospitals. Political movements to increase efficiency and quality of the Dutch hospital care system push for deregulation and a more competitive, market oriented system. These changes have a major impact on the transactions between hospitals and health insurance companies and the way they are coordinated. Examples of these changes are:

1 Verschuren and Doorewaard (1995) call this "probleem signalering". Probleem signalering describes the problem itself, to whom it is a problem and why it is a problem.

- The introduction of an output oriented system (diagnose behandel combinaties[2] or DBC) in the negotiation and contracting process between hospitals and health insurance companies;
- Phasing out of the contract obligation between health insurance companies and hospitals and the regulated price system for hospital products.
- Introduction of a basic insurance[3]. One insurance system has replaced the private and social health insurance system in the Netherlands.

In 2008 the future position of between hospitals and health insurance companies is still anyone's guess and will depend on future political choices. The environment is in turmoil as a result of the gradual transformation towards a more market oriented health care system:

- There are plans to change rules and regulations to allow hospitals to distribute profits to shareholders[4]. The execution of this plan will however depend on the results of the next elections.
- It is not clear which part of hospital care will be deregulated move to free price negotiation and free contracting.
- The impact of a more market oriented system for the overall costs of hospital care in general and the financial situation of hospitals in particular are not yet clear. For instance the plan is that the costs for hospital buildings will not longer be budgeted in 2009 but have to be covered with the product price. Before the costs for hospital buildings were compensated with a budget system and not with an output oriented system. The financial consequences of this plan are high for hospitals with new buildings. It is not yet clear whether the government will compensate these hospitals.
- The role of health insurance companies is changing. Historically health insurance companies were organisations focused on rules and regulations and administration processes. With the deregulation and introduction of more market mechanisms they are developing themselves into a new business partner for hospitals.
- Hospitals move from a budget to an output oriented system with DBCs. This system is very detailed and there is doubt about its functionality in the negotiations with health insurance companies. In 2006 the Ministry of Health has announced a process of redefinition to create an aggregated DBC system. The goal is to develop a DBC system which results in less administration costs and which is less time consuming and more effective in the negotiations between hospitals and health insurance companies. The plan is to implement this new DBC system in 2009. However at the beginning of 2008 parties are still working on fundamental parts of the new system.

Both policy makers and the management of hospitals and health insurance supported this study. It will increase our understanding of the contracting process between hospitals and health insurance companies and the related costs. The aim of this Transaction Cost Economics study is in line with the ultimate goal of deregulation: a better and cheaper health care system.

2 DBCs, comparable with the American DRG (diagnose related groups) system.
3 This is called "basisverzekering" in the Netherlands.
4 The minister of Health has announced the allowance of shareholders in hospitals in 2012.

Most research in the Netherlands on competition in health care is done on a national policy level. Several committees have been installed the last decades by politicians to report their findings concerning different topics in the reform process of the Dutch health-care system.
Many studies, including field research as well as case studies, are concerned with the efficiency and quality of hospital care. No research data are available about the changes in the contracts between hospitals and health insurance companies and the impact of a more market oriented environment. The results of this study will close this gap.

1.3 Research aim

Verschuren (1991) claims that the research problem includes a research aim and research questions. The research aim is described in this section.

The practical relevance of this study can be found in the fact that the management of hospitals, health insurance companies and government are interested in an efficient governance structure for the transactions between hospitals and health insurance companies in a more market oriented environment. Governance structures are instruments which are used to coordinate the transactions necessary for the production of goods or services (Coase 1991b). This can be within an organisation or between separate organisations. Diversity in costs related to this coordination determines the efficiency of a governance structure. These costs are called transaction costs (Williamson 1996). The aim of this study is:

> *Formulate recommendations for the management of hospitals and the management of health insurance companies and policy makers, in order to (re) align the transactions between hospitals and health insurance companies with an efficient governance structure in a more market oriented, deregulated, environment.*

The aim of this study makes it a practical study. A practical study is not focused on gathering knowledge just because of the knowledge but because of the added value it has for an intervention in the current practice (Verschuren and Doorewaard 1995). The intervention in this study is the (re)alignment of transactions between hospitals and health insurance companies.
Van Aken (2004) claims that the academic management research tends to be description-driven (explanatory paradigm). The utilisation problem of this research can be mitigated with additional prescription-driven research (design paradigm) with research strategies including field testing.
A design process is necessary for the research aim of this study. A design process is a systematic and creative process to deliver a future system in a defined environment which exposes the performance as planned taking into account the restrictions. The definition for a design used in this study is (De Leeuw 1996, p.57):

"A design is a model of a future system that will expose the expected behaviour."
The critical success factors of a design study are adequate problem recognition and -definition and a clear diagnosis of the problem. To the extent these have not been made clear in earlier research; these have to be explored during the study. As Verschuren and Doorewaard (1995, p. 32-33) state: "Especially the origin of the problem can provide important clues for the solution of the problem." The transactions between hospitals and health insurance companies in the Netherlands and accompanying transaction costs are quite unexplored. Therefore explorative or positive research[5] is used to assure a proper diagnosis of the problem.

1.4 Scientific relevance of this study

In recent years many articles have been published around management control and governance issues within a hospital organisation. The state of the art scientific literature on management control studies around governance and control in healthcare has resulted in recent articles like "the average hospital" of Sue Llewelllyn and Deryl Northcott (2005) and "The relation between cost-system design, managers´ evaluations of the relevance and usefulness of cost data, and financial performance: an empirical study of US hospitals" of Mina Pizzini (2006). Both studies are bothered with the performance of hospitals as a result of the incentives given by performance information and funding of the hospital. These studies provide us with good understanding of how performance information interferes with the behaviour and (long term) performance of hospitals. However efficiency is not only relevant on the level of the organisation but also between organisations. Transaction cost economics uses the transaction as the unit of analysis. Efficiency is related to the way transactions are coordinated. Transactions can be coordinated within an organisation (hierarchy) or between organisations (market or hybrid). The transaction costs determine the efficiency of the governance structure and are a result of the characteristics of the transactions, the institutional environment en the individual actors.
Transaction Cost Economics analysis of the efficiency of hospital care to scientific literature has scientific relevance. Which also contributes to the scientific relevance is the design oriented part of this study in which efficient governance structures are described for hospital care.

5 Explorative or positive research is used to achieve the goal of this study and to make a clear diagnosis of the problem. Explorative research is appropriate when attempting to describe an unstudied phenomenon (Seaman 1987, see also Van Aken 2004).

1.5 Theoretical framework

Using TCE is quite an obvious choice as TCE is concerned with efficient governance structures for transactions. Williamson (1996, p.46) describes as the main case hypothesis of transaction cost economics: "align transactions (which differ in their attributes) with governance structures (which differ in their costs and competencies) in a discriminating (mainly transaction cost economising) way."
There are two important reasons why TCE and the assumptions of Williamson are chosen as a theoretical framework for this study:

1. TCE focuses on the level of governance, which is the subject of this study. Williamson gives an extensive description of governance structures and their risks and costs which provides a feasible framework for this study[6]. TCE provides explanations for purposeful behaviour which are used in this study as design guidelines.
2. TCE is well equipped to determine the efficiency of the governance structures for a specific transaction. The current governance structure used for the transactions between hospitals and health insurance companies in the Netherlands is a hybrid[7]. This hybrid structure is compulsory and is prescribed in detail by rules and regulations. However further deregulation may offer hospitals and health insurance companies in the future the opportunity to realign their transactions with other (hybrid) governance structures.

The three layers of organisation model (figure 1.1) as presented by Williamson (1996) is used in this study as theoretical framework. Williamson presents in his three layers model an institutional environment[8], a governance layer and an individual layer[9]. The efficiency of the governance structure is determined by the characteristics of transactions[10], the institutional environment (shift parameters) and individual actors (behavioural attributes). Based on these characteristics hazards can be identified which have to be coordinated with an appropriate governance structure. TCE can be used to compare the efficiency of different governance structure in mitigating the identified hazards. This process is called by Williamson (1996, p.14) the "identification, explication and mitigation of hazards through governance".
The mitigation of hazards can be the source of mutual gain of involved individual actors (Williamson 1996). It results in stability for the transactions as opportunistic behaviour is controlled. The three basic governance structures (market, hybrid and hierarchy), as distinguished by Williamson (1996), have their strengths and weaknesses concerning the mitigation of hazards[11].

6 Some critics claim that TCE is not easy to use for empirical research (see also Masten 1994, Masten 1996 and Simon 1991). However Klein and Shelanski (1996) give several examples of applications of TCE which support the use of TCE in empirical research.
7 TCE distinguishes three basic governance structures: a hybrid, hierarchy and market. In a perfect market the price of a product or service includes all information. Therefore the governance structure of a market knows only a neoclassical contract. The governance structure of a hybrid knows a contract and additional institutional arrangements. TCE is also well equipped to determine the efficiency of various institutional arrangements used within a hybrid (Williamson 1996).
8 In the institutional environment there are the rules of the game which influence the governance structure with so-called shift parameters. Shift parameters are for instance rules and regulations concerning property rights (Williamson 1996).
9 The individual layer influences the governance layer with two behavioural attributes: bounded rationality and opportunistic behaviour (Williamson 1996).
10 The characteristics of the transaction are asset specificity, complexity and frequency (Williamson 1996).
11 Hazards can be caused by opportunistic behaviour or adaptation problems.

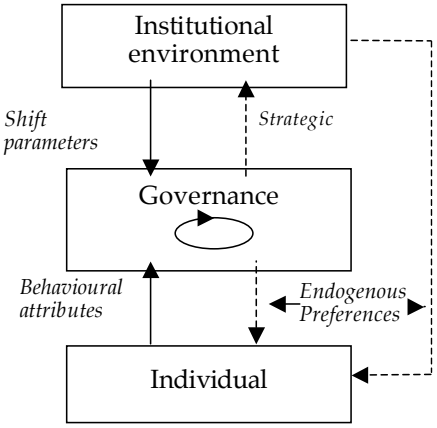


Figure 1.1 Three layers of organisation (Williamson 1996)

In chapter 2 TCE and the three layers of organisation model is described in more detail and a justification is given for the choice of the three layers model as the theoretical framework of this study.

For the aim of this study both positive and design oriented research are used. In the positive part the three layers model is used to describe and analyse the transactions between hospitals and health insurance companies, the institutional environment in which they operate, the transactions and governance structure and the individual actors with their behavioural attributes. Basic knowledge of the Dutch hospital care and findings during the positive part of this study are used to point the three layers model to the aim of this study. This resulted in an extended three layers model which is based on TCE but with certain specifications for the characteristics of the transactions between hospitals and health insurance companies, the instititutional environment in which they are organised and the individual hospitals and health insurance companies involved in the transactions. With this extended model hazards are identified for the transactions between hospitals and health insurance companies in a deregulated environment. The identified hazards are used for the design oriented part of this study, resulting in recommendations for (re)aligning the transactions between hospitals and health insurance companies.

1.6 Research questions

Based on the aim of this study and the theoretical framework the following main question and sub questions are defined.

Main question:

Which governance structure is used for the transactions between Dutch hospitals and health insurance companies in a regulated environment and which governance structure is most appropriate from a transaction costs economic view to mitigate the hazards occurring in a deregulated environment?

The main question contains positive and design oriented research. The positive part (description of transactions and governance structure) is covered by two sub questions. The design oriented part (most efficient governance structure according to TCE) is covered by the third sub question.

Sub questions:

1. *How can we describe the transactions between hospitals and health insurance companies and their governance structure in a regulated environment?*
2. *Which hazards can be identified for the transactions between hospitals and health insurance companies in a deregulated environment?*
3. *Which governance structure is most suitable, from an efficiency analysis[12] perspective, for the transactions between Dutch hospitals and health insurance companies in a deregulated environment?*

1.7 Research model

The research model represents the way in which the goals of the research are realised and questions are answered (Verschuren and Doorewaard 1995). It concerns the methods used to answer the research questions.

In this research transaction cost economics is used as theoretical framework to observe the empirical reality. Data are gathered with desk and field research to gain an understanding of the transactions between hospitals and health insurance companies in a regulated and deregulated environment. Based on these empirical findings the three layers model was made more specific for the transactions between hospitals and health insurance companies in a deregulated environment. This resulted in an extended three layers model. Sub question 1 covers the regulated environment and was answered using the three layers model. The extended three layers model was used to answer sub question 2 and 3 which are concerned with the transactions between hospitals and health insurance companies in a deregulated environment.

TCE is accepted in advance by this research as a valuable theory to gain a better understanding of the transactions between hospitals and health insurance companies in the

12 Williamson (1996, p. 307) gives the next definition of efficiency analysis: "efficiency analysis properly encompasses governance costs as well as production costs". Also costs due to excesses of waste, bureaucracy, slack, and the like are addressed as they are related to the alignment problem (Williamson 1996, p. 311).

Netherlands. The specifications made to the TCE model do not withdraw TCE as an appropriate theory for this study but are made only for the subject of this study.

Several research methods were used during this study to collect data. Desk research and interviews with policymakers did provide general information. Two case studies were performed to gain detailed information about the transactions between a hospital and a health insurance company in a competitive (case study A) and in a less competitive (case study B) environment. With the findings a description was made of the transactions between hospitals and health insurance companies using the layers as presented by Williamson (1996) in the three layers model: institutional environment, governance and individual. With the results of desk research, interviews and case studies the first sub question is answered. In addition a questionnaire was organised which inquired hospitals and health insurance companies about the expected changes in the institutional environment (deregulation), transactions, transaction costs, hazards and the governance structure. The results of the questionnaire were discussed and verified in an expert meeting. This resulted in a good understanding of the transactions between hospitals and health insurance companies in a deregulated environment. With this information hazards for these transactions are identified. To answer sub question 2 an overview of the identified hazards is presented for the transactions between hospitals and health insurance companies in a deregulated environment.

Design oriented research is used to answer sub question 3. The efficiency of governance structures on the highest level (market, hybrid or hierarchy) and lowest level (hybrid with institutional arrangements) to mitigate hazards are compared. Recommendations are given for coordinating the transactions between hospitals and health insurance companies efficiently in a deregulated environment.

1.8 Structure of this thesis

In this first chapter the research problem, the theoretical framework, methodology and structure of this thesis have been outlined.

Chapter 2 describes TCE and justifies TCE as theoretical framework for this study. The three layers of organisation model is elaborated and extended in this chapter.

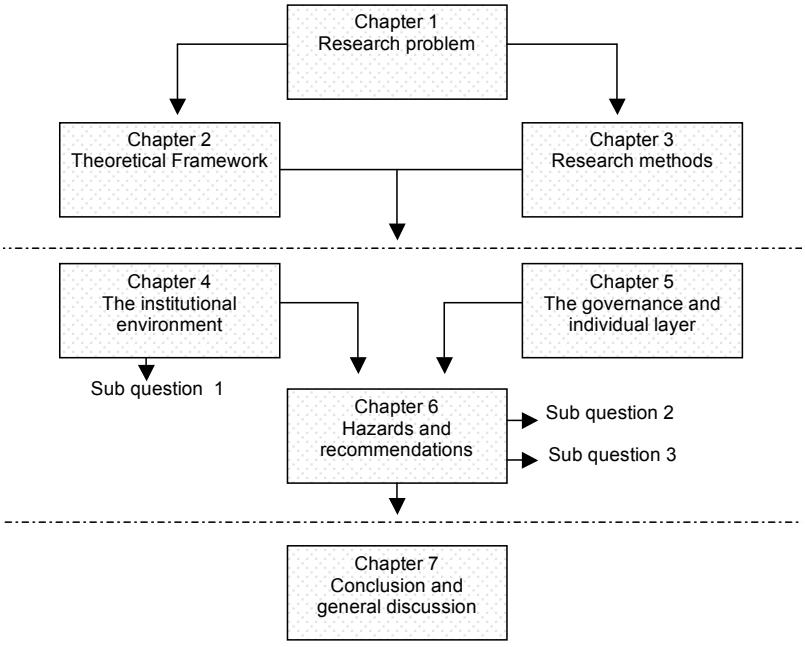
In chapter 3 the research methods of this study are described. An outline is given of the different data gathering techniques: desk research and expert interviews, case studies, questionnaire and expert meeting.

The institutional environment in which the transactions between hospitals and health insurance companies are organised is described and analysed in chapter 4. A description is given of the rules and regulations and recent changes in some important laws. Also outline is given of the expected process of further deregulation. Sub question 1 is answered in this chapter.

The governance layer (layer 2) and the individual layer (layer 3) are described and analysed in chapter 5. This results in a description of the characteristics of the transactions, the governance structure and the behavioural attributes.

In chapter 6 hazards are identified for the transactions between hospitals and health insurance companies in a deregulated environment (sub question 2). Recommendations are given for realigning the transactions between hospitals and health insurance companies in a deregulated environment (sub question 3).

The conclusion, general discussion, limitations of the study and recommendations for future research are presented in chapter 7.



Chapter 2 Theoretical Framework

Chapter 2 Theoretical Framework

2.1 Introduction

In this study considerations of New Institutional Economics (NIE) and more in particular Transaction Cost Economics (TCE) are used to describe and analyse the transactions between hospitals and health insurance companies and formulate recommendations for aligning the transactions with an efficient governance structure.

In this introduction the main concept of NIE and more particular TCE and the appropriateness of these concepts for this study are described. In the other sections of this chapter an outline is given of the theoretical framework of this study.

NIE raises the question why organisations emerge like they did and not otherwise (Scapens 1994, Scott and Meyer 1991, Arrow 1987, Scapens and Arnold 1986). Not so much the organisation itself but the boundaries and transactions ("relationship" between organisations) are subject of study.

NIE has three cornerstones: (1) property rights, (2) agency theory and (3) transaction cost economics (Groenewegen 2004, Douma and Schreuder 2002, Hazeu 2000).

(1) The economics of property rights claims that for efficient performance of an economic system it is necessary to have a clear system of property rights and related public and legal organisations. The design of organisations and the coordination of transactions (in house or on the market) are determined by the risks and possibilities of the system of property rights in a country. Weak property rights increase the risk of financial loss for a company which outsources the production of certain products or parts to a production company. The production company has the opportunity to sell the product without restriction or penalties to competitors of the company which outsourced the production. Companies will in general not outsource the production in an environment with weak property rights to avoid the risk of these financial losses.

(2) Agency theory is concerned with a special contract in which one partner has the property (principal) and delegates tasks to another (agent).

(3) Transaction Cost Economics (TCE), the third cornerstone of NIE, is concerned with transactions and the way they are coordinated. TCE is focused on getting the governance structure right: "organise transactions as efficient as possible". The governance structure is a tool to mitigate hazards and reduce the risk of opportunism resulting in order and stability in transactions (Williamson 1996, 1985, Blois 1996, Ronen and McKinney 1970). The transaction is the central unit of analysis to determine the efficiency of different modes of governance[1] (Williamson 1996, 1975).

1 Modes of governance or governance structures recognised within TCE are markets, hierarchies and hybrids.

A transaction occurs when a good or service is transferred across a technologically separable interface (Williamson 1985, p.1). A transaction can be a transfer between organisations but also between departments in one organisation (hierarchy). When transactions are organised in two separate organisations they are coordinated with a classical contract (market structure) or with a contract and additional institutional arrangements (hybrid governance structure). A classical contract is appropriate to coordinate transactions when the price contains all the information. Complexity and uncertainties related to the transaction request more coordination resulting in a hybrid governance structure with a contract and additional institutional arrangements. Institutional arrangements are included in the governance structure and determine the way economic units (or actors) cooperate and/or compete. Examples of institutional arrangements are contractual agreements about quality, performance reporting, shared investments, innovations and duration of the contract.

The three cornerstones of NIE are found on different layers in the four layer scheme as presented by Williamson in 1998. With the four layer scheme Williamson puts TCE into perspective with other theories within NIE (property rights, transaction cost economics and agency theory), neo classical economics and social theory. He calls this scheme "The economics of institutions". Institutions, with different meanings, are found on the different layers in the scheme. There is no simple and agreed definition of "institution"[2] within NIE (Williamson 1996 and Scapens 1994). In this study institutions in the institutional environment and institutions in the governance layer are relevant. In the institutional environment institutions are found like rules and regulations. Institutions at the governance layer are also called institutional arrangements. These arrangements are additional instruments to the classic contract to coordinate transactions.

2 Douglass North (1991, p.97) calls institutions: "the humanly devised constraints that structure political, economic and social interactions. They consist of both informal constraints (sanctions, taboos, customs, traditions, and codes of conduct), and formal rules (constitutions, laws, property rights)." A second description North gives (1984, p.8):
"institutions consist of a set of constraints on behaviour in the form of rules and regulations; and finally, a set of moral, ethical, behavioural norms which define the contours and that constrain the way in which the rules and regulations are specified and enforcement is carried out."
Allan Schmid (1972, p.893) defines institutions as:
"Sets of ordered relationships among people which define their rights, exposures to the rights of others, privileges, and responsibilities.
The institutionalist Walton Hamilton uses the next definition for an institution (1932, p. 84; see Hodgson 1993)
'An institution is a way of thought or action of some prevalence and permanence, which is embedded in the habits of a group or the customs of a people".

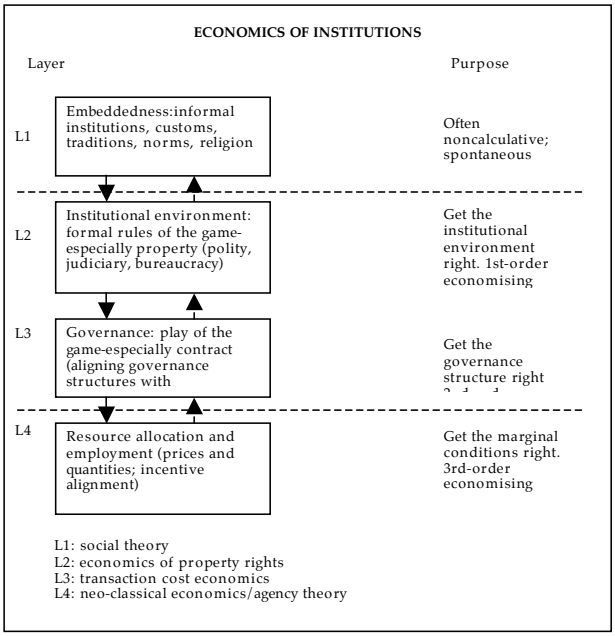


Figure 2.1 Economics of institutions (Williamson, 1998) or four layer scheme

The institutional environment, including property rights is found on layer 2 in the scheme. The institutional environment itself is embedded in informal institutions, traditions, values and so on, which differ across societies (Layer 1). This layer is covered by social theory. An example of this social embeddedness (Granovetter 1985) related to hospital care is the "social value" solidarity. The rules and regulations in most European countries are based on solidarity in healthcare. This social value is less present in countries like the United States, resulting in different "rules of the game" for hospitals and health insurance companies. The institutional environment contains, besides property rights a set of other fundamental political, social and legal ground rules. These institutions create the "rules of the game" and establish the basis for economising on transaction costs by means of governance (see also Davis and North 1971), which is found on layer 3. Layer 4 covers the topics of resource allocation and employment. Agency theory and neoclassical economics are found in this layer.

Why is TCE appropriate for this study?

The central unit of analysis in this study is the transaction between hospitals and health insurance companies and the aim is to formulate recommendations for an efficient governance structure. NIE raises the question why hospitals and health insurance companies are organised as they are. TCE raises the more particular question whether transactions are coordinated efficiently with an appropriate governance structure. This governance structure can be either a market in which hospitals and health insurance companies use a classic contract, a hierarchy in which hospitals and health insurance companies are integrated

into one organisation or a hybrid governance structure. This corresponds with the research aim of this study which makes TCE an appropriate theory for this study.

The current mode of governance for the transactions between hospitals and health insurance companies is a hybrid. Hospitals and health insurance companies are separate organisations and use additional institutional arrangements to the classic contract to coordinate their transactions.
This study has a positive and a design oriented part for which both TCE can be used:

1. In the positive part a by TCE informed description is given of (a) the current transactions between hospitals and health insurance companies and their governance structure in a regulated environment and (b) the hazards in a deregulated environment.
2. In the design oriented part TCE is used to compare the efficiency (or appropriateness) of different kinds of governance structures for the transactions between hospitals and health insurance companies taking into account the hazards in a deregulated environment.

In this study the transactions between hospitals and health insurance companies are studied in the Dutch institutional environment[3], embedded in the Dutch informal institutions, customs, traditions and norms. Therefore the recommendations can not be transferred, just like that, to other countries.

2.2 Governance

Governance within TCE is concerned with the coordination of transactions. Governance structures are instruments for accomplishing coordination of production (Coase 1991b). Diversity in transactions costs are within TCE principally responsible for choosing one mode of governance rather than another (Williamson 1996). Three generic clusters of governance are featured by TCE: markets, hierarchies and hybrids. Markets and hierarchies are polar modes, a hybrid is found in between (Williamson 1996).

(1) In a market the coordination is established horizontally between organisations with the price. A classic contract leaves no room for interpretation and includes the price and all rights and obligations (for instance delivery time and quality) which are necessary to coordinate the transaction. Incentives for organisations to deliver high performance in quality and costs are strong in markets. In a market the contract partner can continuously change of contract partners. A supplier with bad performance is immediately confronted with financial losses and in the end bankruptcy. High performance is rewarded with contracts and sales for the supplier (private benefits).

3 The "rules of the game" in the Dutch institutional environment for hospitals and health insurance companies and their transactions are currently in a transition phase. Major changes in laws and deregulation have been accomplished the last years and expected in the coming years. The ultimate goal of the government with this reform process, in which deregulation and the increase of market incentives are central, is an increase in efficiency.

(2) In a hierarchy coordination is established vertically within one organisation with administrative controls. In a hierarchy there is no price mechanism as there is no possibility to change contract partners. This may result in a low intensity of incentives for suppliers to deliver high performance in quality and costs. Market incentives are however not the only instrument to coordinate transactions and achieve high performance and low costs. Administrative controls like monitoring (Speklé 2001, Williamson 1996), career rewards and punishments (Grossman en Hart 1986) are used in hierarchies to coordinate transactions efficiently. Administrative controls are weak in a market as the classic contract does not incorporate these controls.

(3) Speklé (2001) gives the next definition of a hybrid: "a hybrid is a relational form of governance in which the main instrument of control is an explicit contract which specifies as fully as possible the details of the transaction and its execution". However this definition is not clear about the nature of coordination of a hybrid as the definition is focused on the instruments used for coordination. In a hybrid both vertical and horizontal coordination of production is present. Horizontal coordination is necessary as production is organised in separate organisations. The price plays an important role in the selection of a contract partner. However horizontal coordination is not as strong as in a market which has two main reasons (both will be described in detail in the next section of this chapter):

1. The price does not include all information which results in incomplete contracting and reduces the strength of the price mechanism and market incentives.
2. There can be limitations in the selection of a new contract partner due to for example the contract period. This increase in dependency between contract partners reduces the strength of the prices mechanism and market incentives.

There is a need for additional coordination of transactions in a market when price mechanisms do not work properly. This coordination can be realised with additional institutional arrangements to the classic contract like credible commitments. This additional coordination has the same nature as vertical coordination of transactions in one organisation. The next definition of a hybrid will be used in this study: "a hybrid is a governance structure in which both horizontal and vertical coordination is used to coordinate the transactions between two separate organisations".
A market or hybrid is transformed into a hierarchy by vertical integration. Vertical integration is either backward in the supply chain or forward. An example of vertical integration is a health insurance company which insources certain hospital care or starts to offer certain hospital care itself.
Horizontal and vertical coordination are presented by Williamson in the next figure as important differences between the three generic governance structures by using the strength of the incentive intensity (in a market) and the administrative controls (in a hierarchy). Williamson also identifies differences in adaptation and contract law between the three governance structures.

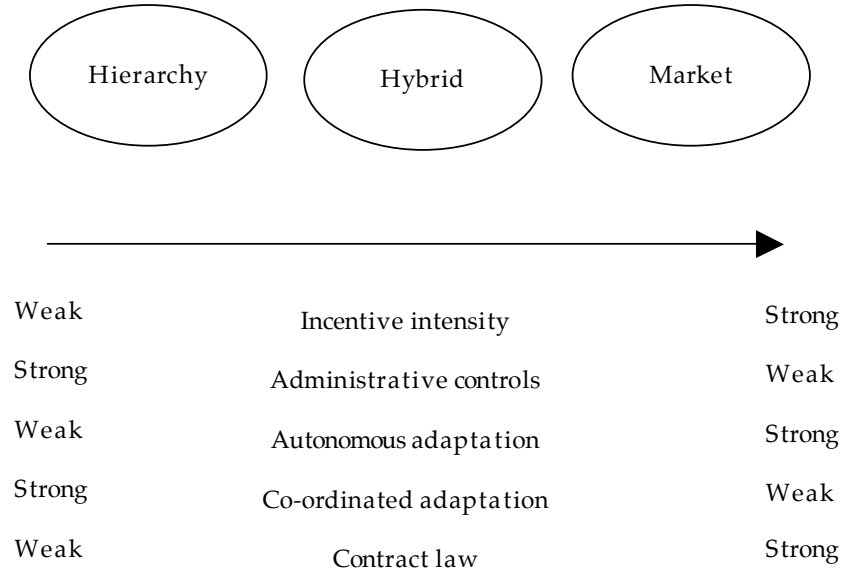


Figure 2.2 Differences between governance structures (Williamson 1996, p. 105).

Contract law, being part of the institutional environment, has effect on the governance structure as described in the first section of this chapter. Markets work out of strong contract regimes as penalties are present when contract partners breach the contract. Hierarchies are efficient governance structures in countries with a weak contract law. In semi-legalistic contract law regimes hybrids are appropriate governance structures (Williamson 1996).

Adaptations in organisations are necessary as a consequence of change (Hayek 1945). These changes can be a result of for instance technological innovation. In a perfect market changes in the demand or supply are reflected in price changes and individual actors can "take the right action" (Hayek 1945). Buyers can show there preferences by selectively buying products. An increased demand of products increases the volumes sold and/or prices of these products. Suppliers who loose contracts and/or see prices drop for their products will change their products or go bankrupt. Williamson (1996) calls this process autonomous adaptation. This is the neoclassical ideal in which suppliers and buyers respond independently on price changes to maximise respectively their utility and profits. Autonomous adaptation fails when individual economic actors recognise signals to change differently (Williamson 1996). Price is not sufficient anymore and additional information is necessary to redirect divergent expectations (Malmgren 1961). This situation requests coordinated adaptation. Markets are weak in coordinated adaptations which can result in imperfect alignments, additional costs and delays associated with strategic bargaining (Williamson 1996, p. 102). Hierarchies have strong internal coordinating mechanisms to adapt (Barnard 1938). The authority relation (fiat) and other administrative

controls have adaptive advantages for transactions requesting more coordination (see also Williamson 1996)[4].
In a hybrid co-ordinated adaptations can be supported by the administrative controls arranged in the contract between economic actors.

2.3 Incomplete contracting: organisational failures and hazards

In a perfect, transparent market horizontal coordination of production between organisations is sufficient. A market structure is an efficient governance structure for the transactions between these organisations. A classical contract is used in which the price carries all information and transaction costs are zero. However most markets are not perfect and transparent and the price does not carry all information. In these markets failures occur and stronger coordination of the production is necessary resulting in hierarchies and hybrids.
Williamson (1983) describes with his "organisational failures framework" why certain markets do not work properly. In the organisational failure framework bounded rationality, opportunistic behaviour, uncertainty/complexity, information impactedness and small numbers are identified by Williamson as main sources of organisational failures. Bounded rationality and opportunism of economic actors are the basic assumptions in this framework. Without these basic assumptions no organisational failures would exist.
Williamson (1975) mentions the "atmosphere" in his organisational failure framework. In later work the atmosphere is called embeddedness, including informal institutions like customs, traditions, values and norms (see also layer 1 in the Economics of institutions, figure 2.1).

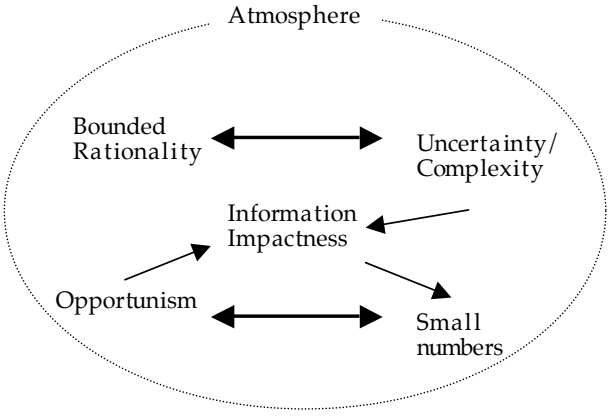


Figure 2.3 The organisational failure framework (Williamson, 1975).

