

# Analysis of influencing factors on attitudes towards environmental and transport policy

## A cross-sectional analysis for eight European cities

Katharina Sammer, University of St. Gallen, Institute for Economy and the Environment

---

### 1. SYNOPSIS

---

This paper represents an analysis to identify the influencing factors on attitudes towards environmental and transport policy on the basis of a cross-sectional international analysis.

---

### 2. ABSTRACT

---

The success of measures in local transport policy does not only depend on the technical quality of these measures themselves but is also dependent on the political acceptance of all involved “stakeholders” of the transport policy. These stakeholders are local citizens, politicians, local tradesmen, traffic experts and journalists. All of them must be regarded as being involved in and/or concerned with local transport policy. Therefore the stakeholders influence each other more or less in their attitude identification. For example the politicians are dependent on the citizen for re-election in their decision-making.

The important question arises what are the main influencing factors of the stakeholders’ attitudes? In the course of a statistical cross-section analysis on the databases of eight European cities (in and outside of the European Union) the influencing parameters were tried to be identified. The examined cities differ in their level of development regarding traffic, environment, economy etc. (e.g. environmental standards, tempo-limit, income, etc.) and therefore give sufficient input at potential influencing factors. Based on the knowledge of the main influencing factors more successful instruments and strategies (“soft policies”) to achieve a higher acceptance for sustainable and environmental-friendly, but not often very popular transport plans could be developed.

---

### 3. PURPOSE OF ATTITUDE ANALYSES IN ENVIRONMENTAL POLICY (TRAFFIC POLICY)

---

“Transport is one sector of the economy in which almost everything has gone wrong; previous transport policy has resulted in too much pollution, too much congestion, too much investment in profitable roads, too little investment in public transport and planning decisions being taken on the basis of misleading price signals”. (MADDISON, 1996)

Traffic problems are a constituent of the ecological crisis, in which we are today. The ecological crisis consists of the fact that so far no effective solutions could be transferred for the environmental problems (traffic problems) occurring at present. This is not only because of the lack of technical solutions and financial means. In the increasing extent the solution of traffic problems depends on the stakeholders’ acceptance of the transport policy. The following groups are usually understood as the stakeholders of the local traffic policy:

- Citizens
- Politicians
- Journalists
- Businessmen, economic representatives, tradesmen
- Traffic planners, transport experts.

All participants are beneficiaries of means of transport and also victims of negative environmental and other effects of traffic (in different extent). The stakeholders differ in their type of influence on traffic policy. Traffic experts develop traffic measures. The implementation of these measures is situated in the hand of the politicians.

The politicians are influenced by the citizens in their decision making (voter opinion). Further journalists as well as businessmen and economic representatives and lobbies intervene as “opinion-maker” directly or indirectly in the local transport policy.

Naturally there are existing traffic measures, which contribute to the protection of the environment. However the long-term damage to the ecological environment increases.

Therefore it seems to be useful to exhaust all possibilities for an environmental friendly traffic policy. It is often overlooked that the ecological crisis or traffic problems exist because of human behaviour. Thus Maloney and Ward already call the ecological crisis 1974 “crisis of maladaptive behaviour”. Devall speaks later of a “crisis of the culture“ (compare KALS, 1996). Public awareness modifications are necessary for the solution of environmental or traffic problems besides technological solutions. Four levels of the awareness-building-process from problem awareness to acting can be identified (so called “**Four-Steps-Theory**”). These four steps are (SAMMER *et al.*, 1999):

**Problem awareness:** Being aware that a general problem “traffic and environment“ exists (**detecting the problem**).

**General readiness for actions:** Having the opinion that the problem should be solved (so called “**passive collective acceptance**”; it concerns me only a little, but I agree that it should be solved).

**Personal intention to act:** Having the intention to contribute personally to the solution (“**individual acceptance**“). It is still another further step necessary to be ready to act personally.

**Personal acting (actual behaviour):** The intentions are transferred into real action, e.g.: A politician does not only give “Sunday speeches” but supplies a budget for the bicycle traffic; A road user transfers from the car to the bicycle.

For achieving a specific awareness-step it is necessary to achieve the preceding one but not sufficient. It represents the potential for the next level. Usually the share of the persons, who behave accordingly the predicates of a level, decreases at a higher awareness-level. From detecting a problem up to concrete behaviour it is a far way especially in the environmental or traffic sector.

Environmental responsible acting cannot be inserted into existing behaviour patterns, but is realisable mostly only by modifications and restrictions in the used way of life (HALLER & GOMILSCHAK, 1996).

Whether the participants of the traffic policy will pass through these four steps, can depend on many factors:

- How are people aware of traffic problems?
- Are the traffic political measures plausible, obvious and necessary?
- How much expenditure (cash, time, money etc...) does a behavioural modification cause?
- How is the status of information and awareness to the economic and ecological subsequent effects of traffic?
- Are there action-alternatives for a behavioural modification available? For example: attractive public means of transport, which can replace the car.
- How are the opinions of the different participants of the traffic policy (citizens, politicians, tradesmen, traffic experts, journalists)? Do their opinions correspond or diverge? How “popular“ is the traffic political measure?

So that people behave “environmentally consciously” and accept environmental traffic measures (with restrictive effects), these people must be motivated to pass through the steps of the awareness-building-process. Transport measures should therefore be supported with awareness-forming measures (“soft policies“). These measures should be differently conceived depending upon the level of the people. The prerequisite to design such measures is the “**knowledge of the market**” (the level of awareness of the participants of the traffic policy).

