INVESTIGATE CITIZENS' REACTIONS TOWARDS THE HYPOTHETIC INTRODUCTION OF A ROAD PRICING SCHEME IN LYON (FRANCE)

Cristina, Pronello: Interuniversity Department of Regional and Urban Studies and Planning,Politecnico di Torino, Viale Mattioli, 39, Torino 10125, Italy, cristina.pronell@polito.it

Valentina, Rappazzo: Interuniversity Department of Regional and Urban Studies and Planning,Politecnico di Torino, Viale Mattioli, 39, Torino 10125, Italy, valentina.rappazzo@polito.it

ABSTRACT

Since Singapore (1975), some metropolitan areas have introduced pricing schemes to make car users aware of the real costs of their trip. This research delves at citizens' reactions towards an hypothetic introduction of a road pricing scheme in Lyon (France).
People's perceptions were investigated through a sample of 61 persons selected according to: age, gender, household composition, occupation, income level and residence location. A web-questionnaire was administered to the participants, and eight focus groups were then organized, each including 7-8 persons. The focus groups allowed to investigate the participants' opinions, emotions, and reactions towards a hypothetical introduction of different road pricing schemes in the urban area. Finally, another web-questionnaire was addressed to collect quantitative data to supplement the qualitative outcomes of the focus groups.
An often evoked outcome is a likely progressive urbanization, but what the whole sample agreed upon is the quest for a coherent policy both for transport planning and management in the Lyon metropolitan area, while respecting the freedom of mobility.
Qualitative methods allows monitoring citizens' emotions, their reactions to road pricing, and changes of opinions when issues are analysed from multiple points of view. The outcomes highlight the importance of using alternative methods when pricing issues are investigated.

Keywords: road pricing, urban transport policy, focus group, citizens opinions

INTRODUCTION

The road pricing scheme has been used since long time as a policy to tackle traffic congestion and environmental pollution in urban areas or to finance infrastructures (Lindberg, 1995). Vickrey (1963) and Button (1995) have recognised the effectiveness of pricing schemes in managing congestion, but defining real prices, not just tips, to induce behavioural changes.
The most ancient and best known example is Singapore where, in 1975, the first application of road pricing was implemented. However it is only a couple of decades that interest in pricing schemes has expanded rapidly (Harrington et al., 2001). Nowadays there are some interesting experiments underway all over the world; in Europe the most important cases are those of London, Stockholm, Oslo, Bergen, Trondheim, and Milano.
Furthermore, Austria and Germany introduced (respectively in 2004 and 2005) a distance-based road pricing scheme applied just to trucks. Gothenburg will introduce a road pricing scheme in January 2013.
The several applications can give some hints about the perception as well as the effectiveness of such schemes. Speaking about the cases of Hong Kong and Seoul, Harrington et al. (2001) report a traffic decrease in the tunnels by nearly 14% and more than doubling of carpools, buses and taxis. Similar positive effects are reported by Viegas (2001) for Oslo, Bergen, and Trondheim.
Nevertheless, the lack of public and political acceptance has been discussed (Jones, 1992; Schlag and Teubel, 1997) and the public opposition has prevented the spread of pricing to other facilities in Hong Kong and Seoul, despite the positive effects on traffic. Public opinion, associations and local stakeholders always point out the intrinsic social iniquity of pricing schemes (Langmyhr, 1997; Eliasson and Mattsson, 2006), which inevitably stresses people disparities, since benefits would be greater for the wealthiest. Sheldon et al. (1993) point out that the lack of acceptance stems from the misperception of the negative effects as being caused by others rather than by oneself.
Thus, the road pricing policy still encounters strong oppositions and remains very unpopular; its low public acceptability is one of the strongest barriers hindering its applicability (Langmyhr, 1997). One of the reasons highlighted by Jakobsson et al. (2000) is that individuals feel a lack of freedom by paying for something that has been always free of charge.
Its unpopularity and such strong oppositions imply that decision makers, although willing to introduce a road pricing policy, often abandon the idea, also considering the huge investment required to establish a management system. Moreover, the administrators are not very confident on the expected traffic results of such a policy and they definitely fear its political consequences (Viegas, 2001).
Nevertheless, it is very interesting to see that the decision makers who had the courage of their convictions (e.g. in Stockholm) turn out to be satisfied with the results, and citizens as well recognise its benefits and generally approve the pricing schemes. This is the case of Stockholm, where a first trial pricing scheme was introduced in January 2006 and tested for a seven months period. The results were satisfactory, even beyond the most optimistic expectations, and when in September 2006 the voters of the City of Stockholm had to express their willingness to keep it or to abandon it through a referendum, a narrow majority gave

their consent to reintroducing the charges on a permanent basis. Before, the trial opinion polls had shown that a majority was against the idea of congestion charging (Jansson, 2008). The Stockholm experience shows that such a measure, usually considered to be unpopular, can turn out to be appreciated and supported, as long as valid alternatives to car use are provided. Such outcome is also confirmed by Harrington et al. (2001) who showed that detaching the concept of road pricing from that of an additional tax and showing that the revenues come back to the public (e.g. cut in other taxes, or helping commuters) reduce the opposition. An interesting figure reported by the study of Harrington et al. (2001) is that the UK adults increased their support for road pricing from 30% to 57% if the revenues would be spent on a mix of improved transit, local traffic management, and better pedestrian facilities.

Thanks to a roll ring, since 1990 the Oslo region can raise money to finance improvements in road and public transport (Odecka and Brathenb, 2002; Larsen, 1995; Lauridsen, 2011): two thirds of the citizens are favourable to the introduction of a new toll ring if the revenues are invested in public transport. Besides the financial benefits, positive outcomes are also evident on congestion levels, since traffic growth is slower than the national average.

In Stockholm, the road pricing produced an increase of 6% in public transport use. In 2007 London enlarged the charging zone previously established in 2003 and the income traffic decreased of 16% and congestion of 30% (May et al., 2010).

Of course, some support measures are deemed necessary to limit congestion, making people aware that pricing increases the efficiency and allows higher value trips and more efficient modes to outbid lower-value trips and less efficient modes for scarce road space.

Viegas (2001) states that the management of road pricing schemes should lie on efficiency and equity as the basic economic objectives. Although business companies always fear huge decreases of their economy and productivity, empirical evidences show that such alarming worries are not justified. In fact, a recent study found that a decline in Trondheim annual turnover registered before the toll introduction was then reversed after the implementation of the cordon charge, testifying that the toll was not influent on business trend. Similarly, in London, business surveys show recognition of transport benefits from congestion charging and highlight its broadly neutral impact on central London economy (May et al., 2010).

The principle of equity and of freedom of choice is a key aspect in the support to pricing schemes: allowing the choice between free lanes and toll lanes increases the support (Harrington et al., 2001), but decreases the positive effect on the traffic reduction. However, the possibility to choice is differently perceived by lower income groups, who are less disposed to accept road pricing as regards high income groups. In fact, they feel themselves more affected because they perceive that the road pricing infringes their freedom and is unfair (Jakobsson et al., 2000).

