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Evaluation of Internal Service Level Agreements in the Hospital

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Abstract

Objective: To evaluate the development and use of SLAs in a Belgian hospital from a client's point of view, in order to draw conclusions on the effectiveness of SLAs and to improve the development and use of SLAs in hospitals.

Methods: Based on a theoretical framework indicating the variables that influence the relationship between the use of a specific governance mechanisms and performance, a new instrument was developed and applied on a convenience sample of SLA clients from a Belgian hospital. The instrument included the following constructs: Contract Detail; Contract Flexibility; Relational Governance; Supplier Asset Specificity, Buyer Asset Specificity, Behavioral Uncertainty, and Performance. Data were analyzed statistically.

Results: With the exception of the Behavioral Uncertainty construct, all questionnaire constructs were internally consistent. More respondents were satisfied than dissatisfied with the SLAs and service providers and mean construct scores ranged from 4.22 (neutral) for Contract Flexibility to 5.28 (slight agreement) for Relational Governance. Compared to the Pharmacy and the Rehabilitation SLA, the Cleaning program SLA scored lower on the general performance of the service provider, Contract Flexibility and several other constructs.

Conclusions: SLAs are useful for hospitals, as they improve people's insight into processes, stimulate people to think about performance measurement and, in some cases, also lead to improved services. The main advantages of SLAs do not really lie

in improved relationships and better fits with client's needs, but in improved process mapping and improved performance measurement. The questionnaire from this research study proves to be a useful and reliable instrument for evaluating internal SLAs from a client's point of view.

Keywords - Service Level Agreement (SLA), Business Services Exchange, Contractual governance, Relational governance.

Introduction

The use of Service Level Agreements (SLAs) is rapidly growing. In a survey conducted by Oblicore (2004), respondents indicated a 10-20% increase in the number of SLAs they use and 56% of the respondents expected more SLAs in the year ahead. SLAs are becoming increasingly popular and progressively more common as a way to manage the quality of services (Blackwell & Dixon, 2003).

Even though many different definitions exist, most authors agree on the core of a SLA (Vandaele & Gemmel, 2004) and regard a SLA as “an agreement between a service provider and a customer in which a minimum acceptable service level is quantified” (Hiles, 1994). Moreover, several common characteristics can be noticed in the different definitions (Vandaele & Gemmel, 2004). A first commonality is the bilateral nature of the SLA, meaning that both the service provider and the customer should approve the content of the agreement and be willing to sign. A second common characteristic is the minimum acceptable service level that should be determined by weighting the needs and wishes of the customer against the needs and wishes of the service provider (Vandaele & Gemmel, 2004). The latter enables quantification of the service, leading to clear performance standards for both the supplier and the customer and enabling an objective assessment of the service quality (Hiles, 1993). A final common characteristic is the opinion that the SLA should be valid only for a minimum period of time and adjusted regularly to adapt to the continuously changing environment (Vandaele & Gemmel, 2004).

Several reasons exist for developing and using SLAs. First of all, by making service providers more aware of customer needs, SLAs enable service providers to better

manage customer expectations (Van Looy, Gemmel & Van Dierdonck, 2003). Secondly, by carefully analyzing the service processes needed to fulfill customer needs and by not delivering service at an unreasonably high level, SLAs could help to optimize the allocation of scarce resources (Van Looy et al., 2003). Finally, SLAs could have a positive influence on customer retention and the development of long-term relationships with customers (Van Looy et al., 2003). Vandaele & Gemmel (2004) classify the most essential objectives of implementing SLAs into four primary and ten secondary objectives (See Table 1).

Table 1

Objectives of a Service Level Agreement (Vandaele & Gemmel, 2004)

Primary objectives	Secondary objectives
1. Determining customer needs	- Controlling customer expectations - Satisfying the customer
2. Defining the necessary processes	- Efficiently allocating available resources - Controlling costs
3. Implementing a performance measurement system	- Measuring customer satisfaction - Comparing performance with competitors - Implementing employee rewarding system - Justifying the budget of a department
4. Managing the relationship between customer and service provider	- Avoiding conflicts - Increasing customer retention

