Opportunity of Non-profit Hospital Development in Germany

Ursula Discher and Irina Peaucelle[1]

Abstract

Hospital is a complex organisation analysed through a number of conflicting social and economic theories, such as: public economics, health production, regional economics, clustering, theory of the firm and financial and health risk analysis. In our paper we look at the effect of these social science developments and their diffusion on the provision of medical care services in non-profit type German hospitals. In support of the case study we explain the evolution of the management objectives and strategies of East German hospitals, following three targets of analysis: First, we place the hospital in the provision of care and in the regional economy and we look at the ways of structuring the socio-economic space by the hospital industry, including approaches that respond to demographic alterations and those driven by the evolution of the economy. Then we come across the competition among hospitals. Finally, we examine the impact of the succession of reforms of convergence since German reunification and we present our observations of results of care in order to assess the impact of increasing the financial responsibility of hospitals.

1. Introduction

Our analysis refers to non-profit hospital operation in today Germany. The religious establishment, Wittenberg hospital cluster, which we choose for case study, corresponds typically to this class of firms. The economic literature, as a general rule, distinguishes three types of firms: government, for profit and non for profit. As for hospitals, every one of these types offers medical care, uses similar resources, operates under the same healthcare regulations, and employs doctors qualified in the same universities. But they behave differently. Each type of behaviour can be analyses regarding the objectives of operation and usually the capital structure or ownership. The economists look on the capital structure by perceiving three main sources of firms' finance: reinvestment of prior earnings, borrowing from a bank, and issuing stock (equity). They explain the difference in structures by financial measures in terms of: cost, profits, the value of uncompensated services, and responsiveness to financial pressure. Non-profit organizations must allot all surpluses for religious and social purposes, thus no one has incentives to supervise their economic performance. Non-profit hospitals contract more often then other types of hospitals financial problems to guide their internal investment policy for development. But, non-profit organizations are dominant in health care systems of many countries. Why? Empirical studies using US data give answer: non-profit organization can offer higher level of quality, than a comparable pro-profit one.

Among the most recent studies on this field one can refer as us to: Sloan (2000), Abraham and alii (2003), Chakravarty and alii (2005), Santerre and Vernon (2005), Horwitz, J., Nichols, A. (2007). These economists analyse the demand side of hospital activity in US and look on performances depending on three previously mention types of hospitals. They pay attention (for instance, Santerre and Vernon (2005)) on population size and density in around territory, age disparity, level of income, unemployment rate of population, crime occurrence, and amount of outpatients' medical care (polyclinics). They measure the willingness or ability of patients to pay, the frequency of admission by safety net services of: uninsured persons, those of below poverty line, and with a disability. To estimate the rate of hospital utilisation they take account of admission, inpatient bed/day rate, surgeries, and emergency room visits. They conclude that hospital quality could not measure in function of ownership criterion, and that in for profit hospitals managers have more freedom to open or close a service for increase profits. Thus, along this last dimension there are large differences

[1] Corresponding author: PSE/CNRS, CEPREMAP, 142 rue du Chevaleret, Paris 13e, France, peaucelle[at]pse.ens.fr

among hospitals behaviour, given that only government and not for profit hospital provide generally undersupplied services.

The American experience (Abraham and alii (2003)) shows also the trend of consolidation in the hospital industry that leads to formation of monopolies, duopolies or triopolies on locally operating health care areas. Two types of questioning go in for: How the form of ownership influences entry and exit of care services? And how the form of competition influences the care quality? Authors' estimations (Chakravarty and alii (2005)) suggest that Entry and Exit is more responsive to demand changes of for-profit than not-for-profit hospitals. Membership in a hospital chain significantly decreases the probability of exit for-profits, but not non-profits. The entry leads to reduce profits' variability and increases quality.

Looking whether medical service provision varies with the for-profit share of their markets (Horwitz, J., Nichols, A. (2007), Horwitz (2005), Santerre and Vernon (2005)) conclude that more quality of care per dollar might be obtained by attracting a greater percentage of for-profit hospitals into some areas. In other words, inter-sector competition generates better general outcomes in term of quality and cost. All this specifies that behaviour of any hospital depends on the profit sharing form of neighbouring hospitals, because it adapts to the management policy of competitors in the same area. Finally, non profit hospital objectives may not be robust to competitive pressures since the ownership status of a hospital's neighbours is correlated with its own medical service offerings (Sloan (2000)).

