



URBANISTIČNI INŠTITUT REPUBLIKE SLOVENIJE

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Motivations for residential site and mobility mode decisions

Vplivi motivacij na odločitve o kraju bivanja in načinih
mobilnosti

Scientific Monograph

Znanstvena monografija



Ljubljana, December 2013

CIP - Kataložni zapis o publikaciji

Narodna in univerzitetna knjižnica, Ljubljana

711.1:72.05(497.4)

GULIČ, Andrej, 1955-

Motivations for residential site and mobility mode decisions : scientific monograph = Vplivi motivacij na odločitve o kraju bivanja in načinih mobilnosti : znanstvena monografija / Andrej Gulič. - 1st ed. - Ljubljana : Urbanistični inštitut Republike Slovenije = Urban Planning Institute of the Republic of Slovenia, 2013

ISBN 978-961-6390-41-5

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ISBN

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Urbanistični inštitut Republike Slovenije / Urban Planning Institute of the Republic of Slovenia

First edition

Name of copyright holder

mag. Andrej Gulič

Publisher

Urbanistični inštitut Republike Slovenije / Urban Planning Institute of the Republic of Slovenia

Publication date

2013

Print date

2013

Number of copies printed

50

Publication's retail price

Free publication

Introductory explanation

The monograph is based on research work carried out within the project MORECO - Mobility and Residential Costs. The project is being performed by a multidisciplinary team composed of ten partners from five countries in the Alpine Space area. The lead partner of the project is SIR - Salzburg Institute for Regional Planning and Housing. One of the partners is also Urban Planning Institute of the Republic of Slovenia (Urbanistični inštitut Republike Slovenije). The project is running from July 2011 to June 2014. MORECO shows the correlation between decisions on residential locations, mobility costs and the subsequent long-term effects. The goal is to contribute to sustainable spatial development. The project is co-financed by the Alpine Space Programme. The MORECO project website is as follows: <http://www.moreco-project.eu/index.php>.



Smart locations for better liveability



Subject terms

Keywords: housing location, mobility, mode of transport, motivations, behaviour, consumer behaviour, needs, social norms, »herd behaviour« phenomenon, quality of life, personal values, housing preferences, scientific monograph, Alpine Space Programme, European Regional Development Fund

Predmetne oznake

Ključne besede: lokacija stanovanj, mobilnost, načini prevoza, motivacije, obnašanje, obnašanje potrošnikov, potrebe, družbene norme, pojav »črednega vedenja«, kakovost življenja, osebne vrednote, stanovanjske preference, znanstvena monografija, Program transnacionalnega teritorialnega sodelovanja Območje Alp, Evropski sklad za regionalni razvoj

Preface

The MORECO project idea arose from the fact that past and current developmental dynamics in the Alpine Space Programme cooperation area (hereinafter AS) leads to extensions of peri-urban areas, to splitting of the territory, lowering quality of transport services and to enormous increase of private traffic with negative consequences for the environment, to reduced profitability of transport services, to accessibility constraints for population groups which depend on public transport, high mobility costs for private households and vulnerability of real estate values in case of heavily rising energy costs for mobility.

Most countries and regions that belong to AS were so far not entirely successful with their planning policies, measures and instruments in dealing with the mentioned negative tendencies. This may lead to the continuation of the negative spatial trends of the past also into the future. In order to contribute to a discontinuation of such development the MORECO project identified different groups of stakeholders - households, house-hunters, politicians, decision-makers, building authorities, municipalities, spatial and traffic planners, public transport services, regional developers, residential building companies, banks etc. - whose decisions are expected to be positively affected by the development and implementation of a variety of modern planning and governance tools, such as cost-information-tool for households, GIS-tool for planners and mobility actors, governance-strategy for political decision makers, authorities and building companies etc.

The project derives from an implicit assumption that households and the other aforementioned stakeholders predominantly make decisions about new residential sites and consequently transport modes consciously, while not considering all relevant objective information, particularly those pertaining to long-term costs of housing and mobility.

Motivations as well as other factors such as quality of life, values, beliefs, norms, lifestyles and housing preferences are supposed to have a significant impact on long-term conscious decisions taken by the actors.

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1. On motivations

Various approaches and theories, which have been elaborated for different purposes and needs, define motivations. Some definitions are briefly presented in the text below.

1.1. Motivation and behaviour

Motivation is the drive that produces goal-directed behaviour. The study of motivation is concerned with the influences that govern the initiation, direction, intensity, and persistence of behaviour.

Motivation is the ability to change behaviour. It is a drive that compels one to act because human behaviour is directed toward some goal. Motivation is intrinsic (internal); it comes from within based on personal interests, desires, and need for fulfilment. However, extrinsic (external) factors such as rewards, praise, and promotions also influence motivation.

Motivation refers to »the forces either within or external to a person that arouse enthusiasm and persistence to pursue a certain course of action« (Daft, 1997).

In an attempt to understand what prompts people, what influences them and why they persist in particular actions Quick (1985) presented four underlying principles that are important to understanding motivation:

- People have reasons for everything they do.
- Whatever people choose as a goal is something they believe is good for them.
- The goal people choose must be seen as attainable.
- The conditions under which the work is done can affect its value to the employee and his or her perceptions of attainability or success.

1.2. Motivation and needs

Motivation is an internal state that drives us to satisfy needs. Motivation is the energizing force that activates behaviour. Once we recognize that we have a need, a state of tension

exists that drives the consumer to the goal of reducing this tension and eliminating the need. Consequently, only unmet needs motivate. According to Maslow's hierarchy of human needs, for each need there are positives gained and negatives that are avoided by meeting that particular set of needs. Products that are purchased because of a need will satisfy a goal and avoid unwanted consequences.

A. Maslow's hierarchy of needs theory falls within the framework of the so called need theories. Maslow presents a hierarchy of needs pyramid which can be divided into basic or deficiency needs, e.g. physiological, safety, love, and esteem and growth needs – cognitive, aesthetics and self-actualization. These needs can create tensions that can influence a person's work attitudes and behaviours. Maslow formed a theory based on his definition of needs which proposes that humans are motivated by multiple needs and that these needs exist in a hierarchical order. One of premises is that only an unsatisfied need can influence behaviour; a satisfied need is not a motivator. The main premise behind the need theories is that if managers, planners, politicians etc. can understand the needs that motivate people, then reward systems can be implemented that fulfil those needs and reinforce appropriate behaviour. In addition to the hierarchy of needs theory the need theories include several other theories, such as ERG Theory (Clayton), Motivation-Hygiene Theory (Herzberg), Theory X and Theory Y (McGregor) and Acquired Needs Theory (McClelland).

According to McGuire, a social cognition theory representative and leading expert on attitude change and the self-concept, there are 12 psychological motives, 12 reasons why consumers are motivated to make purchases. These are: need for consistency, need for attribute causation, need to categorize, need for cues, need for independence, need for self-expression, need for ego-defence, need for reinforcement, need for affiliation, need for modelling, need for novelty and need for assertion. In the following, psychological motives are briefly presented and described in relation to residential sites and transport modes choices.

Thus, within the:

- Need for consistency people have a basic desire to have all parts of themselves consistent and they purchase products that fulfil this need: people that listen country

music will e.g. purchase products like detached farm house and heavy duty trucks.

- Need for attribute causation: people have the need to determine who or what causes things to happen to them; some people choose to attribute it to themselves, fate or an outside force like »invisible hand« of the housing and real-estate market.
- Need to categorize which helps people to process a large amount of information: housing units can be categorized into different categories: private and public (flat, house), urban, suburban and country house, single or multi family unit, detached or semi-detached house, apartment in a block of flats etc.
- Need for cues with which most people will view others' behaviour and infer what they feel and think: housing and car type play an important role in presenting the image of a person.
- Need for independence: e.g. most people want to continue living in their own homes as they get older, by remodelling the home to adapt to their changing needs.
- Need for self-expression: housing is a basic physical need but it is often influenced by psychological factors such as the need for self-expression, the same goes for buying a car.
- Need for ego-defence: in meeting the need to defend own identity and status, from both a practical and symbolic point of view, housing plays a crucial role.
- Need for reinforcement: people are motivated to improve their housing conditions because they are rewarded for doing it by the acceptance and approval of their neighbours, friends and relatives.
- Need for affiliation: the need to establish friendship in a community that you desire makes you work hard to show that you are at the same level – e.g. residential environment characteristics – as the members of that community.
- Need for modelling: conformity and the need to base behaviour on that of other members of the same social group.
- Need for novelty: people have a variety seeking-behaviour and this may be the reason for impulsive housing and/ or car buys.
- Need for assertion: customer's need to engage in activities that will increase self-esteem and self-esteem in the eyes of others, e.g. housing condition positively influences both self-esteem and life satisfaction (adapted to the content of the MORECO project from McGuire, 1976).

1.3. Motivations and consumer behaviour

Motivations significantly affect the consumer behaviour of the population. Engel, Blackwell and Miniard (1995) defined consumer behaviour as »those activities directly involved in obtaining, consuming, and disposing of products and service, including the decision processes that precede and follow these actions«. The consumer behaviour is an important factor influencing the decision making process in buying a house. The buying behaviour is furthermore affected by both internal and external factors. The internal factors comprise motivation, perception, consumer resources, knowledge, attitudes, personality, values and lifestyle (ibid). Cultural background, social class, personal influence, reference group and situation also influence behaviour and represent the so-called external factors. The reference group consists of three components, that is family, friends and colleagues.