The first real SLA was entered into by an ICT department and another internal department in the sixties (Gemmel & Vandaele, 2004). Even though SLAs are nowadays still most often used in the world of ICT, SLAs are increasingly used in other service sectors as well (e.g. the real estate, catering and security sector). Also hospitals are designing SLAs to manage the provision of services from supporting to

care departments, because they are confronted with increasing expectations concerning the quality of care. As this quality is greatly influenced by supporting services (i.e. medical imaging, technical maintaining and cleaning), which have to optimally match the primary care processes, SLAs can be developed between supporting and care departments to manage and optimize the supporting services and hereby improve the quality of care. Furthermore, SLAs can help optimizing the use of scarce hospital resources, caused by an increasing demand for care and simultaneously declining financial resources.

Although the scientific and managerial importance of SLAs is increasingly recognized, little scientific literature on SLAs exists (Vandaele & Gemmel, 2004). While a fairly substantial amount of literature deals with SLAs in the world of ICT, this literature is often very specific and cannot always be applied to other service sectors. This article will therefore move in a new direction and report on a research study concerning SLAs in the hospital sector. The aim of this research was to evaluate the development and use of SLAs in a Belgian hospital from a client's point of view, in order to draw conclusions on the effectiveness of SLAs and to improve the development and use of SLAs in hospitals.

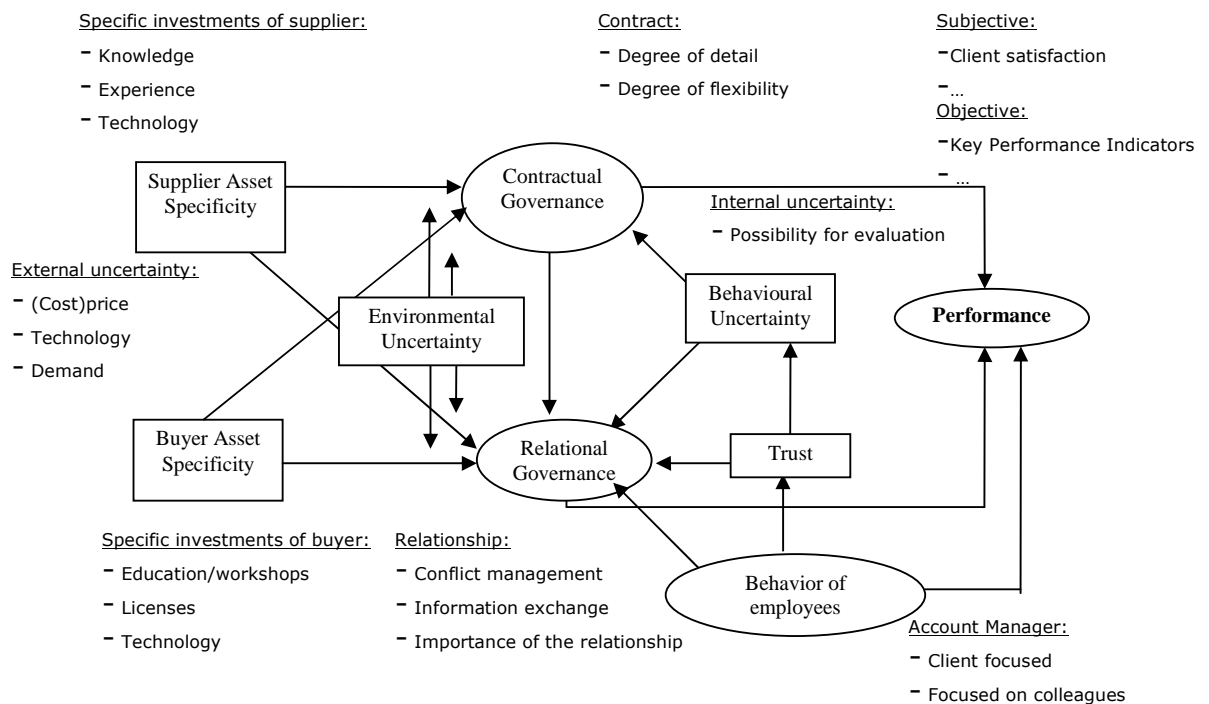
Theoretical Framework

The theoretical framework on which this research study was built (See Figure 1) is based on the study of Vandaele (2007) and concentrated around two types of governance mechanisms: contractual governance and relational governance. The framework indicates the variables that influence the relationship between the use of a specific governance mechanism and performance or, in other words, the factors that

influence the success of the implementation of SLAs. This framework was developed because it was hypothesized that one of the reasons why SLAs have not yet often been studied is that a theoretical framework for understanding the working of SLAs in B2B relationships does not yet exist.

