Marketing Approaches for Value Co-Creation in City Public Transport

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Abstract
Research in urban mobility shows that city public transport is closely related to people’s life and business activities in urban environments in order to enable and support them. The paper is focused on the opportunities of marketing solutions for the improvement of city public transport. Both conventional and modern marketing approaches related to the concept of service are discussed. We emphasize on the opportunities provided by Service-Dominant (S-D) logic, which promotes the participation of the customers and value co-creation with them, as the most outstanding modern approach on service marketing. In order to identify and propose marketing solutions for city public transport we use the scenario method and present a casual day of a family in city of Vilnius. The results show that S-D logic can provide a new basis for the improvement of city public transport that provides solutions based on the co-creation of value. Thus, marketing solutions are co-created with the customer and provide added value and more satisfaction for customers’ needs.

Keywords: City Public Transport, Marketing, Customer needs, S-D logic, Value co-creation.

Introduction
Public transport nowadays takes very important place in people daily life, especially in cities. With the changing attitude of modern societies on lifestyle, values and services, public transport must take into account the importance of peoples’ life in cities; most citizens live in cities and most economic activity takes place in those areas. Public transport provides access to essential services like education, health and employment. It is a catalyst for attracting economic regeneration to deprived areas and maintains the prosperous ones as well. Urban transport is one of the key factors making cities vibrant, dynamic environments with ability to feel free in mobility.

Today marketing of public transport (PT) offers many well known solutions, such as advertising, distribution, promotion, branding, advertising, and others. All these solutions derive from the application of the ‘conventional’ marketing science that is based on the concepts of marketing mix, segmentation, targeting, positioning and others. Public transport companies are keeping these approaches since long time ago, because they know them, are used to them and have
already tested their results; they consider these strategies as trusted and certified. However, such conventional marketing approaches are today under the criticism that they are too much ‘business-oriented’ and ‘sales-driven’ or ‘profit driven’. With the development of new approaches and a new mentality towards customer orientation in marketing and in business management in general, it becomes clear, that conventional marketing approaches tend to overlook the new aspects of customer orientation. New approaches to marketing science are focusing more genuinely to the customer and how empower her satisfy her needs in the best way, by creating value with the participation of the customer and encouraging value co-creation with the customer. Many cities, especially in countries undergoing rapid economic development, face increasing difficulties in providing good quality PT for their citizens. Ageing vehicle fleets and deteriorating PT infrastructure are becoming more and more common. According the SPUTNIC project (2007), public transport use has decreased significantly over the last 15 years. On the contrary, private car ownership has exploded, which resulted increasing congestion, pollution and parking problems. Increasing motorization rates of the number of people, with no alternatives of using public transport, is continuously decreasing in all European cities, and in a lot of Western European cities even among motorized users already dominate PT ridership. Successful marketing solutions can play a major role in stopping or even reversing the trend of declining passenger numbers. What is more, integrated marketing strategies can even significantly increase PT patronage and/or lead to a better capacity utilization of the existing PT network. Marketing is thus a visionary instrument, essential to the sustainability and development of the PT market. However, public transport authorities seem to disregard the importance of marketing in this effort and sometimes they seem to show a limited interest in customer satisfaction. For example, many PT systems have operated for a long time with little or inaccurate knowledge of the needs of customers. However, many PT operators are noticing and understanding now that it is not enough to simply provide a transport offer, but it is also necessary to see each of their customers as a single individual. PT companies need to be transformed from simple providers of transport offers to real service providers that provide benefit and added value to their customers. Modern approaches can provide a fresh view, new ideas and significant benefits. Especially S-D logic (Vargo and Lusch, 2004; 2008), based on the key concept of value co-creation and focusing on the individual customer, could provide helpful input for the design and organization of the public transport service. According to this approach, the customer, who is always a co-creator of value for her own value-in-use, must be seen in relational, rather than in transactional aspects. The contract dialogue is based on managing the value network for resource integration and process orientation of customer-oriented issues, not only profit-based strategies (Karpen and Bove, 2008). This paper focuses on the need to reconsider well known approaches and to explore the potential of new ideas and approached of marketing on public transport. The main objective is to propose new marketing solutions, based on Service-Dominant (S-D) logic for the co-creation of value with the customer. The rest of the paper is organised as such: in section 2 we provide a brief review of the literature on marketing approaches. In section 3 we present our methodology. In section 4 we describe in brief the scenario of a casual day of a family in city of.
Vilnius, as a basis for the application of the concepts of S-D logic in city public transportation. Another two scenarios, referring to elderly and tourists and suggest the solutions, which could be made, according the new approach.

