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Author(s)	Edmund Wut
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## **Trust Among Organizations in Lift Maintenance Services**

**Edmund Wut**

School of Professional Education & Executive Development  
College of Professional & Continuing Education  
The Hong Kong Polytechnic University  
Kowloon, Hong Kong  
spewut@speed-polyu.edu.hk

### **ABSTRACT**

There are increasing skyscrapers in the world. Lift maintenance services industry has become one of the most important engineering industries nowadays. A study was conducted through the survey with over a hundred respondents. These respondents are property management professionals. Results show that trust exists among lift maintenance contractors and management companies of the buildings. Trust is positively related to the level of switching cost during maintenance contract renewal.

**KEYWORDS:** Trust, Lift Maintenance, Services Marketing

## 1 INTRODUCTION

Lift maintenance services industry is one of the most profitable engineering industries in the world. Workers are working mostly in the machine room and lift pit. People do not know the process of maintenance and basically relied on maintenance services provided by maintenance contractor. Thus, it is worthwhile to study trust among organizations in the services.

Usually a management company is appointed by the owners of the building. The management company would responsible for the daily operation and maintenance of the building. One of their jobs is to deal with maintenance of lifts and escalators. Normally they need to sign a maintenance contract with chosen maintenance contractor.

Under normal maintenance situation, maintenance contractors have to change their parts according to their working lift time. That is preventive maintenance. Contractors have to develop trust with building owners and management companies because it is up to the maintenance contractor to decide when to change the elevators' parts. Contractors could even change the parts at the latest available time, that is to say, breakdown maintenance.

## 2 LITERATURE REVIEW

Trust was defined as the expectation that arises among different organizations in the society based on commonly shared norms through regular and honest behaviour (Fukuyama, 1995; Doney and Cannon, 1997; Anderson and Narus, 1990). One would expect such outcomes from one side on whose integrity another side can rely confidently.

Trust is believed to be a construct that contributes to a long term business to business relationship (Doney and Cannon, 1997). This long term relationship is stronger in service contexts involving regular and close employee-customer relationships.

Trust has been studied in the social exchange literature and is based on exchange theory. Social exchange theory has been restricted to the exchange of positive rewards, but from recent developments in this theory it appears that it also includes negative punishment outcomes (Molm, 1994). This can be demonstrated in the provision of a clause in the lift maintenance agreement stating that a penalty is awarded if the contractor cannot meet the minimum requirement.

Trust also reflects credibility and credibility affects the long-term orientation of a customer by reducing the perception of risk associated with opportunistic behaviours by the firm. Trust reduces uncertainty in an environment in which consumers feel vulnerable (Ganesan, 1994). Thus, trust and switching cost are worthy of consideration for the present research.

Switching costs can be defined as the costs incurred in changing from one contractor to another (Heide and Weiss, 1995). There are many aspects: time, money, effort and risk associated with change of contractor (Caruana, 2004).

Switching costs is one of the factors when a management company deciding shift from original service provider to an alternative supplier (White and Yanamandram, 2007). Guiltan (1989, quoted by Caruana, 2004, p258) described group transaction costs and learning costs as set up cost. Psychological commitment costs are the cost of past expenditures or sunk costs. Continuity costs are the opportunity costs, including the risks involved in changing maintenance contractor. These costs are examples of switching costs.

On the other hand, Klemperer (1987) suggested three alternative types of switching costs: transaction, learning and contractual from an economic point of view. Transaction cost is the cost in switching between identical services. Learning cost is the cost of learning the new service. Contractual cost is the cost bound by the contract signed by the customer and service provider. The transaction and learning costs are the social costs of switching and the contractual cost is the artificial switching cost. The researcher believed that switching costs made the individual firm demand curve more inelastic and the service company therefore faced less competition. In the lift maintenance market, every management company has to sign a contract with the lift company.

Switching costs may be higher in service than for goods since there is more uncertainty involved in dealing with a new service provider (Ruyter et al., 1997). Ruyter et al. (1997) found that in industries such as fast food, supermarkets and amusement parks with relatively low switching costs, customers would be less loyal compared to high switching costs industries including health centres and theatres, where choices are limited. In addition, Gerrard and Cunningham (2004) stated that there are three types of incidents (service failures, pricing and inconvenience) that influence customers' switching behaviour within the retail banking industry. More than one incident appears when switching occurs. Switching influenced by pricing seems to be the most influential in the banking industry. Services failures and inconvenience were less important. Moreover, more than ninety percent of their respondents chose not to approach bank staff to discuss the underlying matters prior to switching because respondents felt that they would be wasting their own time (Gerrard and Cunningham, 2004).

So under the above scenario, trust appears to be existent under maintenance condition between two business organizations: maintenance contractors and management companies of the buildings. Thus, the following research question is proposed:

Is there any an association between switching cost and trust?

