

The consequences of hospital autonomization in Colombia: a transaction cost economics analysis

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Granting autonomy to public hospitals in developing countries has been common over recent decades, and implies a shift from hierarchical to contract-based relationships with health authorities. Theory on transactions costs in contractual relationships suggests they stem from relationship-specific investments and contract incompleteness. Transaction cost economics argues that the parties involved in exchanges seek to reduce transaction costs. The objective of this research was to analyse the relationships observed between purchasers and the 22 public hospitals of the city of Bogota, Colombia, in order to understand the role of relationship-specific investments and contract incompleteness as sources of transaction costs, through a largely qualitative study. We found that contract-based relationships showed relevant transaction costs associated mainly with contract incompleteness, not with relationship-specific investments. Regarding relationships between insurers and local hospitals for primary care services, compulsory contracting regulations locked-in the parties to the contracts. For high-complexity services (e.g. inpatient care), no restrictions applied and relationships suggested transaction-cost minimizing behaviour. Contract incompleteness was found to be a source of transaction costs on its own. We conclude that transaction costs seemed to play a key role in contract-based relationships, and contract incompleteness by itself appeared to be a source of transaction costs. The same findings are likely in other contexts because of difficulties in defining, observing and verifying the contracted products and the underlying information asymmetries. The role of compulsory contracting might be context-specific, although it is likely to emerge in other settings due to the safety-net role of public hospitals.

Keywords Hospital autonomy, developing countries, health care reform, transaction cost economics, contract incompleteness, information asymmetry

KEY MESSAGES

- Shifting from hierarchical management relationships to contract-based ones has implications for transaction costs.
- Theory suggests that relationship-specific investments are a necessary condition for the emergence of transactions costs, while contract incompleteness is less important.
- In this study of hospital autonomization in Bogota, Colombia, given large information asymmetries, contract incompleteness by itself was a source of transaction costs, even in the absence of relationship-specific investments.
- This study questions the likely gains from hospital autonomization when purchasers have limited choice of providers.

Introduction

Public hospital networks in developing countries have traditionally been arranged in vertically integrated structures, mostly run directly by the Ministry of Health. This arrangement has shown weak incentives for efficiency and quality (Harding and Preker 2003). Granting autonomy to hospitals and shifting to a contract-based relationship (a form of the so-called purchaser–provider split) has been proposed as a strategy to improve their performance.

Transaction cost economics provides a useful analytical framework to explore the functioning of contractual relationships after the purchaser–provider split. Transactions costs are the costs associated with making an economic exchange under alternative structures that govern the transaction. A shift from one governance structure to another can be seen as essentially a search for a governance structure that reduces the problems that emerge *ex-post* in a relationship between two parties, i.e. their transaction costs.

As proposed by Williamson (1985), transaction cost economics predicts that the presence of relationship-specific investments and contract incompleteness leads two trading parties to engage in a relationship that differs from the typical neoclassical paradigm of discrete anonymous exchanges. Within a context of bounded rationality and opportunism, the presence of relationship-specific investments (i.e. investments whose net present value outside the relationship is lower than the second best alternative), and the difficulty of arriving at a complete contract, prompt the parties to search for a structure to govern the relationship so as to manage the *ex-post* problems that could emerge.

Contract incompleteness stems from: (1) uncertainty regarding future prices and quantities; (2) difficulties in defining, observing and verifying the product exchanged; and (3) information asymmetries (see Figure 1). Given the impossibility of arriving at a complete contract, the party that invests in the relationship-specific investments is exposed to the opportunistic behaviour of the other party, which could extract a quasi-rent from the investing party, because the latter prefers to preserve the relationship instead of losing the investment. This has been called the ‘hold-up’ problem (Goldberg 1976).

The inability of a contract to deal *ex-ante* with this type of *ex-post* problem requires governance structures to minimize the risk of extraction of a quasi-rent. The choice of a governance structure is summarized by Williamson (1990): ‘Transactions, which differ in their attributes, are aligned with governance structures, which differ in their costs and competencies, in a transaction cost economising way.’

Transactions costs economics emphasizes the role of relationship-specific investments as a necessary condition to create transaction costs, whereas contract incompleteness is considered a complementary condition (Williamson 1985, p. 56; Joskow 2005). It could be argued, though, that the implications of information asymmetries in health care are much larger than in other industries (Dranove and Satterthwaite 2000) and could be more relevant for contract incompleteness and the consequent transaction costs, even in the absence of relationship-specific investments.

