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E-business in health care: does it contribute to strengthen consumer interest?

Ed Kertzman [a,*], Richard Janssen [a], Marijn Ruster [b]

[a] *Department of Economics, PO Box 90153, Tilburg University, 5000 LE Tilburg, The Netherlands*
[b] *Professional at unit Warp 11 of Cap Gemini Ernst and Young, Utrecht, The Netherlands*

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Abstract

One of the goals of the reforms in the European health-care systems over the last two decades has been to make the health-care system more demand-oriented. There is not much known about the possible impact of E-business like approaches on this goal. This paper describes the concept of E-business. Two cases are introduced to illustrate the use of a simple E-business approach in a health-care setting. On the basis of these case studies, we aspect a reduction of the information disadvantages of patients. In our analysis, we also apply new institutional economy concepts, namely agency theory and transaction costs economics to focus on the position of the patient. Concluded is that it is more probable that preferences of demanders are answered by the suppliers of health care.

Keywords: E-business approach; Organization of health care; Agency theory; Transaction cost economics

1. Introduction

Within the health-care sector, patients and insurers generally have less information about health conditions than the suppliers of care and cure do. As a result of this information asymmetry, doctors have a strong hold on the allocation of the available capacity because they know more than the other parties about medical issues. However, the extent of their impact depends on the way in which activities within the health sector are steered. Especially important is whether the allocation of services is steered from the demand side. Within the economic science transaction costs economics (TCE) and principal–agent theory provide a framework in which the consequences of steering from the demand side can be studied. At stake is whether patients (the principals) can have more influence on the suppliers of care (the agents).

In this paper, we analyse two cases of demand-led allocation within the Dutch health-care sector. The cases are taken from the nursing and care sector. The first case is about the administration of waiting lists. The second concerns the so-called personal budgets (PBs) which the government supplies to patients. Patients with such budgets

* Corresponding author. Tel.: +31-13-4662-102; fax: +31-13-4663-042
E-mail address: e.kertzman@uvt.nl (E. Kertzman).

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can choose the suppliers of care themselves and make contracts with them concerning the nature, the amount, and the price of care.

The central element in the present analysis is that steering from the demand side can be supported to a great extent by using Internet technology. In the rest of this paper, we call this the application of E-business within the health-care sector. The restriction to two cases means that other possible applications of the Internet are not covered within this paper. For example, we do not deal with information to patients, the availability of medical files to doctors, and the electronic processing of files (e.g. bills) that were previously done manually. Neither we will deal with the use of expert systems that sustain medical decision-making, software for database mining. We will restrict ourselves to use of E-business approaches in the context of health-care sector. An important part of the analysis concerns the question of whether patients (or their insurers) have the technical means to limit the information advantage of doctors [1].

We first pay attention to the phenomenon of E-business within private companies (Section 2). Next, the use of E-business within our two cases is analysed (Sections 3 and 4). Principal/agent and transaction costs theory are then used to determine the impact of E-business on the steering of activities (Section 5). We end with some concluding remarks (Section 6).

2. E-business

2.1. Introduction

E-business can be defined as the exchange of goods, services, and information and/or ideas using an electronic medium (for two good overviews of E-business, see [2]). It is fundamental that the costs of information decrease dramatically by applying the Internet technology. Transmitting, classifying, and using information (as soon as it exists) does lower costs. Moreover, the information is available at any time, in any place. The use of Internet technology by private companies has various dimensions. It affects the relations between companies, between companies and their clients, and between companies and personnel. This last can change the structure and culture of companies. Clients can also exchange information via the Internet, as can patients with in the health-care sector. The last two aspects of E-business will not be dealt within the remaining sections of this paper.

2.2. E-business between companies

E-business between companies concerns company purchasing. This can be analysed from the supplier's or the demander's perspective. Our starting point is the demander's perspective. Purchases can be divided into direct and indirect goods. The first is a part of the end product produced by the purchaser. The second category is not, but it is, nonetheless, necessary in order to produce. Examples are office furniture and computers. In this section, E-business between companies will be illustrated for the case of direct goods.

Direct goods are often specially designed for the purchaser and produced in large quantities. These goods are usually purchased by a small specialised group of people within the company. Indirect goods are standard goods. These are purchased in small quantities. The money value per transaction is lower than in the case of direct goods. Consequently, the transaction costs are relatively high.

