

Does B2C online logistics service quality impact urban logistics? /

La qualité de service logistique envers le cyberacheteur en B2C

façonne-t-elle la logistique urbaine ?

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Depuis sa thèse de doctorat, Bernd Philipp se concentre dans ses travaux de recherche sur des problématiques orientées canal (logistique, SCM, distribution) portant sur le développement durable/ la RSE, la qualité de service en B2B et B2C et l'innovation. Ses expertises sectorielles incluent le packaging, l'informatique, les prestations logistiques, la grande distribution et l'enseignement supérieur (professeur depuis 2001 dans les champs disciplinaires logistique/ SCM et marketing ; chaire du pôle marketing durant 7 ans). A son actif, une trentaine de publications nationales et internationales dans des revues scientifiques à comité de lecture, des actes de conférences, des ouvrages collectifs et des revues professionnelles.

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Dans sa thèse de doctorat, David B. Grant analysait le service envers le consommateur, la satisfaction et la qualité au sein de la logistique agro-alimentaire, et fut récompensée par le prix prestigieux « James Cooper Memorial Cup PhD Award » délivré par l'institut britannique CILT. Ses intérêts de recherche incluent le service client, la qualité et la

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satisfaction, la logistique *retail* ainsi que la *reverse logistics*/ logistique durable. Parmi ses expériences sectorielles, nous citons la distribution au détail, les services bancaires aux entreprises, la conception technique et le conseil. Dans ses travaux plus récents, David B. Grant analyse la disponibilité en rayon et les ruptures de stock, la perte globale et le gaspillage dans la distribution alimentaire au détail, la qualité de service des détaillants électroniques et la logistique fournie envers le consommateur et son ergonomie *shopping* dans les secteurs alimentaire comme non-alimentaire. A son actif, plus de 175 publications dans des revues scientifiques, ouvrages, et actes de conférences. David B. Grant est également membre du comité de rédaction de 9 revues internationales.

Résumé

Cet article témoigne de notre étude scientifique en cours concernant l'impact de la qualité de service logistique fournie au cyberacheteur en B2C (QSL-C) sur sa satisfaction et sa fidélité, impact susceptible de façonner la logistique urbaine au Royaume-Uni, en France et en Allemagne, tout en révélant les différences spécifiques à ces pays en ce qui concerne (1) le comportement du consommateur et (2) les stratégies – canal poursuivies par les professionnels de la *supply chain*. Nous adoptons une démarche méthodologique en 2 étapes, à savoir une recherche qualitative s'adressant aux cadres à l'interface producteur/ détaillant, suivie d'une étude quantitative ciblant les consommateurs en tant que cyberacheteurs afin de déterminer comment leurs attentes en QSL-C et activités annexes influencent leur satisfaction et leur fidélité continue. Cette étude ambitionne primo une contribution théorique originale, en introduisant le contexte B2C pour notre concept QSL-C, reflétant ainsi la partie aval dans la chaîne logistique, tandis que la littérature relative à ces construits est dominée par des conceptions logistiques en B2B. Secundo, notre étude cherche à identifier tout décalage quant aux attentes ou au comportement du consommateur, susceptible d'affecter les réalisations

concrètes de logistique urbaine. Dans un registre plus managérial, cette étude révélera aux différents décideurs de la chaîne logistique ces composants de la QSL-C considérés comme indispensables ou critiques par les *shoppers* en ligne.

Mots clés: qualité de service logistique envers le cyberacheteur en B2C (QSL-C); business to consumer (B2C); satisfaction; fidélité; logistique urbaine

Abstract

This paper reports on an in-progress research study regarding the impact of business to consumer (B2C) online logistics service quality (OLSQ) for shopper satisfaction and loyalty on urban logistics across the UK, France and Germany to also investigate country-specific differences of consumer online shopping behaviour and channel strategies. A two-stage approach is adopted consisting of firstly of qualitative research conducted with managers at the producer/retailer interface and secondly a quantitative survey stage targeting consumers as online shoppers to determine how their expectations of OLSQ and associated activities influence their satisfaction and ongoing loyalty. This study should contribute theoretically by considering a B2C setting for OLSQ, which is the final aspect of point-of-origin to point-of-consumption, as most general literature on these topics has been dominated by business to business (B2B) logistical designs, and also identify any discrepancies between consumer expectations or behaviour as it may affect urban logistics solutions. Further, this study should contribute practically by providing managers with an understanding of the components of OLSQ considered critical by consumers.