We carry on this paper by presentation of typical non-profit hospital and its legislative framework of running in section two. Than in section three we look on the criterion of quality performance for hospitals. The fourth section pays attention to one quality indicator of hospital functioning more: the impact on economic development of geographic area. Fifth section depicts the hospital competition outline in Saxony-Anhalt State and non-profit hospital valorisation in this context. The lines of the hospital management adaptations to changing economic and legislative environment are cited in section six. In the concluding section we recapitulate the opportunity of non-profit hospital operating in the context of cost-quality competition.

2. Case study

We shall look at successive modifications of behaviour of a hospital, which apparently has not been interested in short-term profit. This is the hospital of Wittenberg city inaugurated in 1883 by Delegates of evangelical parishes of Saxony and named after Paul Gerhardt, poet of that period. Until today, the hospital works as a Lutheran clerical establishment. It remained this status throughout the course of its history even during the socialist period in East Germany, where it is situated. At the end of the 19th century the federal government comes to decision to finance hospitals in each big town. The city of Wittenberg chooses to support Paul Gerhardt hospital and it finances its development since this epoch. For this reason the mayor of the City is a permanent member of hospital *curatorium.* After the reunification of Germany, the organisations of guardianship change and to medical care services were added social activities. Both changes entail, after approval by the government of Saxony-Anhalt State and by ecclesiastical authorities, the processing of status revision, which ended by creation in 1997 of the Paul Gerhardt foundation (or cluster, in economic terminology). Currently, the foundation holds and manages eight buildings: a hospital with academic instruction associated to the University of Halle-Wittenberg, where the future doctors do their training; The school of medical care, already established in 1914; the hospital specializes in geriatric rehabilitation at Oranienbaum; nursing homes for the elderly in Wittenberg, Oranienbaum and Zchornewitz; as well as a counselling centre on the disease of addiction. With approximately 850 employees, the foundation is one of the largest employers in the city of Lutherstadt-Wittenberg.

We will look in the text below mostly the hospital management modifications.

In our days, a majority of protestant hospitals in Germany form a particular social corporation. Paul Gerhardt foundation was the first of two foundations in East regions to be admitted in this corporation.

The Paul Gerhardt hospital, as a charity, has a particular regulation. Thus, it has two steering devices: *curatorium*, organ of supervision and of reflection, and the Board of Managers. The definition and duties of each are described in the Legal Status (Charter). The board of directors is made up of twelve people, appointed by *curatorium* for a given period (5 years). It is composed by town, church and employees organisations delegates. The board of management comprises three members: the theologian, the doctor (non-practicing) and the economist. The theologian is a legal person. The doctor is responsible for the "production", i.e. all issues related to the operation of the hospital as an institution of medical care. The economist is a manager, responsible on expenditure and financial outcome.

The hospital is listed in the Hospital plan of Saxony-Anhalt State accordingly the law of hospitals financing. In 2007, it was under supervision of the Ministry of Health and Social Affairs of the government of this State. It hosts all patients inhabitant of Luthershtadt-Wittenberg district and of surrounding States (Saxony-Anhalt, Brandenburg ...), which represents approximately 150000 inhabitants.

The management of the hospital and its accounting are organized according to the several levels rules. First, it enforces federal laws. It is the accounting of State (General for all states), which governs the operation of public and private hospitals. The book of social laws under section 5 (Sozialgeszlouch Teil 5), details the rules of compulsory medical insurance. This document defines legislative obligations of the hospital and gives a description of the types of care to which every associate of compulsory medical insurance has access. There is specified the role of third-party payers, as well as ceilings supported. Hospital enforces the law of hospitals funding (Krankenhausfinanzierungsgesetz, KHG), which defines the dual system of German medical care system: The budget of the hospital consists of two parts, and each has its own source. The insurance agencies provide the money necessary for the functioning of hospitals (staff costs and current costs), and the federal governments realize the investment.
Secondly, the hospital enforces laws of the State (Land). The laws of Saxony-Anhalt give concrete interpretations of federal laws for this State, and in particular the law "Financing hospitals in Saxony-Anhalt" gives for the Paul Gerhardt foundation the specifically estimated volume of investment, the rules of its allocation and deadlines for the use of these funds.

As non-profit hospitals are usually known to provide the care services of higher quality than for-profit hospitals, we began by looking at applied criterions of quality measure.

