

Leonardo da Vinci Transfer of Innovation Project

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E-cito car-sharing

Teaching Notes

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The case is suitable for undergraduates, graduates and executives. Although the depth of analysis and initial theoretical preparation might differ for different target groups, generally the case is understandable for any level. Working in class with the case can take 80 minutes.

Macro environment analysis

Students must understand the importance of macro environment analysis. Besides economic situation, for which the figures in Lithuania for the 2009-2010 are presented in table 1., infrastructural, political and cultural situation is very important.

Table 1. Selected economic indicators of situation 2009-2010 in Lithuania

	2008	2009	2010
Gross domestic product based on purchasing-power-parity (PPP) per capita GDP in international dollars	19,212.09	16,626.53	17,333.18
Inflation, average consumer prices in %	11.14	4.16	1.19
Unemployment rate in %	5.8	13.7	17.8
Population of Lithuania	3 358 000	3 339 000	3 287 000
Population of Vilnius	544,206	546,733	560,200
Distribution of famili income Gini index		35.5 (88 th country in the world)	
Average net income per person in LTL per month	1620	1602	1554
Disposable income per member of a family in LTL per month	1209	1020	1010

Source: World bank, Lithuanian department of statistics, CIA Factbook

The data from previous car sharing experience shows that the major individual car sharing segment is middle/upper income class with good education. Middle age could be approx.30. No difference in gender, marital status, home-owners vs. renters¹. Usage occasions or attitude towards car sharing can differentiate sub segments.

It is important to understand that in Lithuania statistically reported average income (1602 Litas in 2009) is actually not considered to be medium, it is rather low. In conversations and in peoples' mind medium income would be somewhere between 3000-4000 Litas per working individual. Income inequality is high in Lithuania. Wage distribution does not

¹ Brook, D. Carsharing – start up issues and new operational models. Transportation Research Board, Jan., 2004.

demonstrate all income inequality, as due to imperfect tax system there are a number of over ways to receive income with more favourable taxation norms. Rich people are not involved in car sharing since they care more about convenience than costs. Low income segment usually does not have so many occasions to use car sharing service, is easier to convince, or is too price sensitive.

The case includes short mentions of benefits for the community and the importance of infrastructure for developing car sharing business. Students must catch these short cues and develop them further. There are a number of examples in the world when car sharing operators benefit heavily from municipality donations (direct or in the form of tax reductions, free parking places, etc.). If the car sharing service can develop connections to local government and start business with their support, that might become a good cornerstone for a start up business.

Infrastructure is also very important. Car sharing service badly operates in cities with very scattered living/business areas and poor public transport. It is a good indicator of future success, if business/working centres and living areas are clustered separately. In this case it is easier to estimate where the parking places should be, what should be car density and flow. One can consider parking places besides newly build middle-class suburbia and besides major business centres and universities.

Vilnius itself is somewhere on the border between suitable and unsuitable infrastructure. It is a good public connection between older and more centred suburbia. Connection with newly build (10-20 years old) districts of cottages and small block houses, private houses is much poorer. Owning a car for the dwellers becomes „must be“; it is quite usual that there is one car per one driving-able person in a family. City centre and business/working centres are concentrated, being a good indicator for car sharing. Parking spaces are limited, but not non-existent in city centre. They cost 2-8 litas (0,7 – 1,2 Euro) per hour, which is a big amount for some segments, especially if one needs to park the entire day and every day, however, is a very little amount for other segments, especially if parked for a short time. Many offices have their parking spaces reserved, if not for all employees, then at least for part of them.

The climate in Lithuania is not very suitable for bicycles and motorbikes. They are more and more widely used between May-September; however, other months are too cold, with heavy rain and snow. There can be heavy rains in summer as well. All in all, public transport and cars dominate as transportation mode.

Cultural aspect is very tricky. The relationship with Lithuanian and his/her car is somewhat comic. Car is considered to be “must have”; it usually comes on top of the most important purchases list. People would buy cars as soon as they can afford, and as good, as they can afford. As income inequality is high, you see the variety of cars on the streets – from 28 year old Ford which costs 150 Euro to the newest models of BMW, Porsche, Lexus or more exclusive brands. In the beginning of “product” launch “e-Cito” started positioning the service as alternative to a car (the experience proved to be successful in many other world cities). Very soon managers realized that not owning an own car is nothing attracting (rather scaring) for Lithuanian individual. Rather, they focused on positioning “e-Cito” as an alternative to a second car or a good choice in situations when your own car is absent (on repair, lend, sold and looking for a new car).