Keywords: Online logistics service quality (OLSQ); business to consumer (B2C); satisfaction; loyalty; urban logistics

1. Introduction and Research Motivation

Logistics service quality, logistics performance, logistics service level or logistics value, which are often considered synonyms, are generally discussed in business to business B2B settings (Grant, 2004). However, there are few contributions of research into OLSQ directed towards the final customer, i.e. the consumer or shopper, from a logistics or supply chain perspective. Further, most research from a marketing perspective tends towards hedonistic consumer behaviour and preferences for goods as opposed to the supply chain elements (Xing and Grant, 2006). Neglecting this aspect of OLSQ is difficult to understand, which is important at two different levels.

Firstly, the shopper represents a productive resource (Harris et al., 2001), an important downstream supply chain member or logistician, carrying out logistics activities and tasks, weighting up OLSQ with economic and non-economic costs (burden, endeavours, inconvenience), confronted with typical supply chain decisions such as outsourcing logistics tasks – via home delivery and electronic shopping – or internalize them – via store-based, traditional shopping (Granzin et al., 1997; Teller et al., 2006, 2012). In other words, the consumer represents the final link in the point-of-origin to point-of-consumption definition of logistics (Grant, 2012).

Secondly, OLSQ activities directed towards the consumer or shopper also acts along a marketing axis: i.e. satisfaction and loyalty both on transaction-specific and on cumulative levels (Zhang et al., 2005), are not only influenced by product quality elements, but also by service-related dimensions building up the overall shopping experience. OLSQ seems to be an important element in this context, influencing shopper satisfaction and loyalty which are

two major variables in marketing research as they guarantee the company's competitive advantage (Grant, 2004).

This double role of the shopper, downstream supply chain member and customer/consumer at the same time, justifies a dedicated conceptualization of OLSQ. Consequently, a dedicated OLSQ concept should mobilize both logistics and supply chain management (SCM) as well as marketing literature streams in an integrated manner as any separation appears artificial in this context. Further, extant academic literature does not propose a holistic concept of OLSQ yet, but only specific subsets such as items unavailable and out-of-stock. In the same manner, extant literature does not consider the impact of consumer behaviour on OLSQ urban logistics and design, whilst work on urban logistics is focussed on efficiency and environmental solutions that may not take into account the consumer's needs.

We have selected the grocery sector for inspiration; it has had significant logistics, SCM and marketing empirical study in non-online contexts and "*shopper logistics tasks and costs are higher [in this sector] compared to shopping endeavours for other product categories*" due to very frequent purchases (Teller et al., 2012, p. 59). Online shopping, despite still being marginal in terms of grocery market share (Grant et al., 2006), nevertheless has seen recent rapid growth in that and other sectors and hence provides the motivation for this research study.

2. Theoretical Background

Consumer OLSQ, satisfaction and loyalty

General logistics service quality concepts are usually investigated in B2B settings; there are few contributions dedicated to B2C contexts. Thus, discrete academic concepts are usually

derived from inter-company concepts and are often referred to as the 'seven rights': the right amount, of the right product, at the right place, at the right time, in the right condition, at the right price, with the right information (Mentzer et al., 2001; Bienstock et al., 2008). Within B2B settings, two distinctive characteristics have been developed so far. The first one distinguishes three typologies: outcome; process; and structure/potential/functional (Thai, 2013) and is close to the traditional construct of company performance. The second one develops the concept's focus: either oriented towards the customer/consumer and his/her evaluations or perceptions – 'subjective quality' - or towards the service provider in a more industrial view (Saura et al., 2008; Thai, 2013).

Following Grant (2004), the overarching framework for customer/consumer/shopper satisfaction is the expectancy-disconfirmation paradigm where shoppers develop expectations prior to a product or service experience, and then either confirm or disconfirm those expectations afterwards. This comparison refers to product or service performance, which has business implications for a retailer, producer or other supplier providing the product or service. But, while researchers have examined the influence of general service quality on consumer satisfaction and loyalty (Parasuram et al., 1985; Grant, 2004), little research has been conducted on the specific issue of logistics service quality. End consumer satisfaction and loyalty are influenced by a wide set of factors or drivers occurring at the different moments within the consumption experience (Liu et al., 2008). Together with other factors stemming from marketing and other business domains, logistics service quality elements impact both consumer satisfaction and loyalty (Grant, 2004).