This Paper tries to present the “knowledge of the market“ of 8 European cities on the basis of two studies (SAMMER, G. *et al.*: *Einstellung zur städtischen Verkehrspolitik ein Verleich von je vier Städten innerhalb und ausserhalb der EU*; SAMMER, K. *Analyse von Einflussgrössen auf die umwelt- und verkehrspolitische Einstellung im internationalen Vergleich*.). Therefore a basis for the creation of suitable “soft policies” will be given in this paper.

---

#### 4. DATA BASE OF ANALYSIS

---

In 1998 and 1999 the attitudes towards local transport policy was surveyed for eight European cities. Four of these cities are situated within the EU (Como, Volos, Wiener Neustadt, York), four are situated outside of the EU (Bratislava, Győr, Krakow, Maribor). The used questionnaire was divided into three groups of questions which consider the following levels of the awareness-building-process: Importance of city political targets

(problem awareness), importance of local transport policy targets (general action readiness), importance of traffic measures (personal action intention). One question is a matter of step four, the actual behaviour (Which transport mode did you use last working day?).

Altogether this data-set includes the attitudes towards 31 different urban and transport policy goals and measures for the following groups of local stakeholders: citizens, politicians tradesmen, transportplanning experts and journalists. The total sample covered about 1500 persons.

---

## 5. METHODOLOGICAL APPROACH

---

### Factor analysis

For each of the three groups of questions (A: problem awareness, B: general action readiness, C: personal action intention) a factor analysis was executed, both over the total sample and over the individual cities. Thus questions of same dimension should be summarised. With those questions, which fit well, a sum index is formed.

### Regression analysis

The main-question of this study is: Which factors influence the attitudes towards local transport policy? For this type of question a stepwise regression analysis is recommended. A linear and non-linear multiple regression analysis is used to test the hypothesis. By means of the regression analysis the dependency of a variable  $y$  (the attitude) on other independent variables is examined.

Multiple linear regression-function:  $y = b_0 + b_1x_1 + b_2x_2... + b_ix_i$

$y$  dependent (endogenous) variable

$b_0$  constant

$b_i$  regression coefficients

$x_i$  independent (exogenous) variables of attitude

$i$  1,2,3...  $i$  (Index of exogenous variables, which were detected as significant by the stepwise regression analysis)

### Variables

- The dependent (endogenous) variable  $y$
- The examined endogenous variables are represented by sum indices (factors of the factor analysis) and by individual questions of the three groups of questions.
- The independent (exogenous) variables
- These are mainly represented by two large groups of variables: sociodemographic variables and context or situation variables. The sociodemographic variables are divided into individual sociodemographic variables (sex, age, ...) and transport-behavioural-relevant variables (driving-licence-ownership, car ownership, ...). The context or situation variables are divided into city-specific (number of inhabitants in the city, number of cars per 1000 inhabitants, ...) and country-specific variables (per capita gross national product, religion, ...). The attitude of a person depends on personal influences just like the surrounding environment. Further in the analysis step-theoretical and group-specific attitude-variables are considered. Step-theoretical variables are influencing factors from a group of questions of a lower awareness-level. This type of variables should partly represent the Level-Theory; example: Someone who generally agrees the restriction of the motor traffic (passive collective acceptance), will also tend to accept concrete traffic measures with restrictive effects on the motor traffic (individual acceptance). Group-specific attitude-variables represent the influence of the status of a group of the stakeholders (The variables are formed by the means of the examined attitude according to person's group and city affiliation). Thereby the mutual influence of the stakeholders of the traffic policy in their attitude-identification can be determined.

Into the analysis only dichotome nominal scaled variables may be referred. Therefore more highly scaled variables had to be transformed into dummy variables.

## 6. INFLUENCING FACTORS TOWARDS THE ATTITUDE TO THE “PROMOTION OF ALTERNATIVE MEANS OF TRANSPORT AND RESTRICTION OF THE MOTOR TRAFFIC” - AN EXAMPLE

The attitude towards the “*Promotion of the alternative means of transport (bicycle, pedestrian, public traffic) and the restriction of motor traffic*” represents an attitude dimension of the second question block (General readiness to act - passive collective acceptance). This dimension is the sum index of the following variables: (B1: Energy-saving measures are crucial points in transport-planning in our city; B3: It is important to support the use of public transport in our city; B4: It is important to support walking in our city; B5: It is important to support cycling in our city; B8: If there is a conflict between pedestrians and car-traffic, pedestrians should get priority; B9: If there is a conflict between bicycle-traffic and car-traffic, cyclists should get priority).

A multiple linear regression analysis is executed over all cities (with exception of Como due to an unsatisfactory data record for this specific analysis) and separately of the surveyed person’s groups (local citizens, politicians, local tradesmen, traffic experts, journalists). The sum index is used as dependent variable. The independent variables are represented by the individual sociodemographic, transport-behavioural-relevant, city-specific and country-specific variables. As step-theoretical variable serves the sum index “*Reduction of the negative effects by traffic*”. This is an attitude-dimension of question block A (Problem awareness) and includes the following items: (A1: How important is it to improve the environmental conditions caused by traffic in our city; A4: How important is it to reduce the energy-consumption caused by traffic in our city; A6: How important is it to reduce the level of air-pollution caused by traffic in our city; A7: How important is it to reduce the level of noise caused by traffic in our city; A8: How important is it to reduce the number of traffic-accidents and improve traffic safety for pedestrians and cyclists in the city). Due to the regression analysis separately to person’s group the group-specific variable can be used. The attitude towards the “*Promotion of the alternative means of transport and the restriction of motor traffic*” was calculated as mean of the regarded person’s group and city-affiliation.

The descriptive results of the sumindex “*Promotion of the alternative means of transport (bicycle, pedestrian, public traffic) and the restriction of motor traffic*” can be seen in table 1 and graph 1.