3. Measure of hospital quality:

Many concepts were proposed to appraise the hospital quality. The European Community preferred the criterion of the effectiveness (or improved health). The effectiveness is defined as the degree of realization of the desired result, namely the proper delivery of health services to the whole population, institutionally established, in other words, those who stand to gain.

The composite indicators of quality include usually the process indicators as well as indicators of structure and outcome.

The structural indicators are indicators of the availability of health services, such as the adequacy of the qualifications of doctors, or equipment. To do such indicators one can consider the rating of hospitals accordingly to some quality and safety practices, which reduce unnecessary deaths and injuries. For example, in international practice is known a method, which consists in choice and classification of hospitals that require their staff to use computers to order medications, tests and procedures; to select hospitals with an intensive care unit that staffed by doctors who have special

training in critical care; to select those with lots of experience for specific procedures, surgeries and conditions, or those that has put in place standard procedures to reduce preventable medical mistakes.
Process indicators specify whether the appropriate care has been made to the risks faced by the population. Adequacy of cure to needs will be tried in this case taking account of the level of scientific knowledge and of professional services at that moment. For example, one rating firm in US realises clinical excellence rating using risk-adjustment methodology. It draws on Medicare data to calculate the rate of complications or deaths in the wake of each procedure, giving a star rating[2]. It analyses patient outcome data for virtually every hospital across about 30 different patient cohorts, looking at diagnoses and procedures. It considers differences in patient demographic (age, gender) and clinical characteristics that could increase the patient's risk of mortality or complications. To participate at this evaluation hospital must have sufficient patient volume to be rated in a wide variety of cohorts.

Over a period from 2003 to 2005 the rating analysts of one independent company observed 5 000 hospitals and found that only 5% of those hospitals met what they characterized to be the highest quality.

Performance indicators must show improvement (extension of life expectancy) or deterioration (e.g., infections incurred at the hospital) of the health status during the hospitalization. The analysts conclude, for example, that if all hospitals of US did as well as the best 25% of rated hospitals, the health care system could save: 66 000 lives, avoid 145 000 readmissions, and prevent 187 000 medication errors every year.

Now, the amount of compensation for one case of provided care in Germany takes into account the information that the hospital makes available on its predetermined indicators of quality. Hospitals are required to participate in the certification procedures. Certain certification systems are being developed: some of them combine the self-assessment by doctors and by patients; and the others are based on national ratings realised by independent rating companies for hospitals and on assessments by experts visiting each hospital.

The sociological investigation on suitability, possibility to comprehend by patients and relevance of hospital quality criterions in Germany (Geraedts and alii (2007)) is based on patients and physicians opinions of quality indicators among 29 proposed, which patients usually use to choose hospital. The ten indicators chosen by both categories of responders as more relevant and their ranking are presented in table 1.

Table 1. Perception by patients and by physicians of hospital quality indicators

Quality indicator	Patients' opinion	Doctors' opinion
Qualification of doctors rank	1	6
Kindness of staff	2	7
Patient satisfaction	3	5
Range of technical equipment	4	8
Qualification of nurses	5	10
24-hours-availability of technical equipment	6	2
Volume of specified surgical procedures	7	1
Specialist departments range of services	8	4
Medical services and special offers	9	9
Range of therapeutic facilities	10	3

It is interesting to observe that the ranking of indicators by patients and by doctors are divergent. Patients appreciate first of all the consolation, kindness and care, - the quality of services offered by small, non profit clinics. Doctors signal the quality of their work conditions as primary for realisation

[2] Average z-score is the average of all z-scores associated with star ratings, with equal weights given to each é-z-score, whether the z-score is associated with complications, in-house mortality, 30-day mortality, or 180-day mortality. Z-score is calculated taking the difference between the observed number and predicted number of events (mortalities or complications), and dividing it by the standard deviation associated with the observed number of events. http://www.healthgrades.com/media/dms/pdf/Americas50BestHospitalsMethodology.pdf

of sustainable care. What they have in common is that the less important for both is indicator concerning the "Hospital owner", which occupies the last 29th position.