Online grocery retailing

The Internet has risen in importance and acceptance among firms and consumers to conduct business (Xing and Grant, 2006). Further, online grocery shopping has been presented as a promising additional channel for future sales and as a medium to create customer loyalty (Grant et al, 2006). Lastly, consumers' ability to purchase their food needs over the Internet and have them delivered to their homes represents a service innovation in retailing (Kämäräinen and Punakivi, 2002).

The rise of B2C e-commerce has introduced challenges in retail grocery logistics, especially in the physical distribution to the final customer. In traditional retail businesses products are selected and taken home by the consumers from the local store at any time they want. In contrast, e-commerce enables consumers to select the products online and have them delivered to their doorstep (Xing et al., 2010). Additional operations of order-picking, packaging and delivery have to be performed by the retailers which are expensive to carry out (Kämäräinen and Punakivi, 2002). Thus, the responsibility for the fulfilment process has switched from the consumer to the retailer.

A certain customer base is crucial to conduct online grocery retailing to generate sales and thus turn this business model into profitability. Therefore, it is essential to convince customers of the added value this business model offers (Teller et al, 2006, 2012). Creating trust and thus customer loyalty from satisfied purchase experiences is also of great importance to the grocery retailers to convince customers.

Fulfilment issues are concentrated mainly on customer satisfaction and economic aspects in terms of effective order processing and delivery operations to the final customer. In

particular, effective and quick deliveries are an essential part in gaining customer loyalty, and fulfilment operations help to establish a superior service and differentiate from the competition (Xing and Grant, 2006). However, the variations in service quality offered by LSPs and relationships between LSPs and retailers have contributed to OLSQ differences between multi-channel retailers and pure players perceived by online consumers (Xing et al., 2011). Pure play retailers were considered to provide superior information technology and software systems, which better allows them to advise consumers about product availability and delivery processes (Xing et al., 2010). It is not surprising that pure players better understand consumer needs and have developed appropriate techniques and standards; these issues comprise the core competitive criteria for them - if a pure play retailer doesn't understand these issues then consumers will not return.

Xing et al. (2011) concluded that multi-channel retailers (which include food retailers in the context of this study) and their LSPs would benefit from undertaking collaborative operations and marketing to better serve consumers, reduce costs and thus become more profitable. To do that, multi-channel retailers need to have an exact understanding of what consumers want and what LSPs can offer from end to end and how they differ in service provision to meet those needs.

Context of study

The context of this study is the three European countries of the UK, Germany and France. We focus on Germany first as it is Europe's largest retail food market with a population of 82 million people and food retail sales in 2012 of 186.7 billion Euros (Access 6, 2013). By comparison, the UK retail food market was £169.7 billion in 2013 with hypermarkets, superstores and small supermarkets accounting for 64.2% of this total. Retail food sales in

France were 208 billion Euros in 2012 with hypermarkets and supermarkets representing 75% of the market (IGD, 2014). Both the UK and France have populations in the 60 million plus range.

In Germany, structural changes in the market over the last ten years have seen an intensifying concentration of the top five food retailing companies. Further, the German retail food market has long been dominated by discounters such as Aldi and Lidl. Discounters still have 43.9% of the market (IGD, 2014) - a huge share when compared to 5.6% in the UK (or £9.5 billion in sales) and 15% in France (or 31.2 billion Euros in sales). However, while Germany is one of the largest retail food markets in Europe, it significantly lags behind in online food retailing when compared to the driving force in Europe, the UK, as well as France.

And yet, in 2012 the market share of online food retailing in Germany was only about 0.06% (1.1 billion Euros compared to 3.8% (£6.5 billion) in the UK and 2.4% (5 billion Euros) in France (IGD, 2014). Grant et al. (2014) found that while online retailing in Germany is one of the most developed e-commerce markets in Europe with almost 50% of total German retail revenues coming from online sales, German shoppers still show a strong preference for their neighbourhood stores and are extremely price conscious because of leaders such as Aldi and Lidl, and these attitudes are a deterrent to online buying. Further, they tend to shop for different items at different formats – a discounter for everyday basics, local markets for fresh items, and hypermarkets for bulk items. German consumers also like to physically engage with products and the process; for example, they prefer to pack their own bags and hence may not like online store staff picking products for them (Fernie et al., 2006).