However, the real effect of pricing schemes and their acceptance can be certainly known only after their implementation. As pointed out by Santos and Rojey (2004), the impacts of road pricing schemes strongly depend on the characteristics of the town and on the citizens modal choice. Furthermore, the gap from perception and behaviour is an important point in pricing schemes forecasting and remains an element of uncertainty for the decision makers. De Groot and Steg (2006) analysed how a transport pricing policy may reduce car use through an internet survey. The results showed that people do not know how they would behave if a pricing scheme would actually be implemented, and they have troubles in imagining its

behavioural consequences. A more specific and detailed description could facilitate them to imagine their reactions. This result shows how the quantitative approach, alone, can be inadequate to go in depth in a so tricky issue, involving principles of social equity and individuals' freedom.

This paper presents the results of a qualitative survey aiming to investigate the citizens' reactions towards the hypothetic introduction of a road pricing scheme in Lyon (France). Such a charge would tackle problems as traffic congestion and air pollution. The survey was addressed to a sample of 61 residents in the Lyon metropolitan area who participated to a focus group discussion on different transport policies, but particularly focussed on the road pricing policy. Eight focus group were held, each involving about 7-8 participants. The same sample also filled in a quantitative web questionnaire, thus allowing to investigate the same issues through a mixed approach, using both qualitative and quantitative investigation methods. The paper presents only the results of the analysis of the focus groups, focussing on the qualitative analysis.

The next sections will present the methodology adopted in the survey and data analysis design. Some considerations and comparison with the results of other researches in literature will follow.

THE METHODOLOGY: THE SURVEY AND THE DATA ANALYSIS

The methodology has been designed to better understand the reasons behind people attitudes towards the hypothetic introduction of a road pricing scheme in Lyon through an articulated survey scheme, made up by both quantitative and qualitative investigation methods: a web-questionnaire and a Focus Group discussion.

The methodology implies four steps: the definition of the study area, the sample selection, the questionnaire and focus design and administration, and the data analysis.

The first step provided the area on which selecting the sample, the metropolitan area of the city of Lyon, to include people with different mobility profiles and living in the city centre, in the suburbs or in the outer city. Figure 1 shows the Lyon Metropolitan Area, under the Grand Lyon authority, which covers 512 km² (58 municipalities) and houses about 1.3 million people. Lyon is an important pole of economic development and it is the 2nd French metropolitan area after Paris. The orography of the territory is quite complex: it is crossed by two rivers (Rhone and Saone) and presents a hilly landscape.

The participants were recruited according to several criteria: gender, age, income level, presence of children in the household, travel behaviour (users of different transport modes), residence location (Lyon and suburbs neighbourhoods).

A sample size of 61 people was established to allow to manage a feasible number of focus groups (7-8 people for eight Focus Groups). The recruitment was carried out in two phases. At first, the snowball sampling technique was adopted, spreading the word to colleagues, friends and various territorial associations and distributing fliers. After the first fruitful phase, the missing profiles to cover all the criteria were searched through a specialised firm to speed up the second phase of the recruitment. A total of 39 people (participating to the five first

Focus Groups) were recruited through the snowball sampling technique, while 22 persons were selected by the firm and participated to the last three discussions.

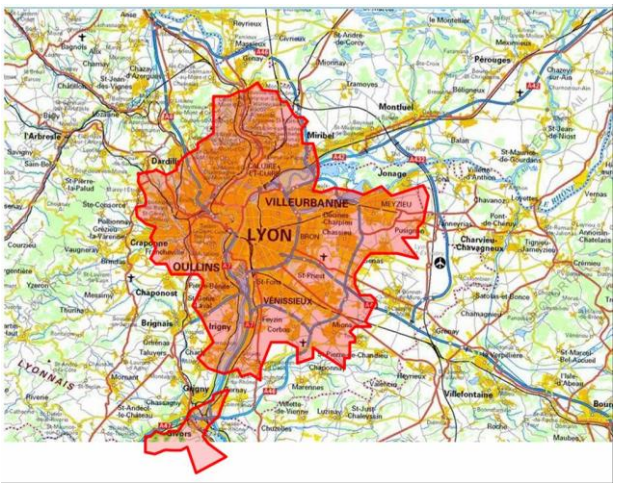

Figure 1: Grand Lyon area

The web-questionnaire, created through the software LimeSurvey, was addressed to the participants in two different moments: few days before the Focus Group and the day after the discussion. The reason of the two stage questionnaire was to prevent the participants to know that the key topic of the discussion would have been the road pricing. They were indeed recruited to discuss about urban mobility issues and transport policies. The aim of such a "trick" was to get people's spontaneous reactions to the topic, preventing them both from preparing a pre-defined thesis on the subject and from a preconceived dislike. Their opinions on road pricing were then quantitatively investigated after the discussion through the ex-post questionnaire. The focus groups and questionnaire were held during the month of October 2011 in Lyon, in the premises of the University. As said above, the paper presents the qualitative survey.

The qualitative survey: Focus group design

The Focus Group discussion was prepared designing an outline detailing all the issues to investigate, preceded by a short presentation of all the participants (name, occupation, household composition, residence and work location, most used modes, scope of the most frequent trip, trip duration), in order to let people know each other. Then, three main issues were investigated and discussed:

1. daily mobility. The participants were asked for their feelings during the daily trips (stress, pleasure, etc.), and then for their preferences towards: a) driving or being a passenger; b) a slow but comfortable trip or a stressful but quick trip; c) taking pleasure of making a trip or arrive at destination as quickly as possible;
2. transport policies. The participants were asked for their opinion about three levers suggested by the European Commission in order to deal with traffic problems: technology, economics, and individual behaviour. Then more detailed transport policies were presented (bike sharing, car pooling, car sharing, High Occupancy Lanes, Limited Speed Zones,

Limited Traffic Zones, Pedestrian Zones, Charging Zones, tackling alternatively car congestion or car pollution), and the participants had to express their opinions about that;

3. hypothetical road pricing in Lyon. Once the Road pricing policy was introduced, the last part of the discussion was directly focussed on the hypothesis of a road pricing scheme in Lyon. The proposed scheme should be in force during weekdays from 7.00 a.m. to 7.00 p.m. and applied to all cars entering or circulating within all the city, excluding two neighbourhoods (the 5ème and the 9ème arrondissements).

The third issue discussed was the core of the research and several questions were asked to the participants:

- their first reaction;
- the acceptable rate and the threshold over which it would become extremely deterrent;
- how would they behave if a road pricing would actually be introduced in Lyon;
- if such a measure would solve congestion and air pollution issues;
- if the political message would be most effective presenting the tax as a tool to fight against congestion or air pollution;
- if they would agree to establish the rate according to the car pollutant emissions and/or to the income level;
- if the residents should take advantage of a rate reduction.

Some few issues than those provided definitely emerged from the discussion:

- the toll time slots;
- the worries about the charge consequences;
- the spontaneous propositions (e.g. variable rate according to the vehicle typology).

The data analysis design

The discussions during the focus groups were recorded (audio and video) and transcribed, word by word, to get the precise content of the whole interaction between participants. An assistant also took notes to point out the outstanding remarks. The transcriptions were then carefully read in order to draw a synoptic grid including main subjects and sub-subjects, thus creating the structure for the content analysis. The participants' wording on the different topics were then reported in the grid in a more and more synthetic way. This work was carried out iteratively, to organize the raw data in definite structure (Krueger and Casey, 2000; Zammuner, 2003).