Figure 1

Theoretical Framework¹



Governance mechanisms

SLAs can be regarded as a governance mechanism for business services exchanges. In general, two different governance mechanisms can be distinguished: relational governance and economic or contractual governance (Griffith and Myers, 2005). Whereas relational governance represents the strength of the social norms present in

¹ Based on the doctorate study of Dr Darline Vandaele 'Governance of Business Services Exchanges: contracts, relations and Employee behaviour, Phd, 2007.

business exchanges, contractual governance stands for the degree to which the formal contract is currently established the exchange (Ferguson et al., 2005). Two important features of contractual governance are contract detail (i.e. the rights and obligations included) and contract flexibility to deal with certain factors not under the control of the contracting units (Vandaele, 2007).

In recent research, Vandaele (2007) distinguished two schools of thought on the interaction of relational and contractual governance. The first is that relational norms are substitutes for complex, explicit contracts and that the presence of one governance mechanism can hinder and sometimes even precludes the need for the other (Paswa, Dant & Lumpkin, 1998; Poppo & Zenger, 2002). This vision is called the substitute view. The second school of thought is the complementary view, which states that formal contracting methods and relational issues complement each other and should be considered simultaneously (Möllering, 2002). According to a recent literature review of Vandaele (2007), empirical research has already disconfirmed the substitution view, but not the complementary view (Poppo & Zenger, 2002).

SLAs are part of contractual governance, as they are written, formal agreements between the service provider and the client. By being linked to the formal contract, they often contribute to more contract detail and contract flexibility. However, SLAs are also part of relational governance. The development and implementation of SLAs often contributes to improved relational norms. SLAs can reduce misunderstandings and conflicts and can help parties gaining better insight in each others' tasks and responsibilities.

Antecedents of governance mechanisms

Based on Griffith and Myers (2005), Vandaele, Rangarajan, Gemmel and Lievens (2007) recognize both non-economic and economic factors for determining the positive relationship between the use of a certain kind of governance mechanism and performance. One important non-economic factor is trust and two important economic factors are asset specificity and uncertainty.

Several researchers have included trust as a social factor to explain exchange governance (Joshi & Stump, 1999). Trust, in this context, can be seen as a firm's belief that another company will execute actions that will result in positive outcomes for the firm and that this company will not take unexpected actions that would result in negative outcomes (Anderson & Narsus, 1990).

Asset specificity can be defined as the degree to which physical and human assets used in support of the transaction can be redeployed to alternative uses without sacrifice of productive value (Williamson, 1991). Transaction specific investments can be made by either the buyer or the supplier (Heide and John, 1990) and two important types of asset specificity mentioned by Vandaele et al. (2007) are therefore Buyer Asset Specificity and Supplier Asset Specificity.

Uncertainty, in this context, is mostly related to environmental aspects (i.e. external aspects) or behavioral aspects (i.e. internal aspects) (Rindfleisch and Heidi, 1997). Environmental uncertainty refers to the unpredictability of the environment or the inability to predict changes in the external environment (Joshi and Stump, 1999), for example because of market conditions such as price and demand (Pilling et al. 1994).

Behavioral uncertainty, on the other hand, refers to the unpredictability of the exchange partner's behavior (Vandaele et al., 2007) and, for example, includes the complicatedness of evaluating the service, formulating product or service standards, and of performing objective assessments (Cannon et al., 2000)

Framework description

Based on the antecedents from the previous paragraph, the framework recognizes the following five variables influencing the relationship between the use of a certain kind of governance mechanism and performance or, in other words, influencing the success of the implementation of SLAs: Buyer Asset Specificity; Supplier Asset Specificity; Environmental Uncertainty; Behavioral Uncertainty, and Trust.