Kotler (1996) noted that buyer decision process passes through five stages, namely: (1) need recognition, (2) information search, (3) evaluation of alternatives, (4) purchase decision and (5) post purchase behaviour. The process starts with the buyer recognising a need which can be inspired by internal or external stimuli; in our case the need refers to buying a house. The next stage is about searching housing information from several sources. Kotler (ibid) mentions four groups of information sources: personal, commercial, public and experiential. The developer from the brochure, advertisement or the salespeople could supply the commercial and public information. On the other hand, information from personal sources such as friends and family could be more convincing than the formal information from the developer (adapted from Susilawati, 2001).

Consumer behaviour is also the subject of study of behavioural economics. The standard (neoclassical) economic analysis assumes that humans are rational and behave in a way to maximise their individual self-interest. Whilst this »rational man« assumption seems to be a powerful tool for analysis, it has many shortfalls that can lead to unrealistic economic analysis and policy-making.

The seven principles for policy-makers are:

- Other people's behaviour matters: people do many things by observing others and copying; people are encouraged to continue to do things when they feel other people approve of their behaviour.
- Habits are important: people do many things without consciously thinking about them. These habits are hard to change – even though people might want to change their behaviour, it is not easy for them.
- People are motivated to »do the right thing«: there are cases where money is demotivating as it undermines people's intrinsic motivation. For example, you would quickly stop inviting friends to dinner if they insisted on paying you.
- People's self-expectations influence how they behave: they want their actions to be in line with their values and their commitments.
- People are loss averse and hang on to what they consider »theirs«.
- People are bad at computation when making decisions: they put undue weight on recent events and too little on far-off ones; they cannot calculate probabilities well, and worry too much about unlikely events; and they are strongly influenced by how the problem/information is presented to them.
- People need to feel involved and effective to make a change: just giving people the incentives and information is not necessarily enough. (nef, 2005).

As seen from the above text people's buying decisions are affected by a number of different factors (behaviour, habits, motivations, affections, need for self-expression etc.) that go beyond the so-called rational decision making. In addition, it is significant that the decisions are prevalingly based on short-term considerations. This is characteristic nowadays for all categories of economic actors including households. »The markets are now dominated by strategies that focus on maximising short-term returns, while underestimating or ignoring the systemic risks, wider impacts or irreversible consequences of this behaviour. This may not deliver the best outcomes for the investor, either from a financial or from a wider social and environmental perspective« (Curran and Chapple, 2011: 18).

1.4. Motivations and social norms

In addition to the mentioned factors social norms have a strong influence on motivation and human behaviour too. Research work of Cialdini (2006) has shown that people are often highly influenced by »social norms«, that is ways of behaving within a certain group. This influence is particularly strong when people see the positive actions of other »people like me«, although they generally do not realise how much they are influenced by their peers.

Cialdini et al. have developed the focus theory of normative conduct, which asserts that norms are only likely to influence behaviour directly when they are focal in attention and, thereby, salient in consciousness. At the same time Cialdini raises the question of distinction between positively and negatively worded messages. That is, such messages can be stated in ways that either encourage desirable or discourage undesirable conduct. In the conclusion he finds – considering numerous surveys and a wide range of instances – that negative stimuli have more impact than positive stimuli. Although there are varying explanations for this effect, it appears that, in general, negative information is accorded greater attention, scrutiny, and weight in consciousness.

1.5. Motivations and »herd behaviour« phenomenon

At the end let us mention the phenomenon of »herd behaviour«. The term is used in behavioural finance literature and denotes the tendency for individuals to mimic the actions (rational or irrational) of a larger group, even if individually they would not necessarily make the same choice. Phung (2010) identified two main reasons why herd behaviour happens. The first is the social pressure of conformity which means that people tend to follow the social norms of a group, rather than be branded as an outcast. The second reason is the common rationale that it's unlikely that such a large group could be wrong. This is especially true of situations in which an individual has very little experience.

This is in strong contrast with Milton Friedman's »efficient markets« hypothesis which rests on the quaint notion that homo economicus is a totally rational being with all the information he needs to make decisions. Schiller (2008) points out, that it doesn't work out

that way in the real world because people often participate in »herd behaviour« like the housing bubble that was experienced in the USA and Europe in 2008. Schiller quotes Bikhchandani et al. (1992) who defined the concept named »information cascades« which can lead people into serious error. Authors found that these cascades can affect even perfectly rational people and cause bubble like phenomena. Ultimately, people sometimes need to rely on the judgment of others, and therein lies the problem.

The theory provides a framework for understanding the real estate turbulence that was observed a few years ago. When everyone you know is buying a house, you override your own instinct that prices are too high and join the herd. The information held by any one individual is usually incomplete and so you look to the judgements of others to make your choice.

This theory poses a major challenge to the »efficient markets« view of the world, which assumes that investors are like independent-minded voters, relying only on their own information to make decisions. The efficient-market view holds that the market is wiser than any individual: in aggregate, the market will come to the correct decision. But the theory is flawed because it does not recognize that people must rely on the judgments of others (Schiller, 2008: 2-3).



Photo: GOKBUY

1.6. Summing up

To sum up, review of some of the available literature on the topic of motivation has shown that:

- There are very different theories, approaches and concepts.
- They in a very limited extent cover the decision-making problems connected with the choice of new residential sites and consequently transport modes in general and particularly in the AS.
- They problematize the concept of rational behaviour with which buyers would maximise their individual self-interest.
- People's buying decisions are affected by a number of different factors, such as behaviour, habits, motivations, affections, need for self-expression etc., under short-term considerations.

These findings are of particular importance vis-à-vis the planned preparation of a MORECO governance strategy.

2. Elements of mobility and site decision making processes which motivate household and other stakeholders' choice of housing location and mode of transport

Due to a lack of relevant empirical studies that examine the impact of motivations on the choice of new residential sites and transport modes in the states and regions of AS and in the wider area, a written survey among the project partners was carried out. In this way we attempted to obtain objective and subjective information about the factors that influence the creation of motivations.

In the above mentioned questionnaire we asked about:

- Benefits and costs of choosing housing location and mode of transport types which influence travel behaviour.
- The main factors of residential location decisions and travel pattern choices / behaviour.
- Quality of life of pilot areas' population.
- Values, beliefs, norms and lifestyles of pilot areas' population.
- Housing preferences.

In the following the synthesis of the results obtained for the above listed thematic areas is presented. The results are in some chapters supplemented by information obtained from the review of available literature.

2.1. Benefits and costs of choosing housing location and mode of transport which influence travel behaviour

2.1.1. Monetary and non-monetary private benefits and costs of housing location referring to different land use / urban form patterns

In this context we tried to obtain objective information and subjective judgements about generally recognized private benefits and costs of housing location in cities and in suburban areas/villages.

The respondents subjectively assessed the **private benefits of housing location in cities** as follows:

- Location in the city centre may offer the so-called agglomeration benefits referring to physical proximity to urban amenities (proximity to shops, schools, hospitals etc).
- Working place and living place are near each other.
- There is no need for a car (opportunities exist to use public transport or bicycle, car sharing).
- Good living quality in high price areas of the city.



Referring to **private costs of housing location in cities** the respondents subjectively exposed the following costs:

- Too high density.
- Traffic congestion.
- Environmental pollution.
- Over-exploitation of resources, environmental degradation.
- Only high price areas offer very good quality of living.
- Large share of household income spent for living.
- Less leisure opportunities without a car (if no good car sharing is available).



With reference to **private benefits of housing location in suburban areas/villages** the respondents subjectively exposed the following benefits:

- Realized preference for low-density living.
- Less expensive private residential and non-residential development costs for those locating near the central city can lead to income savings from living near an economically efficient central area.
- Lower crime rates.
- Proximity to natural areas.
- More living area for the same money.

- Use of private garden.
- No costs for inherited building site.
- Private manpower, neighbourhood work and private work hours may substitute money, so you can build a house with less money.
- There are more jobs closer to where people live (through the development of jobs in the personal services sector, child care or assistance for the elderly).
- Reduction in inheritance taxes, tax relief, advantageous instruments of financing single-family homes or detached houses enhance the construction of houses in suburban areas.
- A house is also an investment in relation to retirement pensions, which have become more uncertain in recent years.
- Movement towards peri-urban areas and detached houses is not only a response to the more insecure environment of collective housing; it is also a means of increasing one's financial security by purchasing a house.
- Lower private residential and non-residential development costs.
- Life in suburban areas is cheaper than life in the city areas.
- Quality of life is higher than in urban areas.
- It is easier to have a bigger house than in the cities.

From the responses it is evident that there are less issues concerning **private costs of housing location in suburban areas/villages** than benefits. They are:

- Weakened sense of community.
- Greater stress due to long journeys to work.
- High time costs for all family members.
- High mobility costs in the long run.
- Risk of loss of property value by changing travel conditions (energy price) or change of land use near the residence (densification, new industrial zones, new technical infrastructures near the house, rising traffic volumes).
- High dependency on the car, more than one car needed in households.
- Suburban areas don't have all the infrastructures and services that you can find in a big centre.

- Since public transport is not well developed everywhere, people can feel isolated especially in the evening and in the winter time.
- It is necessary to take the car for almost every activity you have to do out of the public transport timetable.



