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Abstract

Customer loyalty is seen as one of the key factors of a company's success. According to current research results, a necessary premise among others to gain customer loyalty is how the customers perceive the customer service. In the field of B2C e-commerce online customer support areas are used to fulfill parts of this support duty. It is an open question how big the impact of the online customer support on the customer loyalty is. The goal of this paper is to determine, which factors are influencing e-loyalty significantly. Two factors are used to measure loyalty: positive word-of-mouth and switching probability. In the first part a brief overview of the actual scientific work and recent research results are given. After this, the methods and data acquiring steps are described. The results of the so gained data are presented and interpreted. Based on these results, the conclusion and further research recommendations complete this work.

Keywords: E-Loyalty, Graphical Chain Model, Customer Service, E-Commerce

1 Introduction

The impact of customer support on customer loyalty is widely discussed in the scientific community. But the role of online customer service in creating e-loyalty is not clarified. Although, some positive results exist in this area (e.g. Salmen and Muir, 2003), some authors state that customer support does not have high (e.g. Kumar and Reinartz, 2002) or any impact on customer loyalty (see Oliver, 1997). This paper demonstrates which factors foster e-loyalty in a specific industry. It is based on survey data, collected from mobile phone users in Austria. They were asked to state how they perceive the online customer service offerings of their mobile phone service providers. A graphical chain

model approach is used to reduce the theory-based factors to relevant factors. The a-priori model is a combination of two given approaches: the DeLone & McLean (2004) success model and the E-loyalty framework by Gommans et al. (2001). In this paper we want to clarify the impact of online customer support on customer loyalty in a specific industry by observing two indicators of loyalty: positive word-of-mouth and switching probability.

2   State-of-the-Field

"A loyal customer serves as testimonial, distributes positive word-of-mouth, and loves to use the company's services" (Gould, 1995). Already in the twenties of the last century, researchers mentioned customer loyalty in some kind (e.g. Melvin Copeland - see Jacoby and Chestnut, 1978). But since 1952, when Brown described this term by using the Chicago Tribune consumer panel for measurement (Brown, 1952), customer loyalty is a widely discussed issue in marketing research. Having loyal customers is a very important factor for many companies. Zeithaml identifies two possible dimensions of loyalty: the willingness to recommend and the willingness to pay more (increased pricing) (Zeithaml, 1981, 187). Loyalty is defined in different ways. Oliver (1999, 34f), for example, defines loyalty as a deep commitment and "for a customer to become and remain loyal, he or she must believe that an object firms' products continue to offer the best choice alternative". Other researchers suppose that the delivery of high customer value (Kotler and Keller, 2006, 143) or exceed expectations of customers by what is important to them (especially on value, service, dealing with complaints) (Gould, 1995, 17) are the key to loyal customers. Distinctions between spurious loyalty as a function of inertia where no other brands are available (Bloemer and Kasper, 1995) and true loyalty (Day (1969) and (Srinivasan et al., (2002)), which is based on maximum (brand) commitment (Bloemer and Kasper, 1995) and furthermore on latent and low loyalty (Day, 1969) can be found. Since these distinctions were defined in 1969, a huge part of the studies tried to explain true loyalty. In historical order, examples of customer loyalty approaches are given:

- 1952: repeat purchase behavior (since 1952), Brown (1952)
- 1959/1960: probability of product repurchase, Lipstein (1965) and Kuehn (1960)
- 1971: "biased behavioral purchase process that results from a psychological process", Jacoby (1971)
- 1982: "preferential, attitudinal and behavioral response toward one or more brands in a product category expressed over a period of time by a consumer", Blackwell et al. (2001)
- 1992: "favorable attitude towards a brand resulting in consistent purchase of the brand over time", Srinivasan et al. (2002)
- 1993: "loyalty is present when favorable attitudes for a brand are manifested in repeat buying behavior", Keller (1993)
- 1995: "attitudinal and behavioral dimensions need to be incorporated in any measurement of loyalty", Srinivasan et al., (2002)
- 1996: service loyalty, Gremler and Brown (1996)
- 2003: contingency framework for e-satisfaction and e-loyalty, Anderson and Srinivasan, (2003)