The development and implementation of SLAs has an impact on these variables in three different ways. Firstly, the development and implementation of SLAs has a direct impact on Behavioral Uncertainty. A SLA can reduce behavioral uncertainty, by clarifying the service levels, providing more information on what, how, when and where the service is delivered and by implementing a performance measurement system. The SLA will, consequently, enable more objective assessments and improve the predictability of the behavior of both the client and service provider. If SLAs are able to reduce behavioral uncertainty, contract detail, contract flexibility and relational norms can be better used in managing the relationship between the client and the service provider. The SLA can even be regarded as a way to make the contract more flexible, which is very important in case of high environmental uncertainty.

Secondly, the use of a SLA will also increase the trust between the client and the service provider and hereby improve relational governance. Trust is a necessary condition for relational governance (Macneil, 1980) and can be seen as a predictor of cooperative behavior between firms (Ring and Van de Ven, 1994). In the long run, trust can also be an outcome of relational governance (Bradach & Eccles, 1989; Johnston et al., 2004). Furthermore, trust does not only enhance relational governance, but can also decrease the level of behavioral uncertainty in services exchanges (Vandaele et al., 2007). In a contractual relationship, the existence of trust, can, for example, increase accurate and timely information exchanges. The performance of the other party, consequently, will be more predictable and behavioral uncertainty will decrease (Chiles and McMackin, 1996; Zand, 1972).

Thirdly, according to Gemmel & Vandaele (2004), SLAs will also create more Buyer Asset Specificity. To protect the investments from opportunistic behavior, the buyer or client, consequently, will be stimulated to establish relational norms, which will improve relational governance and result in more positive outcomes for both parties (Gemmel & Vandaele, 2004).

In general, more asset specificity and less behavioral uncertainty will create more opportunities for using formal agreements and relational norms as complementary governance mechanisms (Gemmel & Vandaele, 2004).

Methods

Based on the theoretical framework, a new Dutch-language questionnaire was developed for evaluating SLAs from a client's point of view. To test the feasibility of

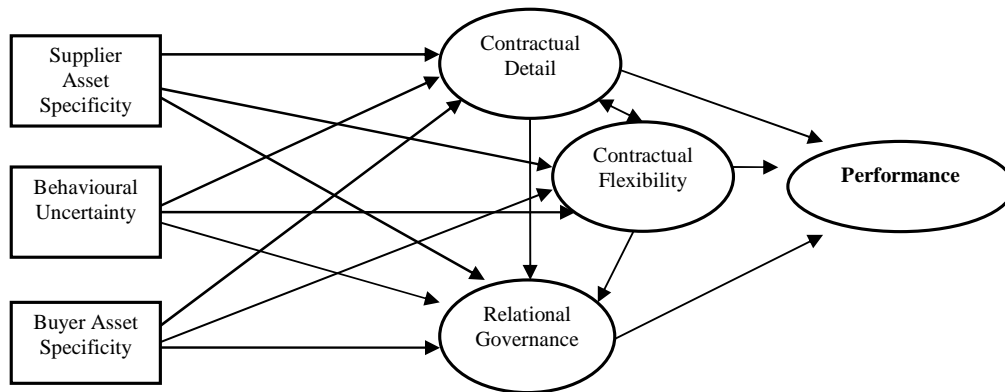
this questionnaire, it has been applied on a sample from the hospital AZ Sint Blasius in Dendermonde (Belgium), which uses SLAs to describe the internal service provision between different departments since 2001.

Development of the instrument

As not all aspects from the theoretical framework were included in the questionnaire, a new questionnaire framework was developed (See Figure 2).

Figure 2

Questionnaire framework



As this figure shows, the questionnaire included the following constructs: Contract Detail; Contract Flexibility; Relational Governance; Supplier Asset Specificity; Buyer Asset Specificity; Behavioral Uncertainty, and Performance of the service provider. Based on the doctorate study of Vandaele (2007), several questions were included for each of these constructs. In addition, seven extra questions were formulated to assess the performance of the SLA.

The following factors from the theoretical framework were not included as a questionnaire construct: Environmental Uncertainty, Trust and Behavior of employees. Environmental uncertainty was not included because it was thought this factor would not be relevant in the case of an evaluation of one hospital with one environment and trust was not included because this factor was thought to be highly correlated to relational governance. Behavior of employees, finally, was not incorporated as a construct in the questionnaire, because this would make the questionnaire too long and too complex.