RESULTS

The survey has allowed to define the reactions as well as the perceptions towards the pricing schemes of the interviewed sample. The respondents are well gender balanced (30 women and 31 men) with a rather high educational level: 37.7% got a university degree, and 24,6% a school-leaving certificate; only 3 persons (4,9%) do not have any diploma. 32.8% of interviewees are white collar and 23% office-workers, while students and retired people are, respectively, 9.84% and 11.48%.

The average monthly income ranges from 3,000 and 5,000 €/month (excluding taxes) for the

27.9% of the participants, while 26.2% earn from 1,500 to 3,000 €/month; only 10% of people did not answer. As regards the household composition, the majority of the survey participants lives in couple (37.7%); the 29.5% live alone, and nearly 23% get a large family (4 people minimum). Participants living with kids represent nearly 30% of the sample.
Considering car ownership and travel habits, we observe that almost all respondents get a driving license (95%) and the overall car availability is rather high: 42,6% own one car and 37.7% own two cars. Nevertheless, almost 10% of the sample does not have any car available within the household.
Analysing the daily travels, we can observe that the most used mode is the car as driver (57.4%), while nearly 20% use public transport. Slow modes are currently used by 13% (5% use the bike while 8.2% walk). The 21.3% of the participants changes mode according to the season. Since most of the participants are active, for 72% of them the most frequent trip is to go to work, while for the six students the home-university trip is the most frequent one. Car is the most frequent transport mode also during the weekend (for 75.4%), while 13.11% use public transport.
In the Annex, a table offers a synthetic overview of the participants' socio-economic characteristics and trips habits. Furthermore, the table is also a useful reference to understand the profile of the participants which are mentioned in the following sections.
The analysis of the qualitative data collected through the Focus Groups was organized in five subjects:

1. first reactions: the strong and moderate oppositions and quest for a coherent policy both for transport planning and management in the Lyon metropolitan area, while respecting the freedom of mobility;
2. the rate level: acceptable or discouraging, variable according to the income, to the car's pollutant emissions or to the car size;
3. size of the charging zone;
4. worries and doubts concerning the consequences of the toll.

First reactions to road pricing

The participants can be divided in two groups according to their reaction to the pricing scheme in Lyon:

1. those showing a strong opposition, rejecting the hypothesis of a congestion charge, and telling that it would be a very unfair policy, socially unacceptable;
2. those who show a more moderate opinion, supporting the idea that the toll should be coherently defined, dramatically improving the current public transport supply and adequately increasing the park and ride facilities in order to offer a real alternative to the car for all metropolitan trips. Within this group, someone was even a supporter of the road pricing.

The *first group* was the largest, since many participants feel that the road pricing policy would be very unfair and socially unacceptable, as it would emphasize, once again, the differences between the rich and the poor, also increasing social segregation. Several of them are unwilling to the principle and perceive the congestion charge like the TEO (Trans Est-Ouest, nowadays called Boulevard Périphérique Nord de Lyon), an intervention highlighting the

differences and inequalities between "*those who have the means and can pay and those who cannot and must therefore queuing up in the Fourvière tunnel for half an hour*" (Virginie). During the Focus Groups, many participants expressed the strong feeling about social injustice, such as: the idea that a toll would become just a supplementary tax to be added to already existing taxes and the idea that the charge would only be effective to raise money during the recession exploiting the citizens.

Another common feeling was the sense of fear towards the road pricing; in fact, several participants admit that the car represents a symbol of freedom and they are proud of it, thus a pricing scheme would infringe the individual freedom. Furthermore, they perceive the road pricing only as a measure to take money, but not as a measure for reducing congestion.

On the other hand, the *second group* showed a more moderate reaction to the toll hypothesis, not opposing to its introduction and recognizing the need for effective actions to limit traffic and pollution. Nevertheless, it is important to note that the dominant reaction is not of welcoming the toll, but a general awareness that this hypothesis could become a reality, as similar measures have been implemented in other cities in order to control traffic problems.

However, the group is united in asking for a coherent and well planned urban transport policy. Many of them asked for an improvement of the current transport supply in the metropolitan area, both in terms of park and ride facilities (preferably free of charge) and of public transport (both urban and suburban), in order to provide real alternatives to car use. Such alternatives seem mandatory to the greatest part of the interviewees, who argue that "*otherwise people will not understand and the toll policy would turn out to be not useful*" (Sophie R). Others, more sceptical and disappointed about such a scenario, note that the lack of a coherent design of the whole transport supply would dramatically reduce the policy's benefits, the toll being just a simple way to collect money. This position bring them near to the strong opponents.

Both groups share a common view, claiming for a coherent urban transport policy, which should be based on two pillars: increasing park and ride facilities and improving the public transport service.

Considering the first pillar, some people remark how hard it would be to build free parking slots at the entrance of the city where the real estate market is costly. In fact, the public administration could not support such a measure which would not bring any financial advantage to the city. Therefore, the relationship between an hypothetical pricing scheme and the parking fees was largely discussed. Many participants highlighted how the cost of parking already play a significant role in limiting their access to the city centre by car, preferring to use public transport or to walk. Thus, a well planned parking policy, supported by adequate park and ride facilities, would allow an easier management of congestion, avoiding the introduction of road pricing. In fact, they state that the parking fees are as efficient as a charging toll and their increase could help in order to make car access more deterrent. To this extent, many participants think that a congestion charge would be "shocking", since the same effect could be obtained just raising the parking fees. On the contrary, Gaëlle expresses a rather odd opinion, finding logical to introduce a "*toll not too expensive*" while reducing the parking fee ("*prohibitive*" or "*racketeering*" [Franck]) in order to avoid an excessive penalization of car traffic. Finally, some people find that the toll could be a vicious circle, because it "*could lead the city centre car parks to bankruptcy*" (Michael G). Someone fears

that if the toll would be limited to the Presqu'Ile (the central part of the city between the two rivers) the docks would once again become a car park, while they have been recently highly re-qualified.
The improvement of the public transport supply, constituting the second pillar, is strongly recommended by all participants, since this would allow a real alternative to car use. Some participants highlights that the current public transport fares are too high, especially for occasional riders; in addition, many of them claim for free public transport, even more if a pricing scheme is introduced. Virginia suggests to have free public transport at least in periods of pollution peaks, to effectively induce people not to take the car. By the way, someone evokes that what could be called "free public transport" would not be effectively free, since its cost should be supported somehow (e.g. by taxes). Furthermore, some participants notice that some people would never use public transport, neither if free, missing the target of the decrease of car use.
Finally, the main behaviours that people would have whether a charge was effectively introduced can be synthesized as follows:

- some, the most opponents and the ones who can afford it, they will move to the countryside or in another city, just to avoid paying the toll;
- some others would change their current modal choice, preferring public transport or soft modes;
- some others would change their current departure time choice, or their current path, in order to avoid paying the toll but still continuing travelling by car;
- some would simply accept the consequences of the toll and pay it, although not enthusiastically.