**Literature review**

In this section we present in brief the concept of 'conventional marketing' (Kotler and Armstrong (2008), Ries and Trout (1992), Bishop (2002), Pride and Ferrel (1995), Boone (2005), etc.), such as the concepts found in the best-selling marketing textbooks, and 'modern marketing', such as S-D logic, relationship marketing and post-modern marketing, which wish to refresh and enrich the academic and scientific field of marketing with new input and insights.

'Conventional marketing’ focuses on the most fundamental requirement of companies to identify customers, identify their needs and preferences, analyze their attitudes, influence their purchasing decisions and persuade them to buy products and serviced from the company - rather than a competitor. Every company must serve customer needs and create customer satisfaction to succeed. However, traditional marketing, is company-focused and product-based. It intends only to increase the visibility of the company and its brand. The message conveyed to the customer is company-controlled and motivated. The company becomes the active participant, while the consumer fades into the inactive and passive zone. Conventional marketing, say many market analysts (e.g. Vargo and Lusch (2004), Kotler and Armstrong (2008), Gummesson (2008), Grönroos (1994), Rytel (2010), Brown (1992)), fails to work in today's world. The brand recall is very minimal as the customer is exposed to a variety of brands. Moreover, as every other brand is as good as its competitor, there is no particular reason for the consumer to opt for a particular brand (Jeff Blackwell).

Modern approaches, such as post-modern marketing (Firat and Venkatesh (1995), Brown (1992)), relationship marketing (Gummesson (2008), Grönroos (1994)) and S-D logic (Vargo and Lusch 2004; 2008) are focused on the customer needs and wants. They are in general consumer-focused and seeking to serve to consumer's interests. S-D logic, in particular, emphasized the benefit (service) for the customer considers that value is always co-created with the contribution of the customer. S-D logic considers service as a process of using ones competences and resources for the benefit of another party, distinguishes between direct and indirect (i.e. through goods) service provision, rather than between tangible goods and intangible services, emphasizes on value creation, rather than production processes, focuses on knowledge and skills as resources of value and recognizes the primary role of the customer (as individual consumer) in the value creation process. S-D logic is reflected on ten foundation premises (FPs) (Vargo and Lusch, 2004; Vargo and Lusch, 2004). S-D logic argues that value can only be created with and determined by the user in the 'consumption' process and through use or what is referred to as value-in-use. Thus, it occurs at the intersection of the offerer and the customer over time: either in direct interaction or mediated by a good. According to post modern approaches (Brown (1992), Rytel (2010), Thompson and Troester 2002), marketing should be treated as activity that conditions transformation of the society's lifestyle and consumption and affects many aspects of social life: from formation of personal needs and senses down to the management of the state’s image, as it is in the post-modern consumer society. Shifts of the post-modern era reveal the importance of emotional factors in marketing and its characteristics of shaping and
satisfying the needs and market views of contemporary consumers, applying new approaches to the management of consumers’ buying/consuming decisions. Relationship marketing (Singh (2003), Gummersson (2008), Bishop (2002), Kirsti Lindber-Repo (2004)) advocates the need for long-term relationships with the customers, as a prerequisite for the creation of value and profit. What is more, for long-term survival and growth, companies need to build, develop and maintain a relationship with their customers, as it is the main purpose for relationship marketing.