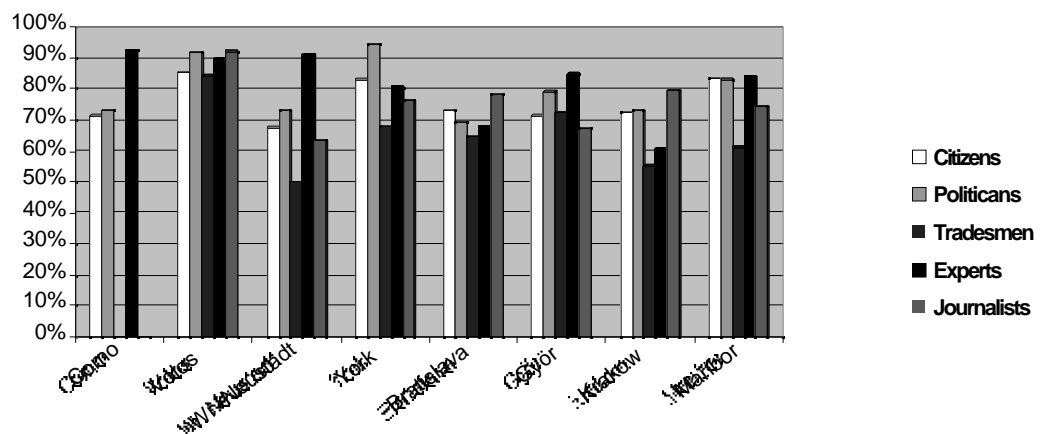
Within the cities Volos, York and Maribor indicate particularly high agreement-rates. Women are generally more environmentally consciously. In York exists no difference between the sexes. Car owners have definitely lower agreement rates than persons without a car. Among the stakeholders the politicians are more positively minded towards the “*Promotion of the alternative means of transport (bicycle, pedestrian, public traffic) and the restriction of motor traffic*” than the citizens. This fact is valid especially for the EU-cities. Tradesmen of all surveyed cities have lower agreement-rates. A very high level of agreement show the experts with exception of the experts of York and Krakow. Journalists in Volos, Bratislava and Krakow have high agreement rates, in the remaining cities the rates of agreement are below the agreement rates of the citizens.

**Table 1. Sum index “Promotion of alternative means of transport and restriction of the motor traffic”  
Average rates of agreement within eight cities**

Degree of agreement (M) in per cent		EU-Cities				Non-EU-Cities			
		Como	Volos	Wr. Neustadt	York	Bratislava	Győr	Krakow	Maribor
Sample size (N)									
All persons questioned	M(%)	72,5%	85,9%	67,7%	82,4%	72,5%	72,5%	70,3%	81,4%
	N	100	136	366	90	196	201	196	165
Men	M(%)	-	83,1%	65,8%	82,7%	71,5%	69,3%	69,3%	79,8%
	N	-	68	186	47	111	121	110	101
Women	M(%)	-	88,7%	69,8%	82,1%	73,7%	77,3%	71,6%	83,8%
	N	-	68	180	43	85	80	86	64
Car owner	M(%)	-	82,33%	65,7%	81,0%	71,0%	70,6%	63,6%	80,4%
	N	-	74	265	72	90	104	111	133
Without car	M(%)	-	90,1%	73,0%	87,9%	73,8%	74,6%	79,1%	85,5%
	N	-	61	100	18	106	97	85	32
Citizens	M(%)	71,6%	85,3%	67,7%	83,1%	73,3%	71,5%	72,6%	83,3%
	N	91	110	317	70	147	158	150	124
Politicians	M(%)	73,0%	91,7%	73,2%	94,5%	69,1%	79,3%	73,0%	83,1%
	N	5	6	26	5	8	10	10	9

Degree of agreement (M) in per cent		EU-Cities				Non-EU-Cities			
		Como	Volos	Wr. Neustadt	York	Bratislava	Győr	Krakow	Maribor
Sample size (N)									
Tradesmen	M(%)	-	84,3%	49,8%	68,0%	64,8%	72,3%	55,5%	61,2%
	N	-	10	12	5	23	20	21	13
Experts	M(%)	92,5%	90,0%	91,0%	80,5%	76,9%	85,0%	60,8%	83,9%
	N	4	5	5	5	12	9	10	14
Journalists	M(%)	-	92,0%	63,3%	76,5%	78,3%	67,5%	79,5%	74,5%
	N	-	5	6	5	6	4	5	5

Figure 1. Average rates of agreement of the “Promotion of alternative means of transport and restriction of the motor traffic” within eight cities divided into the type of stakeholders



### Influencing factors towards the attitudes of the local citizens

Table 2 shows the results of the linear multiple (stepwise) regression analysis. Eleven exogenous variables are significant. The proportion of the explained variance to the total variance amounts  $R^2 = 0,42$ .

- The step-theoretical variable is responsible for the relatively high explanation value. The “Four-Step-Theory” is supported thereby. The general attitude influences the attitude to more concrete questions of the same problem.
- The attitude of the citizens is substantially influenced by so-called opinion-leaders, the politicians. However the personal attitude of the journalists, traffic experts and tradesmen does not exert an influence on the local citizens. The attitude of traffic experts and tradesmen find apparently no expression in the public discussion. Journalists often write their articles by adapting to the newspaper line, these articles must not correspond to their personal attitudes. This interpretation is acknowledged also in specialised literature (SAMMER *et al.*, 1992).
- A substantial influence on the attitude of the citizens have the traffic-behavioural-relevant variables: car owners have an agreement level that is around five per cent lower towards the “Promotion of the alternative means of transport and the restriction of motor traffic”. Bicycle owners have an agreement around four per cent more positive. Frequent car users have a lower agreement rate towards this statement. While people who have used public means of transport on the last working-day before questioning have a around three per cent higher attitude towards the “Promotion of the alternative means of transport also at the expense of motor traffic”. This result is plausible. It can be seen that given action alternatives (ownership of a motor vehicle, etc.) and actual behaviour (using public transport on the day before questioning, etc.) strongly influence the attitude.
- Unemployment influences the result in two different ways. Country-specific unemployment increases the agreement towards the attitude to the “Promotion of the alternative means of transport and the restriction of motor traffic”, while personal unemployment (represented by a dummy variable) reduces the agreement by seven per cent. This result contradicting in the first view can be interpreted as follows: The country-specific unemployment stands for a social standard, a higher unemployment rate causes lower prosperity and