The purchaser–provider split in public hospital networks can be analysed from the perspective of transactions cost economics. As the transaction costs of contracting are expected to shape the relationships, it is relevant to ask what type of transaction costs prevail, and the role of relationship-specific investments and contract incompleteness in shaping these relationships. Interestingly, the literature on hospital autonomy gives little consideration to transaction costs as a rationale for the purchaser–provider split and as an explanation of *ex-post* relationships. Accordingly, this paper analyses the role of relationship-specific investments and contract incompleteness as a source of transaction costs, drawing on evidence from a network of 22 public hospitals in the city of Bogota, Colombia.

The paper is organized in five sections. The next section provides a summary of the reform to the public hospital network in Colombia, i.e. the purchaser–provider split. The third section describes the research question and methods. The fourth section presents the findings and the last section discusses them.

The reform of public hospitals in Colombia

Before 1993, public hospitals were managed directly by the Ministry of Health, regional or local health authorities, and funded via supply-side subsidies (DNP 2002). In 1993, a reform of the health care system created the subsidized insurance scheme to enrol the poor, with several health insurance plans from which the insured were able to choose. These companies purchased care for their members from hospitals and other providers. Choice of hospital was less feasible, because insurers had to contract with the local hospital for primary care services, and public hospitals were the only provider in most areas (including most of Bogota), particularly in poor neighbourhoods.

The reform aimed at shifting subsidies to public hospitals from the supply side to the demand side. Insurers in the subsidized scheme receive a premium per enrollee from the

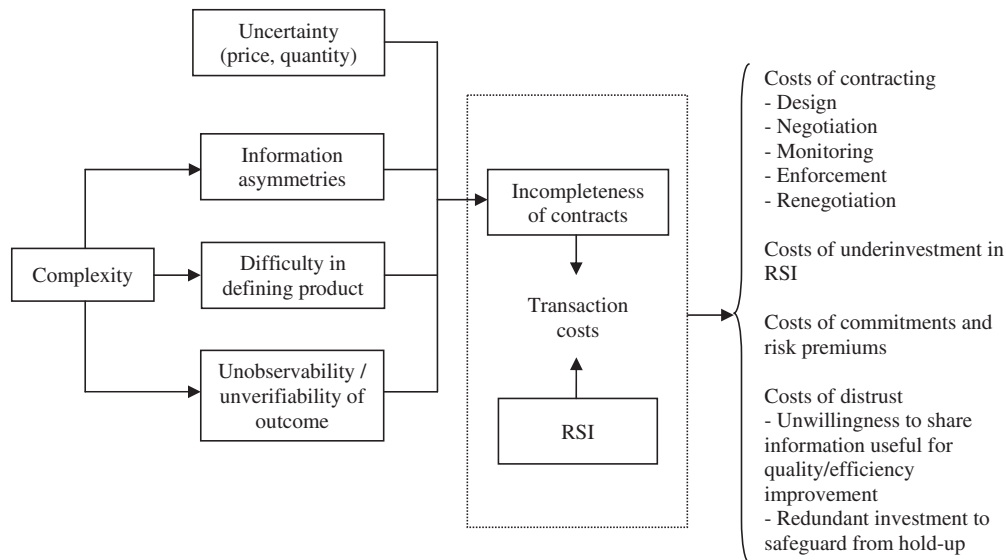


Figure 1 Transaction costs of market-based relationships. Within a context of bounded rationality and opportunism, contract incompleteness and relationship-specific investment (RSI) create transaction costs

Table 1 Major sources of revenue for the 22 public hospitals of the city of Bogota, Colombia

Hospital level	Uninsured	Insured in the subsidized scheme
Level I	The Secretariat for Health (SH) contracts with hospitals on a per-case prospective payment with a budget cap. Payments are made for services provided to the uninsured, or to the insured for those services not included in the benefit package of the subsidized scheme.	Insurers contract with hospitals, mostly via capitation contracts.
Level II		Some services included in the capitation contract. Others paid on a fee-for service basis. Services not included in the benefit package are paid for by the SH.
Level III		
Level IV		Insurers contract with hospitals mostly via fee-for-service contracts.