The behavioral approach is in principle based on the repeated purchase behavior of the customer, which is based on the quantity of proportion of purchase (Cunningham, 1956), sequence of purchase (McConnel (1968) and Tucker (1964)), and probability of purchase or re-purchase (McConnel, 1968). It is measured by analyzing statistically the purchase history of a customer (Zins, 2001). The behavioral measurement of customer loyalty exhibits some weaknesses. Especially, that no other influence can be included in this measurement for instance cognitive parts (Zins, 2001). This point is figured out by Bloemer and Kaspar, who criticize that repeat purchasing behavior does not account for the commitment of the consumer (Bloemer and Kasper, 1995). Attitudinal loyalty is the "degree of dispositional commitment in terms of some unique value associated with the brand" (Punniyamoorthy and Prasanna Mohan Raj, 2007). When behavioral measurement methods are having a generalization possibility, Day (1969) stated that the inclusion of attitudinal criteria turns loyalty into a concept, specific to the brand: an overall behavior pattern is not applicable anymore. The attitudinal approach can be divided in cognitive, affective and conative phases, which ought to be consecutive. Action loyalty - which is a representation of behavioral loyalty - is the last stage (Oliver, 1997). In service loyalty, cognitive loyalty ought to be a dimension on its own (Gremler and Brown, 1996).

Attitudinal approaches to loyalty measurement are based on a wide range of variables. Some commonly used attitudinal variables and factors are satisfaction (e.g. de Ruyter and Bloemer (1999), Shankar et al. (2003)), involvement (Punniyamoorthy and Prasanna (2007), Park (1996), Jacoby and Chestnut (1978), Gordon et al. (1998), Kim et al. (1997)), perceived value (Punniyamoorthy and Prasanna (2007), Gould (1995), Dodds et al. (1991)), customer perceived value (CPV) (Kotler and Keller (2006, p. 141)), (perceived) service quality (de Ruyter and Bloemer (1999), Gould (1995)), trust, reliability and confidence (Dick and Basu (1994), Punniyamoorthy and Prasanna (2007)), and commitment (Oliver. 1999), (Punniyamoorthy and Prasanna, 2007)). Other variables (such as perceived risk (Bloemer et al., 1991), perceived relationship (Grönroos, 2001), ease of obtaining information (Shankar et al., 2003, prior experiences (Reichheld, 1996), motivation (Bloemer and Kasper, 1995), capacity to elaborate (Bloemer and Kasper, 1995), are used, too. Overall, loyalty in e-commerce is primarily influenced by satisfaction, Internet skills and familiarity (Flavián et al., 2006), value and joy (Semeijn et al., 2005), but supplementary attributes, connected to the online characteristics are added: responsiveness, customization, and assurance (Semeijn et al., 2005). The satisfaction of a customer with the website depends on the website quality and the quality attributes (Semeijn et al., 2005), Internet skills are up to the customers experience (Flavián et al., 2006) and familiarity is important, because customers tend to stick on familiar websites (Flavián et al., 2006). What must be managed to create loyalty in e-commerce is fulfilling the requirements (satisfaction, joy, value) to build loyalty and overcome the switching behavior by knowing the switching risks. Due to the conditions in B2C e-commerce, gaining loyalty of customers is getting more and more demanding. Brand and customer loyalty on the Internet are in this case an evolution from the traditional approach, where interactivity or reciprocity were added and the relationship between buyer and seller is direct, connected via functionalities and technology of the Internet (Schultz and Bailey, 2000). It is evident that all loyalty constructs - such as customer loyalty, brand loyalty, or service loyalty - appear and are crucial in the e-commerce field. The term e-loyalty is used in many different ways, for

example it is "the customer's favorable attitude toward an electronic business resulting in repeat buying behavior" (Anderson and Srinivasan, 2003).

Since competing products are often very similar to each other, customer service and support is what makes the difference (Sawy and Bowles, 1997). Customer service is one possibility to skim the biggest part of the customer lifetime value (CLV) (Kotler and Keller, 2006, p. 150). The usage of IT in customer service is considered as an affordable and easy chance (Piccoli et al., 2004). In e-commerce the lack of the possibility to touch and proof the product on the Internet necessitates a product-specific customer support, especially for sensory products (Cho et al., 2002). A 24/7 customer support is vital (Sterne, 1996, p. 16). The computerization of answering questions, solving problems and selling additional products (Sterne, 1996, p. 1) in electronic commerce should always be connected to the website. For this reason, design and functionality are recommended to be based on intense research (Piccoli et al., 2004). Satisfied online shoppers without any perceived problems are recommending the e-commerce site they are satisfied with (Ahmad, 2002).

"Value-enhancing services may be offered in any phase of customers' buying processes" (Levenburg, 2005). The transaction or buying process can be seen as a multistage event with at least three stages which: pre-purchase, acquisition, and post-purchase (Levenburg, 2005). When it comes to complaints or feedback, the need for very detailed information is given. When customers complain they give the company a chance to confirm the company's trustworthiness and influence the loyalty of the customer (Tax et al., 1998), unfortunately not all dissatisfied customers complain, but defect (Hoyer and MacInnis, 2004, p. 289). Complaints in the online environment can be seen as a market feedback instrument, which give a brief assumption on causes for dissatisfaction (Cho et al., 2002). The peculiarity of customer complaints in the e-commerce environment is that the anonymity and distance to the company induces to more complaints than in the real world (Sterne, 1996) and complaints via Internet are mainly used by customers who need a fast response (Cho et al., 2002), which is often not fulfilled.