Like in any hospital, the collective of medical persons of the Paul Gerhardt foundation is exposed to three principles: the need for a quality, which must involve medical knowledge and a great ability as unconditional imperatives, and also moral principle; consciousness that patient is a component of a community, and reflection on the meaning of suffering and death - the assumptions that impose the types of action, ethical principles. The conflict is often spotted by the desire to be charitable face the individual, which is expressed through the use of all the skills for the benefit of patients; and by compliance with the representations of the patient's values, its vulnerability, and the concern of social morale, which means respect for justice. In hospital practice we are faced with the contradiction between the relative urgency of treating "organic" ailments for the patient will simply relieved of physical pain, and the need to perceive the personality of the patient, his desire to be understood and to understand his illness. The practice of clinical decision problematic situation in moral terms is defined as clinical ethics. This practice aligns with the guidelines of treating disease but first and foremost is based on the particularity of the situation of the patient.

Lutheran Hospital, in addition to biological being is attaching to the cultural and relational aspects of the humanity of man, put forward by Protestantism. The theologian sees to function Apostolic doctor-patient relationships, for deliberation in the evaluation of a clinical situation, trying to find a middle way between an uncompromising stance of life, whatever was its status, and the patients' willingness to live and die with dignity. Discussions help caregivers to develop their relationship to disease and death, the one who determines, ultimately, it tends to practice or not sustaining medical treatment on a patient. The patient, for the doctor should not be an object of scientific research. The scientific and technical knowledge must remain an instrument subject to medical ethics.

The Paul Gerhardt hospital, like all church hospitals in Germany, must pass certification "pro Cum Cert." This review evaluates spiritualism, the image of the institution in the social environment, the quality of learning and Lutheran criterion: plan, do, check and act. The new list of indicators and benchmarks for success fitness certification has been developed recently at the Paul Gerhardt hospital (April 2006).

Life expectation upgrading is a measure of health care quality as well. In East Germany it was improved from 78 years in 1990 to 82.1 years in 2005.

4. Clustering policy

Classical economist David Ricardo introduced the principal of comparative advantage to explain how each region can be gainful if it specialises in production of some goods where it has a lower relative cost that signifies a relative advantage and develop the trade of other goods. Michael Porter (1990) took advantage of this principal and set up the notion of competitive clusters that is a group of co-located businesses sharing a geographic area and providing products and services in a specific industry sector, animated by a local network of suppliers, collaborative research facilities, public and private financial sources, supportive governmental agencies, and community institutions. In theory clusters have the potential to affect competition by increasing the productivity of the firms in the cluster, by driving innovation in the domain, and by stimulating new economic activities.

The activity on support of clusters refers to «Clustering policy» and usually includes: liquidation of barriers to innovations; investments in health, education, research and a physical infrastructure; support of geographical concentration of the connected firms.

The development of the concept of interorganizational networks in Germany brings to four methods by which a Cluster can be identified: geographical, sectoral, horizontal (where interconnections between businesses at a sharing of resources level e.g. knowledge management coexist), and vertical

ones (i.e. a supply chain cluster). In the German model of organizational networks it is expected that interconnected businesses must interact and have firm actions within at least two separate levels of the organizations concerned.

The Paul Gerhardt hospital has done extensive construction and major repairs in the years following reunification due to the decisions taken by the Saxony-Anhalt Ministry of Labour, Social and Medical Solidarity. As the mayor of the city is a member of curatorium by large investment in hospital he sought to preserve the local employment and decrease the migration out of the city and generally out of Saxony-Anhalt. Moreover the big hospital agglomeration could become the core for knowledge based economic activity of territorial cluster. When the hospital gets financial support to construct buildings each company applying for the order, brought their conditions of implementing it in an envelope, the proposals are imparted publicly. Any pre-bidding competing with individual companies could not take place. The competition for construction is very hard, because State pays, and it guarantees the levels of wages and of employment. Public market rules for providing the public global goods prevail. Tender documents are stored within 30 years.

If agglomeration economies hold in the hospital industry, health care productivity should be greater in areas with more hospitals. However, some research in the hospital services has found contrary evidence indicating that an increased number of hospitals in the same area cause productivity losses because the various hospitals engage in a "medical equipment race". Hospitals participate in an equipment race and they spend unnecessarily for small quality improvements, cost- attractive technologies, and duplicate facilities as a way of attracting more physicians and patients. As the hospitals compete in the non-price competition, it results in lower levels of productivity.

Consequently, cluster theory cannot identify how the clustering of hospitals affects productivity. Agglomeration economies suggest that clustering of firms will improve hospital productivity whereas the medical equipment race points to the possibility of lower productivity in hospitals.