generally promotes the support of alternative means of transport. The negative attitude of the unemployed offers the following interpretation: Motor traffic is identified with a flourished economy, therefore an unemployed person would not support a restriction of the motor traffic.

- The city-specific variable of modal split (share of trips of non motorised transport) has an large influence on the attitude to the “*Promotion of the alternative means of transport and the restriction of motor traffic*”. This result is superficially not plausible, permits however the following interpretation: This variable describes the general frequency of use and concomitantly the quality of the infrastructure for non-motorised traffic on the level of the individual cities. With increasing quality for the non-motorised traffic within the cities the agreement towards the “*Promotion of the alternative means of transport and the restriction of motor traffic*” decreases, because the necessity becomes lower due to the already existing quality.
- The climatic variable (annual number of days with precipitation) has a significant influence. In cities with many rainy days per year, the car is appreciated as comfortable means of transport. The renunciation of the car is more difficult therefore traffic measures that limit the motor traffic are rejected.

**Table 2. Influencing factors of the attitude towards the “*Promotion of alternative means of transport (bicycle, pedestrian, public traffic) and the restriction of the motor traffic*”**

Dependent Variable: “Promotion of alternative means of transport (bicycle, pedestrian, public traffic) also at the expense of the motor traffic“				
Independent Variables	B	Std. Error	Beta	Sig.
<b>Individual sociodemographic variables</b>				
Occupation (Dummy: unemployed = 1)	-6,86	2,65	-0,06	0,010
<b>Traffic-behavioural-relevant variables</b>				
Car owner (Dummy: yes = 1)	-5,54	1,05	-0,14	0,000
Bicycle owner (Dummy: yes = 1)	4,07	1,10	0,09	0,000
Used means of transport on the last working-day before questioning (Dummy: car passenger = 1)	-2,81	1,30	-0,05	0,031
Used means of transport on the last working-day before questioning (Dummy: citybus = 1)	3,36	1,24	0,08	0,007
Used means of transport on the last working-day before questioning (Dummy: regional means of transport = 1)	3,25	1,51	0,06	0,031
<b>City-specific variables</b>				
Modal Split/proportion of trips without motorised means of transport	-1,09	0,21	-0,35	0,000
Number of days with precipitation per year	-0,03	0,01	-0,12	0,002
<b>Country-specific variables</b>				
Unemployment rate within the countries (%)	1,85	0,29	0,29	0,000
<b>Step-theoretical variables</b>				
Sum index, “Reduction of the negative effects by traffic“ (questionblock 1)	0,50	0,03	0,49	0,000
<b>Group-specific variables</b>				
_ Attitude of the politicians to the „Promotion of alternative means of transport“ in the different cities	0,81	0,10	0,33	0,000
Total sample: N = 996 questioned citizens				
The total sample includes the following seven cities: Volos, Wiener Neustadt, York, Bratislava, Győr, Krakow, Maribor. Como is excluded due to partly missing variables				
R = 0,65				
R <sup>2</sup> = 0,42				
F = 63,82				

(Multiple linear Regression; Method: stepwise; With the occurrence of a missing value of the analysed variables the entire case is excluded.)

### **Influencing factors towards the attitudes of the other stakeholders**

This kind of regression analysis has been also executed for the other stakeholders (politicians, tradesmen, experts, journalists). The most important points are summarised very briefly: For all four stakeholders the group-specific variable has the most significant influence on the attitude towards the “*Promotion of the alternative means of transport and the restriction of motor traffic*”. The local citizens have an influence on the attitude of the politicians. The influence is therefore mutual. This connection can be explained by the existing political system of the analysed cities- the democracy: Politicians represent the people. Politicians who used the car as passenger at the last working day before questioning have a three per cent lower agreement level. Tradesmen, journalists and experts are not influenced by the other stakeholders. In this question they seem to form their attitudes independently. These three groups do not influence other stakeholders. In the analysis of the tradesmen the variable Modal split/proportion of trips without motorised traffic has a positive influence on the attitude towards the “*Promotion of the alternative means of transport and the restriction of motor traffic*”. Apparently tradesmen accept these kinds of measures in cities with a high proportion of trips without motorised traffic more likely because they do not have to be frightened that people would not go shopping anymore by restricting the car traffic. Traffic experts are influenced by the size of the city (number of inhabitants), which represents their working-environment. Traffic experts from larger cities have a lower agreement rate to the “*Promotion of the alternative means of transport and the restriction of motor traffic*” than traffic experts from smaller cities. This is a result which a plausible explanation cannot be found for.