The key benefit of technology, used in services is the possibility to customize and personalize (Semeijn et al., 2005). This personalization endows the customer a feeling of being special and the company the possibility to target directly. What is important to e-commerce, is a fail-safe customer support, a faster reaction time, and the usage of new technologies (Sawy and Bowles, 1997). What is different and necessary in e-commerce is a personalized customer service (Walsh and Godfrey, 2000), which delivers personalized, targeted information and support to the customer. Network-based customer service systems provide the service either directly (via browser on PDA ...) or indirectly (via service representative) (Piccoli et al., 2004). The company's advantage of technology use concerning loyalty is that lots of data about the customer's behavior are collected on the fly (clickstream, purchasing behavior). The website can be used to collect data actively from the customer, by registration forms or by offering customization (Walsh and Godfrey, 2000). Data is also derived from customer cards. To identify high value customers and offer special promotions is simple (Walsh and Godfrey, 2000). All these data provide a good basis to measure the behavioral loyalty, which is based on evaluation of the whole service in B2C-e-commerce (Semeijn et al., 2005). One the other hand, the data offers the opportunity to know the customers in

general and use this knowledge for building customer loyalty. There are some utilities to support the customer service functions, such as eCRM (electronic customer relationship management) and eCCM (electronic customer care management). These systems are used in e-commerce and brick-and-mortar environments, but the advantage of e-commerce is that data collection could be integrated and automated via the website.

3 Methodological Approach

3.1 Basic Model

The e-loyalty framework (Gommans et al., 2001) covers important antecedents of e-loyalty. The influencing factors are website and technology, customer service, trust and security, brand building and value proposition. It covers the main factors and in combination with another model it possibly will help to understand the way customer support is influencing loyalty. The model of DeLone & McLean was developed to measure the success of information systems, fostering net benefits for users or user groups (DeLone and McLean, 2004). In brief, the model consists of different components. On the one hand, there is the quality component, which is divided into system quality, information quality, and service quality. On the other hand, the usage-component is given, where the usage of the website and the from-usage resulting satisfaction is addressed. Last, the net benefits of the user are a component as well. To apply the described research to this model, some modifications are necessary. As already mentioned customer support is a type of service and can be applied in the service-quality component. The online customer service area fits into both: information quality as well as system quality. This can be separated by the different tasks, online customer support must fulfill: on the one hand it fulfills the information task, which is present in all phases of the transaction process. On the other hand the system quality of the online support is an influencing factor, because of the expectation of the customers that online services are available all the time and offer a high usability (Sterne, 1996). The net benefits are the ultimate impact of the system, which can affect users as well as the company (DeLone and McLean, 2004). In this research, net benefits for the company are considered. These are the positive aspects of loyalty leading to positive word-of-mouth and lower switching probability which are the to-be measured loyalty indicators in this case. A combined approach, created from both models could support the goals in a more adequate way (see figure 1).
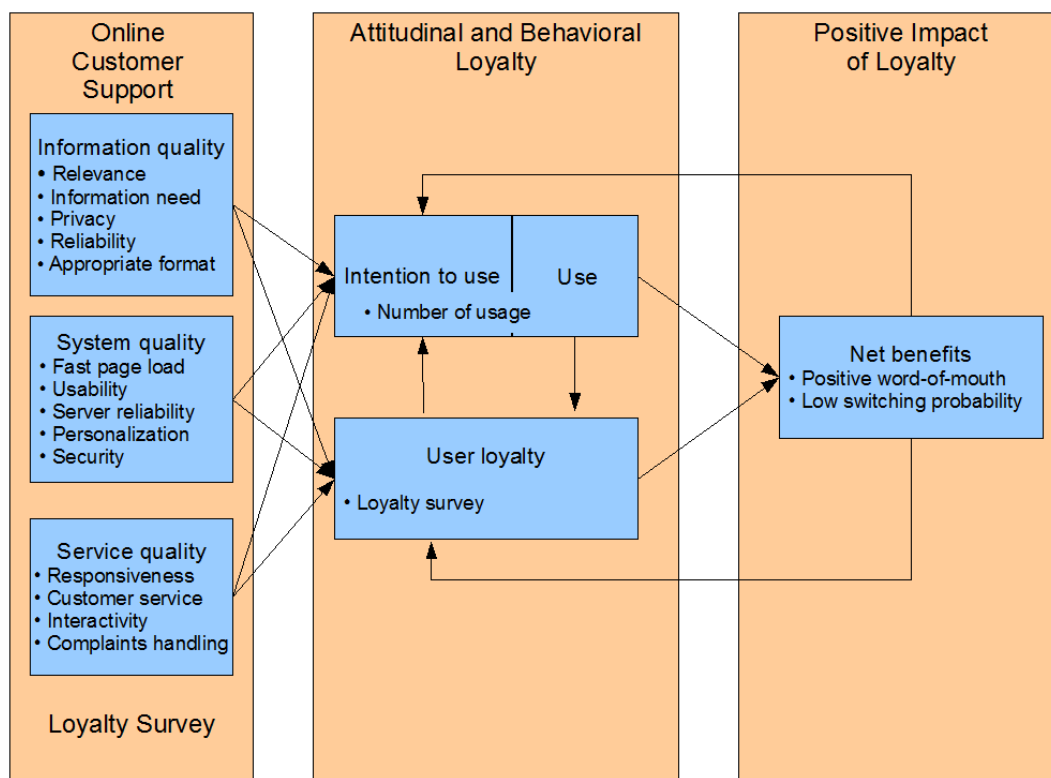
Figure 1: E-Loyalty Success Model