2.1.2. Monetary and non-monetary private benefits and costs of different modes of transport

In this section subjective judgements about private benefits and costs of different modes of transport (car, public transport, walking and cycling) are presented.

With reference to **private benefits of commuting by car**, the respondents proposed the following subjective assessments:

- Better access to different employment opportunities.
- Combining trips to work with other daily trips and obligatory tasks (shopping, recreation, medical services etc.).
- More opportunities for access to desired or affordable housing and residential environment.
- Car is usually chosen over public transport for a number of reasons: quicker, sometimes difficult to get information on and organise the use of public transport, better social

image, pleasure, comfort, independence, flexibility, the possibility of combining several activities on a single journey or trip.

Referring to **private costs of commuting by car**, the respondents presented the following subjective evaluations:

- High average daily commuting time.
- High travel costs.
- Health problems.
- Motor-vehicle insurance costs.
- Motor-vehicle amortization costs.
- Repairs costs.
- Longer commuting is not fully compensated by other advantages.
- Accidental pain, suffering, death, and loss of nonmarket productivity inflicted on oneself.
- Personal time spent working on motor vehicles and garages, and refuelling motor vehicles.
- Psychological problems (stress, fear of being exposed to crime).
- Less opportunities to meet people and get new experiences (expanding horizons) especially as compared to using public transport.
- Built environment features can also affect the cost of car ownership through the ease and convenience of owning a car.
- High risks for accidents.
- Parking costs.



With reference to **private benefits of commuting by public transport**, the respondents outlined the following subjective assessments:

- Reduction in commuting cost and time.
- Reduction in road accidents.
- Reduction in noise and air pollution.
- Enhancement in work productivity.
- Public transport (bus, calling bus) are beneficial both in monetary terms and in terms of reducing stress.
- Taxi transport could be used by several people together who have to move at the same time.

Referring to **private costs of commuting by public transport**, the respondents presented the following subjective evaluations:

- Greater time costs compared with the time costs of personal passenger transport means.
- Using public transport forces people to follow precise timing: for that reason people could feel a restriction of the individual freedom to come back or to leave home at the time they prefer.
- In some areas not all public transports modes are available.



With regard to **private benefits of commuting by walking and cycling**, the respondents outlined the following subjective assessments:

- Daily physical training.
- Improving cardio-vascular fitness.
- Reducing the risk of heart disease.
- Controlling obesity of walkers and bikers.
- Independency of traffic congestions.
- Chance to use routes with good environmental quality.
- Stressless time.



As for **private costs of commuting by walking and cycling**, the respondents presented the following subjective evaluations:

- Built environment features can both affect the amount of time a walk trip takes, but also the comfort, safety, and enjoyment of the walking environment.
- Good equipment (wet days, cold days, icy days).
- Time and space for changing clothes and cleaning.



2.1.3. Monetary and non-monetary social benefits and costs of housing location referring to different land use / urban form patterns

In this section subjective judgements about social benefits and costs of different modes of housing location in central urban area (settlement centres) and suburban areas (villages) are presented.

With regard to **social benefits of housing location in central urban area** (settlement centres) the respondents outlined the following subjective assessments:

- Lower fiscal costs for infrastructure.
- Higher density settlements are argued to be more socially sustainable because, due to high population densities, local facilities and services can be maintained and therefore accessibility to goods and services is more equitably distributed.
- High density urban living is seen as a prerequisite for vitality, vibrancy, cultural activities and social interaction.
- Inner-city redevelopments on 'brownfield' sites.
- Presence of supralocal services.

As to **social costs of housing location in central urban area** (settlement centres), the respondents presented the following subjective evaluations:

- Physical and social degradation of central urban areas.

- Degradation of public spaces.
- Greater health and safety risks.
- Housing improvement in the city centre costs more than new construction outside the city.
- The housing supply strategies of real estate agents, which find less resistance in the more spacious out-of-town areas.

Referring to **social benefits of housing location in suburban areas** (villages), the respondents outlined the following subjective assessments:

- The reduction in commuting times in suburban communities as more suburbanites now live closer to their jobs rather than commuting downtown.
- Suburbanization creates a type of separation of land uses.
- Superstores could not exist in an urban world of compact cities with binding zoning laws.
- Inhabitants bring money to the municipality they settle in.
- Building industry is a big job motor (planners, architects, land agents, craftsmen, furnishings, etc.).
- Great development of social and welfare net is one of the biggest advantages of living in suburban areas.
- It is cheaper to use social structures than in big urban centres and social integration is stronger than in urban centres.



As to **social costs of housing location in suburban areas** (villages), the respondents presented the following subjective evaluations:

- Loss of open space.
- Suburban residents own more cars and drive more kilometres than central city residents causing more car accidents.
- Sprawl contributes to a large ecological footprint because people consume more resources when they live at low density.
- Urban lifestyles are brought to the countryside.
- High demands on public infrastructure by new inhabitants (“we want sidewalks, light in the night, better public transport ...”).
- High infrastructure costs per inhabitant.
- Costs are transferred to the public sphere (high state transfers to municipalities to finance infrastructure).
- Profits often stay private i.e. appreciation in land value.
- Environmental pollution by traffic.
- High dependency on car traffic.
- Cars need much space (especially in towns), this raises land prices and building costs.
- Remote settlement areas and villages don’t receive enough money to keep roads, square, bridges, buildings clean and decorous.
- Commuting can be considered a huge social cost, because it creates pollution since public transport is not well developed and people still prefer private transport.

2.1.4. Monetary and non-monetary social costs and benefits of different modes of transport

In this section subjective judgements about social benefits and costs of different modes of transport (car, public transport, walking and cycling) are presented.

Referring to **social benefits of commuting by car**, the respondents presented the following subjective assessments:

- Increased productivity and individual welfare.

- Better functioning of labour markets.

With reference to **social costs of commuting by car**, the respondents proposed the following subjective evaluations:

- Increased traffic congestion and environmental pollution.
- Cost of public roads construction and maintenance including parking facilities.
- Doubling of transportation infrastructure.
- Emergency-service costs of motor-vehicle accidents included in police and fire cost.
- Monetary costs of travel delay imposed by others: foregone paid work and extra consumption of fuel.
- Accident costs not accounted for by economically responsible party: property damage, medical, productivity, legal and administrative costs.
- Increase in the surface of road infrastructure at the expense of other amenities (aesthetic and environmental benefits from the presence of open space, depletion of farmland).
- Decline and abandonment in the central city, congestion and pollution of the environment.
- Land-use damage: habitat destruction and species loss due to highway and motor-vehicle infrastructure, global warming due to fuel-cycle emissions of greenhouse gases.
- Increase of negative emotional and socio-physical reactions of commuters (excessive commuting).

Referring to **social benefits of commuting by public transport**, the respondents outlined the following subjective assessments:

- Nearly all forms of public transport are more cost efficient for the travellers.
- Environmentally more friendly modes of transport.
- External benefits of public transport arise from a reduction in the external costs of private car use.
- Using public transport reduces individual costs, environmental costs, stress connected to traffic and noise.

Referring to **social costs of commuting by public transport**, the respondents presented the following subjective evaluations:

- Congestion costs.
- Increased travel in peak hours inflicts disamenity on travellers through overcrowding and impacts on embarkation times.
- Using public transport can be uncomfortable because of timetables to which passengers have to get used and the possibilities to combine with other activities (shopping, leisure etc.).

With regard to **social benefits of commuting by walking and cycling**, the respondents outlined the following subjective assessments:

- Significant reduction of fuel consumption and greenhouse gas emissions.
- Lower consumption of space for the construction of cycling infrastructure in comparison with road construction and maintenance.
- Improvement of the psycho-physical condition of the part of population who are actively cycling.
- Greater equity and solidarity between traffic participants especially for more vulnerable segments of populations (elderly, people with health problems, women, unemployed, low income, youth) who are both transport disadvantaged and socially excluded.
- Introduction of public bicycles could represent a very good opportunity especially in summertime because cycling routes can be covered to visit culturally interesting places.



As to **social costs of commuting by walking and cycling**, the respondents presented the following subjective evaluations:

- Planning and construction of a dense network of well-maintained routes that are at the same time safe and perceived as such by users.
- Allocation of local services along walking and cycling routes.
- Reconversion of roads to walking and cycling routes.
- Introducing new tools which have disincentive impact on the use of private cars (pricing, parking management, information and marketing).

2.2. The main factors of residential location decisions and travel pattern choices / behaviour

The purpose of this chapter is to present the main factors that influence residential location decisions and travel pattern choices / travel behaviour of households at the level of the MORECO project pilot areas and the associated broader territorial levels (regional, national).

The set of factors includes:

- Socio-economic characteristics of households: household structure, gender, car and / or season-tickets for public transport, family income, disadvantaged persons etc.
- Mobility generating activities: trip to work, school, shopping and leisure facilities etc.
- Land use characteristics: topography, settlements' size, structure and density, provision

of infrastructure facilities, public transport supply etc.

Initially, the main findings of the literature review are presented, followed by a synthetic presentation of the results of responses to the questionnaire.