Internet technology influences the purchase of direct goods in two ways: it affects the choice of the supplier and the integration of the production processes of supplier and purchaser. Companies can purchase goods in a non-interactive way or they can look at other companies' showrooms via the Internet. In this way, buyers can choose their supplier. A further step is the selection of suppliers by Internet. Direct goods are mostly made specially for the purchaser. In addition to the first selection, subsequent agreements about the quality of products, the scheme of delivery, etc. have to be made.

Once a supplier is chosen, he will continue to be the supplier for many years. After all, he knows exactly what the purchaser wants; however, the

potential competition via the Internet remains. The Internet can bring about changes in a different way when the relation between supplier and purchaser has become stable. Production processes can then be linked by Internet. The supplier has the possibility to use the Internet to monitor the development of stocks and the production of the purchaser. The purchaser can then keep small stocks without risking a shortage of parts. In fact the Internet is the enabler of the use of E-business strategies. It may be clear that besides incentives from the demand side, there are also cultural changes that need to take place when introducing these types of technologies. From the latter, we will abstract in this paper.

3. Waiting lists and personnel care budgets

3.1. The Dutch health-care system

Before we describe the management of waiting lists and personal health-care budgets, we will first give a short overview of the Dutch health-care system. From an administrative point of view, the system is split up into three compartments (see Table 1). The first compartment is concerned with long-term care, which is financed by The Exceptional Medical Expenses Act (AWBZ). The AWBZ provides insurance for this type of care to all Dutch citizens. It covers medical expenses such as stays in nursing homes, homes for the elderly, institutions for the handicapped, and homes for the mentally disabled. It is financed by income-related premiums. Both our cases fall under this compartment.

The second compartment pays expenses for acute care, GPs, medicines, hospitals, and specialist care. Wage earners, social security beneficiaries, and the self-employed with an income below a certain level are covered for this care by the Health Insurance Act. They pay a predominantly income-related premium. A small part of this premium is a nominal premium. People who earn more than the income ceiling have to buy private insurance to cover the care offered in the second compartment. There is a standard private insurance scheme that is provided by all insurers. Everyone who is insured, whether by a private company or by the Health Insurance Fund, is free to change insurance company once a year. Finally, the third compartment is responsible for all care that is not part of the other two compartments. Examples are special dental treatments and plastic surgery. It is a non-regulated part of the health-care system. The relations between insured and insurers are as in a free market. Non-insured care, paid directly by the user to the provider, is also supplied. It is considered as part of the third compartment.

Three actors operate in the triangle presented in Fig. 1: the consumer, the provider, and the third-party payer (the insurer). Thus, we can distinguish three markets. First, there is the market in which the insurers buy care services from providers. In this market, insurers and providers negotiate service volumes and agree on budgets. These budgets are prospective. Unlike the American practice of managed care or the fund holder's contracts in the UK, these contracts have a global character. Second, there is the market in which the users meet the providers. In this market, providers, mostly doctors, make appointments with indivi-

Table 1
Overview of compartments in the Dutch health-care system

Compartment	Financing	Insurer	Regulation	Cost in % (1999)
First compartment	AWBZ	Concession holder (health insurer)	Government regulate supply and prices	45
Second compartment	Health Insurance Act and private insurance	Health Insurance Funds and private health insurers	Regulated competition	52
Third compartment	Optional insurance	Health Insurance Funds and private health insurers	Free markets	3

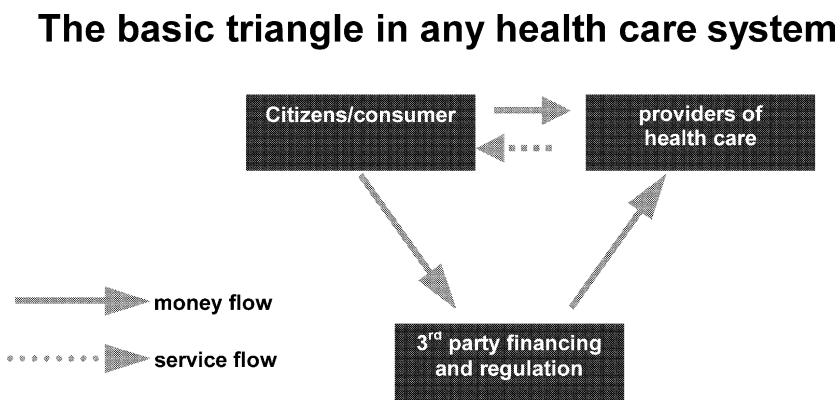

Fig. 1.