Methodology
Taken the purpose of this paper, that is to explore the potential of modern marketing approaches for the development of innovative marketing solutions for the improvement of city public transport, we have chosen to apply the qualitative scenario method. Our scenarios are stories that describe the idiosyncratic and contextual needs of different people that make use of the city public transport. This way, we can approach in a satisfactory way, provide a general description and detect the most considerable problems, needs and solutions. Elzen et. al. (2002) did a similar research about the traffic and transport domain; they selected socio-technical scenarios to discover the problem and give clear guidance on how to realize a specific end situation. The scenario method has become rather widespread over the last few decades. The typical scenario approach involves a description of two or more scenarios, designed to compare and examine alternative futures. According to Stead and Banister (2003), scenario building allows new perspectives to be brought to bear on these issues. They suggest that exploratory scenarios are a tool for the qualitative analysis of possible future trends and developments. As such, they prepare the ground and provide the context for other techniques, including quantitative methods, that will analyze further the initial findings and assumptions. According to Ringland (2006), a good set of scenarios are plausible in that they can be ‘imagined’ in terms of current, visible, events or trends that might cause them to happen; the set should not only include a visionary (or normative) scenario, but also some scenarios that challenge the organization. Börjeson et. al.(2005) created a typology of scenario techniques based on Amara’s classification of different types of futures – the ‘probable future’, the ‘possible future’ and the ‘preferable future’. They distinguish three main categories of scenario studies, according to the principal questions: ‘what will happen?’, ‘what can happen?’ and ‘how can a specific target be reached?’.

For the application of the concepts of S-D logic in city public transport we use the ontological framework provided by Fragidis and Tarabanis (2011), that derives basically from the 10 foundational premises of S-D logic and the literature of S-D logic, in general. Their ontological model of S-D logic involves the following concepts: Actor (as a generalization of Customer and Provider), Service (as a generalization of Direct Service and Indirect Service), Value Co-creation (as a generalization of Co-production Integration and Customisation), Value (as a generalization of Knowledge and Experience - and other concepts possibly), Resource (as a generalization of Operant Resource and Operand Resource), Context (as a generalization of Situational Context and Idiosyncratic Context).
In this section we provide an S-D logic-based approach for the development of new marketing solutions in public transport. In our research we use three scenarios, for three different situations. The scenarios refer to: a) a typical four-member family, that has its mobility needs as a part of the everyday life of it members, b) a elderly person, who has mobility problems and need to move for medical purpioses and social needs, and c) a couple of tourists, that need to move in the city to visit attractions and have entertainment. In this paper we will present only the family scenario, for reasons of economy of space.

The analysis of these three scenarios is a good example of how S-D logic can be adapted to the real situation and explain a value co-creation in a parallel. Satisfying both sides – the organization of Vilnius city public transport and the passengers – creates value, which is well recognized by both the consumer and organization.

The urban environment in set in Vilnius, the capital of the Republic of Lithuania and the largest administrative heart with all major political, economic, social and cultural centers. Current area of Vilnius is about 400 square km. Buildings cover 29.1% of the city and the remaining area is prevailed with the greenery (68.8%) and waters (2.1%). The city has approximately 554,400 inhabitants (Vilnius County 847,754). Furthermore, every day Vilnius City is visited by 150 thousand people who work there or use various services. Therefore, one of the biggest problems in Vilnius City is the problem of transportation. More than a half of Vilnius residents indicated this problem as a major one. The city of Vilnius is served by two types of
public transport - buses and trolleybuses through the city center and to nearby outlaying areas. A number of years have been spent discussing how to solve PT problem, what new means of public transportation should be introduced. Traditional approaches were trying to adapt, but main problems still exist. That is why new approaches should be taken on consideration.