The process of searching for a home consists of two scales of consideration: the evaluation and choice of residential areas, and then the search for vacancies within an acceptable area (Preston and Taylor, 1981; Barrett, 1976 in: He, 2009). Accessibility and pleasantness are identified as major location attractions for the housing consumers (Kauko, 2006; Raju, Sikdar, and Dhingra, 1998). Pleasantness is identified as a pluralist locational preference based on various individual lifestyles that depend on values and beliefs (Lindberg and others, 1988). These preferences include, among other, residential density, cost of housing, cost of living, ethnicity of neighbours, social facilities, the quality of the natural and social environments (Li, 2007; Kim, Horner, and Marans, 2005).

A strong influence on residential location choice is believed to be the **life-course**. Childless groups are overrepresented in the urban and metropolitan areas that are of relatively higher density and provide easier access to services than do suburban and rural areas (Kim, Horner, and Marans, 2005; Lee and Guest, 1983). Households with children have a strong preference for low-density dwellings with plenty of green space and recreational opportunities because such environments are believed to be better for rearing children (Fjortoft and Sageie, 2000). Other household socio-economic and demographic characteristics also contribute to residential location preferences. For example, residential preferences are found to be heavily influenced by the availability of an automobile, but are much less affected by ethnical and employment status (Chapman and Ritzdorf, 1986).

Housing markets have incorporated the **value of the natural environment** into the price of a house and rent (He, 2009) because it has been found that residents are willing to pay more for an apartment or house with desirable natural amenities (Hui and others, 2007). Talbot and colleagues (1987) point out that contact with nature offers compelling and wide-ranging benefits to individuals, such as through actively participating in outdoor recreation or observing nature. Spending time outdoors has been found to have therapeutic potential for

older adults (Rodiek, 2005). Therefore, it is not surprising that the perceived availability of, and interaction with natural environments are vital sources of satisfaction with neighbourhoods and with life in general. People with strong preferences for certain natural amenities are willing to sacrifice other residential attributes (large lot e.g.) (Colwell, Dehring, and Turnbull, 2002).

The **psychological bonds with a place**, which are developed through an individual's habitual and satisfying everyday experience of the tangible or intangible surroundings of the place in which people are born, live, and die, contributes to residential environment choice (Deurloo, Clark, and Dieleman, 1990). As Feijten and others (2008) state: Residential experience may influence people to return to places where they, or members of their household, previously lived because they still participate in activities there (activity), or because they may want to be closer to members of their social network (social), or because they know that place and value it in a positive way (awareness) (Feijten, et al., 2008). People with urban and suburban residential experiences have been found to have a higher likelihood of return migration; people who have lived in rural areas prefer to move to another rural area (Feijten, et al., 2008). People thus choose to relocate within residential environments that are similar to their original homes.

Some types of restrictions and opportunities, such as financial constraints and availability of dwellings (Feijten, et al., 2008) also influence residential preferences. Considering that so many factors play role in residential location selection, successful residential location choice has been viewed as a process of balancing tradeoffs among residence's accessibility, preference and characteristics of housing (Menchick, 1972). Some households are willing to accept a longer commute to work if proximity to certain amenities, like monuments, historical buildings, lakes, rivers, and so on, is important to them (Chen, 2007). Some households place greater importance on lower commuting costs and convenience and thus choose locations that allow access to their job locations or to other urban activity centres (Greenwood and Hunt, 1989). Others consider the functionality and spaciousness of the house itself to be more important than location (Kauko, 2006).

Decisions about residential location are usually made in stages (Figure 1). The decisions to

move or stay are influenced by a range of pull and push factors. Curtis and Montgomery (2006) summarize Rossi (1955) for whom reasons for moving are divided into those that pertain to the decision to move out of the former home – »pushes« - and those reasons pertaining to the choice among places to move to – »pulls« (Rossi, 1955, p. 8). Push factors may include an increase in externalities like pollution or crime, changes in housing affordability, dissatisfaction with the current dwelling or changes in household structure as a result of a birth, death or divorce for example. Pull factors often include aspects like access to good quality public services, such as schools and health care facilities, employment, leisure and recreational opportunities or the fulfilment of housing aspirations.

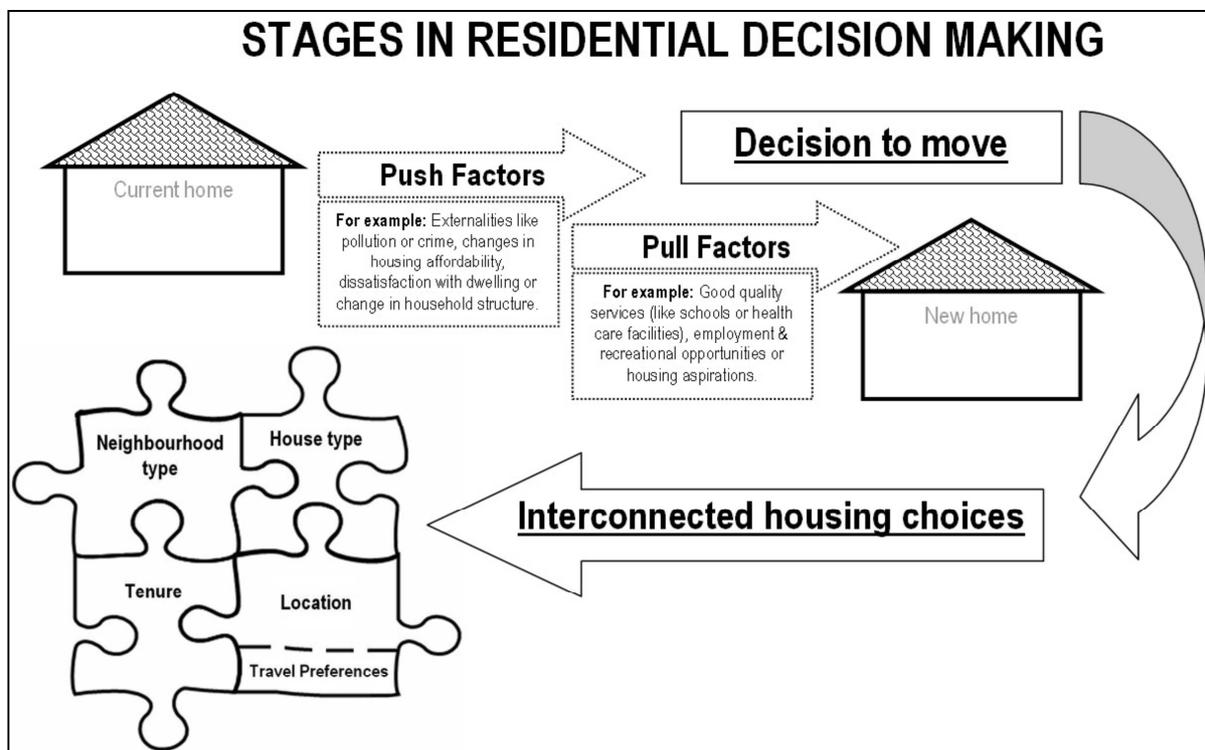


Fig. 1. Stages in Residential Decision Making (reproduced from Curtis and Montgomery, 2006)

For Curtis and Montgomery (2006) these decisions cannot be understood per-se, isolated from each other, furthermore there are many reasons which explain the complexity of decision-making. They highlight the following issues:

- When people buy or rent a home they gain a whole package of goods: features of the house itself, accessibility to work and shopping, social networks and community characteristics, local services and amenities like schools and parks, neighbourhood

layout and features of the natural environment.

- There is furthermore a range of housing types available to consumers: single family detached homes, town houses, apartments or flats and so on. Individual dwellings also vary in quality and availability. It is important to remember that housing location choices are, in many ways, a product of constraint in that they often depend on which housing types are available in particular locations at affordable prices, knowledge of alternatives, societal expectations or norms and the regulatory environment.
- There are also different types of households: singles and couples with or without children, unrelated house sharers, retirees and so on. People tend to live in different types of households as they progress through the life-cycle.
- It is also important to realise that tenure type has an impact on how mobile people are in the housing market and where they choose to live.

The above presented theoretical and empirical findings have been partly confirmed by the respondents' responses to the questionnaire too.

If we single out the Région Rhône-Alpes (France) example, the questionnaire respondents identified three groups of factors of residential location decisions and travel pattern choices / behaviour, namely: influence of age, income and social styles.

For the factor **influence of age** it was found that »family size and the age of the children influence the proximity of public transport: families want to be close to public transport so that children, particularly teenagers, can be more independent for travel. On the other hand, public transport is used less by families with very young children, who find it too restrictive«. In addition, »couples with children or planning on building a family tend to seek housing with larger living areas in less populated zones like small towns. Concerning the elderly (over 60 years old), their residential preferences depend on their mobility: they move back to the centres in spite of the influence of social and environmental factors«.

For the factor **income** the respondents report that »higher incomes are reflected in larger residential lots (larger living areas), together with a high probability of home ownership. Higher incomes thus directly affect the location strategies of households, who tend to leave

the town centres to find a more comfortable lifestyle in the peripheral areas«.

As regards the factor **social styles** the respondents believe that »there are different categories of mobility behaviour depending on place of residence. These categories are known as socio-styles (lifestyles), which reflect age, cultural level, political views and involvement in community life. Behavioural types can therefore be reduced to a single type of factor (residence)«.

Respondents also emphasized »the role of the following factors which have contributed to increased settlement in the peri-urban areas of the pilot area. These are: environmental amenities, property prices, mountain leisure activities, quality of rural landscape, urban pollution«.