Speaking about business customers, economic cycle (crisis) had a double impact on “e-Cito”. From one hand, business started calculating costs, and leveraging expenses became very important for them. As it was easy to demonstrate that for a company which purchases a car for 5 years it is remarkably more beneficial to use “e-Cito” for every day employees’ drives, they soon caught several big clients. On the other hand, preceding economical boom resulted in a heavy car purchase for many companies who had good turnovers and profits. They were investing in car parks paying the entire amount or leasing them for 3-5 years. Thus, at the moment of car sharing launch many potential clients had heavy anchors of owned cars to use until the day of write off (Lithuanian law allows to write off cars within 5 years and sell for the residual price). The potential was quite huge in the upcoming 3-5 years, but at the moment of launch many companies had financial reasons not use car sharing.

Innovation diffusion

The case can be analysed using innovations diffusion model of Rogers (figure 1), innovation diffusions curve (figure 2) and Bass innovation diffusion model (figure 3).

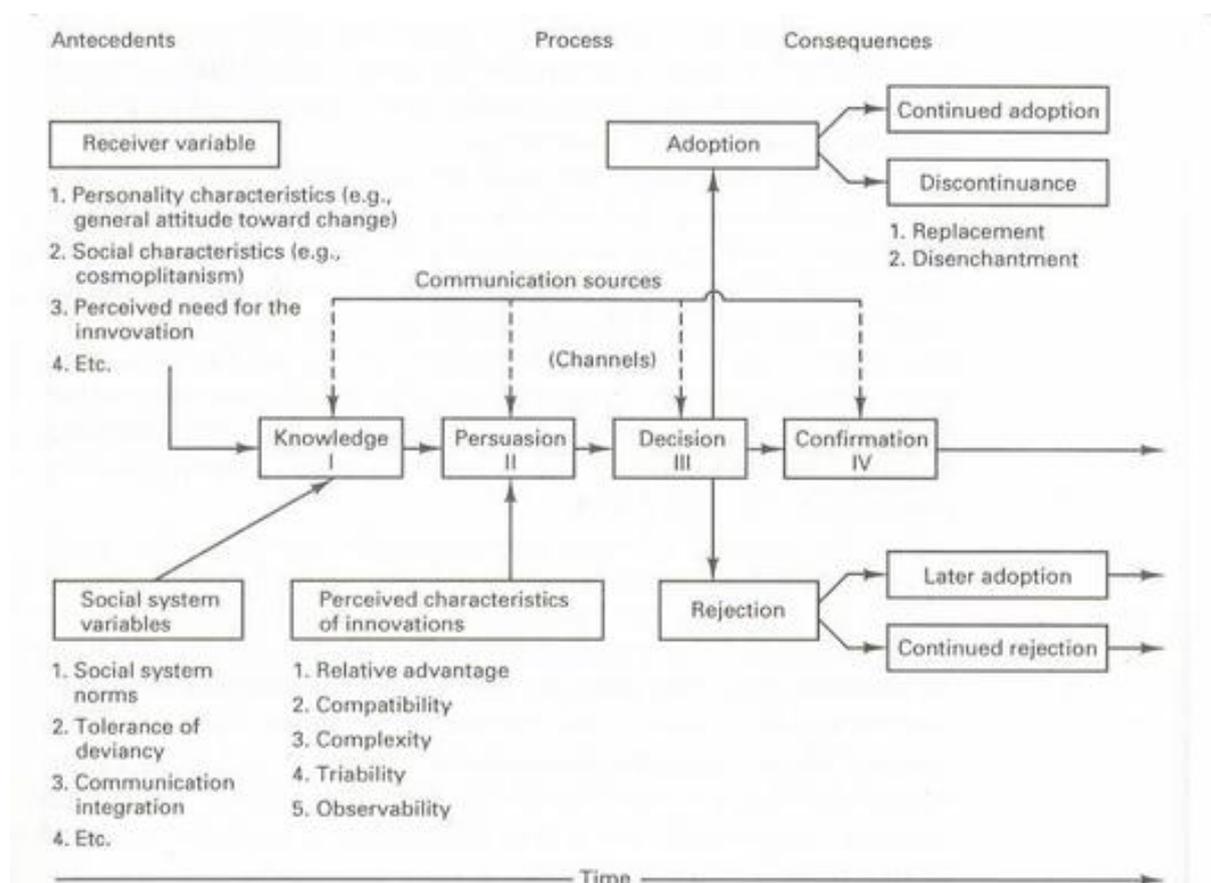


Figure 1. Commucation model of innovatons diffusion²

² Rogers, E. M. (1995). *Diffusions of Innovations*. New York: The Free Press.