dual patients for specific treatments. It is clear that, because a third party usually pays the bill, the influence of the patient is restricted. In fact, the hospitals do not have any short-term incentives to maximise their services because of the prospective budgets. However, the autonomy of the providers is less in the cases we will present in this paper. In the first case, the insurer, who is supposed to act as an agent for the patient, controls the waiting lists. In the second case, concerning a personal health-care budget, the patient controls the money. Therefore, we suppose that the patient has more influence on the care delivered.

Third, there is the market in which the insured meet the insurers. We will not consider this market.

3.2. Structure of the first compartment

Since the financing of the first compartment is part of the social insurance system, the national government decides the extent of the insurance schemes and the premium level, and it controls the available care capacity. The operational part of the AWBZ is decentralised to 31 regions. For every region, there is one concession holder who operates the AWBZ. Concessions are given to insurers for a period of 3 years. Those insurers also offer insurance schemes for the second compartment. The concession holder is called the Health Care Office. The Health Care Office is responsible for operating the AWBZ and guaranteeing first compartment care to all inhabitants of a region. Besides the Health Care Office, there is a Regional Indication Office (RIO). The concession holder provides budgets to the health-care providers on the basis of contracts. In the contracts, the quantity and quality of care is negotiated to guarantee that sufficient care is provided to the insured.

Once a patient receives a positive indication from the RIO, the Health Care Office checks his/her insurance rights. The office determines whether the client will have to pay a part of the costs, which depends on the income level. The Health Care Office also checks the availability of services, or, if relevant the waiting list. In case of a waiting list, if possible, next best care is offered. If the client is put on a waiting list, the degree of urgency is indicated. As alternative to the care of a contracted supplier, a PB may be supplied. In that case, the client is given a certain amount of money (a budget), and can buy the preferred services himself/herself.

3.3. Waiting lists and the need for information

If services are not available at the moment they are needed, a waiting list develops. For reasons of efficiency, a short waiting list is common in non-acute health care. However, patients show a limited acceptance of waiting lists. Being on a waiting list becomes less acceptable if an illness develops in a non-reversible direction or if the workload for the social environment becomes

unacceptable. In this case, the concept of the degree of delay ability of preferred care is applied.

In the past, the AWBZ had waiting lists, not only for providers, but also for the RIOs: as a result, there were waiting lists for indications, the authorisation of care rights by the Health Care Office, and the realisation of care by the providers (see Fig. 2). To reduce the waiting lists, the Dutch government increased the national budget of the AWBZ in the years 2000 and 2001. The government also forced the Health Care Offices to improve the validity of the waiting lists. This process of improvement could be summarised by the phrases: better measurement, better allocation, and adjustment of supply.

3.3.1. Better measurement

To improve the measurement of the waiting list, a coherent regional system for the registration of the waiting lists was developed. This became the responsibility of the Health Care Office. Before this change, the health-care providers managed these lists. Fig. 2 shows the central position of the Health Care Office. The registration format was standardised nationally. The RIOs and the providers are obliged to provide the Health Care Office with adequate information.

In the future, the Health Care Office provides regional data to a national data bank that is accessible via the internet technology. The Health Care Office provides regional data to a national data bank that is freely accessible via the Internet. This system provides national authorities with monitoring information. Regions are able to benchmark the effects of their efforts to reduce the waiting lists.

3.3.2. Allocation

The Health Care Office also has an important responsibility in the allocation of resources in order to balance the supply and demand. They are responsible for specifying the criteria for unacceptable waiting times and urgency, standardising the rationing of care, and defining the so-called second best temporary care.

3.3.3. Capacity

An increase in the volume of care cannot be realised by simply enlarging the capacity of traditional care. An individual budget for each patient was introduced for the care of disabled people. The budget is transferred to the institute providing care to that patient. Consequently, there is a strong incentive for institutes to make an optimal use of the available capacity.