In the case of the Province of Mantua (Italy) factors such as relatively high property costs in central parts of the cities and the so called common cultural model influenced the outmigration to new quarters in suburban areas. Commuting costs were not taken into account when decisions to move to the suburban areas were taken. Commuting to work, to schools and to service activities is done predominantly by car.

In the Piedmont region (Italy) some interesting examples how to reduce suburban trends and enhance the development of small peripheral settlements can be found. For example, the small municipality of Rorà offers incentives by which it seeks to attract new families to settle in the municipality.

In Austria the following factors have a decisive role in selection of a particular community or region for resettlement: accessibility of the core city (temporally and spatially), cost of housing acquisition, existing relations (kinship relations etc.), green environment / ecological qualities, service equipment / infrastructure (kindergartens, schools, doctors), and recreational quality.

2.3. Quality of life and the choice of housing location and mode of transport

The concept of quality of life (QOL) is complex, because it includes a multitude of contributory facets such as housing, different sets of service activities, work and environment. It is possible to identify at least three different approaches to the study of QOL in the context of housing and other spatial planning issues:

- QOL studies focused on subjective well-being or life satisfaction (Donovan and Halpern, 2002). This research concentrates on asking people if they are satisfied with their lives in general, although it can be extended to examine individuals' longer term life goals and aspirations, as well as measuring people's self-reported psychological health and mental state.
- QOL has typically been understood by governments to be synonymous with standard of living (Jackson, 2002). Consequently, if a government strives to improve the nation's standard of living, it can be said to be improving the nation's QOL.
- QOL is frequently associated with the concept of sustainable development so that both concepts are used almost interchangeably. Partly this follows a philosophical argument that unless we engage in more sustainable practices the quality of life for the population will deteriorate (García-Mira et al., 2005).

In addition to the QOL concept, the concept of the »quality of urban life« (QOUL) - a concept making it possible to monitor the multidimensional nature of cities - is used too. Despite a number of recent sources, no single standard definition of it could be found. Psatha et al. (2011) defined 12 general categories of factors determining the QOUL in Europe, namely: economic environment, social environment, natural environment, urban and suburban green spaces, public spaces – public buildings, culture – leisure, demographic data, education, health care, democratic institutions, built environment and traffic and transportation.

In the following we will use a broader term QOL which indirectly includes the term QOUL as well.

For Beck and Stave (2011) quality of life is a subjective term, representing human

perceptions of different aspects of their environment. It is »meant to represent either how well human needs are met or the extent to which individuals or groups perceive satisfaction or dissatisfaction in various life domains« (Costanza, et al. 2007, p. 268). Sawicki (2002) proposes a slightly different approach and introduces the concept of Community Indicator System (CIS) which includes QOL, but also quality of place (QOP), liveability, performance and sustainable measures. QOL focuses on a person's wellbeing and mental state, while QOP looks at the physical characteristics of an area that make it attractive as a place to live. For place based indicators to be relevant, they must be perceived by residents to be important, thus representing some aspect of their quality of life (Sawicki, 2002). Because what one resident values may differ from another, an urban area should be evaluated both in terms of its objective qualities as well as its residents' perception and appreciation for those qualities (Beck and Stave, 2011).

The location of housing in relation to jobs, shopping, transportation and other services significantly impacts on the quality of life (QOL). Housing located near jobs, services and public transportation infrastructure has the potential to improve the urban and regional QOL by reducing traffic, commute times and air pollution. Housing is a fundamental component of QOL. Without appropriate shelter, people cannot meet their basic needs and participate actively in the society. Housing issues can have flow-on effects for health, education and community wellbeing.

The decision to buy or rent a home is a large financial commitment that, in most cases, will continue to influence the QOL, access to opportunities and transportation patterns of families and individuals long after the event.

For Curtis and Montgomery (2006) a number of factors, generally classified as »quality of life« features, are also known to influence housing location choices. These factors relate to people's preferred lifestyles, preferences for leisure and recreation, familial connections, aesthetics of the surroundings and feelings of safety and security. Curtis and Montgomery (2006) cite Colwell et al. (2002) who explored the connection between preferences for recreation and the tendency for people to choose a residential location in close proximity to the recreation site. They claim that consumer preference for recreation does exert influence

over residential location; the stronger taste for recreation the more likely a person is to locate close to recreation sites. In addition, the access to open space and natural features has an important impact in residential decisions. The desire to be »close to nature« plays a significant role in housing decisions for households locating in the suburban areas (Kaplan & Austin, 2004; Vogt and Marans, 2004). Although Vogt and Marans (2004) find these environmental characteristics to be important, neighbourhood and house design and the quality of schools were found to be more important considerations for movers.

Other authors have emphasized the **importance of familiarity and social connections in residential choices**. Winstanley et al. (2002, p. 817) claim that »many people are reluctant to leave familiar and convenient surroundings to which they have grown accustomed and become attached« and this is consistent with the results from residential mobility studies showing that many people who move do so only across short distances (Burgess and Skeltys, 1992).

Beside the already mentioned factors, **reflections of self image and social status** also appear to play an important role in settlement decisions. Sirgy et al. (2005) make a distinction between »functional congruity« and »self-congruity«. Functional congruity basically relates to the utilitarian aspects of a housing choice whereas self-congruity is more symbolic and reflects the buyers' ideas of their own personality, class, aesthetic preferences and also how they wish to be seen by others (Sirgy et al, 2005). When making housing decisions buyers are likely to consider both the functional and symbolic aspects of these decision.

This is similar to the concept of »settlement identity« which suggests that people »tend to feel most comfortable in a particular type of place, its values, lifestyle, and image« (Marcus 1995, p. 201). This place preference determines a person's settlement identity which is often shaped by past or childhood experiences (Marcus, 1995).

Before presenting survey results referring to the quality of life and the choice of housing location and mode of transport in the pilot regions we would like to outline some facts about the achieved QOL in the main urban centres of the AS.

According to the Mercer survey of the quality of living (2011) in selected important cities of the world, the cities in the AS have relatively high rankings: Vienna (1), Zurich (2), Munich (4), Geneva (8), Bern (9), Lyon (39), Milan (42). The same study ranked the world's cities considering personal safety. Rankings of the AS cities are high according to this criterion too, for example: Bern (2-4), Zurich (2-4), Vienna (5), Geneva (6-7), Munich (11-15) and Ljubljana (30).

But at the same time, and this is interesting from the perspective of the MORECO project content, many Alpine cities fall into the group of top 50 most congested cities in the year 2011. Tom Tom has published the results of a recent traffic study, which highlights some of the most congested hotspots of Europe (Newspress, 2011). The most congested city in Europe is Brussels, with congestion getting worse, and with a 1.2% increase in traffic since 2010. Rankings of AS cities are as follows: Lyon (6), Milan (14), Zurich (16), Munich (25), Graz (27), Genoa (28), Vienna (31), Turin (34), and Nice (44).

Although the results of both mentioned studies are not directly comparable, they in general suggest the existence of a contradictory situation in which the high QOL in cities is combined with traffic problems (in this case congestion) which consequently severely jeopardize its level.

The mentioned contradictory situation is confirmed by the responses of some of the MORECO project partners. For example in the region Région Rhône-Alpes (France) the respondents ascertain that – »thanks to a protected environment, large natural areas, and good quality urban and social services – high QOL is observed«. In addition, respondents noted that the »traffic jams are only a problem for the largest towns of the Geneva-Valence alpine corridor especially during rush hours ... which contribute significantly to the environmental pollution ... and are caused by physical (topography, characteristics of road network) and financial constraints (insufficient density, length of journeys). All mentioned reasons make use of the car unavoidable«.

A similar situation is reported also in some other pilot areas. In the Piedmont region (Italy) for example high QOL at the general level is noted which is constantly endangered by traffic

congestion problems too. In Slovenia, although a relatively high QOL is generally observed and experienced, »suburbanisation has had the effect of enlarging urban areas, greatly increasing daily commuting ... and also modifying the existing social structure, the QOL in the settlements around the urban centres and had an impact on changing historical physical identity of the affected areas«.

The above documented and indirectly assumed QOL in the AS is, generally speaking, high and as such has important influences on the choice of housing location and consequently on mode of transport.

Although in each individual case (territorial unit) a number of different factors, such as socio-demographic, cultural, spatial, housing, transportation and other relevant characteristics must be properly considered, it was found that:

- On the one hand, high QOL characteristics, such as people's preferred lifestyles, preferences for leisure and recreation, familial connections, aesthetics of the surroundings and feelings of safety and security significantly affect housing location choices and consequently mode of transport.
- On the other hand, decisions to buy a new house (flat), in most cases, will continue to influence the QOL, access to opportunities and transportation patterns of families and individuals for a long time period after purchasing a residential unit.

QOL is a predominantly subjective term, representing human perceptions of different aspects of their environment. In addition, between individuals (households), there exist potentially significant differences – »what one resident values may differ from another. An urban area should therefore be evaluated both in terms of its objective qualities as well as its residents' perception and appreciation for those qualities« (Beck and Stave, 2011). QOL is defined also by the social status of the residents and by their reflections of it. Lifestyles and self image also appear to play an important role in a changing dynamics in social and spatial mobility, increasing spatial opportunities and taking settlement decisions.