4 Barnard (1938) gives some examples of the advantage of a hierarchy for transactions requiring coordinated adaptations: (1) contracts in hierarchies are in general less detailed and therefore require less changes (due to the adaptations) and changes are realised by fiat, (2) solving conflicts resulting from proposed or initiated adaptations is quicker and less costly in a hierarchy (Scott 1987).

Next a description is given of the elements in the organisational failure framework.

1. Bounded rationality is based on the insight that man has no means to simultaneously consider all the possible alternative solutions to a problem, rank them according to their relative merits and pick the one and only best. Instead, he considers but a few alternatives, and usually the more obvious ones too, and chooses one that is good enough (Simon 1976). This is a rational choice as actors have a limited ability to process information and processing information is costly. The next definition of bounded rationality is used in this study: "behaviour that is intended rational but only limitedly so" (Simon 1957)[5].

2. Complexity and/or uncertainty are related to bounded rationality and information impactedness in the organisational failure framework. (a) A transaction is complex when the performance of the transaction is difficult to measure due to its variety, uncertainty or highly specialised knowledge it requests and the number of possibilities and decisions to be taken are numerous (Williamson 1975, p.23-24). Complex transactions can result in measurement hazards due to the bounded rationality of economic actors (Holmstron and Milgrom 1991). Problems with searching costs occur when the costs of measuring the performance of a contract partner becomes problematic for the transaction. Kenney and Klein (1983) call this oversearching (see also Barzel 1982). (b) Uncertainty exists when the alternatives in the environment cannot all be considered by the economic actors in their decisions due to their bounded rationality. Uncertainty in the institutional environment can be caused by weak property rights or unpredictability. Highly dynamic environments know frequent and significant changes in circumstances. These changes can be unforeseen due to the bounded rationality of economic actors.

3. Information impactedness is a derived condition that arises mainly because of uncertainty and opportunism, though bounded rationality also plays a role. Information impactedness is the result of a complex transaction or uncertainties in the institutional environment in combination with opportunism. Information impactedness occurs when circumstances relevant to a transaction are known to one or more parties but cannot be discerned without costs by or displayed to others. Williamson distinguishes ex ante (during negotiations about the contract) and ex post (during the course of contract execution) information impactedness. Information asymmetry (see also Arrow 1969) occurs when information is distributed asymmetrically between parties in an exchange (caused by for example a contract partner who deliberately withholds information from another contract partner). Problems do not occur as a result of information asymmetry but as a result of information asymmetry related to high costs to achieve information parity and the proclivity of parties to behave opportunistically (Williamson 1975). Information problems can develop even when parties have identical information. This occurs when one party makes representations about the true state of the world that are different than both parties know it to be and if it is costly for an arbiter to discern which party is lying. An uncertain, unpredictable institutional environment increases this opportunity for economic actors.

5 The sociologists Powell and DiMaggio (1991 p. 3) give the following characterisation of bounded rationality: "Individuals attempt to maximise institutional behaviour over stable and consistent preference orderings, but they do so in the face of cognitive limits, incomplete information and difficulties in monitoring and enforcing agreements".

4. Opportunistic behaviour, also called opportunism is defined in this study as "self interest seeking with guile". Opportunism refers to "the incomplete or distorted disclosure of information, especially to calculated efforts to mislead, distort, disguise, obfuscate, or otherwise confuse" (Williamson 1985, p. 47). An economic actor behaves opportunistically when the penalty of for instance breaching the contract is less than the gain. Some actors might not breach the contract but it is costly to find out

.

5. Small numbers refers to a limited number of available contract partners in a certain market. Small numbers can occur ex ante or ex post (Williamson, 1975). In markets with a limited number of contract partners and high entry barriers and/or non homogeneous products ex ante small numbers occur. Ex post small numbers occur when a large-number exchange condition is transformed during contract execution into a small numbers exchange relations. This happens for example with a long term agreement or idiosyncratic experience during contract execution (see also asset specificity).

Small numbers give economic actors limited possibility to select another contract partner and results in uni- or bilateral dependency (monopoly). This diminishes competition resulting in weak price mechanism and market incentives.
Another example of dependency between contract partners is a situation in which an economic actor has a competitive advantage like a unique location or differential skill or has made asset specific investments (Williamson 1975) [6]. Asset specific investments are investments which cannot be redeployed without loss of productive value if contracts should be interrupted[7] (Williamson 1975).
Contracting for goods and services that are produced with the support of transaction specific assets can pose serious problems when not coordinated properly (Williamson 1996):

- Investments are postponed resulting in production with out of date equipment and techniques.
- Products which need high investments are not longer produced or supplied.
- Investments are made in more generic equipment which reduces the financial risk but also reduces efficiency and/or quality of delivered products.

The organisational failures framework shows that several elements can result in behavioural uncertainties and financial losses for economic actors. These expected losses are hazards related to a transaction. Economic actors can reduce the expected loss by mitigating the hazards with an appropriate governance structure (safeguard). An important basic assumption in TCE is that economic actors use farsightedness (instead of myopia) when contracting. Individual economic actors are assumed to calculate the expected financial loss due to opportunistic behaviour of contract partners before concluding a contract.

6 In the light of asset specificity it is interesting to refer to the concept of "relative value" as described by Nooteboom (1994) in the light of competition. Relative value is the surplus value of an organisation for its preferred partner compared to alternative partners. The relative value for a partner may be based on assets such as technological skills, production facilities, market knowledge, access to distributions channels or intangible assets such as image or brand name. The more unique and crucial these assets are to a partner, the higher the relative value is. This results in dependency between contract partners.

7 Williamson (1996) distinguishes several kinds of asset specificity. The most common categories are site specificity and physical asset specificity. Site specificity makes it possible to economize on inventory and transportation expenses. Physical asset specificity occurs for instance when specialized dies that are required to produce a component.

The aim of this study is to formulate recommendations to (re)align the transactions between hospitals and health insurance companies with an efficient governance structure. This requests the identification and explicitation of hazards related to the transactions between hospitals and health insurance companies. A "hazard identification framework" is developed based on the organisational failures framework. This framework presents hazards as a result of the behavioural uncertainties that arise when incomplete contracting and asset specificity are joined (Williamson 1996, p.60). Incomplete contracting is a result of a complex transaction or uncertainties in the environment (in relation with bounded rationality). Behavioural uncertainties or a high risk of opportunistic behaviour increase the chance of financial losses and therefore create hazards.
The "hazards identification framework" is presented below.

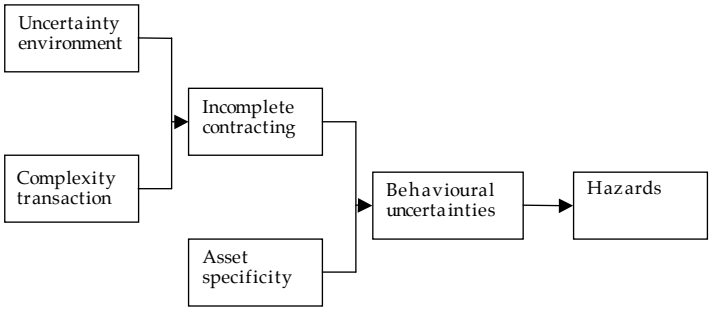


Figure 2.4 Hazard identification framework

Identified hazards can be mitigated with safeguards. These safeguards can have many forms. This can be illustrated with an example of safeguards used to mitigate hazards related to asset specificity:

1. Use an alternative in supply technology;

2. Calculate a price for the product which represents the perceived financial loss when losing the contract and;

3. Increase vertical coordination by supplementing the classic contract with credible commitments and credible threats. Credible commitments additional to other institutional arrangements in a contract cover reliable compensation should a contract partner prematurely terminate or otherwise alter the agreement (Williamson 1996). Commitments are only credible when they are guided by guarantees and/or hostages[8]. Guarantees and hostages included in contracts reduce the risk of opportunistic behaviour as the financial

8 A hostage is for instance a penalty clause. When a contract partner fails to perform as contracted, he has to pay a substantial fee to its contract partner.

advantage of opportunism is compensated by the financial loss resulting from the guarantee or hostage (Klein and Leffler 1981, Telser 1981, Williamson 1983).
Credible threats are also a safeguard for opportunistic behaviour especially when reputation effects are high. In a hybrid they can be useful additional to or instead of the credible commitments. Reputation effects and voice threats are credible threats which can be used by economic actors as unilateral efforts to pre-empt an advantage (Kreps and Wilson 1982, Milgrom and Roberts 1982, Williamson 1982). Therefore credible threats appear often in a context of conflict and rivalry (Williamson 1996, p. 120).

4. Increase vertical coordination by insourcing the production, resulting in a hierarchy.

This example shows that many safeguards are found in the governance structure. Williamson (2000) uses a simple contracting schema to give an overview of the possibilities in contracting taking into account hazards and safeguards. This overview shows that Williamson (1996, 1975) recommends using effective, but minimum vertical coordination. Vertical coordination increases transaction costs (bureaucratic costs) due to limited market incentives and flexibility (autonomous adaptation).

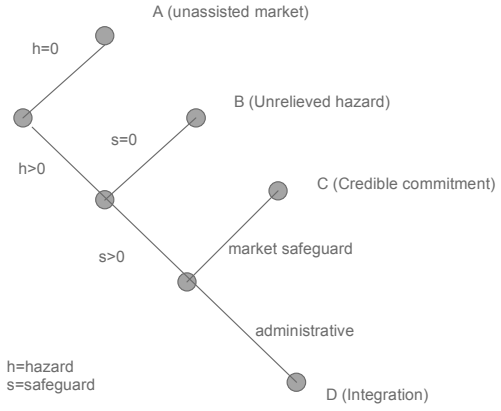


Figure 2.5 Simple Contracting Scheme (Williamson 2000).

The contracting schema shows that a transaction without hazards results in a market (as most efficient governance structure). When hazards occur economic actors can choose to accept unrelieved hazards in the market. When economic actors want to mitigate the hazard additional vertical coordination is necessary. The first alternative is to increase the coordination with credible commitments as safeguard (resulting in a hybrid). The second alternative is to integrate and use administrative controls as safeguard (resulting in a hierarchy).

2.4 Theoretical model in a regulated environment

The first part of the positive research in this study (sub question 1) requires a theoretical model based on TCE which results in a description of the transactions between hospitals and health insurance companies and its governance structure in a regulated environment. The model presented by Williamson (1996) as the "three layers of organisation" will be used as theoretical framework for this part of the study. In this model the governance structure is centrally positioned between the institutional environment and the individual economic actors. The institutional environment and individual actors have a direct influence on the governance structure used to coordinate the transactions.

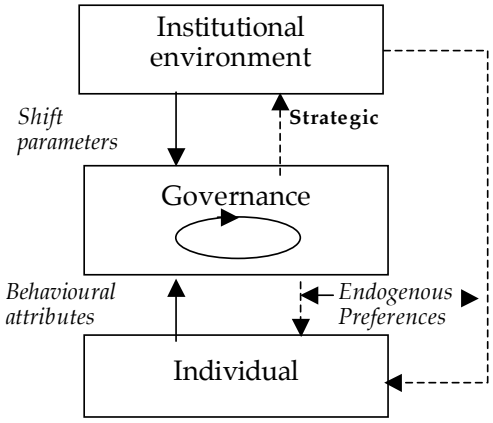


Figure 2.6 Three layers of organisation (Williamson 1996).

The impact of the institutional environment on the governance layer is represented in the model with shift parameters. The influence of individual economic actors on the transactions and governance structure is represented in the three layers model with the behavioural attributes: opportunistic behaviour and bounded rationality. The shift parameters and behavioural attributes are the primary effects in the three layers model. Secondary effects are called endogenous preferences and strategic or instrumental effects. Williamson (1996, p.225) states that transaction cost economics often relates to these secondary effects but that other modes of analysis are often more pertinent. A strategic effect is the influence of the governance structure on the institutional environment. An example, given by Williamson (1996, p.225), is an improvement in contract law, brought about at the request of parties who find that existing law is poorly suited to support the integrity of contracts. Strategic effects could also take the form of protectionist trade barriers against domestic or foreign competition. Williamson (1996, p.295) describes strategic behaviour as: "behaviour by one firm that influences the choice set of another".
Endogenous preferences are found in the influence of the institutional environment and governance structure on the individual economic actor. Feedback effects from governance to the level of the individual can be interpreted as "endogenous preference formation"

(Bowles and Gintis 1993) due to advertising or other forms of "education". The influence of the environment on the individual economic actors results in endogenous preferences, which is the product of social conditioning. The circular arrow within governance reflects the proposition that organisation, like law, has "a life of his own" (Williamson 1996, p.223). The influence of individual economic actors on the institutional environment is neglected in the three layers model.
The three layers model can be used as theoretical framework to give a TCE-informed description of the transactions between hospitals and health insurance companies.
The institutional environment in which hospitals and health insurance companies operate is dominated by rules and regulations. The transactions and governance structure are regulated in detail. Based on this basic knowledge of the Dutch healthcare the expectation is that shift parameters have a dominant impact on the governance structure and the behavioural attributes and other indirect influences have a minor role in determining the governance structure. This results in the model as presented below. This model is applied to describe and analyse the transactions between hospitals and health insurance companies in a regulated environment using the data gathered with desk research, case studies and a questionnaire. The results are presented in chapter 4 and sub question 1 of this study is answered.

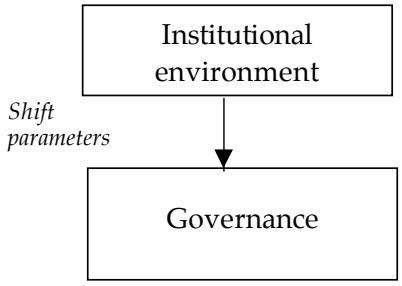


Figure 2.7 Framework to describe and analyse the transactions between hospitals and health insurance companies and its governance structure in a regulated environment.

2.5 Theoretical model in a deregulated environment

For the second part of the positive research in this study (sub question 2) also the three layers model will be used as starting point. The second part covers a description of the hazards which can be identified for the transactions between hospitals and health insurance companies in a more market oriented environment with less regulation.
In a more market oriented environment the dominant influence of the rules and regulations on the governance structure is expected to disappear. With the three layer model it results in the expectation that also the behavioural attributes (individual layer) will determine the governance structure.

With some basic knowledge about the transactions between hospitals and health insurance companies in the Netherlands some adjustments in the three layers model will increase the appropriateness and added value of the model as theoretical framework. Some variables which are implicitly mentioned within TCE need explicit formulation and also an extension to TCE is necessary to the three layers model. This "extended" model will support the identification of hazards for the transactions between hospitals and health insurance companies in a less regulated environment. These extensions were not relevant for the first part of the positive research in this study as in this part the governance structure is expected to be determined by rules and regulations. The extended model is applied in this study to describe and analyse the transactions between hospitals and health insurance companies using data gathered by desk research, case studies and a questionnaire.

Explicit formulation 1: Lack of competition: ex ante small numbers.

In TCE the assumption is made that in the institutional environment the preconditions for competition are met (for instance sufficient suppliers and buyers). As described ex ante small numbers are recognised within TCE to result in uni or bilateral dependency.
Small numbers is recognised within TCE as a hazard especially in combination with asset specificity. Referring to the current reform process of the Dutch hospital care it is plausible to assume that preconditions for competition are not (yet) met and ex ante small numbers exist. This can have effect on the efficiency of different modes of governance as behavioural uncertainties and hazards arise due to this dependency. Therefore the level of competition is explicitly taken into account in this part of the study.

Explicit formulation 2: Institution based trust

An unpredictable and uncertain environment is called by Williamson a weak environment. Levy and Spiller (1994), Weingast (1993) and North and Weingast (1989) use "institution based trust" when they describe certain elements in the institutional environment, such as legal forms, forms of certification and social norms and values (Rousseau et al. 1998). Economic actors experience low institution based trust when the predictability of institutions in the environment is low. Within TCE this results in uncertainty about the shift parameters which results in incomplete contracting. This increases the risk of behavioural uncertainties or more specific opportunistic behaviour (see also Vosselman and van der Meer-Kooistra 2004, Bachmann 2001, Granovetter 1985). Although Williamson does not use the word "institution based trust" it is related with his concept of weaknesses in the environment.
Institution based trust is relevant for the transactions between hospitals and health insurance companies. The institutional environment in which hospitals and health insurance companies operate has been highly dynamic in recent years and is expected to be changing in the coming years. There is no blueprint for rules and regulations and there

are divergent opinions about the future market for hospital care. Politics and the Ministry of Health have a major role in this transformation of the institutional environment. Basic knowledge of the current situation shows that the individual actors (hospitals and health insurance companies) happen to have limited trust in the institutions in the environment (like rules and regulations) as they change unpredictably over time. Due to the bounded rationality of hospitals and health insurance companies contracts are incomplete which results in uncertainties in behaviour.
Institution based trust is therefore made explicit in the three layers model used in this part of the study.

Extension: A direct influence of hospitals and health insurance companies on the institutional environment.

TCE considers the influence of the individual layer on the institutional environment as weak or secondary. This is applicable for transactions in markets with many buyers and suppliers and with limited government involvement. The Dutch hospital care market knows a limited number of hospitals and health insurance companies and knows a high level of government interference, based in many cases on incidents. Basic knowledge about the influence of individual hospitals and health insurance companies on politics and the Ministry of Health presume a more direct influence of individual hospitals and health insurance companies on the institutional environment. For the purpose of this study the TCE framework is extended with a primary influence of the individual layer on the institutional environment.

Identification of hazards
With these extensions the "hazard identification framework" as presented in this chapter can be made more specific for the transactions between hospitals and health insurance companies in a deregulated environment:

1. The explicit notion that limited competition results in dependency, behavioural uncertainties and finally in hazards.
2. Institution based trust is explicitly associated with uncertainties in the environment, which result in behavioural uncertainties and finally in hazards.
3. Uncertainties in the environment are increased by the direct influence of individual hospitals and health insurance companies on the institutional environment. This results in behavioural uncertainties and finally in hazards.

This results in the next "extended hazard identification framework" which will be used in chapter 6 to identify the hazards for the transactions between hospitals and health insurance companies in a deregulated environment (sub question 2).

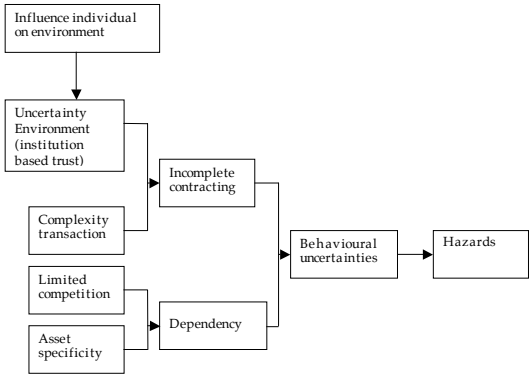


Figure 2.8 Framework: Extended hazard identification framework

2.6 Theoretical model for the design oriented part of this study

The design oriented part of this study (sub question 3) requires a theoretical model which can be used to develop recommendations for an efficient governance structure for the transactions between hospitals and health insurance companies in a more market oriented, deregulated environment. An efficiency analysis perspective covers not only the transaction costs resulting from the governance structure but also the production costs related to the governance structure (Williamson 1996, see also Nooteboom 1994). Therefore both will be taken into account in the design oriented part of this study.

(1) Transaction costs can be distinguished before (ex ante) and after (ex post) the transaction. Ex ante costs occur before the contract is concluded in which the transaction is arranged. Examples of ex ante transaction costs are searching and selecting a contract partner, drafting, negotiating and safeguarding a contract, organise dispute referrals (Klein Woolthuis 1999). Ex post transaction costs occur after the contract is concluded. Examples of ex post transaction costs are the costs of adapting the contract to changing circumstances, haggling costs to correct misalignments, monitoring the performance of the contract partner and information registration or gathering to account for performance to the contract partner (see also Klein Woolthuis 1999).
Transaction costs have an important relation with the volume of transactions. As many costs are fixed the relative costs or costs per transaction decrease for higher volumes. The frequency of transactions is therefore a relevant characteristic of the transaction (see also Williamson 1996, Nooteboom 1994).

(2) Production costs are strongly determined by economies of scale. The technology of production (and related initial investments in assets) determines the possibilities for economies of scale. In general products which require high initial investments know high economies of scale as the costs per unit decrease with an increase in production volume.

Transactions which require asset specific investments have less economies of scale when produced in the market (Noorderhaven 1994). An organisation is better able to realise economies of scale as its own requirements become larger compared to the size of the market. Williamson (1996) calls economising the production function by realising economies of scale "scale economy" (Neo Classical Economics, see also figure 2.1 Economics of institutions).

Jarillo (1988) presents a formula which can be used to compare the costs of production in a market structure with the costs of internal production (hierarchy). In this formula not only the transaction costs are taken into account but also the production costs in the market and the costs of self-production of the product. Basic assumption of TCE is that products made internally instead of in the market are more expensive due to bureaucratic costs and lack of market incentives. The formula of Jarillo shows that production in the market is not always cheaper as transaction costs necessary to coordinate the transaction should be taken into account in the make or buy decision. As soon as the price charged by the supplier for the product together with the transaction costs is higher than the internal costs (production costs including bureaucratic inefficiencies) of making the product, the production should be insourced. This results in a hierarchy.
The formula of Jarillo is presented below.

When		
	EP + TC > IC	
		an activity will be integrated.
EP	*the price charged by the supplier for a product*	
TC	*the transaction costs*	
IC	*the internal cost of making rather than buying the product.*	

Figure 2.9 Transaction costs and integration of activities (Jarillo 1988)

In this study the formula of Jarillo is used for the design oriented part of this study to compare the efficiency of different modes of governance for the transactions between hospitals and health insurance companies.
Based on basic knowledge of the hospital care market the importance of economies of scale is obvious for certain hospital care (for instance acute care and highly specialised care). Therefore economies of scale are made explicit for the design oriented part of this study and incorporated in the extended three layers model. Together with the three extensions this results in the next "extended three layers model"

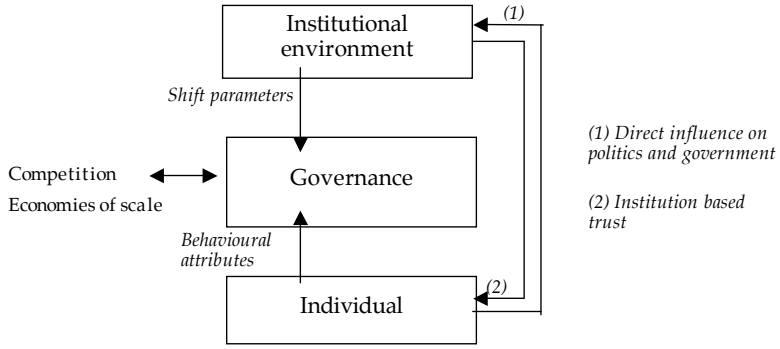


Figure 2.10 The extended three layers model

The simple contracting schema (figure 2.5) as presented in this chapter shows that contracting starts with a good understanding of the hazards as they determine the choice for a safeguard. A good understanding of the hazards for the transactions between hospitals and health insurance companies in a deregulated environment is given in this study by the answer to sub question 2. Based on the identified hazards, the efficiency of different modes of governance can be assessed. In this study this is done, on the highest level, by comparing the costs of a hierarchy versus the costs of a market structure and hybrid using the formula of Jarillo in a for this study developed decision tree.

The contracting schema shows that without hazards a classic contract (market) is sufficient to coordinate the transactions. When hazards are identified for the transactions the need to reduce the behavioural uncertainties related to the hazard with safeguards arises. As described, hazards can be mitigated by introducing vertical coordination on the transactions as a safeguard. A market structure provides no safeguards as price is the only (horizontal) coordination mechanism. Both hybrids and hierarchies have vertical coordination mechanisms. There is however a difference between hybrids and hierarchies in production costs when economies of scale are high. Hazards in combination with high economies of scale of external production result in a hybrid as most efficient governance structure (a classic contract with additional institutional arrangements). The advantage in external production costs overrules the high transaction costs related to the necessary institutional arrangements. High behavioural uncertainties in combination with low economies of scale result in a hierarchy as most efficient governance structure. The internal costs of making the product are lower compared to the transaction costs and price charged by the supplier.

In the next figure the decision tree is described which determines the efficiency of a governance structure: (1) behavioural uncertainties resulting in hazards requesting safeguards and (2) economies of scale.
This decision tree is used in this study to compare the efficiency of different modes of governance (market, hybrid and hierarchy) for the transactions between hospitals and health insurance companies. The results of this study will show that segmentation of

hospital care is necessary. Transactions in different segments of hospital care have different characteristics (complexity, frequency and asset specificity) and result therefore in different hazards and different economies of scale.

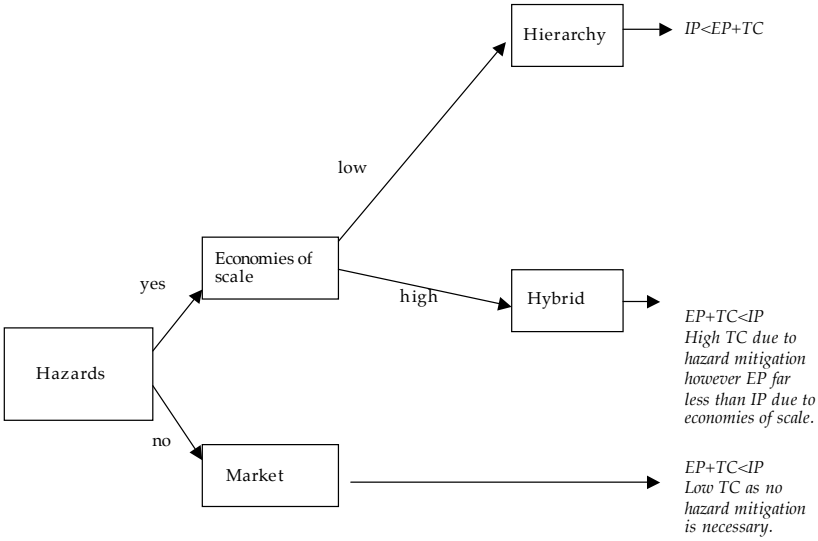


Figure 2.11 Framework: Decision tree for recommendations on the highest governance level.

Recommendations for an efficient governance structure can be given on the highest or first level (market, hybrid, hierarchy) but also on a lower or second level (hybrid). In the next figure both levels are presented. In a hybrid transactions are coordinated with a classic contract supplemented with institutional arrangements which differ in their characteristics and efficiency.

The transactions between hospitals and health insurance companies are currently coordinated with a hybrid. Although this can change in the expected deregulated environment it is interesting to compare the efficiency of alternative hybrids. Production costs or economies of scale are not relevant in this analysis as in a hybrid production always is organised in the market. The second part of the design oriented study results in recommendations for a hybrid to coordinate the transactions between hospitals and health insurance companies with efficient use of institutional arrangements.

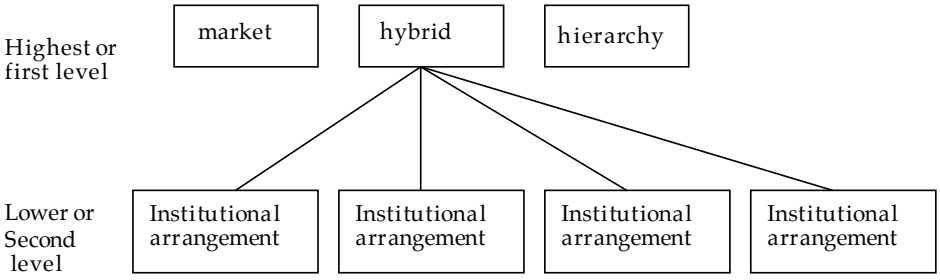


Figure 2.12 Modes of governance on the first and second level.

Institutional arrangements in a hybrid governance structure can cope with hazards resulting from elements as presented in the "extended hazard identification framework":

- Incomplete contracting as a result of uncertainties in the environment and/or the complexity of the transaction. Incomplete contracting requests safeguards to reduce the chance of opportunistic behaviour.
- Dependency between contract partners due to asset specificity and/or a limited number of contract partners. Safeguards are necessary for situations of unilateral dependency between contract partners.

To mitigate incomplete contracting a detailed contract can be used to coordinate the transactions. This is a classic contract when there is no room left for uncertainties and interpretation.
A detailed contract in which delivery time, product quality agreements or other quality assurances are made, is a powerful base for partners to monitor the behaviour of the contract partner (Klein Woolthuis 1999, De Jong 1999). Monitoring is supervising and judging the realisation of the contract (Nooteboom 1994). It provides a contract partner with the possibility to see whether its partner deviates from the (implicit or explicit) agreements. Additional punishment or hostages are necessary to make it credible commitments. Complex transactions can result in oversearching when governed with a detailed contract and intensive performance measurement (see also Barzel 1982). An example of oversearching is given by Kenney and Klein (1983) about the trading of diamonds. Despite a classification in more than two thousand categories significant quality variation in the stones evidently remains. Measuring the performance in this transactional relationship on the unit of a transaction will result in extreme transaction costs. The solution is to establish long term relationships in which the average performance is perceived to be relevant and not the individual transaction with specified product characteristics. Not in case there is an incidental underperformance of a contract partner the contract is ended but when the under performance is systematic. Audits should be arranged to monitor the performance regularly. Again punishment or hostages have to be included in the contract to result in credible commitments. All-in-one (or in-or-out) contracts are institutional arrangements which can be used in hybrids and high complexity in transactions. All-in-one contracts are contracts in which contract partners arrange all transactions in one contract and it is not

possible to contract a subset of the transactions. The average performance for all transactions is monitored with regular audits. The contract ends for all transactions or other punishments are used when the delivered average performance is below the average performance as agreed in the contract.

Long term contracts[9] can be used in hybrids to mitigate hazards resulting from unilateral dependency and they are often used in situations of bilateral dependency. Dependency occurs when there are small numbers, when asset specificity is high (Williamson 1996) or when first mover advantages are high (for instance unique location or learning effects) (Williamson 1971). Long term contracts request credible commitments to reduce the risk of financial loss when the contract is terminated. Punishments or hostages have to be included to make them credible commitments. Shared investments/ownership transforms a unilateral dependency into bilateral dependency (reciprocity). The financial participation is the hostage and results in a credible commitment. Reciprocity is held to be anticompetitive (Blake 1973, Stocking and Mueller 1957) but can be favourable in some circumstances. For instance shared investments equalises the exposure to opportunism by reducing the incentive of the buyer to defect from exchange and leaving the supplier to redeploy specialised assets at greatly reduced alternative value.

A safeguard for the identified hazards can also be found in reputation-effects[10] as reputation-effects can be very powerful in hybrids (Williamson 1996, p.116). Reputation-effects increase the strength of credible threats (see also section 2.3) and decrease the need for additional institutional arrangements and related transaction costs. Reputation also has an effect in the market governance structure as it has impact on the selection of contract partners.

In this study an analysis is made of the efficiency of a hybrid for the transactions between hospitals and health insurance companies including a detailed contract, a long term contract and reputation effects. This results in recommendations which can support the management of hospitals and health insurance companies in their efforts to transform the current hybrid governance structure to a hybrid which is appropriate for transactions in a deregulated environment. The next table is used in this study as a framework.

	Hazard mitigation	Transaction costs	Recommendations
1. Detailed contract			
2. Long term contracts and reciprocity			
3. Reputation effects			

Table 2.1 Framework: Analysis of an efficient hybrid governance structure for transactions between hospitals and health insurance companies in a deregulated environment

9 Short term contracts can be used in a hybrid when the requested autonomous adaptability is high. However in this situation a market structure is often more efficient.

10 In addition Noorderhaven (1996) sees reputation as a functional equivalent or a substitute for character trust (see also Rowe 1989).

2.7 Concluding remarks

In this chapter TCE is described and the relevance of TCE for this study as theoretical framework is explained. The three layers model is used for the positive and the design oriented part of this study. The model is made more specific for the transactions between hospitals and health insurance companies in a deregulated environment resulting in an extended model. The different TCE informed frameworks developed in this chapter are used in this study to answer the three sub questions as described in chapter 1.

In chapter 4 the institutional environment in which hospitals and health insurance companies operate including recent and expected changes in rules and regulations is described. Also a description is given of the competition in the hospitals and health insurance market. The model to describe and analyse the transactions in a regulated environment is applied in this study to answer sub question 1.

In chapter 5 a description is given of the governance and individual layer for transactions between hospitals and health insurance companies in a deregulated environment using the extended three layers model.

In chapter 6 hazards are identified for the transactions between hospitals and health insurance companies in a more market oriented, deregulated environment. The extended hazard identification framework is used to identify the hazards. The identified hazards are presented in an overview to answer sub question 2 of this study.

Recommendations are given in chapter 6 for an efficient governance structure on the highest level with the decision tree on the highest governance level. On the lower level the framework for "comparison of institutional arrangements in a hybrid" is used. Sub question 3 is answered in this chapter.