The original questionnaire was slightly adjusted after discussion with AZ Sint-Blasius and validated by three employees of AZ Sint-Blasius who were familiarized with the concept of SLAs. A more detailed description of the content and the scoring of the questionnaire are presented in the appendix.

Application of the instrument

The instrument was applied on a convenience sample of department heads from AZ Sint-Blasius (i.e. clients) who, regulated through a SLA, receive a service from other departments from AZ Sint-Blasius (i.e. service providers). The questionnaire was distributed among 49 clients, who evaluated 80 different SLAs in total. Even though physicians were counted as one client, the questionnaire for the performance registration SLA between physicians and the invoicing/rating department was actually send to a total of 28 different physicians. The total number of questionnaires that have been distributed therefore is 107.

Analyses

To deal with missing values, respondents with more than 10% missing values were excluded from the analyses. All other missing values were replaced by a reasoned estimation of the unknown score.

Reliability analyses for each of the constructs were performed to measure the internal consistency of the questionnaire. The internal consistency reliability was considered sufficient when Cronbach's alpha values were equal to or greater than 0,70 (Nunally, 1978).

To analyze the associations between the different questionnaire constructs, Spearman rank coefficients were calculated. Based on the outcomes of a study of Vandaele (2007), it was hypothesized that Supplier Asset Specificity would be related to Relational Governance, Contract Detail, and Contract Flexibility and that Buyer Asset Specificity would be related to Relational Governance. A third hypothesis, based on the study of Vandaele (2007), was that Behavioral Uncertainty would be correlated to Contract Detail, Contract Flexibility and Relational Governance. According to Vandaele (2007), Behavioral Uncertainty is negatively related to these factors. Finally, it was also hypothesized that Contract Detail would be correlated to Relational Governance, as Vandaele (2007) argues that "detailed specification of the roles and obligations of both partners (high contract detail) helps to develop mutual agreed norms and values in the relationship and the expectation that the other partner will act as agreed upon."

Shapiro-Wilk tests were conducted to test normal distribution of the answers and the constructs and non-parametric tests were used when data were non-normally distributed. Potential differences among the different SLAs and service providers for which the questionnaires were filled out were evaluated using the non-parametric Kruskal-Wallis test and Tukey's multiple comparison test was used after significant differences were detected. For all statistical analyses, significance was taken at the 5% level and SPSS 15.0 was used.

Results

Of the total of 107 questionnaires that were distributed, 67 were returned at first request or after a reminder. The total response rate therefore was 63%. The distribution of the respondents over the SLAs and service providers that were evaluated in the questionnaire is presented in Table 2. Even though privacy had clearly been guaranteed, as much as one-third of the participants removed the front page from the stapled questionnaire so that it could not be determined which SLA and service provider was evaluated in the questionnaire. The Agreements on cooled medication SLA with the Pharmacy and the Cleaning program SLA with the Cleaning department both counted for around one-fifth of the evaluated SLAs and the SLA with the Rehabilitation department for 13%.

Validation of the instrument

With Cronbach's alphas ranging from 0.726 for Contract Flexibility to 0.931 for Relational Governance, all constructs except the Behavioral Uncertainty construct had sufficient to high internal consistency reliability. The Cronbach's alpha of the Behavioral Uncertainty construct ($\alpha=0.168$) was too low and does not indicate

sufficient internal consistency reliability. The alpha of this construct could, however, increase to 0.733 if Question 3.8, 3.9 and 3.11 would be eliminated.