2.4. Personal values and the choice of housing location and mode of transport

Investigators in the area of consumer research have been for some time dealing with the question of consumers' cognitive structures as a means of developing useful understanding of consumer attitudes and behaviour. One way in which such cognitive structures could be conceptualized is the expectancy-value model which has been widely used in the study of motivation, attitudes and actions. According to the mentioned model, a consumer's attitude and behaviour with respect to a particular product will be largely determined by the consumers beliefs about what the consequences of purchasing the product will be and by his/her evaluation of those consequences (Lindberg et al., 1989).

In connection to the aforementioned model Upmeyer (1982) suggested the definition of attitudes towards a product in terms of some ultimate goal of the individual. Ultimate goal can be interpreted in the set of values, defined as desirable end-states (e.g. freedom, happiness and security), which the individual strives to attain in his/her life. It has been assumed that much of human behaviour is motivated by attempts to attain such »life values«. The life values actually are an element of consumers' cognitive structures and play an important role in explaining consumer preferences and behaviour (Lindberg et al., 1989).

The role of life values and beliefs has also been studied in the context of predictions of residential preferences and simulated residential choices (Lindberg et al., 1988). Lindberg et al. based their predictions on the assumption that a person's evaluation of a given housing alternative is determined by a combination of the evaluations of its different attributes. They also assumed that a person's evaluation of each housing attribute is determined by (a) what effects he/she believes it to have on his/her possibilities to attain various life values, and (b) his/her evaluations of those life values.

Lindberg et al. (1988, 1989) employed in their study 12 housing attributes which were classified into three sub-categories (a) intrinsic attributes of the dwelling unit itself: cost, size, standard, (b) location attributes: distance to work, downtown, friends and relatives, recreation, schools, and (c) neighbourhood attributes: neighbourhood facilities, noise level, reputation, public transportation facilities (more on housing attributes also in Walker et al.,

2007). In addition, the study also included 12 life values, namely: comfort, excitement, family, freedom, happiness, health, inner harmony, leisure, money, pleasure, security, togetherness.

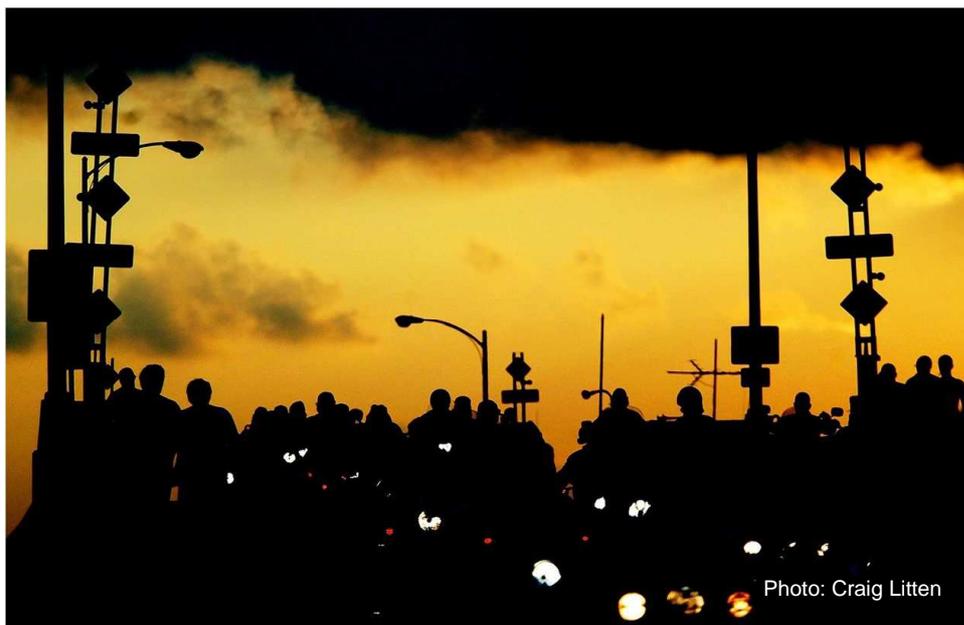
Results of the study (Lindberg et al., 1989) have, among other, shown that housing attributes believed to have the strongest impact on value fulfilment were size, distance to recreation and transportation facilities, whereas those with least rated impact were standard and distance to downtown. The housing attributes were believed to have the largest effect on the attainment of comfort, freedom and family, whereas the attainment of health, money, happiness and pleasure was believed to be less affected by these attributes. Transportation was seen as important for the attainment of freedom, size was important for family and comfort and distance to recreation was important for leisure.

In later studies, the authors also emphasised the importance of impact of changes in residential-location preferences across the life span. They demonstrated that preferences for residential location are based on housing attribute evaluations derived from beliefs about value fulfilment, and those changes in these beliefs account for variation of residential location preferences across the life span. The results showed that life span changes in residential location preferences depended on how much the preferences were influenced by the value of comfort relative to freedom, well-being, and togetherness (Lindberg et al., 1992).

According to Coolen et al. (2001) objectives and values play an important part in the behaviour of people in general (see also Rokeach, 1973) and in their choice behaviour in particular (see also Bettman, 1979). The choice process is considered to be a dynamic process in which people identify a problem to be solved. They determine their objectives on the basis of their values, search for or design suitable solutions, evaluate these solutions and finally make a choice (Simon et al., 1987). People try to realize certain objectives and values in solving their problems. Coolen et al. (2001) state that choice behaviour is value-oriented and goal-directed behaviour. This is also the case for the choice of a house. In this context it has to be mentioned that goal-directed behaviour is not necessarily rational behaviour in the classical micro-economic sense of utility maximization (Simon, 1955). Rational behaviour

implies an optimal choice; goal-directed behaviour results in a functional choice. Such a choice may be optimal, but it is not necessarily so, and frequently it will not be optimal (Beach, 1990).

Schwartz (1994) defines values as »desirable transsituational goals, varying in importance, that serve as guiding principles in the life of a person or other social entity«. Values are thus conceived as objectives which, consciously or unconsciously, function as criteria in all our actions. They have cognitive, affective and behavioural aspects (Rokeach, 1973). In this notion of values as objectives we can recognize the following aspects: (1) values function as interests for individuals or groups; (2) values motivate behaviour and give it direction and intensity; (3) values function as criteria for the evaluation and justification of behaviour; (4) values are acquired through the socialization of dominant group norms and through unique individual experiences (Schwartz, 1994).



In order to be able to live and function in a social environment, individuals and groups transform the needs which are inherent to human existence into specific values. The central role of values in the human cognitive system stems from three types of human needs: from the needs of the individual as a biological system; from the demands set by coordinated social interaction; from the demands which stem from the functioning and survival of groups (Schwartz, 1992). From these fundamental human needs, Schwartz (1992, 1994) derives ten

universal, motivational value domains, namely: power (social power, wealth); achievement (successful, ambitious); hedonism (pleasure, enjoying life); stimulation (daring, exciting life); self-direction (independent, curious); universalism (social justice, unity with nature); benevolence (helpful, true friendship); tradition (humble, devout); conformity (politeness, self-discipline); security (family security, clean).

Every individual strives for values belonging to each of these domains. According to Rokeach (1973) the values will not be of the same importance for every individual. In other words, individuals organize and structure their values so that they are in a position to choose from alternative objectives and actions and are able to resolve potential conflicts. Such a configuration of values is called a value system (Rokeach, 1973). Value systems are relatively stable in the sense that over a longer period of time they will on average comprise the same values. Changes in value systems do not occur so much in the values which make them up as in the relative importance ascribed to every value within the system (Rokeach, 1973).

In a choice situation, various values will be activated in a person's value system. However, it is unlikely that people will be able to act in agreement with all of the activated values simultaneously. In this context a value system is a learnt and organized entity of principles and rules that helps people in their choice between alternatives, to resolve conflicts and to take decisions. A value system is thus a cognitive system of which only a relevant part becomes activated. People's choice behaviour is determined by a combination of both the values activated by the choice object and the values activated by the choice situation. Both sets of values form (possibly overlapping) subsets of the total value system (summarized from Coolen et al. 2001).

As regards personal values and the choice of transport mode, interesting results referring to the main MORECO project working assumption, namely households and other stakeholders predominantly make decisions about new residential sites and consequently transport modes in conscious and rational manner, can be found from different studies and articles.

In examining various motives for car use Steg (2005) represents the views of Dittmar (1992) according to whom material possessions, such as cars, represent instrumental values as well

as symbolic values. The symbolic values refer to the identity of a person and are twofold: the expression of the self and a social–categorical expression indicating one's social position or group membership. Moreover, Dittmar contends that the use of material goods fulfils three functions: instrumental, symbolic, and affective. This implies that car use may have an instrumental function (i.e. it enables activities), a symbolic function (i.e. the car is a means to express yourself or your social position), and an affective function in connection with deeper, non-instrumental needs and desires. These functions may be considered as different types of motives for car use. So, three categories of car use motives may be distinguished. Instrumental motives may be defined as the convenience or inconvenience caused by car use, which is related to, among other things, its speed, flexibility and safety. Symbolic or social motives refer to the fact that people can express themselves and their social position by means of (the use of) their car, they can compare their (use of the) car with others and to social norms. Affective motives refer to emotions evoked by driving a car, i.e. driving may potentially affect people's mood and they may anticipate these feelings when making travel choices.