For an innovation to diffuse rapidly, it has to have relative advantage, be triable, visible, compatible with previous norms, and not complex. There should be a real need for an innovation. Previous users' experience with something similar would be helpful.

Some characteristics of "e-Cito" were in line with desired (visible), some – somewhere on the border. Relative advantage if compared to owned car or public transport could be found from one stand point, but was nil from the other stand point. Usage of "e-Cito" in many cases was cheaper, but did the user really come to the point of comparing own car and sharing costs? It was more convenient than public transport, but only if the user was living/working close to parking locations. Costs were much for public transport. Own car had convenience advantage. For sure, there are many advantages for society, but who pays for public wealth? Actually, "e-Cito" was advantageous only for particular user segments in particular situations. Identifying and targeting these segments with a clear message for them became the major challenge. "e-Cito" was not very much compatible with current norms. Although it did not contradict directly with clearly expressible norms, the majority of Lithuanians would not consider selling a car in exchange for "e-Cito". Although the service model seemed to be rather simple: register, take a car, and go, for most of interviewed respondents it seemed to be very complicated starting from registration procedure which included personal data provision and screening, signing the agreement and finishing with timely parking. The service is tryable, as it is possible to give 2 hour duration cards for potential users to drive cost-free, however, "e-Cito" did not use this opportunity sufficiently.

If new product or service has some characteristics that are not the best for rapidly diffusing innovation, it is possible to induce these characteristics by proper media. Did "e-Cito" do that, and what was it supposed to do?

Hardly there was a clearly expressed need for a service. However, you cannot blame the businessmen. It is common that successful businesses look far beyond clearly expressed needs.

Most likely the initial users' enrollment to "e-Cito" could be explained by previous experience. Business mode itself functions more than 20 years throughout the world. It is very likely that some Vilnius inhabitants were faced with this mode while being short term or long term abroad or heard about it from friends, peers, or press/internet. However, this segment saturated very rapidly, and other potential segments did not have the benefit of previous experience.

According to Rogers (1995), users differ in acceptance time (figure 2).

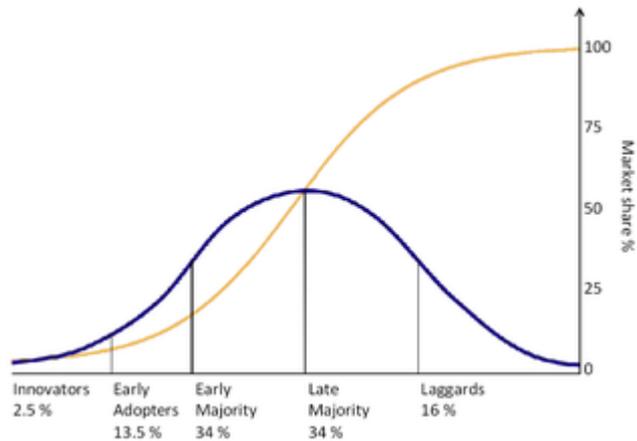


Figure 2. User distribution according to innovation acceptance time and acceptance curve³

It is recommended for marketers not to target all potential segments at once, but to start from innovators and early majority, and later previous users can become innovation spreading agents for subsequent users, especially if communication is induced. It is very good, if it is possible to characterize innovators and early majority with other distinguishing characteristics.

e-Cito expected that their innovators and early majority would be business users and some private users who either have previous experience or have particular need for car sharing and are innovative (students, most likely). Usually only user experience and examples are not sufficient for an innovation to diffuse; additional mass media communication is required. F.Bass (1969) innovation diffusion model could be introduced here (figure 3).

³ Rogers, E. M. (1995). *Diffusions of Innovations*. New York: The Free Press.