The rate level

As expected, most car users oppose the hypothetical introduction of a pricing scheme, and few of them were also rather impolite when questioned about the hypothetical charge level. Nevertheless, they usually identified direct and precise figures, but rather low thresholds. However, few participants raised the declared rate, realizing that they would continue to use the car even if a rather consistent charge was introduced. On the other hand, people who rarely use the car had more difficulties in figuring out a possible rate, finding the question rather "insidious". In fact, most of them felt hesitant between two opposite positions:

- a very high rate, since they would hardly ever bear its cost, not being concerned;
- or a very low rate: not being interested in travelling by car in the city, they would not be willing to pay for it.

Some ideas were presented and discussed among the participants:

- modulating the rate according to the number of car passengers or introducing a discount rate for car pooling, although these proposals would entail the management of different charge levels;
- conflicting positions between a rate that is the lowest possible, in order to be accessible for the great majority of people (as for the bike sharing service, whose daily pass is just 1 euro), and a rate high enough to effectively become a deterrent to use car;
- a difference between those who need to use the car daily and those who use it just exceptionally. A daily fee of 7-9 € was proposed, to be a significant disincentive for those

who come occasionally; a monthly fee of 30 € for those who must use the car daily for working reasons;

– application of a tax during the days with pollution peaks, but spreading the cost during the whole year. The advantage is that the cost is less perceived, but, in this way, it would risk to not discourage enough the car use.

The charge level that participants would be willing to pay, considering it rather acceptable, varies a lot, according to personal attitudes and needs. As already mentioned, some would not pay anything, while others realize, during the discussion itself, that they would support a rather consistent charge even if they would not be willing, but simply because they need to move by car.

When asked to define the charge level that would be a real deterrent for them, many participants spontaneously make a comparison with the cost of a public transport ticket and the parking rate in the city centre. Someone defined the threshold for the rate equal to the single ticket price (1.60 €), while others at least to the return ticket (3.2 €), otherwise the car would still appear to be more convenient.

The comparison with the parking rate in the city centre sets out the tolls (to be a deterrent) to more than the price of parking in Presqu'ile for three hours, which varies from 4 to 8 €. As many authors highlighted, the parking fees are considered one of the "second-best remedies" (together with subsidies to public transport and adequate traffic and parking regulations) to tackle urban traffic congestion and environmental pollution (Jansson, 2008).

Of course, the deterrent level, beside which the charge is considered to be too high, changes according to the personal income, as reminded by several participants who declared different thresholds (4 and 5 €, but also far greater levels). To this extent, a further discriminating aspect is the trip purpose, where the willingness to pay is higher for trips to work and could be null for the leisure trips to the city. Another figure used to point out the deterrent threshold is the fee for parking in a no-parking zone, corresponding to 17 €, thus much higher than the previously considered ones. Only Cyrille mentions this as his personal threshold.

Amongst those declaring a very high threshold rate, they admit to be willing to pay "unlimited" or "anything". The reason is that they really need to travel by car and they could not get to work without it, so they would bear such a constraint and pay, unless it is worthier to change job. To this extent, Cécile and Francine cannot understand the idea of being ready to pay "any amount of money, even incredibly high, such as 100 or 200 €". If the toll was too high compared to what they have identified as deterrent rate (about 3-4 €), they take the bus. However, Francine recognizes the bus extremely more time consuming (more than one hour per day), and its use would significantly decrease her current quality of life. More moderate, Jacques and Gaëlle recognize that in exceptional cases, where using the car is a real need, they would pay limitless. Yves agrees, stating that it is indeed hard to estimate the maximum, because when there is no choice everyone would pay without any limit.

It is interesting to notice how many participants, who firstly placed their threshold at a very low level (e.g. 0.5€ or 1€), soon realized along the discussions that a 2 € charge (greater than their first willingness to pay) would not be a real deterrent. In fact, after an initial period of strong protests, they recognize that "*although at the beginning people would strongly complain, after a while we would all get used*" and "*as long as we can pay the toll we would not change our habits*" (Rémy), in order to continue taking advantage of car comfort. Virginie as well points out that, after a first opposition, all new fees become a habit for all who can afford to pay them. The key role of habit is very clear to some of them, particularly to the most careful observers. As a concrete example, Yves mentioned the "TEO" – the ring road

whose toll raised great complaints when introduced, in 1997 – that is now so much used that is always congested.
Another reason supporting the hypothetical acceptance of paying a toll is that the car represents a symbol of freedom, as Cyril highlights, and that people would probably accept to pay in order to preserve their freedom to move.
Several participants envisage that the employers would probably pay half of the charge, if not the whole amount, as they currently pay for the parking. On the other hand, Virginie and Ariane doubt that all employers could afford such a cost, and Estelle, whose husband has his own company, clarifies that "*companies are already highly charged*" and could not easily afford an additional cost.
A last important comment regards the increase of the urban sprawl even in case of low rates; the participants express great concerns and worries about its consequences (both environmental and economical) that should be adequately taken into account.

Change of rate level according to income, car pollutant emissions and car size

The reactions to a change of rate level according to the income level or the car characteristics varied a lot.
Those against the discrimination as regards the income level support the idea that the rate should be the same for everyone: "*because everyone should have the same right to move*" (Malika), otherwise "*also the baguette should have different prices according to the income level*", as well as all other products, and also public transport (whose price is actually already modulated according to the household size). Michael W. highlights that "*since the tax does not have the role of redistributing money, it would not make sense to impose different charge levels*". Interestingly, Mélissa highlights that since richer people usually have newer cars, less pollutant, such a proposal might be favourable to them and the goal of limiting traffic congestion would not be attained. Moreover, few people feel scared about data confidentiality and traceability.
On the other hand, those in favour would support it, thinking it would be "*fairer*" (Sophie P) and "*more logical*" (Regis), as it gives the opportunity to everyone "*to contribute according to his/her possibility, as for other taxes*" (Marie-Chantal).
Modulating the toll according to the cars' pollutant emissions (the less polluting cars pay a reduced rate) again divided the participants. Many people oppose, sometimes very strongly, considering it doubly unfair, since it would: a) penalize those who have an old car and cannot afford a new one (giving up travelling by car or bearing an excessive rate); and b) facilitate rich people, who would "*take advantage from greater traffic fluidity*" (Franck), or "*could also buy a hybrid car to pay a reduced rate*" (Regis), or simply bear the cost of a higher rate without any problem. Furthermore, some participants think that such a proposal would not be the best method to make people aware and responsible against pollution.
On the other hand, someone agreed with the proposed approach even if they have an old car. Cyril is particularly enthusiastic about Ecopass, the congestion charge in force in the centre of Milan, where the rate varies according to the car pollutant emissions. He believes indeed that this system of "*technical controls on cars and [...] repression on polluting vehicles [allows] to progress a little*". Pierre as well would appreciate an Ecopass Lyon, since such a policy "*would allow fleet renewal, economical upturn, pensions investment and increase of jobs*".
Rémy proposes to "*tax the purchase of polluting cars*", while Michael G proposes to define the toll "*making the ratio between the year of the car and also [the level of] pollution*" and Yves suggests to consider both the power and the pollutant emissions level.

However, the definition of "polluting car" was questioned because both old small cars and big, greedy new cars are polluting; thus also the car size, and vehicle capacity should be considered in the definition of the proper rate. Thus, those who buy big and high-powered cars are usually richer and could then afford to pay a higher charge.
Nevertheless, someone argued that in some cases a large car is needed, especially for large families (Michael W). Interestingly, Gaëlle highlights that the solution to modulate the toll based on the displacement does not necessarily penalize all "rich people" since "*there are people who will buy a small car to use it just in the city to avoid paying a high charge*".
An final consideration made by several participants regards the toll management system in case of variable rates: it would be more elaborate, requiring more resources and thus jeopardising its convenience.