Note: Level I hospitals provide services of the lowest complexity, and level IV hospitals provide services of the highest complexity.

municipality and have to provide a benefit package. As of 2003, the package provided a limited set of primary care interventions, few tertiary/specialty care services and covered some high-cost conditions. In order to provide the services included in the benefit package, insurers agree contracts with public hospitals. These contracts entail payment mechanisms ranging from capitation, typically for primary care, to fee-for-service, typically for outpatient specialty care and inpatient care, and include vague clauses for quality, mostly related to processes, that are difficult to verify. Although insurers can also contract with private providers, regulations require them to contract 50% of the premium with public hospitals.

The number of uninsured decreased gradually and by 2003, 26% of the population was enrolled in the subsidized scheme. Besides billing insurers for services provided to this insured population, public hospitals are also the providers of last resort for the uninsured, and for those interventions not covered by the benefit package of the subsidized scheme. In these two areas, the Secretariat for Health (SH) signs contracts with hospitals to pay for services provided. So public hospitals in Bogota have two main sources of income from contracts: from insurers in the subsidized scheme, and from the SH of Bogota for the uninsured. Table 1 summarizes these sources of revenues for hospitals.

Methods

According to transaction cost economics, it is expected that shifting from vertically integrated to contract-based relationships will give rise to other types of transaction costs. The presence of relationship-specific investments is considered to be a necessary condition for the emergence of transaction costs (Williamson 1985; Joskow 2005) and interacts with contract incompleteness, i.e. the impossibility to deal *ex-ante* with problems that emerge *ex-post* in the contractual relationship. The following propositions were developed on the basis of theory and then tested with empirical evidence. By purchaser is meant both the SH and insurers in the subsidized scheme.

- *Proposition 1:* There are relevant relationship-specific investments in hospital–purchaser relationships.
- *Proposition 2:* The presence of relationship-specific investments increases the transaction costs of hospital–purchaser relationships.
- *Proposition 3:* Contract incompleteness pervades hospital–purchaser relationships.
- *Proposition 4:* Contract incompleteness is by itself a source of transaction costs of hospital–purchaser relationships.

A qualitative study of the contractual relationships between the 22 hospitals of the SH of Bogota, and their payers, was

carried out during 2003 and 2004. Semi-structured interviews were carried out with the 22 hospital directors, three officers of the SH and the medical directors of five insurers. While all 22 hospitals were selected (i.e. the universe of the SH), payers were selected based on the size of their enrolled population. According to Yin's classification (Yin 1994), the study was an embedded case-study since it involved the study of sub-units of analysis, i.e. payers and hospitals, but with the aim of better understanding the role of transaction costs in the contractual relationships between hospitals and their major purchasers (SH and insurers).

The interviews were tape recorded and transcribed verbatim as Word documents. These were later transferred to NUD*IST for coding and categorizing. All these processes were done with the text in Spanish. Contract minutes were also analysed to complement the findings of the interviews.

Potential biases might have arisen from author I's role in the local context as a health policy analyst. This might, for example, have induced interviewees to please the interviewer with their responses. However, the researcher's previous knowledge of the context made it easier to unveil hidden motivations or desirability biases in responses. In addition, triangulating with divergent views from the SH, insurers and hospitals unveiled many of these biases.

This research was approved by the Ethics Committee of the London School of Hygiene and Tropical Medicine. Informed consent was obtained from each interviewee.

Results

Relationship-specific investments within relationships with the SH

The most relevant relationship-specific investment, found in all contracts between hospitals and the SH, was dedicated capacity, because hospitals had been built before the purchaser-provider split. After the reform, a bilateral monopolistic situation emerged between the SH and each hospital, because the 22 hospitals were safety-net providers for the uninsured. Thus, it was unlikely that the SH would use its bargaining position vis-à-vis a party that had a dedicated-capacity type of relationship-specific investment, because it would backfire on the SH itself. As put by two hospital directors:

"The SH has a paternalistic position vis à vis hospitals (...) in addition, the fact that we have to take care of a patient whether he can pay or not makes us a different category of hospital."

"Every year we will have to provide care for the uninsured; every year there will be a responsible [agency], the territorial entity [i.e. the SH], and an executing entity, which is the hospital."