Chapter 3 Research Methods

Chapter 3 Research Methods

3.1 Introduction

The research model of this study is presented in chapter 1. In the light of the aim of the study and to answer the research question, several research methods were used to collect data for this study. These methods are described in this chapter. A justification of the use of the method, details about the method used and some quality issues are addressed. Data collection for this study started with desk research and additional interviews with experts. Also two case studies were performed to gain a better understanding of the transactions between hospitals and health insurance companies. The third step in data collection was a questionnaire and an expert meeting. A questionnaire was sent to all hospitals and health insurance companies to gain more insight in the expected changes in rules and regulations and in the transactions between hospitals and health insurance companies. With the expert meeting the results of the questionnaire were verified and amplified.

3.2 Desk research and expert interviews

Desk research was used to gather data about the institutional environment in which hospitals and health insurance companies operate. Desk research is positive research, which describes the phenomenon as it is. Most important sources of information for the desk research in this study were:
Documents concerning government policy, rules and regulations;
Reports of committees established by the Dutch government.

Expert interviews were used to detect relevant sources for desk research and to gather additional information. Interviews were held with stakeholders and experts (policy makers at the Ministry of Health, umbrella organisations, hospitals, health insurance companies and scientists). In the interviews a checklist was used and a report of the interview was submitted to the interviewee.

Checklist used during interview with experts

- *Interviewee (role and position, experience with and knowledge of relation between hospital and health insurance company)*
- *Impact of the institutional environment on the transactions, governance structure and individual actors (competition, rules and regulations)*
- *Characteristics of transactions between hospital and health insurance company (asset specificity, frequency, complexity)*
- *Relevant characteristics of hospital and health insurance company (knowledge/information asymmetry, opportunistic behaviour)*
- *Characteristics contractual arrangements (content and duration contract, monitoring, performance reports, budget, DBCs)*
- *Transaction costs*

Desk research resulted in two important findings:

1. Rules and regulations strongly affected the transactions between hospitals and health insurance companies and major changes were expected due to the process of deregulation. There was no blueprint available of the planned reform process and experts had different opinions about the future environment.
2. Information concerning the governance structure, the behavioural attributes and the characteristics of the transactions between hospitals and health insurance companies was scarce.

Based on these findings additional research methods were selected for this study. Two case studies were done to gain in depth knowledge of the governance structure used for the transactions between hospitals and health insurance companies and the influence of the institutional environment and the individual layer.
The questionnaire was chosen to gain a representative picture of the expected changes in the institutional environment and the effect of these changes on the transactions between hospitals and health insurance companies and the efficiency of governance structures.

3.3 Case studies

For the aim of this study it is necessary to gain a good understanding of the characteristics of the transactions between hospitals and health insurance companies, its governance structure, and the shift parameters and behavioural attributes. Governance is a complex phenomenon and case studies are well equipped to study complex phenomenon and their background. However they have a more interpretative character than desk research (Swanborn 1996, Yin 1994, Hutjes en van Buren 1992). In a case study the transactions and governance structure are studied in their real-life context.
The TCE framework is applied using the data gathered with case studies. The TCE framework provides a predicted pattern which covers for instance the influence of the behaviour attributes (layer 3), the institutional environment and the characteristics of the environment on the governance structure.
As described in chapter 2 the expectation is that the institutional environment determines the governance structure for the transactions between hospitals and health insurance companies.
This predicted pattern was also found in the case studies (pattern-matching[1], Yin 1994, Trochim 1989, Cook & Campbell 1979).
Cooperation of the hospitals and health insurance companies in the case studies was necessary to gather the relevant information. Therefore an introduction meeting was organised with the CFO of the health insurance company (or a representative) and the CFO of the hospital (or a representative) to ensure their cooperation before the case study started. It proved to be no problem to organise interviews and obtain the necessary documents for desk research.

1 Pattern matching is defined by Hutjes and van Buuren (1992) as "the search for a coherent interpretation framework".

To ensure no bias entering the readers mind due to the reputation of the participating hospitals and health insurance companies the case studies are presented anonymous in this study.

Yin mentions six sources of evidence[2] used in case studies (Yin 1994, p.80): documentation, archival records, interviews, direct observations, participant observations, and physical artefacts. In this study only the first three are used. It was not necessary to use direct or participant observations as the gathered information with documentation, archival record and interviews was sufficient. Physical artefacts were not relevant for this study. The consistency of information collected during the case studies with the three sources of evidence was checked (triangulation).

In the case studies documents and archival records of the hospitals and health insurance companies, the transactions and the governance structure are gathered like the contract, the performance reports and minutes of meetings. In appendix B of this study a list is presented of the interviewed persons and the documents and archival records gathered in both case studies.

Personal interviews in case studies give a good understanding of the social aspects and the perceptions of the different actors and the problems they perceive (Swanborn, 1996). Therefore interviews were held with several stakeholders in the hospital and the dominant health insurance company in the region. Also the negotiator who represents the other health insurance companies in the negotiations (the so called "national representative") is interviewed.
To achieve reliable results and minimise errors and biases all interviews were prepared with a checklist which was sent upfront to the interviewee and interviews were reported and sent back for review to the interviewee. The checklist covers the elements in the three layers model: (1) the influence of the institutional environment on the governance and individual layer and (2) the characteristics of the transactions and the governance structure and (3) the behavioural attributes and their impact on the governance layer.

The next activities were executed in chronological order during the case studies:

1. General information was sent to the insurance company and hospital
2. A meeting was organised with a board member of the hospital and the representative of the health insurance company to discuss the content, logistics and impact of the case study.
3. With the two contact persons the checklist for the interviews was discussed and a list with names of persons to interview in both organisations was made.
4. The checklist was sent to all persons that were planned to be interviewed.
5. Interviews were held with the interviewees.
6. A report was made of each interview and sent back to the interviewee.
7. If necessary a new version of the report was made.
8. Reports related to the hospitals and health insurance companies in general and related to their transactions were gathered for desk research.
9. A case study report was made and was sent to contact persons of the hospital and health insurance company.
10. The case study report was discussed with contact persons and adjustments were made where necessary.

2 One analysis of case study methods found that those case studies using multiple sources of evidence were rated as higher quality than those that relied on single sources of information (Yin 1994, Bateman & Moore 1983)

Two case studies were performed in this study. In chapter 2 of this study an extension to the TCE model for the level of competition. This extension is made because it is expected that not all preconditions for competition are (yet) met for the transactions between hospitals and health insurance companies.
Competition is an important precondition for a market structure as it determines the possibility for organisations to change their contract partner. To examine the impact of competition on the transactions between hospitals and health insurance companies and their governance structure this criteria was used to select the cases. The two case studies performed during this study differ in the number of competing hospitals they have in their region.
The next two case studies are performed during this study in 2000 and 2001:

1. Case study A: a health insurance company and hospital in an urban area which is served by many hospitals (four other hospitals in the same city and many in nearby cities). Hospital A is a more than medium sized hospital in an urban environment in which several hospitals operate. Health insurance company A has 60% market share in the region and is part of a big financial conglomerate. Hospital A was founded after the merger of two hospitals. There were several reasons for the merger: (1) ambitions of the hospital board of directors and staff to realise a major hospital, (2) ability to deliver a broad range of complex hospital care[3], (3) better staffing of smaller units which request specific expertise, (4) knowledge sharing, (5) increase of financial flexibility and (6) being a better partner in the negotiations with other partners (in particular health insurance companies). In hospital A medical specialists are not on the payroll but mainly self-employed.
2. Case study B: a health insurance company and hospital in a rural area which is served by a limited number of hospitals (no other hospital in the same city, three hospitals in nearby cities). Hospital B is a medium sized hospital in a rural environment in which a limited number of hospitals operate. Hospital B is part of a group which includes nursing homes and homes for the elderly. Hospital B started building a new hospital with an innovative concept in which IT has a central role. Hospital B experiences a medical staff shortage. Medical specialists are not on the payroll but self-employed. Health insurance company B is a national player with a high market share in specific regions. The market share of health insurance company B in the region in which hospital B operates is 70%.

3.4 Questionnaire and expert meeting

With the results of the desk research and case studies it became clear that there was a diffuse vision about (1) the future developments in the hospital market in general and (2) more specific about the consequences for the transactions between hospitals and health insurance companies. A larger sample of data had to be gathered to get a representative picture. All hospitals and health insurance companies were asked with a questionnaire about their expectations of the future situation.

3 These are called "artikel 18 functies".

Questionnaire as research technique

A questionnaire was chosen as it is an appropriate technique to gather data in a large sample when there is enough information available to develop a questionnaire. The available information was sufficient for a questionnaire as desk research and case studies were completed.

The whole population of hospitals (95 hospitals or hospital groups) public health insurance companies (23) and representatives of the other health insurance companies (18) is limited. The decision was made to send the questionnaire to the whole population.

Justification of persons who were asked to fill out the questionnaire

The required data about the expected institutional environment and expected transactions and governance structure have a strategic character. Therefore the questionnaire was sent to the board of directors of hospitals and the director responsible for hospital health of public health insurance companies. Also the national representatives[4] were asked to fill out a questionnaire as they are involved in the contract negotiations between hospital and health insurance companies.

Surveying hospitals and health insurance companies can give a bias in the results. Both hospitals and health insurance companies are actors in the relationship and have there own interests. This can have impact on the results as both can fill out the questionnaire in their own interest. To investigate the impact of the bias on the findings the answers of hospitals and health insurance companies were compared. As the difference proved to be not statistically significant the danger of bias in the results is found to be low.

To validate the results of the questionnaire also an invitational conference was organised. During this meeting the results of the questionnaire were discussed with experts and respondents. The results of the invitational conference confirmed the results of the questionnaire.

Quality of the questions in the questionnaire

A structured questionnaire was developed for the questionnaire with multiple choice answers to increase the possibilities of statistical processing. Some questions gave the possibility to give an explanation in open form. In interviews with three hospitals and two health insurance companies and some other experts (for instance from the Ministry of Finance) the questionnaire was checked on the next topics:

- completeness and length of the questionnaire;
- comprehensibility and meaning of questions and answer categories;
- significance of questions.

Recommendations and suggestions were used to improve the questionnaire.

In the first part of the questionnaire a differentiation was made in the questions for hospitals compared to health insurance companies and national representatives. The other parts of the questionnaire were the same (with in some questions a reflection).

The questionnaire was sent in Dutch to avoid misinterpretation and to increase the response. The questionnaire is included in Appendix C of this study.

4 As described in chapter 3 the national representative represents the public health insurance companies with a minor market share and the private insurance companies in the yearly contract negotiations with the hospital.

Response and missing values
The next percentage of hospitals, public health insurance companies and national representatives filled out the questionnaire and responded:

Hospitals	76%
Public Health services	65%
National representatives	55%

The questionnaire was sent in January 2003. In April the questionnaire was sent again to the no respondents. Three actions were taken to increase the response:

1. In the letter accompanying the questionnaire the respondents were offered to receive the results of the questionnaire;
2. Anonymous processing of the answers was guaranteed;
3. Non respondents were called 3 weeks after the questionnaire was sent for the second time to remind them of filling out the questionnaire.

Reasons for the high reply can also be found in the subject of the questionnaire (in 2003 "more market mechanisms in hospital care" was on the agenda of the board of directors of both hospitals and health insurance companies) and the quality of the questions (checked thoroughly with several experts).

In the questionnaire respondents had the possibility to choose the answer category "I don't know". This has supported probably the low number of missing values in the returned questionnaires. Most questions had no missing values; others had one or two respondents who did not answer the question.

Analysis and results
In June 2003 the results of the questionnaires were processed and analysed. Analysis of the multiple choice answers is done in SPSS. Statistics of small numbers was used as the questionnaire was sent to a small population. The multiple choice answers made it possible to process the number and percentage of answers per category.

Based on the Pearson's Chi square there was no significant (95%) difference between the answers of hospitals and health insurance companies. Striking was the identification of a number of respondents who extremely believed in more market mechanisms and a number respondents who were very reserved about more market mechanisms. The biggest part of population was more moderate in their answers. The "extreme" respondents were not treated as outliers as the response to the questionnaire was high and the pattern was recognised already in the case studies and interviews. The consequence is that there is high variety in answers for most questions.

Content of Questionnaire

The questionnaire was developed using the results of the case studies, interviews and desk research. The questions in the questionnaire were clustered around the next topics:

1. The situation of the respondent and the organisation he or she is working in;
2. Feasibility and expected timeframe concerning the introduction of more market mechanisms (for instance DBCs) in the hospital market;
3. Expected developments in the institutional environment, especially the role of the government and changes in the number of hospitals and health insurance companies;
4. Expected changes in the position of health insurance companies;
5. Expected changes in the position of hospitals and medical specialists;
6. The negotiations between hospitals and health insurance companies.

Topic 1 of the questionnaire is used to check for significant statistical differences between the answers of respondents in different situational circumstances. Also the results of hospitals, public health insurance companies and national representatives were compared. The statistical results showed no differences.
Topic 2 and 3 of the questionnaire had the goal to gather more data about expected changes in the institutional environment with questions about (a) the expectations with respect to the planned reform process of Dutch hospital care (changes in the institutional environment) and (b) competition in the hospital and health insurance market.
Questions with respect to the consequences of these changes for hospitals and health insurance companies and their transactions were covered with topic 4 and 5.
Questions in topic 6 are concentrated on the consequences of changes in the institutional environment, the position of hospitals and health insurance companies, their transactions and the governance structure.

A discussion meeting with experts was organised 9 months after the results of the questionnaire became available.
The goal of the discussion meeting was to validate and explain in more detail the results of the questionnaire. The results were summarised in 12 propositions. These propositions were prioritised by the attendants and discussed during the meeting.
A broad range of stakeholders was invited for the discussion meeting:

- Board of directors of hospitals and public health insurance companies;
- Representatives of the umbrella organisations of hospitals and health insurance companies;
- Policy workers of the ministry of finance;
- A member of the Parliament.

The outcome of the expert meeting was that the results of questionnaire were sustainable.

Chapter 4 Institutional Environment and Competition

Chapter 4 Institutional Environment and Competition

4.1 Introduction

The institutional environment determines the efficiency of the governance structure with institutions like rules and regulations. In the three layers model Williamson calls this shift parameters. In chapter 2 the three layers model is made specific for the transactions between hospitals and health insurance companies in the Netherlands in a regulated environment (situation before 2005). Rules and regulations are expected to play a dominant role in the institutional environment and are marked as relevant shift parameters.
In a deregulated environment the influence of rules and regulations on the governance structure changes. In chapter 2 also institution based trust and competition are made specific in the three layers model for the transactions between hospitals and health insurance companies in a deregulated environment.

Data are gathered in this study with desk research, additional interviews, two case studies and a questionnaire. The results are used to describe the institutional environment and competition (chapter 4) and the governance and individual layer (chapter 5).

This chapter starts in section 4.2 with a description of the informal institutions and basic assumptions of the government relevant for the Dutch healthcare. As mentioned in chapter 2 it is relevant for this study to glance at social embeddedness in order to understand the institutional environment

In section 4.3 the institutional environment (rules and regulations) in which health insurance companies operated before 2006 is described and analysed. Also a description is given of the competition between health insurance companies. In section 4.4 the institutional environment before 2005 and the competition between hospitals is described.

The regulations before 2005 which determine the transactions between health insurance companies and the governance structure are described and analysed in section 4.5.
The latest and expected changes in rules and regulations, competition and the role of institution based trust are described and analysed in section 4.6.

In section 4.7 sub question 1 is answered and conclusions are given about the competition between hospitals and health insurance companies and the role of institution based trust.

4.2 Embeddedness

Embeddedness as presented by Williamson (1998) in his Economics of institutions and presents informal institutions, customs, traditions, norms and religion. These topics differ across borders and have its repercussions on the rules and regulations.
It is an important explanation why healthcare systems in the US and in Europe differ significantly[1]. Basic assumptions in which healthcare in Europe is embedded are: access of health and insurance, solidarity and good quality of care. The Dutch Constitution gives the government the responsibility to establish a solid healthcare system[2]. The government supervises hospitals and health insurance companies and, if necessary, takes corrective actions. The Dutch healthcare system is based on a social insurance (like Germany) and not a tax system (like the United Kingdom, Scandinavia, Spain). The government (e.g. the Minister of Health) does not have a budget right but uses rules and regulations to guarantee universal access, solidarity and good quality (see also Schrijvers 2001).
Despite the described institutional atmosphere in the Netherlands, the Dutch government is preparing a more market oriented system for healthcare in the Netherlands. The aim of this reform process is to realise a more efficient healthcare system with good quality for patients[3]. The basic assumptions embedded in Dutch society prevent the Netherlands from introducing a commercial system like the US. Universal access, solidarity and good quality are high on the political agenda. Changes on this level evolve slowly. These basic assumptions will therefore continue to have a substantial influence in the next decennia on the healthcare system in the Netherlands.

4.3 Health insurance companies: rules, regulations and competition before 2006

Before 2006 there were two types of health insurance companies in the Netherlands: (1) social health insurance companies and (2) private health insurance companies. In general we can say that, contrary to private health insurance companies, social health insurance companies were:

- more regulated by the government;
- available for insurants with lower incomes;
- compensated by the government for financial risks and losses.

The relevant market for both private and social health insurance companies was national. However the social health insurance companies had a very dominant position in certain regions (due to historical reasons).

The market concentration of health insurance companies in the Netherlands is high and still increasing in 2008. Together with the specific Dutch rules and regulations this increases the barriers to entry. In 2002 the 5 largest social health insurance organisations had a market share of 67% (Nyfer 2004, Vektis 2003) and were dominant in certain regions with

1 Van Kemenade (2007) presents in her book `healthcare in Europe 2007` the differences between healthcare systems in 11 European countries.
2 This is described in the Dutch Constitution art. 22.
3 More information is found on the website http://www.minvws.nl/en/ and in the `regeringsverklaring Balkenende 4´.

market shares of 70 to 80%. Large financial conglomerates often have health and safety services[4] (Raad voor de Volksgezondheid & Zorg 1998b) and offered different private and social health insurance labels

Decreasing number of health insurance companies	1986	1996	2004
Social health insurance companies	48	29	22
Private health insurance companies (including civil servants)	75	44	38

Table 4.1 Number of health insurance companies in The Netherlands (Brouwer & van den Broek 1997, CTG/Zaio 2005).

Health insurance companies in the Netherlands have organised themselves in an umbrella organisation called ZN (Zorgverzekeraars Nederland). ZN has a role in supporting health insurance companies with new developments in the institutional environment and in the negotiation and communication with stakeholders like the government, supervisors and the umbrella organisation for hospitals.

The Dutch government discerns three compartments in healthcare which differ in their funding[5]:

1. Non insurable risks like nursing homes care for disabled people and hospital care over one year. Financed[6] by the social insurance Exceptional Medical Expenses Act (AWBZ[7]).
2. Insurable risks for hospital care, medical care and pharmaceutical drugs. Until 2006 financed by the Social Health Insurance Act (Zfw)[8] and private insurances[9]. An additional law is the WTZi[10], which compensates health insurance companies for high risk patients.
3. Voluntary insurable risks like plastic surgery and the dentist. Financed by additional private insurance or patient themselves.

The situation before 2006 for the Social Health insurance Act can be summarised with the next bullets:

1. Social health insurance companies work with a national budget which is set annually by the Minister of Health[11]. This budget is linked to the national budget for health and

4 Health and safety services are called ARBO-diensten in the Netherlands.
5 For more information about the health insurance system in the Netherlands see Ministry of Health (2004).
6 The contributions in this social insurance are gathered in a central fund named "Bijzondere ziektekosten". This fund is administered by the CVZ (College voor Ziekenhuisvoorzieningen). These funds are used by several private and social health insurance companies who are authorised by the central government. These insurance companies have regional offices that contract organisations to deliver the healthcare needed.
7 The description of the Algemene Wet Bijzondere Ziektekosten is found in Staatsblad 1992, 392, last changes in Staatsblad 241.
8 The description of the Ziekenfondswet is found in: Staatsblad 1992, 391, last changes in Staatsblad 2004, 32.
9 Social health insurance companies fund 64% of hospital care, private insurance companies fund 35% , this includes 5% for the public servants (Ministerie van VWS, 2004).
10 Wet op de toegang tot ziektekostenverzekeringen 1998 (Staatsblad 1998, 438, last changes in Staatsblad 2002, 82).
11 This is called macro verstrekkingen budget or MVB.

funded with wage related premiums. The contributions of employers and employees to this compulsory insurance are gathered in a central fund named Algemene kas or AK. Also contributions paid by private insurants related to Wet Mooz (in 2004 €120 a year) are gathered in the AK (Ministry of Health 2004). This fund is administered by the CVZ (College voor Zorgvoorzieningen). The Minister together with CVZ determines how the budget (AK) had to be spread over the social health insurance companies. The criteria used are: the fixed costs for hospital nursing of the year before; variable costs (hospital nursing and medical specialists) and other supplies combined with the risk profile of insurants of the health insurance company (with criteria as age, gender, region, diagnose related costs).

2. There are rules concerning the health insurance premiums for Zfw and AWBZ. There is a premium related to income that is set by the government and a nominal premium that is set by the insurance company.
3. Social health insurance companies work under the Zfw and are entitled by a government agency CVZ. This entitlement creates an entry barrier for new social health insurance companies. Before 1992 these social health insurance companies had a regional focus. Since 1992 they were allowed to work on a national level (see also RVZ 1998).
4. The "Ziekenfondswet" knows a system of direct payments to healthcare suppliers. The insurants are insured on a natura basis. Private health insurance companies are free to use a restitution system. Private insured patients pay the healthcare provider and claim restitution from their insurance company.
5. Social health insurance companies know a budgeting system in which the risk profile of insurants is taken into account. They have to accept insurants with high risks for their basic healthcare and are not allowed to differentiate their nominal premiums.
6. Social health insurance companies are not allowed to supply hospital care or to participate in hospital care providers.
7. Social health insurance companies are allowed to offer a complementary health insurance cover to their insurants of care which is not covered by the social health insurance. Almost all social health insurance companies (90%) offer this service. They are free to compose this complementary insurance including pricing.
8. Social health insurance companies have the duty to assure that their insurants receive the healthcare they need. Therefore the "Ziekenfondswet" prescribes that social health insurance companies contract healthcare providers, including hospitals (Ministry of Health, 2004).
9. Social health insurance companies also receive a budget to cover their organisational costs. This budget is set by the government. Negative or positive results on this budget are not balanced but are either a negative or positive result for the insurance company.
10. In the nineties financial incentives are introduced for social health insurance companies like budgeting and partial abolishment of balancing and recalculation (see also RVZ 1998a).
11. The Minister has set a certain minimum on the solvability of social health insurance companies. Health insurance companies compensate negative financial results with their financial reserves and add positive results to their reserves. There is a maximum set for the financial reserves of social health insurance companies (Ministry of Health, 2004).

The institutional environment for private health insurance companies can be summarised with the next bullets:

1. Private insurance companies can set their own premium and define their own insurance policy.
2. Private health insurance companies have full financial risk of their health insurances except for those insurants who are mentioned in the WTZi (elderly and patients with chronic diseases). The government organisation SUO (Stichting Uitvoering Omslagregeling WTZ) compensates the insurance companies with an extra solidarity premium paid by all private health insurants. WTZ is applied to almost 40% of all private health expenditures.
3. Private insurance companies have their own acceptance policy but are not allowed to refuse insurants in the WTZ for the basic health insurance.

4.4 Hospitals: rules, regulations and competition before 2005

Hospital care has specific characteristics which are important for a good understanding of this market. The RVZ (1998b) mentions the next characteristics:

- Hospital care is necessary;
- Patients are fully dependent in critical life threatening situations;
- Stand by capacity is necessary, regardless the actual demand;
- An unbalanced situation can occur due to long education time medical specialists and long timeframe for building hospital facilities;
- Standardisation of products is low and this makes costs and performance not transparent.

Hospitals in the Netherlands are non governmental foundations (stichtingen) with their own profit and loss account. They are not (yet) allowed to make profit but have financial reservations.
Hospitals have three functions or general product groups: acute care, planned care (chronic and not chronic) and highly specialised care. Acute care has a strong regional focus as transportation time should be minimised. A regional focus is also found for certain patient groups like elderly and chronically diseased.

Hospital care (together with general practitioners, medical specialists, obstetricians, dentists and paramedics) covers almost thirty percent of all healthcare expenditures in the Netherlands (Ministry of Health 1999). Total hospital care costs in 2003 were almost € 17 billion (Centraal Plan Bureau 2003) and total healthcare costs were almost 36 billion (CBS Statline).

The NvZ (Nederlandse vereniging voor ziekenhuizen) is the Dutch hospital umbrella organisation. There is also an umbrella organisation university hospitals (NFU) and medical specialists (OMS). These umbrella organisations have a role in supporting hospitals in their negotiation and communication with stakeholders like the government and patient associations.

The last decades have resulted in a wave of mergers in the hospital market (see also Nma 2003, Centraal Plan Bureau 2003, Centraal Bureau voor de Statistiek 2003). In 1990 there were 169 hospitals and in 2004 there were 129 hospitals in the Netherlands (CBS Statline). The number of hospital beds decreased in the Netherlands from 57.825 in 1998 to 51.300 in 2005[12].

The National Health Tariffs Authority or CTG/Zaio (2005) gives the next figures concerning the Dutch hospital in 2004: 89 general hospitals, 8 university hospitals[13], 8 specialised hospitals (specialised in specific diseases) and 70 Private hospitals or "Zelfstandige Behandel Centra" (ZBC). Estimations of the ongoing trend of mergers in the hospital care market result in 40 to 70 hospitals left in 2014 due to mergers (RIVM 2006). The Dutch government has strict supervision on mergers to guarantee accessibility for patients, which can be threatened in certain regions by the shrinking number of hospitals[14].

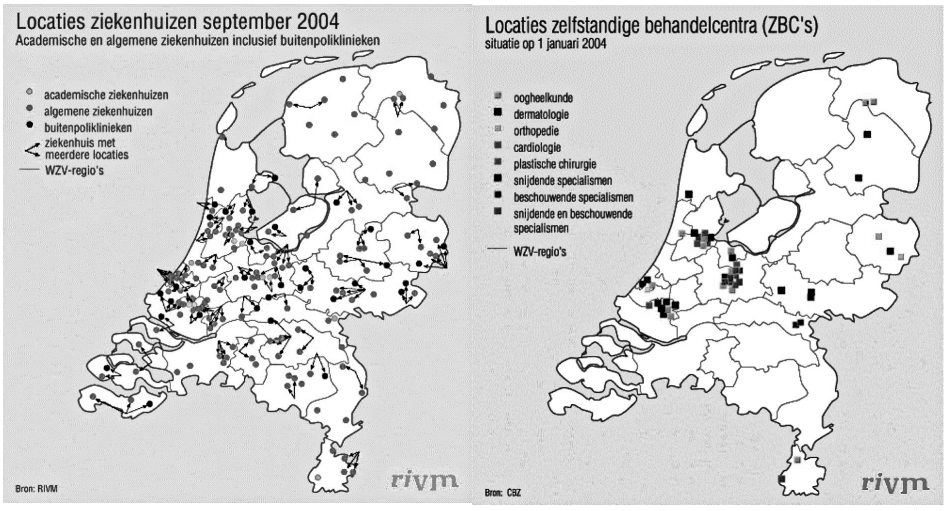


Figure 4.2 Overview of locations hospitals and ZBCs in the Netherlands (RIVM 2004).

A different set of government rules and regulations is developed for small scaled private hospitals specialised in specific not clinical hospital treatments called Zelfstandige Behandel Centra (ZBC). Although the number of private hospitals has risen they only cover a small percentage of the total hospital care budget. Their funding is comparable with the funding of hospitals. However capital expenditures are not compensated[15] and ZBCs have to pay more tax[16] (see also College bouw ziekenhuisvoorzieningen 2003). Both increase the barriers to entry for new private hospitals.

12 The average number of beds in a general hospital was 234 in 1963 and 200 in 1995 (De Folter 1997, RVZ 1996).
13 The university hospitals occupy a special place as leading hospitals with advanced clinical functions, education and research tasks.
14 The last years the government has forbidden planned mergers between hospitals due to this reason.
15 The Ministry of Health has changed this in 2008.
16 VAT exemption is limited.

Foreign hospitals play a role in Dutch hospital care only in areas next to the border. Hospitals in Belgium en German supply care to Dutch patients living in the areas next to the border. Triggered by the waiting lists in recent years patients also went to other countries for their surgery, often facilitated by the health insurance company. However numbers are still small as patients prefer to receive hospital care in their own region.

A radius of 25 kilometres is widely used for determining the level of competition on a regional level. The results of a study done in 1995 and presented by Maarse c.s. (2003) show that:

- Only 3% of the hospitals did not have another competing hospital in a radius of 25 kilometres;
- 44% of the hospitals had 1 to 5 competing hospitals in a radius of 25 kilometres.

Due to the flood of mergers after 1995 these figures are not representative for 2004. Varkevisser et al claims in 2004 that about 20% of all hospitals experience no competition of other autonomous hospitals in a radius of 25 kilometres.
Planned care (not for the elderly and chronically diseased) and highly specialised care are often received by patients outside the region. This increases the number of hospitals in the relevant market and intensity of competition. With around 100 hospitals and 70 private hospitals on a national level there is a high potential of competition for the planned care. However Porter and Olmsted Teisberg (1996) show that not only the number of hospitals but also the transparency of the quality of the delivered hospital care to patients is necessary to activate potential competition. For highly specialised care the potential for competition is lower as only a limited number of hospitals offer this care.

The two case studies used in this study show that (1) competition is limited in certain parts of the Netherlands and (2) competition has little effect on hospital behaviour in competitive regions due to the waiting lists and the contract obligation between health insurance companies and hospitals[17].

The last decades several developments have had important effects on the hospital as organisation:

1. Tightening of the capacity of hospital beds has resulted in a strong restitution effect to day care and OPD-treatment[18]. The average number of nursing days dropped from twenty days in 1973 to ten days in 1994. The total number of nursing days is decreasing since 1975 despite the increase of the Dutch population (Le Grand-van den Bogaard et al, 1997, p.55). CBS Statline gives for 2003 eight[19] days as average number of nursing days.
2. Since 1985 there are two main trends in organisational development in Dutch hospitals: decentralisation and management participation of medical specialists. One of the goals was to realise an integrated hospital with authority and responsibility transferred to the operational level to overcome problems of dual hierarchy (medical specialists

17 The two case studies differ in the number of competitors they have in a radius of 25 kilometres. In case study B the number of competitors in the region is limited. In case study A there are several competitors in the region. However in case study A competition was not felt intense due to the waiting lists and the contract obligation of the health insurance company with the hospital. Hospital A does not cooperate formally with the other hospitals in the region, except with the academic hospital for the referral of patients. However hospital A has informal contacts with competitors in the region about the division of medical functions.

18 This is called "poliklinische behandeling" in the Netherlands.

19 12.757.000 nursing days divided by 1.602.000 admissions.

versus hospital management) and more flexibility and responsiveness (de Folter 1996, p. 96-97). In 1994 the committee Biesheuvel[20] recommended the Minister of Health to transform hospitals into integrated medical organisations. The medical specialist in a Dutch hospital is usually self employed and receives a fee based on production (there are some exceptions like university hospitals). The Dutch government stimulated employment of medical specialists by hospitals. However due to opposition of medical specialists in 2001 about 70 percent of the medical specialists are still self-employed. The government changed the contracting process for medical specialists with health insurance companies. Medical specialists do not negotiate with the health insurance company as they did before. The board of the hospital is responsible for the negotiations with the insurance company about the total hospital budget (including costs for medical specialists). Medical specialists have a contract with the hospital in which their responsibilities and fees are arranged[21].

3. Since 1992 we see a paradigm shift in hospitals from quality assurance philosophy towards a quality improvement philosophy (Brown 1992, p.183). Quality of healthcare is on the political agenda and resulted in a rule about the quality in healthcare organisations (kwaliteitswet Zorginstellingen). This rule improves the position of patients in quality management and supports the integration of the quality systems of the management and professionals in healthcare organisations (Schrijvers 2001, chapter 13). All actions in healthcare organisations should be guided by the principles of continuous quality improvement. This requires a well balanced set of quality measures and performance indicators. However performance measurement in hospitals is complex because measures are difficult to define and to monitor. An important reason is the independence of discretionary decision makers as medical specialists, nurses and lab technicians (de Folter 1996, p.98). OECD has developed indicators to measure the quality of healthcare. In the Netherlands CBS and RIVM have studied the development of 10 indicators (Centraal Bureau voor de Statistiek 2007). The results were promising for a number of indicators as they indicated improvement in healthcare quality. However hospital care knows a broad variety of products with a low standardisation, which complicates measurement and transparency[22]. Reputation is found to play a major role in the process of patients to choose a hospital and/or medical specialist for treatment. The importance of reputation is also found in the case studies and questionnaire (presented in chapter 5).
4. Historical separations of activities among general hospitals, psychiatric hospitals, nursing homes, medical specialists and other providers are eliminating because of integration strategies to provide better healthcare (transmural care). There are three factors stimulating this integration:
   - higher awareness of patient care as a whole;
   - more strategic alliances creating a network of care institutions;
   - technology driven communication and knowledge sharing tools (see also de Folter 1996, p. 99 and Braithwaite et al. 1995, p.87).