---

## **7. CONCLUSIONS**

---

### **Dimensions of attitudes towards the local transport policy - Results of the factor analyses**

Due to the factor analyses for all three question blocks (over the total sample and over the individual cities) the following conclusion can be drawn:

- Differentiated view of „alternative“ means of transport  
The bicycle, public transport and the locomotion on foot belong to “alternative” means of transport. The environmentally friendly mobility is common to them. However within the factor analyses it turns out that the attitudes towards the three means of transport do not represent a perfectly common dimension. The bicycle and pedestrian traffic can be summarised well concerning the attitudes towards the promotion of these means of transport. The attitude towards public traffic forms an extra dimension. That can be put down to the fact of the weather-dependent, sporty and health-promoting component of the bicycle and pedestrian traffic. This has important consequences for the decision makers of transport policy that means: an agreement of the population to supportive measures of public traffic does not mean an agreement to supportive measures of bicycle and pedestrian traffic simultaneously.
- Promotion of a type of means of transport with or without restriction of another means of transport  
Within the determined factors (dimensions) it was clearly differentiated whether it concerns a pure supportive measure for a single mean of transport (e.g.: It is important for the City XY to improve the quality of public transport.) or whether restrictive consequences for additional mean of transport is connected with this supportive measure a (e.g.: In conflict between public traffic and motor traffic at traffic lights public transport should be privileged). Pure supportive measures have as expected a much higher acceptance within the population. Therefore the consequences that will occur by the implementation of specific traffic measures should be checked carefully.

### **Influencing factors**

The following variables influence the attitude towards the local transport policy:

- The influencing individual sociodemographic variables:  
Sex: Women have a more positive attitude towards the “*Reduction of the negative impacts of traffic*“ than men. There is also a higher agreement-rate of women to “*Improvements of car-traffic conditions*“ . In the first moment this result is surprising, that in the second case men have a more environmental-friendly attitude than women. A possible interpretation could be that both, but women in a stronger way, do not connect the measures of improvement of car-traffic conditions with negative increasing negative impacts caused by traffic.  
Age: With advancing age the agreement towards environmental-friendly traffic-measures increases. This applies especially for traffic measures concerning the promotion of public transport.

The degree of education has a positive influence on the attitude. This fact has been confirmed in the analysis several times. A person with high degree of education has a more ecologically desirable attitude. However these persons generally live on a higher prosperity-level, which includes the ownership of a car and an occupation with high mobility level. The variable car-ownership will equate the high environmental-friendly attitude. For these persons the existence of alternative transport possibilities is very important.

The variable “type of stakeholder of the traffic policy” influences the attitude. The citizens have a higher environmental awareness and also a higher individual readiness to act than the other stakeholders of the local transport policy. Traffic experts and surprisingly also the politicians see the solution of traffic problems not in a further promotion of the motor traffic but in a restriction. Tradesmen have a significantly lower problem awareness to traffic and environmental problems than the other stakeholders. They have a high agreement rate towards the promotion of the motor traffic. The group of journalists did not significantly exert an influence on the attitude. (These variables have been dummy variables, they should not be mixed up with the group-specific variables).

Concerning the family status it turned out that among unmarried persons a lower problem awareness of environmental and traffic problems exists. The dummy variable “unmarried” is the only variable of variables of the family status (unmarried, married, divorced, widowed) that influences the attitude.

Within the type of the professional activity only the variable ‘student’ has an influence: they are negatively minded towards an environmental-friendly transport policy. Apparently the attraction of the car outweighs the assumed higher environmental awareness due to the higher education degree.

- The influencing transport-behavioural-relevant variables

The ownership of vehicle (auto, bicycle, etc.) and the appropriate driving licence exerts a strong influence on the attitude. This influence always works toward a promotion of the relevant type of means of transport. For example car owners and persons with a driving licence agree to a greater extent with the promotion of motor traffic.

The influence of the personal behaviour in traffic on the attitude is particularly pronounced. The means of transport use is represented in almost each executed regression analysis as influence-taking factor. The use of certain means of transport promotes the acceptance of supporting measures and the refusal of restrictions of this mean of transport. Behaviour influences the attitude and inversely.

- The influencing city-specific variables

The local situation have an influence on the attitude towards environmental and traffic problems. Apart from a general trend of the attitude on European and national level there is also a local characteristic. Transport policy can be thus also city-specifically influenced.

Bratislava and Győr also possess a comparatively car-oriented attitude, which can be explained by a pent-up demand within the two Non-EU-cities. In Krakow there is demand for a public-transport promotion. York stands up for restriction of the motor traffic. This city (a tourist city) is well-known because of its environmental-friendly transport policy.

The number of inhabitants as indicator for the city size has a low influence on the attitude towards transport policy.

The existing local transport behaviour influences the attitude toward environmental and traffic problems. These variables are however in competition to the traffic-behavioural-relevant variables, which represents the actual use of means of transport of the asked persons. Therefore the connection is not always unambiguous.

The two climatic variables (annual precipitation frequency and average annual minimum temperature) show that in cities with much precipitation and lower temperatures the renunciation of the car will be found more difficult. Therefore measures, which limit the use of the car will be rejected more likely.

- The influencing country-specific variables

The denomination in the countries/cities were identified as significant variables. With a high proportion of both the roman catholic and the protestant population the agreement rate to environmental-friendly aspects is lower.

Only in one case the unemployment rate turned out to be a significant measured variable. The higher the unemployment rate in a country is, the more strongly the promotion of alternative means of transport will be supported. The individual unemployed variable act in opposite direction, a restriction of the motor traffic faces an unemployed person more negatively.

- The influencing step-theoretical variables

The step-theoretical variables inserted into question block B and C (higher levels of awareness) were detected as dominant influencing factor in all regression analyses. The extent of the explained variance could be strongly increased by it. The level theory is supported thereby.



- The group-specific variables  
Citizens and politicians influence each other mutually in their attitude identification. This should be natural in the context of a democracy. One considers the desire for re-election of the politicians. Journalists can be influenced in their attitude identification by the tradesmen, who use the journalists as spokesmen of their own interests. Both experts and tradesmen remain uninfluenced in their attitude identification. This can be attributed to the respective "independence" of these two groups of stakeholders. Experts should usually structure their attitudes on available specialised knowledge. Tradesmen seem to have their own heading and conceptions in the "free" economy.