Value Co-Creation in Public Transport for the Jonaiciai family

‘Are you kidding? Is it tomorrow, not the next week?’- wife Marija told her husband Jonas, when he showed invitations to the meeting of his relatives. It is true, tomorrow evening all family will go to the restaurant to meet their relatives. ‘If so, then tomorrow I desperately need a car, have a lot of things to do, besides, and then I could pick up the children. Doviles’ teacher wanted to talk to me, and Marius has football training tomorrow.’ Usually Jonas is going to his job with his car, but sometimes, because they have only one, he shares it with Marija. ‘It is even better, because tomorrow I leave in the morning, and at this time there are huge traffic jams to the city centre direction. Besides, I will have time to read my newspaper, finally.’ Suddenly the phone of Jonas rang, his oldest son Vytautas was calling him: ‘Yes?’, ‘Hi dad, look, the concert I was being with my friends of university took a little bit longer than I expected, so I missed the last bus. Can you pick me up from Siemens arena?’, ‘Well ok, I am coming.’

In the morning Marija took her children Marius and Dovilė to the school and then went to her job in a hospital. Unfortunately, as Jonas was telling, this morning she had a big traffic jam and got late to her work a little bit. But she was not the only one, who late, most of the workers had difficulties on the road this morning. On the main road was an incident - two cars crashed, nobody was injured, but the traffic was stopped. ‘Good for busses, they have special lines for them on the road, they get to the point much earlier! I even would go with a bus. The only problem is that I have to change the bus, but bus stops without a shelter is a disaster, besides, usually they are so crowded at this time..’ ‘Yes, that’s true, - said colleague, - I also like taking public transport. Of course, I live close to the hospital, so I don’t need any transport, but to go to the city centre, to old town, I take public transport’.

After work, Marija had to go to the shop and take her children home. Her hairdresser called: ‘Hi, Marija, how are you, do you remember that today at 5 PM you reserved a meeting, will you come?’, ‘Oh, yes, sure, I will, just need to lift my children and then will come, in half an hour will be at your office.’ ‘Well, so I am waiting, see you soon’. Marija took her children home and quickly went to the hairdressers’ office, which was in the city centre. When she arrived, she realised that there is no place for parking. No wonder, city centre is always full of cars. Marija took few circles till found a place to park the car. When she came home, her husband Jonas was already at home. ‘You know, darling, I will not go again to the hairdresser with a car. There are so many cars in the city centre and the streets are so narrow. Besides, it took me 10 minutes to find a place, where to park the car; what is more, do you know that the parking tickets got so much more expensive? And still had to go even further than from the bus stop I would. My hairdresser didn’t like that I got late.’ ‘Yes, I know. Sometimes the car makes much more problems than going with other transport. Good for Vytautas, that he is using bicycle.’ ‘Yes, dad, it
is really comfortable, especially when the weather is good, but sometimes, because I get tired or the day is not good for riding, for example, it rains, I get so wet. I wish then be able to use something else, but I already have a bicycle.’

All the family in the evening prepared to go to the restaurant to the meeting of the relatives. They decided to go with a public transport to feel free and relax. The evening was very pleasant and relaxing. All five of them needed to go home now. Jonas called to the taxi service: ‘Sorry, Mr., but we have no cars for more than four people; you should call to another company.’ Especially tonight, there was no car, suitable for five people. Finally Jonas took two taxis to go home with his family. ‘What nonsense, if public transport would work at night, it would be so nice. There would be no such troubles, like we have to face now.’ ‘That’s true; unfortunately, it is too late for a public transport. We left the restaurant too late.’

The main problem of family is urban mobility, so that they can perform their everyday activities as they wish, without wasting time, spending a lot of money and with safety and comfort. A second car seems sometimes to be the solution to their problems. It could be true, because the public transport service is not frequent, does not serve their suburb timely and stops running early in the night, making more difficult and costly to move for leisure and entertainment. However, they understand that using a car in an urban environment is a nuisance as well, as it suffers from certain drawbacks, such as increased cost, wasting time and money for parking and being stuck in the traffic jam, and polluting the environment. Of course the low quality of the public transport services disappoints the members of the family.

