

2. Customer Reactions to Service Elimination

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This research aims to analyze service elimination with a special focus on churn as a potential outcome of service elimination process. Service elimination has been rather a neglected field among marketing researchers so far with only a few studies describing the characteristic of the service elimination process within firms. Only multi-sector studies include telecommunications in the sample, financial services are in focus of service elimination research. We expect to contribute to service elimination and customer retention literature with combining these fields in our research. Practical relevance is ensured according to our prior qualitative research concluding that there is a rationale behind making the process more efficient, thus reducing customer churn during service elimination.

The paper discusses the results of an experimental design based on scenarios that is focusing on the customer side: 2x2 between subjects experiment based on scenarios. We incorporated two scenarios into our research: economic and psychological costs. The main result of the experiment is that economic cost has stronger effect on customer reactions than psychological cost in case of service elimination. The next phase is going to be a 3x3 between subjects experiment based on scenarios, adding the compensation variable to our current research, as based on the literature compensation has an effect on customer complaints. In the case of a forced migration during service elimination we expect compensation to make customers more satisfied, loyal and committed, thus churn to be lower. The limitation of the current study is that we applied a convenience sampling and did not perform the manipulation checks that we plan to do in the next phase.

Keywords: service elimination, loyalty, churn, telecommunications, experimental design

1. Introduction

Service elimination decision is mainly related to the need of managing demand and leading the customers out of the service that is about to be dropped (Harness – Mackay 1997). Service elimination has strategic importance too: *“product elimination can generate outcome benefits for the organization in four areas: simplification/concentration of management and sales effort; improved product portfolio performance; customer management related; improved physical and financial resource management”* (Harness – Harness 2012, p. 56).

Service elimination is highly relevant in the telecommunication industry, due to the short life-cycles of services, though not yet used as a context for studying service elimination. To our knowledge service elimination studies are focusing on financial services (Argouslidis 2007, Argouslidis – McLean 2003, Argouslidis – Baltas 2007). Service elimination may have many potential outputs affecting satisfaction, loyalty for example. In our study we propose to incorporate churn as a potential output of service elimination which has practical relevance in

telecommunications as well. Based on the Hungarian telecommunications market, the trend is clear: voice subscriptions are strongly declining (Analysis Mason 2014) with basically constant market shares by the three operators (T-Mobile, Telenor and Vodafone).

These trends show the difficulty of acquiring new clients, which is possible only if operators convince clients to change their current operator. Therefore, it is important to examine consumer preferences as accurately as possible.

The other important remark in this context is that operators should no longer focus on individual clients, but rather on High Value Customers (HVC) in the business segment, who have numerous SIM cards. This is perfectly illustrated by the case of MOL as well National Media and Infocommunications Authority (NMIA 2014).

So our conclusion is that even in an oligopolistic market, as in Hungary, because of the declining voice trends, operators have to create new types of portfolios, in which the role of SE will be key: eliminating services enables the redesign of the whole service portfolio.

2. Literature review

The focus of the paper is service elimination (SE), which was studied only by a small group of researchers (Argouslidis 2007, Argouslidis – McLean 2003, Argouslidis – Baltas 2007), although the topic has also relevant managerial implications that will be highlighted later in the paper.

- The importance of the topic of SE can be underlined from two main aspects: There are gaps in academic research in many subfields: our literature review clearly shows the possible research directions, such as customer perspective studies and other sectors than financial services;
- There is a need from companies as well to build a proper SE strategy, as they are currently managed on an ad-hoc basis.

A review article (Avlonitis – Argouslidis 2012), provides an overview of the whole field and can be used to position our research objectives. The authors list all the areas ever studied within SE based on two perspectives: firm and customer perspective. There are three phases of the SE process itself: 1. the pre-elimination phase deals with the causes; 2. the PEDM (product elimination decision-making) process determines the attributes of the elimination process; 3. and the post-elimination phase focuses on the result of the SE.