#### **Recommendation for the conception of awareness building measures ("Soft Policies")**

- It is certain that the older generation agree stronger to public transport measures.
- For working persons public transport must be advertised to a greater extent.
- A high degree of education (knowledge) causes a more environmental-friendly attitude. Therefore the spreading of relevant background information is recommendable.
- The advantages of alternative means of transport must be made more palatable to businessmen.
- Traffic experts do not see a solution of traffic and environmental problems in the further promotion of the motor traffic. Therefore environment-friendly approaches by transport specialists can be expected.
- More and more intensive information work are in demand for students, so that the acceptance of ecologically desirable traffic measures rises within this group of persons. An car-oriented attitude is particularly strongly represented in the group of young people.
- The availability (ownership) of means of transport influences considerably the transport-political attitude. If the data of the existing bicycles, cars, etc. within a planning area are well-known, it is easier to measure the agreement or refusal tendencies to the individual traffic measures.
- The agreement or refusal tendencies is also identified by the actual behaviour in traffic. However it should be analysed whether persons have transport possibilities or not.
- In cities with rough climate conditions (high precipitation frequency, low temperatures) the introduction of traffic measures, which limit the motor traffic, will encounter resistance.
- In countries or cities with low prosperity level consideration is to be taken on the need to catch up in the development of the infrastructure for all types of means of transport (also for the motor traffic). Restrictions of the motor traffic will encounter intensified resistance. However the starting point is offered for clearing-up measures of a environmental friendly transport policy.
- Even if problem awareness cannot be equated with readiness to act or actual behaviour, at least it is the potential for achieving "higher" awareness levels.
- Before the implementation of traffic measures the awareness level and mutual influence-strength of the stakeholders should be known. By mutual exertion of influence an attitude polarisation can arise.
- The opportunity to influence the environmental and transport-political attitudes at the local-political level is quite given and should be used.

---

## **8. BIBLIOGRAPHY**

---

KALS, E. 1996. *Verantwortliches Umweltbewusstsein. Umweltschützende Entscheidungen erklären und fördern.* Weinheim: Psychologie Verlags Union.

MADDISON, D. 1996. *The true costs of road transport.* Blueprint, 5. edition., London: Earthscan Publ. .

HALLER, M. & GOMILSCHAK, M. 1996. *Einstellungen zur Umwelt. Die Österreicher im internationalen Vergleich.* Graz: Institut für Soziologie, Karl-Franzens-Universität.

SAMMER, G. 1999. *Attitudes towards transport policy in the mirror of the local transport policy, a long term analysis.* In: Proceedings of the European Transport Conference Cambridge, September 1999.

SAMMER, G. & KLEMENTSCHITZ, R. & THALLER, O. 1999. *Einstellung zur städtischen Verkehrspolitik. Ein Vergleich von je vier Städten innerhalb und ausserhalb der EU.* Wien: Institut für Verkehrswesen, Universität für Bodenkultur.

SAMMER, K. 2000. *Analyse von Einflussgrößen auf die umwelt- und verkehrspolitische Einstellung im internationalen Vergleich.* Graz: Institut für Soziologie, Karl-Franzens-Universität.

ANNEX

7. Appendix

Questionnaire

Attitude concerning transport issues	
What is your view on the following statements for your city? Please mark a cross where applicable.	
Energy-saving measures are crucial points in transport-planning in our city	I agree +3 +2 +1 -1 -2 -3 <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> I disagree
It is important to support the use of private car in our city	I agree +3 +2 +1 -1 -2 -3 <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> I disagree
It is important to support the use of public transport in our city	I agree +3 +2 +1 -1 -2 -3 <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> I disagree
It is important to support walking in our city	I agree +3 +2 +1 -1 -2 -3 <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> I disagree
It is important to support cycling in our city	I agree +3 +2 +1 -1 -2 -3 <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> I disagree
It is important to support parking on public streets in our city	I agree +3 +2 +1 -1 -2 -3 <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> I disagree
It is important to reduce and restrict the private car traffic in our city	I agree +3 +2 +1 -1 -2 -3 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> I disagree
If there is a conflict between pedestrians and car-traffic, pedestrians should get priority	I agree +3 +2 +1 -1 -2 -3 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> I disagree
If there is a conflict between bicycle-traffic and car-traffic, cyclists should get priority	I agree +3 +2 +1 -1 -2 -3 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> I disagree
If there is a conflict between public-transport and car-traffic, public-transport should get priority	I agree +3 +2 +1 -1 -2 -3 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> I disagree

Please continue to fill out following page

2

Test site: YORK	Category: Journalist
<b>Attitude concerning general urban issues</b>	
Please assess the proposals given below in relation to their importance for your city. Please mark with cross where applicable.	
How important is it to improve the environmental conditions caused by traffic in our city?	very important 6 5 4 3 2 1 less important <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
How important is it to improve the car-traffic condition in our city (e.g. reduce congestion)?	very important 6 5 4 3 2 1 less important <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
How important is it to reduce the energy-consumption caused by traffic in our city?	very important 6 5 4 3 2 1 less important <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
How important is it to reduce the level of unemployment in our city?	very important 6 5 4 3 2 1 less important <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
How important is it to reduce the level of air-pollution caused by traffic in our city?	very important 6 5 4 3 2 1 less important <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
How important to reduce the level of noise caused by traffic in our city?	very important 6 5 4 3 2 1 less important <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
How important is it to reduce the number of traffic-accidents and improve traffic-safety for pedestrians and cyclists in the city?	very important 6 5 4 3 2 1 less important <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
How important is it to restrict and strictly control illegal using and dealing drugs in the city?	very important 6 5 4 3 2 1 less important <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