20 Committee Biesheuvel advises the Minister of Health in 1994 to increase the cooperation and coordination between different organisations in the chain of hospital care (GP, hospital, nursing homes). The general practitioner should have a more dominant position and work closely with the medical specialist in the hospital. Rules and regulations should be made more flexible to accept different new ways of delivering care to patients requesting hospital care.

21 This is facilitated with two documents: a MTO (model toelatings overeenkomst) and a DMS (document medische staf).

22 An important complication in performance measurement is severity.

Schrijvers (2006) presents the developments in the care delivered outside the hospitals in his article `The elections and the future of the AWBZ`. These developments will have a significant effect on hospital care as a result of the described integration strategies. A barrier for further integration is however often the financial compensation of these activities.

5. The general practitioner has an important role in the Netherlands in directing patients to the hospital. The government has given the general practitioner the role of "gate-keeper". Patients need (except in case of emergency) a referral from the general practitioner before they get treated in the hospital (Zfw article 4, lid 2). This is requested by the health insurance companies to avoid unnecessary rise in healthcare costs.

An important law for hospitals is the planning and construction law (WZV[23]):

1. The government sets an annual budget for all healthcare expenditures, in order to restrict the healthcare expenditures (macro budget). Maximum prices per medical performance and ratios (e.g. number of beds per 100 inhabitants and number of medical specialist-performances) are used to calculate this budget. The budget is divided over the healthcare insurance companies, who divide it over the hospitals with contracts.
2. All large construction and expansion initiatives should be approved by the government if the hospital wants to obtain government funds.

Hospitals are budgeted on four components (functiegerichte budgettering). These four components are (SCP and CP 1997):

1. The availability component: based on the number of inhabitants in the region (adherentie).
2. The capacity component: based on the number of beds and medical specialists. A fixed price per bed and medical specialist and an additional fee for special facilities.
3. The production component: covers the variable costs of the hospitals. The budget is based on the agreed production numbers with the health insurance companies (not on the real production).These production numbers include number of nursing days, clinical admission, day treatment, first outpatient appointments and specific treatments ("bijzondere verrichtingen"). The production numbers multiplied with the maximum prices as set by the National Health Tariffs Authority, result in the budget. Differences in real production and budget production are covered afterwards with an adjustment of the nursing day tariff. The scale of the hospital also determines the budget. There are three scales. The bigger the hospital the higher the fee for the various production numbers. Differences between the small and large scale hospitals are 15%.
4. The location component: covers costs like energy, maintenance and depreciation.

23 Wet ziekenhuisvoorzieningen (Staatsblad 1971, 268, last changes in Staatblad 220).

Also rules and regulations concerning the budget system in which hospitals operate are important to mention:

- The very costly (often low frequent) and highly specialised hospital care is regulated by the government (topreferente zorg, WBMV[24]). The government gives special permits to hospitals for this care to avoid overinvestment and achieve coordination. These permits result in high entry barriers for new hospital care suppliers in these segments of hospital care.
- Pricing of hospital products is regulated with maximum prices set by the government (WTG[25]).

The government has introduced in 2002 a rule to compensate hospitals for additional production (so called "boter bij de vis"). The goal of this rule was to reduce waiting lists by increasing the production in hospitals with financial incentives.

In 2006 the government has introduced more progressive changes in the financial compensation for hospitals with new rules and regulations. The (expected) changes are described and analysed in section 4.6.

4.5 The transactions: rules and regulations before 2005

In this section rules and regulations which determine (1) the transactions between hospitals and health insurance companies and (2) the contracting process are described and analysed. Recent and expected changes are presented in section 4.6.

1. Transactions

The transactions between hospitals and health insurance companies can be divided in a financial (administrative) flow (payments) and a flow of goods/services (the delivery of care to the patient). Payment and delivery of services are organised between three actors: the hospital, the patient and the health insurance company.

The patient/insurant has an insurance contract with the social or private health insurance company and pays insurance premiums to the social health insurance company. In return the patient/insurant is assured of the payment of hospital care as agreed upon in the insurance contract.

The flow of goods/services is the same for social and private health insurance companies. Hospitals ask the health insurance company for approval before providing the care to the patient (except for urgent care[26]). The hospital informs the patient whether the insurance company will reimburse the payment. The health insurance company is responsible for the administration and handling of insurants with excess for certain hospital care.

The financial flow between social and private health insurance companies differs. Regulations prescribe social health insurance companies to use a system in which they pay the

24 Wet Bijzondere Medische Verrichtingen (before artikel 18 functies WZV). WBMV is introduced in 1997 and gives the government the possibility to stimulate, slow down or stop developments in medical care and the availability of medical technology and to concentrate these in certain hospitals (Ministry of Health 1999, p.46). The government decides in which hospital the special medical treatments will be located or reallocated.

25 Wet tarieven gezondheidszorg (Staatsblad 1980, 646, last changes Staatsblad 23).

26 Urgent care is hospital care which has to be delivered immediately to complex patients.

hospital bills for their insurants. Private health insurance companies in general use a restitution system in which the patient pays the hospital bill and sends the bills for restitution to his or her health insurance company.
In figure 4.3 and 4.4 the relations between the hospital, patient and health insurance companies are summarised.

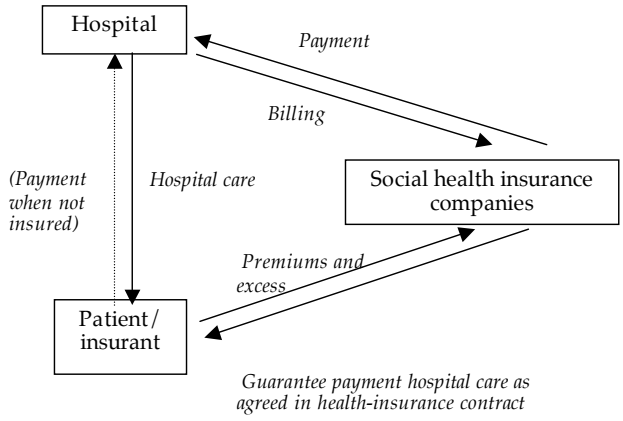


Figure 4.3 The transactions between hospitals, social health insurance companies and patient/insurant.

In the restitution system patients receive a bill for the received hospital care and ask restitution from their private health insurance company. There are exceptions where private health insurance companies have contracts with hospitals for direct payment. This is an extra service for the insurants and it decreases the overall administrative costs for hospital and insurance company.

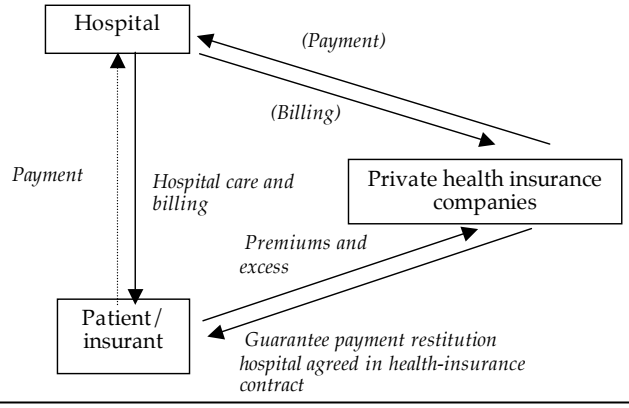


Figure 4.4 The transactions between hospitals, private health insurance companies and patient/insurant.

2. Contracting process

There is an annual contracting process between hospitals and health insurance companies. This contracting process is embedded in financial regulations (Zfw, AWBZ and WTG), quality regulations (Wet BIG, Kwaliteitswet Zorginstellingen) and the planning of health supply (WZV).

The contract includes agreements about the amount of hospital care provided to the insurants of health insurance companies[27] and agreements about the financial compensation for hospitals. With these contracts the macro budget for hospital care as set by the government is distributed between the Dutch hospitals.
A special system of representation of health insurance companies has been introduced by the government to facilitate the contracting process between the hospitals and health insurance companies. The social health insurance companies with the highest market share, together with a representative of all the other health insurance companies (national representative), negotiate and contract the hospitals.

Negotiations are organised around the next topics:

- the number of nursing days;
- volume of clinical admission;
- volume of day treatment;
- volume of first outpatient appointments.

The negotiated numbers are included in the contract. The contract has a prescribed format (called model contract) but can be supplemented with voluntary basis agreements about quality and performance information exchange (called individual contract). The prices are limited to a maximum (set by the CTG) but negotiable. However until 2006 in general only maximum prices were used in the contracts.

In the next figure the three important contracts which are used in the contracting process between hospitals and health insurance companies are presented.

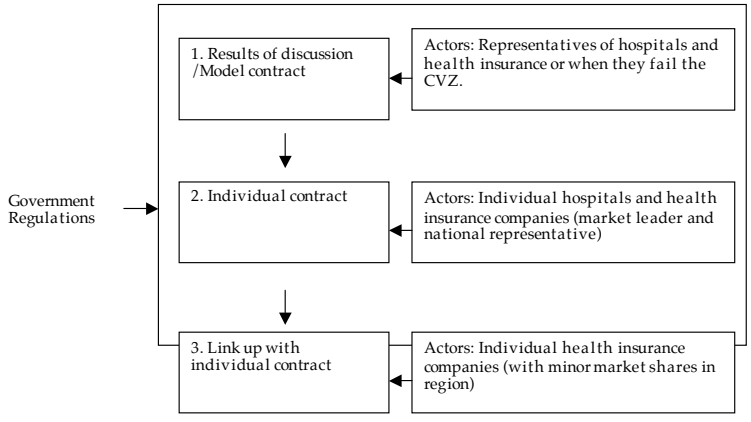


Figure 4.5 Relevant contracts for the coordination of transactions between hospitals and health insurance companies.

27 The government has made insurance companies responsible to contract sufficient hospital care for their insurants.

1. The contracting process starts with a "result of discussion" (Uitkomsten Van Overleg) or "model contract". Representatives of hospitals and health insurance companies (or when they fail the CVZ) construct the model contract. Results of discussion and model contracts contain co-ordinated agreements between the hospitals and health insurance companies that should be used as a framework for the individual contracts.
2. When the result of discussion or the model contract is authorised by the CVZ individual contracts can be finalised. These contracts are the result of the negotiating process between hospitals and (a representative[28] of) the health insurance companies.
3. A health insurance company which does not negotiate with the hospital has the possibility to link up with an individual contract. Regulation prescribes social health insurance companies to link up with every contract finalised with a hospital in the Netherlands. The national representative represents their interests in the negotiations. Private insurance companies are free to join.

The individual contracts between hospitals and health insurance companies must include at least the following information (prescribed by the government, see article 44 number 3 Zfw and article 42 number 4 AWBZ):

- Start and duration contract
- Rights and duties of the contract actors
- The care to be delivered
- Quality and efficiency parameters about the care to be delivered
- Administrative procedures
- Control procedures
- Rules regarding termination of the contract
- The possibility to install a committee when disputes arise between parties.

The next performance or management reports are prescribed by the government (Zfw and AWBZ):

1. Quarterly report (6 weeks after quarter has ended) with production figures (number of products delivered, number of OPD-day treatment, number of clinical admissions) and financial figures;
2. Financial annual report;
3. Quality annual report.

4.6 Deregulation of the Dutch healthcare: 2005 and later

The healthcare expenditures in the Netherlands were over € 38 billion in 2002. This is roughly 12% of GDP. The expenditures were 28 billion euros in 1999 (Ministry of Health 2003). The challenge for the Dutch government is to reform the healthcare market to establish an affordable healthcare for the future (Ministry of Health 2001a, 2001b, 2002).

28 Usually social health insurance companies with the largest market share in the region and a private insurance company.

The government has announced in their strategic plans of 2002 and 2003[29] a basic health insurance for all citizens. This has resulted in the introduction of the "Zorgverzekeringswet"[30] in 2006. The distinction between private and social health insurance companies has disappeared resulting in only private health insurance companies. Health insurance companies can choose whether they want to use restitution system or contract hospitals and pay hospital bills directly.
In the new law a difference is made between a basic insurance and a complementary insurance. The basic insurance includes all necessary healthcare (including care already insured within the Zfw, see section 4.5). For this basic insurance health insurance companies have to accept all insurants. As before health insurance companies are compensated for costs of high risk insurants to avoid that insurants are not accepted by insurance companies due to their high health risk. Health insurance companies are allowed to select and refuse insurants for the complementary health insurances.
To increase the competition between health insurance companies the patients are allowed to change their health insurance company at the beginning of every year. Health insurance companies offer reductions to insurant groups who join as a group. This has resulted in an enormous increase of employers who contract health insurance companies for their employees. The employer negotiates with the health insurance companies about the conditions of the insurance for the employees.

The "Zorgverzekeringswet" started with a no-claim component[31] to restrain the consumption of healthcare. Due to the limited effect health insurance companies replaced it in 2008 with (limited) excess risk for insurants. The Netherlands knew an almost hundred percent health insurance rate. This percentage has dropped since 2006 which will probably result in new regulation of the government to stop this trend.

The law WTG has been changed dramatically in 2005 with the WTG Express. The goal of this new law is liberalisation of the price setting for hospital care based on the product system DBC (see also WTG[32] 2000 and Ministry of Health 2001a). DBCs include all costs of treatments between diagnoses and discharge of the patient. Clinical, inpatient and outpatient treatments are covered in the DBC system, including the workload of medical specialists. It is an important instrument for the Ministry of Health in the process of further deregulation. The main goal of DBCs is competition between hospitals with transparency in the costs and performance of hospitals. This transparency supports health insurance companies (and patients) in selecting the best performing hospitals and increases the incentives for hospitals to improve their performance. Since 2008 the compensation of medical specialists is based on a general hourly rate (set by the government) and the time necessary for the treatment as set in the DBC system.
The DBC system has, like the DRG system, also another goal: offer hospital management the means for understanding and controlling resource usage within hospitals (Lehtonen 2007, Fetter and Freeman 1986, Fetter 1987).
The Dutch government operates with a step by step approach and uses segmentation in hospital care to introduce more market mechanisms. This segmentation resulted in seg-

29 Strategisch Akkoord kabinet Balkenende I 2002 and Hooflijnen akkoord kabinet Balkenende II 16 mei 2003.
30 Kamerstukken II 2004/05, 2004/05, 29 689, nr. 12
31 A no-claim component gives insurants the opportunity to receive part of their paid insurance fees back when they have not submitted a claim during a year.
32 WTG is the law Wet Tarieven Gezondheidszorg.

ment A and B of hospital care. In 2005 segment B contained 10% of all, non acute hospital care (budget of € 900 million). For this segment free price negotiation (contract obligation is lifted and prices are no longer set by the government) between hospital and health insurance companies is possible. Examples of care in segment B are hip replacement and cataract operations. Segment A contains all other insured hospital care (CTG/Zaio 2005). There is a standard pricelist for DBCs which is maintained by a governmental body[33]. The questionnaire shows that more than one in three respondents expects that the contract obligation for hospitals and health insurance companies will not be lifted completely before 2008 (table 4.2). These expectations are confirmed by the situation in 2008. In 2007 the government has announced to increase the segment B from 10% to 20% of all, non acute hospital care in 2008. For the other non acute hospital care the plan was to introduce a "benchmark competition price system". However the Dutch parliament has postponed this plan and is investigating other possibilities to introduce controlled competition in the hospital market.
At the start of the DBC system the capital expenditures were left out due to complicated financial valuations of hospital buildings. The government is planning to incorporate the capital expenditures in the DBC price. In 2008 a start is made in the negotiations between hospitals and health insurance companies for the prices including capital expenditures for segments of (not complex) planned care.

Changes in rules and regulations have also had direct effect on the contracting process between hospitals and health insurance companies and the way hospitals are financed. The law "Herziening Overeenkomstenstelsel Zorg (HOZ)[34]" is adopted as of 1st of February 2005 and has resulted in:

- Repeal of contract obligation in "Ziekenfondswet" for segment B of hospital care.
- Repeal of 'uitkomsten van overleg' en modelovereenkomsten "ziekenfondswet".

Health insurance companies and hospitals are free to contract for the B segment and model contracts are not longer used.
The government has ordered hospitals in 2005 to present product price lists for segment B. The price on this list is used for not contracted hospital care. The insurance company compensates all or a reasonable part (at least 70 percent) of this price to the patient[35].

To give healthcare suppliers more flexibility in organising the hospital care in their region the WZV is replaced in 2006 with the WTZi[36]. It is the first step in deregulation of the planning and construction laws[37]. Key in WTZi is permission to supply care which is related to the "Zorgverzekeringswet" or AWBZ. This permission guarantees that healthcare suppliers meet certain criteria as accessibility, transparency, governance structure and operational management. This permission has been dropped and new entrants to the hospital market are not restricted any longer in their product range and are allowed to supply all hospital care (segment A and B, including clinical treatments). These new entrants are called Zelfstandige Behandel Centra or ZBCs (see also section 4.4).

33 Beleidsregel standaardprijslijst (I-710) CTG/Zaio, taking effect on october 1st 2004.
34 Tweede Kamer, 2003-2004, 28 994.
35 Insurants which are treated in a hospital at the time the contract with his or her insurance company ends is assured of prolongation of his care without extra costs (amendment Van der Vlies, Kamerstuk 2003-2004, 2\d.\d.\d. nr 18 Tweede Kamer).
36 Wet toelating Zorginstellingen. The WTZi has passed on october 18th 2005.
37 See also kamerstukken II, 2003/04, 29379 and 2000/01, 27659).

Also the WTZi does no longer restrict health insurance companies from offering hospital care or participate financially in hospitals. This has resulted in new initiatives like a new operation unit in a hospital in the South of the Netherlands which is financed partly by the health insurance company.

4.7 Expectations for the future

The plans of the government to change rules and regulations are not undisputed. The expectations of hospitals and health insurance companies about the future changes are investigated in this study with a questionnaire. The answers to questions related to the institutional environment (role of the government, supervising agencies, rules and regulations) and competition are presented below. The research methodology of the questionnaire is described in detail in chapter 3.

In the questionnaire hospitals and health insurance companies were asked about their expectations concerning the timeline in which the preconditions for a free hospital market will be met. The results in the next table show quite a variety in answers. Many respondents expect all preconditions will be met in the long run. However a substantial part of the respondents expects that certain preconditions will never be met. For instance 33 percent expects that complete funding of hospitals on DBC output will never happen.

When will the next market preconditions be met for hospital care? (% answers based on 103 questionnaires)	2004	2005-2006	2006-2008	>2008	Will not happen	No idea
DBCs for all hospital products	2%	23%	38%	15%	21%	0%
DBCs for a part of the hospital products	32%	43%	18%	1%	4%	1%
Funding of hospital based on DBC-output	1%	12%	29%	22%	33%	2%
Partly funding of hospital based on DBC-output	21%	40%	28%	5%	4%	0%
Health insurance companies have sufficient understanding of the efficiency of hospitals	2%	23%	33%	26%	15%	0%
Health insurance companies have sufficient understanding of the quality of delivered hospital care	1%	17%	38%	28%	16%	0%
Contract obligation for health insurance companies to contract all hospitals is lifted	5%	22%	32%	21%	14%	5%
Contract obligation for hospitals to contract all health insurance companies is lifted	6%	17%	30%	19%	26%	2%
Sufficient hospital care supply	8%	22%	20%	24%	18%	8%

Table 4.2 Results Survey 2003: question 2.2

In a more market oriented system not only price but also transparency of quality is important (see also Porter and Olmsted Teisberg 2006). Transparency of quality and of the performance of hospitals and medical specialists is important for health insurance companies and patients to select a hospital. In recent years more and more information has become available about the performance of hospitals (e.g. annually benchmarking by Elsevier, Algemeen Dagblad and several internet sites).
In the Netherlands a system called peer review is used in the associations of medical specialists (organised for each discipline). In addition the umbrella organisation for hospitals in the Netherlands has introduced a quality stamp for hospitals. An organisation called "Nederlands Instituut voor Accreditatie Ziekenhuizen (NIAZ)" is launched to review hospitals on a set of performance indicators resulting in a star-rating. Also the IGZ [38], the State Inspectorate of Health, has an important role in monitoring the quality of delivered hospital care.

As described in this chapter supervising agencies like CTG, CTZ and IGZ play an important role in the Dutch hospital market to guarantee universal access, solidarity and good quality. In 2006 the law Marktordening Gezondheidszorg (WMG) has replaced the WTG. The WMG covers rules about the market structure, the efficiency and controlled cost developments in the healthcare. The WMG assigns the supervision of the hospital market to different organisations like Nma, NZa and IGZ. NZa or Nederlandse Zorgautoriteit is a result of a merger between CTZ and CTG on October 1st 2006. The mission of this new supervising agency is (NZa, 2006):

"The NZa creates and monitors a market of the Dutch healthcare market which works well. The interests of the patient are of central concern. Efficiency on the short and long run, transparency of the market, freedom of choice, accessibility of healthcare and quality are guaranteed by the NZa".

The results of the questionnaire show that most respondents expect that supervisors will be as important in 2008 as they are in 2003 especially on the topics: quality, access and competition. Over 35% of the respondents also expect that health insurance companies have to certify themselves in the future and over 50% thinks this maybe will be the case. Certification is an instrument which can be used by supervising agencies to monitor the quality of organisations.

	More important	As important as in 2003	Less important
What is your opinion about the role of supervising organisations in the hospital market in 2008	26%	57%	17%

Table 4.3a Results Survey 2003: question 6g

38 Inspectie voor de Gezondheidszorg.

Which topics will be monitored by supervising agencies? The next topics were mentioned by more than 50% of the respondents:

The quality of the delivered hospital care (78%)

Accessibility of hospital care (65%)

Competition in the health insurance market (64%)

Competition in the hospital market (64%)

Accessibility of health insurances (52%)

Table 4.3b Results Survey 2003: question 6

Do you agree with the next propositions?	Certainly	Maybe	Definitely not	No idea
1. Health insurance companies must certify themselves for being a good health insurance company.	37%	51%	6%	6%

Table 4.4 Results Survey 2003: question 3

Several rules and regulations have changed in recent years in the reform process of Dutch healthcare. The questionnaire shows however that most respondents are not sure whether deregulation will result in less influence of the government in the institutional environment. The results in the table below show that around 40 percent of the respondents expect this will definitely not happen (question 3.1, 3.2, 3.3). Question 3.3 shows that hospitals and health insurance companies experience elusiveness of rules and regulation. Only 6% of the respondents are certain that the predictability of rules and regulations will increase

.

Do you agree with the next propositions?	Certainly	Maybe	Definitely not	No idea
2. The government will withdraw itself from the hospital market the next 5 years (2003-2008).	7%	54%	38%	1%
3. The macro budget for hospital healthcare will disappear after successful implementation of DBCs.	7%	44%	41%	8%
4. The predictability of rules and regulations concerning hospital care will increase the next 5 years.	6%	41%	44%	9%
5. Competition between hospitals will increase because of the introduction of DBCs.	41%	51%	8%	1%
6. Private hospital care suppliers (including ZBCs) will play in 2008 a substantial role in the hospital market (with a market share part of more than 20%).	10%	46%	44%	1%
7. Insurants/patients will receive in 2008 a substantial part of their hospital care outside their own region.	6%	34%	56%	4%
8. New entrants in the health insurance market will play an important role.	16%	61%	16%	8%
9. The influence of umbrella organisations will decrease in the next years.	27%	56%	14%	3%
10. Organisations representing the interests of patients will gain more influence in the relationship between hospital and health insurance companies.	23%	54%	18%	5%

Table 4.5a Results Survey 2003: question 3

Respondents are not sure what will happen with the level of competition (table 4.5a and b): Only 8 percent thinks competition in the hospital sector will not increase, 41 percent thinks it will definitely increase (question 3.4);

- 10 Percent is certain that private hospitals will play an important role in 2008 and 44% thinks this will definitely not happen (question 3.5);
- Only 6% percent of the respondents is certain that patients will receive a substantial part of their hospital care outside their region, 56% thinks this will definitely not be the case (question 3.6);
- Only 16 percent expects new entrants to play an important role in the health insurance market and 16 percent think this will definitely not happen (question 3.7).
- Around a quarter of the respondents expects an increase in the influence of umbrella organisations (question 3.8) and patient organisations (question 3.9) and around 15 percent think this definitely will not happen[39].
- Only 4 percent of the respondents do not expect that health insurance companies will invest in procurement of hospital care from abroad.

What investments will be done by health insurance companies to maximise their profit of the introduction of more market mechanisms?	Fully agree	Partly agree	Do not agree	No idea
Procurement of hospital care abroad	26%	64%	4%	6%

Table 4.5b Results Survey 2003: question 6.2

Most respondents expect that collaboration between hospitals will either increase or change after the introduction of more market mechanisms. This is in line with the trend in the institutional environment of mergers between hospitals. Burgess et al. (2005) argue that hospital network activity itself does not affect price. However when they are working in the same market tis will raise the price. Overall conclusion of Burgess is that hospital networks are as likely to use arrangements in pro-competitive as in anti- competitive ways. Further research is recommended to gain more insights in the effects of network arrangements on hospital pricing behaviour.

Collaboration hospitals after the introduction of more market mechanisms (question 3k):

39% thinks hospitals will increase collaboration

9% thinks hospitals will decrease collaboration

15% thinks hospitals will not change their level of collaboration

39% thinks hospitals will change the way they collaborate

Table 4.6 Results Survey 2003: question 3k

39 With the concentration in the health insurance market the role of ZN as umbrella organisation for the health insurance companies has diminished in 2008. The role of the umbrella organisation of the hospitals has increased in 2008 with a focus on the communication with stakeholders like the Ministry of Health.

Competition with the threat of losing clients to competitors and the ultimate consequence of bankruptcy triggers organisations to be competitive and deliver a good performance on costs and/or quality. The threat of bankruptcy is an important precondition. Only 1 in 3 respondents expect bankruptcy for hospitals with bad performance in 2008 and 1 in 2 respondents expects this for health insurance companies. In 2006 the first Dutch hospital became bankrupt and had start up with a new owner and new management. Despite a very bad financial position of some Dutch hospitals there were no other cases until June 2008.

Will hospitals and/or health insurance companies with bad performance will be bankrupt in 2008?

29% expects both hospitals and health insurance companies with bad performance will be bankrupt
5% expects only hospitals with bad performance will be bankrupt
22% expects only health insurance companies with bad performance will be bankrupt
43% expects neither hospitals nor health insurance companies with bad performance will be bankrupt.

Table 4.7 Results Survey 2003 question 6f

4.8 Conclusions

In this chapter a description is given of the (expected) institutional environment of transactions between hospitals and health insurance companies and the level of competition based on the data gathered with desk research and additional interviews, case studies and a questionnaire.
This chapter confirms the dominant influence of rules and regulations on hospitals, health insurance companies and their transactions. Before 2006 rules and regulations determine the transactions between hospitals and health insurance companies and the way they are coordinated. In the three layers model the shift parameters between the institutional environment and the governance layer determine the way the transactions are coordinated.
In chapter 5 the results of the case studies confirm the dominant rules of rules and regulations before 2005.

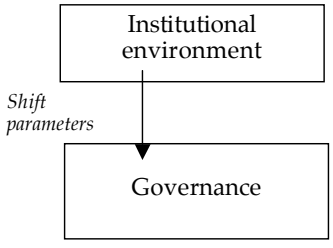


Figure 4.6 Framework to describe and analyse the transactions between hospitals and health insurance companies and its governance structure in a regulated environment.

With this conclusion sub question 1 is answered in this chapter:

How can we describe the transactions between hospitals and health insurance companies and its governance structure in a regulated environment?

The expected deregulation in the institutional environment will result in less influence of the shift parameters on the governance structure. The results of the questionnaire show the doubts about complete deregulation. The expected situation is rather a semi-regulated environment. The informal institutions, customs, traditions and religion in which the Dutch hospital care is embedded support these expectations. The basic assumptions in Dutch health care (access of health and insurance, solidarity and good quality of care) request a certain regulation. Changes in these assumptions will take decennia.

Limited competition in the hospital market (1) and the role of institution based trust (2) are two other important conclusions of this chapter.

(1) The market concentration in the health insurance market is high:
Mergers and acquisitions resulted in a limited number large financial organisations with different health insurance brands;

- There are very dominant health insurance companies in many regions;
- The entry barriers for new entrants are high.

The relevant market for health insurance companies is national. Despite the very dominant position of health insurance companies in many regions the number of health insurance companies is (still) sufficient to realise competition.

There are sufficient hospitals on a national level to realise competition. Most hospital care is however supplied within a region. The number of hospitals in many regions is limited which complicates the introduction of a market with competition between hospitals. Segmentation on the characteristics of hospital care and/or patient groups is necessary to determine the (potential) competition between hospitals. Urgent care and care for chronically diseased people and elderly people is delivered in general within a region. Highly specialised care and certain planned care have a bigger relevant market as this care is often provided to patients outside the region. However the complication of highly specialised care is that special permission of the government is needed to receive financial compensation. The result is that only a very limited number of hospitals deliver this care on a national level.

Competition is included, in chapter 2, in the extended three layers model for the design oriented part of this study as complication with competition was expected. This chapter confirms that a limited number of hospitals can complicate the realisation of competition in certain segments of hospital care or for certain patient groups.

(2) The basic assumptions in Dutch hospital care do not correspond with complete deregulation and the effects of a free market. The management of hospitals and health insurance companies have a variety of ideas about the future institutional environment and the role of the government. Expected changes in rules and regulations are not clear. This elusiveness of rules and regulations is presented in chapter 2 in the extended three layers model as institution based trust. Low institution based trust effects the behaviour of economic actors and will be taken into account in the design part of this study.

Chapter 5 Governance and Individual Layer

Chapter 5 Governance and Individual Layer

5.1 Introduction

The extended three layer model is applied in this chapter to describe and analyse the transactions between hospitals and health insurance companies and the way they are coordinated. Data gathered with the case studies and with the questionnaire are used to increase our understanding of the governance structure and the variables which determine the efficiency of this governance structure. As described in chapter 2 the characteristics of the transactions have a dominant impact on the coordination of transactions. Additional variables which have a direct or indirect effect on the way transactions are coordinated are presented in the extended three layer model. The shift parameters, behavioural attributes, economies and scale and competition have a direct effect on the governance structure. Institution based trust and the direct influence of individual actors on politics and government have an indirect effect. The shift parameters resulting from the institutional environment, competition and institution based trust are presented in chapter 4. The other variables are described in this chapter.
In section 5.2 the results of the case studies and in section 5.3 the results of the questionnaire are presented. This chapter ends with a conclusion about expected changes in the way transactions between hospitals and health insurance companies in a deregulated environment will be coordinated in an economic way.
In the next chapter the results of chapter 4 and 5 are used to identify the hazards for the transactions between hospitals and health insurance companies in a deregulated environment.

The "extended three layers model" as presented in chapter 2 is presented in the next figure.

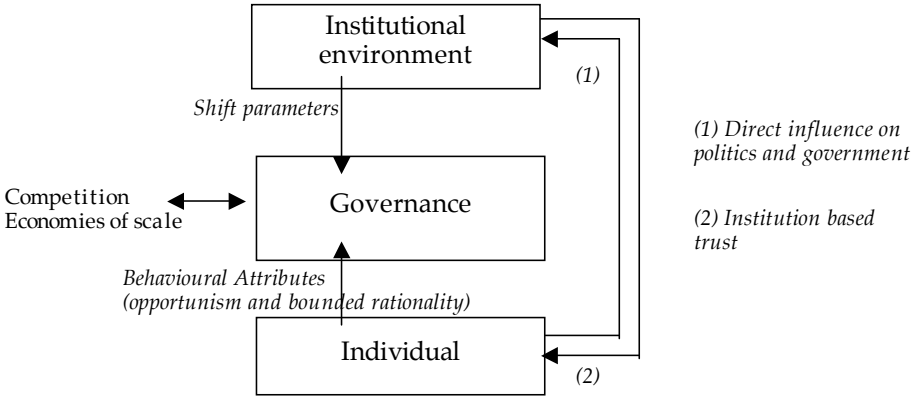


Figure 5.1 The extended three layers model.