Size of the congestion zone

When discussing the size of the charging zone, several people highlight that the hypothetical area (the municipality of Lyon, excluding the 5th and the 9th arrondissement, and the outer city of Villeurbanne) would definitely be *too large, huge, and unreasonable*. An argument supporting this opinion is that such a size "*will increase the traffic jams in closer areas which are already rather congested*". Many participants agree that a smaller area, as the Presqu'Ile for example, would be reasonable.
The main remarks and objections concern some quiet areas which are supposed to be included in the charging zone, as for example the 8th arrondissement, part of the 3rd, and, particularly, Villeurbanne (outer city), whose inclusion would really seem a way to raise money.
On the other hand, while discussing new proposals, someone remarks that it would be fairer to include even the 5th and 9th, or, at least, the 9th where there are many professional activities. Others point out that the Croix Rousse (4th) should not be included, since its hilly topography makes it not convenient for soft modes (fig. 2).

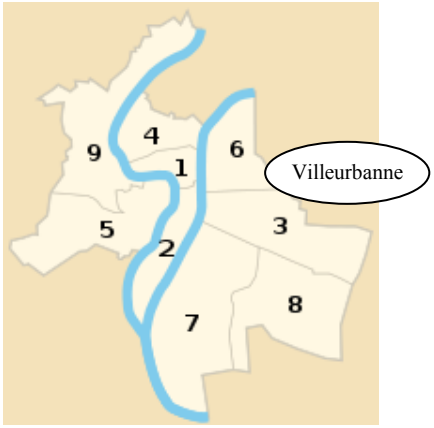

Figure 2: Lyon neighbourhoods (arrondissements from 1st to 9th) and Villeurbanne, in the North-East

The idea of limiting the charging zone to the Presqu'Ile (2th) seems to be much more reasonable. Only the exclusion of the tunnels from the charging zone is suggested, but no other reasons are against. In fact, many participants would agree, since "*there is a lot of traffic*" and "*it is possible to move there by public transport*", so it would be "*rather acceptable from a social point of view, as the ones who do not want to pay can do everything on foot or by public transport, which are highly concentrated here*". Many participants think also that this intervention would leave more space to pedestrians, reducing car congestion and

noise, and being more attractive for tourists. They also propose to test the charge in the Presqu'Ile in order to figure out how it could work for the whole city. A countermeasure to avoid that such intervention become counterproductive is the management of traffic along the rivers (Rhône and Saône) banks, in order to avoid their conversion to a parking. Furthermore, the importance to pay attention to the whole city and not just to the city centre has been frequently highlighted, to avoid an increase of traffic in the rest of the city just to preserve the most touristic areas.
Along the debate on the Presqu'Ile toll, several participants like the idea of a pedestrian area in this central zone, also supported by its particular geography (narrow area between the two rivers). An exception to the common view is made by Michel R who, although having always supported the idea of a pedestrian Presqu'Ile, is no more favourable; he thinks that such a decision would not be coherent towards the current policy of building more and more multilevel parking in the city centre.

Worries and doubts concerning the toll

Several worries about the potential effects of the pricing scheme were raised, mainly related to urban sprawl, effectiveness of the toll, effect on residents, revenues of the toll system, hypothetical behaviours after the scheme implementation.
The support of the urban sprawl is the first worry, fostering to locate in the suburbs several activities, such as businesses, shops, industries, administrative offices, banks and insurances. This moving would both entail environmental concerns and determine a strong economical and cultural recession of the city and of its role within the agglomeration.
The environmental concerns are related to the further urbanization of the countryside, already in progress; it would be definitely intensified if the hypothesis of a congestion charge become real.
The commercial role of the city within the agglomeration is already decreasing in favour of big malls in the outskirts which become more and more attractive, particularly for motorists, since "*using the car in the city centre sucks*" (Régis). The commerce in the Presqu'Ile would be impaired; Colette imagines strong protests from traders, while Jacques and François see the death of the city and of the Presqu'Ile. Several participants state they would change their shopping habits, "*strongly penalizing the businesses in the city center*" (Eric).
Besides people feeling worried about the urban sprawl entailed by a toll charge, others would not care, since they rarely come to the city centre which they do not like, preferring the countryside and the suburban outskirts, where every place can be reached by car.
The effectiveness of the toll to reduce traffic congestion and air pollution divides the participants. Some of them highlight that traffic problems would not be solved, because "*crazy traffic jams*" would move mainly to the border zone, free of charge, which should bear such cost. Many others recall that people continue to travel by car despite the gasoline price increases, as well as they continue to smoke even if the price of cigarettes increases.
On the other hand, some others think that the toll would be effective in reducing car trips in the city because "*it will induce people to think twice before taking their car*" (Gabriel). Ariane believes that the toll could act as deterrent by making explicit the cost of the car, which, although being high, is not really perceived by motorists.
Several participants feel that «*our town is not big nor crowded enough to justify the introduction of a toll*» (Gilles), while Camille believes that "*since Lyon is always affected by fine particulate air pollution*" a charge is maybe needed.

Another important issue concerns the residents, who cannot avoid passing in the charging zone. Some participants believe it would be normal, or even "*mandatory*" (Julien) for residents to have a reduction, since "*they have no choice*" (Debora). Deborah envisages a 90% reduction, as in London, or even a free pass "*since people living in the city centre already pay the parking yearly subscription*" (Françoise). On the other hand, someone points out that a 90% reduction would be excessive, losing the role of deterrent to car use. Furthermore, in such a scenario, "*the residents would be the only ones taking advantage of the charge effects, since their environment would be more calm and quiet, at other people's expense*" (Régis). Sophie R. proposes that residents could have 2-3 free accesses per day, as in Montpellier.
The daily period of the scheme, from 7 a.m. to 7 p.m., could penalize all workers during typical «office hours». They should bear a further transport cost if willing to use the car to get to work, while paying a charge could be more reasonable for leisure activities. In order to avoid a discrimination for workers, someone proposes a 24 hours toll, in force also on Saturday, when people usually have more time and can more easily take public transport (Aurélien). On the other hand, someone tries to propose « ad hoc mitigations » as toll only during short time slots in order to move freely during commuting hours.
It already emerged that a transparent knowledge about how the revenues are used could heavily change the citizens opinion. To this extent, some participants wonder whether there would be an effective return to the community, such as investments to improve the Vélo'v service and cycle paths, or the public transport supply.
A redistributive role of the revenues is highly appreciated, particularly by Pierre and Yves, who believe it would be interesting to enable the development of "green" public transport thanks to the charge applied on private car traffic. Mentioning the example of some other municipalities, several participants even expect that the public transport service should become free if a toll was effectively introduced, since the revenues should finance it.

