AN ANALYSIS OF SOCIAL CONDITIONS OF COMPACT CITIES IN THE NETHERLANDS

MASTER THESIS

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AN ANALYSIS OF SOCIAL CONDITIONS OF COMPACT CITIES IN THE NETHERLANDS

MASTER THESIS

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Abstract

The compact city concept tries to achieve sustainability through high density, mixed use and intensification. These approaches have affected society's perception and expectation which then response through various social changes due to different social backgrounds, that is, age, gender, ethnicity, and social class. In the Netherlands, social characteristics are also shaped by the global influence of individualism and women emancipation, which has implied to decreasing household size and low dwelling occupation, especially in urban areas. Differences of social backgrounds are caused by the multicultural characteristics of society contributed by significant number of immigrants. The research tries to analyse the compact city policy through social aspects and the effects of other influencing factors, which include the internal and external factors. A review of spatial distribution of society by social characteristics using data from The Statistics Netherlands shows a fact that compact city policy causes a different level of impacts for society of each municipality and tends to be exaggerated by high density, which fortunately is the aim of the compaction policy. The concept tries to encourage social cohesion between different social classes through high density housing and horizontal mixed use but, unfortunately, has led to ethnic segregation in major cities because low economic class is identical to a certain group, that is, the non-Western ethnic minority. This situation creates uncomfortableness and raises reasons for residential mobility and residential migration, in addition to reasons to suit with the need of space regarding changes in household size through life course. The evaluation of living condition is based on society's perception and expectation of the urban functions, that is residence, work, transportation, comfortableness and leisure. The research comes to a finding that regional coordination, good governance and integration policy are needed to achieve sustainability, especially social sustainability in compact city.

Keywords: *compact city, sustainability, social characteristics, segregation, regional coordination, good governance, integration policy*

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Preface

It has been a very precious moment to study in very stimulating academic environments at Institut Teknologi Bandung and University of Groningen. Being in classes, discussions, and taught by expert lecturers have really been an upgrade for me as a staff of the Regional Development and Planning Board of the Local Government of the City of Palangka Raya, Central Kalimantan - Indonesia. Especially when working on the thesis about "An Analysis of Social Conditions of Compact City in the Netherlands" through which I learn how social changes may occur as a consequence of spatial planning and incorporation of other public policies. It will be a very valuable lesson for me in undertaking my duty because it brings an awareness of what to expect from a planning decision and the need of integrated policies.

May all that have been learned and achieved be a positive contribution to the development of human beings and especially for the improvement of the local government and society of the city of Palangka Raya. To Lord Jesus Christ be all glory and honour.

Groningen, August 2009

Roysart Alfons

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Chapter I

INTRODUCTION

Discussions about compact city have been dominated by analysis of its economic and environmental implications. Social implications are usually studied in relation with other aspects, such as socioeconomic, socio ecology, etc. In fact, compact city is concerned about spatial arrangement of human space and as so must have affected the human sphere, that is the society and the way they live, and may have even triggered the shaping of new social characteristics. It then becomes important to give more focus on social aspect itself in analyzing the impacts of compact city policy. It is important to serve an answer for whether social impacts of compact city tend to go in accord with the concept of development, through compact city, and how they will affect the future in regard with sustainability issue. Due to the contingency characteristics of social issues, this research will only use one country, that is, the Netherlands, as the study focus. The expected findings of this research will provide better understanding of the implication of physical aspects of planning system, especially compact city model, on the social life of society. This awareness should be born in mind by government and especially planners as public policy developer.

This chapter will firstly introduce the discourses on compact city, including its relationship with social issues, among practitioners and academicians. The specific objective of research and methodology and methods used are explained in the next section followed by the research scope. Provided at the last section is the structure of this report and hints of each chapter.

1.1 Research Background

Compact city has been advocated by many scholars as an appropriate approach of doing sustainable urban development, especially in the middle of the race between the increasing demand of residential areas and the urgency to protect environment. It is said so because the concept of compact city bears two parallel missions, that is, to provide area for urban uses and, at the same time, sustain the green open space. This is done by keeping the growth of urban area from sprawling to its countryside and as so the surrounding area can be kept as green open space. The intent of compacting is not only for the sake of environment outside the boundary of the city, but purposely also, as advocated, for the inner part of the boundary which deals with the improvement of economic efficiency and social benefit. Compactness is achieved through high density, mixed use, and intensification (Jenks et al, 1996, p.107). The United States and European Countries, pioneered by The United Kingdom and The Netherlands, have been implementing compact city for more than a quarter of century. Other countries which have also implemented compact city methods are Australia and Japan.

The sustainability concept of compact city is perceived as a concept which meets the most referred definition of sustainability stated in Our Common Future, the Report of the World Commission on Environment and Development. Sustainable development is defined as

development that meets the needs of the present without compromising the ability of future generations to meet their own needs (WCED, 1987). The two types of need in this definition, that is the need of the present and the future generation, require that development be carried out considering intra-generation and intergeneration matters, two faces of a coin. Provision of the need of the present is very much dealing with urban matters while for the future generation it will be more about protection of the environment. Jenks, Burton and Williams (1996, p.341) see these two faces of a coin as a relationship between urban form and environmental protection. Here compact city takes position as a prospective solution for sustainable development.

Besides dealing with the two sides, that is the urban and rural part, another challenge for compact city in achieving sustainability is, as described in Charter of European Cities and Towns towards Sustainability, that it should meet the three aspects of sustainability, also known as the Triple Bottom Line, that is, environmental, economic and social sustainability (European Commission, 1994). A lot of researches have been conducted to evaluate the fulfilment of each of these aspects in the practice of sustainable development. Unfortunately, according to Burton (2001, p.1), of the three different aspects of sustainability social issues have been discussed the least in researches. She links this unevenness with the difficulty of defining and measuring social sustainability, compared with environmental or economic valuing. De Roo and Miller state that "the compact city has been espoused as a counter strategy" when describing the solution for rapid suburbanization which has threatened rural lands (De Roo and Miller, 2000, p.4). From this point of view, it is clear that advocation of compact city is mostly based on environmental issues. Economic consideration also seems to get favour in sustainability related researches because location and scale are significant factors for economy. Supporting this point, Smyth (1996, p.104) shows how land values and different attitude of economic actors can contribute to changes in urban form. Here the function of compact city approach becomes important in designating urban growth.

Especially social aspects, they are usually linked with other aspects in many discourses, for example, socioeconomic discusses about relationship of social life and economic activity, socio-ecology about how social structure and organization are influenced by organisms' environment[1], etc. This is reasonable since the ultimate aim of any development policy is for the sake of social welfare. Understanding of society's perception of and expectation from their environment is important for evaluation of the sustainability of compact city. The characteristics of society are dynamic and very contingent. The level of difficulty increases when inter-generational issues are involved because the need of future generation can be very different with that of current generation. This also gives the idea why it is necessary to focus the objective of research only on social aspects.

Proofing the claims in social cases is not an easy task because they always incorporate multiple factors that interlink one another and create a more complex relationship. People will make activities within the space or environment and changes are introduced into the environment,

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[1] Definition of socioecology on Wikipedia, http://en.wikipedia.org/wiki/Socioecology accessed on May 26, 2009.

directly or indirectly. The other way around, a given environment, with its physical structure and intrinsic values, may trigger certain behaviour of individual living in it, such as preference of living space, travel path and ways[2], etc. Interaction between people and their living space tend to generate new social characteristics as the result of people trying to adapt the new condition. Existing regulations and norms will also determine to which direction these changes are heading. Given the case of compact city, it is interesting to see how a society will adapt with such spatial arrangement. Moreover, it is not only spatial policy that plays a role in this context but many other factors may also contribute implications. These dynamic social characteristics and influencing factors, in forms of non spatial public policies, global influences, economic growth, etc., has created a social conditions that affects the implementation process of the compact city, whether in synergy or against its aim. At the end, we can expect to find out whether or not the compact city policy succeeds to achieve sustainable development, especially social sustainability, for the present and future generation.

This research will focus on the Netherlands, one of the most populated countries in the world, which has implemented compact city since 1980s. While restricting urbanization of rural areas, the Netherlands are facing a high demand of house. According to the official website of Ministry of Housing, Spatial Planning and the Environment[3], as many as 445,000 new houses will be built between 2005 and 2010 to reduce shortage to 1.5%. On the other hand, two social phenomena have influenced the characteristics of society in the Netherlands, namely individualization and high immigration. Individualization has been correlated with the increase of one-person households (Praag and Uitterhoeve, 1999) resulting in more people asking for a home but then occupy it in "low density".

1.2   Research Objectives

As explained by De Roo and Miller (2000, p.4), the decision to implement compact city in many countries, including the Netherlands, was initially for environmental consideration. In accord with this decision, it was advocated that compact city offers solution for a sustainable way of development that should meet the notion of sustainability in three basic aspects, that is, environment, economic, and social sustainability. Here a question rises: if the initial consideration is environment, how can it provide solution also for economic and social aspects? and if it can, how appropriate is the solution? This research is not intended to provide a proof of claim or counter-argument to the concept of sustainability in compact city but rather to see how this sustainability approach has contributed impacts, especially to social life. Therefore, the objective of this research is to analyse the social conditions of compact cities in the Netherlands regarding the specificity of the characteristics of the society and existing influential factors.

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[2] Hillier, B., Iida, S., 2005, Network Effects and Psychological Effects: A Theory of Urban Movement, a long paper presented in the 5th International Space Syntax Symposium, Delft
[3] http://international.vrom.nl/pagina.html?id=37456, accessed on May 28, 2009.

1.3 Research Questions

In order to understand the implications of compact city on social aspects the research will be carried out to provide answers for these three main questions:

1. What impacts has the compact city policy contributed to the social life in the Netherlands? This question is elaborated into four subordinate questions:
   a. How is compact city policy put into practice in the Netherlands?
   b. How does the society adapt with the compact city?
   c. Are other non spatial policies in accord with compact city policy to achieve sustainability?
   d. Are there any changes in social characteristics due to the implementation of compact city policy?
2. What factors are influencing the implementation of compact city in the Netherlands?
3. What kind of tendency does the compact city approach create for future social life based on current social condition?
   The third question is raised in order to see how current social changes may influence back the policy of compact city that is then passed to the future generation.

1.4 Methodology and Methods

The implementation of compact city and other spatial policies as regulating vectors, which are intentionally or unintentionally combined with other public policies, is assumed to create an image about living condition in society, and it will affect the society's way of living and create social changes. In order to catch how these two schemes, that is, compact city policy and social changes, work or influence each other a quantitative method is to be carried out and the research will be maintained in these following steps:

i. Review

A review on the practice of compact city policy is carried out to see what changes have occurred since the implementation of the policy. The focus will be on the physical arrangement which directly affects social condition of society, especially based on urban functions, that is, residence, work, transportation, comfortableness and leisure. This review will include public regulations that also take part in synergy with spatial planning policy, such as subsidy for housing, rent allowance, etc. This whole information is hoped to give a better understanding on how spatial arrangement, not only compact city policy, is being carried out.

The method to gather information for this need is through a secondary data collection from online sources, as follows:

- *http://www.vrom.nl*
  This is the official website of The Ministry of Housing, Spatial Planning and the Environment. It contains publication of public policy on housing and spatial planning, the background of policy, the progress and government's plan, and government regulation on housing subsidy and loan. This website also informs the findings of investigations on resident's perception of their living condition, especially regarding housing provision.
- *http://www.cbs.nl*
  This website is maintained by The Statistics Netherlands and containing a broad information on social, economic and environmental achievements in the Netherlands.

The historical figures dating from some years back and the variousness of recorded aspects can provide a quite comprehensive understanding about the progress of development. Information that will mostly be made use from this website is about population, housing, income, social security, security, leisure, and transport.

A review on social changes is carried out to see how social characteristics, identified by social categories, that is, age, gender, ethnicity and social class, are spatially affected. For example, how a certain group has been spatially distributed as a consequence of social adaptation with the spatial arrangement. This review will make use of previous investigations and recorded social changes held by the government, that is the Netherlands Institute for Social Research. To demonstrate how individual make decision regarding their living condition, some interviews will be conducted to collect people's opinion. The result of this interview will not be used as the main information to lead the research but is hoped to give clarification about how each individual with different backgrounds may have different opinions about their living condition. Social related policies such as policies on immigration and discrimination are taken into account in order to be able to detect which factor has given the most influence to social changes and how these factors work upon society. The whole information will also provide understanding on society's perception[4] and expectation[5] of their living condition.

The method for gathering information about social changes is a secondary data collection which will make use of an online source at *http://www.scp.nl*. It is the official website of The Social and Cultural Planning Office of The Netherlands. Most of the publications in this website are related to socio-economic issues in the Netherlands and also Europe. There are a lot of results of surveys on social issues conducted by the office such as social trends, living situation, public opinion, etc.

The method to for the interview will be carried out in form of online questionnaire. This online method is used in order to give chances for respondents from all over the Netherlands, especially those who live in a city, to participate so that the specific condition of city is taken into account in the analysis. In order to keep the validity of answers, only familiar respondents will be invited with a chance for them to invite other potential respondents that he or she thinks reliable for participating in the survey. Since some questions are sensitive and there is no need to know the respondents in personal, the

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[4] Definition of **perception** in Merriam-Webster Online Dictionary : (1) a result of perceiving : observation, a mental image : concept; (2) obsolete : consciousness; (3) awareness of the elements of environment through physical sensation (color perception), physical sensation interpreted in the light of experience; (4) quick, acute, and intuitive cognition : appreciation, a capacity for comprehension (http://www.merriam-webster.com/dictionary/ perception, accessed on May 29, 2009)

[5] Definition of **expectation** in Merriam-Webster Online Dictionary : (1) the act or state of expecting : anticipation (in expectation of what would happen); (2) something expected (not up to expectations) (expectations for an economic recovery), basis for expecting : assurance (they have every expectation of success), prospects of inheritance —usually used in plural; (3) the state of being expected; (4) expectancy, expected value (http://www.merriam-webster.com/dictionary/ expectation, accessed on May 29, 2009)

survey is made anonymous except that the IP address[6] of the respondent is recorded in order to anticipate any internet users from around the world to mess the survey. The questionnaire is provided in Dutch and also in English to provide ease for those living in The Netherlands but are still more familiar with English language, especially new immigrants. The website of the online questionnaire is *http://compact-nl.logic-research.com* and the printed version of the questionnaire is provided in Appendix. Considering that some social groups are not active internet users, for example, old people, some direct interviews are carried out using the same questionnaire. These direct interviews will only be conducted in the city of Groningen due to the limitation of time and resources for research.

ii. Analyze

Two kinds of analysis will be carried out. The first one is to analyze the impacts of compact city policy on the social life of society based on the findings in the reviews. This can be said as to find a link between compact city policy and social changes. It is somehow challenging because social changes are the product of multiple factors and not only physical arrangement. Analysis is going to be carried out with this consciousness of other influencing factors. The method to link between compact city policy and social aspects is done by observing impacts created by regulations in urban functions, that is, residence, work, transportation, comfortableness and leisure, according to the response of each social category, which is identified by difference of age, gender, social status and ethnicity.

The second analysis is a kind of test of the social sustainability of compact city regarding intra-generation and intergeneration. This will show the effectiveness of the implementation of compact city. The tendency of current social changes as the result of society's perception and expectation of their living space is to be evaluated using the five principles for evaluating social sustainability proposed by The Western Australian Council of Social Services (WACOSS, 2002, p.8), namely, equity, diversity, interconnectedness, quality of life, democracy and governance. Operationalization of the evaluation of each principle is presented in TABLE 1.1 below.

TABLE 1.1
Operationalization of the evaluation of social sustainability principles

Principle	Evaluation
Equity	Just fulfilment of and access to basic needs for any social group
Diversity	Feeling of cohesiveness and acceptance within the society
Interconnectedness	Existence of formal or Informal representation of group of community
Quality of life	Fulfilment of basic needs, safety, comfortableness and leisure
Democracy and governance	Opportunity to participate in public matters and planning

The findings of this evaluation will describe the present social state in responding compact city policy and whether or not this tendency will support the notion of social sustainability for the present and future generation.

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[6] http://en.wikipedia.org/wiki/IP_address

1.5   Conceptual Framework

The process of the research can be presented in a conceptual framework as follows:
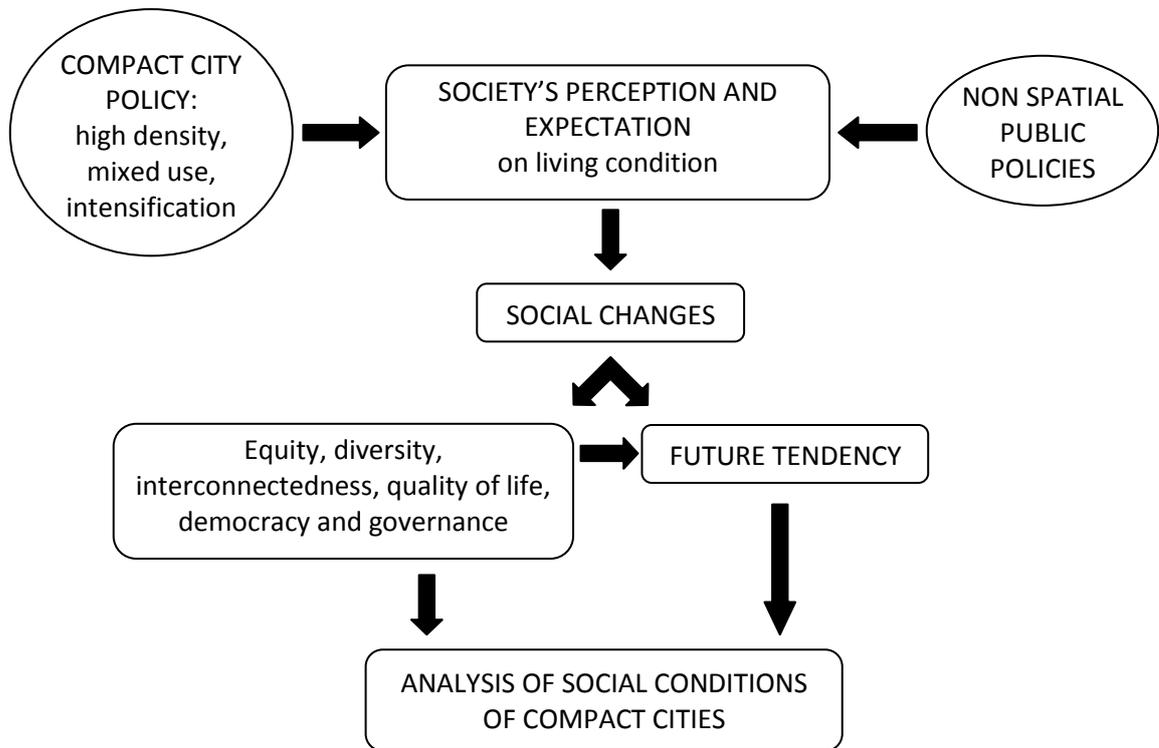
Figure 1.1 Conceptual framework

1.6   Scope of Research

The research will be limited on evaluation of social issues that have arisen specifically due to the implementation of compact city policy. The definition of compact city referred in this research is that which has been implemented in the Netherlands.