One important implication of the literature review is that the first two groups are basically covered, what remains relatively unstudied is the post-elimination phase. Second is the customer side, which is rather neglected. This is why we focus on the success measures of SE from the customer side.

The literature review showed that the methodology of the studies is mostly a mixed qualitative-quantitative type. Argouslidis used the combination of qualitative and quantitative research: in-depth interviews and mail survey (Argouslidis – McLean 2003). The article presents qualitative and quantitative empirical evidence on a) the way in which British financial institutions analyze the deviant performance of financial services, which have been identified as candidates for elimination and b) the remedial actions that they consider in order to restore a deviant performance, when possible and feasible.

His later studies in the financial sector (Kent – Argouslidis 2005, Argouslidis 2007) applied similar methodology, exploring formalization in financial institutions' product line pruning decisions, and maintaining a link between service elimination decision-making and structural characteristics of organizational decision-making. Service elimination decision and implementation is also key in the work of Avlonitis (Gounaris et al. 2006).

Our study combines SE with churn, which is usually not adapted to measure the effect of SE on customers. We have chosen churn, because it is a frequent tool in service industries to determine the satisfaction of customers with the current service.

Risselda studies the evolution of churn prediction models (Risseladaet al. 2010) that is important to us, because we have found that one key KPI of measuring the success of SE is the reduced churn rate. That is why we intend to combine churn and SE.

Knox measures the likelihood of churn by measuring the effects of prior complaints, prior purchase and complaint recovery (Knox – Oest 2014). They find that the number of prior complaints increase the probability of churn, whereas complaint recovery leads to less churn. The surprising fact is however that the *“effect of purchase reducing churn is much higher (315 days) than the effect of complaints (8 days)”* (Knox – Oest 2014, p. 48). This means that if the customer does not leave after the first complaint, he/she is expected to stay with the company.

So based on the churn literature, SE can be viewed as a situational factor that modifies customer satisfaction and engagement. Thus the models determining normal customer churn rate needs to be modified in order to assess the effect of SE. In the SE and churn literature we see a huge potential in adding these results that might help to reveal the aspects that make churn modeling different in case of SE.

3. Research questions and methodology

The aim of the research is to analyze service elimination strategies in the context of the telecommunication industry, because it was not studied before and it is ideal to understand the special characteristics of services during elimination.

The research will focus on the following research question: What is the relationship between perceived costs of service elimination and satisfaction, loyalty and churn from the customer's perspective?

The research is based on experimental design. Our aim with the experimental design based on scenarios was to determine the relationship between SE and economic and psychological cost. We used churn as the primary factor to decide whether the elimination was successful. Based on the literature review we prepared a 2x2 between subject experiment based on scenarios (N=163); with independent variables of economic and psychological cost (Homburg et al. 2010).

The independent variables are perceived economic cost and perceived psychological cost as proposed by Homburg (Homburg et al. 2010). Economic cost is incorporated into the scenarios as the cost of the service package for the customer, which is defined as a Dummy variable that takes the value of one if the cost of the offered service package is high (worse offer), and zero if the cost is low (better offer). As Homburg did not specify the exact measure of psychological cost, we defined it as whether the SE is expected for the customer, which means that the role of notice will be emphasized here: if the customer gets a prior notice about the SE, we expect psychological costs to be lower, and their effect to be marginal.

To measure the effects between SE and the dependent variables, we used the valid measures in each field: churn, satisfaction, loyalty, WOM, affective and calculative commitment. The following hypotheses are proposed:

H1: Psychological cost increases churn and WOM, decreases satisfaction, loyalty, and commitment

H2: Economic cost increases churn and WOM, decreases satisfaction, loyalty, and commitment

H3: There will be an interaction effect for psychological and economic costs.

List of dependent variables: churn, satisfaction, loyalty, WOM, affective and calculative commitment. Short description of scenarios:

1. Better service package after elimination; customer receives letter and call notification before the elimination (no economic with no psychological cost).