The Concept of Service

From the public transport organisation’s perspective, direct service refers to the mobility of citizens in urban environments, which is a fundamental prerequisite for a high quality of life, as it provides access to work, housing, education, health and leisure. Here is included regular transportation service (e.g. regular lines), specialized transportation service (e.g. mini-buses or shuttle buses for servicing special needs, etc.) and intermodal transportation service (connection with other kinds of transportation). Indirect service can include any kind of service and support provided by the PTO that supports the direct service (mobility) and is used to add value for the customer. Some examples of indirect service are the following: a) information provided either online or in print (e.g. website, specialized applications, call centers, leaflets, etc.), b) information and directions provided by personnel – or other passengers, c) applications that provide value adding information (e.g. information on board with smart phones, route planners, etc.), d) applications that make easier public transportation (e.g. electronic tickets, etc.), e) facilities in the vehicle and at the stations for special categories of passengers (e.g. for the elderly or physically handicapped persons, for cyclists, for people with carriages, etc.), f) safety and security services on the vehicle and at the stations, h) luggage deposit services, i) ticketing services (issuing and controlling), k) cleaning services.

From the customer’s point of view, the direct public transport service for the family is mobility in a punctual, comfortable and safe way. Mobility in an urban environment is a prerequisite for performing other activities, such as going to work or going home, going to a variety of
everyday activities (e.g. education, health, shopping, etc.), going for entertainment and for leisure, etc. Indirect service is related to anything that supports and adds value to the activities that people pursue by using public transport. For Jonas, for example, indirect service includes comfort to read his newspaper and space to work on his laptop (plugging to the power network would be a dream as well).

The Concept of Resources

Resource refers to any kind of input used by Actors in value co-creation processes and are classified in Operant and Operand Resources. Operand resources are any kind of material resources and infrastructure that are used to create value. They include: vehicles, routes, stations, information systems and applications that coordinate the transportation or provide information about it, applications that facilitate using public transport (e.g. electronic ticketing infrastructures), special facilities on the vehicles or at stations (e.g. signalling facilities for blind people, platforms for the elderly or people with physical disadvantages, etc.), fuels, materials and equipment used for the maintenance of the infrastructures, monetary resources for funding the different investment programmes and the business activities in general. Operant resources are workers in the public transport company, that are skilful and helpful (drivers, technicians, helpdesk personnel, administrative staff, etc.), any kind information (in any form) provided to the passengers (about routes, the timetable, prices, etc.), provided it is accurate and it is provided in a timely way, the opinion (information) from other, the customers themselves, consultants and other specialized companies that support the public transport organisations in their operation. Also in situation of city Vilnius should be mentioned the lack of certain resources, such as the lack of shelters in bus stops, which makes waiting for the bus a problem.

The Concept of Value

In S-D logic business firms can make only value propositions, while value is always co-created as the result of the collaboration between the customer and the business firm. The value proposition of the public transport organisation for the family is related to the following: a) the line that serves their neighbourhood, b) the network of public transport in Vilnius, c) the new buses that operate in their line, those provide increased safety and comfort, d) the different kinds of information systems that provide information about the network and the routes, the arrivals, etc., e) the reduced prices for students. However, the value in public transport services from the perspective of the family is a little different. Value for the family in this scenario means:

a) Mobility in the city of Vilnius.
b) Comfort. It is required both by (father), who finds the opportunity to read his newspaper or do some work, and (mother), who is usually exhausted when she returns home. Despite the fact that the buses are new, they are usually overcrowded and comfort is usually lacking. In addition, the lack of shelter in their bus stop is a big problem.
c) Safety. It is important for the children and (mother) is constantly anxious about it in overcrowded buses. Nonetheless, the new buses provide increased safety on the road, but they do not have areas and facilities for children.
d) Accuracy. It is required especially by (father) and (son), who need to be punctual.
e) Frequency. It is required especially by (mother), because she changes buses and sometimes she delays in the preparation of the children to go to school.
f) Operation at night or customized transport services. For example, if there was a night bus or there was the opportunity of making reservation of a mini-bus that serves special needs of the people, they wouldn’t need to hire two taxis at night and paying a fortune.
g) Carrying on bicycles. This would allow (son) to take the bicycle with him at the University or the city centre, which means increased and improved mobility and more fun.
i) Change bus with the same ticket. This is needed by (mother), who changes 3 buses in order to take the children to the school and then go to her job. For her, the cost of using public transport is too high.