1.7   Chapter Outline

The report of the research is comprised of six chapters. Chapter one introduces the research background, objectives and main questions that need answers. This will explain why evaluation of social issues is important regarding spatial planning policy, which in this case is compact city. Furthermore, the methodology and methods to carry out the survey including the sources of information are explained. Sections of conceptual framework and scope of research are presented to describe the overall design of the research process and to specify the focus of the research. At the end of this chapter the structure of research report is described to show how each chapter interlinks. Definitions of matters being studied, such as sustainability, social sustainability, and compact city, are provided in chapter two. Chapter two also elaborates theoretical foundation of the research and explanation of how other theories can suit with the research problem. Some findings of surveys and reports by other researchers are also made use to confirm the validity of the application of the theories in this research. Chapter three and four are dedicated to provide socio-cultural condition of society and the real world practice of compact city in the Netherlands. Chapter three explores the social life in the Netherlands,

especially those related to spatial issues, such as preference of house location, neighbourhood, etc. Chapter four explains why compact city has been chosen as a spatial planning approach and how it has been implemented throughout the Netherlands including the effect of other accompanying public policies. The result of the primary survey is served in this chapter. Chapter five will contain discussion about the relation between the practice of compact city policy explained in chapter four and the social response and changes resulted explained in chapter three. The analysis is based on the theories discussed in chapter two. As the end of the research, a final conclusion of the analysis is presented in chapter six and followed by some recommendations.

Chapter II

THEORETICAL REVIEW

This chapter explains about the theoretical paradigm used in approaching the research problems. This is important for deciding what main theories are used and how these theories relate to each other. To give a clear understanding about components that take part the explanation will first explain what the definition of sustainable development is and social sustainability, as one of its aspects. Definition of compact city and how it should be implemented are explained before elaborating its conceptual social impacts.

2.1 Theoretical Paradigm

The proposition of this research is to review the social conditions of the compact city policy regarding the specificity of the social characteristics and existing influential factors. As obviously seen, there are two main field categories involved in the problem, that is, social matters and urban spatial policy, which bears the responsibility to achieve sustainable development. Figure 2.1 demonstrates interactions between the two fields for this topic. The first is specifically related to the problem of how a society is influenced by and influencing spatial aspects, that is, the environment within which it exists. Theories in urban sociology[7] provide explanation on this topic. The second relates to the approach of sustainable development through the idea of compact city. The discussion in this chapter is about interconnecting the two groups of theories. Furthermore, discussed at the last part of the chapter is about social characteristics regarding how a society perceives changes.
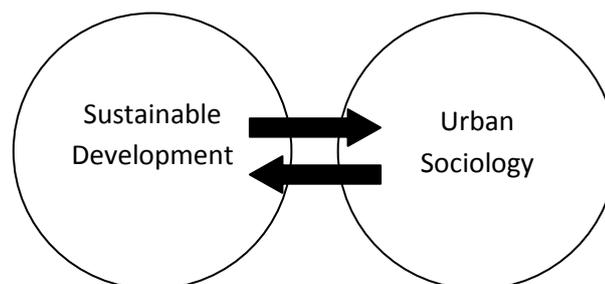
Figure 2.1 Theoretical Paradigm of Research

2.2 Sustainable Development

Referring to the definition of sustainable development in Brundtland report, the mission it bears is to meet people's need through development in a way that secures the possibility for people in the future to also fulfil their need. This means that sustainability should concern

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[7] Urban sociology is the sociological study of social life and human interaction in metropolitan areas. It is a normative discipline of sociology seeking to study the structures, processes, changes and problems of an urban area and by doing so providing inputs for planning and policy making. (Source: http://en.wikipedia.org/wiki/ Urban_sociology, accessed on 10 June 2009)

about time dimension regarding the next generation. Pearce et al in De Roo and Miller (2000, p.2) agree with this emphasis of time in their definition of sustainable development, which says:

"... *managing resources use in such a manner as to be able to meet a set of aspirations of society over a considerable period of time*".

Another dimension of sustainability is space because the geographical impact of development can spread through local, regional or even global basis (De Roo and Miller, 2004, p.3).Figure 2.2 sketches the time (T) and space (M) element in the notion of sustainability. Usually people can only see their quality of living condition, which is also called liveability, and it will cover a very limited space that directly bounds the society and can be perceived in a short time period. In fact, the effect of this liveability is not limited to that perceived space but can go larger into regional until global and involve a longer period of time. As an example, on the one hand, forest cutting activity in some areas is seen as a way to fulfil people's need. On the other hand, it causes the land to lose its capacity to hold water and may lead to flood in lower areas, besides that the impact of the forest cutting creates imbalance in nature for a long period of time. This consideration of wider area and longer period is the emphasis in sustainability. The other way around can also occur that consideration of sustainability can create a negative impact on liveability on certain locality. For example, an urban infill can be done as an effort to preserve green open space but then some negative effects emerge for the locality, such as an unpleasant living condition due to the high density. Therefore, De Roo and Miller affirm that liveability should not be associated with sustainability (De Roo and Miller, 2000).
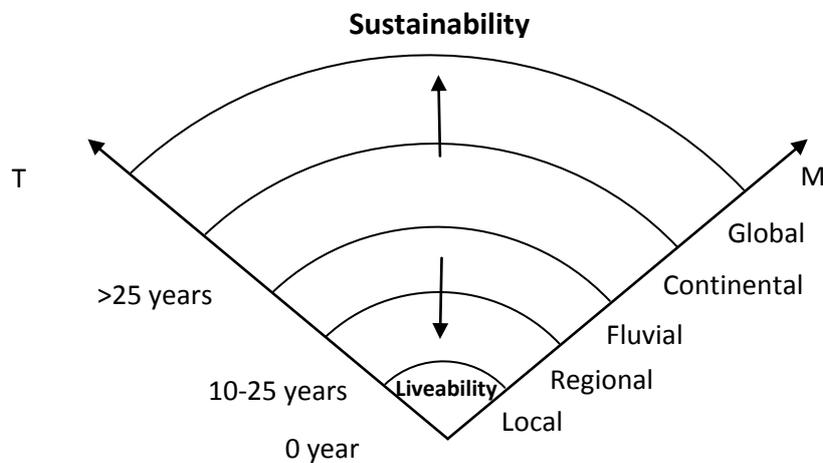
(Source: De Roo and Miller, 2004, p.3)

Figure 2.2 Time (T) and Space (M) Dimension of Impact

Sustainability is usually simply related to the effort to conserve the environment in the dimension of time and space. Although it is obvious that environment is something tangible for evaluation of sustainability, the Brown Agenda[8] proposes to include economic development

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[8] The Brown Agenda is the concern of the critical and most immediate problems facing developing countries cities which derive from inadequate water, sanitation, drainage, and solid water services, poor urban and industrial waste management, and air pollution. (Bartone et al., 1994, p.11)

and social capital in regard with sustainability. The relationship between environmental condition and both economic and social is explained by McKenzie (2004, p.3) who argues that environmental degradation occurs at worst in areas where there are high poverty and low social cohesion. To this point, it is agreed that to achieve sustainable development, three aspects should be met, namely environmental, economic and social sustainability. These three aspects are also known as the Triple Bottom Line.

These three components of sustainability interconnect with each other and no effort can be done upon one component without affecting the others. The way these components interact with each other is popularly explained in two paradigms proposed by WACOSS as follows:

a. Overlapping circles model
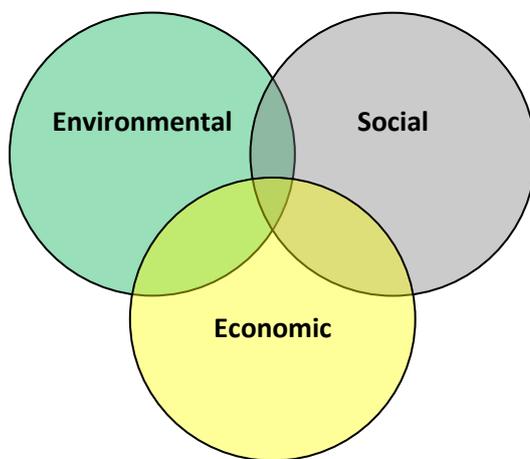
Source: WACOSS, 2002
Figure 2.3 Overlapping circles model

This model sees environmental, social and economic matters as separated phenomena that in some conditions overlap with each other. It is realized in this model that there will be collisions of interest at the border of each component, and this calls for a concurrent handling. This model is suitable for planning for sustainability where each component should gain even consideration.

b. Concentric spheres model
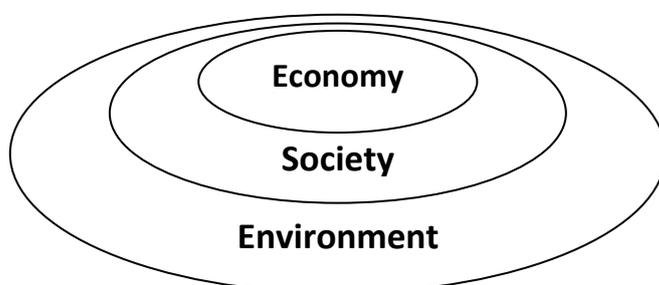
Source: WACOSS, 2002
Figure 2.4 Concentric spheres model

This model explains the relative position of components, that is, which component sits in which. Economy resides wholly within society meaning that all economic activities are carried out by the society. Society is contained within an environment and this means that the society is a part of the environment and whatever occurs to the environment will affect the society as

well, and on the other way around, whatever the society does will influence its environment. This model is a bit rigid since it offers an understanding that influences on a society can only come from its economic activities and surrounding environment. In fact, when regarding locality, a society can make contacts with another society in another environment through telecommunication and these contacts may result in transfer of influences that can shape the society. This phenomenon is known as globalization. In other words, this model lacks explanation of the dynamism of society. Despite its rigidness, this model can be used to explain or evaluate the interrelation between components of sustainability and therefore suits the approach of this research. Following is the description of each component of sustainability.

a. Environmental sustainability

Environmental sustainability concerns about the way the ecosystem is treated in order that its quality and potentiality are preserved while fulfilling the present need. This aspect is about physical phenomena within which people are contained. Discussions within this topic include healthy environment, air condition, green open space, etc. The most challenging issue in the discussion of environmental sustainability is how to measure and what unit of measurement to use[9].

b. Economic sustainability

Economic sustainability is about the firmness of people's efforts to fulfil their need financially. This is not only about how to gain maximum profit but also about efficiency and continuation or guarantee of financial support in the long run. Measuring economic aspects is relatively easier than measuring the other two aspects because monetary unit is one thing agreeable to economic actors, although involving complicated variables[10].

c. Social sustainability

Explanation about social sustainability is provided in detail in the following section.

2.3 Social Sustainability

Social sustainability concerns about the implication of development to the social life of the society affected by the development. This includes the way the society adapts with its environment and interact with each other. Although not come as the first consideration, which is given to the environment, social sustainability is obviously important because the aim of development is for the society. Sustainable environment and economy are nothing if people cannot enjoy them.

Among many opinions about definition of social sustainability, Partridge (2005, p.8) and McKenzie (2004, p.20) suggested the notion of social sustainability, which they referred to the work of WACOSS (2002), as follows:

> *"Social sustainability occurs when the formal and informal processes; systems; structures; and relationships actively support the capacity of current and future generations to create healthy and livable communities. Socially sustainable*

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[9] Holland, A. and Cox, J.R., 1992, The Valuing of Environmental Goods: a Modest Proposal in Valuing the Environment: Economic Approaches to Environmental Evaluation (eds: Coker, A. and C. Richards) London: Belhaven Press. P. 12-27.

[10] See also Economic Sustainability in http://www.ec.gc.ca/soer-ree/English/SOER/1996report/Doc/1-5-2-6-5-1.cfm, accessed on June 17, 2009

> *communities are equitable, diverse, connected and democratic and provide a good*
> *quality of life"*

To assess social sustainability, Partridge (2005, p.9) proposes five parameters that should be maintained to achieve sustainable social life as follows:

i.   Equity

Equity is a condition where people from various social categories, which is based on gender, age, ethnicity, and social class, have similar chance to utilize the result of the development. Equity is the one mostly associated with social sustainability (Partridge, 2005).

ii. Diversity

Diversity describes the level of cohesiveness among a society. A society with a high level of social cohesion gives a feeling of being accepted for all and by all. With a slight difference in meaning, Partridge uses the term "inclusion" to describe cohesiveness in which she means that existing problems such as poverty, deprivation, and related social problems should not exclude anyone from the society (Partridge, 2005, p.10). Rosell in Maxwell (1996) describes social cohesion as:

> *"..involves building shared values and communities of interpretation, reducing*
> *disparities of wealth and income, and generally enabling people to have a*
> *sense that they are engaged in a common enterprise, facing shared challenges,*
> *and that they are members of the same community."*

Social cohesion may arise from shared hardships, ethnic or religious ties, shared ideology, or social institution that tries to build consensus around values, priorities and the overall goals of a society (Maxell, 1996).

iii. Interconnectedness

The existence of community is not only physically but should also bear a synergy within it to provide processes, systems and structures that can represent the community inside and outside at the formal, informal and institutional level.

iv. Quality of life

Quality of life here refers to the level of enjoyment of people upon their living condition. This can be very subjective, but is suggested in order to maintain a balance between the disadvantage and the prosperous and also to avoid a quest for quality of life today at the expense of the future generation's need. Quality of life is concerned with achievement of feeling of safety, healthy, and level of education.

v.   Democracy and governance

The society has the chance to participate through governance process to decide their living condition. The available chance for participating reflects a good acknowledgement of the people and can create a feeling of being part of the total system.

The Brundtland report is not the only one that proposes a definition of sustainability. There are other definitions and concepts of sustainability as Winter in Jenks et al (1996, p.233) recognizes over 200 working definitions. Besides agreement in existing definition and concept, there are also debates on the meaning of sustainable development. Redclift argues that the term sustainable development is somewhat an oxymoron because development tends to cause depletion of resources and that sustainability has been used as a propaganda to justify actions that have impacts from local to global (Redclift, 2005). In the middle of the quest for a

globally accepted concept of sustainability, there have been a lot of concepts and efforts introduced and even put into practice. These practices can be grouped based on the approach[11] as follows:

a. Reorganizing living condition. Some practices of this approach are eco-villages[12], eco-municipalities[13], eco-city[14], and compact city

b. Reappraising economic sectors. Some practices of this approach are green-building[15] and sustainable agriculture[16].

c. Work practices, for example sustainable architecture[17].

d. Technology, for example green technology[18] and renewable technology[19].

e. Adjustment of individual lifestyle[20]

2.4 Compact city

2.4.1 The Principles of Compact City

The idea of city compacting is not really a new matter despite its rising popularity just in the last half of century. Thomas and Cousins (1996, p.54) refer to medieval cities as an impression of compact city since not only were cities physically bounded by city's walls but also all activities were limited and concentrated within the walls. The main reason for the compaction in medieval cities was to provide protection for the residents (Boone and Modarres, 2006). Today the notion of compact city is not anymore about physical protection from political enemies and, therefore, there is no need to build physically walled city. Compact city is now understood as a spatial planning approach which delineates boundary between areas designated for urbanization and rural areas.

The concept of compact city belongs to the centrist group which emphasizes compaction approach in urban development planning (Breheny, 1996, p.15). The idea of urban compaction has risen as a respond to the very rapid suburbanization in Canada, United States, Japan, Australia and Europe after World War II. Except in Europe, the suburbanization took a ribbon pattern along main transportation routes and that's why it was usually referred to as "the 100 mile city" (De Roo and Miller, 2000, p.4). In Europe, urban growth occurred through urban expansion toward fringe areas. Names like Ebenezer Howard and Frank Lloyd Wright surfaced for their thoughts supported this decentralist urban development. Contrary to decentralist practices, supporters of centrist proposed urban compaction by limiting urban growth not to expand toward rural areas in its surrounding and in that way rural areas can be conserved. Le

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[11] Grouping by wikipedia at http://en.wikipedia.org/wiki/Sustainability, accessed on June 16, 2009.

[12] See http://www.context.org/ICLIB/IC29/Gilman1.htm, accessed on June 16, 2009

[13] See http://sustainablebusiness.com/index.cfm/go/news.feature/id/1269, accessed on June 16, 2009

[14] See Roseland, Mark, 1997, Dimensions of the eco-city, Cities, vol. 14, pp.197-202

[15] See http://www.epa.gov/greenbuilding/pubs/about.htm, accessed on June 16, 2009

[16] See Gold, M.V., 1999, Sustainable Agriculture: Definitions and Terms, http://www.nal.usda.gov/afsic/pubs/ terms/srb9902.shtml, accessed on June 16, 2009

[17] See Kim, Jong-Jin and Rigdon, Brenda, 1998, Introduction to Sustainable Design, http://www.umich.edu/ ~nppcpub/resources/compendia/ARCHpdfs/ARCHdesIntro.pdf, accessed on June 16, 2009

[18] See http://en.wikipedia.org/wiki/Green_technologies, accessed on June 16, 2009

[19] See http://en.wikipedia.org/wiki/Renewable_energy, accessed on June 16, 2009

[20] See http://www.oregonmetro.gov/index.cfm/go/by.web/id=24199, accessed on June 16, 2009

Corbusier and Ian Nairn were among prominent scholars who had supported this idea. The enunciation of sustainable development in the Brundtland Report which emphasized environmental consideration in development processes has inclined urban compaction, or popularly known as compact city, because it is said to involve consideration on environment, economic and social issues.

Claims of compact city as being sustainable are based on a few concepts which Jabareen (2002, p.40) grouped in four major themes, that is,

i. Rural protection
    This concept is the most common reasoning for compact city to be called sustainable. Despite sprawling to the countryside and consuming the landscape, the compact city concept will optimize urbanized regions for all urban functions, that is, residence, workplace, transportation, comfortableness, and amusement. Urban growth is as much as possible accommodated within areas designated for urbanization. Compact city also promotes revitalization and regeneration of derelict areas and by this promotes usability and landscape in urban regions (Williams et al, 1996, p.84).

    In economic view, there are pros and contras toward this compaction approach. Urban compaction tends to support economy of agglomeration because the economy can take advantage of the densely populated areas. On the contrary, economy of location drives firms to locate sites profitable and this has been among main reasons of urban sprawl (Cervero, 2001). Promotion of compact city is likely to struggle with this economic tendency, especially in developing countries where economic considerations are highly prioritized in order to fulfil basic needs.

ii. Efficiency in energy consumption
    There are two side effects, regarding efficiency, of being compact. The first is that proximity to many places within the city offers less distance for travelling and thus promotes walking or cycling, which is cheap and consuming less fuel. The second, provision of public utilities and infrastructure, such as gas, water, electricity, road, is more efficient since installation sites are not widely spread or scattered.

iii. Reduction of greenhouse gas (GHG) emission
    Issues of global warming and greenhouse effect have brought forth a quest for solutions to reduce gas emission. Cars are among top contributors to this greenhouse gas[21] and so minimizing use of cars may slow down the accumulation of GHG in air. As explained that compact city offers efficiency in fuel consumption within urban areas, it can be a reasonable solution for reduction of greenhouse gas emission through the field of urban planning. In case of housing density, some studies[22] show that residential density correlates

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[21] Intergovernmental Panel on Climate Change, 2009, Working Group III Report "Mitigation of Climate Change", source: http://www.ipcc.ch/pdf/assessment-report/ar4/wg3/ar4-wg3-chapter1.pdf, accessed on June 29, 2009.
[22] See (1) Bloomberg and Aggarwala, 2008, Think Locally, Act Globally, How Curbing Global Warming Emission Can Improve Local Public Health, American Journal of Preventive Medicine, Vol.35, No.5,

with the level of GHG contributed to air, that is, the higher the density, the less GHG contributed to air.

iv. Promotion of quality of life

This reason is perhaps the most debated claim of compact city. Promoters of compact city argue that high density population creates proximity among individuals within a society and thus it will interact more frequently. A good quality of life is simply depicted as a classic picture of social interaction in traditional streets and urban villages where people easily meet and chat with each other in a harmonious surrounding (Burton, 2002, p.222). The reasoning for claim of promotion of quality of life through compact city is not as robust as the other reasons above. Smyth (1996, p.101) comments that compact city theory is very much driven by environmental considerations, whereas economic and social aspects are more as effects than causal. Burton's concluded her research on social equity in compact city that there is no definitive answer to whether compact city can promote social equity, only some criteria indicate social equity and the others do not (TABLE 2.2).