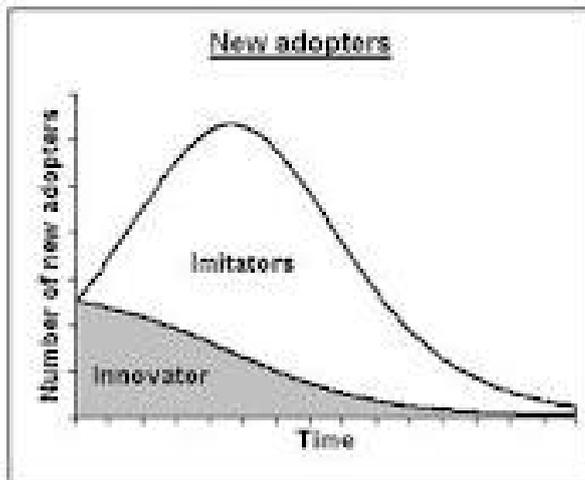


Figure 3. New product adoption due to mass and personal communication⁴

Bass claimed that first adopters of new product or service are influenced by mass media. The remaining part of adopters is influenced by personal influence, that is, monitoring friends, peers, opinion leaders using the product, or active recommendation from these groups to use the product induces product diffusion among the entire potential user population. Thus, to start innovation diffusion process, one needs to start from mass communication. Later existent users will become information agents for other users. Note, that Bass model is created when internet and social media was non-existent, also database marketing, direct marketing, CRM and other current marketing techniques were at embryo stage. Another drawback of Bass model is that it distinguishes strictly between those who are affected by mass media, and those who are affected by other users' examples, neglecting the fact that usually both factors affect decision to adopt. Nevertheless, Bass model can be used for good insights of communication message content. In the beginning of innovation diffusion, the message should be addressed to innovative people and encourage trial. When product adoption is in the middle of the adoption cycle, the message content is supposed to change, creating a social pressure for non-adopters ("Do not stand behind", "Your grandfather has adopted "X", what are you waiting for?"). Although there is no empirical data about "e-Cito" communication in the middle of the cycle, it is suggested to let students to propose message contents.

For an innovation to diffuse rapidly (all models can be used here), it is important that segments (or users) communicate among themselves sharing information, and that

⁴ Bass, F. M. (1969). A New Product Growth Model for Consumer Durable. *Management Science*, 15(1), 215.

subsequent segments would be interested in following first segments. e-Cito expected that business segments will become information spreading agents for individual segments. But does the information really spread among business and individual segments? Do they follow each other experience? Of course, sometimes segments overlap: a journalist who is driving e-Cito for business reasons might consider using e-Cito for evening returns to suburbia or weekend drives. But speaking in broader context, hardly student segment follows how businesses are saving their costs and what novelties they adopt. Thus, there had to be innovators, early majority in *each segment*. And their identification, targeting and communication inducement was supposed to be separate for separate segments. It is obvious that social media was underexplored in “e-Cito” case.

All stages of new service adoption according to Rogers (1995) model could be discussed, paying special attention to separate target groups, message content, and media (both mass and personal) channels.

Consumer decision making

Also the case could be discussed from decision making perspective. According to classical consumer behaviour theory, the decision making process follows these steps: need recognition (problem), information collection, alternative check, decision, and usage.

There was no clearly expressed need for car sharing, however, people do have a need for short term usage of car in various circumstances. It is common that for a new product a problem is created artificially, with substantial effort of mass media, when situations of problem arousal and solution are depicted. e-Cito started their mass communication with a similar mode, however, the problem or situations were not clearly enough outlined for an absolutely ignorant user. Also, mass information for individual users was a little bit delayed and not very intensive.

Information search is another tricky part. Suppose the customer needs a car for a short term, and he/she does not know what exactly to do. What key words would he/she enter into Google? Taxi? Car rental? Under a certain problem, customers did not look for car sharing as an alternative solution. They could find this information accidentally (however, properly selected internet ad words or pop ups could be very helpful), or initial awareness of a product/brand was required. Thus, a lot of communication efforts had to be invested into brand/product awareness. Note, that these efforts would be only for putting e-Cito on alternative list, but not for selecting e-Cito for usage.

Alternatives' check is another interesting point. What criteria consumer selects for comparing the alternatives? It is known that many users do not think of own car driving in terms of costs

per time/distance. Once they purchase a car, maintenance costs are taken as default, and only very price sensitive users reconsider this decision. Precise estimates of e-Cito cost benefits if compared to own car should be provided in communication (internet page), and still many users would not sacrifice their convenience for cost saving. 2 hours drive with e-Cito cost 21.6 litas (based on plan Premium 50), 50 kilometres included. A regular 12 kilometres taxi drive would be approx. 15 litas. At the first glance the difference is 6 litas (27 per cent), and that usually raised the first thought “expensive” for prospects. At the second glance, mileage is longer, and e-Cito offers flexibility in driving forth and back, with possible several stopping points within two hours. A taxi for the same service would charge substantially more, probably 70-80 litas. These costs should be contrasted very clearly with precise usage situations.

Those who decide to use usually see a car sharing as alternative for a second, not the first car⁵. It is crucial for e-Cito, that decision to use would be permanent. That usually requires much longer considerations if compared to situational usage and initial trial. Interestingly, registration fees might involve users into deeper commitment and usage.

⁵ Brook, D. Carsharing – start up issues and new operational models. Transportation Research Board, Jan., 2004.