DISCUSSION AND CONCLUSIONS

Although avoided for a long time, due to their unpopularity, charges to enter the city centre are slowly spreading out, both to raise money for road maintenance and to reduce traffic congestion and environmental pollution, often considered as two different purposes, but indeed closely connected.
Norwegian tolls were simply aimed at collecting revenues for the infrastructure maintenance, and did not considered at all the purpose of limiting car traffic. To this extent, for coherence sake, their revenues could not be invested to improve public transport, not even a limited quota. In fact, Larsen (1995) pointed out that, in the Norwegian case, where the tolls were specifically introduced to finance road maintenance, the public acceptance would be more difficult if the income would then finance public transport. This highlights the importance to maintain a coherent policy and of being "respectful" towards the contributors.
Despite the overall public acceptability of road pricing is usually very low, it increases when information and explanations on its role and importance to tackle traffic congestion and environmental problems are given (Musselwhite, 2009). Several past studies pointed out the elements that can play a significant role to increase the public acceptability of cordon tolls and other pricing schemes. The first important point is to clarify which is the reason why a road pricing should be introduced (Bielefeldt, 2004; Bird and Vigor, 2006; Vagverket, 2002), in order to avoid that the toll is perceived like an unmotivated imposition, or just a mean to raise money from the citizens. Once the road pricing is effectively recognized as a possible

solution to some existing problems, such as heavy environmental pollution or high traffic congestion, its acceptance will become easier.
In the Lyon case study, the participants' reactions in case of introducing a congestion charge are different. If someone recognizes that a congestion charge may be necessary to reduce car traffic and to manage transport problems in the city, others believe that such a measure would be ineffective since the same purpose could be attained through an increase of the parking price, which is already a real deterrent to the car use. Many participants envisage that the purposes of tackling congestion and air pollution are "just an excuse to squeeze extra money from the citizens", since there would be other effective measures to deal with such problems, especially air pollution.
Furthermore, it may be interesting to observe how in the participants "change their mind" about congestion problems in Lyon. In fact, at the very beginning of the discussion many of them complained about traffic jams and consequent delays, while as soon as they understand that the discussion would tackle the hypothetical introduction of a congestion charge in Lyon many of them did an about-face, stating that congestion level in Lyon would not justify the introduction of a toll. Furthermore, they added that considering the agglomeration size the implementation of a charge would not be reasonable. Thus many of them actually assumed a "defensive attitude", in order to relieve any possible justification for the introduction of a charge.
Conversely, as regards environmental pollution, several participants recognized Lyon to be a highly polluted city, but not as polluted as China or other Countries which do not apply strict regulations on pollution. Nevertheless, few participants enjoyed the idea of an "Ecopass Lyon", similar to the Ecopass Milano, which would allow the renewal of the French vehicle fleet, although at the expenses of private citizens, as stressed by many others. To this extent, they highlights the importance of public subsidies in order to offer a concrete help to those who want to buy a "greener" car, especially the hybrids.
Moreover, several participants drive the attention on the high installation cost of such a toll system, claiming that "the game is not worth the candle", while strong investment to improve the whole urban transport supply (park and ride and public transport) would be much more appreciated. Jansson (2008) as well highlights that "in the absence of an in-vehicle unit as an integral part of the charging system, foolproof urban road pricing seems to be much more expensive to run than expected".
Coming back to a more general consideration, a crucial factor contributing to the road pricing acceptability is of course its inclusion in a comprehensive, well structured and coherent transport policy (Green and Stone, 2004), offering concrete alternatives to car use and including adequate measures on all urban transport modes, as highly requested by all participants being involved in our case study. Several participants clearly state that the improvement of public transport would be mandatory to offset the toll and assure an alternative to car use to go to the city centre, "*otherwise nobody would come to town*".
Thus, all participants agree to ask for a coherent policy concerning transport planning and management in the Lyon metropolitan area, and the key condition to accept the introduction of a toll is an effective upgrade of the current transport supply. This would imply an increase of park and ride areas (which should be accessible 24/24) and the improvement of the public transport service (frequency, comfort, safety, etc.). Restrictions should be mandatorily coupled with new opportunities (e.g. such as bonus to help people to buy a "greener" car with low pollutant emissions), otherwise the social injustice would be too high and the gap between rich and poor people would further increase.

The principle of "freedom" is widely evoked, related both to the "freedom of movement", which should not be threatened by "a fashionable tax during recession periods", and to the risk of confidential data traceability. This last point is especially raised when discussing about the possibility of varying the charge level according to the household income, but also when discussing about the risk of being "tracked" by the cameras controlling the car accesses to the charging zone.

Concerning the charge level, the opinions are different and often change along the discussion, thus demonstrating that the interaction between the participants is a concrete opportunity to compare their own opinions and to possibly change his/her mind. In such a context, it is sometime possible to observe how people, initially being strong opponents, then realize, along the discussion, that they would "unfortunately" suffer this constraint and accept to pay the charge. Furthermore, they sometimes admit they would finally accept to pay much more than supposed, either to take advantage of travelling by car, or because, as for everything, "at the beginning people raise great protests and then everyone become used to new charges and then pay for it "(e.g. TEO).

In addition, road pricing acceptance usually increases consistently after its implementation since habit plays a significant role. Larsen (1995), in his overview of toll cordons in Norway, testifies that the share of opponents to the toll before its introduction in Bergen was far greater (54%) of the share recorded one year later (just 36.5%), while inversely the share of people supporting the toll increased from just 13% to 50%.

An interesting and pertinent reference is the Graduality Strategy elaborated by Noam Chomsky. He states that to make a measure acceptable, it has to be applied gradually, little by little, for years. This is the way in which new socio-economical conditions (neoliberism) were imposed in the eighties and nineties: little welfare, privatisations, precariousness, flexibility, unemployment, low wages; so many changes that would have caused a revolution if applied all at once.

Besides low public and political acceptance, claim for social injustice and inequity, another feared consequence of road pricing toll is the loss of attractiveness of the city centre, entailing negative effects on his commercial and social role within the conurbation. Nevertheless, although business companies always fear huge decreases of their economy and productivity, empirical evidences show that such alarming worries are not justified. In fact, a recent study found that a decline in Trondheim annual turnover registered before the toll introduction was then reversed after the implementation of the cordon charge, testifying that the toll was not influent on business trend. Similarly, in London, business surveys show recognition of transport benefits from congestion charging and highlight its broadly neutral impact on central London economy (May et al., 2010).

Finally, several hypothetical behaviours after the scheme implementation emerged. Some people would relocate, other would change transport mode, other would bypass the toll area (changing schedule or path), and other would adapt theirselves, suffering the consequences.

Karlström and Franklin (2009) accurately discussed behavioural adjustments such as changes in the mode choice and in the departure time choice, particularly focussing on morning commutes during the trial test of the Stockholm congestion charge.

Besides the contents of the various proposals and ideas presented throughout the discussions, the proposals themselves also raised some interesting consideration from the methodological point of view.