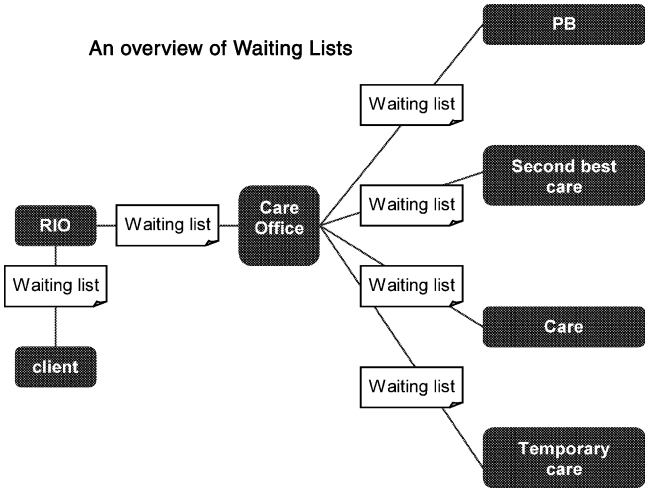

Fig. 2.

3.4. Management of waiting lists using by an E-business approach

The management of waiting lists is an example of the usefulness of E-business between enterprises, in this case Health Care Offices and health-care providers. Easy access to information about the care indicated by the RIOs, the realised care and the yet to be realised care supplied by the providers, the income and the addresses of clients and status (still alive), is necessary for the good performance of the Health Care Office. Information about the income of the client is necessary because of the possible requirement of income-dependent co-payment. This information is provided by the fiscal authorities. The civil registrars' office has information about the civil status of the client and can check the addresses.

For the interchange of information between the above-named institutions, one can use the Internet technology. The information that is available to one of the institutions about a specific client can be supplied to another institution by using web technology or even acquired directly by an authorised institution. This situation is comparable to a business-to-business relation. The following conditions are necessary for such a system:) >

1) The registration is done by the institution that has the best opportunities to do so. This information must be of excellent quality.
2) The definitions of the data have to be standardised and well described to avoid misinterpretation by the users.
3) The privacy of the clients has to be guaranteed.

How does this function in reality? Every registered person in the Netherlands has a social security and fiscal number (Sofi-number) which is the basis for the administrative identification of a person. The RIO connects the Sofi-number to a personal file number. In this personal file, the different indications are registered by separate numbers. A digital version of this information can be supplied to the Health Care Office. If this information is available to the Health Care Office, the latter has access to adequate data, and it can update and analyse these data from different point of views. This type of information interchange has the following advantages:) >

1) The number of comparable indications is easy to determine.
2) Clients with the same kind of indication can be grouped by, e.g. date of indication.
3) It is not difficult to determine how many clients with the same indication are on a waiting list in different regions.

We may conclude that the digital registration of the indication procedure and the order status of care delivery lead to greater efficiency and an improvement of the quality of data. The improvement in efficiency is the result of a less hand-operated process. Table 2 shows the improvement of quality aspects.

The improvement in quality of data is not the only remarkable result of digital registration and processing. Another result is that there is less information asymmetry. By managing the waiting lists, the Health Care Offices know better than before how the available capacity is used. This information can be used to help patients to make better choices.

4. E-business and PBs

4.1. Introduction

PBs were introduced as part of AWBZ in the Netherlands in 1997. Expectations were rather high. PBs were introduced to give the insured more control over the kind of care they receive.

Table 2
Improvement of quality aspects

All data are available online at every moment of the process
It is convenient to generate management and policy information on different levels
The accountability of AWBZ institutions for its activities is improved
Fewer mistakes and other problems in the registration process
The registration process is much faster
There is better protection of privacy

The insured are given a budget in order to contract the indicated care themselves.

The insured person can choose who supplies the care and also negotiate the price, the time, and the sort of care. Client and supplier agree on the specifics of care. PBs are designed for people who need long-term professional nursing and/or care or support in the domestic situation because of a mental handicap or psychiatric problems.