2.4.2 Compact City Approach

Compactness in compact city is achieved through one, two or all three approaches, that is, high density, mixed use and intensification (Jenks et al, 1996). The explanation of each approach and how it is implemented are given as follows.

i. High density

High density is achieved by designating a minimum number of houses in an area. It is usually expressed in terms of number of people/hectare or dwellings per hectare (dph). For example, The UK National Plan in The Planning Policy Statement 3 on Housing sets 30 dph as a national indicative minimum to guide policy development and decision making[23]. Terraced houses and flats are mostly the types of building implemented to achieve this criterion. Among other approaches of compaction, this high density issue raises the most debates as noted in the 2nd report of the Campaign to Protect Rural England (CPRE, 2006), as follows:

> *"People are concerned about the possible impact that rising local populations may have on local services (including competition for school places), amenities and transport systems and parking space, or the character of neighbourhoods. There are also concerns that raising densities will mean less privacy or that dwellings will become smaller, private gardens will be a thing of the past and there will be insufficient provision for families with children."*

To this concern, Harley Sherlock, the President of CPRE London wrote that the purpose to keep level of density in the city should also be accompanied by provision of environment, including housing and facilities, which people aspire to (CPRE, 2006, p.1). This way will be a pulling factor of the city and reduce willingness of exodus to surrounding countryside.

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pp.414-423, (2) Brown et al, 2005, Toward a Climate-Friendly Built Environment, source: http://www.pewclimate.org/ docUploads/Buildings_FINAL.pdf, accessed on June 29, 2009.

[23] Communities and Local Government Committee, November 2006, Planning Policy Statement 3 – Housing

ii. Mixed use

Mixed used is implemented by assigning a few functions to the same building or areas or facilities. Burton grouped mix of uses in two types, that is, the vertical and horizontal mix of uses (Burton, 2002, p.224-225). The vertical mix of uses refers to the use of one building for various functions vertically. For example, a building may be used for shops or offices on the ground floor and residential purposes on the upper floors. The horizontal mix of uses is sharing of use of areas by different activities, such as housing and shops or offices, and mix of different types of houses and tenure. A mix of types of housing and housing tenure also means mix of social class because some social class will own certain types of house and tenure. This mixture will bring high interaction between people and so minimize social gaps. It is argued that this condition creates a feeling of safety (Davies 1997 in Burton 2002). CPRE (2006) reasoned this feeling of safety in case of different working hours of the residents. Mix of people with different social class, which means different working hours, provides better surveillance for the neighbourhood compared to if people should go out to work in the same range of time a day because the neighbourhood are in similar social class. The latter situation will have a poor surveillance for the neighbourhood.

iii. Intensification

The previous two approaches describe a state of compactness, whereas this third approach is a process to achieve compactness. Intensification is the effort to make use of brownfield areas to fulfil the need of spaces. The reuse of these derelict areas can provide more spaces for residential, offices, workshops, or other functions within the city. It is carried out to avoid conversion of green open space as long as possible. Intensification offers efficiency since the cost to provide infrastructure to these areas are cheaper than developing in a new region because they are already within the scope of service range in the city. The result of intensification is higher density in the city.

2.4.3 Debates on Compact City

Approaches to achieve compactness have also resulted in some consequences, which have become the sources of debates on the claims of compact city (Jenks et al, 1996). TABLE 2.1 provides some pro and contra opinions about sustainability of compact city. From an environmental point of view, compact city is evidently promising preservation of rural areas and low level of energy use. On the contrary, flocking of activities in urban centres can create congestion and more pollution. In economic thinking, compactness decreases distance and thus reduces transport cost. Besides that, the close arrangement of facilities, such as housing, offices, etc., increases efficiency in the provision of infrastructure. The counter for this idea argues that such condition will trigger competition for limited areas and thus result in high land price, less affordability of house, high service price, small size houses, and scarcity of parking space. In social thinking, compactness and high density will increase interaction among people, and thus it is hoped to improve social relation and at last social cohesion. Despite high social interaction, high density areas have shown tendency of declining quality of life and an increase of crime. Those are the argumentations for compact spatial arrangement.

TABLE 2.1

Main Pros and Contras about Sustainability of Compact City

Aspect	Pros	Contras
Environment	Preserving rural areas and less energy use	Congestion Pollution
Economy	Less transportation cost and more efficient infrastructure provision	High land price in urban area Less affordability of house High service price Small size houses Scarcity of parking space
Social	Increase social interaction	Degradation of quality of life Loss of amenity Reduction of privacy

In case of social sustainability, Burton (2000) conducted a research about social equity of compact city, using samples from 25 cities of various sizes in the United Kingdom. She concluded that claims saying compact city promotes social equity via its compactness were untenable. To some aspects of social equity, compactness showed a positive correlation but to others negative (TABLE 2.2). Regarding crime in compact city, she noted that the average crime rate shows a closer association with the size of city than with its actual density. Walking and cycling rates are found to be higher in low density housing which Burton argued due to the better environment for pedestrians and cyclists. Claim of reduced domestic living space may apply to the disadvantage group, since they have limited budget to purchase better housing, but this is not the case for the middle class who is usually able to have a house and some small home garden. The claim of poorer health is associated with congestion and pollution in high density areas, but it is also argued that this condition can be mitigated through the provision of good public transport. The other claims are found to some extent show significant relation with compactness, especially better public transport, reduced social segregation and lack of affordable housing.

TABLE 2.2

Evidence to compact city claim related to social equity

Compact City claim	Evidence
Better access to facilities	✓?
Poorer access to green space	✓?
Better accessibility to jobs	?
Better public transport	✓
Greater opportunity to walking and cycling	✗
Reduced domestic living space	✓✗
Poorer health	✓✗
Reduced crime	✗
Reduced social segregation	✓
Lack affordable housing	✓

✓=supports claim; ✗=contradicts claim; ✓✗=claim supported in some respects but not others; ?=evidence is ambiguous; ✓?=evidence is weak but tends to support claim.
Source: Burton, 2000.

2.5 Social Impacts of Compact City

The compact city concept introduces high density and mixed conditions into urban living condition and is trying to maintain them in its aim to achieve sustainability. Therefore, the success of this effort should be based on (1) whether the level of density and mixed condition is not decreasing and (2) in order to meet criterion of social sustainability, a high satisfaction level of the residents. The level of satisfaction offered by a city or some parts of a city is a pulling factor that can attract people from outside the city to move in (in-migrate) and so maintain the concept of compactness. Despite its noble mission to protect environment, the concept of compact city is faced by many centrifugal forces that attract people to live outside the dense areas or city centres. Howley (2009) noted some reasons why people would avoid living in high density are pollution, congestion, and crime. Moving to low density areas usually provides proximity to natural environment, which people would aspire to. The great advance in telecommunication technology and transportation also has released people from having to be in close range with workplace or relatives (Barcus, 2004). Less attention to this issue may lead to gradual exodus and emergence of urban sprawl (Howley, 2009). One force that is in line with the purpose of compact city regarding effort to maintain compactness is the economy of agglomeration where economic actors take advantage of being close to others[24]. Besides the constraining factor implemented by the government through land use, Howley (2009) emphasized that the society's satisfaction is also determinant in the implementation of compact city.

Decision to move in (in-migration) or out (exodus) may be rooted from three reasons, that is, employment distribution, family life cycle, and living condition (Howley, 2009). Employment distribution is related to economy of agglomeration. Job seekers, and also employees, tend to move to locations where they can get to their workplace cheaply or easily. Family life cycle is a cultural practice that young people, especially when they get married and start their own family, would like to have a private home which they usually look for a cheap option. Living condition or quality of life relates to the satisfaction in fulfilment of the need of a society. WACOSS (2002) describes these needs as basic needs, safety, comfortableness and leisure.

Cheung and Leung (2008) differentiated between objective and subjective living condition. The first refers to the availability, whereas the second to the result of adaptation and consciousness of the realization of potentialities. People's satisfaction on living conditions is one thing subjective and very much depends on individual perception and expectation (Cheung and Leung, 2008). Despite its basis on individual perception and expectation, subjectivity is not of less importance in decision making. People can adapt to objective condition and after that they will concern less. As an example, in the case of migrants from rural areas to New Delhi, Dhaka and Islamabad, although living in slum areas they can adapt with their living area and to some extent are satisfied (Ruback et al, 2004). Another discrepancy about objective living condition is when existing condition, although favourable, is not of one's genuine favourite (Cheng and Leung, 2008).

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[24] Lambooy, J.G., 1998, Economies of Agglomeration and Spatial Development: Cities in the Era of the Knowledge Economy, Inaugural Lecture, University of Utrecht, 2 December 1998

Two contrasting theories about satisfaction exist, namely, liveability theory and comparison theory (Hagerty, 1999). Liveability theory claims that satisfaction is the result of the fulfilment of living conditions. Comparison theory does not emphasize the fulfilment condition but on the change of state between previous and current condition, or between condition of one individual and that of others, or between one condition in one location and in others. Each theory has its own supporters and therefore, in evaluating satisfaction of living condition, it is important to apply both perspectives. In the case of the implementation of compact city, comparison theory can be introduced through evaluation of temporal condition that people's level of satisfaction is compared based on the previous and current condition.

Perception and expectation, which form level of satisfaction, are affected by some background factors, namely, age, gender, education level, employment status, social class, income, ethnicity, nationality, immigrant status, and housing condition (Cheung and Leung, 2008). In regard with high density and mixed condition, how these background factors incorporate in generating people's satisfaction of compact city is given in TABLE 2.3. Statements in TABLE 2.3 are not to justify how background factors will affect satisfaction but only to show examples of how they may incorporate in shaping people's perception and expectation.

TABLE 2.3
Role of background factors in determining people's perception and expectation

Factors	Cases related to high density and mixed condition
Age	Proximity to relatives or to work and social groups (Dökmeci and Berköz, 2000)
Gender	Feeling of Safety (Parkes et al, 2002)
Education Level	Proximity to relatives (Kalmijn, 2006) Stability in facing environmental and social changes (Cheung and Leung, 2008)
Social class	Segregation (Burton, 2001)
Income	Preference on location and segregation (O'Sullivan, 2009)
Ethnicity	Segregation (Burton, 2001)
Nationality	Segregation (Germain, 2002)
Immigrant status	Segregation (Germain, 2002)
Housing condition	Residential mobility and residential migration (Barcus, 2004; Howley, 2009)

How people perceive and what they expect from their environment will shape their opinion and this also occurs in the case of compact city as a given environment. In compact city, since the environment is designed in compactness through high density and mix of use, the inhabitants do not have many choices but to settle in while keep struggling to gain satisfaction. As argued by Diener and Lucas (2000), the inhabitants may have shown adaptation to the compact situation which leads to social changes. It is interesting to see how these changes occur because it will give feed back to the concept of compact city, which has to be socially sustainable. Being socially sustainable means that it should meet the need of the present generation while also considering how it will be transferred to the next generation. This is a long way implication from environmental issues to social impacts for the present and at last for the future generation. Social changes are somewhat unpredictable because the society can

adapt to current situation through changes but then these changes do not guarantee whether the purpose of compact city regarding the next generation can still be maintained.

To evaluate the tendency of social changes the areas where compact city policy affects become the focus of interest. These social changes can be seen through how people adapt with their need of home, work, transport, recreation and leisure. Spatial policies are not the only rulers in determining urban development. Although not directly, other non spatial public policies, such as employment regulation, bank loan, housing subsidy, family law, may have influence on urban development (Morison, 1998). This suggests that spatial policies and non spatial policies should be in concert in order to achieve sustainable development through compact city.

2.6   Concluding Remarks

Compact city, which is said to be a sustainable approach for urban development was developed based on environmental consideration, whereas definition of sustainable development demands also consideration for economic and social issues. Compact city is implemented through at least on these approaches, namely high density, mix of use and intensification. The impacts of these approaches on the society should be evaluated to see how social characteristics are affected and whether or not the impacts tend to contribute a positive influence for intra-generation and intergeneration. In the evaluation, subjective opinion of society's, that is perception and expectation, are important factors to observe because they describe the response on the policy. This subjective opinion varies as the cause of differences in age, gender, ethnicity, and social class. How each of this social group is served by the compact city policy becomes the test for social sustainability using these measures: equity, diversity, interconnectedness, quality of life, democracy and governance. Social issues are very contingent and, therefore, need a specific case to apply the study. The next chapter explains about socio-cultural characteristics of society in the Netherlands and followed by chapter four providing information about how the compact city policy has been implemented in the Netherlands.

Chapter III

CHARACTERISTICS OF SOCIETY IN THE NETHERLANDS

Understanding the socio-cultural characteristics is an absolute requirement when developing and implementing a policy which affects a community. Urban development policy is of no exception since it is meant to affect society through spatial arrangement. The challenge is that social characteristics can change to adjust with its environment and result in situation that is different from of which a policy has been based on when developed. In order to understand how compact city policy can affect the socio-culture in the Netherlands this chapter will discuss social life in the Netherlands, especially its relation with spatial arrangement.

3.1 Global Influence

As part of the global community, The Netherlands is and will always be influencing and influenced by international condition. It means that not all influence has arisen from the society itself but also from outside. It can also be that the trend of change is a global tendency and is not only particularly experienced by one nation. Two important social trends that have significantly affected social and even cultural characteristics in the Netherlands is individualization and women emancipation. As of individualization, Praag and Uitterhoeve (1999) remark that it is a very influential trend which has swept the Netherlands since about 1965 as they note as follows:

> *"The modernization of Dutch society, which started back in the sixties, affected a wide range of social relationships and to some extent undermined respect for authority. Individualisation made it easier for people to escape the influence and control of their relatives, neighbours or religion and to choose their own social environments. Individualisation also had its effect on a more personal level. For instance, the stability of marriage was increasingly forced to give ground in the cause of personal self-realisation."*

This social trend has caused significant changes in many aspects in the society. However, besides social influence, there is another important thing that has significantly affected the socio-culture in the Netherlands, that is, the economic growth. The Netherlands Institute for Social Research report in one of its publications about social and cultural trends in 1995 – 2006 (Roes, 2008) where they remark as follows:

> *"The gradual improvement in income in the second half of the 1990s, and the marked improvement in purchasing power in 2001, had a positive effect on people's life situation. This is reflected above all in an increase in mobility and the associated vehicles (more, and more expensive cars), and improvements in housing (more, and more expensive, owner-occupied homes). The healthy economic growth in the 1990s naturally also had an impact on the employment rate (more people in work) and unemployment (fewer unemployed people)."*

The Netherlands also experienced a reversal in economic growth in 2001 – 2005 as the impact of the global economic slowdown but started to accelerate again in the third quarter of 2007 for the stability of its economy. Among the European Union member states, the Netherlands records the lowest unemployment rate, 2.9%. With this economic condition, the Netherlands is among prosperous countries in the world. As mentioned in the quotation above that this economic condition plays an important role in the shaping of the socio-culture in the Netherlands. The following discussion will elaborate the characteristics of society in the Netherlands through social categorizations, that is, age, gender, ethnicity and social class.

3.2   Age

The growth of population in the Netherlands experienced a phase called *baby boom*, which is an explosion of birth during the period of 1945 – 1965 (Praag and Uitterhoeve, 1999). It can be seen until now that the number of people of middle age is relatively higher than the other age. The phenomenon is usually called ageing population meaning that the number of people growing old is larger than the younger generation. This means that dependency ratio is going to increase. The darker strip in Figure 3.1 is the baby boom generation. This kind of population structure will later have profound effect on social and economic issues, such as housing provision, labour market, etc.
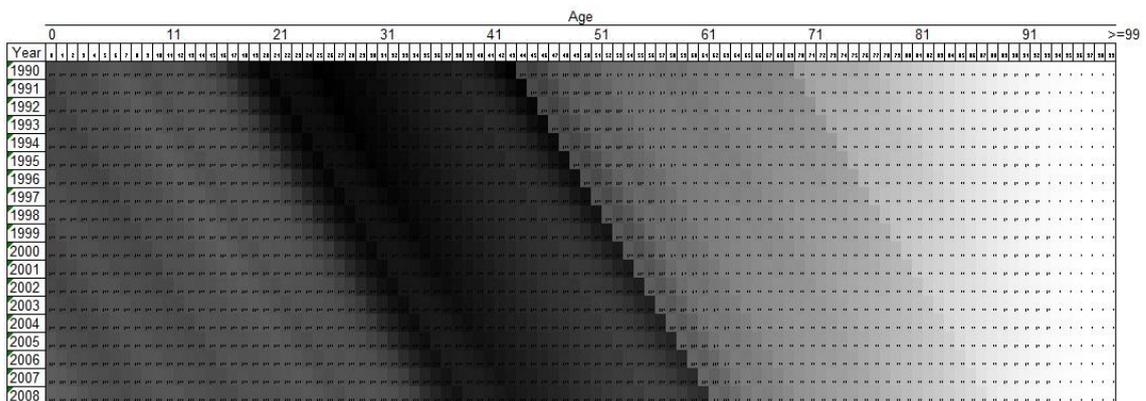
Data source: www.cbs.nl, accessed on July 21, 2009; Darker colour = higher population.

Figure 3.1 Generation of baby boom in the Netherlands

In the life course, young people who want to start their own family will move to more spacious dwelling, whereas older people, for instance after their children leave home for school, job, or starting family, tend to downsize their need of space by moving to a smaller house (Clark and Deurloo, 2006). This social phenomenon creates a predictable residential mobility[25] or residential migration[26] in the society and does not occur only in the Netherlands but also in many countries. TABLE 3.1 shows number of people moving within the same municipality (residential mobility) and to another municipality (residential migration). The total number of movement each year is relatively similar. The most active citizens who move are those of 20 to

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[25]   Residential mobility is intra-urban moves i.e. relatively short distance moves within the same region. (Howley, 2009)

[26]   Residential migration is a move from one region to another. (Howley, 2009)

40 years old. In 2007 this age group did almost half of all moves, and were followed by those 20 years old and younger (23%) and then 40 to 65 years old (20%).

TABLE 3.1
Residential mobility and residential migration (x1000)

Types of moving	2000	2005	2007	2008
Residential mobility	972	1,009	993	978
Residential migration	614	642	647	646
Total	1,586	1,652	1,639	1,624

Source: CBS, 2009

TABLE   3.2 is presented by Clark and Deurloo (2006) to show the tendency of space consumption when households in different age group move to another dwelling. It is clearly seen that regardless of their previous housing situation, whether crowded, neutral, spacious or very spacious, when young people (<50 years) move, then, a move to a less spacious lodging is the lowest probability. In case of those who live in crowded or neutral lodging, younger people (<50 years) move to new lodging that at least has the same number of rooms they previously have (35.4%) or to have more rooms than previously (37.9%). This also applies for young people who already live in spacious or very spacious lodging, that is, only 12.1% move to less number of rooms and 21.5% to at least the same number of rooms and 66.4% to have more rooms. On the contrary, as expected, the older age group is likely to move to live in lodging with less number of rooms, especially after 60 years old. The reasons of old people to move to a new dwelling are primarily for the concern of health, needing care and too much space (Clark and Deurloo, 2006).

TABLE 3.2
Households that move; change in number of rooms after move

Age group	% Fewer rooms	% Same # of rooms	% More rooms
(a) After the move living in crowded[**] or neutral lodging[*]			
<50	26.8	35.4	37.9
50 – 59	59.7	25.9	14.4
60 – 69	69.8	26.2	4.0
70 – 79	72.6	22.7	4.7
80+	79.8	18.3	1.9
(b) After the move living in spacious[+] or very spacious lodging[+]			
<50	12.1	21.5	66.4
50 – 59	31.8	31.1	37.0
60 – 69	45.6	28.7	25.7
70 – 79	57.1	25.5	17.4
80+	63.3	28.3	8.4

[*]*Neutral lodging is housing situation with one more room than the number of persons in the household;* [**]*Crowded lodging is all housing situation with less space than neutral lodging;* [+]*Spacious lodging is housing situation with two more rooms than the number of persons in the household;* [++]*Very spacious lodging is housing situation with 3+ more rooms than the number of persons in the household.*
Source: Clark and Deurloo, 2006

Besides the fact that older people move to downsize their use of space, Clark and Deurloo (2006) also find out - and this is actually their research focus – that there are some areas where old people are not moving away from their spacious home, although they live with very few persons. Tracing the locations of the occurrences, they found that housing over-consumption by old people existed in suburban areas around highly urbanized cities (Figure 3.2). Clark and Deurloo argue about this that the longer a household stay in a dwelling, the less they want to move from there, and they will try to maintain the spacious dwelling they already have.