Grant et al. (2014) concluded that whereas underlying enablers in the German market include a significant customer base, a broad product portfolio, good service quality, and advanced website and technology, there are significant barriers including issues about profitability, customer acceptance, and operational issues regarding fulfilment. They further determined that implications for retail and logistics service providers (LSPs) include addressing issues concerning delivery costs for the entire online food supply chain, in the cold-chain to maintain freshness and provide quality assurance, in the last mile to households such as routing and scheduling and in the natural environment pertaining to unattended delivery and urban logistics.

Impact on urban logistics

Scientific research in urban logistics (e.g.; Durand et al. 2010, 2014; Gonzalez-Feliu et al., 2014; Gonzalez-Feliu and Morana, 2010; Lang and Bressolles, 2013; Macharis and Melo, 2011; Paché, 2008; Taniguchi and Thompson, 2014) is dominated by systemic approaches in line with, on the one hand regulatory/ecological/sustainable requirements or, on the other hand upstream/professional supply chain members costs and performance considerations such as economic efficiency and effectiveness and social and ecological or levels of sustainability. The first group of work stresses reductions of negative ecological or social impacts such as emissions, energy consumption, noise, accidents, travel/ transport distances, vehicle flows parking durations, delivery generations, space occupation, as well as public/spatial/ urban development issues.

The second group of work not only develops supply chain members' attitudes, strategies and reactions to respective norms and regulations, but also includes issues related to pooling, both physical and informational flows consolidation, inter-companies co-operation/coordination,

share of responsibilities, roles (e.g. between producers, wholesalers, retailers and logistics service providers), operations and logistics infrastructure, creation of dedicated jobs and responsibilities ('ensemblier' of urban logistics), co-operation/coordination with public authorities (urban distribution centres, urban logistics zones, logistics proximity zones), supply chain-related organisation considerations (e.g. push versus pull system, basic B2C models of online order preparation, outsourcing versus in-house as regards to last mile logistics).

The online shopper is meant to adapt to the above mentioned systemic, sustainable, company-centric goals, to change mentalities related to traditional purchase patterns, transport/travel habits and attitudes towards services (Augereau et al., 2009). However, we argue there needs to be a fresh approach focusing on the online shopper and relating OLSQ to shopper satisfaction and loyalty. Durand et al. (2010) suggested that in the case of logistics failure (delay, damage, loss), the shopper might not continue visiting the commercial web site. Logistics thus has to be considered as a constitutive element of the online shopping transaction and we argue that OSLQ indeed adds complexity with regards to traditional logistics service quality.

In summary, OLSQ relates to particular characteristics, modalities and the fulfilment of the delivery mode, B2C customer delivery windows, the existence or absence of physical stores, and the relay/ complementarity/ support/co-existence/interplay between online shopping and traditional shopping channels and websites, which may annoy some shoppers.

Based on the foregoing review of theory/ literature and the resulting research gaps, we propose the following four research objectives:

RO1: What is the impact of OLSQ perceptions for online shopper satisfaction and loyalty, both on transaction-specific and cumulative levels?

RO2: What are the perceptions of supply chain members, e.g. category captains, retail category managers, and/ or LSPs, and shoppers with regards to OLSQ?

RO3: Are there any inconsistencies or issues for urban logistics with regards to OLSQ and a consumer-centric approach?

RO4: Are there any country-specific differences among the UK, France or Germany regarding OLSQ perceptions?

3. Methodology

To address the four research objectives we propose an empirical study to undertake a fresh and new approach to the phenomena of interest: OLSQ. Accordingly, to ensure construct, internal and external validity we are using Churchill's (1979) two-stage framework for the development and validation of items and constructs in marketing, Dunn et al. (1994) subsequently adopted this framework for logistics and thus it has been proven robust in both disciplines.

In the first stage of this framework the domain of the latent constructs are specified and confirmed. In this study the a priori constructs are consumer OLSQ, satisfaction and loyalty and the first stage for this study, in-line with a deliberate integrated and holistic supply chain

approach, consists of structured in-depth interviews conducted with managers at the producer/retailer interface, e.g. producer category captains and retail category managers.

In the second stage, manifest variables or items related to the latent constructs must be generated and then tested and purified via major empirical research. This study will follow-up the first qualitative stage with a quantitative survey stage targeting consumers as shoppers to verify their expectations of retail OLSQ and related activities, relative to their satisfaction and ongoing loyalty. This two-stage proceeding seems relevant, as major discrepancies or gaps are frequent between shopper/ consumer expectations, on the one hand, and, on the other, executive perceptions of shopper/consumer expectations.

