USING LOGISTICS SERVICES TO ACHIEVE SATISFACTION AND TURN CORPORATE BRAND EQUITY INTO LOYALTY

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ABSTRACT

Purpose: This research applies theory and techniques from the services and marketing literature to a logistics service provider (LSP) context to determine whether corporate brand equity and the LSP's service offerings lead to customer satisfaction which in turn leads to increased customer loyalty towards the LSP.

Methodology/Design: A conceptual model was developed from the literature and includes four latent constructs of corporate brand equity, satisfaction, service and loyalty that are underpinned by nine manifest variables. A survey of over 200 Finnish industrial firms was conducted to explore these constructs.

Research Findings: Data were analysed using structural equation modelling and the relationships among the four constructs in the conceptual model were supported.

Research Limitations: Although primary empirical research was conducted the context of the research was companies in one geographical context, Finland. However, the results indicate that the theory and constructs should hold in other contexts.

Practical implications: The findings of this research should enable management of LSPs to determine those service offerings most important to their customers and develop a service package using such offerings to satisfy the customer needs and thus build corporate brand equity and loyalty.

Originality/value of the paper: This paper adds to knowledge of customer service and satisfaction in logistics, particularly LSPs, and provides an interdisciplinary approach to research in the logistics domain.

INTRODUCTION AND BACKGROUND LITERATURE

This paper reports on a research study investigating how corporate brand equity can create loyalty towards a logistics service provider (LSP) based on extant theory from the services marketing literature. An LSP is usually termed a 'third-party' as it is 'outside' the usual the buyer-seller relationship. As such, the LSP is sometimes neglected below a 'line of visibility' as shown in Figure 1 below.

A customer's *ex-ante* expectation of a manufacturer or supplier's ability to meet their needs is based on influencers such as word-of-mouth, previous experience and sales promotion. When a customer actually receives the goods they have purchased they will perform an evaluation of the entire service experience provided by the manufacturer or supplier as well as the LSP and compare this *ex-post* perception to their original expectation.

If their perception is equal to their expectation their expectation is confirmed and the customer is satisfied. Over time and repeat experiences continued satisfaction should lead to increased loyalty towards the manufacturer or supplier as well as the LSP and thus build corporate brand equity (Grant, 2004; Davis et al., 2008).

If however their perception does not equal their expectation the expectation is 'disconfirmed' and the customer is either dissatisfied if their perception is less or possibly 'delighted' if their perception is greater. This 'expectancy-disconfirmation' paradigm is commonly used in the services marketing literature for consumer services such as banks and restaurants (Grant, 2007).