Non-profit hospital needs the state government approval for purchases of heavy machinery. It should be noted that in the choice of new technology, the hospital Paul Gerhardt is not guided by a desire to benefit the local producers. Here, one buys the best among what is affordable. The hospital decides independently of health insurers or the Ministry and appeals to the world's best producers. It is the doctors who make the requests for technologies advancing their criteria of preference: world standards, methods of use, effectiveness of treatment. This can explain the relative reluctance of State authorities to increase its participation in hospital acquisition of new equipment.

Local State is against further changes in ownership structure of Paul Gerhardt cluster.

Protestant hospitals has the right not to organize tenders for acquisition of medical equipments, but Paul Gerhardt hospital has as rule to ask at least three competing firms to do the offers. In such circumstances, tender can happened and they are regularly organized by management stuff of the hospital.

The medical and technical equipment, furniture and computers are being purchased on behalf of hospital profit (investment account). The small equipment, linens, glass, pharmaceuticals, consumer goods, water, gas and insurance premiums for employees are paid from the account for "operating expenses".

The hospital has completely externalised Logistics (laundry, laundry) and intends to externalize (privatize or sell) other services, such as laboratory of the department of physical therapy and spa that are currently part of the hospital. Another policy of this hospital, the creation of so-called shared services. For example, the pharmacy provides services to three hospitals in the Land. Cleaning and Restoration Company was backed by the Paul Gerhardt foundation. It performs services for the benefit

of the hospital and the three hospices for the elderly. 120 people, often part-time, are employed by this company. The hospital leases its premises to the company and it owns 51% of the capital.

The hospital also uses the outside medical or nursing personal to participate in the care inside the hospital, for example, dental, dermatology, ophthalmology troubles. A number of different types of work are done by young men who opt for civilian service in place of military service. In Germany the civil service is an open option for called up.

The Paul Gerhardt hospital provides intensive care and chronic illness long-term care. The long-term illnesses are provided by seven different programs (such as diabetes, coronary deficiencies ...). Currently, the hospital is seeking the upward revision of rates for processing these cases, because the extended stay of patients is associated with the period of convalescence and is not reimbursed by insurance. The hospital is obliged to enter into contracts with other agencies to ensure the recovery of his patients.

5. Competition and Hospital valorisation

Currently 53 hospitals and clinics: municipal, private, and university (state) operate in the same area which is Saxony Anhalt.

As we sow in the previous sections the list of medical and technical capabilities of a hospital is very important to inform patients and attract them. In Germany patients are aware of the existence of high technology at the hospital and are asking that it be applied to their case. The sickness funds use to refer patients to hospitals sufficiently skilled[3] and competent in terms of the treatment and screening. However, the non-profit hospital can not do the race in equipment increasingly sophisticated. The choice of technology is based on the specialization that the hospital chooses. It is the consequence of decisions taken previously, on the one hand, and competition between hospitals, on the other hand. Incited by new management criteria, the hospital is trying to attract the greatest number of patients. It must also be careful not to be dismissed from the Plan of the State without which it can not legally operate and grow. Based on these constraints, it is seeking to have the best-performing technologies and doctors.

Among the selection criteria for medical equipment the management stuff must take account of the length of utilization and explores the possibility of likely appearance of another technology more efficient. If the last possibility exists, the hospital postponed the acquisition of equipment. The management staff checks also whether the technology already exists in the neighbourhood. If so, it raises the question of the necessity of having it at hospital, since it can not have enough patients to cover expenses related to the acquisition. Doctors write their proposals and negotiate among themselves the deadline for acquiring technologies based on the priorities of the departments. The hospital operates also by technology leasing, often for a number of years. This enables to exchange equipment against another before its full amortization.

Private hospitals buy their equipment more easily, because they have the right to deduct the depreciation of their tax returns, but the Paul Gerhardt foundation as a non-profit hospital has no right to do so.
The protestant foundation cannot admit the transaction with greater business as result of which it would turn up that foundation becomes a space of selling of this business production. Such was the case of one university clinic in Essen purchased by a company producing drugs for anaesthetic and artificial nutrition. Naturally, market transactions of this kind could not guarantee quality performance of medical care of population.

[3] For example, the Paul Gerhardt hospital must realise at least 150 surgical procedures on artificial knees to be able to accept patients for this intervention.