The discussions' dynamics allow to understand how the Focus Group investigation method really invites people both to think individually and to react to the other participants remarks

and suggestions, while the questionnaire, traditional quantitative investigation method, does not offer any opportunity of comparison between the respondents.
It is interesting to observe how participants' views evolve during the discussion. For example Yves, who first proposed a discount for residents, then changed his mind during the debate; he states that while residents can easily travel by public transport, people living in the suburbs often have no alternative to the car; thus he found a discount for residents rather unfair.
The Focus Groups participants are usually rather talkative and proactive, except for some exceptional cases of very shy and indolent people. Along this project, about five people, out of the 61 participants, did not sufficiently intervene on the different topics tackled during the discussions (thus about 8.2% of the interviewees were not sufficiently active in the discussion). Nevertheless, when questionnaire respondents are directly "forced" to express their own opinion on all topics tackled in the questionnaire itself (which is very easy to do with an online questionnaire), we are not sure that they always respond consciously and carefully. Furthermore, due to the Social Desirability Bias, people may give answers that do not correspond to their real opinions but which are more convenient and socially appreciated. Conversely, it would be difficult for Focus Group participants to "play a role" throughout the whole discussion, so they usually have more spontaneous and genuine reactions.
Qualitative methods allows monitoring citizens' emotions, their reactions to road pricing, and changes of opinions when issues are analysed from multiple points of view. The outcomes highlight the importance of using alternative methods when pricing issues are investigated.

REFERENCES

Bielefeldt, C. (ed) (2004). *Social and Political Issues*. Deliverable D4.3 of the PRoGRESS Project, Competitive and Sustainable Growth Programme, European Commission.

Bird, J. and Vigor, A. (2006). *Charging Forward: A review of public attitudes towards road pricing in the UK*. London: Institute for Public Policy Research.

Button, K. (1995). Road pricing as an instrument in traffic management. In: Johansson, B., Mattsson, L.G., (Eds.). Road pricing: Theory, Empirical Assessment and Policy. Kluwer Academic Publisher: Boston, MA.

De Groot, J. I. M. and Steg, L. (2006). The role of value orientations in evaluating quality of life consequences of a transport pricing policy. Transportation Research Part D: Transport and Environment, Vol. 11, Issue 2, pp. 160-165

Eliasson, J., Mattsson, L. (2006). Equity effects of congestion pricing. Quantitative methodology and a case study for Stockholm. Transportation Research Part A, 40, pp. 602–620.

Harrington, W., Krupnick, A.J., Alberini, A., (2001). Overcoming public aversion to congestion pricing. Transportation Research Part A, 35, pp. 87–105.

Jakobsson, C., Fujii, S., Gärling, T. (2000). Determinants of private car users' acceptance of road pricing, Transport Policy, 7, pp. 153–158.

Jansson, J. O., (2008). Public transport policy for central-city travel in the light of recent experiences of congestion charging, Research in Transportation Economics 22, pp. 179–187.

Jones, P. (1992). Review of available evidence on public reactions to road pricing, Report to London Transportation Unit. Department of Transport.

Karlström, A. and Franklin, J. P. (2009). Behavioral adjustments and equity effects of congestion pricing: Analysis of morning commutes during the Stockholm Trial. Transportation Research Part A, 43: pp 283–296.

Krueger, R. A., and M. A. Casey (2000). Focus Group. A practical guide for applied research. 3rd edition. Sage Publication, London.

Langmyhr, T. (1997). Managing equity. The case of road pricing. Transport Policy, Vol. 4, No. I, pp. 25-39.

Larsen, O. (1995). The toll cordons in Norway: an overview. Journal of Transport Geography Vol. 3 (3), pp. 187-197.

Lauridsen, H. (2011). The impacts of road tolling: A review of Norwegian experience. Transport Policy, 18, pp. 85–91.

Lindberg, G. (1995). Road pricing: policy and options for the future. In: Johansson, B., Mattson, L.-G. (Eds.). Road Pricing: Theory, Empirical Assessment and Policy, Kluwer, Boston, pp. 205–221.

May, A.D., Koh, A., Blackledge, D., Fioretto, M. (2010). Overcoming the barriers to implementing urban road user charging schemes. European Transport Research Review, 2:53–68.

Musselwhite, C.B.A. and Lyons, G. (2009). Exploring the public acceptability of road pricing. Proceedings of the 41st Universities Transport Study Group Conference, University College London, January.

Odecka, J., Brathenb, S. (2002). Toll financing in Norway: The success, the failures and perspectives for the future. Transport Policy, 9, pp. 253–260.

Santos, G. and Rojey, L. (2004). Distributional impacts of road pricing: The truth behind the myth. Transportation 31: pp. 21–42.

Schlag, B., Teubel, U. (1997). Public acceptability of transport pricing. IATSS Research 21, pp. 134–142.

Sheldon, R., Scott, M., Jones, P. (1993). London congestion charging: exploratory social research among London residents. Paper presented at the 21st PTRC Summer Annual Meeting. In: Proceedings of Seminar F, PTRC Education and Research Services, Glenthorne House, Hammersmith Grove, London W4, pp. 129–145.

Vägverket (2002). Road pricing in urban areas, *Vägverket*, available at: www.transport-pricing.net/download/swedishreport.pdf.

Vickrey, W.S. (1963). Pricing in urban and suburban transport. American Economic Review, Papers and Proceedings 53, pp. 452-465.

Viegas, J.M. (2001). Making urban road pricing acceptable and effective: searching for quality and equity in urban mobility. Transport Policy, 8, pp. 289-294.

Zammuner, V. (2003). I Focus Group, Il Mulino, Bologna.

Annex : Main socio-economical characteristics and trip habits of the participants

Name	Sex	Age	Education	Occupation	Income level	People in the HH	Children in the HH	The most frequent trip				
								Time spent	Scope	Mode used	Household (Origin)	Most frequent destination
Michael G.	M	33	UD	High level	3	2	No	20	Work	PT	Villeurbanne	Lyon - 3
Alexandra	F	32	HSD + 2/3 y.	Employee	2	2	No	12	Work	Only on foot	Villeurbanne	Villeurbanne
Antoine	M	19	HSD	Internship	1	1	No	20	Work	PT	Lyon - 6	Rillieux-la-Pape
Amélie	F	20	HSD	Student	ND	1	No	8	Study	Only on foot	Lyon - 8	Lyon - 8
Aysel	F	27	HSD + 2/3 y.	Employee	2	2	No	45	Work	PT	Lyon - 9	Vaulx-en-Velin
Sophie R.	F	27	UD	Student	1	1	No	30	Leisure	PT	Lyon - 7	Lyon - 6 / Lyon - 1
Ariane	F	52	HSD	High level	4	> = 4	Yes, 19 and 14 y.o.	27	Work	Car	Oullins	Bron
Dalila	F	37	UD	High level	ND	2	No	20	Work	PT (SS) / Car (AW)	Villeurbanne	Villeurbanne
Virginie	F	43	HSD	Employee	2	2	No	15	Work	Only on foot (SS) / PT (AW)	Lyon - 8	Lyon - 8
Christelle	F	44	PT	Employee	1	2	Yes, 15 y.o.	20	Work	PT	Villeurbanne	Lyon - 7
Aysun	F	25	HSD + 2/3 y.	Employee	1	1	No	30	Work	PT + On foot	Villeurbanne	Villeurbanne
Guillaume	M	23	UD	Student	3	> = 4	No	20	Study	Bike (SS) / PT (AW)	Lyon - 3	Lyon - 7
Svein	M	55	UD	High level	3	2	No	70	Work	Car	Brindas	Lyon - 7
Pierre	M	23	UD	Student	1	1	No	30	Study	PT	Lyon - 6	Lyon - 1
Marie Chantal	F	54	HSD	High level	1	1	No	25	Work	PT	Lyon - 3	Lyon - 1
Lahssen	M	58	UD	High level	ND	2	No	20	Work	PT	Villeurbanne	Villeurbanne
Gilles	M	66	PT	Retired	3	2	No	17	Leisure	Car	Lyon - 7	Lyon - 6
Julia	F	22	UD	Student	3	3	No	15	Study	Only on foot	Lyon - 3	Lyon - 7
Nicole	F	61	HSD + 2/3 y.	High level	3	2	No	15	Work	Car	Morancé	Anse
Camille	F	43	HSD + 2/3 y.	High level	1	1	No	15	Achats	Only on foot (SS) / PT (AW)	Lyon - 5	Lyon - 1
Erna	F	64	UD	Retired	4	2	No	30	Pick up / drop s.o.	Car	Lyon - 3	Villeurbanne
Frédéric H.	M	31	UD	Unemployed	2	2	No	25	Study	Bike	Villeurbanne	Lyon - 7
Thierry	M	56	UD	High level	4	> = 4	Yes, 19 and 14 y.o.	20	Work	Car	Oullins	Tassin-la-Demi-Lune
Remy	M	50	UD	High level	4	1	No	35	Work	Car	Brindas	Lyon - 7