Parasuraman et al. (1985) identified within their general service quality model a so-called 'gap 1' susceptible to having an impact on shopper's/consumer's evaluation of service quality and on his/her satisfaction and loyalty levels. This gap is particularly acute in online fulfilment given that it is the consumer's only reference to the service (Xing and Grant, 2006), and also affects the LSP's strategy as it becomes their unique selling proposition or USP (Xing et al., 2011).

Descriptive statistics involving data frequencies, means, standard deviations and cross-tabulations will be performed for all data. Exploratory factor analysis (EFA) will be used to examine the latent constructs and internal consistency of individual items. Finally, confirmatory factor analysis (CFA) and structural equation modelling (SEM) will be used to determine the validity, reliability, and relationships among the items and latent constructs.

Conceptual Model

Figure 1 shows our conceptual model where online logistics service quality (OLSQ) is posited to directly affect satisfaction (SATIS), which in turn directly affects loyalty (LOYAL). Alternatively, it may be that satisfaction is implicit and OLSQ may directly affect LOYAL without a direct effect on SATIS. However, until we collect and analyse data we can only present this relationship as a potential direct link (dotted line) from OLSQ to LOYAL. We are not presupposing any sub-constructs and will instead allow the EFA to suggest appropriate sub-constructs which we can then use to purify the variables and refine the conceptual model.

Insert Figure 1 here

The OLSQ construct

Reviewing literature related to B2B settings, Saura et al. (2008) identified relevant measures of the OLSQ construct as follows: timeliness, condition and accuracy of the order, quality of information, availability and quality of contact personnel. Amongst these elements, timeliness or on time delivery has revealed to be the most important one (Mentzer et al., 2001) particularly in an online context (Xing and Grant, 2006). Bouzaabia et al. (2013) have also derived from the B2B literature measures for a B2C setting. Finally, Bressolles et al. (2014) used OLSQ dimensions as predictors of satisfaction for the travel, electronics and cultural goods sector. We have applied the ‘seven rights’ of the logistics service quality concept developed in B2C-oriented literature in order to propose our holistic construct of OLSQ as follows *...the right amount, of the right product; ...at the right price*, i.e. the economic cost and also the shopper’s convenience, comfort, ergonomics, ease of use or other

non-economic costs; and ...*at the right time*. From the aforementioned studies and our holistic principles for OLSQ we have derived 42 manifest variables for study.

The Satisfaction construct

It is widely accepted that perceived general service quality has an impact on customer satisfaction, which in turn leads to later behaviours towards the service firm, including loyalty (Grant, 2004). OLSQ strives, together with marketing and other business domains, for consumer satisfaction and loyalty, on both transaction-specific and long-run cumulative levels in order to guarantee the firm's competitive advantage (Zhang et al., 2005). Shopper satisfaction is an attitude, unlike shopper loyalty which is purchase behaviour, or a combination of attitude and behaviour (Jones and Taylor, 2007). Giese and Cote (2000) define satisfaction as a response, either cognitive or affective, that pertains to a particular focus (e.g. a purchase experience and/ or the associated product) and occurs at a certain time (e.g. post-purchase, post-consumption). From this work we have derived 8 manifest variables for study.

The Loyalty construct

Dick and Basu (1994) define loyalty as a combination of repeat purchase levels or repeat patronage behaviour and relative attitude or levels of attachment. Jones and Taylor (2007) empirically found that loyalty for the specific domain of services has two dimensions: a behavioural element and a combined attitude/ cognitive element. The first one consists of repurchase intentions, switching intentions and exclusive purchasing intentions, whereas the second one translates consumers' strength of preference, advocacy, altruism, willingness to pay more and identification with the service provider. Loyalty in retail settings occurs when shoppers or other customers repeatedly purchase a good or service over time and hold

favourable attitudes towards a good or service or towards the company supplying the good or service, e.g. the retailer store. Further, Mitra and Lynch (1995) investigated shopper attitudes to retail advertising as precursors of loyalty while Zeithaml et al. (1996) examined the effects of consumer behaviours and subsequent consequences on overall loyalty. From this work we have derived 43 manifest variables for study.