3.2 Survey

Information about the influence of customer service on loyalty is required. The necessary information is gained by surveying customers. The data is collected online with an online questionnaire. The attendants are participating anonymously, voluntary and consciously. Validated scales were used to design the survey. The chosen items (99) were validated in two ways, using two different sort methods. The pre-selected items were printed out on cards and allocated by five independent judges to given constructs and overall categories. Items which are placed in the same construct or category several times by different judges show convergent validity for this and discriminant validity for other constructs (Moore and Benbasat, 1991). A pre-test of the questionnaire was conducted to check usability requirements. The process is very similar to the procedure of instrument development used in some publications (Moore and Benbasat (1991) and Davis (1989)) as well as overall guidelines (e.g. Groves et al., 2009). Due to fact that the survey was conducted in a dual-language setting (English and German), the final English questionnaire was translated to German and pre-tested in terms of usability and understandability. To assure that the translation meets the requirements of the original question, it was retranslated. In case of any unclear translation, an independent expert was asked to translate and retranslate the questions. Sometimes it was necessary to adopt the German questions for better understandability. The items were selected according to constructs in the developed model. In addition some questions were added to investigate Internet usage and experience of the participant and to gain some demographic information. According to the aims of this research, expectations (as in

SERVQUAL and SERVPERF) and importance (as in SERVPERF) were not surveyed, only the performance of the online customer service center was investigated. The first step was to extract the items referring to the constructs stated as important in the developed model. In detail, as a pre-selection the following items were chosen:

- SERVQUAL (four items): P5, P7, P8, P9
- SERVPERF (one item): 85
- SERVCESS (eleven items): A15, A16, A18, A19, B1, B2, B3, B4, B5, B6, C2b
- WEBQUAL (26 items): informational fit-to-task (3), trust (2), tailored information (3), response time (3), ease of understanding (3), intuitive operations (1), online completeness (3), intent to reuse the website (7), alternative to calling customer service or sales (1)
- SiteQual (38 items): Reliability 1 - 4, Responsiveness 1 - 4, Assurance 1 - 4, Tangibility 1 -5, Intrinsic 1 - 5, Accessibility 1 - 6, Contextual 1 – 6, Representational 1 - 6
- SITEQUAL (six items): Q3, Q5, Q7, Q25, Q26, Q27
- PERSLOY (three items): y41, y42, y43 (The term "bank" in the original questionnaire was replaced by XYZ for the selection phase) (Ball et al., 2006)
- ECSI (five items): Q4, Q6, Q13, Q14, Q19 as used in (O'Loughlin and Coenders, 2004) (The term "postal" was eliminated or replaced when possible)
- NEW (five items): these items are not from a given scale. They were used to investigate switching probability and to document demographic data.

The items of SERVQUAL and SERVPERF which are the same are referenced as SERVQUAL, items occurring exclusively in SERPERF, are referenced as SERVPERF. To document the Internet usage and skills of the customers as well as sex and age, this information was investigated, too. The questions are based on questionnaires used by Anandarajan et al. (2000), Teo et al., (1999) and Smihily, (2007). Usage of the website (overall, daily) and the income of the customers, as well as mobile phone customs of the users are investigated in addition. Endurance of the relationship and number of times switched is used to sketch the behavioral loyalty of the participants. The reasons to switch are based on the conditions in the market (receive new cell phone, benefits of new customers). The online survey was pre-tested by ten people. The final questionnaire can be found in the appendix.