Contract incompleteness regarding contracts with the SH

Contracts between the SH and each of the 22 public hospitals were based on a per-case prospective payment. This payment mechanism was not very detailed, and it included only 13 categories with three subcategories for low-, medium- and

high-complexity hospitals. In order to prevent excess billing to the SH, the latter set a billing cap for each hospital. This cap was based on the fixed costs of each hospital, which were difficult to reduce quickly, particularly those relating to employment of civil servants (see Table 1).

It might be expected that administrative and clinical staff would devise mechanisms to reduce unnecessary care within each case category. Instead, it was found that most of them excluded some activities from their service portfolio, as put by one hospital director:

"...therapies were categorized as intermediate activities, then all [hospitals] started to close down their therapy services."

Other hospitals dumped less-attractive patients on other hospitals and cream-skimmed the better paid categories. Another hospital director stated:

"...they send us the less profitable patients (...) or they cream-skim the better paid part of the services to be billed and then they refer to us the patients with the complications..."

The 'quicker and sicker' and the 'code-creep' problems of prospective payments were also found. For example, although contracts clearly stated that any re-admission within 30 days of discharge would not be considered a new case, this rule was rarely applied, as stated by a SH officer:

"...only a few cases were denied payment for this reason, because it was impossible to link the readmission with a previous admission."

Regarding 'code-creep', the expected responses were also found, as illustrated by a SH officer with the case of care in the emergency room:

"... [hospitals] learned to bill and to work the package: if a patient showed up at the Emergency Room, they kept him for 24 hours to charge the inpatient day."

Regarding the complexity of the contracted products, a feature that would make it difficult to solve *ex-ante* the contractual difficulties, hospital directors considered the products were not complex or difficult to define. Although contract minutes explicitly stated that services should be provided in good conditions of technical quality, payments were never denied based on claims of poor technical quality. In the same vein, information asymmetries were not seen by hospital directors as a big problem: they pointed out that the SH cared most about outputs (e.g. number of hospital days or number of outpatient visits) and inputs, sometimes about process indicators, and not at all about health outcomes.

Regarding uncovered services for enrolees of the subsidized scheme, where the public hospital was the safety net provider, disputes typically related to the boundaries between what was covered by the subsidized scheme and what was covered by the SH. Given that the boundaries of the benefit package were

imprecise, opportunities for cost-shifting on both sides of the boundaries were pervasive. As one hospital director commented:

“When the patient (i.e. subsidized-scheme enrollee) shifts to [the uncovered part of the package] it is my responsibility to provide prescription drugs for 20 days, provided the patient has a chronic condition. Then the question is what the SH takes for a chronic condition.”

The gaps in the benefit package of the subsidized scheme created wide room for disputes around cost shifting. On the one hand, regulations have been unable to clearly solve every possible disagreement around the boundaries of the package, and on the other hand, contract minutes did not help to solve disputes *ex-ante* because they referred to the regulations, which are imprecise.

Relationship-specific investments regarding relationships with insurers

Insurers in the subsidized scheme typically paid for primary care services on a capitation basis. Inpatient care, ambulatory specialty care and treatment for high-cost conditions were typically paid on a fee-for-service basis. The most clearly identified type of relationship-specific investment within contracts with insurers was human relationship-specific investment, i.e. the investments a hospital had to incur to manage the risk of a capitated population. It was clear that this was indeed a relationship-specific investment, because if the insurer replaced the capitated population with a new population, the hospital would lose the investment.

Regarding this relationship-specific investment, two clearly different approaches were found among hospital directors. One group considered it was unwise to incur this investment, because of the risk of losing the relationship-specific investment due to the opportunistic behaviour by the insurer, as illustrated by one hospital director:

“...we do not incur [the relationship-specific investment] because that would mean giving a healthy population to an insurer without knowing if it will later contract with me.”

Another group considered it was wise to incur the investment, even though the insurer might replace the population. One of the reasons was that they incurred this relationship-specific investment as a way to enhance patient loyalty. Given that beneficiaries of the subsidized scheme were allowed to choose their preferred insurer, securing patient loyalty to the hospital meant strengthening the latter's bargaining position vis-à-vis the insurer. This eventually allows the hospital to deny contracts with unattractive insurers. Another reason was that the medium- and long-term effects of the investment will be reaped by the hospital, no matter the insurer, because most of the population remains in the area.

The insurers' views contrasted with those of hospitals. The five insurer officers that were interviewed had the same perception of the importance of investing in prevention and keeping capitated populations with the same hospital for periods long enough to obtain a return on investment.