4. Work to Date

So far we have held a workshop in France with practitioners in conjunction with the Retail Chain Paris conference as part of the stage 1 qualitative research. The purpose of the thirty minute event was to assess the importance to participants of sub-constructs for OLSQS in order to determine if any of them could be pruned from further study. Workshop participants were given a brief about the project and a survey form inviting them to rank on a scale of 1-8 (1=very important and 8=very unimportant) proposed sub-constructs based on the 'seven rights' discussed above. Twenty-eight attendees, comprising sixteen retailers, five producers, three producers/ retailers, two logisticians, and one each of a consumer and consultant, completed the survey and their average scores are shown in Table 1. There were twenty-one male and seven female respondents with an average age of thirty-eight years. The scores for the 'seven rights' centred around 2.5 and thus we do not believe we should delete any of them or their manifest variables from further study.

Additionally, we asked an additional, holistic question about the quality of service personnel that encompasses all 'seven rights' and its average score was 3.8. Protection (2.3) is the most important OLSQS element in the respondents' eyes, followed by quality of information (2.4). Interestingly, all OLSQS elements are in with the front runners' cluster, with one clear exception, namely quality of contact personnel. Quality of contact personnel also achieved

the highest standard deviation (2.4) and the highest median value (3). Respondents' variability might be explained as follows: perhaps some of our interlocutors mostly supply chain management executives, approach logistics, LSQ and related metrics as a sequence of technical management processes rather than the result of – human – resources. Or some of them may link quality of contact personnel solely to the marketing arena, neglecting its crucial role for logistics. But even this 'outsider element' of OLSQS obtains a value inferior to 4.5, the mid-point of our scale, indicating that respondents considered it important as opposed to unimportant.

Insert Table 1 here

We asked if they could list any additional important items of OLSQ as there was insufficient time to discuss same in the workshop. Four such items are listed at the bottom of Table1 and will inform our study going forward. Lastly, we asked participants to rank five variables related to food products, again on the same importance scale, to determine if any product characteristics may be important to the OLSQ process. The five variables and their average scores were product quality (2.0), freshness (2.4), functionality (2.7), prestige and innovative character (3.7 each). Based on these scores we will ensure issues of product characteristics are considered in our further study.

6. Conclusions

This paper has discussed the development of an ongoing research study investigating the effect that online logistics service quality for consumers, or OLSQ, has on consumers' overall online shopping experience, satisfaction and loyalty towards online retailers. The literature review has stimulated the development of a conceptual model of OLSQ and its relationship to

satisfaction and loyalty. An empirical study is now being undertaken to test and validate this model across three European contexts of France, UK and Germany.

We believe this study should contribute theoretically by considering these important issues in a fresh light, focussing on the consumer's perspective as opposed to usual B2B perspectives, looking for differences and similarities among the three primary European markets, and considering the impact of urban logistics on the online fulfilment process, all of which might suggest different approaches in a pan-European trading environment.

For practitioners, this study should contribute by providing a battery of validated and tested OLSQ variables they can incorporate into their customer and logistics service strategies to generate increased satisfaction and loyalty in a marketplace that is currently being driven by discount retailers and low prices at store level, but which may ignoring basic service criteria of the consumer in online and urban logistics design.

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Figure 1: Conceptual Model (source: authors)