2. Worse service package after elimination; customer receives letter and call notification before the elimination (economic cost with no psychological cost).
3. Better service package after elimination; customer does not receive call notification before the elimination (no economic cost with psychological cost).
4. Worse service package after elimination; customer does not receive call notification before the elimination (economic cost with psychological cost).

We now briefly introduce the scales used in the experiment. Aksoy et al. (2013) measure the relationship between overall satisfaction and loyalty intentions of mobile telecommunications customer. They found that satisfaction is an important predictor of recommendation/repurchase.

Regarding word of mouth (WOM) we used Anderson's scale (Anderson 1998). He measures the effect of customer satisfaction on loyalty. They used a utility-model of WOM and data from Sweden and the USA. The results show an asymmetric U-shape figure: the highly dissatisfied customers engage in higher WOM than highly satisfied ones, but these are the highest values. They also found that negative communication has greater effect on WOM than positive communication. They suggest that it would be important to understand the differences across product and service categories. Regarding this, our research contributes to the analysis of the effect of service elimination in telecommunications on WOM. We expect WOM to be higher if the customers are not satisfied, which gives the support for H1 and H2 regarding WOM.

Gustafsson et al. (2005) used scales for measuring satisfaction, calculative and affective commitment that we incorporated in our research. They investigate the relationship between customer satisfaction on commitment and customer retention. They define customer satisfaction as the driver of customer retention.

There are two types of commitment: affective and calculative. This is very similar to the categories Homburg defined regarding product elimination: psychological and economic cost (Homburg et al. 2010). As our research has references to Homburg's terminology, we decided to use Gustafsson's scales to measure it, as Homburg has not defined clear categories within these main types.

We used the summary of Pamlies for valid measures regarding loyalty (Pamlies 2012). Furthermore, we use churn as a measure for loyalty with Zeithaml's scales (Zeithaml et al. 1996).

4. Results of the study

General Linear Model (GLM) was used to assess the effect of economic and psychological cost on churn, satisfaction, loyalty and commitment. The results of the differences in means according to the four scenarios are summarized in Table 1.

Psychological cost (0: no cost; 1: there is a cost): The effect of psychological cost on satisfaction and affective commitment is higher when no psychological cost is present as expected. Loyalty, churn and WOM are not significant here. So H1 is partially supported.

Economic cost (0: better service package; 1: worse service package): In case of the economic cost we see that all dependent variables behave as expected based on our hypothesis: economic cost increases churn and WOM, decreases satisfaction, loyalty, and commitment. So H2 is supported.

Table 1 Mean values of dependent variables in the groups based on independent variables

Independent variables		Dependent variable				
		Satisfaction	Loyalty	Churn	WOM	Affective commitment
Psychological cost		F=7,706 sig. 0,006	F=1,468 0,227	F=0,542 sig. 0,463	F=3,236 sig. 0,074	F=7,306 sig. 0,008
	Yes	2,71	2,70	2,87	4,17	2,29
	No	3,14	2,84	2,80	3,88	2,65
Economic cost		F=145,562** *	F=141,885***	F=185,536***	F=10,251 sig. 0,002	F=87,606***
	Yes (worse)	1,97	1,91	3,76	4,26	1,83
	No (better)	4,04	3,77	1,75	3,75	3,23
Economic cost	Psychological cost	F=6,991 sig. 0,009	F=7,08 sig. 0,009	F=7,45 0,007	F=0,358 sig.0,550	F=8,149 sig. 0,005
Yes (worse)	Yes	1,95	2,02	3,61	4,45	1,84
	No	1,98	1,80	3,91	4,07	1,82
No (better)	Yes	3,58	3,47	2,00	3,84	2,82
	No	4,51	4,08	1,49	3,65	3,65