5.2 Results of the case studies

In this section the results of the two case studies performed in 2000-2002 (before deregulation) are presented to describe and analyse the governance and individual layer. First the governance structure as found in the two case studies is described (5.2.1.). Next the characteristics of the transactions (5.2.2.), economies of scale (5.2.3.) and the behavioural attributes resulting from the individual layer (5.2.4.) are described. This increases our understanding of how these variables determine the efficiency of the governance structure.

5.2.1 The governance structure

A contract, meetings and performance reports were found as instruments in the governance structure of the two case studies. However there role in coordinating the transactions was found to be limited due to the dominant role of rules and regulations and the limited financial risk for contract partners. In a regulated environment the added value of institutional arrangements other than the ones prescribed by rules and regulation are limited. Both hospitals and health insurance companies in the case studies confirmed the limited impact but saw their efforts as a first step towards the governance structure necessary in the expected deregulated environment.

The contract

The gathered documents (archival records) in both case studies showed that the prescribed individual contracts based on the standardised form of CTG are concluded on a yearly basis. The contract between hospital and health insurance company contained standardised parts (start and duration of the contract, rights and duties and so on) and three main topics which were filled out every year:

1. Budget

In chapter 4 the budget system as prescribed by rules and regulations is described. The negotiators in the two case studies complained that the budget was set for 95% by rules and regulations. Their negotiations were focused on only the last 5% of the budget.

2. Production figures

The production figures in a hospital are related to historical production (e.g. number of beds) and to the budget. Until 2002 hospitals did not receive financial compensation for an increase in production. The case studies showed this resulted in a conflict of interests as health insurance companies had to reduce waiting lists for their insurants. With the introduction of a new rule in 2002 ("boter bij de vis"), which compensated hospitals for extra production, this conflict of interest disappeared. Case study B showed also another conflict of interest. Health insurance company B wanted priority for their insurants in hospital B as they had waiting lists for insurants in other regions. Hospital B gave patients in the own region priority[1] and is not bothered about the insurance company of the patient. This resulted in conflicts.

1 An important reason for this is that studies have shown that patients prefer to be treated in a nearby hospital.

3. Number of specialists
The number of specialists and medical functions were the third topic in the contract. The two case studies showed that hospitals prefer to increase the number of medical functions in their hospital. An increase in medical functions increases production, budget, reputation and the possibility to attract good physicians. Health insurance companies are consulted by the Ministry of Health before a hospital is awarded for the request of a new medical function. Hospitals and health insurance companies have a conflict of interest as health insurance companies want optimisation of medical functions in a region.
Hospital A and B discussed additional medical functions with the health insurance companies. To increase their negotiation power hospital A discussed the division of medical functions with other hospitals in the region before discussing it with the health insurance company.

The case studies showed that contract partners did not feel the need to use additional arrangements to reduce the risk of opportunistic behaviour. Health insurance company B mentioned that they can ask support of one of the supervising agencies when they have lost faith in the hospital. In practice this instrument was hardly used as problems were discussed and solved between the contract partners. This is illustrated with the next quote of a physician in hospital B:

> *"Punishments for breaching the contract are not necessary. Health insurance companies and hospitals will not start a fight. They are sentenced to each other for the regional demand and supply of hospital care."*

Hospital B and health insurance company B did not share their willingness to create a partnership. Hospital B liked to share financial risks and involved health insurance company where possible. An example of an initiative of hospital B was the membership of a board member of health insurance company B in the new building "think tank" of hospital B.
Health insurance company wants to operate independently and does not want to increase dependency with for instance long term contracts or co-financing activities.
There was a conflict when health insurance company B breached the long-term contract with hospital B as soon as financial disadvantages appeared for them due to changes in government rules and regulations. There were no punishments recorded in the contract. This opportunistic behaviour of health insurance company B had a negative impact on the relationship with hospital B.

Hospital A and health insurance company A did not like the idea of a partnership. Health insurance company A did not want to be involved but liked to be informed about major investments in hospitals. The next quote of the negotiator of health insurance company A illustrated this: *"Hospital A is not very keen on discussing the hospital policy with the health insurance company".* Hospital A informed health insurance company A only when they need additional budget.

In both cases additional contracts were concluded for financing innovation/improvement projects in the hospitals. This is illustrated with the next quote Hospital B physician: *Coordination between hospital and health insurance company is necessary to realise innovation and major improvements in hospital care.* Both health insurance companies used a form that had to be filled out to apply for financial compensation for hospital innovation/improvement projects[2]. Compared to the budget of the hospital there were no considerable amounts of money involved in these additional contracts.

Meetings

In both case studies meetings were organised between hospitals and health insurance companies. In both case studies four types of meetings were determined:

1. Two to four times a year the hospital policy was discussed. In spring the long-term policy plan of the hospital was discussed in one or more meetings with the health insurance company. In autumn the results and problems in the realisation of the hospital plan were discussed in the same setting.
2. Several technical meetings were held to prepare the content of the contract and the negotiating process. In the technical meetings representatives of the health insurance company, the national representative[3], the finance manager and the representative of the medical staff of the hospital attend. Production figures and rules and regulations are the main discussion topics.
3. The contract negotiation meetings were joined by representatives of the health insurance company, the national representative, the board member, finance manager and the representative of the medical staff of the hospital.
4. Several meetings were organised to discuss the hospital performance during the year.

In the case studies 4 problems were found with respect to the meetings which did not have major impact in a regulated environment but could result in hazards in a deregulated environment.

1. In general the meetings were not well structured and archived.
   Discussions and agreements about qualitative aspects were not archived at all. A quote of the health insurance company A negotiator illustrates that this caused problems: *"Arrangements between hospital and health insurance company are not always documented well within health insurance company A. This gives the hospital the possibility to behave opportunistically."*
2. The policy meetings were focused on financials and not on policy concerning delivered hospital care.
   Both hospitals[4] were very negative about the added value health insurance companies had in discussions about hospital care. The only advantage hospital B found in the policy meetings was the referral of health insurance company B to examples of innova-

2 In case study A there were three projects running in 2001 (started in 2000) with a financial horizon of 3 years. One project was 50% financed by the hospital. The form provided by health insurance company A contained information about project definition, project goal, financials and number of patients. In some projects the medical adviser of the health insurance company was involved in the project team, in others there was only periodic reporting.

3 The national representative and health insurance company try to reach consensus before discussing issues with the hospital. Although their interest is often conflicting they have a good relationship in which they act as a team.

4 In 2002 the archiving system for hospitals in health insurance company B is not yet computerised. A project team is concerned with future improvements in the information system.

tions in other hospitals (best practices).[5]. A quote of hospital B financial manager illustrated the situation: *"Current policy meetings are a ritual. The real decisions are made in informal meetings between the directors of both hospital and health insurance company."* The dominant role of rules and regulations was perceived as main cause of the limited added value of the policy meetings. A physician of hospital B illustrates this with the next quote: *"Realisation of agreements made in policy meetings is difficult due to rules and regulations".*

3. Unbalanced negotiation partners.
   The hospitals in both case studies found it problematic that the representatives of the health insurance companies had no decision power in the negotiations. They often had to go back to their manager to discuss the issue. This slowed down the negotiation process and frustrated the board of directors of the hospitals. The health insurance companies admitted the problem but also that this was the negotiation strategy of the health insurance company.
4. Delay in negotiations.
   In both cases studies the budget was not set and negotiations were not finished before the start of a new budget year. In case study B the budget for 2002 is discussed for the last time in spring 2002 before it is set. Both hospital and health insurance company claim this is not a desirable situation, however in practice, given the framework of rules and regulations, there is believed to be no real alternative.

Performance reports

The health insurance companies used the provided financial reports of the hospitals to analyse their pattern of spending and to signal financial misbehaviour (e.g. under investments). The gathered performance reports in both case studies show that both hospital A and B deliver the legally required management information to the contracted health insurance companies:

1. production figures;
2. number of fulltime equivalents;
3. number of specialists;
4. waiting lists and extra production (compared to agreed production);
5. entry time (Treeknormen[6]and OPD);
6. number of performances (verrichtingen).

There were several issues were found in the two case studies related to the management reports. Again these issues had no severe consequences in a deregulated environment but should be addressed properly in a regulated environment to avoid opportunistic behaviour of one of the contract partners.

1. In both case studies the management reports were delivered often too late without any consequences. The process of management reporting from hospital A to health insurance company A had a long history of problems. Reports were delivered too late and incomplete. For example the first quarterly report of 2001 was delivered in July

5 There is a regular report with benchmark data of the hospitals performance. Health insurance company B has started a study to define performance measures for the quality of hospital care (not highly specialised). This is done with 8 or 9 hospitals (including Hospital B). The study is financed by health insurance company B and the hospitals. Benchmark information health insurance companies can generate in the nearby future can be of help for health insurance companies and hospitals to improve efficiency and quality.

6 Treeknormen are the permitted maximum number of people on waiting lists.

2001. An important cause was the problems hospital A experienced with its information system. Hospital A was also sometimes reluctant to provide health insurance company specific information. Hospital B also had delays in reporting internal and external management information. This was mainly due to the new information system. The expectations were that in the future hospital B would be able to generate sophisticated management reports.

2. In both case studies the monitoring of health insurance companies on the performance of hospitals and more in particular the quality of the delivered hospital care was perceived as weak. For instance in case study A quality of hospital care was only monitored by the health insurance company with the registration of complaints of insurants. There were two reasons for the weak monitoring: (1) The information system of both health insurance companies was inadequate. Both health insurance companies were investing in their information systems. Health insurance company B mentioned that they also had the intention to benchmark hospitals on performance. (2) The role of the medical advisor in monitoring the performance of hospitals was relevant but limited. Their capacity was limited and they did not acquire the necessary information from the hospitals. This is illustrated with a quote of the health insurance company A medical advisor: *"Professional medical groups have a peering review to check the performance of physicians in hospital A. These visitation reports are not given to health insurance company A".* In both case studies reputation was recognised as an important safeguard which prevents the delivery of poor hospital care. A good reputation attracts patients which is important for both hospital management and physicians.
3. As mentioned hospital B wanted to establish a partnership with health insurance company B and provided health insurance company B with additional performance reports. Long term investment plans, the results of the Balanced Scorecard, the quality annual report and health innovation initiatives were provided. However these reports were never discussed between the contract partners and were only used by the health insurance company to check whether the initiatives were in line with rules and regulations.

The differences between the two case studies concerning the governance structure and used instruments were found to be limited to the perceived dependency and the willingness to realise a partnership.

5.2.2 Characteristics of the transactions

As described in chapter 2 TCE discerns 3 characteristics of a transaction: asset specificity, frequency and complexity. These characteristics can give rise to hazards and have therefore impact on the governance structure. The results of the case studies are used in this section to describe and analyse the characteristics of the transactions between hospitals and health insurance companies. The results of chapter 4 show that the characteristics of the transactions between hospitals and health insurance companies are found to be irrelevant for the governance structure in a regulated environment. The results of the case studies confirm these results. However the extended three layers model shows that the characteristics of transactions will become relevant in a deregulated environment as the governance structure is no longer prescribed by rules and regulations. The charac-

teristics found in the case studies are relevant for the next chapter of this study in which the hazards of the transactions between hospitals and health insurance companies in a deregulated environment are identified.

Asset specificity

The results of the case studies showed several categories of asset specificity. TCE perceives asset specificity as an issue as it bears financial risks for contract partners when one of the partners breaches the contract and switches to a competitor. The results of chapter 4 showed that the rules and regulations prevent switching. Contract obligation makes the financial risk related with asset specificity irrelevant for hospitals and health insurance companies. Further deregulation will change this situation.

1. Site specificity

In both case studies hospitals and health insurance companies claimed that most patients (especially certain patient groups) prefer to go to the hospital in their region and sometimes even town. The distance between a hospital and supply chain partners (e.g. nursing homes) was also identified as a site specific asset as this had impact on transportation costs. Site specificity was seen as especially crucial for urgent care as patients are brought in general to the nearest hospital. For a hospital with a limited number of competitors in the region (like case study B) site specificity was most relevant.

2. Physical asset specificity

During the case studies the physical assets of hospitals were distinguished in the next categories:

- Buildings and equipment related to capacity (number of beds, OPD treatments)
- Equipment, innovative techniques and educated people related to certain specialised care.
- Equipment to support the hospital organisation in general (e.g. ICT).

Assets in the first category are related to volume but not related to certain products/ treatments delivered by the hospital (DBCs). Especially urgent care has a high capacity related financial component. Also hospital care which requests an operation and/or admission has a capacity related component. Hospital buildings are big investments often related to the number of beds (volume). These investments include new hospital development, expansions, renovations and improvements of the buildings. Redeploying the assets for contracts with other health insurance companies is possible. However possibilities are limited as (1) most patients go to nearby hospitals and (2) in many regions there is a dominant health insurance company with a market share of 50 tot 90 percent. This may cause problems for hospitals to redeploy these assets as other health insurance companies. Redeploying the assets for other purposes is also possible as an example illustrates. The first bankrupt hospital in the Netherlands "Slotervaart hospital" had several bidders in 2006. One of them wanted to create apartments in the hospital building.

Hospital A did not view asset specificity as a threat as (1) the budget system compensated investments (2) the contract obligation and (3) the shortage of hospital care supply. Hospital B experienced high financial risks for the innovative building concept with investments in IT and a new hospital building which did not fit into the rules and regulations.

Health insurance company B supported hospital B in the discussions with the Ministry of Health about the budget. However health insurance company B did not like to share risks and co-finance the innovative building concept.

Investments in physical assets differ among hospital products. For instance most highly specialised hospital care needs high investments in medical equipment. Physical asset specificity occurs when investments in these assets are not redeployable when the contract partner ends the contract. In both case studies physical assets of the second category were found. In some cases the health insurance company financed part of the assets with innovation funds. These funds were however limited compared to the hospitals budget. Both hospital A and B did not experience the risk of physical asset specificity for the transactions with health insurance company A respectively B due to the contract obligation and budget system.

Physical assets in the third category (equipment to support the hospital organisation in general) are not related to a hospital product but related to the organisation as a whole. There are possibilities for redeployment.

3. Human asset specificity
The case studies showed that the quality, qualifications and reputation of physicians are in many cases leading for the patient to choose a hospital. Both hospitals and health insurance companies recognised that having the best physicians in a hospital is an important asset. This attracts patients especially for specialised and complex care. Health insurance companies would prefer to contract hospital care for their insurants given by the best physicians. This is however only possible with further deregulation.

Not only rules and regulations but also asset specific investments to realise transactions between hospitals and health insurance companies can result in barriers to entry for new hospital care suppliers. This is applicable for the next hospital care: (1) hospital treatments which require the availability of an intensive care, (2) hospital treatments requiring high investments in building or equipment and (3) hospital treatments which know a shortage of physicians.

Frequency

Frequency is related to the number of transactions between two contract partners. As described in chapter 2 the frequency of transactions has an impact on the efficiency of the governance structure. The results of the desk research showed that social health insurance companies had in general high market shares in certain regions. A high market share in a region implied many patients consulting the hospitals in the region. This results in many transactions between hospital and health insurance company and therefore a high frequency. Private health insurance companies have lower market shares and therefore a lower frequency. The case studies confirm these findings. In both case studies the social health insurance companies have high market shares and the private health insurance companies represented by the national representative have low market shares. As described in chapter 4 the difference between public and private health insurance companies has been lifted in 2006. However the dominant market shares of certain health insurance companies have not changed.

It is not only interesting to analyse frequency related to the market share of the health insurance company but also for hospital products. Some hospital treatments or DBCs occur frequently others are very rare. This is mainly a result of the occurrence of the disease. This frequency is not related to the commonly used segments of hospital care as all segments (urgent, highly specialised and planned care) know frequent and rare treatments (DBCs).

Complexity

Within TCE a transaction is called complex when the price and/or quality of a product or service is not transparent[7]. The more information is not captured in the market price, the more complex the transaction (see also chapter 2).

The results in chapter 4 show that the government has introduced the DBC system to handle the complexity of hospital care and increase the transparency of costs and performance of hospital care. The interviewees in the two case studies confirmed that hospital care is complex. The complexity is caused especially by the variety in products and the difficulty to measure and benchmark quality of delivered hospital care. The next three important aspects of information are mentioned in the interviews held and documents consulted in the case studies:

1. Volume: the production figures are registered by the hospital and reported to the health insurance companies on a periodic basis.
2. Quality: the variety in products (diagnoses and treatments) and the specialised knowledge of the physicians indicates how difficult it is to measure quality of hospital care with performance indicators. The risk profile of patients complicates this process. An example was given in the case studies: a patient with heart problems having an operation related to another diagnosis (e.g. a fracture) has a higher risk of experiencing complications than a patient without these heart problems. This makes benchmarking complicated. As the medical advisors of health insurance company A illustrates the government (IGZ) plays an important role: *"The medical performance of a hospital is not transparent for a health insurance company; however the health insurance company can alert the IGZ*[8] *when signals of medical performance problems are detected by the health insurance company".* Reputation was mentioned by both hospital and health insurance company in both case studies as important incentive for hospitals to deliver high quality hospital care.
3. Costs: in the budget system costs of hospitals were not linked to output/products which make benchmarking and managing costs difficult. One of the goals of the introduction of the DBC system was to change this. A physician in the case studies confirmed this: "DBCs will increase the transparency of costs".

7 TCE calls problems with performance measurement of complex transactions a measurement hazard which can result in high transaction costs due to oversearching (Williamson 1996). A measurement hazard can cause instability in the transactions between two organisations when not handled properly with an adequate governance structure.

8 Inspectie voor de GezondheidsZorg: this organisation has the task to check the quality of care delivered by hospitals in the Netherlands.

5.2.3 Economies of scale

In the extended three layers model economies of scale are presented as a variable having impact on the governance structure for the transactions between hospitals and health insurance companies in a deregulated environment.
Economies of scale are related to the costs per product for different production volumes. For instance 200 hip replacement operations a year will result in other investments in physical assets and another price compared to 2000 hip replacement operations a year. Production in the market has the advantage that volumes necessary for several health insurance companies can be joined. Insourcing by a health insurance company reduces the volume to the necessary production for its own insurants. It is relevant to determine for hospital products whether they are provided to patients on a regional or a national level as competition differs. On a national level the market shares of health insurance companies are not dominant. The case studies confirmed that on a regional level market shares can be very dominant (70 to 80% of all insurants). Economies of scale are no issue to insource hospital care with a regional focus for health insurance companies with a dominant market share in the region. The interviewed persons in the case studies expect an exception for the hospital products which occur very rarely and hospital products which request very high initial investments which can be shared in the market (like urgent care). Economies of scale of production in the market can be relevant for health insurance companies with minor market shares in the region and for hospital care with a national market. Economies of scale of the market can also be relevant for highly specialised care which requests high initial investments in physical assets and human assets. The results of the case studies show the complexity of economies of scale for hospital products due to variety in market share of health insurance companies and the variety in frequency and initial costs of hospital care.

5.2.4 Behavioural attributes: the individual layer

TCE distinguishes bounded rationality and opportunistic behaviour as behavioural attributes of the individual actors. The results of the case studies show the limited impact of bounded rationality and opportunistic behaviour on the transactions between hospitals and health insurance companies in a regulated environment. This confirms the results of chapter 4 in which the governance structure is determined rules and regulations. The case studies show however a potential threat of bounded rationality and opportunistic behaviour for the transactions between hospitals and health insurance companies in a deregulated environment when not coordinated properly.

Bounded rationality and information asymmetry
As described in chapter 2 actors have a limited ability to process information. This implies that they act with limited rational behaviour or with "bounded rationality". The results of the case studies show that both hospital and health insurance company are focused in their negotiations on the legally required budget parameters related to production. Quality and efficiency are not taken into account.

Within TCE especially information asymmetry is identified as a point of attention for transactions between two organisations. Information asymmetry in combination with opportunistic behaviour is seen by Williamson (1996) as one of the main problems for transactions between two organisations as it creates instability (see also chapter 2). The interviewees in the case studies identify information asymmetry as an issue for the transactions between hospital and health insurance company. Both health insurance company A and B experience a considerable lack of knowledge about the performance of the hospitals. In a regulated environment the problems arising from this information asymmetry in the transactions between hospitals and health insurance companies are however limited. This situation will change with further deregulation as opportunism will result in negative financial consequences for the other contract partner. The results of the case studies show that the expectation of hospitals and health insurance companies is that both want to reduce this information asymmetry with investments in for instance information systems and benchmarking. The expectation is however that the both actors have cognitive limitations in processing information and hospitals and health insurance companies will not be able to completely avoid information asymmetry.
The case studies show three causes of the information asymmetry between hospitals and health insurance companies:

1. Knowledge of hospital care, which is complex, is limited within health insurance company A and B. Employees are in general not medically educated but business oriented. Only the medical advisor of the insurance company has a medical background. Both health insurance companies in the case studies have medical advisors. The medical advisor has mainly added value in innovative/improvement activities in the hospital. Health insurance company A never visits the hospital to view production units and gain understanding of the operation and performance of hospital A. Quote of physician in hospital A: "*The knowledge of the health insurance company about what happens in a hospital has shortcomings".* A quote of the health insurance company B negotiator: *"Health insurance company B does not have an exhaustive picture of the performance of hospital B".*
2. Both health insurance company A and B have a high turnover rate in contact persons for the hospital which increases lack of knowledge and experience. Health insurance company A had three different persons in the last year. Health insurance company B has replaced its contact person four times in six years.
3. As mentioned hospital A and B have problems with their information system and are not able to process and report performance information.

Opportunism

The assumption of TCE is that organisations can behave opportunistically. When the economic actor gets the opportunity from an economic point of view[9] he will act in his own favour (see also chapter 2).
Interviewees in both case studies (hospitals and health insurance companies) confirm the existence of opportunistic behaviour. Quote Health insurance company A negotiator: *"Lack of transparency makes both partners suspicious".* The hospitals are most likely to behave opportunistically due to the information asymmetry experienced by health insurance companies. Quote Health insurance company A negotiator: *"Hospital A is behav-*

9 For example TCE claims that an actor will breach the contract when the punishment of breaching the contract is less than the gain.

ing opportunistically whenever they have the possibility". An illustration with a quote of the board member hospital B: *"Hospital B behaves opportunistically with the goal to gain more budgets."*
An example of opportunistic behaviour of health insurance company B is the contract concluded with a hospital abroad to solve their waiting list problems without informing hospital B. Hospital B was not amused as they were not involved.
In the two case studies the consequences of opportunistic behaviour on the transactions were experienced as limited due to the regulated environment. The financial consequences of opportunistic behaviour for both hospitals and health insurance companies will rise with further deregulation.

5.2.5 Direct influence of individual actors on the institutional environment

The extended three layer model shows that individual actors not only determine the efficiency of a governance structure with their behavioural attributes but also indirectly by influencing the institutional environment. In both case studies hospitals and health insurance companies illustrate this indirect influence with the use of lobbying and press and media to influence directly the policy makers at the Ministry of Health and politics.
An example found in case study B is hospital B using the media to express their dissatisfaction with the negative impact of rules and regulations on hospital care[10]. Health insurance company B was not informed and not pleased with this article as it damaged their reputation.
Also lobbying is used in both case studies and the board of directors of both hospitals and health insurance companies have positions in committees which are related to the government.
The direct influence hospitals and health insurance companies have on the institutional environment is perceived as negative as it is used often opportunistically. The next quote of a physician of hospital A illustrates this: *"Lobbying within the government occurs without informing health insurance company A".*

5.3 Results of the questionnaire

The case studies have resulted in an increased understanding of the transactions between hospitals and health insurance companies and the governance structure. The information with respect to the expected future situation found in the case studies was however limited. As described in chapter 3 a questionnaire was used in this study additional to the case studies. In this questionnaire all hospitals and health insurance companies were questioned about the transactions between hospitals and health insurance companies, the governance structure and the expected changes. The expected institutional environment is described and analysed in chapter 4 using the results of the questionnaire. In this section the results of the questionnaire are used

10 Hospital B experienced frustration of the rules and regulations and the fact that health insurance company B did not want to share any of the financial risks of the new building.

to increase our understanding of the expected governance structure and the variables which determine this governance structure[11].

5.3.1 The governance structure

The questionnaire included questions about the current governance structure and the expected future governance structure. The next table shows that reliable DBC information, trust between negotiators and a good relationship between the board of directors and the physicians in a hospital are perceived as most important by 80 to 90% of the respondents. A good contract and good knowledge of the need for hospital care are perceived as important by 60 to 70 percent of the respondents.

How important are the next characteristics of the negotiations between hospital and health insurance company?	Not important	Somewhat important	Important	No idea
1. A good contract	4%	31%	65%	0
2. Reliable DBC information	5%	20%	75%	0
3. Long-term relationship between negotiators	13%	57%	28%	2%
4. Trust between negotiators	3%	20%	77%	0
5. Good relationship between board of directors and physicians in the hospital	0%	21%	79%	0
6. An health insurance company having a good knowledge of the hospital	5%	45%	50%	0
7. Negotiators having a good knowledge of the need for hospital care.	1%	33%	65%	1%

Table 5.1a Results Survey 2003: question 6k

In chapter 2 reputation is mentioned as a credible threat which can be used in governance structures to mitigate hazards and opportunistic behaviour. The results of the questionnaire show that the respondents think that reputation is important for the transactions between hospitals and health insurance companies. Voicing about reputation can therefore be used in the governance structure as a credible threat.

Do you agree with the next proposition?	Certainly	Maybe	Definitely not	No idea
1. Reputation will retain an important variable for hospitals to monitor the quality of the delivered care and to monitor the satisfaction of patients.	88%	9%	2%	1%

Table 5.1b Results Survey 2003: question 3

11 In the presentation of the findings of the questionnaire no differentiation is made between the answers of hospitals and health insurance companies. As described in chapter 3 there are no significant differences found in the answers of both respondent groups.

Respondents expect a slight, although not significant, shift in the characteristics of the relationship between hospitals and health insurance companies (table 5.2). A bit more tight lipped, content oriented, hostile and long term focused.

How would you characterise the relationship between hospital and health insurance company?	In 2003 Average score	In 2008 Average score
1 = very open, 5 = very tight lipped	2,4	2,8
1 = very content oriented, 5 = very process oriented	3,2	2,8
1 = very cooperative, 5 = very hostile	2,6	2,8
1 = short term focused5 = long term focused	2,5	2,7

Table 5.2 Results Survey 2003: question 6m and 6n

The questionnaire was filled out by the respondents in 2003. Table 5.3 shows that respondents expect various scenario's for the governance structure which will be used in 2008 for the transactions between hospitals and health insurance companies. Shared investments, preferred supplier contracts, contracting with several health insurance companies and the use of benchmark information, DBC information and protocols are mentioned by respondents as possibilities. The recommendations in this study will show whether these governance structures are appropriate for the transactions between hospitals and health insurance companies in a deregulated environment in the light of TCE.

Which scenario is most likely in 2008?			
1. Hospital and Health Insurance Company cooperate to improve hospital care with shared investments. Investment risks are shared for certain projects.	36%	Only the hospital is responsible for delivering hospital care	64%
2. Hospitals and health insurance companies have a yearly contract including price and capacity of a complete package of DBCs. The hospital can be certain of payments for this package.	18%	Hospital and health insurance company have a preferred provider contract, including DBCs and prices. The health insurance company pays only the DBCs used taken by the insurants. The hospital is responsible for setting the capacity.	82%
3. The hospital negotiates with different health insurance companies (for instance in favour of spreading the risks)	39%	Hospital negotiates only with health insurance companies with a high market share in the region.	61%
4. Hospital and Health Insurance Company will present themselves with quality certificates, which will be used in the negotiations.	22%	Hospital and health insurance company use benchmark information in their negotiations.	78%
5. Health insurance companies use protocols to guarantee the quality and efficiency of the hospital and physician	28%	Health insurance companies will use the DBC information delivered by the hospital to guarantee the quality and efficiency of the purchased hospital care.	72%

Table 5.3 Results Survey 2003: question 6a-6e

Respondents expect several alternatives for contracting health insurance companies with a minor market share which indicates the expectation of more variety in future governance structures. Linking up with the market leader, a product catalogue and shared procurement organisations are marked by the respondents as alternatives. Only 1 in 5 respondents expects that a product catalogue will be used by health insurance companies.

How will health insurance companies with a minor market share contract hospital care in 2008? (more answers possible)	% respondents
1. With a contract concluded with a health insurance company with a high market share	42%
2. Using a product catalogue which includes the hospital products and prices	21%
3. Using procurement organisations in which more health insurance companies with minor market shares participate	58%
4. Other	5%

Table 5.4 Results Survey 2003: question 6l

The results in the table below show that health insurance companies are expected to invest more in information systems, benchmarking and contracts and negotiations with hospitals. Respondents are positive but less unanimous about investments in hospital care knowledge and private hospital care suppliers[12]. These investments will reduce the information asymmetry between hospitals and health insurance companies as found in the case studies.

What investments will be done by health insurance companies to maximise their profit of the introduction of more market mechanisms?	Fully agree	Partly agree	Do not agree	No idea
1. Hospital care knowledge and medical advisors	32%	53%	10%	5%
2. Information systems	74%	23%	2%	1%
3. Benchmarking of hospital performance (including the performance of physicians)	81%	17%	0%	2%
4. Contracts and negotiations with hospitals (procurement)	72%	26%	1%	1%
5. Knowledge of hospital care issues	27%	55%	15%	3%
6. Private hospital care suppliers	33%	61%	4%	2%

Table 5.5 Results Survey 2003: question 6.2

The results of the case studies show that information about the performance of the hospital is a problem. The table below shows that respondents of the questionnaire expect that

12 Investments in private hospital care suppliers would suggest ownership of the health insurance company of a hospital care supplier which transforms the current hybrid governance structure into in a hierarchy.

the implementation of DBCs will result in an improvement of the internal management information but also a rise in administration costs. Also a changing relationship between physicians and the board of directors of a hospital is expected.

What are the consequences for hospitals of the implementation of DBCs?	Fully agree	Partly agree	Do not agree	No idea
1. Improvement of internal management information	71%	27%	1%	1%
2. Higher costs of administration	56%	32%	7%	5%
3. Changing relationship between physician and board of directors due to higher transparency of the performance of physicians	47%	44%	7%	2%

Table 5.6 Results Survey 2003: question 5.1

The table below shows the expectation that negotiation and contract costs will also rise. Most respondents also expect that differentiation and marketing become more important for hospitals. This suggests that marketing costs will rise for hospitals.

What are the consequences for hospitals of lifting the contract obligation between hospitals and health insurance companies?	Fully agree	Partly agree	Do not agree	No idea
1. Higher negotiation and contract costs (sales)	53%	38%	4%	5%
2. Differentiation and marketing become more important	69%	30%	1%	0%

Table 5.7 Results Survey 2003: question 5.2

In addition many respondents expect a rise in higher administrative costs for buying hospital care.

The expected position of health insurance companies in 2008 when DBCs are implemented successfully.	Fully agree	Partly agree	Do not agree	No idea
1. Health insurance companies will experience higher (administrative) costs for buying hospital care.	49%	26%		13%

Table 5.8 Results Survey 2003: question 6.1

This expected rise in transaction costs will be taken into account in the next chapter. The recommendations for the most appropriate governance structure incorporate the expected rise in transaction costs when the current hybrid governance structure for the transactions between hospitals and health insurance companies is used in a deregulated environment.

5.3.2 Characteristics transactions

The results of the case study show that asset specificity was not perceived as an issue for the hospitals as health insurance companies are obliged to contract every hospital. The results of the questionnaire show that after lifting the contract obligation hospitals will be more vulnerable when high investments are made.

What are the consequences for hospitals of lifting the contract obligation between hospitals and health insurance companies?	Fully agree	Partly agree	Do not agree	No idea
1. Vulnerability when high investments are made in care with sufficient supply	41%	47%	8%	4%

Table 5.9 Results Survey 2003: question 5.2

With the results of the case studies it was possible to generate a segmentation of hospital care based on the characteristics of the transactions between hospitals and health insurance companies. For this study segments of hospital care are made using the characteristics of the transactions: frequency/volume and complexity (based on the level of risk and the complexity of performance measurement).
Also traditionally used segments for hospital care (highly specialised, planned and urgent care) are used in the questionnaire. As described these traditionally used segments know different kinds of asset specificity and level of competition (regional versus national).

With the questionnaire the expectations of hospitals and health insurance companies about the possibility of a market structure for the different segments were investigated. The results, presented in the next table, show a significant difference between the widely used segments and even a greater difference in expectations in the segments based on volume and complexity. Planned care and care with high volume, low risks and measurable results are expected by most respondents to be segments for which a market structure is perceived to be possible. The recommendations in the next chapter will show that this TCE study confirms the expectations of the respondents on most aspects.