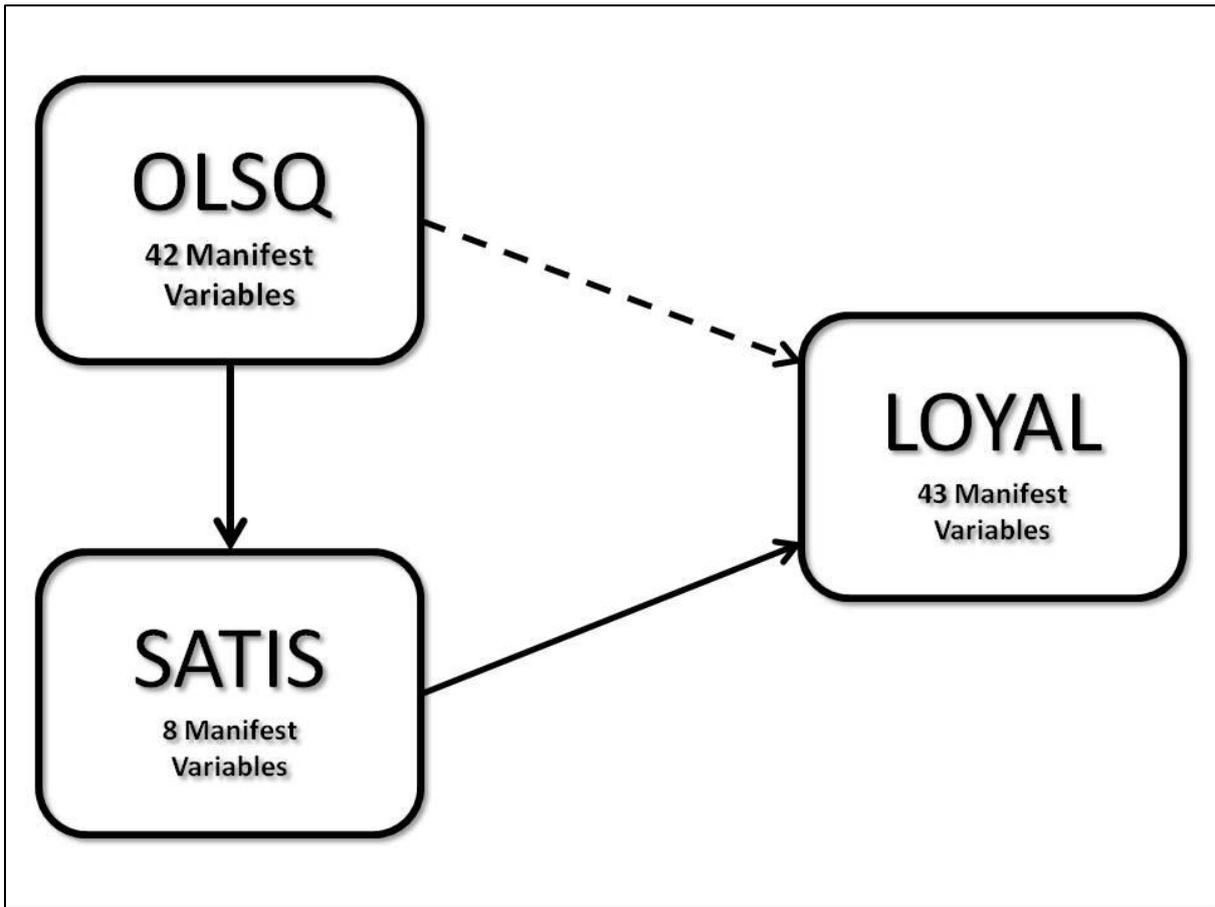


Table 1: Results of Practitioners Workshop (n=28 respondents); Scale from 1=very important to 8=very unimportant

| Proposed OLSQ Constructs | Explanation of Construct | Average Importance Ranking | Standard deviation | Median |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-----------------------------------|---------------------------|---------------|
| Quality of information (“ <i>with the right information</i> ”) | The website gives detailed information on the product or service supplied. | 2.4 | 2.2 | 1 |
| Condition (“ <i>in the right condition</i> ”) | The items sent from the web site are well packaged and perfectly sound. | 2.3 | 2.3 | 1 |
| Accuracy (“ <i>the right product</i> ”) | Customers are satisfied with the delivery accuracy from the website for postal, express and home delivery. | 2.7 | 2.1 | 2 |
| Availability (“ <i>the right amount of the right product..</i> ”) | The website has merchandise available when the online shoppers want it. | 2.5 | 1.9 | 2 |
| Timeliness (“ <i>at the right time</i> ”) | The product is delivered by the time promised by the company. | 2.5 | 1.8 | 2 |
| Economic cost (“ <i>at the right price</i> ”) | The general pricing of the website’s goods is relatively low (goods price plus delivery price). | 2.5 | 2.0 | 2 |
| Convenience, non-economic cost (“ <i>at the right price</i> ”) | It is easy for customers to move within and find what they are looking for on the website. | 2.6 | 1.8 | 2.5 |
| Quality of contact personnel (referring to all seven ‘rights’ of OLSQ and stressing | Customer service personnel are always able and willing to help. | 3.8 | 2.4 | 3 |

| | | | | |
|--------------------------------------------|-------------------------------------|-------------------------|-----------------------|--|
| human resources) | | | | |
| Additional OLSQ items of importance | | | | |
| Price comparison system | Access via type, size, model, brand | Search matching ranking | Comments of community | |