Please continue to fill out following page

1

Attitude concerning concrete measures in transport-management																															
What is your view on the following transport-measures for your city? Please mark with cross where applicable.																															
It is important to implement road-pricing with 7 Pence per kilometre for the whole city-road network to improve travel conditions and reduce fuel consumption	<table border="0"> <tr> <td>1 agree</td> <td>2 agree</td> <td>3 agree</td> <td>4 agree</td> <td>5 agree</td> <td>6 agree</td> <td>7 agree</td> <td>8 agree</td> <td>9 agree</td> <td>10 agree</td> </tr> <tr> <td>+2</td> <td>+2</td> <td>+1</td> <td>-1</td> <td>-2</td> <td>-2</td> <td>-3</td> <td>-3</td> <td>-3</td> <td>-3</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> </tr> </table>	1 agree	2 agree	3 agree	4 agree	5 agree	6 agree	7 agree	8 agree	9 agree	10 agree	+2	+2	+1	-1	-2	-2	-3	-3	-3	-3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1 agree	2 agree	3 agree	4 agree	5 agree	6 agree	7 agree	8 agree	9 agree	10 agree																						
+2	+2	+1	-1	-2	-2	-3	-3	-3	-3																						
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>																						
It is important to prohibit long-stay parking for non-residents within the central area in our city	<table border="0"> <tr> <td>1 agree</td> <td>2 agree</td> <td>3 agree</td> <td>4 agree</td> <td>5 agree</td> <td>6 agree</td> <td>7 agree</td> <td>8 agree</td> <td>9 agree</td> <td>10 agree</td> </tr> <tr> <td>+2</td> <td>+2</td> <td>+1</td> <td>-1</td> <td>-2</td> <td>-2</td> <td>-3</td> <td>-3</td> <td>-3</td> <td>-3</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </table>	1 agree	2 agree	3 agree	4 agree	5 agree	6 agree	7 agree	8 agree	9 agree	10 agree	+2	+2	+1	-1	-2	-2	-3	-3	-3	-3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1 agree	2 agree	3 agree	4 agree	5 agree	6 agree	7 agree	8 agree	9 agree	10 agree																						
+2	+2	+1	-1	-2	-2	-3	-3	-3	-3																						
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																						
It is important to increase the fuel-price nation-wide by a 50% in order to improve the environment and reduce car-fuel use	<table border="0"> <tr> <td>1 agree</td> <td>2 agree</td> <td>3 agree</td> <td>4 agree</td> <td>5 agree</td> <td>6 agree</td> <td>7 agree</td> <td>8 agree</td> <td>9 agree</td> <td>10 agree</td> </tr> <tr> <td>+2</td> <td>+2</td> <td>+1</td> <td>-1</td> <td>-2</td> <td>-2</td> <td>-3</td> <td>-3</td> <td>-3</td> <td>-3</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> </tr> </table>	1 agree	2 agree	3 agree	4 agree	5 agree	6 agree	7 agree	8 agree	9 agree	10 agree	+2	+2	+1	-1	-2	-2	-3	-3	-3	-3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1 agree	2 agree	3 agree	4 agree	5 agree	6 agree	7 agree	8 agree	9 agree	10 agree																						
+2	+2	+1	-1	-2	-2	-3	-3	-3	-3																						
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>																						
For traffic-calming a speed-limit of 30 kmh in residential areas with the exception of main-roads should be implemented in our city	<table border="0"> <tr> <td>1 agree</td> <td>2 agree</td> <td>3 agree</td> <td>4 agree</td> <td>5 agree</td> <td>6 agree</td> <td>7 agree</td> <td>8 agree</td> <td>9 agree</td> <td>10 agree</td> </tr> <tr> <td>+2</td> <td>+2</td> <td>+1</td> <td>-1</td> <td>-2</td> <td>-2</td> <td>-3</td> <td>-3</td> <td>-3</td> <td>-3</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </table>	1 agree	2 agree	3 agree	4 agree	5 agree	6 agree	7 agree	8 agree	9 agree	10 agree	+2	+2	+1	-1	-2	-2	-3	-3	-3	-3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1 agree	2 agree	3 agree	4 agree	5 agree	6 agree	7 agree	8 agree	9 agree	10 agree																						
+2	+2	+1	-1	-2	-2	-3	-3	-3	-3																						
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																						
It is important to implement pedestrian-zones in the city-centre and shopping-avenues to increase life-quality in our city	<table border="0"> <tr> <td>1 agree</td> <td>2 agree</td> <td>3 agree</td> <td>4 agree</td> <td>5 agree</td> <td>6 agree</td> <td>7 agree</td> <td>8 agree</td> <td>9 agree</td> <td>10 agree</td> </tr> <tr> <td>+2</td> <td>+2</td> <td>+1</td> <td>-1</td> <td>-2</td> <td>-2</td> <td>-3</td> <td>-3</td> <td>-3</td> <td>-3</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </table>	1 agree	2 agree	3 agree	4 agree	5 agree	6 agree	7 agree	8 agree	9 agree	10 agree	+2	+2	+1	-1	-2	-2	-3	-3	-3	-3	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1 agree	2 agree	3 agree	4 agree	5 agree	6 agree	7 agree	8 agree	9 agree	10 agree																						
+2	+2	+1	-1	-2	-2	-3	-3	-3	-3																						
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																						
Bicycle routes, bicycle lanes, parking lots for bicycles and traffic calming to support cycling should be implemented in our city	<table border="0"> <tr> <td>1 agree</td> <td>2 agree</td> <td>3 agree</td> <td>4 agree</td> <td>5 agree</td> <td>6 agree</td> <td>7 agree</td> <td>8 agree</td> <td>9 agree</td> <td>10 agree</td> </tr> <tr> <td>+2</td> <td>+2</td> <td>+1</td> <td>-1</td> <td>-2</td> <td>-2</td> <td>-3</td> <td>-3</td> <td>-3</td> <td>-3</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </table>	1 agree	2 agree	3 agree	4 agree	5 agree	6 agree	7 agree	8 agree	9 agree	10 agree	+2	+2	+1	-1	-2	-2	-3	-3	-3	-3	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1 agree	2 agree	3 agree	4 agree	5 agree	6 agree	7 agree	8 agree	9 agree	10 agree																						
+2	+2	+1	-1	-2	-2	-3	-3	-3	-3																						
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																						
It is important to reduce bus fares of public transport in our city	<table border="0"> <tr> <td>1 agree</td> <td>2 agree</td> <td>3 agree</td> <td>4 agree</td> <td>5 agree</td> <td>6 agree</td> <td>7 agree</td> <td>8 agree</td> <td>9 agree</td> <td>10 agree</td> </tr> <tr> <td>+2</td> <td>+2</td> <td>+1</td> <td>-1</td> <td>-2</td> <td>-2</td> <td>-3</td> <td>-3</td> <td>-3</td> <td>-3</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </table>	1 agree	2 agree	3 agree	4 agree	5 agree	6 agree	7 agree	8 agree	9 agree	10 agree	+2	+2	+1	-1	-2	-2	-3	-3	-3	-3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1 agree	2 agree	3 agree	4 agree	5 agree	6 agree	7 agree	8 agree	9 agree	10 agree																						
+2	+2	+1	-1	-2	-2	-3	-3	-3	-3																						
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																						
It is important to improve the service of the public transport system in our city (e.g. new bus-lines and increased frequency)	<table border="0"> <tr> <td>1 agree</td> <td>2 agree</td> <td>3 agree</td> <td>4 agree</td> <td>5 agree</td> <td>6 agree</td> <td>7 agree</td> <td>8 agree</td> <td>9 agree</td> <td>10 agree</td> </tr> <tr> <td>+2</td> <td>+2</td> <td>+1</td> <td>-1</td> <td>-2</td> <td>-2</td> <td>-3</td> <td>-3</td> <td>-3</td> <td>-3</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </table>	1 agree	2 agree	3 agree	4 agree	5 agree	6 agree	7 agree	8 agree	9 agree	10 agree	+2	+2	+1	-1	-2	-2	-3	-3	-3	-3	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1 agree	2 agree	3 agree	4 agree	5 agree	6 agree	7 agree	8 agree	9 agree	10 agree																						
+2	+2	+1	-1	-2	-2	-3	-3	-3	-3																						
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																						
It is important to increase the attractiveness of the public transport system in our city ( e.g. the city authority should implement bus lanes and busses should get priority over private car traffic at traffic lights)	<table border="0"> <tr> <td>1 agree</td> <td>2 agree</td> <td>3 agree</td> <td>4 agree</td> <td>5 agree</td> <td>6 agree</td> <td>7 agree</td> <td>8 agree</td> <td>9 agree</td> <td>10 agree</td> </tr> <tr> <td>+2</td> <td>+2</td> <td>+1</td> <td>-1</td> <td>-2</td> <td>-2</td> <td>-3</td> <td>-3</td> <td>-3</td> <td>-3</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </table>	1 agree	2 agree	3 agree	4 agree	5 agree	6 agree	7 agree	8 agree	9 agree	10 agree	+2	+2	+1	-1	-2	-2	-3	-3	-3	-3	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1 agree	2 agree	3 agree	4 agree	5 agree	6 agree	7 agree	8 agree	9 agree	10 agree																						
+2	+2	+1	-1	-2	-2	-3	-3	-3	-3																						
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																						
Please continue to fill out following page																															