In connection with organization and implementation of travel demand management Steg (2005) emphasizes that it is important to have in mind that people do not drive their car only because it is necessary for them to do so, but also because they love driving. Symbolic and affective aspects significantly contribute to the positive utility of driving (Mokhtarian and Salomon, 2001). This might be one of the reasons why attempts to influence car use have not been very successful, and it might explain the vast resistance against (effective) policies aimed at reducing car use. As policies aimed at managing travel demand will be more effective if they are directed at important factors influencing car use, Steg (2005) emphasizes the need to design policies that are (also) directed at non-instrumental motives. So, policy makers should not exclusively focus on instrumental motives, but they should also consider the many symbolic and affective values of various modes of transport.

In an earlier article, based on results of a study conducted among Dutch respondents in 2001, Steg (2003) tried to answer the question whether public transport can compete with the private car. Hereinafter some key findings related to personal values and the choice of transport are summarized.

Steg (2003) found that five dimensions underlie the attractiveness of car use: independence and convenience, the »fun« of car use, control and freedom, kick and status, and negative aspects of car use (i.e. travel costs, traffic unsafety and stress). Frequent car drivers judge more favourably about all these factors than those who hardly drive. Comparable dimensions underlie the judgements on the attractiveness of public transport, i.e. independence and convenience, the »fun« of public transport, freedom and control, and status and traffic safety. Infrequent car users evaluated these factors most favourably. Steg (2003) reported that a similar Danish study also revealed that frequent car users evaluate car use positively on many different aspects, while only a minority of the respondents had strong positive feelings towards travelling by public transport or cycling. Interestingly, especially the car appeared to be much more than a means of transport (for more than half of these Danish respondents), while cultural and psychological values are hardly connected with travelling by public transport.



According to Steg (2003) this means that car users do not only travel by car because they need to do so, but also because they love driving. People also prefer to drive a car because of its psychological and cultural meanings. Car users express themselves in the choice of their car and the way they use it and driving a car may cause feelings of control or feelings of superiority over others. Moreover, many people like to drive because they think driving is pleasurable, adventurous, and arousing. So, people also drive because they like to, and not (only) because they have a real utilitarian need for a car or a practical reason to drive.

Brechan (2005) found that persons with strong ecological norms and persons that are socially oriented prefer public transport to a larger extent than persons with a weak ecological norm and persons who are self-serving. She also found that the self-efficacy (capability) and achievement are personal values that are relevant to transport mode choice. Finally, she pointed out that the concept of self-presentation shows that people consume products and services to confirm their identity to themselves and to communicate their identity to other people. Use of certain modes of transport is a tool for self-presentation too. The private automobile has been identified as an essential lifestyle component of a dominant segment of the population, obsessed with efficiency, safety and freedom (Steg, 2005; Mann and Abraham, 2006).

As we can see from the presentations of selected literature and research findings, values – among other factors such as cost of travel, social norms, perceptions of convenience, accessibility etc. – represent one of the very important factors which affect choice of housing location and travel behavior as well as its possible changes.

The next chapter presents how values are related to preferences.

2.5. Housing preferences

The issue of preferences has been partly addressed in the previous chapters, in which we dealt with motivations, quality of life and personal values and their influence on choices of housing location and mode of transport.

A great diversity in methodological approaches to the measurement of housing preferences exists (Timmermans, et al., 1994; Jansen et al., 2011). According to Coolen et al. (2001) an important distinction in this context is made between stated and revealed preferences. Revealed preferences are based on actual housing choices. In contrast, stated preferences are based on intended or hypothetical choices.

In examining the relationship between values and preferences authors describe a theoretical perspective called means-end theory and a measurement approach named laddering. These notions are then applied to preferences for housing attributes.

The original means-end chain model is based on four assumptions (Gutman, 1982):

- Values influence choice processes.
- People can keep track of the enormous diversity of goods by grouping them in sets or classes so as to reduce the complexities of choice.
- It is assumed that the behaviour of consumers has consequences, although these consequences do not have to be the same for everybody.
- There is the assumption that consumers learn to associate particular consequences with particular behaviours.

Using Gutman's original model (1982), presented in a simplified form in Figure 2, the authors have shown the link between values on the one hand, and housing preferences, on the other (Figure 3).

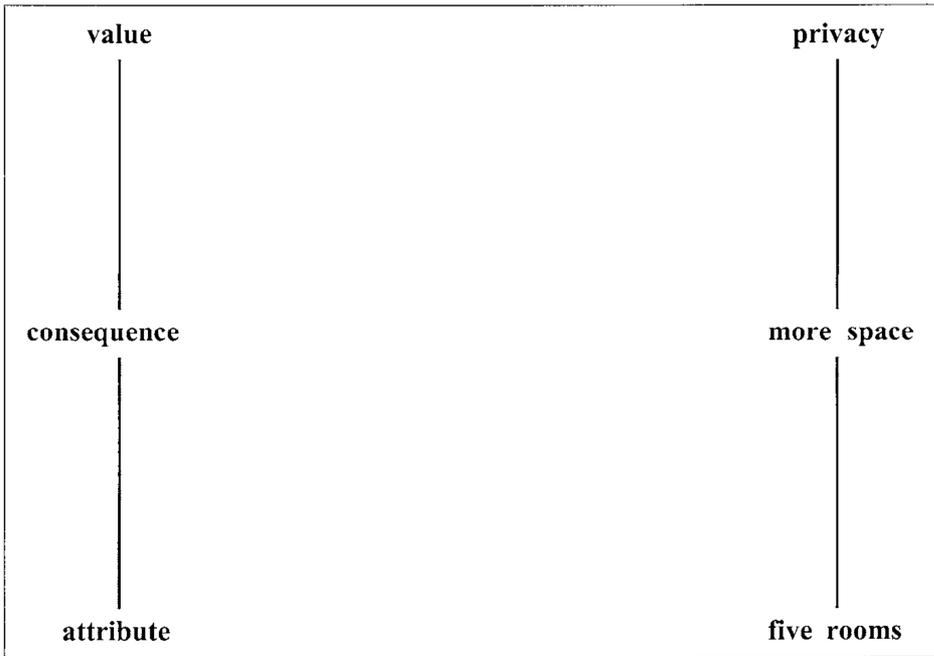
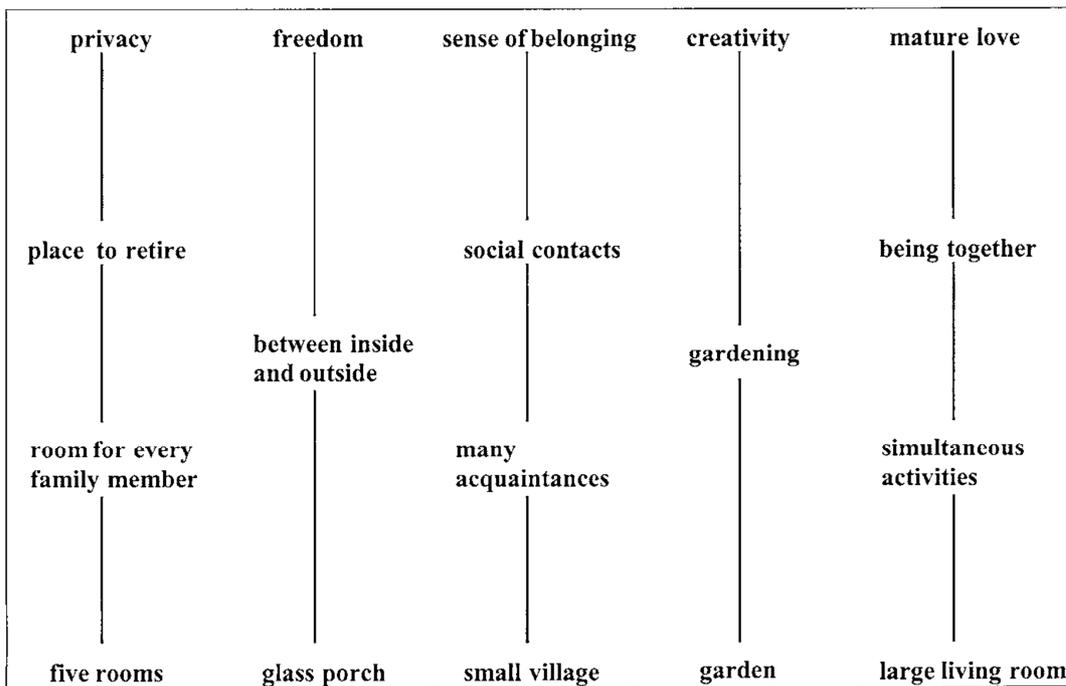


Fig. 2. Original means-end chain model (reproduced from Coolen et al., 2001)



Source: OTB pilot project Means-End Chains

Fig. 3. Examples of means-end chains of housing attributes (Source: OTB pilot project Means-End Chains)

Another conceptual framework for studying housing preferences has been offered by Beamish et al. (2001). The proposed concept highlights the role of other important factors, such as household type, social class, life style and housing norms, which besides values affect housing preferences and choices (Figure 4).