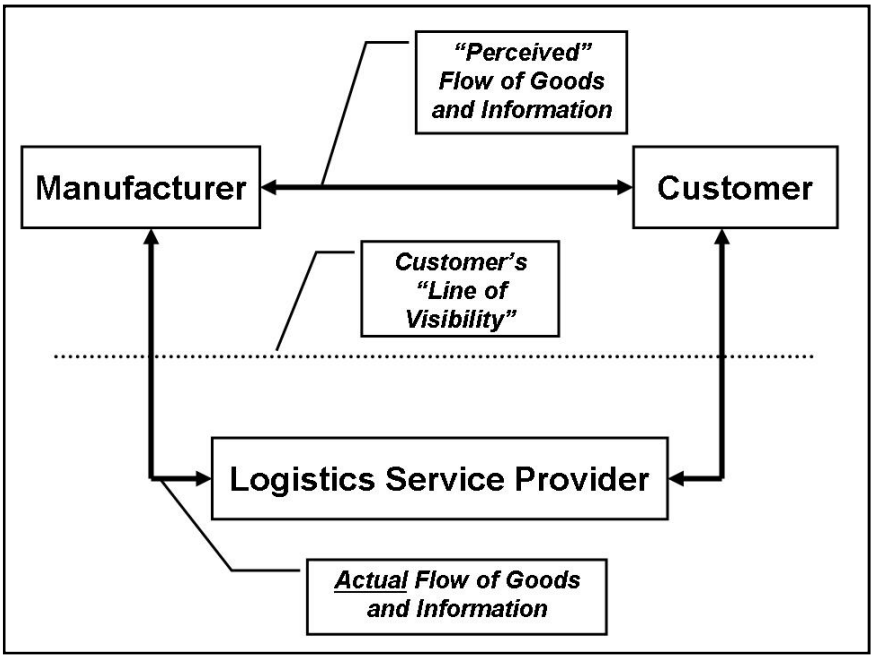

Figure 1: Customer's Perceived versus Actual Logistics Flows

LSPs may be considered services in the marketing sense as the services they provide are intangible, heterogeneous and cannot be 'inventoried' (Grant et al., 2006). As shown in Figure 1 a customer's perception of the flow of goods and information may be very different from the actual flow. Because the LSP actually provides the flow from supplier to customer their impact on the service provision process is important and thus their corporate brand equity is also important to both customers and suppliers to ensure expectations are confirmed by perceptions and generate loyalty towards the LSP.

Additionally, there seems to be a strong 'halo effect' between corporate brand equity and the service levels experienced by customers (Davis et al., 2008) that affects supplier and customer perceptions regarding the LSP.

Given these considerations, we argue that models and research techniques used in marketing and services marketing contexts are also applicable to logistics in general and LSPs in particular (Stock, 1997; Grant, 2007). We thus developed the path model (Loehlin, 1998) shown in Figure 2 from the LSP and marketing and services marketing literature (Davis et al., 2008; Grant 2004, 2005) where the dependent construct of loyalty is affected sequentially by constructs of satisfaction, service levels experienced and corporate brand equity of the LSP.

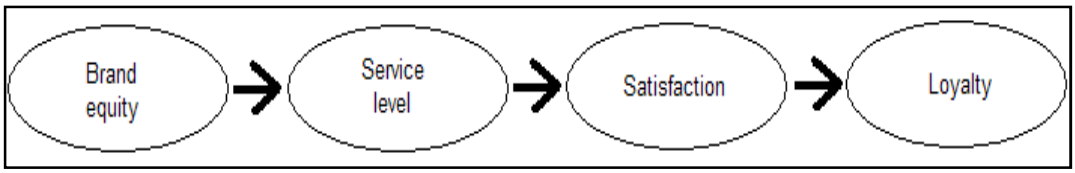

Figure 2: Proposed Path Model

The constructs in the model are considered latent constructs or factors that are not directly observable but are inferred from other manifest or measurable variables. In practice, the operational measures are usually presented in a questionnaire as attitudinal statements based on the 7-point Likert scale (strongly agree … strongly disagree). The descriptions and the operational measures of the concepts are presented in Table 1 below.

EMPIRICAL ANALYSIS

The path model was tested in a survey of 235 Finnish firms that purchase LSP services during early 2008. The survey was conducted using the Internet and the Webropol online survey software package. The questionnaire included various sections intended for mapping outsourcing-related issues for logistics in Finland as well as the research discussed in this paper. The questions in the questionnaire were based on a seven-point Likert scale as discussed above.

The first criterion for the target group was that their line of business uses a lot of logistics services (e.g. mining, manufacturing, oil- gas- and water maintenance and construction). The next criterion was that companies in the target group must have at least 50 employees. Following the previous criteria, the next step was to include only the companies with revenues over 400,000 Euros. This yielded a total target group of 1043 companies and 235 acceptable responses were received for a response rate 23%.

The respondents had filled the questionnaires fairly accurately but any missing data were completed using SPSS software's expectation maximization (EM) function. The data were analysed using structural equation modelling (Bollen and Long, 1993) and estimations were made with Lisrel software (Jöreskog et al. 2000). The estimates were calculated using the ML (maximum likelihood) method based on covariance matrix and the normality of variables was determined using Prelis 2 software (Jöreskog et al. 2000).