■ >55% of the households over-consuming
■ <55% of the households over-consuming
□ insufficient cases (<10 households over 50)

Source: Clark and Deurloo, 2006
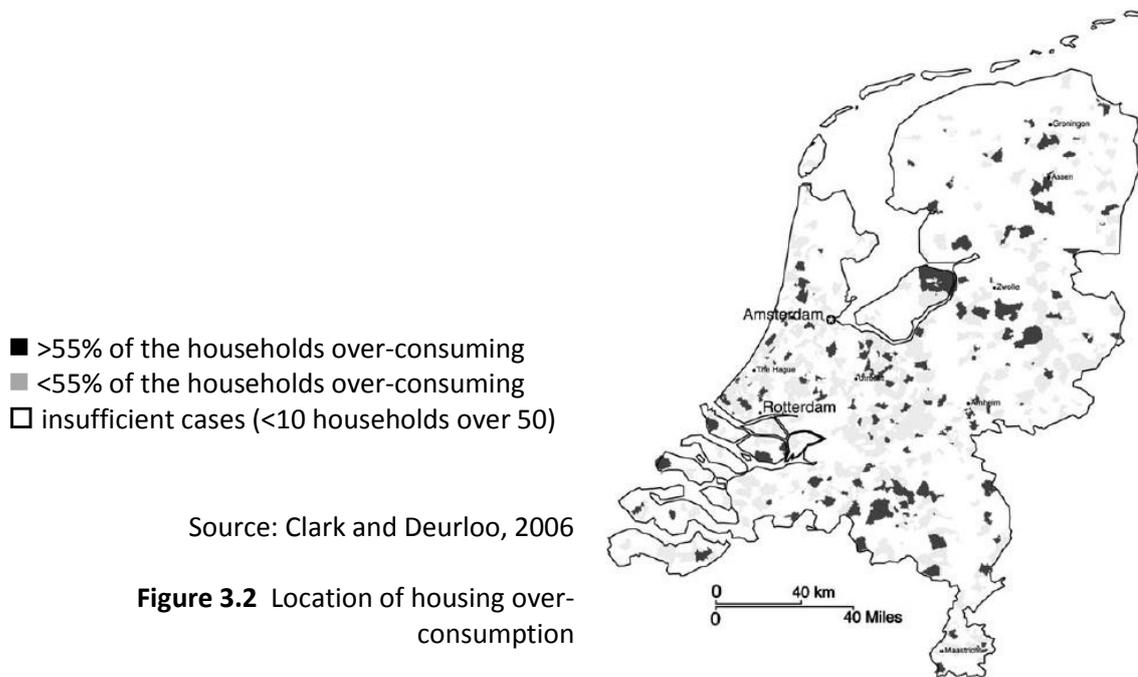
Figure 3.2 Location of housing over-consumption

3.3 Gender

The total number of men and women in 2008 is relatively even (Figure 3.3). Women comprise 50.55% of the total population. However, when observed per age then it is clearly seen that the number of women under 63 years old is fewer than men and contrarily the number of women of 63 years old and older are more than men (Figure 3.4).
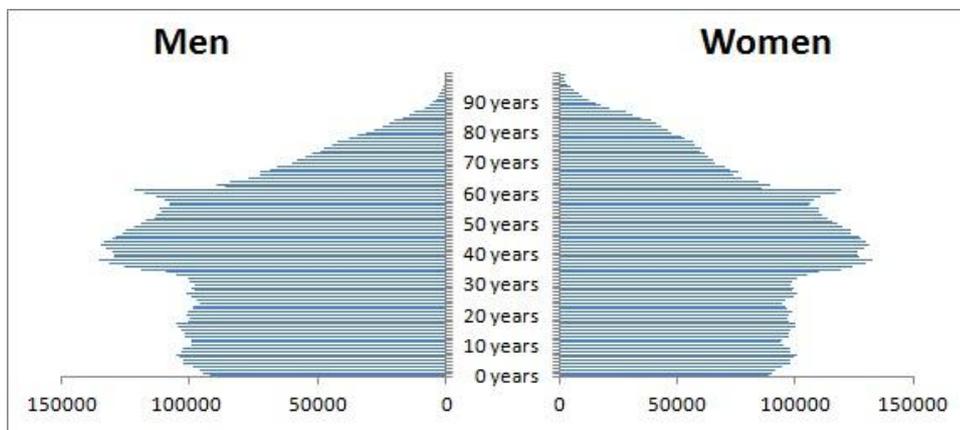
Data source: www.cbs.nl, accessed on July 21, 2009

Figure 3.3 Population of the Netherlands in 2008 by gender

Number of women compared to men
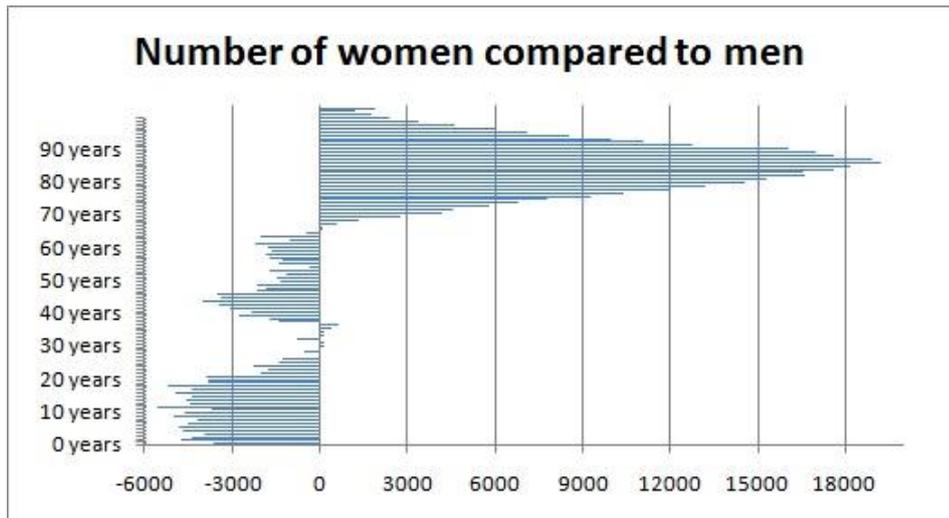
Data source: www.cbs.nl, accessed on July 21, 2009

Figure 3.4 Number of women compared with men in 2008 (Women – Men)

The influence of individualization and woman emancipation, that is more married women participate in labour force, have caused people, men and women, to pursue for self freedom and avoid being bound by any relationship, including marriage. This has resulted in a striking phenomenon in the decrease of household size in the Netherlands and to some extent acceleration of the process of ageing population. Figure 3.5 depicts the pattern of household size in the Netherlands from 1995 to 2008. It shows an increase of one-person household from 33% of the total household in 1995 to 36% in 2008. The role of family still holds important role and cannot be diminished by individualization, except that many young adults take more time to start up a family (Praag and Uitterhoeve, 1999). The Netherlands also records an increasing number of divorces. In 1970 the percentage of divorces were 12%, and became 24% in 1980, 30% in 1998 and 34% in 2007 (CBS, 2009).
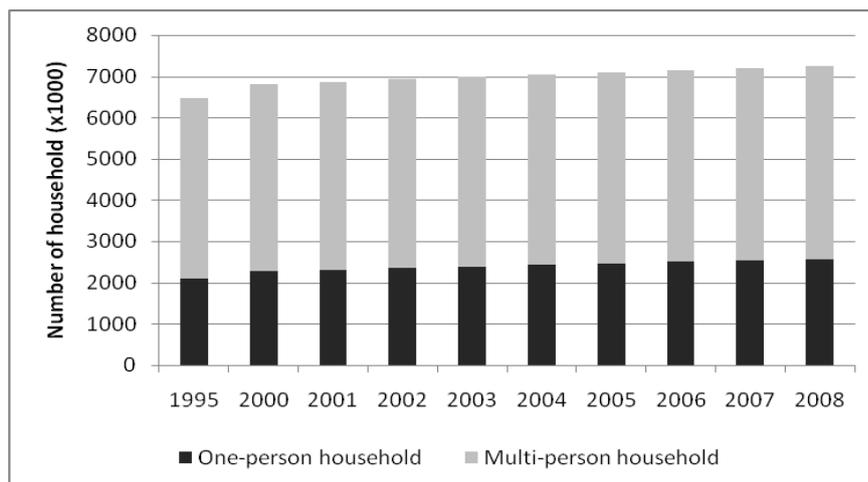
Adopted from Statistical Yearbook of the Netherlands (2004, 2005, 2008, 2009)

Figure 3.5 Number of household by household size

The increase number of women emancipation in labour force has affected labour supply that there is more labour demand than the supply. The Netherlands faces an increasing unemployment since the labour supply cannot pace with the labour demand that is contributed by the increase in women emancipation and influx of immigration. Figure 3.6 displays the comparison between women and men emancipation in labour force from 1996 to 2008. In 1996 the difference between men and women emancipation rate was 5%, whereas in 2008 decreased to only 2%. The condition has created a tough competition in the labour market and those who have low skill and education have fewer chances to get a job. Whether they would look for a temporary job or become unemployed, many of them are easily welcomed in the world of crime or illegal businesses.
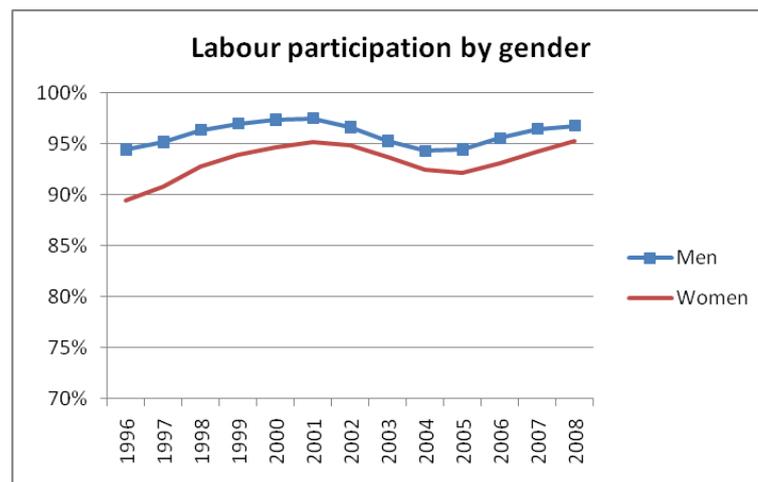
Data source: www.cbs.nl, accessed on August 4, 2009

Figure 3.6 Labour Participation by gender

3.4   Ethnicity

A typical social characteristic of the Netherlands is the significant number of immigrant population. Population growth in the Netherlands is affected by international migration, whether from Western or non-Western origin. Some of these people have also come to the Netherlands as asylum seekers since the early seventies (Praag and Uitterhoeve, 1999). Those referred to as foreign background are people who were born outside the Netherlands or have at least one parent of Dutch origin, or in Dutch word it is called "*allochtoon*". On 1 January 2009, the number of immigrant with a Western background (excluding Dutch) is 1,478,396 or 9% of the total population. The number of non-Western background is 1,809,310 or 11% of the total population. Among these non-Western origins, there are four ethnic groups that number dominantly, namely Moroccans (341,528), Netherlands Antilles and Aruba (134,774), Suriname (338,678) and Turkey (378,330). The other non-Western number 616,000 (Figure 3.5). Most of these four groups spread in the four major cities, that is, Amsterdam, Rotterdam, The Hague and Utrecht (VROM, 2009b) and create high concentration in some neighbourhoods.

The availability of job market in the four major cities can partly explain why people from ethnic minority groups would come to settle in. Van Ham (2005) explains that more than 50% of all jobs in the Netherlands are available within the Randstad where these four major cities locate. Therefore, these cities become the major centres of employment. More explanation is given

that the type of jobs available in Randstad is directed to specialization towards professional, meaning that high education and skill are necessary. Manufacturing industries and goods-handling, which can absorb employees who have limited skill and education level, are shifted to regions outside the Randstad (Van Ham, 2005). Regarding the education level of most of the citizen of ethnic minority (TABLE 3.4) it is expected that they will spread in other regions beyond the Randstad. The fact that they are clustering in the Randstad can only be satisfied by the explanation of Healey (2006) saying that people would like to live with others who have similarity in lifestyle (culture). As a consequence, many of these people will be unemployed or surviving in informal jobs.
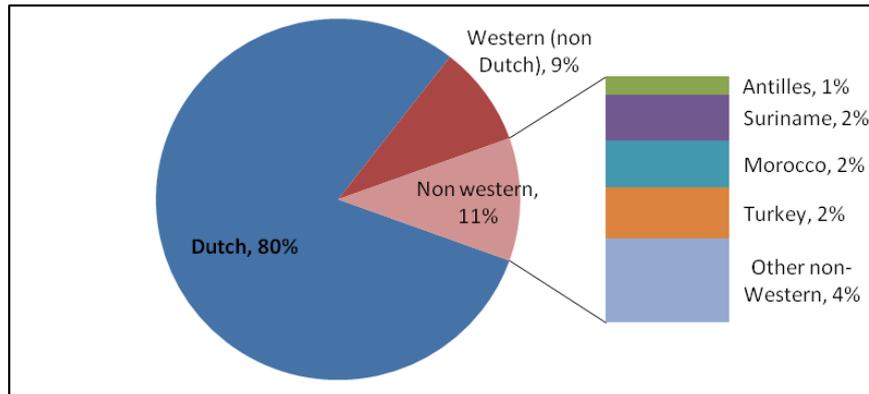
Data Source: CBS, 2009

Figure 3.7 Composition of population according to country of origin

The central government is trying to get all citizens, including those from foreign background, to be able to fit well in the society through access to appropriate housing, education, job and other social services. The non-Western ethnic background becomes the focus of the national government because they cannot yet catch up with the indigenous Dutch in many fields. This is not the case for those from Western background. The reason so far is that the first generation of the non-Western background came to the Netherlands with low education and skill. This condition can explain why participation of the non-Western ethnic minority in the labour market is still low (Roes, 2008). However, the second generation of this group has a better chance to access higher education and get a better job.
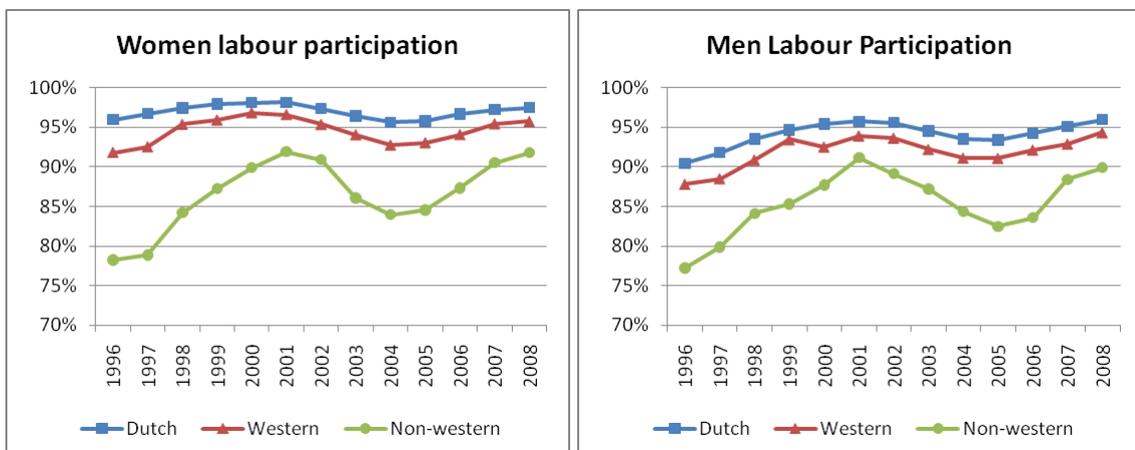
Data source: www.cbs.nl, accessed on August 4, 2009

Figure 3.8 Women and men labour participation

The background culture of non-Western ethnic is accounted for the low contribution of women in labour force. This usually also relates to family tradition of some ethnic, for instance, women tend to stop participating in labour force after her first child is born. Another case is that people of the non-Western ethnic minority tend to have more children in their family, especially the Turks and Moroccans, than the indigenous Dutch family or even other Western ethnics. Besides their growth in population will be faster than the other groups, the housewives take care more children at home and this gives them less time for a job. Figure 3.8 shows the difference in labour participation between the indigenous Dutch, the Western ethnic, and the non-Western ethnic minority, in which the latest is the lowest. During recession from 2001 to 2005 there has been a decrease in labour participation, which is caused by many layoffs. It is apparent from the figures that both men and women of the non-Western ethnic origin experienced the worst impact of the crisis, whereas the indigenous Dutch people and the Western ethnic group are relatively stable.

The Netherlands, which once developed an open and tolerant attitude to all citizens and provided protection for the sake of human rights, now faces divisions in view due to developing global issues on terrorism. In the last decade, the significant number of non-western ethnic population has gained various attentions from Dutch figures, such as politicians, artists, and raised new discourses, and even debates, on the immigration policy implemented in the Netherlands[27]. Praag and Uitterhoeve (1999) respond that it might be better to speak of multi-ethnic than multicultural in the Netherlands since each ethnic domain seems to stick to their culture and the immigrants reluctantly try to adapt with the indigenous culture. This situation has increased tensions nationally and especially in major cities where existence of immigrants is very apparent. The government of the Netherlands is aware of the situation and trying to adjust some policies. In housing policy, the government begins to encourage those having good income to live in a city and not in a suburb or rural area. This effort aims to create balance between social classes in city.

3.5   Social Class

Social class can be seen through three aspects, namely through education, income level and employment. In case of income, only 5% of all households have income below 10,000 euro per year. Half of the households have income in range 10,000 to 30,000 euro. Household size also shows relation with income rate, that is, higher income belongs to multi-person household. Single person households are likely to be young people who are relatively new in employment or even unemployed. Multi-person household describes a mature household whose breadwinners may have been in employment for longer time and having better salary, for instance, due to their position. These multi-person households may also be double income households.

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[27]   EU: Netherlands leading trend to more stringent immigration rules; source:
http://www.rferl.org/content/article/1067418.html, accessed on August 5, 2009

Income by household size in 2007
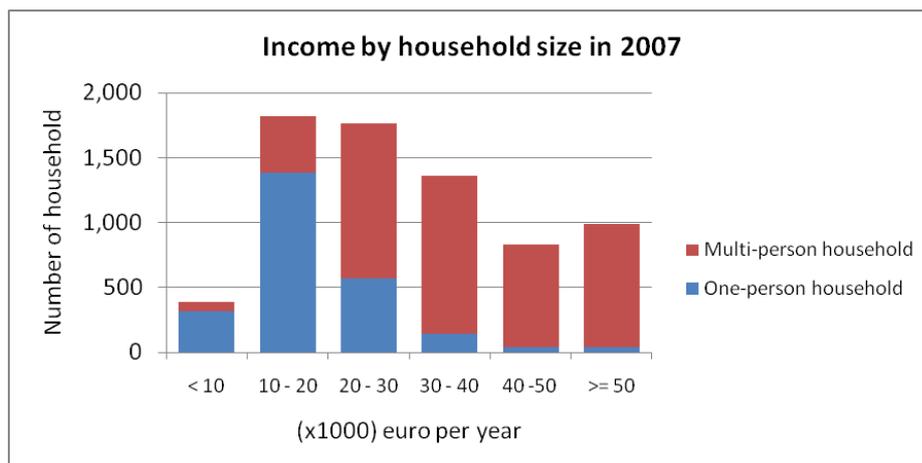
Data source: CBS, 2009

Figure 3.9 Disposbale income by composition of household in 2007

Using the available data in 2005, TABLE 3.3 describes how income is distributed among different ethnic groups. The indigenous and the Western background from the first and second generations enjoy a good level of income. The first generation of the non-Western ethnic group has less income than the other ethnic groups. However, their second generation cannot yet get better income, and even get less than the first generation, since they are relatively new in the employment.

