



Purchasing a general ticket for public transport – A means end approach



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ABSTRACT

Switzerland offers a dense network of public transport means. The Swiss General Ticket (GT) is a popular travel pass, which allows the use of most of the public transport facilities in Switzerland. The buying behavior for public transport general tickets underlies a complex decision process. Public transport customers can deal with the complexity in two ways: either one decides on choice heuristics according to ones rather emotional beliefs or decides systematically based on a rational price comparison. Judgment and decision theory creates the basis for the discussion of heuristic versus systematic decision-making in this paper.

The goal of the study is the explanation of the two consumer typologies when buying a GT along the continuum from more heuristically to systematically made decisions. Drivers for a more heuristically based as opposed to a systematically based decision process, taking into consideration endogenous and exogenous factors, are evaluated.

Literature provides some relevant heuristic and systematic decision factors. Primary research with railway customers in Switzerland (research panel) was conducted using an exploratory, semi-standardized approach using the laddering technique, which helps to identify relevant factors involved in the buying decision process. Functional attributes, which were put into context of higher-level personal values using the means-end approach, were detected. These functional attributes are the ones influencing a buying decision.

Results show that convenience factors have a high influence when it comes to purchasing a season ticket, but price is the crucial factor behind the final purchase decision.

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Introduction

Switzerland is well known for its public transportation system and its dense network of railways. One of the Swiss population's favored travel passes is the Swiss General Ticket (GT), which is valid for one year and gives access to most of the public transport facilities. It provides an integrated public transport service free at the point of use at a price of CHF 5800 for first class and CHF 3'550 for second class per adult in the year 2013. The costs are in the same range as those of using a mi-class car (Simma and Axhausen, 2001). Simma and Axhausen (2001) revealed that although one would think that the ownership of a GT reduces car-usage due to the high costs of a GT, this is not the case. As the decision for a GT is not a substitutive one, it seems that price is not the only reason for GT ownership. Therefore, the question arises which factors drive the decision to purchase a GT.

Switzerland, as along with other European countries, is trying to control environmental problems by stimulating the use of public transportation. Due to the excessive use of private automobiles, urban regions are struggling with air pollution, high noise levels, as well as traffic congestion and parking problems (Apel, 1992; Bamberg and Ajzen, 2003). Thus, it is necessary to detect factors which positively affect public transportation choice and consequently the purchase of a GT. Some authors have already proposed travel demand management measures - including road pricing, traffic restrictions, introduction of new public transport, and the improvement of the service level of public transport (e.g. Pas, 1995; Kitamura et al., 1997; Fujii and Kitamura, 2003). Everett and Watson (1987) stated that most of the travel demand management measures pursue the goal of increasing the service level of public transportation and/or decreasing the service level of private transportation. Service improvement of public transportation could be achieved by four factors: comfort, accessibility, supply and price (Eboli and Mazzulla, 2008).

Due to the well-developed network of public transport in Switzerland, nearly all regions are easily accessible and public

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transport is offered with synchronized timetables. Season tickets, which are basically discounted and based on the average costs for using public transportation, contribute to augmenting the use of public transportation (FitzRoy and Smith, 1999). According to Carbajo (1988) customers who make many trips tend to choose travel passes while customers with fewer trips purchase ordinary tickets. However, the selected option impacts the customers' travel patterns. Having purchased a travel pass, the number of trips might increase as it influences the marginal costs of travel. Doxey (1984) revealed that personal savings is the most important factor when deciding to purchase a travel pass. In addition to cost savings, travel passes offer the convenience of flexible travelling during its period of validity. White (1981) suggested that customers who have regularly purchased season tickets, and are thus used to its convenience, accept price increases and are willing to renew even if the costs are higher.

Although the above-mentioned studies propose that price is the major factor, other influential factors have barely been examined. In this paper we distinguish between instrumental factors (like price), and convenience factors which include factors other than price. In previous studies convenience factors have less often been considered when exploring influential factors on the purchase of season tickets in public transportation. That leads to the research question whether there are drivers, other than price, which influence the positive purchase decision of a GT. While price is a dominating factor when making systematic choices, we assume that convenience factors lead to a more heuristic purchase decision process. Thus, we subsequently intend to identify the factors that could be summarized as convenience factors.

This paper addresses the issue of understanding customers' motivations to purchase a GT and to identify factors other than price, which drive the consumer to a positive purchase decision. From a managerial perspective the understanding of customers' motivations to purchase a GT assists in defining an appropriate marketing strategy.