Although sampling is an important issue, in this case a non-probabilistic sampling method was chosen. Participants were contacted by posting an informational text, a survey description and a link to the survey in Austrian online platforms. In addition, people were contacted via Facebook (136), e-mail (167) and directly (17). The convenience sampling method (Smith (1983) or Ferber (1977)) was combined with a snowball sampling approach (Ahn et al., 2007). 518 people were contacted using different communication channels and 557 users passed by in the chosen communities, showing a response rate of 26.14 %. Out of these participants, 245 people finished the questionnaire. Not surprisingly, the response rate is much higher when addressing people you know (37.45 %) in comparison to post a statement anonymously to a forum (11.13 %). When accounting only the completely filled out questionnaires, 194 people (response rate 37.45 %, 87.11 % of people starting) completed the questionnaire, in the anonymous group, 51 people (response rate 9.16 %, 78.43 % of people starting) did the

same. At the end of the survey processing time, running for one week in December 2009, 245 completed questionnaires existed in the data set.

3.3 Graphical Chain Model

Graphical chain models are possibility to present complex circumstances in an understandable way. Graphical models use graph theory on the one hand and probability distributions on the other (Jordan, 2004). A graph consists of nodes and edges. In graphical models, the nodes represent random discrete or continuous variables and the edges determine the connection or relationship between the nodes. A missing connection between variables states conditional independence between these two nodes. The joint probability is the product over functions of the connected subsets of modes (Jordan, 2004). A central concept in graph theory is separation, describing whether nodes are adjacent or not (Whittaker, 2009, 63). The most used directed graphs are Directed Acyclic Graphs (DAG), which are used especially in computer science (see Jin et al. (2006), An et al. (2006) and Stamelos et al. (2003)).
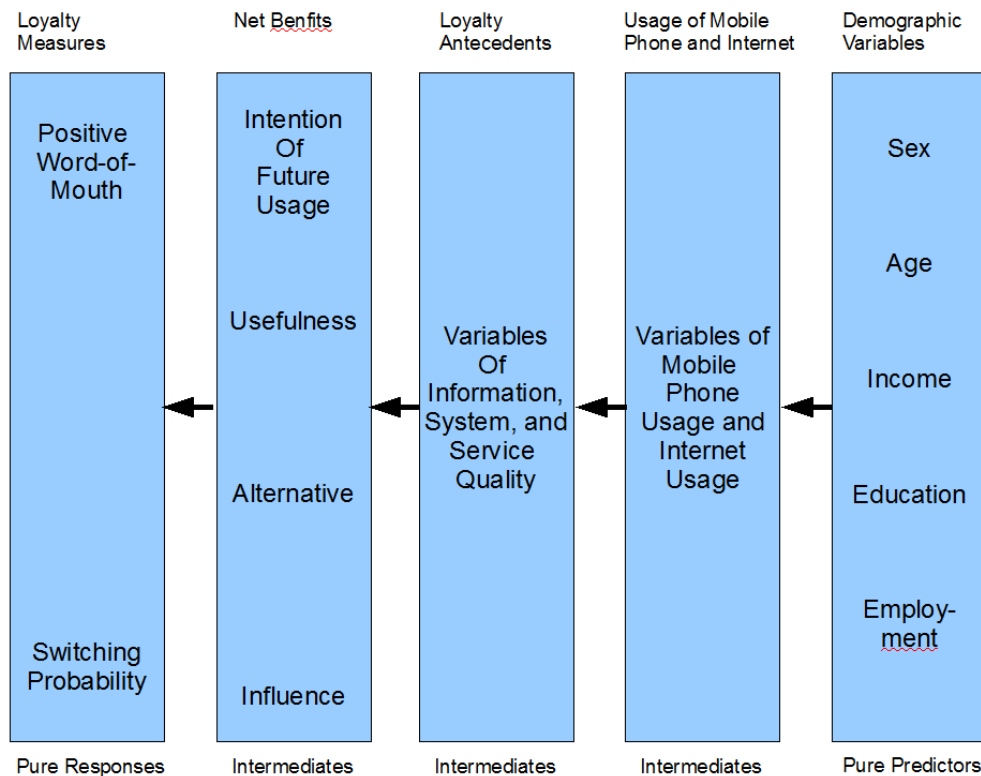
Figure 2: Causal Relationship, A-Priori-Design

To create a graphical chain model, in a first step the variables are combined into blocks or subsets. In a second step, these blocks are ordered to form a chain. Variables in a preceding block are potential causes of the variables in the subsequent block. An important precondition of this model is that nodes within the same block are non-causal (represented by an undirected edge), whereas the relationship between variables of different blocks is causal, marked by a directed edge (or arrow) (Berrington et al., 2008). Based on a theory-driven a-priori design, tests for conditional independence are

necessary to find non-significant relationships (Berrington et al., 2008). Adapting it to the given formal notation of graphical chain model, figure 2 is given. In contrary to graph theory, graphical chain models are drawn from right to left "so that the response variables of primary interest are in the left-hand box and its explanatory variables are in boxes to the right " (Cox and Wermuth, 1983, p. 208).