TABLE 3.3
Average disposable income, persons aged 18 years and older, by ethnic, 1994-2005
(in euros, 2004 prices)

	Average disposable income (x1000)			
	2000	2001	2003	2005*
Indigenous	18.4	18.8	18.5	18.7
Western – 1st generation	17.8	19.3	18.3	18.3
Western – 2nd generation	18.5	19.1	18.8	18.7
Non-Western – 1st generation	15.1	15.7	15.4	15.4
Non-Western – 2nd generation	12.5	13.7	13.4	13.5

*The figures for 2005 are provisional.

Source: Roes, 2008

This income condition relates to the kind and level of employment. Citizens from the non-Western ethnic minority are still struggling to get better position in jobs but are still facing a problem with low level education, especially the first generation. TABLE 3.4 depicts the level of education of citizens in different ethnic groups in 1996 and 2005. Comparing the composition in 1996 and 2005 there is obviously an improvement in general that more people get higher education in 2005. For instance, of the indigenous Dutch people in 1996 only 20% had the proficiency as higher education, and in 2005 there were 26% of all Dutch people. The same case applies for other groups. However, when comparing the achievement of each group in education level, there is still a big gap between the indigenous and the four main ethnic minorities, especially in higher education.

TABLE 3.4

Population aged 15-64 years, by origin and education level, 1996-2005 (in %)

	Indigenous	Turks	Moroccans	Surinamese	Antilleans	Other non-Western
1996						
Primary education	12	56	57	26	19	24
vbo/mavo	27	24	23	27	34	25
havo/vwo/mbo	42	16	16	33	32	31
hbo/wo	20	4	4	13	16	20
total	100	100	100	100	100	100
2005						
Primary education	8	31	34	14	11	16
vbo/mavo	25	25	26	29	25	20
havo/vwo/mbo	41	36	33	43	45	43
hbo/wo	26	8	7	15	19	21
total	100	100	100	100	100	100

vbo = pre-vocational education; mavo = junior general secondary education; havo = senior general secondary education; vwo = pre-university education; mbo = senior secondary vocational education; hbo = higher professional education; wo = university education

Source: Roes, 2008

The government of the Netherlands is working towards creating a conducive environment for all citizens and also aware of the potential problems that exist within the society. Measures to create integration among multicultural citizens have been implemented in many policies and institutions. One of the measures in integration policy is that all citizens must be able to speak Dutch because proficiency in Dutch language will of course help the process of integration and also participation in the society, whether through employment or other social activities.

3.6   Concluding Remarks

The global wave of individualization and women emancipation has significantly affected the Netherlands, at first through social lifestyle but then snowball into many other issues. The decrease of household size and ageing population are among evident impacts that root from these two trends. The typical multicultural society is also a substantial identification of socio-culture in the Netherlands. It has become one of the important focuses of the government since it is the government's purpose to get all citizens to fit well in the society. The problems faced in this effort have emerged from the low education level of immigrants, especially the four largest minority groups, and this has implied to the emergence of gaps in employment, income and housing. Measures for social integration are applied through many policies and institutions that are aimed to create a social cohesion and support for the achievement of the general purpose of development. One of the integration policies is the mixed use scheme in the implementation of compact city. However, since compact city is not at first developed based on these social issues, problematic situation is likely to emerge. The next chapter will explore the implementation of compact city in the Netherlands, how it is approached and what impacts it results in.

Chapter IV

COMPACT CITY IN THE NETHERLANDS

Implementation of a spatial planning policy by a government should certainly be based on specific reasons. These reasons may come up from the geographical condition of the region, the cultural history, a decree from higher authority, etc. Other non-spatial public policies may also introduce significant effects on the implementation of spatial policies and become determinant factors for the future result. This chapter will elaborate why and how the Netherlands has implemented compact city approach, including its spatial impacts. At the end of the chapter the result of the online survey is discussed.

4.1 Reasons for the Implementation of Compact City

The history of Dutch cities has exhibited compact approach in their development, although the reason for the development was mainly based on defence purposes. This urban development approach soon evolved to a rapid suburbanization during pre-war and post-war resulting in dispersed urban development. In 1980 the concern of environmental capacity arose among planners who then put forward the idea of compactness in urban planning. The favourableness of compact city approach was based on two main reasons, that is, the scarcity of space and spatial structure of functions within urban regions (De Roo and Miller, 2000).

The implementation of compact city approach for urban development in the Netherlands did not come only from inside the country, that is the national planning policy, but also from outside. The European Union, in which The Netherlands is one of the members, also motivates its members and regional authorities to pursue the concept of compact city (the city of short distances) (CEC, 1999). Some policies put by the European Commission are determinatively influencing the Netherlands planning policy, such as the Environmental Directives that designate protected areas and so increase the scarcity of space for development purposes in the Netherlands.

TABLE 4.1
Area by land use in the Netherlands in 1996 and predicted for 2030

Type of land use	1996 hectares of land	% of 1996 total	Predicted 2030 hectares of land	% of 2030 total
Residential	224,231	5%	286,231	7%
Commercial	95,862	2%	138,862	3%
Infrastructure	134,048	3%	181,548	4%
Agriculture	2,350,807	57%	2,028,307	49%
Green areas	461,177	11%	791,177	19%
Recreational areas	82,705	2%	226,705	6%
Water	765,269	19%	1,255,269	31%
Total	4,114,099	100%	4,908,099	119%

Source: Woltjer and Al, 2007

The geographically low-lying position of the Netherlands is a critical factor for which the planning policy should put environmental consideration in high priority. TABLE 4.1 is a prediction of land use in the Netherlands showing that the total land use needed will exceed the available land in 2030. Woltjer and Al (2007) posit the importance of integration between water management and spatial planning which leads to a multiple land use scheme.

The concern of environmental capacity among planners, introduction of directives of the Commission of the European Community, and the geographical condition of land are among important factors why compact city, which promotes high density and mix of use, has been considered a sustainable way of development, especially in urban areas, in the Netherlands.

4.2   The Implementation of Compact City and Its Spatial Impacts

The implementation of compact city in the Netherlands applies all three criteria, that is, high density, mixed use and the process of intensification. Since the 1990s, the central government has focused housing development within cities and intensified brownfield development and as far as areas adjacent to existing urbanized areas. New town development was no longer a favourite policy since it is said to stimulate car traffic and urban sprawl (VROM, 2009b). The following discussion about implementation of urban planning policy in the Netherlands is presented in each urban function, that is, residence, workplace, transportation, comfortableness, and leisure.

4.2.1   Residence

Compactness in the Netherlands is regulated through housing provision policy. Not only the big cities are arranged with such approach but also any small town or village. The residential areas are arranged in a way that a high density and mix of use are maintained. Following is the explanation for each approach separately.

4.2.1.1   High Density

To achieve high density, a minimum standard of number of dwellings per hectare is designated for any residential area. This standard is decided by municipality, as the authority who develops the local land use plan, to provide guidance for any housing developer. A housing density of 30 dwellings per hectare is usually referred to as a minimum density level (Lörzing, 2006) for urban areas. Cities like Amsterdam and Rotterdam even have residential areas that have more than 100 to 300 dwellings per hectare. The central government through The Directorate General for Housing, Communities and Integration of The Ministry of Housing, Spatial Planning and Environment pursues to provide good quality, affordable, and safe housing for as many people as possible (VROM, 2009a) while also trying to keep the urban areas compact. Due to the high cost of construction, including provision of basic utility such as electricity, gas and sewerage, residential buildings are mostly built by private developers or

housing associations[28] that hold building permit from the government. This policy tends to limit the size of dwelling in urban areas in order to meet the housing demand.

The number of dwelling follows the distribution of population in Dutch cities, which is uneven. In 2008 from 16 million population 35% live in the four biggest cities in the west, that is, Amsterdam, Rotterdam, The Hague and Utrecht. There are a lot of social housings provided in these big cities to fulfil the high demand of housing. Population is distributed in urban regions, including their vicinity areas, and in rural areas[29]. There are more people living in urban than in rural areas, that is, 55% of the total population in 2000 and became 56% in 2004 (Figure 4.1). The number of dwellings in urban regions shows a similar pattern to distribution of population but is less occupied and even declines. The average of absolute dwelling occupation[30] for the whole Netherlands is moving to 2.2 person (absolute) per dwelling. In rural areas from 2000 to 2006 the rate is 2.4 and declined to 2.3 in 2007. Similar rate also occurred in urban fringes[31] while in 22 metropolitan agglomerations[32] the rate moves from 2.1 in 2000 to 2.0 in 2005 until now (Figure 4.2). Dwelling occupation in Amsterdam and The Hague is even smaller, 1.9 person per dwelling. The declination of dwelling occupation in the Netherlands is explained by The Netherlands Institute for Social Research referring to the growth of household in the period of 1993-2006 which outstripped the increase of population by over 5%. This higher growth was partly caused by the relative increase of single-person households, which reached up to 1.6% per annum (Roes, 2008). There are actually four types of dwelling based on its function in the database of The Statistics Netherlands, that is dwelling, dwelling unit, recreation house, and special residential building[33]. However, this evaluation does not include the recreation houses since they are only temporarily occupied.

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[28] Housing associations are social enterprises that have an important social task: investment in good, affordable housing and in the quality of the residential and living environment. http://www.vrom.nl/pagina.html?id=37399 accessed on July 16, 2009

[29] Rural areas are areas not included in metropolitan agglomerations and their fringe areas.

[30] Dwelling occupation is the number of person living in a dwelling. The term is used to avoid misconception with household size since people sharing a dwelling unit may not be a household, for example, in the case of homes for the elderly.

[31] Urban fringe is the surrounding areas of a metropolitan agglomeration comprising smaller nuclei (small towns, villages, small settlements) which are interrelated in various ways. (CBS, 2009)

[32] Metropolitan agglomerations are urban regions in morphological sense, i.e. an uninterrupted built-up area where human activities take place and most jobs and public facilities are found. Metropolitan agglomerations are the centres of urban regions. In a metropolitan agglomeration, the following conditions are met: more than 100,000 inhabitants, more than 50 thousand jobs and over 150 thousand potential customers (CBS, 2009). These metropolitans are Amersfoort, Amsterdam, Apeldoorn, Arnhem, Breda, Dordrecht, Eindhoven, Enschede, Geleen/Sittard, Groningen, Haarlem, Heerlen, Leeuwarden, Leiden, Maastricht, Nijmegen, Rotterdam, s-Hertogenbosch, The Hague, Tilburg, Utrecht, and Zwolle.

[33] A dwelling is defined as a building intended for permanent habitation by one private household; A dwelling unit has similar function with dwelling except that it does not have a toilet and a kitchen fit for the preparation of complete meals. Shared toilet and/or kitchen facilities are required instead; A recreation house meets all the requirements of normal dwellings but is also used for holiday purposes or situated in a recreation resort; A special residential building is a building intended for permanent habitation by institutional households. This includes homes for the elderly, boarding schools, etc. (CBS, 2009)
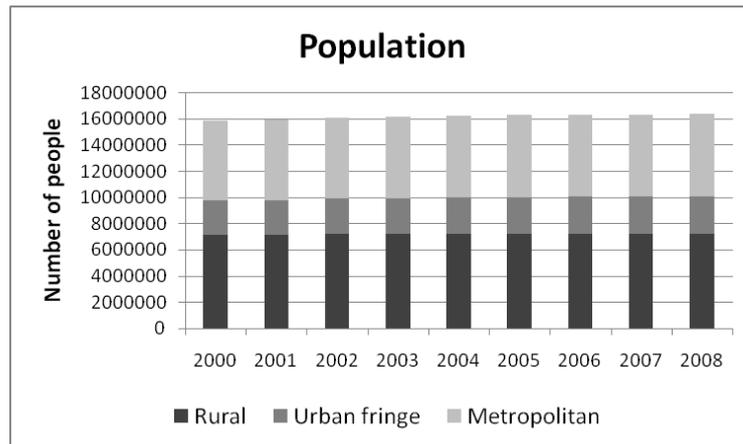
Data source: CBS, 2009

Figure 4.1 Population of the Netherlands
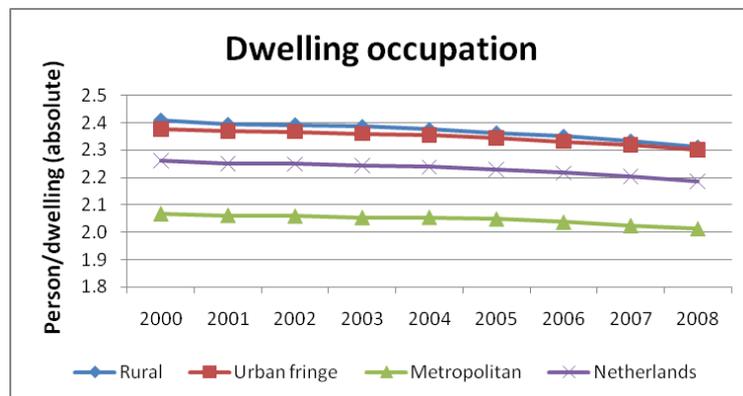
Data source: CBS, 2009

Figure 4.2 Dwelling occupation

The tendency of smaller dwelling occupation in metropolitan areas does not mean that the people live in a more spacious house than those in urban fringes or rural areas. The fact is that sizes of house in metropolitan areas are averagely smaller than those in the other parts of the country. TABLE 4.2 shows the difference in home size and space per household member according to income, ethnicity and municipality. It shows that people living in more urbanized areas tend to live in smaller house size and use smaller space per household member. In the four largest cities, the house size is on average 86m^2 in 2006 compared with 135m^2 in urban fringes. The existence of rented unit of dwelling in metropolitan areas has undoubtedly contributed to this situation because dwelling unit is mostly of small size dwelling offered in cheaper prices than other types of dwelling. The table also shows the difference regarding group of income, that is, the more the income, the larger the house size and the larger space consumption per household member. On the contrary, space consumption per household member by the lowest 20% income group is higher than the other income groups. This is an indication that people in the lowest 20% income group live with fewer numbers of person. Space occupation by ethnicity shows a significant difference between the indigenous Dutch and the ethnic minority, while among the ethnic minority there is only a slight difference. Many of the indigenous Dutch people own inherited houses, especially in rural areas and urban fringes, which have been there long before new smaller houses are built. Among the

minorities, it can be seen that the Turkish and Moroccans share a house with more household members compared with the other non-Western ethnic minorities do. For instance, in 2006 every member of a Turkish household in average consumes one third of space while the other consumes a half. In other words, the Turkish and Moroccans' households consist of three persons, whereas the other only two in average.

TABLE 4.2

Average of home size and Space per household member by income and municipality

Criteria	Home size (m^2)		Space per household member (m2)	
	2002	2006	2002	2006
According to income group				
Lowest 20% incomes	86	86	71	72
20% - 80% incomes	118	120	61	63
Highest 20% incomes	164	128	65	68
According to ethnicity				
Indigenous	124	128	65	68
Surinamese	89	89	49	50
Antillean	86	82	51	48
Turkish	88	92	36	39
Moroccan	81	85	33	38
Other non-western ethnic minority	87	89	44	47
According to municipality				
Four largest municipalities	84	86	54	54
21 largest municipalities	111	114	62	64
Other municipalities	131	135	66	68

Source: Roes, 2008

4.2.1.2 Mixed Use

Mixed use is achieved through mix of land use where different types of land use are assigned in the same area. In this policy, there is no such specific designation as office areas, residential areas and so on, but all can be put in the same location. Recreational sites in the form of neighbourhood playgrounds are provided in exchange for the little space in home. This kind of mix is called horizontal mix. There is also a kind of mixed use called vertical mix that is the use of the same building for different purposes, for example, stores or offices are located in the ground floor and the rest of the building up are for residential purposes (Figure 4.3).

Figure 4.3 Vertical mixed use between commercial and residential uses

Picture: Groningen, google maps
Accessed on July 18, 2009

In mixing various types of building composition is taken into account in order that each building still has a good access and view and is not blocked by other buildings. There are four types of residential building can be found in the Netherlands, namely detached house, semi detached house, terraced house, and flat (Figure 4.4). In 2006 the share of detached house is 15%, semi detached house 13%, terraced house 25% and the rest is flat (Roes, 2008). The difference in type of residential building can also show social class of the owner because detached and semidetached houses are expensive and usually belong to the rich, except those built in urban vicinity since the owners can possess enough piece of land to have a detached house.

Picture source: google maps, accessed on June 5, 2009, location: Groningen

Figure 4.4 Types of residential building

Vertical and horizontal mixes explained above relate to mixing of land uses. Besides, the government also introduces in this mixed use scheme a mixing of tenure between rented and owner-occupied dwelling (Figure 4.5). The purpose to provide rented dwelling is, of course, to give chances for the low income group to have a dwelling place in the city, but the reason to mix different tenure is to encourage social cohesion between various social classes within the society. Figure 4.6 shows the percentage of home-ownership between the indigenous Dutch and the ethnic minority. Most of the residents of the latter have low access to home-ownership and live in rented houses. This explains why mix of tenure can, or is hoped to, increase social cohesion among the society. This scheme does not only work for ethnic issues but also for the issue of difference in income level, although as explained in Chapter 3 that income and ethnic issues can be to some extent identical.

Pictures taken on July 19, 2009

Figure 4.5 Rented and owner-occupied dwelling in Korreweg, Groningen
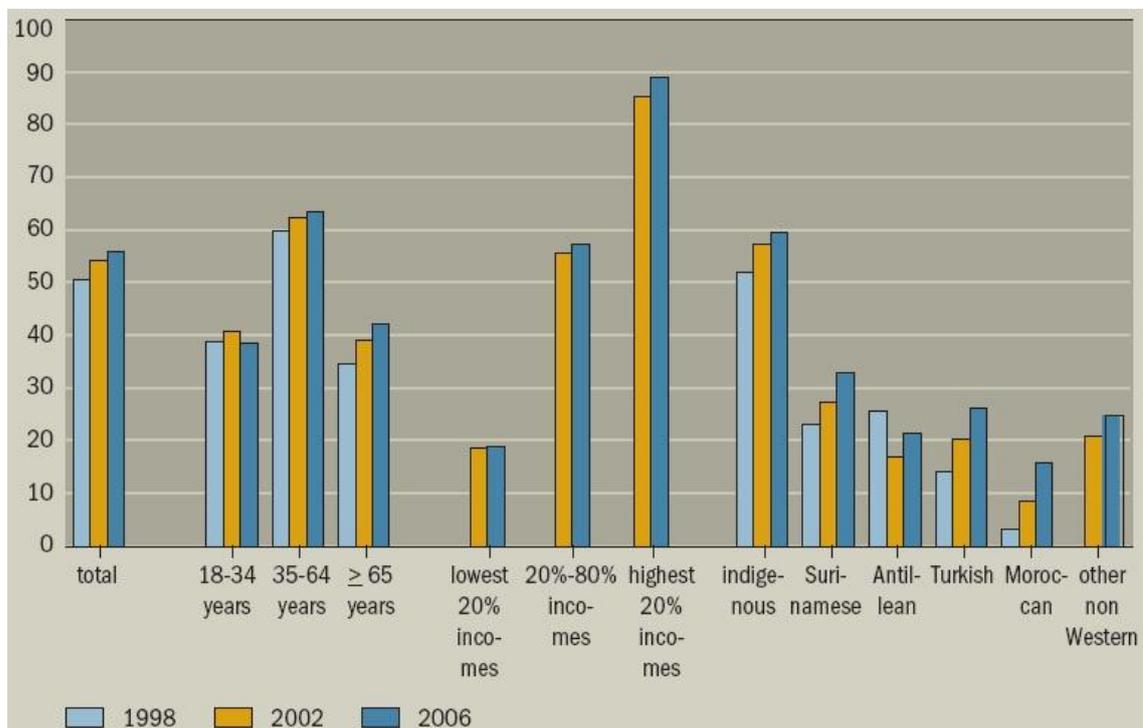
Source: Roes, 2008

Figure 4.6 Percentage of home-ownership age, income and ethnic group

The recent policy in housing taken by the government is to change rented dwellings into owner-occupied to provide better house tenure for the residents. The government is also implementing a new scheme in housing by providing houses for middle and high class economy in the city and enticing households from these groups to live in cities (Clark and Deurloo, 2006). Households with double income, that is partners are both at work, are usually offered to participate in this scheme. The government seems to introduce this scheme in an effort to keep a social balance in cities that cities are not dominantly populated by only certain social group, that is the low income group and certain ethnic minorities due to the availability of relatively cheap rented dwellings in cities.