Table 2

Evaluated Service Level Agreements

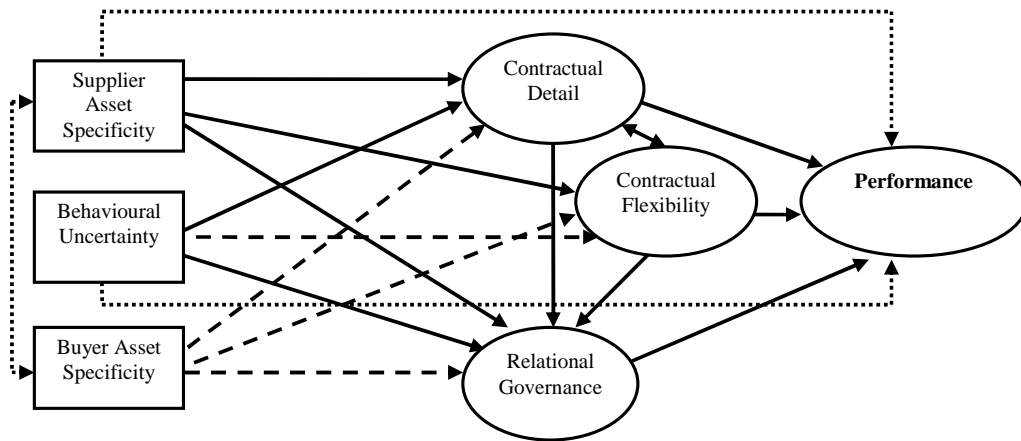
Service provider: SLA	Number	%
Cleaning: cleaning program	13	19
Pharmacy: agreements on cooled medication	15	22
Invoicing/Rating: performance registration	5	8
Central sterilization: availability alarm call- service	1	2
Rehabilitation: accessibility; responsibilities; request; indications; reaction time; progress of treatment	9	13
Food service: agreements on collaboration	1	2
Unknown	23	34
Total	67	100

Many moderately to strong significant correlations were found between the different constructs. As was hypothesized, Supplier Asset Specificity was correlated to Relational Governance, Contract Detail and Contract Flexibility; Behavioral Uncertainty to Contract Detail and Relational governance, and Contract Detail to Relational Governance. No significant correlations were, however, found between Buyer Asset Specificity and respectively Contract Detail, Contract Flexibility and Relational Governance and between Behavioral Uncertainty and Contract Flexibility.

The confirmed and disconfirmed correlations are visualized in Figure 7. The normal arrows in this figure represent the confirmed and the striped arrows the disconfirmed relations. The dotted arrows, finally, represent extra relations that were not yet indicated in the theoretical framework. For example, a very strong new correlation was found between Buyer and Supplier Asset Specificity. In addition, Behavioral Uncertainty and Supplier Asset Specificity appeared not to be only indirectly, but also directly related to Performance.

Figure 3

Confirmed relations in questionnaire framework



Outcomes of the instrument

According to the Shapiro-Wilk test for normality, data were not normally distributed. Non-parametric tests were therefore conducted.

Respondents could score each item with a number between 1 (strongly disagree) and 7 (strongly agree). Table 3 reports the mean scores on the different constructs in

general and for the three SLAs that had a large enough number of respondents for a more detailed analysis (i.e. the Cleaning, Pharmacy and Rehabilitation SLA). The general scores ranged from 4.22 (neutral opinion) for the Contract Flexibility scale to 5.28 (slight agreement) for the Relational Governance scale. According to the Kruskal Wallis test of variance, the Cleaning program SLA scored significantly lower on Contract Flexibility than the Pharmacy and the Rehabilitation SLA and on Performance of the service provider than the Rehabilitation SLA.

Table 3

Outcomes of the questionnaire constructs

Scale (1-7)	General	Cleaning	Pharmacy	Rehabilitation
Contract Detail	5.26	5.27	5.34	5.43
Contract Flexibility	4.22	3.55	4.61	5.00
Relational Governance	5.28	4.81	5.48	5.76
Supplier Asset Specificity	4.73	4.68	4.51	5.55
Buyer Asset Specificity	4.34	4.28	4.39	4.79
Behavioral Uncertainty	5.15	4.98	5.52	4.97
Performance	5.03	4.46	5.24	6.00

Table 4 reports the mean scores for Question 4.1 to 4.7, asking for respondents' opinion on the performance of the SLA. With the exception of Question 4.2 and 4.4, for which a more neutral mean score around 4 was obtained, respondents on average only slightly agreed with the questions from section 4 (mean scores around 5). The Skewness statistics from Table 5, however, indicate skewness to the left for all questions except Question 4.2 and 4.4. This means that the mass of the distribution is

concentrated on the right of the distribution figures, representing the more positive outcomes. The positive Skewness statistics for Question 4.2 and 4.4, on the other hand, indicate that more respondents scored these two questions negative than positive.