Profitable hospitals have opportunity to change capital or finance structure by debt issuance, because of tax advantages. For for-profit hospitals this way is cheaper than one consisting in issuance of new equity. But the cost of barrowing from a bank can be high than the cost of selling parts of hospital operating services. This is because adding debt usually increases the default risk and by consequence the interest rate that hospital must pay to bank. For non - profit hospital the increase of debt repayment signifies the reduction of internal savings.

In all these mentioned occurrences the valorisation of the hospital is indispensable. And economic science must weigh in discussion of a difficult problem of a public good valuation. The economist has to emphasise the strategic arguments such as notoriety, medical and nursery skills, clustering outcome, and specific for health sector management achievements. Lutheran hospital, for example, must conserve its ethical specificity and not be governed by cost prerogatives. The State must exercise its mission of care without discrimination and improve full employment[4].

Competition in the domain of medical care for quality and for cost conducted to creation of standards of valuation of medical care activity, so-called Diagnosis Related Groups (DRG), which is activity as unit of pricing and skills. With this methodology it is easier to appreciate the relative quality of hospital management.

6. Management and adaptation of a non-profit hospital

Management of non profit hospitals in Eastern Germany, where they in the past prevailed, should be renovated permanently since Germany reunification and starting globalisation.

The act of care structure, 1993, was the first major legislation to limit expenditure in the hospital sector. This act introduced standard time for the tasks of care by the nurses. In the Paul Gerhardt hospital, due to the necessary remedial in terms of supervisory staff, this law has enabled to create 30 new posts for nurses. Despite the act of care structure, the expenditures in term of ratio bed / day of hospitalization continue to grow in Germany, but at the same time, there is the decline in expenditure in proportion to the case of hospitalization. This development in the late 1990 is interpreted by some analysts as increased technical efficiency of hospital care. We consider that the decrease in treatment costs per case of hospitalization has been linked in Paul Gerhardt hospital case simply to increasing number of patients.

The development of “domestic budgets” began in the Paul Gerhardt hospital in 1994. Initially, the data from the previous year were used, later they began to define it on the basis of average costs, while taking account of medical advances and changes in the structure of the hospital. The Board council prepares the annual investment plan (the first group of investment) based on the proposals raised by chefs of clinics. The second group of expenditure is managed by the clinics themselves, based on the plan that provides direction, called the “domestic budget”. At the beginning of each month, the chief of clinic receives a detailed report on the outcomes of previous month in terms of the types of expenditures planed and really made, on the evolution of which the chief doctor can intervene and about which he is statutorily responsible.

To enforce the domestic provisional budgets is the most serious management problem, because the director economist has virtually no way to influence the behaviour of physicians-in-chief, and chefs bear no financial responsibility on their services’ spending. The economist says that the only way he emphasises to dissuade the surplus of spending is a menace to dismiss the staff of the department if leader does not comply with the assigned spending limits. The personnel costs account for

[4] For example, one municipal hospital in Hamburg was sold to a private company, which for cost reasons put out to unemployment the personnel of the hospital. One year late new owner was obliged to hire again the personnel, because as the Labour Code of Germany is very strict on conditions of redundancy especially concerning public organisations.

approximately 65-70% of the overall cost of Paul Gerhardt hospital. Yet this threat is not applicable in practice, because for this it is necessary to acquire the change of the hospital "constitution", where is inscribed that being the organisation with limited liability, the hospital cannot change the volume of the personnel.

The number of beds decreases and the length of hospitalization became shorter in the Paul Gerhardt hospital, as elsewhere in Germany. Between 1991 and 1996, this decrease in the number of beds was challenged by the Hospital Governing Council as it caused the decline in the investment and the volume of employment, which were, according to Federal Act (Pttegesatz verordunung), proportional to the number of beds. The decrease is now scheduled because of forecasts indicating the downward of Anhalt- Saxony population. It is target to reduce for 2015 the number of beds to 350. In 2005, the occupancy rate was about 378 beds per day. The occupancy rate planned for 2015 is 320 beds. According to the rule dated to 2004, the bed occupancy is considered sufficient if the beds are occupied at 75% in the paediatric and 85% in other departments.