The Ministry of Housing, Spatial Planning and the Environment reports that the share of homeownership in the whole country has increased gradually and steadily from approximately 15% in 1957 to almost 56% in 2006 (Figure 4.6 shows only from 1998 - 2006) with the highest ownership level is in rural areas. In urbanized areas the share is from 35% until 56% except in Amsterdam and Rotterdam where homeownership is only 22% and 30% respectively (VROM, 2009c). The increase in homeownership is the result of the government's effort to create greater diversity of housing within the cities, especially in financing category (Roes, 2008). There are a few policy measures provided by the government to help people to have their own home, which one of them is to give home subsidy for people of age 18 years or more that have not yet had access to home ownership (VROM, 2009c). Besides this scheme for encouraging homeownership, there is also rent allowance that is targeted to low income tenants to help them pay their house rent (VROM, 2009d).

4.2.2 Work

The concept of compact city is to arrange residential, workplace and other land use in adjacent locations. In case of workplaces, how these locations are arranged can be evaluated through the travel behaviour of people. A survey undertaken in 2004 among residents of 12 years and older (Roes, 2008) shows that the portion of journey for work is one fifth of the total journeys in 2004 (Figure 4.8) and comprises 28% of the total kilometres travelled (Figure 4.7).
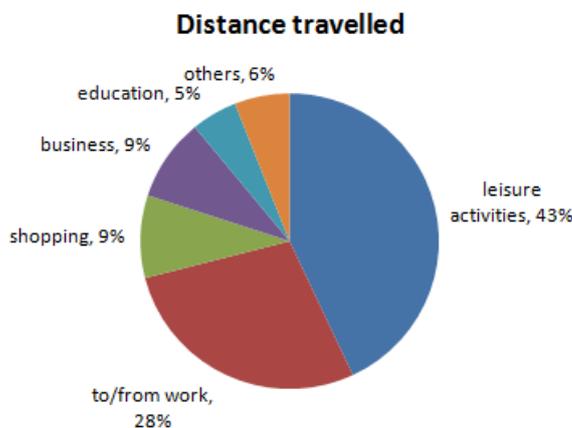
Source: Roes, 2008

Figure 4.7 Distance travelled by motives
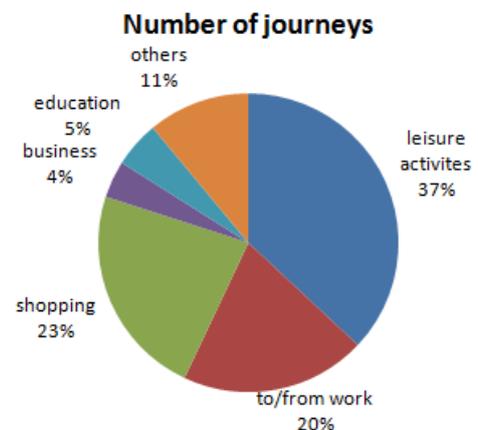
Source: Roes, 2008

Figure 4.8 Number of journeys by motives

This gives an index of 1.4 kilometres per trip[34] for a journey to/from work, which ranks the second after journeys for business purposes, 2.25. Considering that there is possibility for people living in a city and have to travel to another city for work, this index of journey for work can describe that the chance of such condition is very little. If there are many of that case the index will be higher than 1.4 kilometres per trip. In this case, it is an indication of a working compactness scheme. The provision of housing policy, whether rent allowance or homeownership subsidy, is also responsible for this condition since people can adjust with location of dwelling in order to get proximity to work.

4.2.3   Transportation

Compact city policy should promote the use of public transport, walking and cycling. The Netherlands is famous with people cycling in cities. This is made possible because there are dedicated lanes for cycling that will give a feeling of safe for cyclists. Road signs are set to give priority to cyclists and almost all streets are accessible for cycling, which gives benefit when someone wants to get close to his or her target location. In every train station, there is provided a parking space special for bicycles to accommodate people who want to use train but has been cycling to the station. In case of walking, pathways for pedestrians are well provided with adjustment for scooter wheels or other walking aid tools usually used by the elderly.

Public transport serving uses train, metro, tram and bus. Tram and metro are not provided in all cities but only in big cities. The choice to use metro, tram or bus depends on where and when someone wants to go and all use the same ticketing scheme. Tickets can be obtained at ticket selling machines installed in local shops. Some measures are applied to promote the use of these public transports. Special groups of society, that is, old people and students are subsidized to use these public transports, including for train. There is train discount cards that can be purchased by any one in order to get some discount of the tariff for one year. All these measures are undertaken to support compact city living.

After all measures explained above are taken, it does not mean that private car is of less preferred, on the contrary, it remains a favourite transport (CBS, 2009). People have their own reasons and preferences in choosing a transport mode, especially with the improvement of economic condition. Ownership and use of private cars cannot be prohibited except that some 'inconveniences' are faced by private car users. The most problematic matter is parking space, whether at home or other locations, because there has been a scarcity of space even for homes. Most of the residential areas do not have an off-road parking lot. Many will have to park cars on the road close to their home and thus have created inconvenience for other road users. Availability of parking space becomes a determinant factor for some households when choosing in which residential area to live.

TABLE 4.3 shows the number of cars in the Netherlands. It has been continuously increasing and in 2007 it numbered almost half of the population, that is, 44%. It is interesting to see that

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[34]   Index of kilometres per trip is the average of length travelled in every trip. The higher the index means that kind of trip takes farther distance.

the number of car ownership in 2007 outnumbered the number of household. This should not be interpreted that every household has a car because some households may have two or more cars. It is reported that in 2007 more than half of households had one car and nearly a quarter had access to two or more (Roes, 2008).

TABLE 4.3
Number of cars

	1995	2000	2001	2004	2005	2006	2007
Number of cars (x1000)	5581	6343	6539	6908	6992	7092	7230
Cars per 1000 inhabitants	362	400	409	425	429	434	442
Cars per 1000 households	863	933	952	980	985	992	1001

Adapted from: Roes, 2008 and CBS, 2009

Journeys in the Netherlands are still dominated by car users (TABLE 4.4). About 50% of all journeys are undertaken by cars of which three fourth are driven alone. Bicycle and moped comes the second followed by walking. Public transport, despite all measures mentioned previously, is the least choice for making journeys. In case of train, it is a good indication of compact city since it means that there are only a few who travel to other cities or the city is free standing enough. On the contrary, in case of bus, tram and metro, low rate of use means that they are not popular enough. There are two possible reasons for this. The first one is that people prefer to walk or use bicycle since it is cheaper. The second one is that people use private cars more. Emancipation, in case that many married women at work, and individualization of task have also led to higher car ownership and single person driver.

TABLE 4.4
Number of journeys, duration and distance travelled per person per day,
population aged 12 years and older, by means of transport

	1995	2000	2005	2006
Distance travel (km)	34.2	34.8	34.9	35.1
Duration of travel (minutes)	65.4	64.4	64.1	64.7
Number of journeys	3.16	3.11	3.03	3.05
Of which (%)				
Car driver	35	38	37	37
Car passenger	13	12	12	11
Public transport	6	5	5	5
Bicycle/moped	27	26	27	27
Walking	18	17	17	18

Source: Roes, 2008

The following TABLE 4.5 is the expansion of information in TABLE 4.4 but only in one year observation. It describes the condition recorded in 2005 about comparison of all kinds of transport modes in city and the social category of the users.

TABLE 4.5

Distance travelled, duration of journey and number of journeys

per person per day, by means of transport and various personal characteristics, 2005

	Distance travelled (km)	Number of journeys	Duration of travel (min)	% journeys by car	% journey by public transport	% journey by bicycle/ on foot
Total	32.4	3.0	60.4	49	5	46
Gender						
Men	38.4	3.0	65.7	53	5	42
women	26.4	3.0	55.3	45	5	49
Age						
12-19 years	25.4	2.7	60.7	24	11	65
20-29 years	41.1	2.9	71.3	50	12	38
30-39 years	43.5	3.5	69.6	57	4	39
40-49 years	41.0	3.4	69.5	57	4	40
50-59 years	38.7	3.2	69.0	56	3	41
60-74 years	26.6	2.8	57.8	48	3	49
≥ 75 years	12.7	1.7	33.0	44	5	51
Employment hours						
Employed 12-30 hours	33.9	3.6	66.3	53	4	43
Employed >30 hours	50.6	3.2	77.0	64	5	32
Unemployed	23.5	2.6	51.8	44	7	48
Household size						
1-person household	29.9	2.8	61.2	23	14	63
2-person household	35.4	2.9	63.0	43	7	50
> 2-person household	36.8	3.2	66.4	42	12	45
Education						
lo, lbo, mavo[*]	25.7	2.7	53.8	45	4	50
mbo, havo, vwo[*]	39.3	3.3	69.5	54	6	40
hbo, wo[*]	52.2	3.5	82.9	55	6	39
Municipality						
5 largest municipalities	31.2	2.9	65.9	43	12	45
Rest of Netherlands	36.1	3.1	63.9	52	4	44

* lo = primary education; lbo = junior secondary vocational education

   mavo = junior general secondary education; mbo = senior secondary vocational education

   havo = senior general secondary education;   vwo = pre-university education

   hbo = higher professional education; wo = university education

Source: Roes, 2008

Women's pattern of journeys and contribution to the use of transport mode are affected by emancipation, since there are more women are at work. Regarding age, people in 30 – 50 years old are the most active in making journeys and travelling long distance. This can explain about the busiest period in one's life since they run many obligations for family and career. The number of journeys and distance of travel increase in line with age until about 50 years old and decrease as people grow older. People in school age, that is 12 – 29 years old, use public transport the most (23%). This relates to the fact that they are subsidized in using public transport and mostly do not have enough income to purchase their own car. Old people over 60 years old are also provided with subsidy to use public transport. However, based on figures in TABLE 4.5, they are likely to make a short travel and prefer walk or use bicycle/moped in shorter range journeys. The travel pattern is also very much related to employment. People who work for more than 30 hours a week are the most mobile persons. They make longer

journeys and use car (64%) more than the other two groups in this category. The group in 12 – 30 employment hours are making journeys not fewer than the previous group (>30 employment hours). This can explain that people will use their spare time to also make journeys. The unemployed, as expected, make journeys the least in this category and their dependence on public transport (7%), bicycle and walk (48%) is the highest among others. But, despite their unemployment status, the percentage of car use by this group is high enough (44%). In comparison of household size, TABLE 4.5 depicts that the more people in the household, the more journeys every member will make, which are also farther and longer. In this category, the 2-person households are likely to be families or cohabiters without kids. Since they are adults, they would prefer using a bicycle or walking to paying for public transport. Education level shows a clear relationship with someone's journeys. The higher one's education level, the more and longer the journey he or she will make. People in higher education use car more and less bicycle or walk. This may relate to their wealth that they can purchase a car or their responsibility in job that they need to depend on car. In regard with the rate of urbanization, people in highly urbanized municipalities spend more time in journeys (65.9 minutes) than those in less urbanized municipalities (63.9 minutes), although in the latter municipalities people travel farther (36.1 km). Congestion in big cities can be a very influential factor for this phenomenon. In general, the use of public transport is very low, whereas the use of car and bicycle or walk dominate almost half of the journeys. On the one hand, the high use of bicycles and that a lot of people choose to walk show a good indication of compactness of the city. On the other hand, the high use of cars is actually not encouraged for compact city policy, but it cannot just be hampered since people need to adjust with their need of transport and even it is also an indication of good economic condition.

4.2.4 Comfortableness

In 2006 the government held a survey about satisfaction with housing environment. The survey asked people's opinion about their housing surroundings, parking facilities, availability of green spaces, vicinity of stops for public transportation, shopping facilities, day centres for children, elementary schools, public playing fields for children and amenities for the youth. The result of the survey is 86% of the respondents are satisfied with their housing environment. On specific items of question, the responses were different between those living in small municipalities (up to 20,000 inhabitants) and in big cities. In small municipalities the level of satisfaction with living condition is above national average except that there is lack of shopping facilities and the vicinity of public transportation. The opposite condition, as expected, occurs in big cities where there are many shopping facilities and relatively better access to public transport but living condition is deteriorated by high density, congestion, etc. (VROM, 2009e). The survey was based on respondent's subjective satisfaction and, therefore, means that the concept of compact city to some extent is successful. The residents (respondents) see that their need for living environment is fulfilled.

Another matter of comfortableness is safety, that is, people will feel comfortable if they feel safe. The idea of compact city is to provide more surveillance on the neighbourhood by locating people from different social groups in one neighbourhood and as so it is hoped that the residence will feel safe and comfortable to stay at home and to travel around in the city. The Statistics Netherlands gathers information about the residents' feeling of security in

various rates of urbanization. Figure 4.9 depicts the residents' feeling of insecurity[35], Figure 4.10 about how the residents perceive their neighbourhood[36], and Figure 4.11 tells how many people would change their outdoor leisure activities due to the feeling of insecure[37].
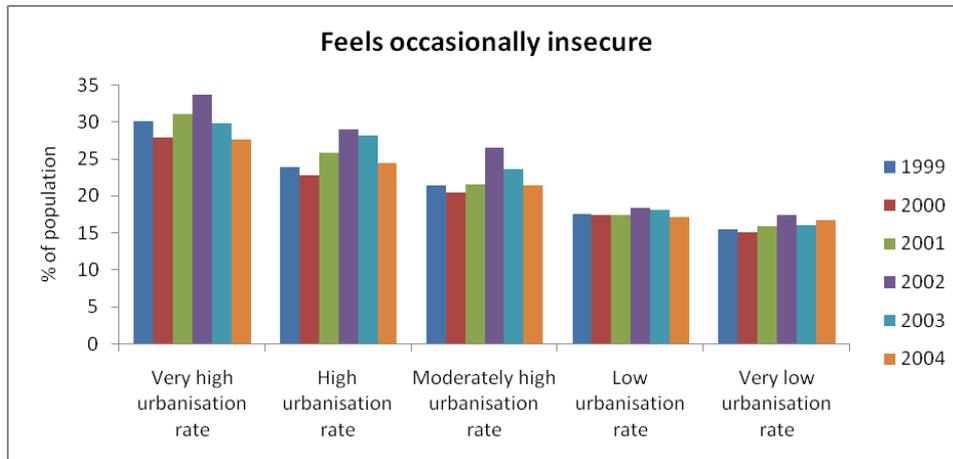
Data source: CBS, 2009

Figure 4.9 Feeling of occasionally insecure by rate of urbanisation

As expected, high density tends to diminish feeling of security (Jenks et al, 1996). Among the three questions asked, the response for scary places in the neighbourhood gave higher rate than the rate of people changing their outdoor leisure activities. On average in survey period years, that is 1997 – 2004, 40% of the population in the very highly urbanized areas feel scared of places in their neighbourhood, while in very low urbanization only 16%.
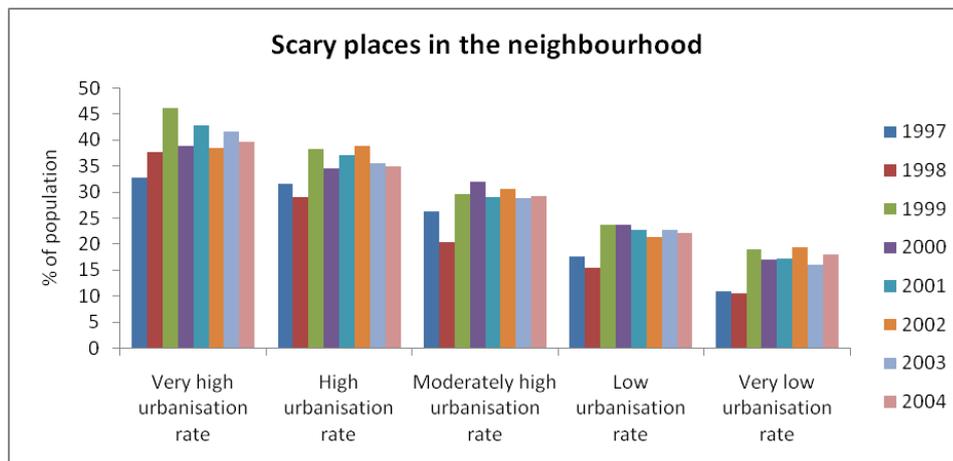
Data source: CBS, 2009
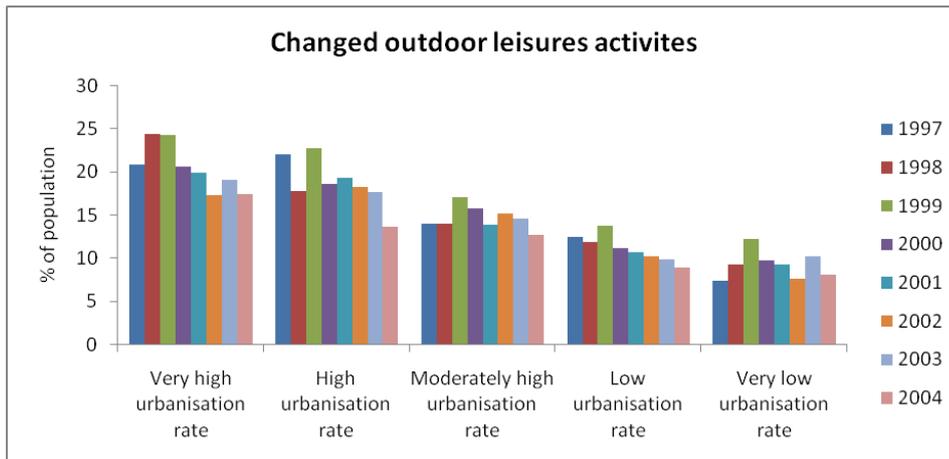
Figure 4.10 Scary place in the neighbourhood by rate of urbanisation

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[35] Question: Do you occasionally feel insecure? (CBS, 2009)
[36] Question: Are there any places or streets in your neighbourhood you would rather avoid in the evening? (CBS, 2009)
[37] Question: Did you change your behavior with respect to going out in recent years because you think it is unsafe? (CBS, 2009)

Data source: CBS, 2009

Figure 4.11 Changes outdoor leisure activities by rate of urbanisation

These figures are not only feelings and of no reason. Figure 4.12, also from the same survey, shows fact of crime victims that the percentage of number of victims is higher in more urbanized areas.
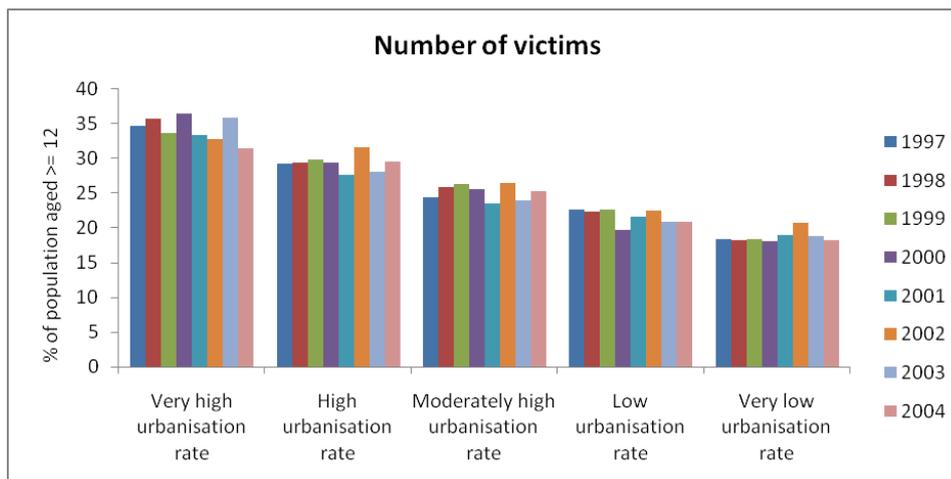
Data source: CBS, 2009

Figure 4.12 Victims of crime

4.2.5 Leisure

The choice for public recreation and leisure is provided through neighbourhood playground and city park. Neighbourhood playground is located in residential areas with some playground equipments and is usually surrounded by residential buildings. A city park provides more space and is intended to serve the whole city. The number of city parks is only a few since it consumes much space. In the Netherlands such parks bear a multifunction, that is, not only for leisure but also for water management. Most of the city parks have some ponds or even small lake in its location. Besides to provide a good scenery for visitors, the pond can function to retain water especially in times of high rainfall.