### 3 RESEARCH DESIGN

The study was conducted through a survey instrument with building property managers regarding their perceptions and evaluations of lift maintenance services provided in their buildings or estates.

Established scales are used for trust and switching costs. Some scales needed minor modifications in order to meet the requirements of the study (Yen and Gwinner, 2003). The item of the switching cost's construct is changed from "*primary wholesalers*" to "*maintenance contractor*." On the *trust* construct, "*supplier*" is changed to "*maintenance contractor*." At the same time, the nine point Likert scales have been reduced to seven points in order to speed up response time. In the translation from English to Chinese, back translation is used to ensure language consistency. In order to improve understanding and facilitate the answering process, the language used in the scale is adapted to meet the actual situation of the lift maintenance industry, making use of well-recognised colloquialisms.

A two-part exploratory study is considered. The first phase consists of a pilot study and the second phase is a survey-based empirical study. The purpose of the pilot study is to check the reliability of the questionnaire and anticipate any problems that may occur in the full-scale survey. Some rephrasing of the questions is expected. The Cronbach's coefficient alpha of some constructs is lowered by reducing the number of items through the pilot study. A Cronbach alpha between 0.7 and 0.9 is considered to be the criteria for internal consistency of the scales (Hong et al., 2004). Questionnaires are sent to experts in property management,

who study each item against the proposed construct to ensure face and content validity (Cavana et al., 2000).

The targeted sample size of the pilot study is twenty. All recruits are property managers. The sample profile in the pilot study is an approximation of the target population.

According to Kumar et al. (1995), there are two dimensions in the trust construct: honesty and benevolence (see table 1). Each dimension has five items. Perceptions of honesty reflect the degree to which a property management company believes that the lift maintenance contractor is honest, truthful and reliable. Benevolence refers to the extent to which a management company believes that the contractor is interested in the welfare of the buildings.

**Table 1 Trust Construct (multi-dimensions)**

<b>Dimension</b>	<b>Literature</b>	<b>Alpha</b>	<b>No. of items</b>	<b>Type of scale</b>	<b>First item</b>
Honesty	Kumar et al. (1995)	0.91	5	Likert scale (seven point)	Even when the supplier gives us a rather unlikely explanation, we are confident that it is telling the truth
Benevolence	Kumar et al. (1995)	0.91	5	Likert scale (seven point)	Though circumstances change, we believe that the supplier will be ready and willing to offer us assistance and support

Heide and Weiss (1995) used the scale to measure a buyer's anticipated time investment and training costs related to developing a relationship with a new vendor.

Switching costs are the costs facing the property management companies for switching from one lift maintenance contractor to another contractor. Caruana (2004) observed that relational, learning and contractual costs are important. Relational costs are the emotional and psychological costs incurred when a new contractual relationship is established. Information or learning costs are the effort required by the management company to maintain the standard of maintenance services. Contractual costs are direct costs applied by the contracted company to penalize switching customers. A single dimension by Heide and Weiss (1995) is chosen to shorten the questionnaire (see table 2).

**Table 2 Switching Cost Construct**

<b>Dimension</b>	<b>Literature</b>	<b>Alpha</b>	<b>No. of items</b>	<b>Type of scale</b>	<b>First item</b>
Switching costs	Heide and Weiss (1995)	0.79	3	Likert scale (seven point)	We thought that purchasing ... for a number of our employees

There are thousands of property management companies registered in Hong Kong as business registration is simple and requires no specific asset requirements. It is therefore impossible to obtain a complete listing of all the management companies in Hong Kong. Although there are some management companies associations, they tend to include only the larger management organizations, with many small to medium sized companies excluded. This makes simple random sampling of property management companies difficult to achieve.

On the other hand, if we start from all buildings and housing estates in Hong Kong, the process is extremely tedious and impractical in applied business research, where time, manpower and financial resources are highly restricted.

Quota sampling, one type of purposive sampling, is adopted, which ensures that certain groups are adequately represented in the study through the assignment of a quota (Cavana, 2000). In the study, a number of large, medium or small property management companies is grouped and specified quotas are set for each category. The design of the questionnaires allows the property management companies to maintain their anonymity.

Depending on the size of the building or complex, there may be any number of lifts, from just one to ten or more. Hence, it is wise to define the building's size according to the number of lifts and escalators it has. Less than or equal to four is small. Five to ten is medium. Eleven to nineteen is large and twenty or above is regarded as very large. Therefore, the number of installed lifts is one indicator of whether the building, complex or estate is large or not. This may be one of the best data collection methods in the limited time-frame in the approximately three months.