However, insurers perceived hospitals were not doing a good job in this regard. An officer from an insurer stated that:

“...Maybe they incur some investment but not the way it should be. (...) one doesn't find that it results in interventions on the population risk, or that they set up intervention programmes.”

Contract incompleteness regarding contracts with insurers

Regarding information asymmetries between hospitals and insurers, the latter argued that when they paid on a fee-for-service basis they were able to keep track of utilization, because the submitted bills carried detailed information about services provided. On the other hand, when hospitals were paid on a capitation basis, hospital directors considered it was better for them to hide information about utilization, so as to avoid the capitation payment being ratcheted down.

Another source of much dispute was the issue of counter-billing, i.e. services provided to enrollees seeking care at hospitals other than the one which received their capitation. Disputes arose because the hospital providing these services billed the insurer on a fee-for-service basis and the insurer subtracted them from the subsequent capitation payment for the relevant hospital.

Regarding difficulties in defining, observing and verifying the contracted services, it was found that, as in the case of contracts with the SH, concern for technical quality and best health outcomes was not apparent. However, some insurers complained that they had higher than expected tertiary care complications that they had to pay, which originated from poor-quality primary care, as pointed out by one insurer's officer:

“...we noticed a big change, we then started tracking back the cases and we found that [the hospitals] were discharging the cholecystectomies the following day [of an open surgery].”

Transaction costs of contractual relationships

The observed *ex-post* problems of the parties that have been described above suggest that the contract-based relationships of the purchaser-provider split exhibited types of transaction costs that were unlikely to have been present during the vertical-integration era. The costs of the contracting process itself, including the design, negotiation, monitoring, enforcement and renegotiation of contracts, were new challenges arising from the contractual relationships. However, it was interesting to find that the presence of dedicated capacity as a relationship-specific investment, that was supposed to create a risk of hold-up with the SH, was not in practice an explanation of transaction costs.

It should rather be said that most transaction costs were related to the fact that the SH and public hospitals were locked-in because of the safety net effect. This bilateral monopoly situation was at the root of most disputes between the SH and all the hospitals.

Shifting from fee-for-service to a per-case prospective payment system was seen by the SH as a simplification of the billing processes, because hospitals did not have to issue an

itemized bill but just a global bill with the number of cases that were given care. However, this also meant a loss of detailed information that was valuable for risk management purposes.

Relationships with insurers in the subsidized scheme showed two clearly separate situations: regarding level I hospitals, a bilateral monopoly existed because compulsory contracting regulations made the insurer's threat of contract termination irrelevant. But regarding level II and III hospitals, insurers were allowed to contract selectively. Accordingly, transaction costs in level I contracts showed a similar dynamic to that observed with the SH, whereas contracts with level II and III hospitals showed a dynamic more similar to the predictions of theory.

The high transaction costs that were observed because of information asymmetries, and the blurred boundaries of the benefit package, were addressed in different ways by the hospitals. Some leader hospitals adopted mechanisms to reduce disputes, such as concurrent review, or re-negotiation of capitation payments. However, these monitoring tools increased the administrative costs of contracting. Building trust was also seen and adopted by these leaders as a strategy to reduce transaction costs.

The views on transaction costs of contracting and payment mechanisms were mixed. It was found that the parties had shifted toward capitation as a means to reduce the transaction costs of fee-for-service contracting, as expressed by an officer of an insurance firm:

"...[we said] let's check how it works and if it really decreases transaction costs and [allows us to have] a smoother operation. (...) [However,] the [costs associated with] denials in the fee-for-service payment became the [costs associated with] counterbillings of capitation. I think the relationships were more alienated with capitation."

Another officer on the insurer side had a more general view of transaction costs in fee-for-service contracts:

"...The problem is that there is no trust between the parties. So I am always thinking the provider is inducing

more interventions than those the patient needed, and the provider is thinking that I will make more denials than they expect. Then they induce 100 000 more because that is what they expect I will deny."

So, apparently, capitation and fee-for-service contracts had each their own types of transaction costs, making it difficult to determine which costs were higher. Accordingly, an alternative governance structure was vertical integration of primary care networks, as suggested by one insurer's officer:

"...Our stance on capitation is to reduce it as much as we can and administer it directly."

Table 2 summarizes the observed relationship-specific investment and features of contract incompleteness that were found in the relationships between hospitals on the one side, and the SH and insurers on the other. In summary, the findings reported above confirm or reject the propositions set out at the beginning, as follows.