The Statistics Netherlands conducted The Integrated System of Social Surveys which one of its items was about satisfaction with leisure activities within period 1997 – 2004. The result, shown in Figure 4.13, shows no significant difference in the distribution of level of satisfaction. Most of the respondents answered that they were very satisfied or satisfied. The number of respondents who answered "not very satisfied" and "reasonably satisfied" is relatively more in higher urbanization.
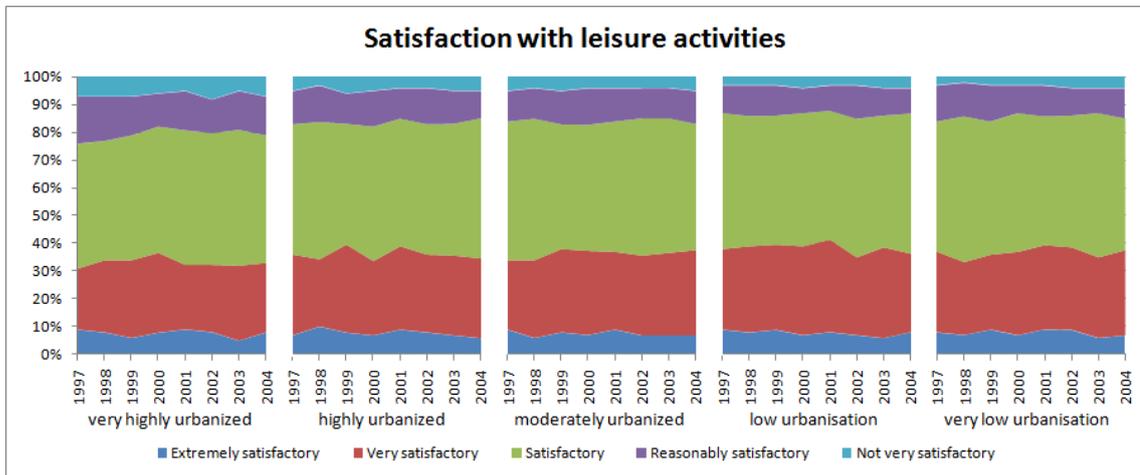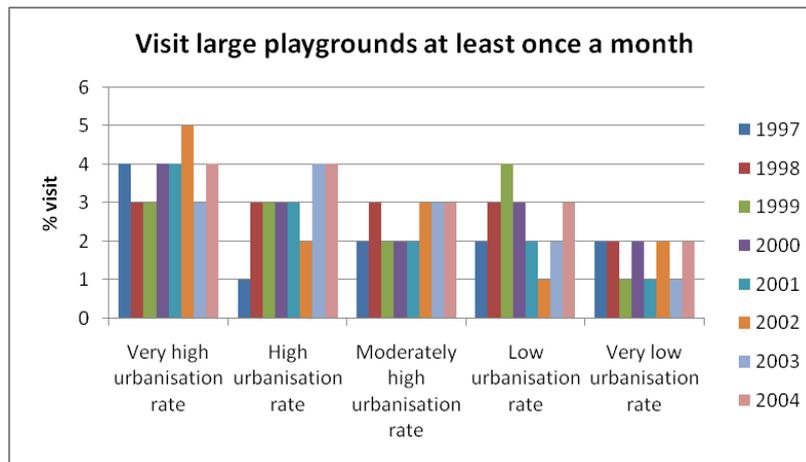

Data source: CBS, 2009

Figure 4.13 Satisfaction with leisure activities by rate of urbanization

Generally, one would think that travel to and from work will be the highest portion because it occurs at least five days in a week. The case in the Netherlands is found very surprising since distance of travel and number of journeys were dominated by leisure activities, which is 43% in distance travelled and 37% in number of journeys, whereas to/from work motive come the second in distance travelled (28%) and the third in number of journeys (20%) (Figure 4.7 and 4.8). Within the motive of leisure activities, the biggest portion is visiting to friends and family, which accounts for 39% of all the journeys for leisure and almost 50% of the associated distance travelled (Roes, 2008). The survey also shows that, after excluding trips for educational purposes[38], most of the journeys are carried out using cars, that is, three fourth of all journeys and half of the total kilometres travelled. The length of travel for leisure activities cannot be simply interpreted that people need to take a long journey for leisure purposes because this high rate of kilometres travelled (43%) is contributed by, also, a high number of journeys (37%). In this 2004 case, journeys undertaken for business hold the highest index of kilometres per trip rate, that is, 2.3, while to/from work and leisure activities come the second and third with a rate of 1.4 and 1.2 respectively.

Observation on leisure activities should also see the tendency according to urbanization rate and the kinds of activities. The Statistics Netherlands undertook a survey called The Integrated System of Social Survey and the result is published through its website. Some observations

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[38] Students mostly use bicycle and public transport. The students are subsidized for using any public transport.

undertaken were about the tendency of residents in various urbanization rate[39] in visiting large playgrounds, or city park, and countryside. Figure 4.14 shows the percentage of people visiting large playground locations at least once a month. It can be seen that the more urbanized the city, the more the residents would visit large playgrounds. This can be explained that people living in a highly urbanized area can hardly find spacious scenery in the city except in the parks. On the contrary, those who live in low urbanization are not getting stress with the dense situation and this situation tends to diminish a need of visiting spacious scenery.
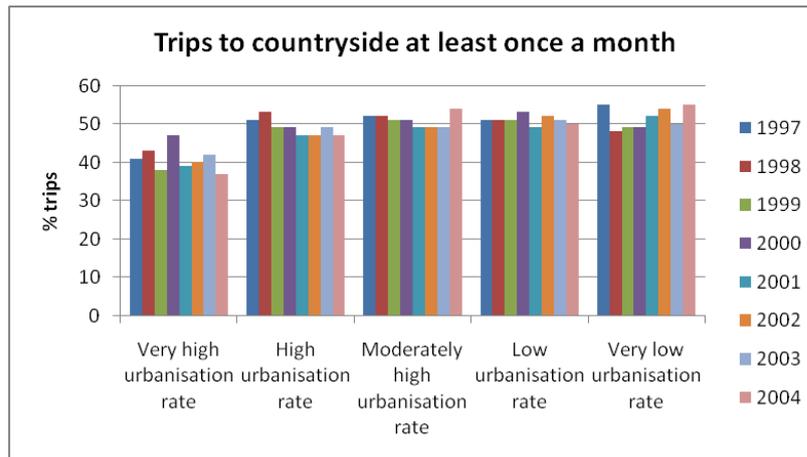

Data source: CBS, 2009

Figure 4.14 Percentage of visit to large playground by rate of urbanisation

In case of visit to the countryside, there is a significant difference between the trips made by residents of highly urbanized areas and that by low urbanized areas (Figure 4.15). The residents in very high urbanization make fewer trips to the countryside at least once a month than those in other areas. It is quite odd because one would think that those living in high urbanization may need more relaxation by visiting low density areas in the countryside. This situation may have been caused by the characteristics of the residents in the very high urbanization rate and car ownership because as has been mentioned that travels for leisure activities mostly use cars. The very high urbanization rate corresponds to very high density areas with high rise residential buildings especially provided for people from the lower income group or working class. It is very possible that this group is car-less and so have less accessibility to the countryside.

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[39] In this survey, five categories of urbanization rate were used, that is, very high urbanization rate corresponds to 2,500 addresses per km^2, high urbanization rate 1,500 – 2,500 addresses per km^2, moderately high urbanization rate 1,000 – 1,500 addresses per km^2, low urbanization rate 500 – 1,000 addresses per km^2, and very low urbanization rate fewer than 500 addresses per km^2. (http://www.cbs.nl)

Data source: CBS, 2009

Figure 4.15 Percentage of trips to countryside by rate of urbanisation

4.3   The Survey

The survey is aimed to get an individual perspective on his or her living environment in a cause-effect relationship meaning that each particular answer will be linked with his or her background and other responses. The result is not intended to represent the characteristics of the community in the Netherlands but just to show how the pattern in the secondary data possibly occurs by observing individual's choices or decisions. This approach is to demonstrate how difference in social backgrounds may result in different individual's perception and expectation. In this survey, it is necessary to ask about his or her social background, such as gender, age, ethnicity, job, and salary. The city where the respondent lives is also necessary to know to relate it with his or her responses. The survey is ought to be carried out through a direct interview but since it will need much time and resources to get interviewees from many cities in the Netherlands, the question is carried out via an online questionnaire.

There are 39 people invited to participate in this survey with whom to some extent the author is already familiar. From all invitations only 17 gave response, two of which were individually interviewed due to lack of internet accessibility. TABLE 4.6 resumes the general background of the respondents. Most of the respondents have been living in the Netherlands for more than 10 years and of Dutch nationality. The length of living in the Netherlands will determine how well someone knows the situation, in terms of changes and improvements. Moreover, since most of the respondents are of Dutch nationality, it is likely that they will have more expectation in the development than will the other residents who are not or do not intend to be registered as citizen. The respondents are dominated by young people in 18 – 40 years old group, college students and domiciling in the city of Groningen. There are also some participants from other municipalities, that is, Leeuwarden (province of Friensland), Arnhem (province of Gelderland) and Burgum (province of Friensland). These cities are categorized as medium urbanization (Groningen), low urbanization (Leeuwarden and Arnhem) and very low urbanization (Burgum). One similarity of all of the respondents is their monthly earning, which is less than 1500 euros per month.

TABLE 4.6
General information of respondents

Background	Item	Count
Length of living in the Nethelands	More than 10 years	16
	2 – 5 years	1
Gender	Male	8
	Female	9
Age	18 – 40 year	14
	41 – 62 year	2
	63 – 80 year	1
Nationality	Dutch	16
	Non Dutch	1
Ethnicity	Dutch	12
	Indonesian	5
Occupation[*]	Student	11
	Private employe	1
	Particular	1
	Already pension	1
	Non work	2
Monthly earnings[*]	Less than 1500 euro	16
City	Groningen	12
	Leeuwarden	3
	Arnhem	1
	Burgum	1

[*]The answers do not total 17 since some have been left blank.

The author is aware of the lack of representativeness of the result for a few reasons. The first is that none of the respondent lives in the four biggest cities, that is Amsterdam, The Haque, Rotterdam and Utrecht. It is evident from the secondary data that these four big cities are the most affected by social issues for its highly mixed social condition and dense population. The second is that none of the residents is from the four largest non-western ethnic minority, that is Surinamese, Turks, Antilleans, and Moroccans, whereas these four groups have been very much focused in observations and others social researches. The third is that there is no variation in the amount of monthly salary, which means that all the respondents are likely to come from similar social class. The results of the survey is therefore limited on medium to lower urbanization rate and low level income of society. However, in general, it still shows how the society in the Netherlands responses to the living environment.

The survey provides explanations about background reasons of people's decisions and perceptions. Quite different choices are caused by difference in age. Considering home, old people will prioritize safety in the neighbourhood for location of dwelling place as well as safety in recreation locations. Spacious home is not necessary for them, but however, they also think of having enough room in case their children or grandchildren come to pay a visit. Bus and walk are preferred because they are cheap and subsidized. Households in old age may also think of selling their home after the breadwinner retires and they are getting older. They may move to a rent house which suits with their need of space, which is usually smaller, and is cheaper in cost. On the other hand, young people are prioritizing the rent or price of house.

Some students who live in a different city from his school will make use of public transport subsidy to commute to school and so do not have to pay expense for house rent. However, although they receive subsidy for public transport, they still say that proximity to school is preferred with affordable dwelling price or rent. When they finish their study, it is likely that their expectation on this proximity will change, except about price. Students expect that there are cheaper housings provided in the city where their school locates. Neighbourhood is less considered by these respondents compared to other factors. Some of the respondents think that not purchasing a home is just fine as long as they can rent one. This way of thinking may have been caused by the high price of housing, especially in cities. This view is obviously different from the concept of house ownership as a saving or inheritable property. Besides that, the government of the Netherlands is encouraging the citizens to buy a house and not just to rent one. The perception about "renting a house is enough" can be the result of good housing management that guarantees the tenants' right. The survey held by the government about satisfaction of housing condition and neighbourhood shows that the society is mostly satisfied with its home and neighbourhood.

For employment, most of the respondents choose appropriateness of skill as the top reason and then proximity to home and salary come next. This is supported with the response on transport cost that the respondents perceive their transport cost to work is just proper and even cheap. Besides students, two respondents who work as a particular and a private employee also comment that transport cost to work is just proper.

In utilizing recreation facilities, there seems to be a tendency differentiated by age. Old people love to spend time in their backyard or terrace garden because they do not need to go far from home and save some energy. Young people like city parks or sport centrum where they can meet more people and gather with friends. Kids can play in neighbourhood playground and stay around. Young parents with kids at home also seem to prefer backyard and terrace garden, since they have to watch their kids. Young people prioritize proximity to home for location of recreation facility in order that they do not have to spend much money to get there, and after that the variety of choice. Contrary to old people's choice, young people put safety factor as the least consideration for location of recreation facility. Some family, usually of the rich ones, have a rented garden in urban fringe where they will visit it and enjoy gardening in summer.

Two last questions ask about the involvement of members of society in the neighbourhood to make any improvement. Some of the respondents do not care about participation to improve neighbourhood. Those who rent an apartment are likely to rely on the owner or housing association that will maintain anything about the neighbourhood. However, not only tenants, respondents who possess their own house also say that they do not care or even see it as unimportant. This is an indication of individualization. However, this is not absolutely right since many of the respondents also say that it is important, although they have never got involved yet. The last question is about chance to express opinion on living condition. Many of the respondents do not know whether they have any kind of chance to have their say about their living condition. Some other respondents say that they know and have the chance for it. This condition relates to top-down style of government policy.

4.4 Concluding Remarks

The implementation of compact city in the Netherlands is to some extent successful since it can really halt the urban expansion to rural areas and focus urbanisation in already urbanized areas. The subsidy scheme for house ownership and tenancy has helped the residents to adapt with the policy to stay living in the city and get job. The policy in transportation through the provision of convenient path for pedestrians and cyclists and subsidy for the elderly and students for using public transport have encouraged people to walk, use bicycle and ride public transport, which is inline with the concept of compact city. Population distribution cannot be arranged through compact city policy because compact city policy only covers municipality and not a province or even the whole state. Some cities become much more dense than others and this has created uncomfortableness for the residence due to the increase of crime and diminishing of feeling of safety. The increase of car ownership due to the good economic growth is also out of the control of compact city policy and this has created unsupportive condition for the policy since journeys using cars have also dominated. The next chapter will be a discussion about how compact city policy interact with the socio-cultural condition in the Netherlands.

Chapter V

ANALYSIS OF SOCIAL CONDITIONS OF
COMPACT CITIES IN THE NETHERLANDS

The compact city policy tries to promote sustainable development through efforts to limit urban expansion into rural areas and to create efficiency in resource use. The main approaches implemented are high density, mixed use and intensification. Due to the dynamism of the society, it is very natural that the society will response back to its living condition, created by the spatial policy, in various kinds of adaptation. Besides that, an urban spatial policy cannot escape from the influences of other internal and external factors that also exist and shape the social characteristics. This brings an interesting topic to discuss, that is, about questioning the effectiveness of the compact city policy in achieving sustainable development in the middle of the very dynamic social conditions around the compact city policy. The following sections provide an analysis of the idea based on the theoretical argumentation provided in chapter two.

5.1   Society's perception and adaptations

In general, the society in the Netherlands is satisfied with the living condition and compact city policy is to some extent responsible for this. The provision of special bicycle lane and pedestrian path attract people to walk and use bicycle. Locations are made short in distance to reach from any other part of a city. The more people use bicycle or walk, the better the condition of air can be promised. Besides that, streets become more calm and free of air pollution. Public transportation is provided to serve to almost any part of a city and a subsidy scheme is applied for certain groups of citizens, that is, for students and the elderly, to encourage more people to use public transport. While this description is true for cities in general, a different situation exists in the four biggest cities. For instance, in Amsterdam, traffic is heavy and congestion is not a rare thing, although people walking and using bicycle are also a lot. This is not to say that situation in big cities do not occur in other smaller ones, but that the level is different. Problems found in highly urbanized cities also occur in lower urbanization and vice versa, except that the situation is exaggerated by the high population density. This suggests that the higher the density, the more evident the problems are.

The compact city in the Netherlands is implemented through high density and mixed use, which give impacts mostly on housing issues. The high density concept in compact city, especially in the Netherlands, tends to result in high house price and this affects mostly those who are economically vulnerable, and unfortunately most of them are people of the non-Western ethnic minority (TABLE 3.3). These groups are spread in the four major cities and mostly living in rented apartments or social housings. In some areas of these cities, segregation by ethnicity is very apparent. Such condition reduces the feeling of safety and comfortableness for the surrounding people. The mixed use scheme seems to be the answer for this problem since it will avoid a massive flocking of certain social class. However, the problem will keep

arising when the demand for dwelling place of various prices is unbalanced, meaning that certain social class obviously outnumbers the others. For some people, especially those who live in the surrounding areas, such situation affects their subjective living condition regardless of good facility and services they have access to. Young families who begin raising kids may be motivated by this reason to move to another dwelling place outside the city, besides the reason of the need for more space. The same consideration may be taken by old households who prefer safety to proximity to services.