Questionnaires can be distributed in person, by post and electronically. Personally administered questionnaires let the researcher collect all the completed responses within a short period of time. Queries related to the questionnaire can be clarified and a higher response rate is expected. Electronic questionnaire surveys are easily designed and are cost saving where a wide geographical area is being covered. However, the response rate will be lower as people can more easily turn down the electronic request. It is also difficult for small management companies in Hong Kong as they may not have individual email accounts for each staff member, making it more difficult to maintain the anonymity of respondents. Therefore, the mailed structured questionnaire was chosen as the data collection method. The main advantage of the method is that a wide geographical district can be covered and produce a higher response rate with follow-up telephone calls. Service quality of lift maintenance contractors, customer satisfaction and customer loyalty of management companies with the contractor was measured. Similar methods have been used in other industries (Lam et al., 2004; Hart & Rosenberger, 2004). A package containing a cover letter, survey questionnaire and a self-addressed, prepaid envelope was sent to each respondent. Follow-up telephone calls were made to the non-responding companies to ensure that they received the questionnaire and to encourage them to respond. The data collection period lasted twelve weeks until all quotas were filled (Lam et al., 2004). Table 3 shows the workflow schedule.

**Table 3 Data Collection Sequence**

<b>Process</b>	<b>Detail</b>	<b>Duration</b>
Pilot study	Personally-administrated Researcher can obtain immediate feedback from the respondents	Two weeks
Pilot study analysis	For reliability test	Four weeks
Amendment of questionnaire	Some items may be changed	Four weeks
Mailed questionnaire survey	400 questionnaires mailed out	Twelve weeks
Telephone follow-up	For non-respondents	Four weeks
Analysis of data	SPSS Software	Eight weeks

A pilot study, using twenty respondents, was undertaken to test the quality of the questionnaire. Wording and sequence of questions were amended for better comprehension and to avoid ambiguity. The amended questionnaires were then distributed by mail to the full cohort of potential respondents. Six weeks were allowed for the first round of data collection until all quotas in each category were filled (Lam et al., 2004). At the end of the data collection period, any unfilled quotas were completed through telephone calls or individual appointments.

In order to maintain the uniformity of samples, only property managers and technical officers in management companies, who are the decision makers in the renewal of maintenance contracts, were the target respondents (Lee-Kelley et al., 2002). In the case of buildings managed under a single owner, the person responsible for lift maintenance was considered the possible respondent. Buildings managed by Incorporated Owners only were excluded from this study. In order to increase the likelihood of response, the questionnaire was designed in Chinese. Four hundred questionnaires were mailed out to guarantee that useable responses would be received and satisfy most of the requirements of maximum likelihood estimation.

#### **4 DATA ANALYSIS**

Table 4 presents a correlation of the averaged measures of constructs. Numbers are Pearson correlations.

**Table 4 Means, Standard Deviations and Correlations**

	<b>Trust</b>	<b>Switching cost</b>
<b>Correlations</b>		
<b>Trust</b>	<b>1</b>	
<b>Switching cost</b>	<b>0.620</b>	<b>1</b>
<b>Mean</b>	<b>4.69</b>	<b>4.23</b>
<b>Standard deviations</b>	<b>1.39</b>	<b>1.55</b>

Trust has only one dimension, rather than the two dimensions, 'honesty' and 'benevolence' as suggested by Ganesan (1994). In the original trust construct, honesty focuses on the contractor's expertise and reliability and benevolence focuses on motives and intentions. It seems that property managers have disregarded this difference, emphasising the outcome and are thus results orientated. Once management staffs have engaged the services of a specified contractor they then invest confidence with that contractor.

## **5 DISCUSSION AND CONCLUSION**

Trust is particularly important to the lift maintenance industry because most customers are mature and competition is very keen in Hong Kong. It seems that there is little differentiation among lift maintenance service contracts for price sensitive customers.

Since the cost of obtaining a new customer is very high and the profitability of a loyal customer grows with the relationship over time, customer loyalty or customer retention is a critical issue for service providers. Longevity of a customer relationship provides long-term profitability. Property management companies patronizing a lift maintenance contractor for a long period of time do so because they are pleased with the service they have received.

Providing good service quality may be more profitable to lift maintenance companies than capturing more market share or reducing costs. This is because companies have to offer competitive prices in the tender process in order to enter the first round selection and this price reduction may cause service quality to be impaired.

From the management company perspective, when they established trust with a particular maintenance contractor, it would increase their switching cost that in assigning a new maintenance contractor. The result obtained in this study is higher than Yen et al. (2011) which is on electronic firms indicating that the reliance is heavy. Thus, trust building is a central element for marketer in lift maintenance contractors.



## BIOGRAPHICAL NOTE

Dr. Edmund Wut is a lecturer in the cluster of Business. Dr. Wut obtained his PhD from University of South Australia. His research interests are in family consumer behaviour, crisis management and corporate social responsibility.

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