PBs have proved to be a great success. About 400 million guilders were spend on PBs in 2000 [3]. This was only a fraction of the total health expenditure of that year. However, the execution of policy proved to be more difficult than expected. The available budget remained partly unspent and, especially in the care of the handicapped, there are waiting lists. However, PBs are more important than one would expect considering the budget amount. Suppliers of care see PBs as part of a transition to a more demand-led allocation of care and are, therefore, more prepared than they were in the past to fulfil the wishes of the patients.

The main cause of these problems is the way in which the implementation of PBs is structured. Therefore, we will describe this structure first. Then, we will discuss the problems and their causes in more detail. Finally, we will demonstrate that E-business can solve the described problems.

4.2. The implementation of PBs

RIOs, the Health Care Offices, and the Social Insurance Bank (SVB) administer the PBs. RIOs and the Health Care Offices do this at the regional level. RIOs determine the care need. The Health Care Office decides who is entitled to a budget and controls the total budget that is available for its region. Allocated budgets are not transferred to the clients. The SVB pays their budgets directly to the providers of care and does the related administrative work (see Fig. 3). In fact, the money does not even flow via the Health Care Offices.[1] They only have a budget on paper.

[1] The formal receiver of the subsidy.

Besides these real executors, other agencies are involved in the implementation of PBs as suppliers of information. These agencies (IAs) supply information about the income, the place of residence, and the address of the clients. Information Demanb/Supply chain of PBs on incomes is relevant because the budget is income-dependent for some forms of care.

4.3. Problems

The present implementation of PBs is characterised by slowness, lack of transparency, and underspending of budgets [4]. A substantial part of the budget for PBs for the last years was not spent. This underspending has two causes:) >

1) The Health Care Offices did not allocate approximately 10% of the budgets that were available for the different forms of care.
2) The clients did not spend approximately 18% of the budgets that were allocated to them. So, there were two types of underspending. Underspending by clients, however, can be evaluated positively insofar as they managed to buy the needed care at lower prices than was expected. However, the Health Care Offices did not manage to use the full amount of this underspending for other clients.

Recently, in the course of 2000, this situation improved. However, the implementation of the PBs is still not without problems.

Slowness is a result of the poor communication between SVB and clients. In the past, SVB did not always inform budget holders (clients) in time that SVB had paid their care suppliers. So, it could happen that collection agencies would order budget holders to pay their bills immediately. Through a lack of information, however, they did not know whether SVB had already paid the bills. The lack of transparency relates to the fact that the Health Care Offices did not know to what extent clients spent their budgets.

The causes of these problems can be categorised as follows:) >

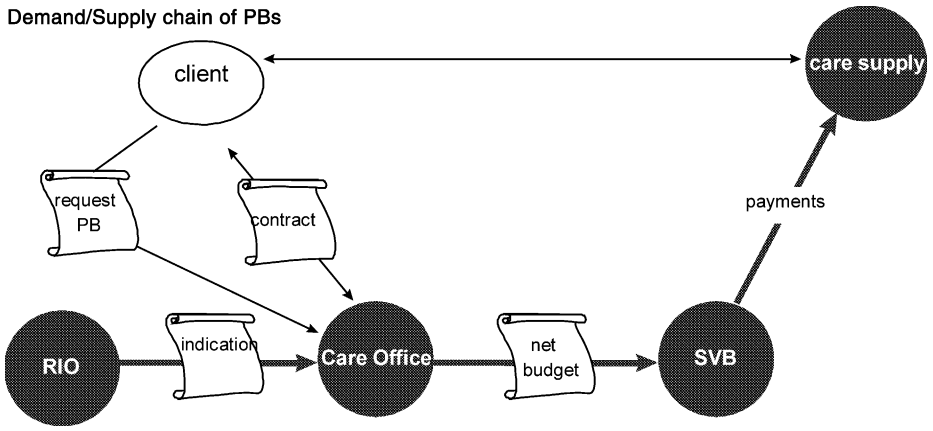

Fig. 3.

1) Many parties are involved in the implementation of policy. The result is a highly complicated implementation structure. Furthermore, the distribution of tasks and the connected responsibilities are not clear in all respects.
2) Data are often incorrect or incomplete. Moreover, the information provided to the Health Care Offices by SVB is often of poor quality. The same applies to the information given by SVB to the clients.