For which segments of hospital care is a market structure possible?	Certainly	Maybe	Certainly not	No idea
1. Highly specialised care	5%	38%	51%	6%
2. Planned care	68%	27%	4%	1%
3. Urgent care	5%	20%	71%	4%
4. Care with high volume, low risk and measurable results	78%	18%	4%	0%
5. Care with low volume, high risks and complex performance measurement	2%	25%	70%	3%

Table 5.10 Results Survey 2003: question 2.1

5.3.3 Individual layer

Information asymmetry between hospital and health insurance company was found in the two case studies. The results of the questionnaire show that most respondents expect that the performance of hospitals will become more transparent in the future and health insurance companies will negotiate more on price and quality. However information asymmetry is expected to remain for the performance of physicians. This can be a deliberate choice of the health insurance companies not to invest more in this knowledge or it can be due to bounded rationality of health insurance companies. Respondents do not expect that health insurance companies will be better capable in reducing waiting lists, direct patients to a hospital, or employ more influence on hospital policy or –investments.

The expected position of health insurance companies in 2008 when DBCs are implemented successfully.	Fully agree	Partly agree	Do not agree	No idea
1. The performance of hospitals is more transparent to health insurance companies	38%	50%	9%	3%
2. The performance of physicians is more transparent to the health insurance company.	3%	13%	59%	25%
3. Health insurance companies will negotiate lower prices in their negotiations with hospitals (assuming hospital care supply is sufficient)	42%	47%	9%	2%
4. The insurance company will call hospitals more often to account for the quality of delivered care.	43%	41%	14%	2%
5. Health insurance companies will employ more influence on the policy and investments of individual hospitals.	8%	44%	44%	4%
6. Health insurance companies are better capable in reducing waiting lists	15%	58%	23%	4%
7. The insurance company will decide in which hospital the insurant receives its hospital care[13]	13%	62%	20%	5%

Table 5.11 Results Survey 2003: question 6.1

5.3.4 Direct influence on the institutional environment

The case studies showed the use of press and media by hospitals and health insurance companies to influence politics and policy makers directly. The results of the questionnaire show that press and media will continue to be important in the future for the transactions

13 These contracts between insurant and insurance companies are called "stuurpolis". With a "stuurpolis" an insurance companies sends patients to certain hospitals which are contracted. Patients can choose to go to another hospital but there is the possibility that the insurance company will not restitute all the costs (in case the prices are higher compared to the contracted hospital care).

between hospitals and health insurance companies. About lobbying many respondents are not sure.
Fifty percent of the respondents expect personal networking between hospitals and health insurance companies is by to increase, however 43% is not sure whether this will happen.

Do you agree with the next propositions?	Certainly	Maybe	Definitely not	No idea
1. After the introduction of more market mechanisms political involvement will still be triggered by reports in press and media.	68%	28%	4%	0%
2. Lobbying (with politicians) will have less meaning after the realisation of more market mechanisms.	18%	51%	25%	6%
3. Personal networking between hospitals and health insurance companies will increase after the realisation of more market mechanisms.	50%	43%	6%	1%

Table 5.12 Results Survey 2003: question 3

5.4 Conclusions

The case studies were performed in a situation where the institutional environment had a dominant influence on the governance structure used for the transactions between hospitals and health insurance companies. Rules and regulations prescribed the governance structure in detail. The governance structure found in the two case studies were similar in most aspects and match the governance structure as prescribed by rules and regulations (see chapter 4). Interesting conclusions of this chapter with respect to the way transactions between hospitals and health insurance companies are coordinated in a deregulated environment are listed below.

1. The results of the questionnaire show that hospitals and health insurance companies expect changes in the way transactions between hospitals and health insurance companies will be coordinated when rules and regulations with respect to the transactions and governance structure are lifted. They expect different governance structures across segments of hospital care.
2. The results of the case studies show that the complexity of the transactions between hospitals and health insurance companies causes information asymmetry due to the bounded rationality of health insurance companies. Hospitals and health insurance companies expect that this information asymmetry will decrease in the future due to the DBC-system and investments of health insurance companies in, for example, information systems and benchmarking. However this is not expected to lift the information asymmetry about the performance of physicians.
3. The expected changes in the governance structure can be explained by the findings concerning the characteristics of the transactions. Asset specificity, frequency and complexity differ significantly across segments of hospital care. As these characteristics determine the efficiency of the governance structure this will result in different

governance structures for different segments of care. The governance structure used in the regulated environment is not efficient for most of the hospital care. Planned care and care with high volume, low risks and measurable results are segments for which a market (with a classic contract) is expected to be an efficient governance structure. Complexity of this hospital care is low. Performance measurement is supported by standardisation and the use of protocols. High volumes result in low transaction costs per unit as many transaction costs are fixed. For urgent care and care with low volumes, high risks and complex performance measurement a market structure is less efficient due to the high transaction costs. For highly specialised care a market structure is probably not efficient. Most highly specialised care, urgent care and part of the planned care know a high variety in procedures and less predictable outcomes. Performance measurement is difficult and requests highly specialised medical knowledge. Using the TCE characteristics "frequency and complexity" it is possible to create other segments of hospital care than the traditional segments. Based on the characteristics of TCE the next segmentation can be made: (1) care with high frequency and low complexity (low risk and measurable results) and (2) care with low frequency and high complexity (high risks and complex performance measurement).

4. In addition a differentiation in governance structures can be expected based on economies of scale as they also determine the efficiency of the governance structure. Economies of scale are related to the market share of the health insurance company in the relevant market of the hospital product and related to the requested initial investments necessary to deliver the hospital product. Therefore differentiation in governance structures across health insurance companies and segments of hospital care is expected. Economies of scale are relevant for hospital care with a national market which require high investments (highly specialised and certain planned care), health insurance companies with small market shares on a regional level and hospital care with a regional market requesting very high investments (urgent care).
5. The direct influence of hospitals and health insurance companies on the institutional environment complicates the coordination of transactions with a classic contract as it raises the chance of opportunistic behaviour. The case studies and questionnaire show that both hospitals and health insurance companies are found to behave opportunistically. Hospitals and health insurance companies use lobbying and press/media to influence their environment in their own favour.
6. Reputation is an important variable in the institutional environment as it has an important role for hospitals to attract patients and for health insurance companies to attract insurants. Reputation is therefore a potential credible threat which has influence on the transactions between hospitals and health insurance companies and the way they are coordinated.

In the questionnaire respondents were asked about their expectations of the introduction of more market mechanisms and the effect on the efficiency of hospital care and the satisfaction of patients (who are interested mainly in quality and service/friendliness). The respondents expect a positive contribution to efficiency, despite the expected investments which raise the transaction costs. They expect however a limited contribution to the satisfaction of patients. The results of the questionnaire are presented in the next table.

What is your opinion about the contribution of the introduction of more market mechanisms to:	Average score (1=very little, 10=very high)
A more efficient hospital care	7
A higher satisfaction of patients about the delivered hospital care	6

Table 5.13 Results Survey 2003: question 6i and 6j

Certain findings (relevance of a long term relationship, trust, and good relationship) in the case studies and the questionnaire are not found in TCE or more specific the extended three layers model. These findings are considered to be outside the scope of this study. In chapter 7 the relevance of these additional findings are addressed together with certain critics of TCE. These critics found in literature confirm the relevance of the found variables for the study of governance.

Chapter 6 Hazards and Recommendations for the Governance Structure

6.1 Introduction

Williamson (1996, p.14) states that transaction cost economics is concerned with the identification, explication, and mitigation of hazards through governance. In this chapter the hazards for the transactions between hospitals and health insurance companies in a deregulated environment are identified and recommendations are given for an efficient governance structure to mitigate these hazards.

In section 6.2 the description of the transactions between hospitals and health insurance companies as presented in chapter 4 and 5 is used to fill out the "extended hazard identification framework". This framework is based on the extended three layers model and is described in detail in chapter 2 of this study. The framework is filled out for the different segments of hospital care as the expectation is that this will result in different hazards in a deregulated environment. With this overview of hazards for the transactions between hospitals and health insurance companies an answer is given to sub question 2 of this study.

Sub question 2: Which hazards can be identified for the transactions between hospitals and health insurance companies in a deregulated environment using an extended three layers model?

In section 6.3 recommendations are given to mitigate the identified hazards with an efficient governance structure. The "decision tree for recommendations on the highest level", as presented in chapter 2, is filled out with the hazards and the economies of scale for different segments of hospital care as presented in chapter 5. It results in recommendations for the most efficient governance structure on the highest level: market, hybrid or hierarchy.
As a hybrid can have many forms an analysis will be made in section 6.3 to compare the efficiency of different institutional arrangements in coordinating transactions between hospitals and health insurance companies in a deregulated environment. The framework "Analysis of an efficient hybrid governance structure for transactions between hospitals and health insurance companies in a deregulated environment" as presented in chapter 2 is used. This results in recommendations for different segments of hospital care.

Sub question 3 of this study is answered.

Which governance structure is most suitable from an efficiency analysis[1] perspective for the transactions between Dutch hospitals and health insurance companies in a deregulated environment?

6.2 The identification of hazards

Hazards occur due to behavioural uncertainties of contract partners about transactions. These behavioural uncertainties are the result of (A) incomplete contracting or (B) dependency between contract partners.

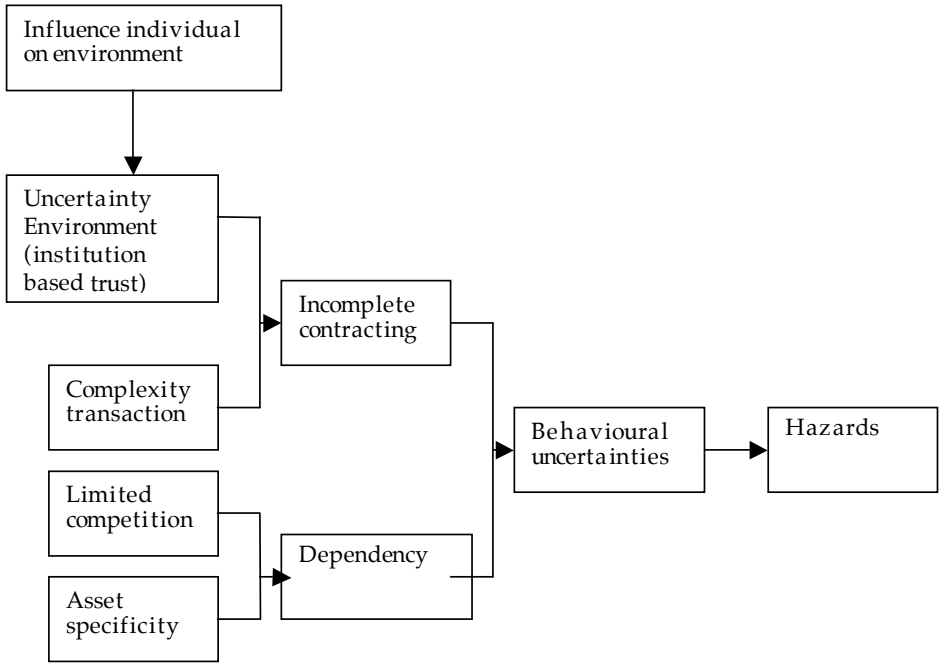


Figure 6.1 Framework: Extended hazard identification framework

1 Williamson (1996, p. 307) gives the next definition of efficiency analysis: "efficiency analysis properly encompasses governance costs as well as production costs". Also costs due to excesses of waste, bureaucracy, slack, and the like are addressed as they are related to the alignment problem.

A. Incomplete contracting due to *(1)* uncertainties in the environment and *(2)* complex transactions.

(1) Recently many rules and regulations have changed in the institutional environment of hospitals and health insurance companies and their transactions. In chapter 4 low institution based trust is found for the transactions between hospitals and health insurance companies due to elusiveness and limited predictability of rules and regulations. This elusiveness is reinforced by the conflict between the norms and values in Dutch society and a free market for healthcare. The influence individual hospitals and health insurance companies have on politics and the Ministry of Health limits the predictability of rules and regulations. Both are weaknesses in the institutional environment which nourish opportunistic behaviour based on information asymmetry.

The results of this study show low institution based trust and opportunistic behaviour of both hospitals and health insurance companies. In a regulated environment this opportunistic behaviour has had limited effect on the transactions between hospitals and health insurance companies. The transactions and the governance structure were completely regulated with limited financial risks. In a deregulated environment this will result in hazards and instability in transactions between hospitals and health insurance companies when not governed properly. The hazard identified is called "weaknesses in the environment". Petterson (2004) claims that the degree of trust or distrust in state agencies as regulative bodies determines the strategy of the government (see also Hood 2002). When there is high trust in state agencies a delegation strategy is used and when trust is low a directive strategy is used. This statement is supported by the directive strategy of the Dutch government in this market with low trust in the government.

(2) The results of this study show that the transactions between hospitals and health insurance companies are diverse and the complexity differs across segments of hospital care. Complexity of transactions is low when there are possibilities to use standardisation (protocols) and the outcome is predictable. Variety in transactions, high risk treatments and specific knowledge to review the performance of a hospital increases complexity. The traditionally used segments of hospital care are: highly specialised care, planned care and urgent care[2]. Complex transactions are found in the three segments but are overrepresented in urgent and highly specialised care. A complex transaction can result in information asymmetry and incomplete contracts. The chance of opportunistic behaviour rises and this creates instability for transactions when not governed properly. These hazards are called "measurement hazards".

B. Dependency: Maladaptation hazards due to *(1)* limited competition and *(2)* asset specificity.

Bilateral dependency can result in maladaptation hazards and requests an appropriate governance structure. Adaptation is seen as a central economic problem for organisations (Barnard 1938 and Hayek 1945). In perfect markets autonomous adaptation of organisations is realised through the price system. In imperfect markets coordinated adaptation is required which is more complex as it requires coordination between two organisations (Williamson 1996).

The results of this study show that individual hospitals and health insurance companies know maladaptation hazards due to limited competition and asset specificity.

2 Urgent care is care which is provided immediately to complex patients.

(1) Competition requests sufficient supply and sufficient contract partners in the market. In recent years sufficient hospital care supply has been achieved by the reduction of waiting lists for most hospital care. Sufficient contract partners are a problem for most hospital care despite the entrance of many small scaled private hospitals (or ZBC's) in recent years. The results of this study show that on a regional level there are often a limited number of hospitals and one dominant health insurance company. On a national or international level there are sufficient contract partners available for hospitals and health insurance companies. The results show that only a limited part of the hospital care is supplied to patients outside region and the expectation is that this will not rise dramatically. Urgent care and hospital care for certain patient groups like chronically diseased and elderly people will always be provided within the region. The problems with competition and insufficient contract partners increases dependency between hospitals and health insurance companies for certain hospital care.

(2) Asset specificity represents the assets which bind one contract partner to another since these assets lose their value when the contract is terminated. In chapter 5 of this study an analysis is made of asset specific transactions between hospitals and health insurance companies. Asset specific investments are identified for different segments of hospital care. The results of the questionnaire indicate that asset specificity will become a hazard for the transactions between hospitals and health insurance companies as soon as the contract obligation is lifted by the government. Hospitals become more vulnerable when investing in assets to provide certain hospital care which cannot be redeployed by the hospital. In general, highly specialised, certain planned care and urgent care request high investments. Highly specialised care knows also human asset specificity which makes health insurance companies dependent of hospitals. Human asset specificity occurs when there are a limited number of qualified physicians to deliver certain hospital care. Urgent care knows also site specificity as the distance from the patient to the hospital is crucial. Asset specificity especially in combination with a limited number of contract partners (small numbers) causes maladaptation hazards. The result can be suboptimal investments of hospitals in, for instance, redeployable but more expensive assets, delay in replacing equipment or the decision of the hospital to stop offering the hospital care. Asset specificity can be reduced by leasing assets. Although this is in general somewhat more expensive compared to buying the asset, it is an effective instrument to mitigate the hazards related to asset specificity.

The conclusion is that maladaptation hazards occur in a deregulated environment especially for the transactions between hospitals and health insurance companies which require asset specific investments and which are provided on a regional level with limited competition.

Overview of hazards

In the next table an overview is given of the identified hazards for hospital care in general and for the different segments of hospital care.

Hospital care segment	Weaknesses in the environment	Measurement hazards	Maladaptation hazards
Hospital care in general	All segments which are deregulated know weaknesses.	Measurement hazards arise when complexity of transactions is high. Performance measurement is difficult due to lack of standardisation and unpredictable outcome of treatment.	Maladaptation hazards occur when there is asset specificity especially in combination with small numbers.
Planned care		Planned care is very diverse in complexity. There is planned care which is easy to standardise and there is planned care for which this is not the case.	Small numbers occur in regions with a limited number of contract partners for planned care delivered to certain patient groups like chronically diseased and elderly people. Some planned care also requests asset specific investments.
Urgent care		Urgent care is in general complex as possibilities for standardisation and delivering a predictable outcome are limited.	Urgent care knows asset specificity, site specificity and competition on regional level.
Highly specialised care		Highly specialised care is diverse in complexity. Complexity is on average higher compared to planned care. Human asset specificity (quality of physician) has an important role in highly specialised care.	Highly specialised care knows very high asset specificity. Highly specialised care knows in general competition on a national level which results in fewer problems with the number of contract partners.

Table 6.1 Hazards identified for the transactions between hospitals and health insurance companies in a deregulated environment.

A new segmentation of hospital care can be made using the identified hazards for hospital care in a deregulated environment.

1. Hospital care with weaknesses in the environment.	2. Hospital care with weaknesses in the environment and measurement hazards.
3. Hospital care with weaknesses in the environment and maladaptation hazards.	4. Hospital care with weaknesses in the environment, measurement hazards and maladaptation hazards.

Figure 6.2 Segmentation of hospital care on identified hazards (TCE segmentation).

6.3 Recommendations for an efficient governance structure

6.3.1 The basic governance structure

Coase (1937: 336) presents as a general rule that a hierarchy will be chosen as soon as the costs of using a market exceed those of using internal governance. The efficiency of a market, hybrid or hierarchy for the transactions between hospitals and health insurance companies is determined in this section using the decision tree for recommendations on the highest governance level and the identified hazards in section 6.2 of this chapter. The formula of Jarillo (1988) is used to compare the costs of the alternative governance structures.

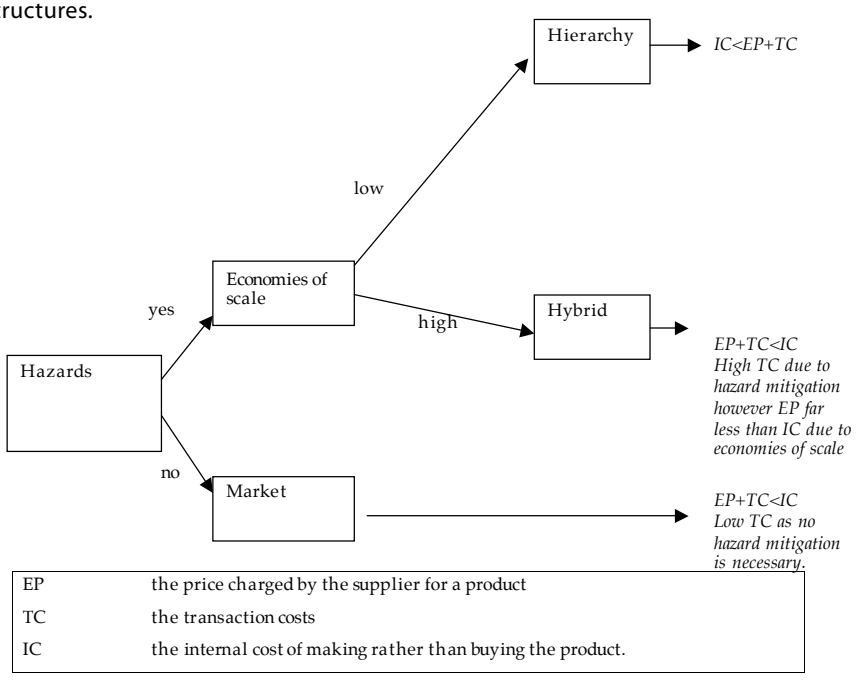


Figure 6.3 Framework: Decision tree for recommendations on the highest governance level.

In the decision tree hazards and economies of scale determine the efficiency of the basic governance structure:

(1) Hazards
Several hazards have been identified for the transactions between hospitals and health insurance companies. A safeguard to mitigate hazards is creating a hierarchy. Another safeguard is to mitigate these hazards with institutional arrangements. This results in a hybrid governance structure. There are several institutional arrangements which can be used in a hybrid. The cost effectiveness of these arrangements depends on the identified hazards. The frequency of transactions is important as it determines the transaction costs per transaction. Many transaction costs are fixed and not related to the number of transactions. Frequency differs per hospital product (DBC) and is not related to the traditionally used segments of hospital care.

(2) Economies of scale

Economies of scale can be achieved for certain products when production is organised in the market. A hierarchy can have major financial disadvantages in production costs for these products. In terms of Jarillo the EP is very low compared to the IC. There are two important variables in measuring economies of scale: initial investments in technology[3] (not related to production volume) and market share. Economies of scale differ across the traditionally used segments of hospital care (highly specialised care, planned care and urgent care). A health insurance company with a high market share has more opportunities to insource hospital care activities efficiently compared to health insurance companies with low market shares. The market share in the region is relevant for hospital care which is provided to patients in a region and the national market share is relevant for hospital care which is provided also to patients outside the region.

In the next table recommendations are given for the most suitable governance structure (market, hybrid or hierarchy[4]):

Segment	Hazards (TC)	Economies of scale (EP)	Recommended governance structure
Planned care	Hazards are present but vary across planned care. Transaction costs are high for planned care with measurement and maladaptation hazards, when not using a hierarchy. Maladaptation hazards can be reduced by leasing assets.	Economies of scale are high for planned care which request high investments in physical assets/ buildings. The advantage of production in the market is highest for health insurance companies with a limited market share.	A hierarchy is recommended for planned care with high asset specificity and/or high complexity delivered to a health insurance company with a dominant market share. A hybrid is recommended for all other planned care.
Urgent care	Urgent care knows measurement and maladaptation hazards which request safeguards. Transaction costs are high, when not using a hierarchy. Maladaptation hazards can be reduced by leasing assets.	Economies of scale for urgent care are high due to the high investment costs in buildings, equipment and the necessary standby capacity.	A hybrid is recommended for all urgent care as the economies of scale outdo the transaction costs necessary to mitigate the identified hazards.
Highly specialised care	Highly specialised care knows measurement and maladaptation hazards. Transaction costs are high when not using a hierarchy. Maladaptation hazards can be reduced by leasing assets.	Economies of scale for highly specialised care are high due to the necessary investments in physical and human assets.	A hybrid is recommended for highly specialised care. The economies of scale outdo the transaction costs. It is possible for a health insurance company with a dominant market share to organise highly specialised care efficiently in a hierarchy.

Table 6.2 Recommended basic governance structure for the transactions between hospitals and health insurance companies in a deregulated environment.

3 Technology requests certain equipment and machines, buildings and human skills and knowledge.

4 To realise a hierarchy forward or backward integration is necessary. The most sustainable scenario is that health insurance companies buy hospitals or start hospitals themselves due to their dominant market position and the financial resources they have available. In recent years some health insurance companies in the Netherlands have already developed some initiatives to offer certain health care for their insurants themselves.

Based on the traditionally used segmentation of hospital care and the segmentation based on the TCE characteristics of transactions the following recommendations can be given:

1. A market governance structure is not suitable for transactions between hospitals and health insurance companies as hazards are identified for all hospital care. In case the current weaknesses in the institutional environment dissolve in the future it is recommended to use a market governance structure for hospital care which has no measurement and maladaptation hazards. This is mainly planned care which is easy to standardise in a region with several contract partners and/or limited asset specific investments. The hospital care in the current B-segment meets these requirements. More hospital care can be coordinated in a market governance structure when the necessary assets are leased instead of bought by the hospital. Another possibility is that the health insurance company buys the assets which are used in the hospital. Voicing with reputation effects can be used by health insurance companies as a credible threat. This increases however the chance of conflicts and rivalry.
2. A hierarchy is the recommended governance structure for transactions between hospitals and health insurance companies which know (1) low economies of scale when organised in the market, (2) maladaptation and/or measurement hazards. A hierarchy is in general recommended for health insurance companies with a dominant market share as they can create economies of scale with internal production. A hierarchy is also recommended for hospital care with maladaptation and measurement hazards where transaction costs are higher compared to the lower production costs when produced in the market.
3. A hybrid is the recommended governance structure for transactions between hospitals and health insurance companies when economies of scale of production in the market are high. Economies of scale are high for health insurance companies with low market shares and hospital care with very high initial investments. In general a hybrid is an efficient governance structure for highly specialised and urgent care and for planned care with high economies of scale. An exception concerns very large health insurance companies who can efficiently insource highly specialised care with high frequencies. Examples of institutional arrangements which can be used in the hybrid governance structure efficiently can be found in the next section.

Segmentation hospital care on identified hazards	Economies of scale of production in the market for individual health insurance company.	Basic governance structure
Hospital care with weaknesses in the environment		Hybrid with limited TC
Hospital care with weaknesses in the environment and measurement hazards	High (IC>EP) Low (IC<EP)	Hybrid with high TC Hierarchy
Hospital care with weaknesses in the environment and maladaptation hazards	High (IC>EP) Low (IC<EP)	Hybrid with high TC Hierarchy
Hospital care with weaknesses in the environment, measurement and maladaptation hazards	High (IC>EP) Low (IC<EP)	Hybrid with very high TC Hierarchy

Table 6.3 Recommended basic governance structure for the TCE segments of hospital care for transactions between hospitals and health insurance companies in a deregulated environment.

6.3.2 Recommendations for the hybrid

In chapter 2 the following definition is given of a hybrid: "a hybrid is a governance structure in which both horizontal and vertical coordination is used to coordinate the transactions between two separate organisations".
A hybrid can have many forms as different institutional arrangements and credible commitments can be used additional to the classic contract. In chapter 2 the detailed contract and long term contract (including credible commitments) are mentioned as commonly used arrangements in a hybrid. Also the use of credible threats resulting in reputation-effects is analysed.

In this section an analysis is made of the use of detailed contracts, long term contracts and reputation-effects to mitigate the identified hazards for the transactions between hospitals and health insurance companies in a deregulated environment. Recommendations are given for the hybrid governance structure in the framework "Analysis of an efficient hybrid governance structure for transactions between hospitals".
First the effectiveness of detailed contracts, long term contracts and reputation-effects in mitigating the identified hazards is analysed:

1. Weaknesses in the environment result in incomplete contracts as there is uncertainty and possible information asymmetry between hospitals and health insurance companies about (future) rules and regulations and interventions of politics in the hospital care market. Discussions and agreements related to (a) possible future scenarios of the institutional environment and (b) the use of individual influence on the environment diminishes the information asymmetry between contract partners. The (financial) interests of both the hospital and the health insurance company should be taken into account in these agreements. Credible commitments are necessary to reduce the chance of opportunistic behaviour. This results in detailed contracts. Weaknesses in the environment can also be mitigated with the creation of shared interests. Shared interests are created by shared ownership and shared investments. Both are long term agreements. Shared interests dissolve after the asset is depreciated and reinvestments are necessary. Long term contracts with credible commitments can create shared interests for a longer period.

2. Measurement hazards are identified for transactions between hospitals and health insurance companies which are complex. Complex hospital care is difficult to standardise (with protocols), risks are high and performance measurement is complex. This results in incomplete contracting. The results of this study show that health insurance companies are investing in their knowledge of hospital care (investments in benchmarking and information systems) to mitigate this hazard. The highly detailed product prices system which is prescribed by the Dutch government (DBC) can result in oversearching (Barzel 1982, Kenney and Klein 1983). Performance measurement with this system is very costly. An appropriate institutional arrangement to avoid oversearching is block booking. Block-booking economises on measurement costs[5]. Williamson (1986, p.77) describes an interesting case of the market for gem quality

5 This is a reinterpretation of the Loew's case (United States v. Loew's Inc., 371 U.S. 38, 1962) in which block-booking is seen as an effort to effect price discrimination.

uncut diamonds. The comparison with hospital products is striking. For diamonds a classification in more than two thousand categories exists. However significant quality variation in the stones remains. For hospital products in the Netherlands thousands of DBC-classifications are used, still medical specialists complain that their treatments do not fit into the classification system. To avoid oversearching in the diamond trade all-or-none and in-or-out trading rules were introduced. A combined regime of all-or-none and in-or-out trading rules supports legitimate expectations. With block booking a long term relationship is established in which the average performance is perceived to be relevant and not the performance of every individual transaction. Only with systematic underperformance the contract is ended. Higher integrity is achieved when using this institutional agreement in trade. The risk of oversearching for the transactions between hospitals and health insurance companies with high complexity and/or low frequency can be mitigated with all-or none and in-or-out trading rules. Reputation effects are recognised as a credible threat and an important safeguard for bad performance of hospitals and health insurance companies towards the patient/insurant. The strong reputation effects for hospitals and health insurance companies provide the possibility to use alternative instruments to support the coordination of transactions. These alternative instruments are quality certificates and/or benchmarking by supervising agencies. Supervising agencies can increase the transparency of the quality of hospital care. The results of the questionnaire used in this study, show that almost 80% of the respondents expect that the quality of the delivered hospital care is an important topic for supervising agencies in 2008. Two examples of appropriate instruments which mitigate the measurement hazards by using the strength of reputation effects are:

- Benchmarking done by supervising agencies. These benchmark data can be used by hospitals and health insurance companies in their negotiations. However Llewellyn and Northcott (2005) claim that in the UK the problem with this "metrics approach" is that hospitals are highly differentiated places which make comparisons not possible. The effect of using cost categories for hospital care is standardisation resulting in the "average hospital". This implies that poorly performing hospitals improve performance but also that well performing hospitals worsen performance. Van Helden and Tillema (2005) argue that the impact of benchmarking in public sector may be similar to the effects of market forces in the private sector. This makes benchmarking a substitute for the market and not an instrument which can be used with a market.
- Quality certificates can be given to hospital care suppliers. This can mitigate the measurement problem. Quality certificates can be organised and published by a national organisation, for instance a supervising agency. Additional regular audits are necessary.

3. Asset specific investments in physical assets are identified for certain hospital care and in combination with small numbers this results in maladaptation hazards. This hazard can be mitigated with institutional arrangements such as long term agreements and shared investments/ownership. Another possibility to mitigate the hazard is to lease assets. Health insurance companies also experience hazards as a result of site specificity (limited number of hospitals in the region), human asset specificity (limited number of good physicians for a treatment) and brand name of the hospital. Health insurance companies can mitigate this hazard with long term agreements

including credible commitments. Another possibility to mitigate these hazards is by encouraging insurants with (financial) incentives to receive their treatment outside their region or even abroad. Health insurance companies can also start hospitals themselves to mitigate this hazard. This results in a hierarchy instead of a hybrid.

In chapter 2 a framework is given for the hybrid in which detailed contracts, long term contracts and reputation-effects are included. This framework is used here to formulate recommendations for the use of these instruments for the transactions between hospitals and health insurance companies coordinated with a hybrid.

	Hazard mitigation	Transaction costs	Recommendations
1. Detailed contract	Weaknesses in the environment and measurement hazards can be mitigated with a detailed contract. However it is difficult to realise a complete contract and therefore credible commitments like financial punishments or hostages should be included. In the contract credible commitments should be made about the renewal and ending of the contract.	A detailed contract including credible commitments is in general expensive. Monitoring of a detailed contract and enforcement of the agreements with the financial punishments and hostages increases the transaction costs.	All-in-one contracts are very effective in mitigating the measurement hazard and reduce transaction costs as it avoids monitoring on the level of the transaction. Additional audits are necessary to check the average performance regularly. For weaknesses in the environment a detailed contract is an expensive arrangement. Alternatives described below are recommended.
2. Long term contract	Hazards due to weaknesses in the environment and maladaptation hazards can be mitigated effectively with long term contracts as long as they are combined with credible commitments.	Long term contracts can be costly when they are detailed or request intensive monitoring and enforcement of agreements in the contract.	Shared investments/ ownership are an effective alternative and can be more efficient compared to a detailed long term contract. Shared investments/ ownership create shared interests which mitigates the maladaptation hazards and the hazards due to weaknesses in the environment. Leasing is a good alternative to reduce maladaptation hazards.
3. Reputation effects	Reputation effects can mitigate the identified measurement hazards. Reputation threat can be used by hospitals and especially health insurance companies. Reputation-effects can be supported by independent supervising agencies which monitor the performance of hospitals using quality certificates or benchmarking.	Reputation effects involve high transaction costs when benchmarking or quality certificates are used. The transaction costs for supervising agencies are high as hospitals have to record data and the agency needs staff to audit and report the performance of hospitals.	Reputation threat is effective but is normally not used in a situation where cooperation is necessary between contract partners (due to dependency). Benchmark systems are costly and controversial. Quality certificates are effective but costly. Credible threats using the results of benchmarking or quality certificates are in general used in conflicts and rivalry and are less appropriate for a hybrid with dependency between contract partners.