We implemented an exploratory, semi-standardized approach by using the laddering technique, which helped to identify relevant factors involved in the buying decision process. We detected functional attributes, which were put into the context of higher level personal values using a means-end approach.

The study proceeds as follows: first we give a short overview of relevant buying behavior literature which leads to an outline of the research methodology based on the laddering technique and means-end theory. Consequently, we describe the results and finish with managerial implications.

Theoretical background: consumer decision-making

Consumer decision making

How people behave when facing the challenge of making decisions is a widely discussed question in common literature. The theory of judgment and decision making can be found in the disciplines psychology, sociology, business management, economics, political sciences, medical sciences, engineering, and other fields (Arkes and Hammond, 1988). In the study at hand, the theory of judgment is used in the field of business management to explain the behavior of consumers; specifically, how consumers judge offerings and make buying decisions.

Judgment is "*the mental or intellectual process of forming an opinion or evaluation by discerning and comparing,*" (Merriam-Webster, 2014) meaning the power or ability to decide on the basis of evidence (Arkes and Hammond, 1988). The definition of decision is given by Merriam-Webster's Online Dictionary (2014) as "*the act of settling or terminating... by giving judgment*". A decision is an action taken with the intention to achieve favorable outcomes;

hence, a decision is said to be successful if it leads to as satisfying outcomes as could have been reached with other actions (Yates, 1990). These definitions suggest that there is no big difference between judgment and decision-making in an ordinary discourse.

Although there are studies about judgment and decision making that go all the way back to 1918 (Thorndike, 1918; Edwards, 1954; Hammond, 1955), the systematic empirical study of judgment and decision making began in the 1960ies. This was especially the case in the field of cognitive psychology concentrating on motivational research. Decision analysis focuses on a priori decomposition, meaning separating the decision process into several components before the decision is made (Arkes and Hammond, 1988). Therefore, consumers have to fulfill a multifaceted task when making buying decisions, as they are often faced with several alternatives and a large amount of product attributes which have to be evaluated (Solomon, 2013). Consumer decision-making models explain the problem solving process which starts with the recognition of a need. Consequently, in order to solve the problem, the customer has to pass through several steps: information search, alternative evaluation, purchase and post-purchase evaluation (Howard and Sheth, 1969; Engel et al., 1973). The consumer has well-defined preferences and aims at maximizing utility. Thus, he or she chooses the option which maximizes his or her received value (Bettman et al., 1998).

Consumers are confronted with difficult value trade-offs, such as price versus convenience (Bettman et al., 1991). In this case, consumers either apply a heuristic or a systematic decision process (Gigerenzer and Gaissmaier, 2011; Doyle, 1998). A systematic decision-making process focuses on the selection between alternatives which show the preferences individuals have when making a common decision. It is postulated that the individual disposes of all available information and applies rules of logic and statistics (Luce and Raiffa, 1957; Raiffa, 1968; Kahneman et al., 1982; Doyle, 1998). A heuristic decision maker, on the other hand, ignores part of the available information and uses fewer resources to make a decision. Heuristic decision making strategies are less complex and, as only little information is needed, decisions are made faster. The heuristic perspective is based on divergences from systematic decision behavior, and is regarded as a cognitive approach which includes irrational and implicit factors and roles (Kahneman and Shane 2001; Kahneman and Frederick, 2002; Shah, 2008). While systematic decision-making refers to rational reasoning, heuristic decision-making is linked to error-prone intuitions or irrationality (Gigerenzer and Gaissmaier, 2011).

According to Simon rational choice models require "full information of all relevant alternatives as well as the consequences, probabilities, and a predictable world without surprises" (Simon, 1979, p. 500). Bettman (1979) argued that the rational choice theory is insufficient for a deep understanding of how consumers behave when making a decision. The individual's brain is not able to process all the available information and thus applies specific decision rules to evaluate product alternatives. Reisen et al. (2008) found that in the early stages of the decision making process, individuals tend to use heuristic decision making strategies. In later stages, until the end of the process, alternatives are evaluated more carefully. During this phase consumers trade off price against other factors and finally make their purchase decision. Hence, it could be assumed that the instrumental factor price dominates systematic decisions, whereas other product attributes are prevailing factors when making heuristic choices.

Travel passes in public transportation

Season tickets or travel passes allow the customers the use of an entire network of different means of public transport. Hence, season tickets are multi-modal in nature and cover the whole

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