Solving these problems is a precondition to using PBs on a larger scale. Use of PBs on a larger scale is desirable for two reasons. Firstly, a more demand-led allocation of funds is desirable. Second, the waiting lists can be reduced by using PBs, as PBs can be used to buy services from non-official care providers. Clients can buy domestic aid from relatives and friends, for instance.

Using E-business can solve the second problem, more particularly by applying PBs in an already existing information system. We will call this system EDI (electronic data interchange) in the remainder of this paper. By using EDI, the supply of care can be better matched with the preferences of clients. Thus, we can speak of E-business between business and consumers.

4.4. EDI as a solution

The exchange of information can be improved by using EDI for the transmission of data. Some parties within the social security sector started with EDI in 1996. The aim was to improve the exchange of data between the different sectors of social security. Using EDI can be considered as a condition for an E-business-like approach within the health-care sector.

In the exchange of data, EDI functions only as an intermediary between the demand and supply of information. Every sector that participates in EDI has an electronic window that processes all incoming and outgoing information. The exchange of information is linked to the Sofi-number of the patient. By using the Sofi-number, a sector automatically receives all the information other sectors have about a person. In this way, the demanding sector does not have to know where the information is located.

To use EDI for the exchange of data about PBs would be a logical step from several points of views. Sectors that already use EDI are also involved in the implementation of PBs. This applies to SVB and the tax department (one of the IAs). A further argument is that using EDI requires only a minor investment from the Health Care Offices. Using EDI would make an automatic exchange of data between these offices and SVB possible.

It is important, however, that a high quality of information flows through the EDI system. Information must be carefully verified and registered at the moment that a PB is allocated to a person. In this way, the data transmitted by EDI can be

free of errors. At the intake, the Sofi-number of the patient is linked to the number of the SVB file. By using these two numbers, data can be exchanged with a negligible risk of mistakes. Information can also be collected without mentioning the name of clients, which guarantees privacy.

The processing of data can be done automatically, taking only a day. In the past, this took some weeks. As a result, SVB can know faster what budgets are allocated to clients. The Health Care Offices can receive faster and more exact information about the spending of budgets by their holders and can, therefore, prevent the underspending of budgets.

In other words, the introduction of E-business eliminates the obstacles that block the expansion of PBs. EDI prevents great delays and mistakes in data processing, making the implementation of the PB program much more efficient than in the past. This benefits clients as well as the parties that execute the PB program.

4.5. E-business and a more demand-led allocation of care

The above demonstrates that E-business enables a more demand-led allocation of care on the health-care market. In the future, demand-led allocation could increase even more. Essential is that E-business reduces the information disadvantage of patients. A uniform registration of waiting lists will enable patients to make better choices. For instance, one can choose a type of treatment for which short waiting lists exist. By using PBs, suppliers have an incentive to advertise on their Internet site what services they have to offer and under what conditions. As a result, a development is possible in which the initial use of E-business furthers an additional use.

5. E-business and the new institutional economy

5.1. Introduction

The preceding is to a large extent descriptive. In the following, we will analyse the consequences of E-business for the health-care sector in terms of the new institutional economy (NIE). The budget system in the health-care sector described in Section 3.2 is our starting point in this analysis. In this system, the suppliers of care have a fixed budget that is partly based on the agreements between insurers and suppliers of care about the volume and character of productive activities. Such activities consist of, e.g. first visits to outpatient departments and the numbers of hospital days. Thus, the agreements are not in terms of output (type of treatment) or outcome. The other part of the budget finances the fixed and semi-fixed production capacity.

5.2. Agency theory

Expressed in terms of agency theory this type of budgeting does not prevent moral hazard [5] on the health market. Of course, the annual budget is fixed, but the suppliers of care can still determine rather autonomously who gets what treatment. In the first place, this has to do with the information asymmetry that works to the advantage of the agent—the supplier of care—and to the disadvantage of the principal—the patient. Also, the individual demand for health care does not impact the budget of the supplier. Even the well-informed principal does not, therefore, have a strong position in relation to the agent.