Construct or Latent Variable	Explanation and Operational Measure in the Questionnaire	Label
Corporate brand equity	Refers to corporate equity of the brand (Davis et al, 2007).	**BE**
	"We are willing to pay more in order to do business with this logistics service provider."	paymore
	"This company's brand is different from other logistics service providers."	difbrand
	"The name of this provider gives them an advantage over other logistics service providers."	nameadv
Service level	Refers to service levels experienced by customer (Grant, 2004).	**SERV**
	"Recent experiences in logistics service related to keeping schedules."	schedule
	"Recent experiences in logistics service related to sufficiency of capacity."	capacity
	"Recent experiences in logistics service related to service-mindedness of personnel."	service
Satisfaction	Refers to customers' overall satisfaction (Grant, 2004).	**SATIS**
	"Give an evaluation of your overall satisfaction with the operation of your main logistics service provider."	satisfi
Loyalty	Refers to the customer's loyalty towards service provider (Grant, 2004, 2005)	**LOYAL**
	"With high probability we will continue the relationship with our present logistics service providers as long as possible."	continue
	"With high probability we will change our main logistics service provider in the next few years."	change

Table 1: Constructs or Latent Variables and their Operational Measures

Using the operational measures described above, the proposed model was tested and the results are shown in Figure 3. It can be seen that brand equity has a positive relationship with service levels experienced, service levels experienced has a very strong and positive relationship with satisfaction, and satisfaction has a positive relationship with loyalty.