Table 4

Outcomes of Question 4.1-4.7: performance of the SLA

Scale (1-7)		General	Cleaning	Pharmacy	Rehabilitation
4.1	In general, we are very satisfied with the SLA we developed with this internal service provider	5.05	4.62	5.14	5.38
4.2	The relationship with this internal service provider has improved since the use of the SLA	4.19	4.31	4.21	4.13
4.3	The SLA is really used in the service provision	4.80	4.77	4.79	4.63
4.4	Since the development and use of the SLA, the service provision is better geared to the needs of our service	4.17	4.08	4.07	4.25
4.5	Since the development and use of the SLA, we gained better insight into the process of service provision	4.66	5.38	4.00	5.00
4.6	Since the development and use of the SLA, it is clearer how the service of the service provider should be evaluated	4.73	5.08	4.57	4.75
4.7	Both parties stick to the agreements that are established in the SLA	5.14	4.77	4.86	5.38

Table 5

Skewness statistics for Question 4.1-4.7

	Statistic	Std. Error
4.1	- 0.430	0.311
4.2	0.483	0.311
4.3	- 0.199	0.311
4.4	0.203	0.311
4.5	- 0.284	0.311
4.6	- 0.243	0.311
4.7	- 0.319	0.311

Discussion

This study was performed against the background of the increasing interest in using SLAs in the hospital sector. In this study, the development and use of SLAs in a Belgian hospital were evaluated from a client's point of view and the feasibility of a newly developed instrument was assessed. The questionnaire was based on a theoretical framework (Vandaele, 2007), indicating the factors that influence the success of the implementation of SLAs and included the following constructs: Contract Detail; Contract Flexibility; Relational Governance; Buyer Asset Specificity; Supplier Asset Specificity; Behavioral Uncertainty, and Performance of the service provider. The questionnaire was applied on a convenience sample of SLA clients from the Belgian hospital AZ Sint-Blasius, who were asked to fill out 107 questionnaires, 67 of which were returned.

The newly developed questionnaire proves to be a useful and reliable instrument for evaluating the effectiveness of SLAs from a client's point of view. With the exception of the Buyer Asset Specificity construct, all questionnaire constructs were sufficiently or even highly internally consistent. Furthermore, the Buyer Asset Specificity construct could also become sufficiently reliable if three questions (Q3.8, Q3.9 and Q3.11) would be eliminated.

The theoretical framework, on which the questionnaire was based, was also to a great extent confirmed. The Buyer Asset Specificity construct was the only construct for which none of the expected correlations were found. This can possibly be explained by the fact that this construct had very low internal consistency reliability. Another possible explanation could be the extra correlation that was found between Buyer Asset Specificity and Supplier Asset Specificity. Even though Buyer Asset Specificity was not directly related to Contract Detail, Contract Flexibility and Relational Governance, it was indirectly related to these factors through its correlation with Supplier Asset Specificity, which appeared to be very strong. Even though it was expected that lower Contract Flexibility could be explained by higher Behavioral Uncertainty, no correlation was found between Behavioral Uncertainty and Contract Flexibility. While the Rehabilitation and the Cleaning SLA had an almost similar score on Behavioral Uncertainty, the Contract Flexibility of the Cleaning SLA was much lower.

The internal service provision in AZ Sint-Blasius scored lowest on Contract Flexibility and highest on Relational Governance. Even though, on first sight, respondents were only slightly more satisfied than dissatisfied with the performance

of the SLA, the negative Skewness statistics of most questions indicated that more respondents scored positive than negative. Most respondents are satisfied with the SLA and have the opinion the SLA is really used in the service provision. In addition, most respondents have the opinion that both parties stick to the agreements and that the development and use of the SLA caused them to gain better insight into the process of service provision and into how to evaluate the service of the service provider. The positive Skewness statistic of Question 4.2 and 4.4, on the other hand, indicate that respondents on average indeed had a neutral opinion on the influence the SLA has had on the relationship with the service provider and on the degree to which the service is geared to clients needs. Based on these results, it could be concluded that the main advantages of SLAs do not really lie in improved relationships and better fits with clients' needs, but in improved process mapping and improved performance measurement. SLAs seem to give a better insight into the processes and cause people to think about performance measurement. The advantages, in other words, have more to do with the development than with the use of SLAs.