- *Proposition 1:* There are relevant relationship-specific investments in hospital-purchaser relationships.

This proposition was confirmed: there were dedicated-capacity type relationship-specific investments in the relationships between hospitals and the SH, and human type relationship-specific investment in the relationships with insurers, particularly for primary care capitated services at level I hospitals.

- *Proposition 2:* The presence of relationship-specific investments increases the transaction costs of hospital-purchaser relationships.

This proposition was partially confirmed: although present, relationship-specific investment (dedicated capacity) did not create the risk that the SH held hospitals up, because of the safety-net effect. Regarding contracts with insurers and the presence of a human type of relationship-specific investment

Table 2 Observed relationship-specific investment (RSI) and components of contract incompleteness found in the relationships between hospitals and payers

	Type of RSI	Components of contract incompleteness			
		Uncertainty	Information asymmetry	Unobservability / unverifiability	Difficulty in defining the product
Uninsured and interventions not covered by the subsidized scheme (SH)	Dedicated capacity	High: number of intermediate activities; hitting the billing cap	Reduced because of no concern for best health outcomes	Low because of focus on outputs	Boundaries of benefit package with SH
Insurers in the subsidized scheme					
Capitation	Human (P&P)	High: quantity demanded	High because insurers concerned for high-cost outcomes due to skimping on care	High	High because of boundaries of benefit package
Fee-for-service	None	None	Induced demand	Low	High because of boundaries of benefit package

Notes: P&P: Health promotion and disease prevention; SH: Secretariat for Health.

(investment in the capitated population), two responses were found. Some hospitals perceived the risk of extraction of quasi-rents and underinvested in preventive care. Other hospitals thought it was strategically better to incur the investment. In general, relationship-specific investment was not found to be a major source of transaction costs in comparison with contract incompleteness.

- *Proposition 3:* Contract incompleteness pervades hospital–purchaser relationships.

This proposition was confirmed. However, lack of concern for best health outcomes reduced the problems of asymmetric information, difficulty in defining the product and observability/verifiability of the product. The difficulties in definition of the product were found mainly regarding the boundaries of the benefit package, which created opportunities for cost shifting both on the provider and on the purchaser side. These blurred lines were not dealt with adequately in the contract minutes because they just reflected the regulations, which were also unclear.

On the side of subsidized scheme contracts, they showed a very different pattern. Contract incompleteness stemmed from two basic causes: (1) uncertainty regarding quantities demanded; and (2) difficulty in defining the product in terms of the boundaries of the benefit package. Cause 1 was related to capitation contracts, whereas cause 2 was related to both capitation and fee-for-service contracts. In the case of the latter, endless discussions on the boundaries of the benefit package induced the parties to shift towards capitation contracts in the expectation of reducing these contracting costs. However, in the case of capitation, the incentives for skimping on care were perceived to increase the risk of poor quality outcomes and consequently created other types of transaction costs.

- *Proposition 4:* Contract incompleteness is by itself a source of transaction costs of hospital–purchaser relationships.

This proposition was confirmed: the effects of the features of the SH-uninsured contracts on the costs of contracting were clear, and mainly related to poor quality outcomes that remained unchecked, i.e. hospitals spent less than the optimal in terms of improving health outcomes because skimping on care was not a major concern for the SH.

Regarding contracts in the subsidized scheme, a concern for quality outcomes was clearly reflected in the costs to be borne by insurers for poor quality care that ended up in high-complexity events. Thus, insurers could not ignore the importance of good quality outcomes, but these were difficult to define, observe and verify, and information asymmetries would make it very difficult to enforce compliance. Consequently, the relationships were burdened with transaction costs related to skimping on care and distrust, and only to a minor extent related to sub-optimal investment in relationship-specific investment.

Other costs of distrust were reflected in hospitals' unwillingness to share information with insurers that might be useful for the parties to improve risk management and increase the likelihood of best health outcomes.

Discussion

The qualitative approach of this study helps us to understand what types of transaction costs emerge with the purchaser–provider split, and to hypothesize about their effect on contractual relationships. Context-specific variables such as compulsory contracting or the fact that all 22 hospitals were located in a large urban centre can make extrapolations risky. However, the pervasiveness of information asymmetries in health care means they are likely to emerge as sources of transaction costs in other settings, even in the absence of relationship-specific investment. One of the rationales for the purchaser–provider split is to avoid the transaction costs of vertically integrated hierarchies. This is based on the assumption that the transaction costs of contract-based relationships between purchasers and providers are lower than those of vertical integration.