Michel R.	M	61	UD	Entrepreneur	4	2	No	20	Work	Car	Brindas	Saint-Martin-en-Haut
Francine	F	56	UD	High level	ND	2	Yes, 23 y.o.	45	Work	Car	Brindas	Lyon - 7
Cécile	F	37	UD	High level	2	> = 4	Yes, 8 y.o. and twins of 6 y.o.	60	Work	Car	Brindas	Lyon - 9
Michel W.	M	65	UD	Retired	4	2	No	40	Voluntary work	Car	Brindas	Lyon - 2
Michael H.	M	62	No certificate	High level	3	2	No	45	Work	Car	Brindas	Lyon - 7
Myrose	F	65	HSD + 2/3 y.	Association manager	ND	2	No	50	Voluntary work	Car	Brindas	Lyon - 1
Mélissa	F	20	HSD + 2/3 y.	Student	1	2	No	15	Study	Bike (SS) / Only on foot (AW)	Lyon - 3	Lyon - 8
Françoise	F	65	PhD	Retired	1	1	No	20	Leisure	Car	Tassin-la-Demi-Lune	Chaponost
Christian	M	44	PhD	Associate Professor	1	1	No	75	Work	Car + PT + On foot	Messimy	Lyon - 5
Flora	F	54	HSD + 2/3 y.	High level	2	1	No	25	Work	PT	Vénissieux	Lyon - 7
Gabriel	M	38	HSD + 2/3 y.	High level	4	> = 4	Yes, 11, 9 and 6 y.o.	10	Work	Two-wheelers	Oullins	Lyon - 7
Sophie P.	F	26	UD	High shool teacher	2	1	No	30	Work	Car	Brignais	Lyon - 5
Jacques	M	64	UD	Retired	4	2	No	30	Voluntary work	Two-wheelers (SS) / Car (AW)	Charbonnières	Lyon - 7
Colette	F	68	HSD + 2/3 y.	Retired	3	ND	No	40	Pick up / drop s.o.	PT	Lyon - 6	Lyon - 5
François	M	63	HSD + 2/3 y.	Retired	1	1	No	30	Leisure	PT	Lyon - 5	Lyon - 1
Estelle	F	33	UD	Employee	3	3	Yes, 8 months	25	Work	Car	Lyon - 1er	Villeurbanne
Loic	M	27	HSD + 2/3 y.	Worker	2	1	No	45	Work	Car	Lyon - 9	Lyon - 7
Regis	M	39	HSD + 2/3 y.	Employee	2	1	No	25	Work	Car	Saint Fons	Lyon - 1
Anthony	M	28	HSD	Entrepreneur	3	2	No	25	Work	Car	Sainte Foy Les Lyon	Lyon - 8
Malika	F	56	UD	High level	2	2	No	30	Work	Car	Lyon - 7	Villeurbanne
Eric	M	51	HSD	Employee	3	3	Yes, 21 y.o.	-0	Work	Car	Chonas-l'Amballan	Lyon - 6
Nadira	F	42	HSD + 2/3 y.	Employee	1	> = 4	Yes, 16, 14 and 10 y.o.	15	Work	Car	Bron	Villeurbanne
Richard	M	29	UD	High level	4	> = 4	Yes, 2 and 1 y.o.	25	Work	Car	Lyon - 9	Lyon - 3

Franck	M	45	PT	Intermediate occupation	3	> = 4	Yes, 15 and 11 y.o.	60	Work	Car	Dommartin	Lyon - 3
Julien	M	25	No certificate	Employee	3	3	No	25	Work	Car	Lyon - 5	Lyon - 3
Marylene	F	59	HSD	Intermediate occupation	2	1	No	20	Work	Car	Lyon - 5	Lyon - 1
Mickael G.	M	27	HSD + 2/3 y.	High level	3	2	No	40	Work	Car	Givors	Lyon - 3
Ana	F	36	HSD	Employee	2	> = 4	Yes, 13 and 10 y.o.	25	Work	Car	Lyon - 3	Lyon - 9
Aurélien	M	33	UD	High level	3	> = 4	Yes, twins of 20 months	35	Work	Car + PT + On foot	Chassieu	Lyon - 3
Bernard	M	54	PT	Employee	2	2	No	20	Work	Regional Train	Oullins	Lyon - 7
Deborah	F	26	HSD + 2/3 y.	Employee	2	1	No	30	Work	Car	Villeurbanne	Lyon - 9
Gaëlle	F	30	HSD	Employee	2	> = 4	Yes, 8, 6 and 3 y.o.	10	Work	Car	Lyon - 3	Villeurbanne
Cyrille	M	32	HSD + 2/3 y.	High level	3	3	Yes, 11 months	20	Work	Car	Lyon - 9	Lyon - 3
Pierre-Yves	M	46	No certificate	High level	3	> = 4	Yes, 20 and 15 y.o.	30	Work	Car	La Mulatière	Lyon - 3
Frédéric P.	M	38	UD	Employee	2	1	No	30	Work	Car	Lyon - 4	Villeurbanne
Marie-Françoise	F	46	UD	Employee	ND	> = 4	Yes, 16 and 14 y.o.	5	Work	Car	Saint Cyr au Mont d'Or	Lyon - 9
Yves	M	52	HSD	Employee	4	> = 4	Yes, 21 and 19 y.o.	45	Work	Car	Tassin-la-Demi-Lune	Lyon - 8

Notes:

Education : No certificate ; PT stands for "Professional Training" ; HSD stands for "High School Diploma" ; HSD + 2/3 y. stands for "High School Diploma + 2/3 years" ; UD stands for "University Degree (min. 4 years of University studies)" ; PhD.

Income level: 1 stands for "< 1500 €/month" ; 2 stands for "1500 to 3000 €/month" ; 3 stands for "3000 to 5000 €/month" ; 4 stands for "> 5000 €/month".

Mode used: SS stands for "Spring-Summer" ; FW stands for "Autumn-Winter". When "On foot" is specified within a trip chain, it means that the respondent makes a significant leg on foot (more than 300 metres).

NB: The participants are listed according to the Focus Group to which they took part.