The Cleaning Program SLA scored significantly lower than the other two SLAs on Contract Flexibility and than the Rehabilitation SLA on Performance of the service provider. Even though not statistically significant, the Cleaning Program SLA also scored lower on Contract Detail, Relational Governance and Buyer Asset Specificity, especially when compared to the Rehabilitation SLA. Overall, it could be concluded that the Cleaning Program SLA performed worse than the other two SLAs and that there might be something wrong with the Cleaning Program SLA. The lower performance of the Cleaning Program SLA is not likely to be explained by the characteristics of the service. Looking at the results for the questions asking for other

characteristics of the service, no real differences between the different SLAs can namely be found.

This study has its strengths and limitations. Strengths include the moderately high response rate and the relatively high reliability of the questionnaire. Limitations include the unequal distribution of the respondents over the different SLAs. Only three SLAs had a large enough number of respondents for a more detailed analysis. Another limitation is the posttest-only research design.

Conclusion

The objective of this research was to evaluate the development and use of SLAs in a Belgian hospital from a client's point of view. Three important conclusions can be drawn. Firstly, it can be concluded that the story of SLAs is easier and on first sight more advantageous during the negotiation and development phase than during the implementation phase. Secondly, it can be concluded that differences in effectiveness can exist between the different types of services and SLAs within one hospital or organization, implying that different services can learn from each others' successes and failures. Last but definitely not least, it can be concluded that SLAs are certainly useful for hospitals. SLAs improve people's insight in processes, let people think about performance measurement and, in some cases, also lead to improved services.

Directions for future research

Translation of the questionnaire into other languages is desirable in order to enable international comparisons. Further research is therefore recommended to explore the psychometric characteristics of the questionnaire when translated into other languages

with use of the so called forward-backward procedure (Cull et al., 2002). Another recommendation is to apply the questionnaire in a situation where both a pretest and a posttest can be carried out.

Managerial implications

Based on the neutral to slightly high median scores on all scales, AZ Sint-Blasius is recommended to keep on improving the SLAs and the service exchange between internal departments in order to obtain higher scores in the future. Special attention should be paid to Contract Flexibility and Buyer Asset Specificity, for which lower outcomes were obtained.

Special attention should also be paid to the Cleaning SLA, which obtained lower outcomes than the other evaluated SLAs, especially with regard to Contract Flexibility. The less successful outcomes of the Cleaning SLA did not surprise AZ Sint-Blasius, as it already observed a general discontent with the provider of cleaning services among its clients. According to AZ Sint-Blasius, this dissatisfaction is mainly caused by the unilateral nature of the negotiations that have taken place for the Cleaning SLA in the past. Clients were not much involved in the negotiations on the indicators laid down in this SLA. The lower score of the Cleaning SLA on the Contract Flexibility scale was also recognized by AZ Sint-Blasius, as clients have never been able to negotiate more cleaning hours and the provider of cleaning services never deviated from the existing SLA.

In this article, we provide a useful and reliable instrument for evaluating hospital SLAs from a client's point of view. AZ Sint-Blasius and other hospitals using SLAs

are recommended to use this instrument on a regular base. Comparing questionnaire results over time can give important information for improving SLAs and service provision.

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Appendix: Questionnaire content and scoring instructions

Questionnaire constructs

- Contract Detail: question 1.1-1.9
- Contract Flexibility: question 1.10-1.14
- Relational Governance: question 2.1-2.9
- Supplier Asset Specificity: question 3.1-3.5
- Buyer Asset Specificity: question 3.6-3.11
- Behavioral Uncertainty: question 3.12-3.15
- Performance of the service provider: question 5.1-5.3
- Performance of the SLA: question 4.1-4.7

Scoring instructions

Whereas some items in the questionnaire are worded so that agreement reflects satisfaction with the SLA and service provision, other items are worded so that agreement reflects dissatisfaction. In order to score all items in such a way that high scores reflect satisfaction with the SLA, the original response values of Question 2.2; 3.8; 3.9; 3.14 should be scored in the opposite way. For example, an original response value of 1 should be scored as a 7 and an original response value of 2 as a 6.

More information

For more information on this Dutch-language questionnaire, please contact the corresponding author.