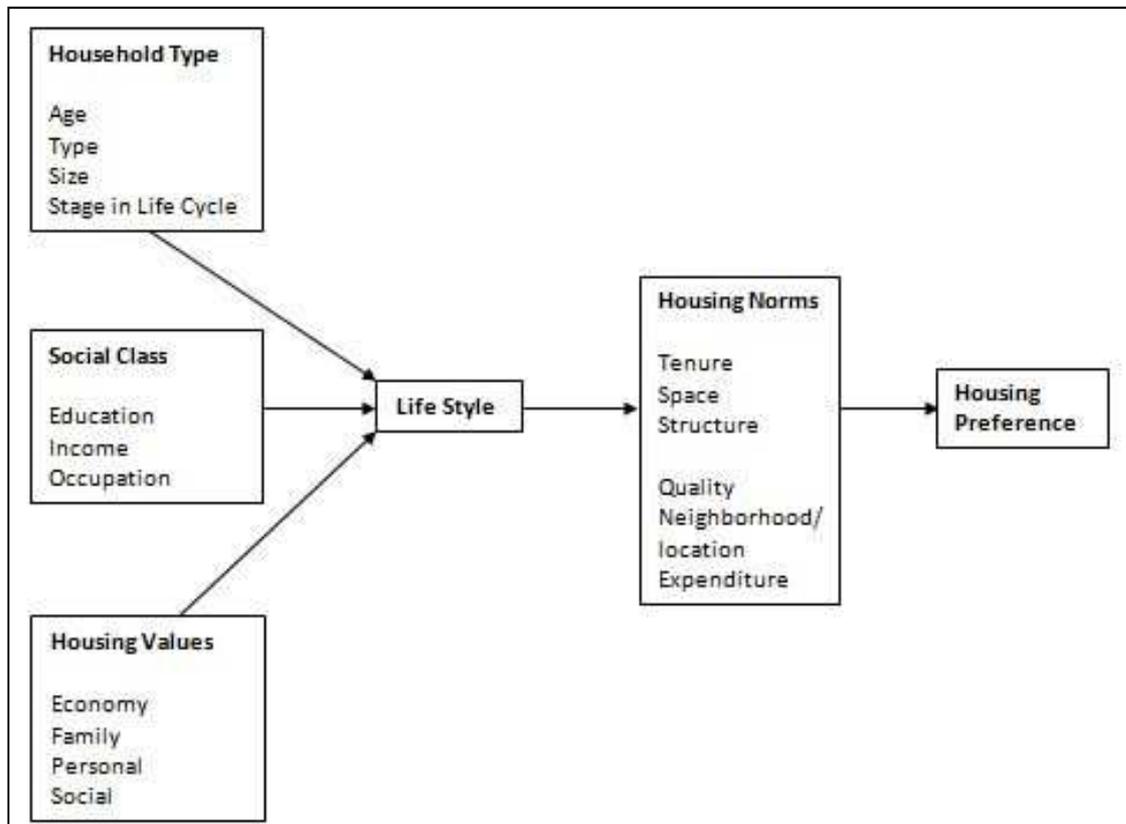


Fig. 4. Conceptual framework for influences on housing choice (Source: Beamish et al., 2001)

Although this conceptual framework has been developed considering the situation in the USA, we believe that it can be used also in the European context and in context of the AS.

The fundamental characteristic of this conceptual framework, for its authors, is the concept of lifestyle which is an individual's whole way of living. Lifestyle is influenced by household type, including age of household members and size of household. Age, marital status, and the presence and age of children determine the stage in the life cycle that impacts one's lifestyle. Social class also influences lifestyle. Traditionally social class has been determined by income, education, and occupation. Finally, lifestyle is impacted by the values that are present in the key members of a household. Values are internalized standards, which

materially affect the way a person will react when confronted with a situation permitting more than one decision. It is a guide for making decisions. A number of values have been identified that are specific to housing choices.

The impact of lifestyle on housing choices is influenced by the housing norms that are present in a culture. Morris and Winter (1978) identified six housing norms: tenure, space, structure, quality, neighbourhood and expenditure.

Finally, housing preferences are determined by the buyer. Once preferences are known, the consumer enters the housing market and makes a choice that is influenced by the housing stock that is available, the resources that the household has to devote to securing housing, and any other constraints that may be present. Consumers are striving to match their preferences for housing with the final selection or choice that they make (summarized from Beamish et al., 2001).

A French SOFRES survey in 2007 (cited by Sangouard, 2008) has determined a set of criteria, which are vital to people while searching for preferable residential location. These criteria are as follows: less than 1 km from green areas and local services (schools, doctors), less than 10 km from higher level services such as hospitals, leisure facilities, and a TGV station, and 60 km from an airport.

Generally, the French studies reveal that in the search for implementation of preferences it is necessary to reach an adequate compromise. Financial compromise: people settle further from the town centres in order to be able to enjoy a larger house at an affordable price. Distance is the variable that allows people to adjust their residential dream to their financial means. Those who settle in peri-urban areas are not “forced” to leave the town, but make a choice among limited options resulting in a compromise between proximity to services and low-density housing (summarized from Rhône-Alps Region + PACTE, 2011).

3. Conclusions

From the previous chapters it is evident that, besides short and long-term costs of housing and mobility there are also other, one might call them "soft" factors that influence the residential site and mobility mode decisions. This group of factors includes motivations. In the report – in addition to the analysis of the role and importance of motivations – we have included several other factors which are closely linked with motivation, namely: quality of life, personal values and housing preferences. All these factors are discussed in separate chapters.

Despite the fact that all mentioned factors are substantively interconnected, their analytical presentation varies according to the authors, approaches, theories and results of empirical analysis that were carried out in different environments, time and with various participants. It is also important to mention that when preparing this report, we did not run empirical analysis specifically related to AS or to countries and/or regions within the AS. The information obtained from the written questionnaires of the MORECO partners gave us opinions from their specific functional perspective. All this must be taken into account when applying the results of this report for further work on the MORECO project.

Review of literature on the topic of motivation has shown that:

- There are numerous and very different theories, approaches and concepts.
- They cover in a very limited extent decision-making problems on the choice of new residential sites and consequently transport modes in general and particularly in the AS.
- They problematize the concept of rational people's behaviour with which they would maximise their individual self-interest.
- Motivations significantly affect the consumer behaviour of home buyers and are an important factor determining the decision making process of choosing the site and type of residential unit (house, flat etc.).
- People's buying decisions are affected by a number of different factors: internal – perception, consumer resources, knowledge, attitudes, personality, values and lifestyle, behaviour, habits, motivations, affections, need for self-expression etc., and external –

cultural background, social class, personal influence, reference group and situation etc., prevailing under consideration of short-term aspects.

- Social norms have a strong influence on motivation and human behaviour too and influence is particularly strong when people see the positive actions of other »people like me«.
- Messages that contain negative stimuli have more impact on behaviour and decision-making than positive stimuli – negative information is accorded greater attention, scrutiny, and weight in consciousness.
- There is the so-called »herd behaviour« phenomenon which is the tendency for individuals to mimic the actions (rational or irrational) of a larger group, where individually they would not necessarily make the same choice. Its basic dimensions are briefly the following:
 - a) Because the information held by any one individual is usually incomplete he/she looks to the judgements of others to make his/her choice thus participating in »herd behaviour« (like in the housing bubble that was experienced in Europe in recent years) and consequently posing the question whether the efficient markets hypothesis, which rests on the notion that “homo economicus” is a totally rational being with all the information he needs to make decisions, is still relevant and practically usable.
 - b) Rational herding can be understood as a social learning device by which the actions of others provide valuable information and affect motivations in a world of imperfect information.
 - c) Non-rational herding may emerge as the outcome of psychological motivations and limitations, e.g. because of social pressures and forces (Baddeley, 2011). Social pressure has distinct impacts on real-estate and housing decisions because people will follow the majority opinion in spite of their own individual and potentially more accurate judgments about a situation (Gibler and Nelson, 2003).

Referring to elements of mobility and site decision making processes which motivate households and other stakeholders’ choice of housing location and mode of transport, a number of benefits and costs were presented. We would like to point out that questionnaire respondents exposed a far more extensive range of private benefits as well as costs of

choosing housing location in suburban areas/villages then in urban (city) areas.

Analysis of the main factors of residential location decisions and travel pattern choices / behaviour showed that there are roughly three set of factors, namely:

- Socio-economic characteristics of households which among others include: household structure, gender, family income, life-course position, social network, individual lifestyles that depend on values and beliefs, residential preferences and aspirations, psychological bonds with a place, residential experiences, disadvantaged persons, car and/or season-tickets for public transport etc.
- Mobility generating activities, such as trips to work, school, shopping and leisure facilities etc..
- Land use and housing characteristics: accessibility and pleasantness, topography, residential density, settlement size, structure and density, provision of infrastructure facilities, public transport supply, ethnicity of neighbours, social facilities, the quality of the natural and social environment, functionality and spaciousness of the house etc.

Quality of life of population represents another factor that motivates households and other stakeholders choice of housing location and mode of transport.

The location of housing in relation to jobs, shopping, transportation and other services significantly impacts quality of life (QOL). Housing located near jobs, services and public transportation infrastructure has the potential to improve the urban and regional QOL by reducing traffic, commute times and air pollution. Housing is a fundamental component of QOL. Without appropriate shelter, people cannot meet their basic needs and participate actively in the society. Housing issues can have flow-on effects for health, education and community wellbeing. The decision to buy or rent a home is a large financial commitment that, in most cases, will continue to influence the QOL, access to opportunities and transportation patterns of families and individuals long after the event.

Values – among other factors such as cost of travel, social norms, perceptions of convenience, accessibility etc. – represent one of the very important factors which affect choice of housing location and travel behaviour as well as its possible changes. The same

goes for housing preferences which represent one of the key factors that influence the motivation of people in choosing an appropriate residential location.

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