Table 6.4 Framework: Analysis of an efficient hybrid governance structure for transactions between hospitals and health insurance companies in a deregulated environment

The results of this study show that the costs related to the coordination of transactions between hospitals and health insurance companies with a hybrid is higher in a deregulated environment. Many of these costs know initial investments (fixed). The more transactions between a hospital and a health insurance company (frequency) the lower the transaction costs per transaction. Health insurance companies with a limited number of transactions are recommended, from an economic point of view, to use a lean governance structure or even market governance (restitution system). However market governance has the disadvantage that instability in transactions is expected due to the identified hazards.

Chapter 7 Conclusion and Limitations of the Study

7.1 Conclusion

Transaction Costs Economics is used as theoretical framework in this study to reach the next aim:
Formulate recommendations for the management of hospitals and the management of health insurance companies and policy makers, in order to (re) align the transactions between hospitals and health insurance companies with an efficient governance structure in a more market oriented, deregulated, environment.

With the three layers model as presented by Williamson (1996) the transactions between hospitals and health insurance companies are described and hazards are identified. Data gathered with desk research, case studies and a questionnaire were used to describe and analyse the layers and the parameters and variables in the three layers model. The model was appropriate to describe and analyse the transactions in a regulated environment. The model was made more specific to describe and analyse the transactions between hospitals and health insurance companies in a deregulated environment. This resulted in an extended model which is based on TCE principles.
The transactions between hospitals and health insurance companies are complex as many different types of hospital care are delivered by the hospital to the patient and billed to the insurance company. The hospitals and health insurance companies coordinate these transactions with a governance structure. In the regulated institutional environment this governance structure is prescribed by the government. This study showed that this prescribed governance structure is not efficient and will change during the process of deregulation into more efficient governance structures.

An important conclusion of this study is that the transactions between hospitals and health insurance companies have different characteristics. The transactions differ in complexity, asset specificity and frequency and request different governance structures. Also the market share of the health insurance company and the number of possible contract partners differs across regions and requests different governance structures. Economies of scale in production are important as they diminish the production costs. Economies of scale are determined by the investments in hospital care (technology) and by the market share of health insurance companies (in the relevant market).
The extended three layer model was used in this study to describe and analyse the transactions between hospitals and health insurance companies and the way they are coordinated. This increased our understanding of the transactions and other variables which determine the efficiency of the governance structure. With this knowledge three categories of hazards could be identified for the transactions between hospitals and health insurance companies which differ across segments of hospital care: (1) weaknesses in the environment, (2) measurement hazards and (3) maladaptation hazards.

Another important conclusion is that in a deregulated environment the transactions between hospitals and health insurance companies can be organised efficiently only when different governance structures are used across segments of hospital care and by different health insurance companies.
A market governance structure was found to be inappropriate for all segments due to the weaknesses in the environment. However when weaknesses in the environment dissolve in the next years and alternatives are used for high investments in hospital care there are possibilities for the coordination of transactions with a classic contract. Certain hospital care which knows problematic measurement and maladaptation hazards is most efficiently organised in a hierarchy when the health insurance company is able to achieve the necessary economies of scale. A hybrid is an alternative governance structure for this hospital care when the health insurance companies are not able to achieve the necessary economies of scale.
This study concludes also that the commonly used detailed (long term) contract will result in high transaction costs. Alternatives like all-in-one contracts and shared investments/ownership are recommended. All-in-one contracts with regular audits and agreements about average performance and contract ending or renewal with financial punishments or hostages is the most cost effective instrument for complex hospital care. The effectiveness of benchmarking is controversial. Quality certificates can be helpful for complex care but increase transaction costs. Voicing on reputation effects can be used as credible threats but are less suitable for contract partners with dependency issues as they results in conflicts and rivalry. Shared investments/ownership and leasing are efficient safeguards for hazards caused by asset specificity. Weaknesses in the environment can be mitigated with a contract including possible future scenarios in rules and regulations taking into account the financial consequences for hospitals and health insurance companies. These contracts should include credible commitments like punishments or hostages. Also agreements should be made about the use of individual influence on politics. The creation of shared interest with for instance shared investments also mitigates the hazards due to weaknesses in the environment.

The final conclusion of this study is that ultimately the classic hospital with a full range of services and products which contracts health insurance companies for all hospital products will disappear. Economic behaviour of hospitals and health insurance companies in a deregulated environment will result in segmentation, specialisation and selective contracting.

The research aim of this study is to formulate recommendations for the management of hospitals and the management of health insurance companies and policy makers, in order to (re) align the transactions between hospitals and health insurance companies with an efficient governance structure in a more market oriented, deregulated, environment. This study shows that an analysis of the transactions between hospitals and health insurance companies with an extended TCE model meets the aim of this study. The recommendations provide sufficient clues to improve the current hybrid governance structure during the process of further deregulation and to coordinate the transactions between hospitals and health insurance companies with an efficient governance structure in the future.

7.2 Methodological issues

In this study two case studies were used to gather information about the transactions between hospitals and health insurance companies. The case studies were used to increase the understanding of transactions between hospitals and health insurance companies, the governance structure and the contract partners. The results of the case studies showed no effect of the level of competition between hospitals on the transactions and governance structure. An explanation was found in the fact that the case studies were performed before important changes in the institutional environment. Analysis of the transactions between hospitals and health insurance companies in the regulated environment showed the dominant influence of rules and regulations on the transactions and governance structure. Competition is expected to have an important effect in a deregulated environment. The extended three layers model explicitly presents competition as a variable which has effect on the transactions and the way they are coordinated. This effect is however not investigated in this study with additional case studies in a deregulated environment.

A questionnaire was used in this study to gather information about the future developments in the hospital market and the future transactions between hospitals and health insurance companies. This research method has certain limitations as there is the risk that respondents fill out the questionnaire with insufficient knowledge or based on wishful thinking instead of realistic expectations. In this study triangulation is used to address these risks. In chapter 3 more details are given about the research methods.

7.3 The relevance of the conclusions for current theory

The relevance of this study for current theory is that it demonstrates that a generic theory can be used for an industry like hospital care with a specific and changing institutional environment. The TCE model is made more specific for this study as this was necessary to describe and analyse the transactions properly and to identify and understand the hazards related to these transactions. The principles of TCE are the basis of the theoretical model and determine the recommendations for an efficient governance structure.

Transaction Costs Economics has proven its practical relevance in this study. However the data gathered with the two case studies and a questionnaire show that trust and especially process based trust is perceived to be relevant for the coordination of the transactions between hospitals and health insurance companies. These concepts can have added value for the management of individual hospitals and individual health insurance companies. Hospitals and health insurance companies have long lasting transactional relationships and combined business experience. They also have to act within the current institutional environment with an unpredictable process of deregulation and limited possibilities to use other governance structures than a hybrid. Especially in situations with high uncertainty and complexity a process based approach starting with a lean governance structure and improving it "along the way" is more efficient compared to the design of a complete governance structure in which all risks and uncertainties are covered (see also Vosselman 2006 and Vosselman and van der Meer 2004).

In this section the concepts of trust and the process based approach are described and illustrated with findings in the case studies and questionnaire. In the next section recommendations are given for future research on these subjects.

Trust

TCE has many critics[1] who are concerned with the absence of the domain of trust in transaction costs economics[2]. They conclude that the social-context variable of trust interacts with the behavioural assumptions of the TCE model and therefore must be addressed in future treatments (Klein Woolthuis 1999, Klein Woolthuis Hillebrand & Nooteboom 2005). There are several definitions of trust[3]. Zucker (1986) identifies process based trust, character based trust and trust based on institutional mechanisms[4]. Trust based on institutional mechanisms is related in this study to uncertainties in the institutional environment. This institution based trust is part of the extended three layers model. It supports the identification of the hazard for the transactions between hospitals and health insurance companies related to the "weaknesses in the environment". Character based trust was not taken into account in this study as it does not fit into the aim of this study to formulate general economic recommendations, which are not are related to the character of individual persons.

Process based trust is related to the exchange between partners in the past and to the expected future exchanges. Granovetter (1985) indicates that long-lasting exchange relationships get a social content with strong expectations regarding trust and forbearance of opportunism. The result of the case studies and questionnaire show that process based trust was found to be relevant by hospitals and health insurance companies for their transactions and the way they are coordinated. Frequent changes in contract partners were perceived to be disturbing for the coordination of the transactions. A good relationship between the negotiators was perceived to be important for the contract negotiations.

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1 Gambetta (1988) refers to it as "the elusive notion of trust" and claims that trust is necessary due to bounded rationality. Chiles and McMackin (1996) claim that many of the perceived shortcomings of the TCE paradigm are in part attributable to the inadequate treatment of risk and trust.

2 Williamson (1993a and b) calls trust an endogenous preference and is not taking it into account in his studies.

3 Luhman (1979) states that trust starts where knowledge stops. Bromiley and Cummings write in 1992 that the influence of the layer of trust on the basic structural implications of TCE is not altogether clear. The definition of trust used by Gambetta (1988, see also Dasgupta 1988 and Luhmann 1988) is: "trust is a particular level of the subjective probability with which an agent assesses that another agent will perform a particular action, before he can monitor such action and in a context in which it affects his own action.
Two other definitions of the concept of trust are:
"The expectations concerning standards and values related to competencies and responsibilities" (Barber 1983)
"The social and statutory expectations which are shared by all partners involved in an exchange" (Zucker 1986)
Nue (1991) recognises some similarities in the several definitions for trust. Trust seems to be based on common expectations. Also trust seems to be part of the system and of the individuals in the system. Finally pressure seems to be absent in the concept of trust (Kahnemann et al. 1986).
The conceptual association between risk and trust is pervasive in literature (see e.g. Coleman 1990, Deutsch 1973, Koller 1988, and Zand 1972). Zand (1972, p. 230) and Noorderhaven (1996, p. 109) distinguish interpersonal trust as the willingness to increase one's vulnerability to another whose behaviour is not under one's control In the context of a transaction Noorderhaven (1995) calls this "the willingness to engage in a transaction in absence of adequate safeguards".

4 Character based trust also has an important role in the trust partners have in each other. Partners with common characteristics as nationality, social environment, age, sex and so on get expectations (correct or incorrect) regarding the behaviour of partners and this is the starting point for behaviour in a relationship.
Trust based on the character is more robust and therefore a more reliable basis for transactional relations (Noorderhaven 1995, Nooteboom 1993, Ring 1993).
The institution based trust Zucker describes can be divided in individual and organisational specific actions, intermediary and rules and regulations.

Process based approach and relational signalling

Critics like Vosselman and Van der Meer (2004) challenge the farsighted approach as it is presented in TCE. They introduce the process based approach which is related to a "transactional relationship" between contract partners. The process based approach knows a step by step approach for realigning transactions with an efficient governance structure and incorporates the concept of (process based) trust.

Vosselman and van der Meer Kooistra (2005) argue that accounting controls such as credible commitments can be used in relationships in order to prevent strategic opportunism from occurring. Vosselman and van der Meer Kooistra call this "thin trust" as it does not suffice in attenuating all potential opportunistic behaviour. In order to prevent myopic opportunism from occurring parties experience the need for a vehicle of relational signalling. This vehicle of relational signalling reflects commitment and helps building "thick" trust, which contributes to the stability and durability of the relationship between contract partners. The concept of process based trust fits well to the concept of "thick trust" which is build up with relational signalling. Relational signalling presumes a process based approach. It implies that the indirect effect or endogenous preferences of the governance layer on the economic actors becomes direct and the there is a continuous feedback loop between the individual and the governance layer. Speklé (1998, 2001) describes frequent personal contact as an arrangement which can be used in a hybrid to coordinate transactions. The effect of frequent personal contact can be found in the concept of relational signalling as described by Vosselman and van der Meer Kooistra.

The results of the case studies support the importance of relational signalling and process based trust. In both case studies the hospital and health insurance company have a contractual relationship for several years. Negative experiences in the past were perceived to affect the relationship and the level of trust. This revealed itself by not or partly informing the contract partner about certain topics and weakening of certain combined initiatives. In both case studies interviewees complain that the turnover rate of contact persons of the health insurance company is high. This is perceived to have a negative influence on the transactional relationship as there is no shared history (this is reinforced by the bad archiving and documentation within the health insurance companies). There are several meetings and other contact moments between hospitals and health insurance companies in both case studies. This reduces the risk of myopic opportunism of one of the contract partners which increases the stability of the relationship by building thick trust.

7.4 Limitations and research recommendations

This study knows certain limitations which challenges further research. In this section these limitations and recommendations for further research are described.

The recommendations given in chapter 6 of this study are purely theoretical. Based on this study more controlled quantitative studies on this subject can be conducted in the future (see also Burns and Grove 1987) to investigate the transaction costs of different governance structures. Variables used in this study can be (1) the economies of scale and asset specific investments for different segments of hospital care and health insurance compa-

nies with different market shares and their effect on hospital pricing and (2) the transaction costs related to segments of hospital care which differ in complexity and frequency.

The impact of competition on the transactions between hospitals and health insurance companies, the governance structure and the transaction costs under the new regulation is not investigated with field research in this study. Recommendation for future research is to perform case studies to investigate the effect of competition on the transactions between hospitals and health insurance companies and the way they are coordinated in a deregulated environment (output pricing and free contracting). In 2006 we see already, for certain segments of hospital care, the effect competition can have on the transactions between hospitals and health insurance companies. In chapter 4 a more detailed description is given of these effects. The ultimate goal of policy makers is to create a healthcare system which is affordable. Deregulation and the DBC-system are instruments used by the Dutch government in this effort to increase efficiency.
Interestingly is that Pizzini (2006) claims that the ability to significantly reduce healthcare expenditures lies in containment of the direct costs of patient care. Previous research shows that cost systems (like the DBC system) result in improvements in administrative efficiency and not in direct costs of patient care. Until the cost system functionality is introduced in the management of clinical expenditures the usefulness of cost-system design in containing hospital costs is limited.
Lehtonen (2007) has similar conclusion as he sees that in general DRG-based prospective pricing and case-mix accounting systems have in general more potential for control purposes at the profit centre and speciality levels but less on the departmental level. Lehtonen argues that the key to successful implementation of cost accounting systems is an ability to persuade clinicians to become centrally involved in the management and the development of the control systems. Groot (1999) argues that involvement of clinicians is achieved with control systems including incentives which are aligned with the professional opinions and attitudes. Latent professional attitudes which contribute to the goals of the organisation are reinforced with these incentives in the control system.
Leister and Stausberg (2005) have studied the effect of cost accounting methods on health care quality. They conclude that every single DRG systems cost accounting method has an impact on providers´ behaviour and the quality of services provided. They caution governments that an unsolicited and inadequate method of calculation could impact provider behaviour badly and result in economic losses. This stresses the need for more research to determine the effects of the DBC system on the efficiency and quality of Dutch hospital care.

In this study the Dutch hospital care is investigated within its specific institutional environment. The transactions between hospitals and health insurance companies are embedded in institutions, customs, traditions, norms and religions which are typically for the Netherlands. However, cases from abroad about how hospital care can be organised efficiently can give useful insights. The HMOs in the United States, the role of the regional government in countries like the Czech Republic and Norway and the effect of competition on hospital care in England due to private hospitals can provide the Dutch government, health insurance companies and hospitals with information about the transaction costs of different governance structures. A study of Aidemark and Lindkvist (2004) illustrates that performance of hospitals improved with the introduction of contracts including regulated prices according to performance between hospitals and procurement authorities.

These contracts resulted in more commercially minded leadership, rapid decision making procedures, increased administrative control and goal congruence between medical professionals and the hospital leaderships. Increased competition could not be seen as an explanation as the number of hospital care suppliers did not change. This is a relevant finding as lack of competition is often considered to be a problem for the introduction of more market mechanisms in the hospital care market.
Also lessons learned from other industries, despite the differences in institutional environment, can have added value in finding the most suitable governance structure. The example used in this study about the diamond industry with all-in-one contracts illustrates this argument.
Further research in an international and industry wide context will create new insights which can be helpful in the current reformation process of the Dutch hospital care market.

The role of trust is only superficially investigated in this study. More research is necessary on the process of building "thick" trust to determine the role of trust and relational signalling in transactional relationships between hospitals and health insurance companies. This also the case for the effects of reputation for hospitals and health insurance companies and the way their transactions are coordinated.

In this study the health insurance companies in the Netherlands using the restitution system resulting in classical contracting, are not investigated separately. It is interesting to perform more research on the effect of the identified hazards in this study, on the transactions between hospitals and health insurance companies using the restitution system and the effect on contracted prices.

Appendix A Institutional Environment

The next table gives an overview of all possible forms of the health insurances in The Netherlands with their characteristics before the new law "Zorgverzekeringswet" was introduced (2006).

	Public		private		
	AWBZ[1]	Ziekenfonds	civil servants[2]	private other	WTZ[3]
Character-istics	in justice	in justice	legal status	under private law	mixed (duty to accept insurants)
Insurants	every person paying Dutch income tax	Employees with wages under "Ziekenfondswet" limit, benefit holders	Civil servants local authority, province, police	Civil servants central government, employees with wages above "Ziekenfondswet" limit, self employed	all other
number of insurants	14,5 mln	8,9 mln	0,9 mln	4,0 mln	0,7 mln
premium	percentage of wages	Part 1: percentage of wages Part 2: nominal	percentage of wages	nominal	nominal
compensation in kind/ restitution	in kind	in kind	restitution	restitution	restitution
Contribution and franchise	compulsory contribution	compulsory contribution	compulsory contribution	voluntary franchise	compulsory contribution and franchise
Execution	various organisations	social health insurance companies	public civil servant insurance organisations	private insurance companies	private insurance companies
Supervision	CTZ	CTZ	Ministry of home affairs	Insurance chamber	Insurance chamber

Table A1 Overview health care insurance in the Netherlands (Brouwer & van den Broek 1997)

1 Algemene Wet Bijzondere Ziektekosten. For instance hospital care that takes more than one year is covered by the AWBZ. Costs for hospital care up till one year are covered by the other insurances.
2 Het Instituut Ziektkostenvoorziening Ambtenaren of de Interprovinciale ZiektekostenRegeling and DGVP.
3 The WTZ (de Wet op de Toegang tot de Ziektekostenverzekering) is an insurance for people with high health risks and manages the duty of private health insurance companies to accept people who are named in this legislation (for instance aged people).

In the next table the hospital products are presented which present the DBCs in segment B which know since 2005 free contracting and price negotiations between hospitals and health insurance companies.

DBC-categorieën met vrije prijsvorming	
Specialisme	DBC categorie
Chirurgie	Liesbreuk (hernia inguinalis)
Chirurgie	Spataderen (varices)
Interne geneeskunde	Diabetes mellitus
KNO	Keel- en neus amandelen (adenoïd en tonsillen)
Plastische chirurgie	Borstverkleining
Dermatologie	Spataderen (varices)
Gynaecologie	Baarmoederhals-afwijkingen (cervixafwijkingen)
Gynaecologie	Incontinentie bij vrouw
Kindergeneeskunde	Diabetes bij kinderen
Oogheelkunde	Staaroperatie (cataract)
Neurochirurgie	Hernia nek en hernia long/tot de lende behorend (HNP)
Reumatologie	Jicht
Orthopaedie	Verstijving van de wervelkolom als gevolg van reuma (spondylitis ankylopoetica)
Orthopaedie	Totale heup/overige operaties
Orthopaedie	Totale knie/overige operaties
Orthopaedie	Hernia (H.N.P)
Gastro-enterologie	Gastro-oesofageale refluxziekte/oesofagitis
Gastro-enterologie	Chronische bovenbuikklachten (dyspepsie functioneel)
Urologie	Blaasoperaties
Urologie	Niersteen-behandeling
Urologie	Uretersteen-behandeling
Neurologie	Hernia (radiculair syndroom / HNP lumbaal)
Longgeneeskunde	Interstitiële aandoeningen

Table A2 DBC's in segment B (CTG/Zaio 2005)

Appendix B Case studies

In this appendix the sources of information used in this study for the case studies are presented. First the list of interviewed persons in both case studies is presented in two separate frames. Subsequently the documents and archival records gathered in both case studies are presented in two separate frames.

List of interviewed persons in case study A:

Hospital

Manager finance and information
- Member board of directors
- Nurse and clustermanager "klinisch ambulante zorg" and participant innovation project
- Medical specialist "stafvertegenwoordiger, Nefroloog"
- Participant innovation project (shared project with health insurance company)
- Medical specialist/neuroloog

Health insurance company
- Manager "Zorg Beleid & contractering", manager Health region, before working in hospital for several years.
- Account manager hospitals
- Account manager Hospitals/country representative other region.
- Account manager Hospitals/country representative other region.
- Director Health
- Medical advisor
- Account manager hospitals country representative health insurance companies

List of interviewed persons in case study B:

Hospital
- Member board of directors
- Member board of directors
- Medical specialist, chairman medical specialists
- Hospital manager, finance portfolio
- Medical specialist, new chairman medical specialists

Health insurance company
- CEO, chairman board of directors, portfolio finance and new building activities
- CEO health
- Head of department hospitals and account manager
- Account manager
- Country representative in negotiations
- Head of department hospitals
- Medical advisor

List of documents and archival records gathered in case study A:

1. Rapport "zorgvernieuwingsprojecten 2001 ziekenhuis", 23 maart 2001.
2. Rapport "zorgvernieuwingsprojecten fase 2 consequenties in beeld, ziekenhuis, juni 2000.
3. Rapport "evaluatie zorgvernieuwingsprojecten 2000, ziekenhuis", november 2000.
4. Convenant tussen NVZ, orde van medisch specialisten, VAZ en ZN, 6-12-2000.
5. Budget aanpassingen per 1 januari 2001 op grond van herallocatie FB, Bijlage 7 ij JM/th/l/2001/14c, gecorr. 13 maart 2001.
6. Addendum bij modelovereenkomst 2000 ziekenhuis-zorgverzekeraar.
7. Artikel interview directeur zorgverzekeraar over rol zorgverzekeraar in Nederland.
8. Jaarverslag 2000, zorgverzekeraar.
9. Brochure ziekenfondsverzekering zorgverzekeraar.
10. Verzekerings reglement en vergoedingen ziekenfonds wet en aanvullende verzekeringen zorgverzekeraar, ingangsdatum 1 januari 2001.
11. Folder "Bruggen bouwen in de gezondheidszorg (tussen vraag en aanbod in de regio)" zorgverzekeraar.
12. Jaarrekening 1999, 2000, ziekenhuis.
13. Kwartaal rapportage 2000, ziekenhuis.
14. Bijlage 8 bij J</th/l/2001/14c, gecorr. 14 maart 2001, Budget aanpassingen per 1 januari 2001 op grond van productieafspraken (inclusief afspraken m.b.t. wachtlijstproductie).
15. Brief productie afspraken 2001 (inclusief ontdooiing) tussen zorgverzekeraar, ZN en ziekenhuis, 4 mei 2001.
16. Brief aan NVZ aan de directies/Raad van Bestuur van de instellingen aangesloten bij de NVZ (Nederlandse Vereniging van Ziekenhuizen), 7 december 2000, onderwerp: convenant bekostiging 2001.
17. Model overeenkomst ziekenfonds-ziekenhuis (geïntegreerde verstrekking).
18. Kwaliteits jaarverslag 1999, ziekenhuis.
19. Fusie document ziekenhuis, 8 september 1999.
20. Regiovisie Ziekenhuiszorg 2000-2003, kader voor curatieve zorg, opgesteld door de holding", 28 maart 2001 en een update dd 5 juli 2001.

List of documents and archival records gathered in case study B:

1. Jaarverslag 2000, ziekenhuis
2. Kwaliteits jaarverslag, ziekenhuis, 2000
3. Lange termijn plan ziekenhuis 2002-2005, versie september 2001
4. Kwartaal rapportage productie cijfers ziekenhuis, oktober 2001
5. Balanced Score Card ziekenhuis, derde kwartaal 2001
6. Notulen bijeenkomst tussen ziekenhuis en zorgverzekeraar.
7. Notulen bijeenkomst ziekenhuis, zorgverzekeraar en landelijke vertegenwoordiger.
8. Notulen interim bijeenkomst accountmanagers ziekenhuis en zorgverzekeraar.
9. Rapporten over nieuwbouw activiteiten ziekenhuis.
10. Maandelijkse nieuwskrant ziekenhuis.
11. Nieuwskrant ziekenhuis over nieuwbouw activiteiten ziekenhuis.
12. Publicaties van ziekenhuis in professionele literatuur over verschillen van mening met het beleid van zorgverzekeraars en zorgverzekering wetgeving.
13. Jaarverslag ziekenhuizen 2001, zorgverzekeraar.
14. Patiënt tevredenheids onderzoek, format vragenlijst, zorgverzekeraar.
15. Patiënten informatie zorgverzekeraar, december 2002

Appendix C Questionnaire

In this appendix the format of the questionnaire used in this study is presented. The questionnaire for hospitals and health insurance companies differ for certain questions and are therefore both presented.

Vragenlijst ziekenhuis

Naam ziekenhuis:_____

Plaats ziekenhuis:_____

Verzekeraar(s) waarmee wordt onderhandeld:
_____

Regiovertegenwoordiger verzekeraars:

Naam respondent:

Functie respondent:

U kunt het ingevulde vragenformulier terugsturen in de bijgevoegde antwoordenveloppe of naar UMC Utrecht, Julius Centrum D01-335, tav prof dr A.J.P. Schrijvers, antwoordnummer 8419, 3500 VW UTRECHT

deel 1 Situationele vragen

a. Hoe lang werkt u reeds bij dit ziekenhuis?

O minder dan 2 jaar

O tussen de 2 en 5 jaar,

O meer dan 5 jaar

b. Welke achtergrond heeft u?

O zorginhoudelijk

O bedrijfseconomisch

O anders namelijk _____

1

c. Hoeveel jaren onderhandelt u in uw huidige functie met verzekeraars?

O minder dan 1 jaar

O 2 tot 5 jaar

O meer dan 5 jaar

d. Hoe groot is het marktaandeel van uw ziekenhuis in uw WZV regio?

O minder dan 25%

O tussen de 25 en de 50%,

O tussen de 50 en de 75%,

O meer dan 75%

e. Hoe groot is het marktaandeel in de provincie waarin uw ziekenhuis is gehuisvest?

O minder dan 10%

O tussen de 10 en de 20%,

O tussen de 20 en de 30%,

O meer dan 30%

f. Heeft uw ziekenhuis een landelijke functie? Nee/ja namelijk voor: _____ _____

g. Op welke gebieden onderscheidt uw ziekenhuis zich? (meerdere antwoorden mogelijk)

O regio gerichtheid en kennis,

O topklinische zorg,

O klantvriendelijkheid,

O innovativiteit,

O transmurale projecten,

O wachtlijstbehandeling,

O anders namelijk…….

O weet niet

h. Met hoeveel ziekenhuizen concurreert u? regionaal_____ziekenhuizen

landelijk_____ziekenhuizen

i. Met hoeveel ziekenhuizen werkt u samen in een formeel verband?_____

2

deel 2 Vragen over marktwerking

1. Voor welke segmenten van ziekenhuiszorg denkt u dat marktwerking[1] in Nederland realiseerbaar is?

a. Topklinische zorg

O zeker O mogelijk O zeker niet O weet niet

b. Zorg met hoge volumes/prevalentie (vaak voorkomend) , lage risico's en meetbare resultaten

O zeker O mogelijk O zeker niet O weet niet

c. Zorg met laag volume/prevalentie (nauwelijks voorkomend), hoge risico's en minder duidelijke uitkomsten

O zeker O mogelijk O zeker niet O weet niet

d. Planbare zorg

O zeker O mogelijk O zeker niet O weet niet

e. Spoedeisende hulp

O zeker O mogelijk O zeker niet O weet niet

f. Andere segmenten namelijk:_____

2. Wanneer denkt u dat aan onderstaande voorwaarden, die gerelateerd zijn aan marktwerking, is voldaan?

a. integrale invoering dbc's

☐ 1 jaar ☐ 2-3 jaar ☐ 3-5 jaar ☐ langer dan 5 jaar ☐ zal niet gebeuren ☐ weet niet

b. gedeeltelijke invoering dbc's (bijvoorbeeld voor planbare zorg)

☐ 1 jaar ☐ 2-3 jaar ☐ 3-5 jaar ☐ langer dan 5 jaar ☐ zal niet gebeuren ☐ weet niet

c. volledige financiering ziekenhuizen op basis van onderhandelde dbc's

☐ 1 jaar ☐ 2-3 jaar ☐ 3-5 jaar ☐ langer dan 5 jaar ☐ zal niet gebeuren ☐ weet niet

[1] Onder marktwerking wordt verstaan vrije onderhandeling over volume, prijs en kwaliteit van in te kopen ziekenhuisproducten met door de verzekeraar geselecteerde ziekenhuiszorg aanbieders.

3

d. gedeeltelijke financiering ziekenhuizen op basis van onderhandelde dbc's (bijvoorbeeld planbare zorg)

☐ 1 jaar ☐ 2-3 jaar ☐ 3-5 jaar ☐ langer dan 5 jaar ☐ zal niet gebeuren ☐ weet niet

e. voldoende inzicht verzekeraars in doelmatigheid prestaties ziekenhuis en medisch specialisten in het kader van onderhandelingen

☐ 1 jaar ☐ 2-3 jaar ☐ 3-5 jaar ☐ langer dan 5 jaar ☐ zal niet gebeuren ☐ weet niet

f. voldoende inzicht verzekeraars in kwaliteit prestaties ziekenhuis en medisch specialisten in het kader van onderhandelingen

☐ 1 jaar ☐ 2-3 jaar ☐ 3-5 jaar ☐ langer dan 5 jaar ☐ zal niet gebeuren ☐ weet niet

g. contracteervrijheid voor zorgverzekeraars t.a.v. ziekenhuizen en specialisten

☐ 1 jaar ☐ 2-3 jaar ☐ 3-5 jaar ☐ langer dan 5 jaar ☐ zal niet gebeuren ☐ weet niet

h. contracteervrijheid voor ziekenhuizen t.a.v. zorgverzekeraars

☐ 1 jaar ☐ 2-3 jaar ☐ 3-5 jaar ☐ langer dan 5 jaar ☐ zal niet gebeuren ☐ weet niet

i. Voldoende ziekenhuis personeel en -voorzieningen om aan de vraag te voldoen

☐ 1 jaar ☐ 2-3 jaar ☐ 3-5 jaar ☐ langer dan 5 jaar ☐ zal niet gebeuren ☐ weet niet

Deel 3 Vragen over de institutionele omgeving

4

Kunt u aangeven wat uw verwachting is ten aanzien van onderstaande stellingen?

a. De overheid zal de komende 5 jaar geleidelijk terugtreden uit de ziekenhuis zorgmarkt.

O zeer zeker O mogelijk O zeker niet O weet niet

b. Het BKZ zal na een succesvolle invoering van DBC's worden afgeschaft.

O zeer zeker O mogelijk O zeker niet O weet niet

c. De voorspelbaarheid van de wet- en regelgeving waaraan ziekenhuizen en zorgverzekeraars zich dienen te houden zal de komende 5 jaar toenemen.

O zeer zeker O mogelijk O zeker niet O weet niet

d. Berichten in de media zullen een belangrijke rol blijven spelen voor politieke bemoeienis in de ziekenhuismarkt na realisatie van een bepaalde mate van marktwerking[2] in de ziekenhuis zorgmarkt.

O zeer zeker O mogelijk O zeker niet O weet niet

e. Persoonlijk netwerken in de politiek (lobbyen) zal minder betekenis krijgen voor ziekenhuizen na realisatie van een bepaalde mate van marktwerking in de ziekenhuis zorgmarkt.

O zeer zeker O mogelijk O zeker niet O weet niet

f. Persoonlijk netwerken tussen ziekenhuizen en zorgverzekeraars zal toenemen na realisatie van een bepaalde mate van marktwerking in de ziekenhuis zorgmarkt.

O zeer zeker O mogelijk O zeker niet O weet niet

g. De concurrentie tussen ziekenhuizen zal toenemen door de komst van DBC's.

O zeer zeker O mogelijk O zeker niet O weet niet

Toelichting:_____

h. Priveklinieken (inclusief ZBC's) zullen over 5 jaar een aanzienlijk deel (meer dan 20%) van de ziekenhuiszorg leveren.