3.4 Fitting the Graphical Chain Model

For this paper, the fitting of the graphical model was following the approach used by Caputo, Heinicke and Pigeot (1999) based on Cox and Wermuth (1994). As a precondition, a Conditional Gaussian distribution is considered (Caputo et al., 1999). First, the correlation of the variables in the different blocks of the graphical chain model (see figure 2) is calculated. Based on this the relationships in the blocks are defined and the results are cumulated. For the model presented here, linear regressions are used. Starting with calculating the t-values (dividing estimates by standard error) are used to check nonlinearities. No evidence for nonlinearity was found, therefore the backward selection strategy started. The backward selection was stopped, as soon as every non-excluded explanatory variable demonstrates a t-value greater than two (absolute value). This indicates a significant relationship within the boundaries of 0.05-confidence level. The backward selection with NBSWITCH as response variable was stopped after 42 steps. The model for these response variables holds eight explanatory variables. The backward selection with NBRECOMMEND as response variable needed 45 steps, identifying five explanatory variables to be added to the reduced model. After fitting the model using the survey data, some variables indicate influence on others, or in other words a causal relationship between these variables cannot be refused.

The following tables (table 1 and 2) present the reduced model, including the net benefits switching probability (NBSWITCH) and positive word-of-mouth (NBRECOMMEND) and their regressions coefficients as well as the standard errors. The given variables seem to have a causal relationship to the response variables.

Explanatories	σ	B	t − value
NBINFLUENCE	0.2800	0.0661	4.3030
SYSQPERSONALIZE	0.2905	0.0752	3.8610
NBRECOMMEND	0.2485	0.0736	3.3750
MPSP 2	-0.3015	0.4483	-0.6720
MPSP 4	-1.1284	0.4072	-2.7710
MPSP 5	-0.8896	0.4261	-2.0880
MPSP 7	-1.3947	0.5670	-2.4600
MPSP 8	-1.0986	0.8960	-1.2260

Explanatories	σ	B	t − value
MPSP 9	-0.7750	0.4085	-1.8970
MPSP 10	0.9761	1.4536	0.6720
IU FREQ 2	-0.3780	0.5443	-0.6950
IU FREQ 3	0.8985	1.4081	0.6380
IU FREQ 5	-3.6527	1.4204	-2.5720
IU FREQ 6	-1.8262	1.5221	-1.2000
DD EDU 2	-0.3976	0.3103	-1.2810
DD EDU 3	-0.4699	0.3162	-1.4860
DD EDU 4	0.1082	0.5673	0.1910
DD EDU 5	-1.1119	0.4663	-2.3850
SEQCOMPLAINT	0.1553	0.0612	2.5350
SEQINTERACT	-0.1700	0.0779	-2.1820

Table 1: Regression Coefficients, Standard Errors and t-values, Response Variable NBSWITCH

Explanatories	Σ	β	t − value
NBINFLUENCE	0.4392	0.0487	9.0240
NBSWITCH	0.2189	0.0541	4.0460
SYSQTECHNOLOGY	0.2422	0.0651	3.7210
TIMETHIS 2	-0.2955	0.2820	-1.0480
TIMETHIS 3	-0.2062	0.3099	-0.6550
TIMETHIS 4	-0.3416	0.3766	-0.9070
TIMETHIS 5	0.2211	0.4352	0.5080
TIMETHIS 6	-0.5231	0.2421	-2.1610
TIMETHIS 7	-0.5517	0.2433	-2.2680
SYSQPERSONALIZE	0.1184	0.0629	2.1070

Table 2: Regression Coefficients, Standard Errors and t-values, Response Variable NBRECOMMEND

Legend:

- NBSWITCH: Switching probability ("As long as the customer service quality stays on the same level, I can't see a necessity to switch to another provider'', 7-point Likert-Scale; Totally Agree – Totally Disagree)

- NBRECOMMEND: Word-of-mouth ("Due to the quality of the online customer service, I would recommend the website to a friend interested in this service", 7-point Likert-Scale; Totally Agree – Totally Disagree)

- NBINFLUENCE: Influence of customer service on switching ("The quality of the online customer service influences my decision to stay with this provider", 7-point Likert-Scale; Totally Agree – Totally Disagree)