The management of waiting lists by Health Care Offices with the help of E-business lessens the strong position of the agent in two ways. First, control of the list shifts from the suppliers of care to the experts in the Health Care Offices. Who will be treated and when is no longer decided by autonomous suppliers. They can no longer use their information advantage in a way that does not support the interests of the patient. Second, by using E-business, the Health Care Offices can more than adequately monitor the indicated, allocated, and realised care. Thus, they know how the available capacity is being used and consequently the autonomy of the suppliers is reduced.

Within the system of PBs, the suppliers' budgets increase in line with the demand for their services. In this way, the preferences of the patient become

more important. Moreover, the patients (and their relatives) can evaluate the quality of care quite well in most cases. E-business is not only a condition for the successful implementation of PBs; it also makes another principal/agent relation possible. Within this relation, the principals (patients) can better control the agents (suppliers).

5.3. Transaction costs economics

This theory analyses the ways in which economic activities are governed [6]. The theory states that when competition prevails, the governance structure with the lowest transaction costs will be chosen. The theory discerns two basic types of governance: the market and the hierarchy. In practice, there are also hybrid forms. More specific the question is of whether companies purchase direct and indirect goods on the market from other companies or produce these goods themselves. Transaction costs are the costs of incurring and monitoring agreements. In the first case, these are the costs linked to a relation with another party; in the other case, the costs of internal transactions. In both cases, attention is paid to the explicit and implicit contracts that are made.

The governance of activities within the health-care sector can only be explained to a limited extent by TCE. This is because the theory supposes that parties operate on markets. Parties that operate on markets can choose autonomously the governance structure, with the lowest transaction costs. However, it is the government that ultimately chooses on the basis of political calculations for a certain governance structure, and not the demanders and suppliers of care themselves. Therefore, is not certain that the government will chose the most efficient structure. Other political considerations (e.g. income distribution) will also play a role [7].

However, TCE can be used to study the consequences of changes in the health sector. For example, what happens with the transaction costs on the health-care market when suppliers and demanders of care negotiate about how much care has to be delivered within what budget. TCE can also describe the governance structures made possible by technological progress makes. For instance, E-business lowers the transaction costs of PBs so that demand-led care is a realistic option for a governance structure. In the same spirit, one can describe the management of waiting lists with the tools of E-business as a situation in which contracts on the health-care market are more complete than before. The demanders of care are now able to say more precisely what they require from the suppliers.

Decisions about changes in the health-care sector are, however, still made within a political context. Therefore, E-business does necessarily result in the maximum level of efficiency. E-business can also make a complicated governance structure more efficient and, as a consequence, viable for a longer period of time. One example is the governance structure of PBs. E-business can make the structure more efficient, but a simpler structure could perhaps increase efficiency even more.

6. Conclusions

In the market sector, E-business has important consequences for relations between companies, and between companies and clients. Within the health sector, E-business can also lead to big changes. As examples of this, we analysed the management of waiting lists and PBs. Through the use of these instruments, E-business allows the demanders of care to acquire a stronger position on the health-care market. This stimulates the suppliers to pay more attention to the preferences of the demanders of care. In terms of the new institutional economy, one can conclude that, in the principal–agent relation, the principal has gained a stronger position and that new governance structures have become possible. Both changes have to do with less information asymmetry to the detriment of the principal. It may be clear that the introduction of new technologies with such an impact is only possible if it is facilitated by cultural changes. We hope that this paper gives input to the willingness to change.

References

[1] Milgrom P, Roberts J. Economics, Organization and Management [Chapter 5]. Englewood Cliffs, NJ: Prentice-Hall, 1991.
[2] Kinney S, An overview of B2B and purchasing technology. A survey of e-management, The Economist, November 11, 2000;4–30. www.freemarkets.com.
[3] Report on the Health Situation 2001 (Zorgnota). The Hague, 2000.
[4] Commissie Toezicht Uitvoeringsorganisatie. Uitvoering subsidieregeling persoonsgebonden budget door zorgkantoren, 2000.
[5] Milgrom P, Roberts J. Economics, Organization and Management [Chapter 6]. Englewood Cliffs, NJ: Prentice-Hall, 1992.
[6] Williamson OE. Transaction-cost economics: the governance of contractual relations. Journal of Law and Economics 1979;XXII(2):233–61.
[7] Moe TM. Political institutions: the neglected side of the story. Journal of Law, Economics and Organization 1990;6:213–53.