Low cost. It is important for a five-member family, as the transportation cost is very big for them.

The Concept of Value co-creation
The existing level of value co-creation is limited. Value co-creation takes place in the following ways:
a) The family calculated the time they need to go to the bus stop, the frequency of the buses (according to the notices in the bus station) and the time they need to go to different places according to the different traffic conditions in the day in order to reduce the time they wait at the bus station. This way, they use their knowledge to improve the quality of the public transport service.
b) They use the online route planner in order to take information for new destinations and check the timetable according to different traffic conditions.
c) Monthly tickets favour the interest of both the organisation and the passenger and in parallel contribute in lower traffic by not using cars and reduced pollution.

More opportunities for value co-creation would be the following: a) customized transport services, which allows making a reservation of a vehicle (e.g. mini van) for a certain customized route or for late transport service, b) advice from peers, such as an online forum that allows people with the same interests or living in the same area to exchange information for their needs and provide advice to each other, c) motives to use public transport at low traffic periods (e.g. lower fares), d) lockers for bicycles at bus stations, which allows to take the bicycle until the bus station, without being afraid of having it stolen. e) carrying on bicycles, which increases the mobility and improves the mood of people, f) plugs to connect laptops, which allows people to work on board, g) free internet on board, i) free newspapers on board, or video for the entertainment of the passengers, j) ‘family tickets’ combined with certain economic or other benefits, would motivate the whole family move together, k) mobile phone services that provided a variety of services and value added (for example, a service that indicates on the map the closest station from the point you are staying now and the buses that pass by there).

Conclusions
This work is focused on the area of public transport, by finding marketing solutions based on the concepts of S-D logic, which provides helpful direction for the design and organisation of marketing public
transport service. The customer, who is always a creator of value for his or her own value-in-use, must be seen in relational, rather than in transactional aspects. Quality improvement should be focused on such areas as customer empowerment and participation, value co-creation, management of service operations and the use of service technology. Urban transport companies should adapt their customers’ wants by taking into account their everyday activities and special needs and by letting them to co-create value in their personal way (e.g. in the family scenario, by reading on board, by taking bicycle on board etc.). Customers’ participation could be encouraged by creating blogs and forums, where people could discuss their problems, write the best options and communicate with each other, in this way by using information co-creating value. Encouraging the participation of the customers can expand the possibilities of the service and provide value co-creation. It helps to identify the needs much easier and satisfy the customers by offering value propositions, what they really want. Customers’ participation in the process of creating and maintaining services influences effectiveness, quality, quantity of the employees work, feedback and value creation in the better way.

Operant resources, in the form of skilled professional employees, must be seen to represent the fundamental source of competitive advantage. Inter-organizational network operations should be designed such that resource integration becomes the key driver of value facilitation; the dialogue should be based on governing the value network for integration and process orientation of the operand resources. Performance measurement should be based on auditing the quality standards of these operations-related concerns.

Experimentation with scenarios showed that there is a significant potential of applying S-D logic in a field of public transport, as it is based on providing the service and satisfying customers’ needs. S-D logic can help in modernization of city public transport, but for getting better, more trustful results, further research analysis is needed, such as by adapting the scenarios to real life situations with the use of interviews with customers and discussions with professionals, by the development of case studies of companies that apply systematically or spontaneously the principles of S-D logic, etc. These ideas will provide the basis for future research.

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