- SYSQPERSONALIZE: Personalization on the website ("The company's website offers personalized services such as profiles, rebates etc.", 7-point Likert-Scale; Totally Agree – Totally Disagree)

- MPSP: Current mobile phone service provider ("Your mobile service provider in Austria is ... - Please choose only one of the following"; List of 12 mobile phone service providers in Austria plus open field for inserting another one)

- IU_FREQU: Frequency of Internet usage ("On the average, how frequently do you use the Internet? - Please choose only one of the following: Several times a day; About once a day; A few times a week; A few times a month; Less than once a month; Never/almost never. Usage is defined as browsing through the Web / Internet, blogging, buying etc.")

- DD_EDU: Education ("What is the highest level of education you have completed - Please choose only one of the following: High School; Some college; Bachelor's degree; Some graduate or professional study; Graduate or professional degree")

- SEQCOMPLAINT: Complaints handling ("My most recent complaint was handled to my satisfaction", 7-point Likert-Scale; Totally Agree – Totally Disagree)

- SEQINTERACT: Interactivity ("The website has interactive features, which help me accomplish my task", 7-point Likert-Scale; Totally Agree – Totally Disagree)

- SYSQTECHNOLOGY: Perceived level of technology ("The website is supporting the latest technology", 7-point Likert-Scale; Totally Agree – Totally Disagree)

- TIMETHIS ("Time staying with this mobile phone service provider - Please choose only one of the following: One year or less than one year; Two years; Three years; Four years; Five years; More than five years; Always (since my first mobile phone)")

Based on the results of the regression analysis, a fitted graphical chain model is given (see figure 3).
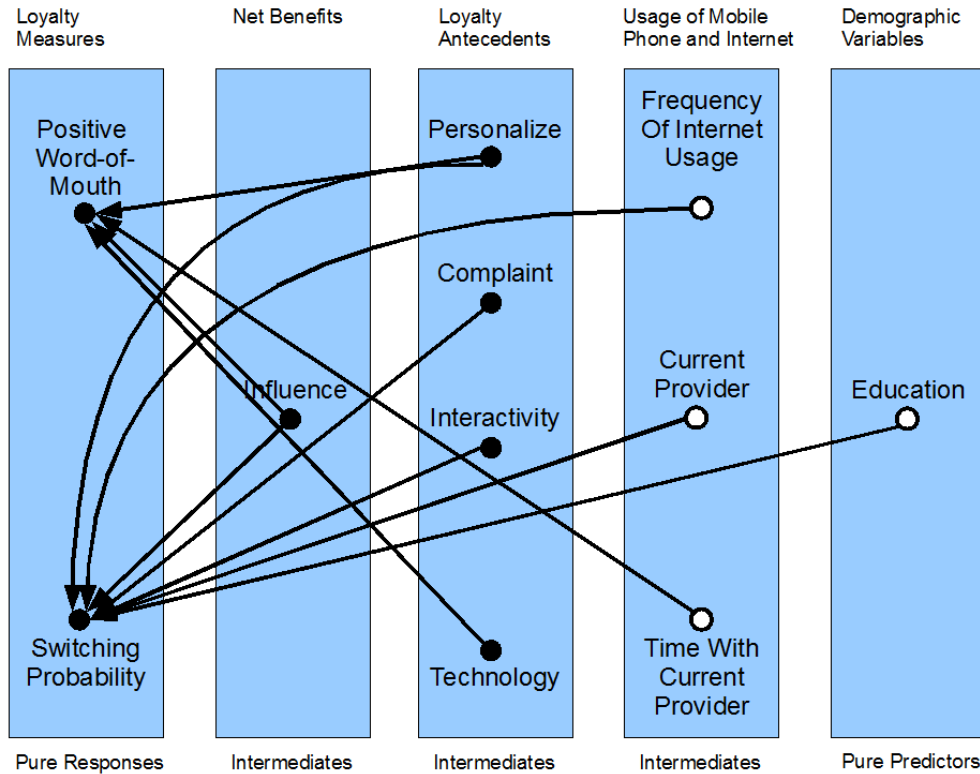