Hart *et al.* (1991) suggested that when quality is noncontractible, private firms are more likely to skimp on quality. Eggleston and Zeckhauser (2001) point to the same expected results of contracting out for health services. Chalkley and Malcomson (1998) argued that what can be expected from a public hospital is that, being a public organization, its behaviour would be benevolent because it is not interested in making profits. However, this study suggests that hospitals behave like a profit-maximising firm, or a not-for-profit firm that acts as a for-profit, as proposed by Feldstein (1993).

Within the context of the purchaser–provider split, it was found that the shift to prospective payments (SH's per-case payment and insurers' capitation) was seen as a strategy to deal with transaction costs. This line of reasoning follows Bech and Pedersen's (2005) point that payment mechanisms are alternative ways to reduce transaction costs within a given type of relationship. However, the incentive in prospective payments to skimp on care, the problem of counterbillings and hospitals' unwillingness to share information with purchasers generated other types of transaction costs that were not adequately dealt with by the parties just shifting from one payment mechanism to another.

As the findings show, the parties lacked concern for best quality health outcomes. As suggested by McPake *et al.* (2003), quality may decrease as providers concentrate effort on observable and verifiable features of products, but not on technical quality. The additional finding of this research is that purchasers also lacked concern for technical quality. It could be argued that this lack of concern makes it less likely that the parties invest effort in reducing transaction costs, because they can just cut production costs.

The safety net effect was an important issue that shaped hospitals' relationships with their payers. The bilateral monopoly that emerged after the purchaser–provider split created room for opportunistic behaviour on the side of the hospital. This was also the case for the relationships with insurers, specifically for level I services, due to the compulsory contracting regulations. Interestingly, relationships between insurers and hospitals providing level II and III services showed more competitive features, making them more willing to build trust to reduce transaction costs.

The most important findings of this research are the minor effect of relationship-specific investment, and the major effect

of contract incompleteness, in shaping relationships. This contrasts with the importance that transaction cost economics gives to relationship-specific investment. However, provider opportunism, and the consequent over-response to the perverse incentives of payment mechanisms in a situation of contract incompleteness, does not work in the same way as relationship-specific investment regarding quasi-rents. In fact, there are no quasi-rents in the pure form, but if the payer contracts on a fee-for-service basis, and the provider induces demand, the latter can extract rents from the payer. In the case of prospective payments, if the provider skimps on care and shifts costs to the payer or to other parties, it can extract a surplus regardless of lower quality or efficiency. Interestingly, the recent literature on results-based contracting might suggest that quality-based contracting is feasible (Loevinsohn and Harding 2005). However, it might be argued that structure- and process-compliance in a context like Bogota is much higher than in most rural, low-income, low-capacity contexts where results-based contracting has been implemented. Improvement in quality outcomes as a result of contracting would be relevant for the Bogota context, but relatively harder to achieve and therefore likely to be smaller.

Conclusions

The shift from a hierarchical relationship to a contract-based one seems to be in accordance with Williamson's argument to align transactions with governance structures with a transaction-cost economizing purpose. This research has shown that transaction costs seem to play a key role in contract-based relationships. Contract incompleteness seemed to be a major source of transaction costs, even in the absence of relationship-specific investment. Although it cannot be said that transactions costs are higher than in vertically integrated arrangements, it was clear that they were present in contract-based relationships. In those relationships that were more exposed to competition, i.e. contracts between insurers and level II and III hospitals, the parties shaped their relationships in a transaction-cost economizing way. Those less exposed to competition exhibited a completely different dynamic, due to their lock-in situation.

Given the very limited literature on purchaser-provider split relationships in low- and middle-income countries, it is difficult to assess the likely relevance of these findings elsewhere. However, the role of contract incompleteness as a source of transaction costs is likely to appear in different contexts, whether in an internal market or an open market approach. Although compulsory contracting regulations are specific to the Colombian context, the consequences of lock-in situations interacting with the safety-net effect are also likely to appear in other contexts, and to weaken the expected benefits of the purchaser-provider split.

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Conflict of interest

None declared.

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