3

Personal data, please mark with cross where applicable	
gender: male <input type="checkbox"/> female <input checked="" type="checkbox"/> Year of birth: _____	
marital-status: unmarried <input checked="" type="checkbox"/> married <input type="checkbox"/> widowed <input type="checkbox"/> divorced <input type="checkbox"/> unmarried <input type="checkbox"/> divorced <input type="checkbox"/> widowed <input type="checkbox"/> divorced <input type="checkbox"/>	
completed education: secondary <input type="checkbox"/> university <input type="checkbox"/> at school <input type="checkbox"/> in full-time employment <input type="checkbox"/> in part-time employment <input type="checkbox"/> manager household full time <input type="checkbox"/> Part-time <input type="checkbox"/>	
occupation: _____	
Do you own a car? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Do you own a private car driving license? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Do you own a bicycle? Yes <input type="checkbox"/> No <input type="checkbox"/>	
Do you own a motor-cycle or scooter? Yes <input type="checkbox"/> No <input type="checkbox"/>	
Do you own a season ticket for public-transport? Yes <input type="checkbox"/> No <input type="checkbox"/>	
Which transport mode did you use last working day? (more answers possible)	
<input type="checkbox"/> stayed at home <input type="checkbox"/> bicycle <input type="checkbox"/> car as driver <input type="checkbox"/> city-bus <input type="checkbox"/> motor cycle/scooter <input checked="" type="checkbox"/> walking <input type="checkbox"/> car as passenger <input type="checkbox"/> regional public transport <input type="checkbox"/> other _____	
If you want to state something else related to transport planning in the city, please do not hesitate to fill out this section:	
_____	
_____	
_____	
Please return this questionnaire by 25 September 1998	

1