Figure 3: Backward Selection - Result

Interestingly in this sample only one demographic variable - education - seems to show causal relationship with the switching probability. The frequency of Internet usage and the current mobile phone provider are influencing the switching probability, whereas the time staying with this provider influences the willingness to spread word-or-mouth. Only four of the given loyalty antecedents are influencing the loyalty measures. Personalization shows a relationship to both – word-of-mouth and switching probability. The remaining others (complaints, interactivity, and technology) are exclusively influencing the response variable switching probability. The fact, that none of the information quality variables shows a causal relationship in this sample, will be discussed in the conclusions of this paper. Interestingly, the item how the quality of the customer service influences the decision to stay with the mobile service provider does show a relationship with both loyalty measures. The full graphical chain model (see Figure 4) is given, when the relationships between the nodes on the right side influencing the nodes located in the left blocks. Based on this, education shows an indirect relationship with positive word-of-mouth via technology and other nodes.
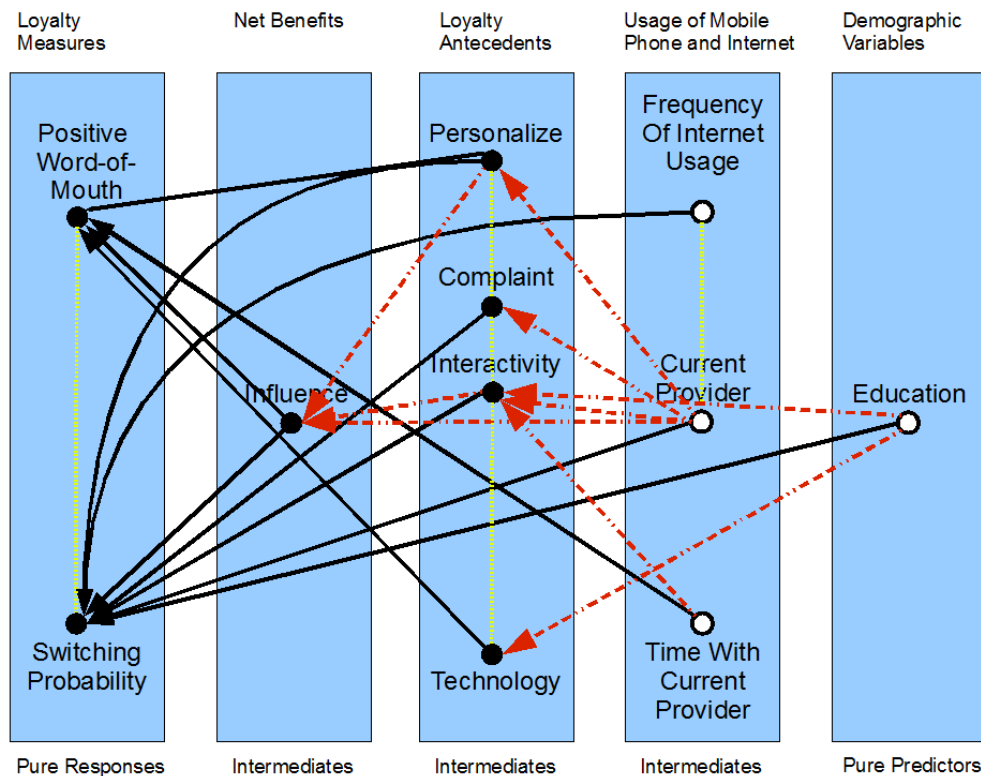
Figure 4: Graphical Chain Model

4   Results, Contribution and Further Research

The data collected in the online survey provided us with interesting insights. Interestingly, not all variables in the blocks are connected to build a whole chain. The low influence of demographic circumstances may lay in the sample itself, which does not meet the target population very well. The results of the survey support the idea that online customer service fosters customer loyalty. In the given industry, which is absolutely price-driven, the influence is not as high as it could be in other industries. In the year 2009 the world was suffering from an economic crisis, many companies declared bankrupt, especially in the financial sector. These external conditions influence the decision of a customer, why to stay with a mobile phone service provider and reduce the importance of attitudinal factors. Costs are important for the customers, because they were suffering from the crisis, too. So in this setting the relative low impact of online customer service on loyalty is not surprising. On the other hand, the sample data provided evidence that behavioral loyalty is high - 52 people in the sample never changed the mobile phone service provider. When assuming that attitude influences behavior, the attitude was not clear expressed in their answers at the survey. The results will on one hand contribute to a deeper understanding of customer support areas and their impact on customer loyalty. This first attempt needs consideration and enhancement.

Concerning further research, a comparison between log file analysis and customer survey could help to present an in-detail picture of differences in attitudes and behavior concerning usage of the customer service offerings. The log file analysis would demonstrate how intense some parts of customer support are used in terms of quantity. This is a possibility to refine the importance of some parts, though it is arguable that log file analysis does not measure the loyalty to the company but only the usage of the support area. Concerning the survey, it should be applied to other industries, especially to customer oriented once. This could be the entertainment industry, tourism or service industry at all. The new insights gained will help to refine and further develop the given model, a validation using a representative sample within another industry is recommended.

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