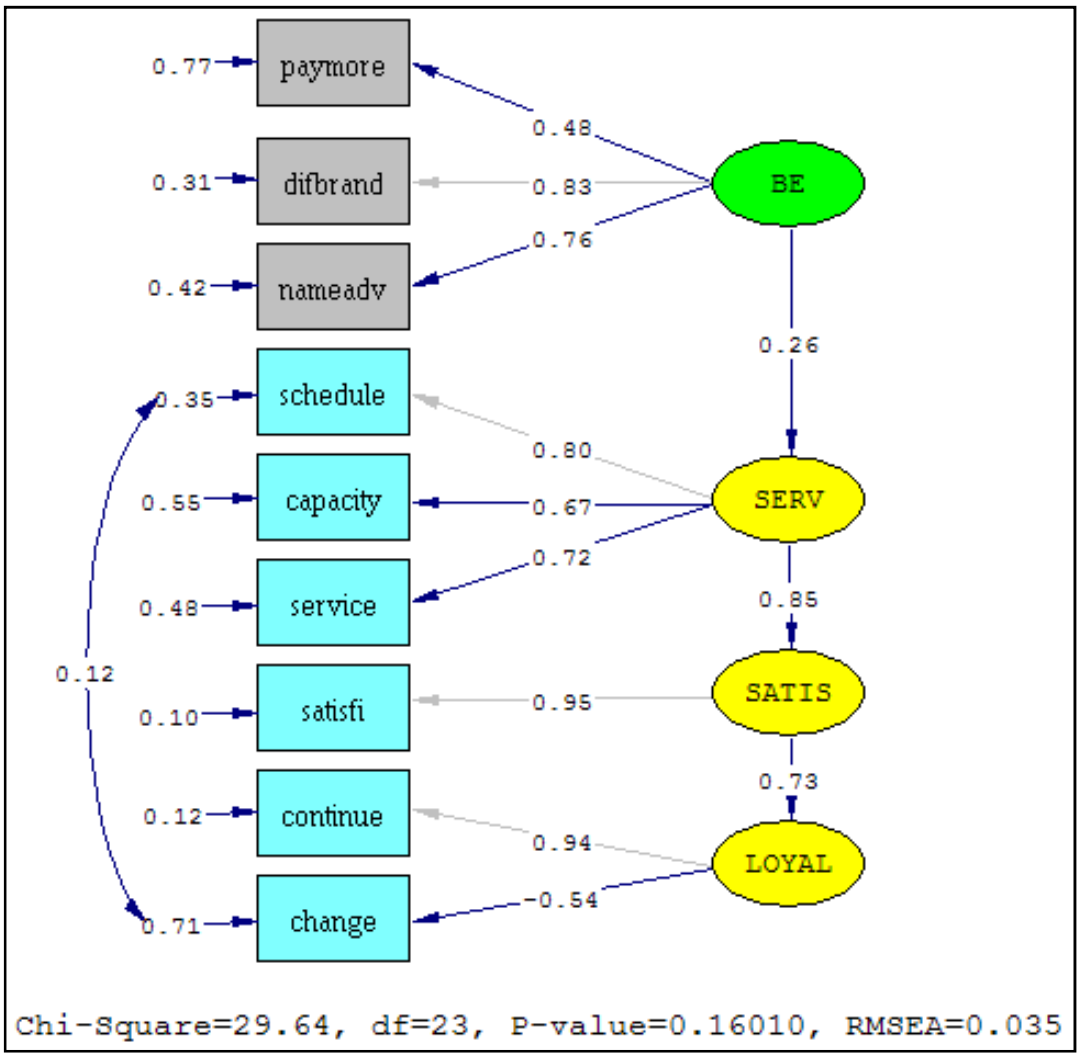

Figure 3: Final Empirical Model

The model provides a good statistical fit as shown in Table 2. All relationships in the final model are statistically significant and their directions are similar to the proposed model. Individual factor loadings are also good. Modification indexes indicated a high correlation between the error terms of the measures 'change' and 'schedule'. This is understandable as intuitively customers will begin to seek new LSPs if their current provider cannot adhere to schedules.

The Chi-square test shows an acceptable fit of the model to the data, the minimum acceptable p-value normally being 0.05. According to Browne and Cudeck (1993), an RMSEA value below 0.05 indicates a close fit of the model. Jaccard and Wan (1996) argue that the model's CFI and GFI values should be above 0.90. The value of the normed chi-square should be between 1.0 and 2.0. Thus, based on the test values, the model can be considered acceptable.

Test	Value	P-value
Chi-square (df)	29.64 (23)	0.16
RMSEA	0.04	
CFI	0.99	
GFI	0.97	
SRMR	0.05	
Normed Chi-square	1.29	

Table 2: Goodness-of-Fit Indices of Final Model

Additionally, each construct was evaluated for construct reliability (CR) as shown in Table 3. Because some factors have only one or two measures, they are unidentified without full structure and it is impossible to perform factor analyses of individual latent variables. This also weakens the usability of traditional test values like CR and average variance extracted (AVE) and, therefore, the results should be evaluated primarily on the basis of the fit indexes of the full model and theoretical background of these measures. Mainly also CR and AVE values support good statistical fit of the model, but SATIS has low AVE value. However, as there is only one measure for overall satisfaction it is not surprising that the AVE value is below 0.5.

Latent variable	CR	AVE
BE	0.74	0.60
SERV	0.78	0.62
SATIS	0.90	0.47
LOYAL	0.73	0.54

Table 3: Construct Reliabilities and Average Variance Extracted

CONCLUSIONS

The research study's findings indicate corporate brand equity has a positive effect on service levels experienced; service levels experienced have a strong positive effect on customer satisfaction; and customer satisfaction has a positive effect on loyalty towards the LSP. The strength of the corporate brand equity relationship with service levels experienced is not particularly strong, nevertheless there is an effect and the relationship is positive.

From a theoretical point-of-view this research study adds to knowledge of customer service and satisfaction in logistics, particularly LSPs, and also considers corporate brand equity as a factor (Davis et al., 2008). However, the study also answers a call (Stock, 1997; Grant, 2007) to conduct more interdisciplinary research in the logistics domain.

This study is important to managers as well as academics since there is little research simultaneously investigating service levels, customer satisfaction and loyalty, and corporate brand equity in LSP activity (Holter et al., 2008). From a managerial perspective LSPs should concentrate on the quality of their service offerings to ensure customer satisfaction and thus increase loyalty from suppliers and customers. This will add to their corporate brand equity which should also be beneficial in the long term. By doing so, LSPs will better position themselves strategically and should generate a competitive advantage relative to competitors or firms considering internalising their logistics activities (Juga et al., 2008).

Methodologically, the research study exhibits good face, construct and internal validity (Mentzer and Flint, 1997). However, the research was carried out in the discrete context of Finnish industrial companies. The results should apply to other contexts but further research should replicate this study in such contexts to determine the external validity of the findings.

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