Before 2006 the Paul Gerhardt hospital practiced the mix enhancement of activity. The *per dim* fee was applied in the majority of clinics and pricing of cases of care (in proportion of procedures) was used in others and in the surgery clinic in particular. The funding in proportion to the cases of hospital treatments pushed hospital to choose the better paid risks that creates social inequality. However, the mixing of the two methods was ineffective from the societal point of view also, because the hospital could achieve equalization of spending between activities with different methods of valuation.

Every year the hospital forecasts the volume of services for next year. It must do this forecasting carefully because its earnings corresponds to planned volume of services, or to the realised volume if this one has been less important than the planned. By contrast the hospital is not compensated for services corresponding to the excess activity.
The Paul Gerhardt hospital is introducing since 2006 the standards of treatment corresponding to the requirements of pricing in terms of DRG, although, the introduction of medical technology does not seem to be determined by these international standards.

The formula used for calculating remuneration of a hospital is as follows: Multiplying the number of cases by the factor assigned to each homogeneous group of diseases (case-mix) and by the rate of treatment of each case defined by the state. The Wittenberg hospital is currently carrying out the treatment of patients of over 600 categories of DRG. One can notice that in Germany, in 2005, 878 DRG (or standards of treatment) were identified, for which the fees for medical care were established in function of diseases diagnosed by severity, co-morbidity, age and intensity of intervention.

The relative weight of each group (DRG) is defined at the national level after the estimation of the average cost of treatment. The benchmark presents the average cost of treatment of appendicitis, which is assigned the value 1. The index of each hospital (case-mix) can be estimated and it is the sum of all relative weights divided by the number of cases. In 2005, the index of the Paul Gerhardt hospital was equal to 1.09, indicating that the complexity of treated cases was above average. This fact is significant for the hospital budget. The fee for each case-mix in the Land is calculated by combining the national average rates and expenses recorded in the hospitals of the region. If in 2004, the average fee basis in Germany was 2593 euros per case of treatment and ranged between 1000 and 4000 euros, the average fee in the Paul Gerhardt hospital (in 2005) stood at the level of 2054 euros.

As the State could not financially assure the necessary restructuring of municipal and university hospitals, they seek to barrow from a bank. Often the default risk of hospitals is higher in comparison with other industrial firms, and bank refuses barrowing or accepts a credit, but under very constraining conditions. In such circumstances a non-profit hospital is leading to sell some of its assets or accept the terms of agglomeration with other health care providers. In both issues it likely looses the sovereignty of acting.

Conclusion:

As medical service provision varies in theory in function of hospital ownership type and of hospitals mix on same geographic area, we looked at transformations of non profit hospital operating after Germany reunification. Using a case study approach we suggest that previously dominant form of hospitals subsists and provides quality services both from medical and from social positions. The health status of population is improved, the hospital management is successfully adapting to new competitive context. At the same time the big effort must be done to increase the non profit hospitals incentive to provide public global health care beginning by structuring the around geographic innovative clustering.

Bibliography

Abraham, JM., Gaynor, M., Vogt, W. (2003) "Entry and Competition in Local Hospital Markets", *CMPO* W.P. n°03/088

Chakravarty, S., Gaynor, M., Klepper, S.,Vogt. W. (2005) "Does the Profit Motive Make Jack Nimble? Ownership Form and the Evolution of the U.S. Hospital Industry", *NBER* W.P. n°11705

Discher, U. (1998) “Probleme beim Übergang zum neuen System der Vergütung der Krankenhausleisleistungen in der Neuen Bundesländern der Dundesrepublik Deutschland”, *TACIS contract n° T95-4122-R*

Geraedts, M., Schwartze, D., Molzahn, T. (2007) “Hospital quality reports in Germany: patient and physician opinion of the reported quality indicators”, W.P. *BMC Health Services Research*, 28 September

Horwitz, J. (2005) “Does corporate ownership matter? Service provision in the hospital industry”, *NBER*, W.P. n°11376

Horwitz, J., Nichols, A. (2007) "What do nonprofits maximize? Nonprofit Hospital service provision and market ownership mix" , *NBER*, W.P. 13246

Porter, M. (1990) *The Competitive Advantage of Nations*, N.Y. Basic Books

Peaucelle, I. (2007) "The Hospital Industry: The Consequences of Reforms in Eastern Germany", *Journal of Economic Issues*, n°2, pp.443-450

Santerre, R., Vernon, J. (2005) Hospital Ownership Mix Efficiency in the US: An Exploratory Study, *NBER*, W.P. n°11192