O zeer zeker O mogelijk O zeker niet O weet niet

i. Verzekerden zullen over 5 jaar een aanzienlijk deel (meer dan 20%) van de ziekenhuiszorg buiten hun eigen regio (ander deel van Nederland of buitenland) ontvangen

O zeer zeker O mogelijk O zeker niet O weet niet

---

[2] Onder een bepaalde mate van marktwerking wordt verstaan vrije onderhandeling over volume prijs en kwaliteit met door de verzekeraar geselecteerde ziekenhuiszorg aanbieders voor een bepaald assortiment ziekenhuisproducten (bijvoorbeeld alle planbare ziekenhuiszorg)

5

j. Nieuwe toetreders in de zorgverzekeringenmarkt zullen een belangrijke rol gaan spelen

O zeer zeker O mogelijk O zeker niet O weet niet

k. Ziekenhuizen zullen over 5 jaar na de invoering van gedeeltelijke of gehele marktwerking:

O meer gaan samenwerken met collega ziekenhuizen

O minder gaan samenwerken met collega ziekenhuizen

O evenveel samenwerken met collega ziekenhuizen

O anders gaan samenwerken met collega ziekenhuizen, namelijk _____

O weet niet

l. Reputatie blijft voor ziekenhuizen een belangrijke factor om de kwaliteit van de zorg en/of klanttevredenheid hoog te houden.

O zeer zeker O mogelijk O zeker niet O weet niet

m. De invloed van de koepelorganisaties (ZN,NvZ, Orde MS) zal de komende jaren afnemen

O zeer zeker O mogelijk O zeker niet O weet niet

Indien u denkt dat de invloed anders wordt kunt u dit omschrijven?

_____

n. Patienten (behartigings) organisaties (voor chronisch zieken) zullen een grote rol gaan spelen als intermediair tussen verzekeraar en ziekenhuis bij de inkoop van zorg voor hun patienten

O zeer zeker O mogelijk O zeker niet O weet niet

o. Verzekeraars zullen zich wettelijk moeten gaan certificeren voor goed "zorgverzekeraarschap"

O zeer zeker O mogelijk O zeker niet O weet niet

Deel 4 Vragen over positie van verzekeraars

1. Verwachte positie verzekeraar over 5 jaar bij een succesvolle invoering van DBC's.

a. De prestaties van het ziekenhuis zijn transparanter voor de verzekeraar

O geheel mee eens O deels mee eens O geheel mee oneens O weet niet

b. De prestaties van de medisch specialisten zijn transparanter voor de verzekeraar

O geheel mee eens O deels mee eens O geheel mee oneens O weet niet

c. De verzekeraar zal scherpere prijzen onderhandelen met ziekenhuizen (bij voldoende capaciteit)

O geheel mee eens O deels mee eens O geheel mee oneens O weet niet

d. De verzekeraar zal ziekenhuizen vaker op de kwaliteit van geleverde diensten aanspreken

O geheel mee eens O deels mee eens O geheel mee oneens O weet niet

e. De verzekeraar zal meer directe invloed uitoefenen op het individuele ziekenhuisbeleid en -investeringen

O geheel mee eens O deels mee eens O geheel mee oneens O weet niet

f. De verzekeraar zal hogere (administratieve) kosten voor de inkoop van ziekenhuiszorg maken.

O geheel mee eens O deels mee eens O geheel mee oneens O weet niet

g. De verzekeraar zal in staat zijn effectiever wachtlijsten terugdringen

O geheel mee eens O deels mee eens O geheel mee oneens O weet niet

h. De verzekeraar zal met stuurpolissen sterk bepalen naar welk ziekenhuis de verzekerden zullen gaan

O geheel mee eens O deels mee eens O geheel mee oneens O weet niet

2. Waarin zullen verzekeraars meer gaan investeren om beter gebruik te kunnen maken van de invoering van marktwerking (inclusief DBC's)?

a. Verzekeraars zullen investeren in zorginhoudelijke kennis en mensen,

O zeker O mogelijk O zeker niet O weet niet

b. Verzekeraars zullen investeren in informatiesystemen

O zeker O mogelijk O zeker niet O weet niet

7

c. Verzekeraars zullen investeren in benchmarking van prestaties ziekenhuizen en specialisten

O zeker O mogelijk O zeker niet O weet niet

d. Verzekeraars zullen investeren in contacten en onderhandeling met ziekenhuis (de inkoopfunctie)

O zeker O mogelijk O zeker niet O weet niet

e. Verzekeraars zullen investeren in kennis van ziekenhuisproblematiek

O zeker O mogelijk O zeker niet O weet niet

f. Verzekeraars zullen investeren in priveklinieken

O zeker O mogelijk O zeker niet O weet niet

g. Verzekeraars zullen investeren in buitenlandse inkoop

O zeker O mogelijk O zeker niet O weet niet

Deel 5. Vragen over de positie van ziekenhuizen en specialisten

1. Welke gevolgen heeft de invoering van DBC's voor ziekenhuizen?

a. betere interne managementinformatie

O zeker O mogelijk O zeker niet O weet niet

b. hogere administratiekosten door genereren DBC informatie

O zeker O mogelijk O zeker niet O weet niet

c. verandering relatie RvB-specialist door verhoogde transparantie prestaties specialisten

O zeker O mogelijk O zeker niet O weet niet

2. Welke gevolgen heeft het afschaffen van de contracteerplicht voor ziekenhuizen?

a. Kwetsbaarheid bij grote investeringen voor zorg waarvoor voldoende capaciteit bestaat[3]

O zeker O mogelijk O zeker niet O weet niet

Toelichting:_____

b.Hogere onderhandelings- en contractkosten (de verkoopfunctie naar verzekeraars)

O zeker O mogelijk O zeker niet O weet niet

c. Differentiatie en marketing worden belangrijker voor ziekenhuis (differentiatie in de zin van goedkoper, innovatiever, klantvriendelijker dan andere ziekenhuizen)

O zeker O mogelijk O zeker niet O weet niet

[3] De kwetsbaarheid is afhankelijk van de verwachte contractduur en de mogelijkheid/wens van verzekeraar om te wisselen van ziekenhuis bij de inkoop van zorg.

9

Deel 6 Vragen over onderhandelingsrelatie zorgverzekeraars en ziekenhuizen

a. Welk scenario acht u het meest waarschijnlijk over 5 jaar? svp één scenario aankruisen

O Ziekenhuis en zorgverzekeraar werken samen aan het verbeteren van de ziekenhuiszorg door gezamenlijke investeringen. Investeringsrisico's worden voor bepaalde projecten gedeeld.

O Ziekenhuis is alleen verantwoordelijk voor het leveren van de ziekenhuiszorg

b. Welk scenario acht u het meest waarschijnlijk over 5 jaar? svp één scenario aankruisen

O Ziekenhuis en zorgverzekeraar hebben een jaarcontract afgesloten met prijs en capaciteit van een compleet pakket DBC's. Het ziekenhuis is verzekerd van betaling van dit pakket ziekenhuisproducten.

O Ziekenhuis en zorgverzekeraar hebben een preferred supplier contract afgesloten. De zorgverzekeraar betaalt alleen de daadwerkelijk afgenomen DBC's tegen de afgesproken prijs. Het ziekenhuis is verantwoordelijk voor het bepalen van de benodigde capaciteit.

c. Welk scenario acht u het meest waarschijnlijk over 5 jaar? svp één scenario aankruisen

O Ziekenhuis onderhandelt met verschillende verzekeraars (bijvoorbeeld t.b.v. van risicospreiding)

O Ziekenhuis onderhandelt alleen met verzekeraars die een hoog marktaandeel hebben in de regio.

d. Welk scenario acht u het meest waarschijnlijk over 5 jaar? svp één scenario aankruisen

O Ziekenhuis en verzekeraar zullen zich gaan profileren met kwaliteitscertificaten en hiervan in hun onderhandelingen gebruik maken.

O Ziekenhuis en verzekeraar zullen op basis van benchmark informatie onderhandelen.

e. Welk scenario acht u het meest waarschijnlijk over 5 jaar? svp één scenario aankruisen

O Verzekeraars zullen het instrument van protocollering gebruiken om de kwaliteit en efficientie van ziekenhuis en specialist te waarborgen.

O Verzekeraars zullen gebruik maken van de door het ziekenhuis en specialist opgeleverde DBC informatie om de kwaliteit en efficientie van de door hun ingekochte ziekenhuiszorg te waarborgen.

f. Welk scenario acht u het meest waarschijnlijk over 5 jaar? svp één scenario aankruisen

O ziekenhuizen die slecht presteren zullen failliet zijn

O verzekeraars die slecht presteren zullen failliet zijn (cq. uit de zorgmarkt zijn gestapt)

O ziekenhuizen en verzekeraars die slecht presteren zullen failliet zijn

O geen enkel ziekenhuis/verzekeraar zal failliet zijn

g. Wat is uw mening over de rol van toezichthoudende instanties in de ziekenhuismarkt over 5 jaar?

O belangrijker dan nu O even belangrijk als in de huidige situatie O minder belangrijk

10

h. Welk rol zullen toezichthoudende instanties spelen over 5 jaar? (meerdere antwoorden mogelijk)

O bewaking kwaliteit geleverde ziekenhuiszorg

O bewaking wachtlijsten

O bewaking inkoopbeleid zorgverzekeraars

O bewaking transparantie ziekenhuiszorg

O bewaking transparantie ziektekosten verzekeringen

O bewaking concurrentieverhoudingen in ziekenhuiszorg markt

O bewaking concurrentieverhoudingen in zorgverzekeringen markt

O bewaking toegankelijkheid ziekenhuiszorg

O bewaking toegankelijkheid zorgverzekeringen

O bewaking klanttevredenheid patienten

O bewaking klanttevredenheid verzekerden

O _____

i. In hoeverre denkt u dat de invoering van marktwerking zal bijdragen aan een efficientere[4] ziekenhuiszorg? (omcirkel svp de bijdrage waarbij 1 is zeer weinig, 10 is zeer veel))

1 2 3 4 5 6 7 8 9 10

Toelichting_____

j. Denkt u dat de invoering van marktwerking zal bijdragen aan een hogere tevredenheid van patienten over de geleverde ziekenhuiszorg? (omcirkel svp de bijdrage, 1 is zeer weinig, 10 is zeer veel)

1 2 3 4 5 6 7 8 9 10

Toelichting_____

[4] Efficienter betekent met dezelfde middelen meer doen.

11

k. Hoe belangrijk zijn de volgende variabelen in de onderhandelingen tussen ziekenhuis en zorgverzekeraar? S.v.p. aankruisen in hokje.

	niet belangrijk	enigszins belangrijk	zeer belangrijk	weet niet
Een goed contract				
Betrouwbare DBC informatie				
Langdurige relatie personen aan de onderhandelingstafel				
Vertrouwen tussen personen aan de onderhandelingstafel				
Goede relatie RvB en specialisten ziekenhuis				
Goede kennis bij verzekeraar van ziekenhuis				
Goede kennis vraag naar ziekenhuiszorg bij de personen aan de onderhandelingstafel				

l. Hoe zullen verzekeraars met een laag marktaandeel in een regio de ziekenhuiszorg gaan inkopen over 5 jaar? meerdere antwoorden mogelijk

O met een contract met een verzekeraar met een hoog marktaandeel

O met een productenboek waarin het ziekenhuis verrichtingen en prijzen aanbiedt

O met een inkoopcombinaties gevormd door verzekeraars die ook een laag marktaandeel hebben

O anders namelijk _____

m. Hoe typeert u op dit moment uw relatie met de zorgverzekeraar? svp per regel een cijfer omcirkelen

1 2 3 4 5 (1 = zeer open, 5 = zeer gesloten)

1 2 3 4 5 (1 = zeer inhoudelijk, 5 = zeer procedureel)

1 2 3 4 5 (1 = zeer cooperatief, 5 = zeer vijandig)

1 2 3 4 5 (1 = korte termijn gericht, 5 = lange termijn gericht)

n. Hoe denkt u dat de relatie met de zorgverzekeraar eruit ziet over 5 jaar na de invoering van gehele of gedeeltelijke marktwerking? svp per regel een cijfer omcirkelen

1	2	3	4	5	(1 = zeer open, 5 = zeer gesloten)
1	2	3	4	5	(1 = zeer inhoudelijk, 5 = zeer procedureel)
1	2	3	4	5	(1 = zeer cooperatief, 5 = zeer vijandig)
1	2	3	4	5	(1 = korte termijn gericht, 5 = lange termijn gericht)

EINDE VRAGENLIJST

HARTELIJK DANK VOOR UW MEDEWERKING

\

U kunt het ingevulde vragenformulier terugsturen in de bijgevoegde antwoord enveloppe of naar UMC Utrecht, Julius Centrum D01-335, tav prof dr A.J.P. Schrijvers, antwoordnummer 8419, 3500 VW UTRECHT

13

Vragenlijst zorgverzekeraar

Naam verzekeraar
:_____

Ziekenhuizen waarmee wordt onderhandeld: _____

_____

Naam respondent:

Adres respondent:

email:

Functie respondent:

U kunt het ingevulde vragenformulier terugsturen in de bijgevoegde antwoordenveloppe of naar UMC Utrecht, Julius Centrum D01-335, tav prof dr A.J.P. Schrijvers, antwoordnummer 8419, 3500 VW UTRECHT

deel 1 Situationele vragen

a. Welke achtergrond heeft u?

O bedrijfseconomisch

O zorginhoudelijk

O anders namelijk _____

b. Hoeveel jaren werkt u in uw huidige functie?

O minder dan 1 jaar

O 2 tot 5 jaar

O meer dan 5 jaar

c. Bent u een regionale of landelijke verzekeraar? landelijk / regionaal

d. Hoe groot is uw marktaandeel in Nederland in de zorgverzekeringen?

O minder dan 5%

O tussen de 5 en de 10%,

O tussen de 10 en de 15%,

O meer dan 15%

O weet niet

14

e. Voor hoeveel ziekenhuizen bent u marktleider (meer dan 50% van de patienten is bij u verzekerd)?

O 0 tot 5

O 5 tot 10

O 10 tot 15

O 15 tot 20

O meer dan 20

O weet niet

f. Wat zijn de belangrijkste gebieden waarop u zich onderscheidt als verzekeraar?

O aanpak van wachtlijsten,

O klantvriendelijkheid,

O prijs

O innovativiteit,

O zorginhoudelijke kennis

O anders namelijk…….

O weet niet

g. Met welke verzekeraars concurreert u? _____

h. Met welke verzekeraars werkt u samen?_____

15

deel 2 Vragen over marktwerking

1. Voor welke segmenten van ziekenhuiszorg denkt u dat marktwerking[5] in Nederland realiseerbaar is?

a. Topklinische zorg

O zeker O mogelijk O zeker niet O weet niet

b. Zorg met hoge volumes/prevalentie (vaak voorkomend) , lage risico's en meetbare resultaten

O zeker O mogelijk O zeker niet O weet niet

c. Zorg met laag volume/prevalentie (nauwelijks voorkomend), hoge risico's en minder duidelijke uitkomsten

O zeker O mogelijk O zeker niet O weet niet

d. Planbare zorg

O zeker O mogelijk O zeker niet O weet niet

e. Spoedeisende hulp

O zeker O mogelijk O zeker niet O weet niet

f. Andere segmenten namelijk:_____

2. Wanneer denkt u dat aan onderstaande voorwaarden, die gerelateerd zijn aan marktwerking, is voldaan?

a. integrale invoering dbc's

☐ 1 jaar ☐ 2-3 jaar ☐ 3-5 jaar ☐ langer dan 5 jaar ☐ zal niet gebeuren ☐ weet niet

b. gedeeltelijke invoering dbc's (bijvoorbeeld voor planbare zorg)

☐ 1 jaar ☐ 2-3 jaar ☐ 3-5 jaar ☐ langer dan 5 jaar ☐ zal niet gebeuren ☐ weet niet

c. volledige financiering ziekenhuizen op basis van onderhandelde dbc's

☐ 1 jaar ☐ 2-3 jaar ☐ 3-5 jaar ☐ langer dan 5 jaar ☐ zal niet gebeuren ☐ weet niet

[5] Onder marktwerking wordt verstaan vrije onderhandeling over volume, prijs en kwaliteit van in te kopen ziekenhuisproducten met door de verzekeraar geselecteerde ziekenhuiszorg aanbieders.

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d. gedeeltelijke financiering ziekenhuizen op basis van onderhandelde dbc's (bijvoorbeeld planbare zorg)

☐ 1 jaar ☐ 2-3 jaar ☐ 3-5 jaar ☐ langer dan 5 jaar ☐ zal niet gebeuren ☐ weet niet

e. voldoende inzicht verzekeraars in doelmatigheid prestaties ziekenhuis en medisch specialisten in het kader van onderhandelingen

☐ 1 jaar ☐ 2-3 jaar ☐ 3-5 jaar ☐ langer dan 5 jaar ☐ zal niet gebeuren ☐ weet niet

f. voldoende inzicht verzekeraars in kwaliteit prestaties ziekenhuis en medisch specialisten in het kader van onderhandelingen

☐ 1 jaar ☐ 2-3 jaar ☐ 3-5 jaar ☐ langer dan 5 jaar ☐ zal niet gebeuren ☐ weet niet

g. contracteervrijheid voor zorgverzekeraars t.a.v. ziekenhuizen en specialisten

☐ 1 jaar ☐ 2-3 jaar ☐ 3-5 jaar ☐ langer dan 5 jaar ☐ zal niet gebeuren ☐ weet niet

h. contracteervrijheid voor ziekenhuizen t.a.v. zorgverzekeraars

☐ 1 jaar ☐ 2-3 jaar ☐ 3-5 jaar ☐ langer dan 5 jaar ☐ zal niet gebeuren ☐ weet niet

i. Voldoende ziekenhuis personeel en -voorzieningen om aan de vraag te voldoen

☐ 1 jaar ☐ 2-3 jaar ☐ 3-5 jaar ☐ langer dan 5 jaar ☐ zal niet gebeuren ☐ weet niet

Deel 3 Vragen over de institutionele omgeving

Kunt u aangeven wat uw verwachting is ten aanzien van onderstaande stellingen?

a. De overheid zal de komende 5 jaar geleidelijk terugtreden uit de ziekenhuis zorgmarkt.

O zeer zeker O mogelijk O zeker niet O weet niet

b. Het BKZ zal na een succesvolle invoering van DBC's worden afgeschaft.

O zeer zeker O mogelijk O zeker niet O weet niet

c. De voorspelbaarheid van de wet- en regelgeving waaraan ziekenhuizen en zorgverzekeraars zich dienen te houden zal de komende 5 jaar toenemen.

O zeer zeker O mogelijk O zeker niet O weet niet

d. Berichten in de media zullen een belangrijke rol blijven spelen voor politieke bemoeienis in de ziekenhuismarkt na realisatie van een bepaalde mate van marktwerking[6] in de ziekenhuis zorgmarkt.

O zeer zeker O mogelijk O zeker niet O weet niet

e. Persoonlijk netwerken in de politiek (lobbyen) zal minder betekenis krijgen voor ziekenhuizen na realisatie van een bepaalde mate van marktwerking in de ziekenhuis zorgmarkt.

O zeer zeker O mogelijk O zeker niet O weet niet

f. Persoonlijk netwerken tussen ziekenhuizen en zorgverzekeraars zal toenemen na realisatie van een bepaalde mate van marktwerking in de ziekenhuis zorgmarkt.

O zeer zeker O mogelijk O zeker niet O weet niet

g. De concurrentie tussen ziekenhuizen zal toenemen door de komst van DBC's.

O zeer zeker O mogelijk O zeker niet O weet niet

Toelichting:_____

h. Priveklinieken (inclusief ZBC's) zullen over 5 jaar een aanzienlijk deel (meer dan 20%) van de ziekenhuiszorg leveren.

O zeer zeker O mogelijk O zeker niet O weet niet

i. Verzekerden zullen over 5 jaar een aanzienlijk deel (meer dan 20%) van de ziekenhuiszorg buiten hun eigen regio (ander deel van Nederland of buitenland) ontvangen

O zeer zeker O mogelijk O zeker niet O weet niet

[6] Onder een bepaalde mate van marktwerking wordt verstaan vrije onderhandeling over volume prijs en kwaliteit met door de verzekeraar geselecteerde ziekenhuiszorg aanbieders voor een bepaald assortiment ziekenhuisproducten (bijvoorbeeld alle planbare ziekenhuiszorg)

j. Nieuwe toetreders in de zorgverzekeringenmarkt zullen een belangrijke rol gaan spelen

O zeer zeker O mogelijk O zeker niet O weet niet

k. Ziekenhuizen zullen over 5 jaar na de invoering van gedeeltelijke of gehele marktwerking:

O meer gaan samenwerken met collega ziekenhuizen

O minder gaan samenwerken met collega ziekenhuizen

O evenveel samenwerken met collega ziekenhuizen

O anders gaan samenwerken met collega ziekenhuizen, namelijk _____

O weet niet

l. Reputatie blijft voor ziekenhuizen een belangrijke factor om de kwaliteit van de zorg en/of klanttevredenheid hoog te houden.

O zeer zeker O mogelijk O zeker niet O weet niet

m. De invloed van de koepelorganisaties (ZN,NvZ, Orde MS) zal de komende jaren afnemen

O zeer zeker O mogelijk O zeker niet O weet niet

Indien u denkt dat de invloed anders wordt kunt u dit omschrijven?

_____

n. Patienten (behartigings) organisaties (voor chronisch zieken) zullen een grote rol gaan spelen als intermediair tussen verzekeraar en ziekenhuis bij de inkoop van zorg voor hun patienten

O zeer zeker O mogelijk O zeker niet O weet niet

o. Verzekeraars zullen zich wettelijk moeten gaan certificeren voor goed "zorgverzekeraarschap"

O zeer zeker O mogelijk O zeker niet O weet niet

19

Deel 4 Vragen over positie van verzekeraars

1. Verwachte positie verzekeraar over 5 jaar bij een succesvolle invoering van DBC's.

a. De prestaties van het ziekenhuis zijn transparanter voor de verzekeraar

O geheel mee eens O deels mee eens O geheel mee oneens O weet niet

b. De prestaties van de medisch specialisten zijn transparanter voor de verzekeraar

O geheel mee eens O deels mee eens O geheel mee oneens O weet niet

c. De verzekeraar zal scherpere prijzen onderhandelen met ziekenhuizen (bij voldoende capaciteit)

O geheel mee eens O deels mee eens O geheel mee oneens O weet niet

d. De verzekeraar zal ziekenhuizen vaker op de kwaliteit van geleverde diensten aanspreken

O geheel mee eens O deels mee eens O geheel mee oneens O weet niet

e. De verzekeraar zal meer directe invloed uitoefenen op het individuele ziekenhuisbeleid en -investeringen

O geheel mee eens O deels mee eens O geheel mee oneens O weet niet

f. De verzekeraar zal hogere (administratieve) kosten voor de inkoop van ziekenhuiszorg maken.

O geheel mee eens O deels mee eens O geheel mee oneens O weet niet

g. De verzekeraar zal in staat zijn effectiever wachtlijsten terugdringen

O geheel mee eens O deels mee eens O geheel mee oneens O weet niet

h. De verzekeraar zal met stuurpolissen sterk bepalen naar welk ziekenhuis de verzekerden zullen gaan

O geheel mee eens O deels mee eens O geheel mee oneens O weet niet

2. Waarin zullen verzekeraars meer gaan investeren om beter gebruik te kunnen maken van de invoering van marktwerking (inclusief DBC's)?

a. Verzekeraars zullen investeren in zorginhoudelijke kennis en mensen,

O zeker O mogelijk O zeker niet O weet niet

b. Verzekeraars zullen investeren in informatiesystemen

O zeker O mogelijk O zeker niet O weet niet

c. Verzekeraars zullen investeren in benchmarking van prestaties ziekenhuizen en specialisten

O zeker O mogelijk O zeker niet O weet niet

d. Verzekeraars zullen investeren in contacten en onderhandeling met ziekenhuis (de inkoopfunctie)

O zeker O mogelijk O zeker niet O weet niet

e. Verzekeraars zullen investeren in kennis van ziekenhuisproblematiek

O zeker O mogelijk O zeker niet O weet niet

f. Verzekeraars zullen investeren in priveklinieken

O zeker O mogelijk O zeker niet O weet niet

g. Verzekeraars zullen investeren in buitenlandse inkoop

O zeker O mogelijk O zeker niet O weet niet

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Deel 5. Vragen over de positie van ziekenhuizen en specialisten

1. Welke gevolgen heeft de invoering van DBC's voor ziekenhuizen?

a. betere interne managementinformatie

O zeker O mogelijk O zeker niet O weet niet

b. hogere administratiekosten door genereren DBC informatie

O zeker O mogelijk O zeker niet O weet niet

c. verandering relatie RvB-specialist door verhoogde transparantie prestaties specialisten

O zeker O mogelijk O zeker niet O weet niet

2. Welke gevolgen heeft het afschaffen van de contracteerplicht voor ziekenhuizen?

a. Kwetsbaarheid bij grote investeringen voor zorg waarvoor voldoende capaciteit bestaat[7]

O zeker O mogelijk O zeker niet O weet niet

Toelichting:_____

b.Hogere onderhandelings- en contractkosten (de verkoopfunctie naar verzekeraars)

O zeker O mogelijk O zeker niet O weet niet

c. Differentiatie en marketing worden belangrijker voor ziekenhuis (differentiatie in de zin van goedkoper, innovatiever, klantvriendelijker dan andere ziekenhuizen)

O zeker O mogelijk O zeker niet O weet niet

[7] De kwetsbaarheid is afhankelijk van de verwachte contractduur en de mogelijkheid/wens van verzekeraar om te wisselen van ziekenhuis bij de inkoop van zorg.

Deel 6 Vragen over onderhandelingsrelatie zorgverzekeraars en ziekenhuizen

a. Welk scenario acht u het meest waarschijnlijk over 5 jaar? svp één scenario aankruisen

O Ziekenhuis en zorgverzekeraar werken samen aan het verbeteren van de ziekenhuiszorg door gezamenlijke investeringen. Investeringsrisico's worden voor bepaalde projecten gedeeld.

O Ziekenhuis is alleen verantwoordelijk voor het leveren van de ziekenhuiszorg

b. Welk scenario acht u het meest waarschijnlijk over 5 jaar? svp één scenario aankruisen

O Ziekenhuis en zorgverzekeraar hebben een jaarcontract afgesloten met prijs en capaciteit van een compleet pakket DBC's. Het ziekenhuis is verzekerd van betaling van dit pakket ziekenhuisproducten.

O Ziekenhuis en zorgverzekeraar hebben een preferred supplier contract afgesloten. De zorgverzekeraar betaalt alleen de daadwerkelijk afgenomen DBC's tegen de afgesproken prijs. Het ziekenhuis is verantwoordelijk voor het bepalen van de benodigde capaciteit.

c. Welk scenario acht u het meest waarschijnlijk over 5 jaar? svp één scenario aankruisen

O Ziekenhuis onderhandelt met verschillende verzekeraars (bijvoorbeeld t.b.v. van risicospreiding)

O Ziekenhuis onderhandelt alleen met verzekeraars die een hoog marktaandeel hebben in de regio.

d. Welk scenario acht u het meest waarschijnlijk over 5 jaar? svp één scenario aankruisen

O Ziekenhuis en verzekeraar zullen zich gaan profileren met kwaliteitscertificaten en hiervan in hun onderhandelingen gebruik maken.

O Ziekenhuis en verzekeraar zullen op basis van benchmark informatie onderhandelen.

e. Welk scenario acht u het meest waarschijnlijk over 5 jaar? svp één scenario aankruisen

O Verzekeraars zullen het instrument van protocollering gebruiken om de kwaliteit en efficientie van ziekenhuis en specialist te waarborgen.

O Verzekeraars zullen gebruik maken van de door het ziekenhuis en specialist opgeleverde DBC informatie om de kwaliteit en efficientie van de door hun ingekochte ziekenhuiszorg te waarborgen.

f. Welk scenario acht u het meest waarschijnlijk over 5 jaar? svp één scenario aankruisen

O ziekenhuizen die slecht presteren zullen failliet zijn

O verzekeraars die slecht presteren zullen failliet zijn (cq. uit de zorgmarkt zijn gestapt)

O ziekenhuizen en verzekeraars die slecht presteren zullen failliet zijn

O geen enkel ziekenhuis/verzekeraar zal failliet zijn

g. Wat is uw mening over de rol van toezichthoudende instanties in de ziekenhuismarkt over 5 jaar?

O belangrijker dan nu O even belangrijk als in de huidige situatie O minder belangrijk

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h. Welk rol zullen toezichthoudende instanties spelen over 5 jaar? (meerdere antwoorden mogelijk)

O bewaking kwaliteit geleverde ziekenhuiszorg
O bewaking wachtlijsten
O bewaking inkoopbeleid zorgverzekeraars
O bewaking transparantie ziekenhuiszorg
O bewaking transparantie ziektekosten verzekeringen
O bewaking concurrentieverhoudingen in ziekenhuiszorg markt
O bewaking concurrentieverhoudingen in zorgverzekeringen markt
O bewaking toegankelijkheid ziekenhuiszorg
O bewaking toegankelijkheid zorgverzekeringen
O bewaking klanttevredenheid patienten
O bewaking klanttevredenheid verzekerden
O _____

i. In hoeverre denkt u dat de invoering van marktwerking zal bijdragen aan een efficientere[8] ziekenhuiszorg? (omcirkel svp de bijdrage waarbij 1 is zeer weinig, 10 is zeer veel))

1 2 3 4 5 6 7 8 9 10

Toelichting_____

j. Denkt u dat de invoering van marktwerking zal bijdragen aan een hogere tevredenheid van patienten over de geleverde ziekenhuiszorg? (omcirkel svp de bijdrage, 1 is zeer weinig, 10 is zeer veel)

1 2 3 4 5 6 7 8 9 10

Toelichting_____

k. Hoe belangrijk zijn de volgende variabelen in de onderhandelingen tussen ziekenhuis en zorgverzekeraar? S.v.p. aankruisen in hokje.

	niet belangrijk	enigszins belangrijk	zeer belangrijk	weet niet
Een goed contract				
Betrouwbare DBC informatie				
Langdurige relatie personen aan de onderhandelingstafel				
Vertrouwen tussen personen aan de onderhandelingstafel				
Goede relatie RvB en specialisten ziekenhuis				
Goede kennis bij verzekeraar van ziekenhuis				
Goede kennis vraag naar ziekenhuiszorg bij de personen aan de onderhandelingstafel				

[8] Efficienter betekent met dezelfde middelen meer doen.

l. Hoe zullen verzekeraars met een laag marktaandeel in een regio de ziekenhuiszorg gaan inkopen over 5 jaar? meerdere antwoorden mogelijk

O met een contract met een verzekeraar met een hoog marktaandeel

O met een productenboek waarin het ziekenhuis verrichtingen en prijzen aanbiedt

O met een inkoopcombinaties gevormd door verzekeraars die ook een laag marktaandeel hebben

O anders namelijk _____

m. Hoe typeert u op dit moment uw relatie met de ziekenhuizen? svp per regel een cijfer omcirkelen

1	2	3	4	5	(1 = zeer open, 5 = zeer gesloten)
1	2	3	4	5	(1 = zeer inhoudelijk, 5 = zeer procedureel)
1	2	3	4	5	(1 = zeer cooperatief, 5 = zeer vijandig)
1	2	3	4	5	(1 = korte termijn gericht, 5 = lange termijn gericht)

n. Hoe denkt u dat de relatie met de ziekenhuizen eruit ziet over 5 jaar na de invoering van gehele of gedeeltelijke marktwerking? svp per regel een cijfer omcirkelen

1	2	3	4	5	(1 = zeer open, 5 = zeer gesloten)
1	2	3	4	5	(1 = zeer inhoudelijk, 5 = zeer procedureel)
1	2	3	4	5	(1 = zeer cooperatief, 5 = zeer vijandig)
1	2	3	4	5	(1 = korte termijn gericht, 5 = lange termijn gericht)

EINDE VRAGENLIJST

HARTELIJK DANK VOOR UW MEDEWERKING

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U kunt het ingevulde vragenformulier terugsturen in de bijgevoegde antwoord enveloppe of naar UMC Utrecht, Julius Centrum D01-335, tav prof dr A.J.P. Schrijvers, antwoordnummer 8419, 3500 VW UTRECHT

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Curriculum Vitae

Claudia Brandenburg (1968) graduated in 1991 in Business Administration at the Erasmus University in Rotterdam and in 1994 in Social Sciences at the University of Utrecht. She started her career as a management consultant in 1994 at Arthur Andersen. Her interest for the hospital market started in 1996 during a large-scale consulting project at a Dutch University hospital. In 2000 she moved to London to work as a knowledge manager for the EMEIA Public Sector practice within Arthur Andersen. Between 2002 and 2007 Claudia worked for Deloitte Consulting. At the moment she is responsible for the healthcare industry at Protiviti Risk Consulting in the Netherlands. During her career she was engaged in many consulting projects in hospitals and the public sector. Claudia specialised herself in governance and management and cost accounting issues. Since the start of her PhD she has written several publications related to the subject of this study.

ERASMUS UNIVERSITEIT ROTTERDAM