Note: significant means are in bold

Source: own construction based on GLM outputs

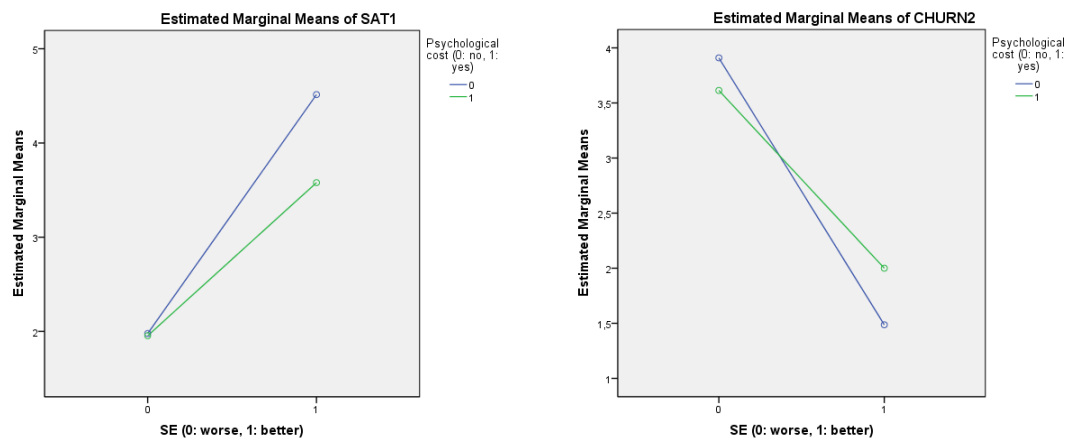
Interaction between economic and psychological cost: The interactions gave surprising results with worse service package and psychological cost: although satisfaction is higher in case of no psychological cost, loyalty is the exact opposite, and churn as well. This means that more customers would leave the company if they receive a worse service package offer, but they are receiving a prior notice compared to not receiving such notice. The relationship

between satisfaction and affective commitment also raises some questions, because psychological costs make them less satisfied, however they are more committed.

The interactions between the better service package and psychological cost are meeting our expectations: customers are more satisfied, loyal and committed with the better service package if they receive a prior notice compared to not receiving one, and also churn is lower. WOM is not significant here. So H3 is partially supported.

The contradictory results are clearly shown also on the plots of satisfaction and churn: satisfaction is higher in case of a better service package offer, where psychological cost decreases satisfaction. Churn is higher if psychological cost is not present and worse service package increases churn as expected (Figure 1).

Figure 1 The effect of economic cost (SE) on satisfaction and churn in connection with psychological cost



Source: own construction based on GLM outputs

The limitation of the current study is that we did not perform the manipulation checks, which should be added before the larger scale experiment to see whether the scenarios measure the same as we intended on different samples. The next phase of our research should be to refine the model based on the experiment questionnaire's results, and use a larger sample to test the relationship between SE and its main success factors. A further question is to include compensation in the test, as the literature suggests differences in case of customer complaints with compensation.

5. Conclusions

The aim of this research is to gain new knowledge in the field of SE, in a way that is useful for practitioners as well. From an academic point of view our literature review showed

that there are just a few papers to compare with, especially in the telecommunication sector. Most studies were done in the product field, within services, especially financial services were analyzed. Only multiple-sector studies include telecommunication operators in the sample, but they do not focus on their main characteristics. This may also give some new insights that could enlighten the SE area from this perspective.

From a managerial perspective we think that the planned research project can solve the current SE-related problems of companies: as SE is usually not dealt on a strategic level at most companies, the whole SE strategy could be improved, and with more focus on the customer during the SE process, customer churn could also be reduced.

Our literature review on customer insights to SE concluded that churn is a common measure of customer satisfaction, however not used in the special case of SE. Practical relevance of the topic is also confirmed by prior in-depth interviews.

Our research including experimental design based on scenarios aims to analyze whether we can generalize these findings in case of SE, and what limitations are not applicable in our combined case of SE and churn prediction.

We used experimental design to determine the effects between SE and its main success-factors, primarily churn, and other variables related to customer reactions (satisfaction, loyalty, WOM and commitment): all our hypotheses are supported, only the worse service package option gave contradictory results in terms of interactions with psychological cost, which means that economic cost has stronger effect on customer reactions than psychological cost in case of service elimination.

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