To this point, an answer is needed for the question: does compact city really encourage social cohesion? The situation in the major cities is quite extreme and may provide a bias answer. Social contacts are high due to the density but the quality of the contacts should be questioned. In such situation described previously, people from the same social group, especially the same ethnicity, will have a deeper meaning of contact than with other social groups. Feeling of unsafe signals a distrust among social groups and this cannot be called a social cohesion. In condition where segregation is not apparent, it seems easier to achieve better social cohesion.
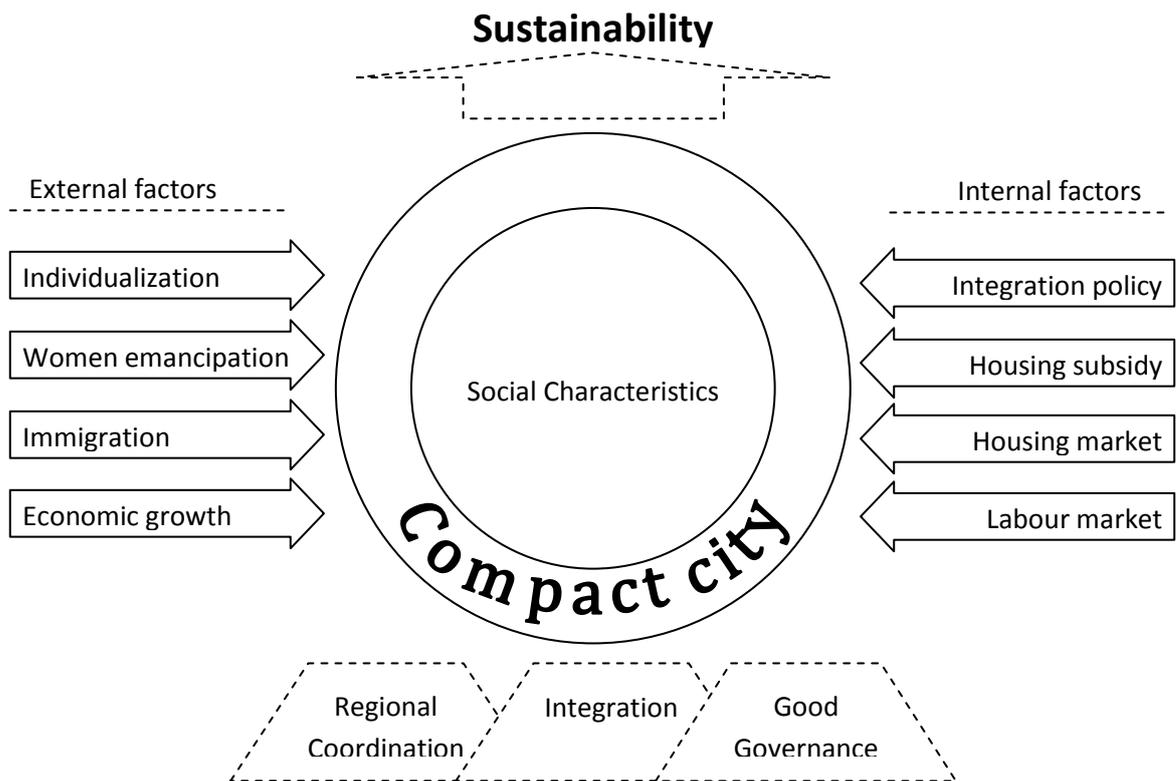

Figure 5.1 Factors affecting and supporting the compact city policy

Figure 5.1 describes factors that affect compact city concept in achieving the aim towards sustainability. Some factors, such as individualization and women emancipation, are cultural factors that do not affect the compact city directly but, firstly, create changes in the society that then affect its living environment. Individualization, women emancipation, immigration and economic growth are external factors meaning that they cannot be controlled through the compact city concept. Robustness of the concept should stand these factors as well. The

integration policy, housing subsidy, housing market, and labour market are internal factors that can still be adjusted by the concept but are also affecting the process of the implementation. Regional coordination is a higher coordination involving many municipalities in order to create a balance of burdens among cities. It is meant to support the concept to be more robust. A good governance process will open the chance for people participation in the neighbourhood and is hoped to encourage social cohesion.

The fact that high density is not caused only by spatial planning but also by market mechanism should be a warning for the government that implements the compact city policy through high density and mixed use approaches. The case of Amsterdam, Rotterdam, The Hague and Utrecht, where a lot of low income households are flocking and even segregating, is a result of the availability of labour market. Labour market will be a pulling factor of cities and can create an unbalance of density among cities and also an unbalance of social class within a city. If there is a significant unbalance in social class in a city with high density, the effort to achieve mixed use will face difficulty as described previously. This calls for a vertical coordination in regional level or even state level in order to maintain a robust concept of the spatial approach. This concept is explained by De Roo and Miller (2000) that sustainability cannot be achieved only through locality, but also needs to involve wider regions and authorities. The compact city approach seems to have been implemented in municipality level and less coordination is made in regional level. This is somehow not easy in decentralization political system because every municipality will optimize its areas almost regardless of other municipalities and can potentially create an unbalance of situation. In case of the Netherlands, since the political system is still strictly top-down, a better and even distribution of labour market among municipalities has a better chance. The effect of this balancing effort will be more significant for municipalities that are separated by rural areas and not in a conurbation region. In a conurbation region, where transport system is usually already well developed, people can live almost anywhere regardless of the location of their workplace and this can be a problem for the effort in mixed use arrangement. On the contrary, people living in a municipality that is remotely separated with other municipalities by rural areas are likely to be reluctant to commute to another municipality for work, although some people do. The chance to have a mix in this situation is better because people have "fewer" options for dwelling places.

The requirement of high density in compact city, which tries to attract as many households as possible to live in urban areas, and the culture of individualization, which implies in the declination of dwelling occupation (Figure 4.2), have a strong potential to affect housing market to supply smaller dwelling space, especially in high urbanization areas (TABLE 4.2). Chances to get spacious house are bigger in urban fringes or suburbs, which become an option for families who start raising kids. The tendency in the future will maintain the ongoing trend that dwelling occupation in urban centres lowers and household size decreases, whereas bigger households move to live outside the centres. On the contrary, grown children in their life course will move out from their parents' home and look for a smaller dwelling place. These new young households tend to look for houses in urban areas for some reasons, such as proximity to school, workplace, friends, leisure activities, etc. For the old households, after the breadwinner retires, they tend to downsize their need of space (TABLE 3.2) and spend the rest of their life alone.

The high density also reduces comfortableness in city centres and causes many of the residents will try to spend time travelling to visit large playground areas or the countryside. The compact city concept focuses on the quality of living in the city but pays less attention on how to go outside to enjoy rural areas. It is a common knowledge that people living in a high density will have less enjoyment and higher stress level compared to those in low urbanization. They will sometimes need to relax in fresh environment. Terrace garden and neighbourhood playground seem not enough for this need and city parks become the target. For those who have access to car, they can make a journey to the countryside and other large playgrounds easily, but this will not be the case for lower income people. The low income households are as though "trapped" in the city for the reason of cheap housing and availability of employment (Breheny, 1996). This may lead to a degrading valuing of city by individual perception and when people get better in their economy, they would try to move to a less stressful area outside the centres. On the other hand, those who have high income seem to be survivors of the compact city system because they can take advantage of the compactness while not losing their chance to enjoy less stressful environment outside the city (see also Smyth, 1996). With the current government's policy to encourage the households of middle and high class economy to live in city centres the indication is strong that the high income households are those who can enjoy living in compact cities.

The campaign for less car use and depending more on public transportation or bicycle do not seem to gain success. However, the increasing number of car-ownership does not yet indicate the failure of compact city because only people who have enough income that buy car according to their improvement in economy. The growth of economy result in more welfare households buy a car. This also relates to the previous situation that reduced comfortableness in city centres drive people out to urban fringes or suburbs and then will rely on car for commuting to their workplace. On the other hand, people who live in city centres would drive a car for leisure in the countryside. Economic growth is a positive achievement which affects compact city concept as an external factor. The effort should not aim to hinder people from having cars but to encourage them to walk or use bicycle or public transportation by providing convenience in using these means.

5.2   Influence of non spatial policies

Some policies that do not directly relate to spatial planning can have significant impacts on spatial planning. Among many public policies of this kind, housing subsidy, rent allowance and integration policy give very significant influences. The implementation of subsidy for promoting homeownership and rent allowance provides chances for young people of age 18 years or older to move out from their parent's home and live by themselves and at last add the number of one-person households. Young adults who just start living separately from their parents do not have much money to buy or rent a big dwelling place or private car. These facts lead them to look for housing in urban areas, which usually offer relatively cheap houses or apartments and are located close to school, workplace, leisure facilities, etc. With this scheme the pattern of residential mobility and migration becomes clear that young people move to urban centres and older people move to outer parts. Besides that, young people are more invulnerable to social condition in city centres than small children and old people are.

The other influencing policy is the effort to integrate ethnic minority with the indigenous population. This policy has been implicitly implemented through the mixed use scheme of compact city policy. It can be said that compact city is driven by the integration policy and not vice versa. When a tendency of high concentration of ethnic minority occurs some measures are taken to diminish such condition. For example, the municipality of Rotterdam applied income threshold to certain neighbourhoods and streets that people from outside Rotterdam who do not have a high income cannot come to settle in[40]. Although the threshold is set on income but the actual target is ethnicity. Invitation for high income households to live in disadvantaged areas in city centres is an effort to approach gentrification in order to counter the unhealthy condition of high concentration of the ethnic minority. In some municipalities, the government converts rented housing into owner-occupied with double aims. The first relates to the effort to promote house-ownership, and the second is to balance ethnic concentration in the city. To this point, it is clear that while compact city policy through mixed use scheme aims to increase integration, the higher policy, that is the integration policy, would sometimes halt the mixture to control unbalanced condition.

5.3   Changes in social characteristics due to the implementation of compact city policy

The impact of compact city on social characteristics of the citizens of the Netherlands is very much reflected on the changes of social structure, that is, spatial distribution in terms of age, gender, ethnicity and social class. In case of age, old households prefer to live at lower urbanization or in the houses for the elderly in the city. Young families who want to raise kids may be spread in urban fringes or suburbs. The city centre will be dominated by young people. Compact city can also be identified by the high residential mobility and residential migration. In terms of gender, the changes are very much affected by individualization and emancipation and not by the compact city policy. Ethnicity and social class are maybe the most affected aspects, since there is a special focus on these two issues. Social class and ethnicity usually represent the same case because certain social classes refer to definite ethnic groups. When referring to the low income group in social class, it will point to the non-western ethnic minority. It also applies when discuss about the low level of education. In the four major cities, population of the four largest non-western ethnic minorities is high and these groups are identified as having low level education and low income. The condition today is better since the second generation of these groups already has access to a good education system in the Netherlands.

The decrease of household size and dwelling occupation cannot be said to be the impact of compact city. Individualization is the first and main cause for these phenomena. However, to some extent, compact city policy, accompanied by housing subsidy scheme, is likely to have supported the process through provision of small size dwelling places. It is unreasonable to provide spacious dwellings if only few people can afford to rent or buy it, even by mortgaging. City centres with a high density will consist of many, if not dominated by, one-person households while larger households prefer to dwell in urban fringes, suburbs or rural areas. This condition can also explain the fact that many elderly citizens live by their own and not

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[40] http://english.scp.nl/english/publications/summaries/9789037703122.html, accessed on July 9, 2009.

together with their children. Although some old households insist to live in their spacious homes (Figure 3.2), most of the others choose to downsize and live by themselves. The function of housing for the elderly becomes important because in some stage of their life, old people will not be able to take care of themselves and need an aid from other people. The option to move to live with their children is possible but seldom undertaken because the culture of Dutch people is to be independent, and besides the size of their children's house may not be enough to add more people according to the housing regulation.

The high price of housing has shifted people's opinion about home-ownership. Some people would see that renting a house is enough and no need of owning one. This is made possible by the good performance of housing management that people can rely on their service. Even, households who already own a house may think of selling their house and renting one in their old ages or moving to the house for the elderly. To these people, they do not see a house as a social guarantee for old ages or an inheritable property which is a very common opinion for others or in the past.

5.4 The impacts for future generation

After elaborating the compact city concept, implementation and impacts on social issues in the Netherlands, the next question to ask is about its social sustainability. As advocated that compact city is a sustainable way of doing urban development and should bear the notion of environmental, economic and social sustainability, this section will discuss whether compact city policy in the Netherlands can indicate that the claim is valid, especially for the social sustainability. It is necessary to understand the sustainability issue because it concerns for the impacts of compact city on the present generation and the future generation. Whatever and whenever the people makes activities now will create impacts through time and space dimension for the future (De Roo and Miller, 2000). The evaluation will use the five principle of social sustainability defined by WACOSS (2002), namely, equity, diversity, interconnectedness, quality of life, and democracy and governance. The discussion about these five principles will be limited only on social issues that relate to spatial arrangement meaning that the result of the evaluation should not be interpreted as a general performance of social sustainability of compact city in the Netherlands.

In achieving equity, the compact city in the Netherlands generally indicates a positive status where groups of age, gender, ethnicity and social class seem to be able to enjoy the spatial arrangement equally. Despite the problems of ethnic concentration, the compact city concept gives concern on all groups through vertical and horizontal mixed use, public transportation, pedestrian path, bicycle lane, rented and owner-occupied dwelling, etc. One thing that cannot be well served is the need to access recreation sites outside the city. This is actually beyond the claim of the compact city concept because it relates to something outside the city. However, the fact is that the residents are "trapped" in high density and demanding to have a relaxation in fresh environment. The advantage to enjoy such leisure belongs to those who have access to car while others who are carless have to be satisfied with city parks, neighbourhood playgrounds, and backyard gardens.

The next principle is diversity, which describes level of cohesiveness in the society. As already elaborated in previous chapters, high density and mixed used schemes are intended to increase interaction among different social classes. To some extent, it works since there are more chances that people will "bump" in the neighbourhood or streets, but how meaningful people want to get involved with others is under a bigger influence of individualization. It depends on the culture and individual's objective. Van Marissing et all (2006) note that the type of household will determine how people would like to involve in their neighbourhood. For example, starting family and students are only attracted by low rents and will not live in a neighbourhood for long. Therefore, they tend to be less attached to the neighbourhood. The problem of the non-western ethnic minority in the major cities of the Netherlands does not indicate the failure of compact city. The background reason of low level of education has created a gap in capability to access a better job and has reduced options for a better dwelling place. This similarity in fate will drive this group to form an exclusive social cohesion only within their group (Maxwell, 1996) and thus creates a bigger gap with other social groups. The government of the Netherlands is working to bring all citizens to have equal access on basic needs, including education, and this way is hopefully to increase inclusion among the society.

The quality of life is reflected through people's satisfaction with their living condition. Based on the survey conducted by the government, the rate of satisfaction with housing condition is high. However, another fact shows that residential mobility and residential migration are quite high in the Netherlands. This mobility and migration have occurred because people do not meet their need, especially about housing condition. Hagerty (1999) explains this by differentiating kinds of satisfaction in two paradigms, that is, liveability theory and comparison theory. Liveability theory explains that people are satisfied when their needs are fulfilled and this explains the result of the survey. The comparison theory sees satisfaction based on the difference of conditions. Although people are satisfied with their living condition in term that their needs are fulfilled, but when they learn that developing situation needs a new treatment, for instance, kids are growing and the space at home is not enough anymore, their satisfaction is affected and result in a move to another location that meets their new need. This means that, regarding quality of living, compact city can satisfy only existing needs but not changing of needs.

Interconnectedness means that the existence of a community is not only physically but also bears a synergy within it, which provides processes, systems and structures that can represent the community inside and outside at the formal, informal and institutional level. This is in line with democracy and governance where the society is hoped to show participation in the neighbourhood and work together for the improvement of the neighbourhood. In some cases, the neighbourhood has shown participation in keeping the comfortableness of the environment such as cleanness and surveillance. However, since there are particular firms that are responsible for the service in the neighbourhood, it seems that the residents just rely on these professional agencies and government, and only maintain their own house. Dependence on the professional firms for the provision of good quality living environment is of course fair, but unfortunately this can partly reduce the chance for people to participate in their neighbourhood. It is the government's task, working together with private sectors, to provide and manage good housing and residential environment, but this should not diminish the part

of the society. In other words, a good governance process will also determine the chance to achieve social cohesion.

5.5   Concluding Remarks

Regarding social aspect, the effectiveness of compact city policy in the Netherlands differs by level of urbanisation. The analysis finds out that the higher the density, the lower the effectiveness level is achieved. The high density, which is the purpose of the compact city concept, has unfortunately exaggerated social problems in major cities, especially in Amsterdam, Rotterdam, The Hague, and Utrecht. The social problems in these major cities relate to the presence of the non-Western ethnic minority. Social problems emerge due to the low education level of the first generation immigrants from these groups, which then creates gaps in income, employment and, thus, social class. The mixed use approach faces problems to place side by side groups of different social class due to the big number of population of the ethnic minority and the indifference of the immigrants to assimilate with the Dutch socio-culture. The first reason emerges due to feeling of cohesiveness among similar ethnic, which drives them to stay close to each other and, thus, creates ethnic segregation. The second reason rises due to the ideology in the Netherlands to promote individual's rights and freedom. This segregation has created uncomfortableness for the other groups, especially from the indigenous and western ethnic minority, and to some extent has raised the residential mobility and residential migration. In lower urbanisation areas, the compact city policy has contributed a pleasant living condition to the society. It is very apparent that the compact city policy in the Netherlands does not function only as an urban spatial policy but also as a social measure in creating cohesion among citizens. Facing the dynamism of the social conditions in the cities, the compact city policy needs to be supported by the implementation of regional coordination, social integration, and good governance. These supporting factors are needed to improve the effectiveness of this urban spatial policy and make it more robust in the effort to accommodate the future generation. The next chapter is the conclusion of the research and also some recommendation on the methods to evaluate compact city and implement compact city.

Chapter VI

CONCLUSION AND RECOMMENDATION

6.1   Conclusion

Compact city cannot be implemented as a static concept while hoping to achieve sustainable development. Its definition can be simple but in implementation it is a dynamic process working together with other aims in social, economic and environmental aspects. The research discloses that focusing on social aspects in evaluating spatial development planning can give significant understanding and knowledge for controlling or even improving the performance of the spatial plan to achieve sustainable development. It is very apparent through the research that compact city policy as a leading spatial development approach in the Netherlands intertwines very intensively with social measures, that is, integration policy, to achieve sustainable society. Even, since compact city has been developed based on environmental consideration, it is really necessary to evaluate its impacts on the other issues, that is, social and also economic issues. The research concludes that the dynamic social conditions can work towards supporting the aim of the urban spatial policy but can also work against it.

Evaluation of the compact city concept towards its impacts to social issues should be conducted as an integration of its attributes, that is, high density, mixed use and intensification, to distinguish its specific approach from other spatial concepts. High density, an attribute of compact city, is a common concept in the centrist group and can also be achieved through market mechanism, a phenomenon found in big cities that may have not been intentionally developed via compact city approach. Mixed use is a typical concept of compact city that creates a distinct approach from other concepts. In the Netherlands, the mixed use concept is heavily assigned with social integration policy and this gives a specific characteristic of compact city concept in the Netherlands in which it is not only a bare spatial planning approach but also functioning as a social control. Intensification, the other attribute of compact city is a process that ends with the state of being high density and mixed use.

Lesson learned from the implementation of compact city in the Netherlands, especially in social aspects, is that the concept of compact city through high density and mixed use approach should have clear criteria and meaning of density and mixed use. A clear definition and understanding of these two aspects will help improve the effectiveness of the policy. Firstly, how dense is high density and what is used to determine the criteria of density. Using dwelling per hectare (DPH) does not really describe the density in residential location because dwelling occupation differs between areas. In high urbanization areas, where most of the houses are occupied by single households, the density is lower than in other areas with the same DPH standard but have higher dwelling occupation rate. This case can occur for the Moroccans and Turks which have relatively more people in their household than in the households of other origins. The use of people per hectare (PPH) seems more accurate to address density due to various social characteristics. Secondly, the mixed use approach should

define clearly what is actually going to be mixed. The case in the Netherlands shows that mixed use, which is targeted to social class issues, has turned into ethnic issues since classification of social class is fortunately identical to classification of ethnicity that leads to an apparent ethnic segregation in big cities. This suggests some improvement for this mixing approach. Social classification should clearly see whether it has the potentiality to turn into classification of other social categories, such as, ethnicity, age, or gender. The mixed use approach should be accompanied by other policies to avoid a potentially social segregation. This can be done by keeping records of people within the same social class in one area to see whether they come from a similar social category that may lead to a social segregation.

The mixed use approach in compact city is targeted to distribute residents spatially by social class, especially income, so that no one will feel abandoned or excluded by the public policy. The aim through this approach is to encourage a social cohesion in the society. According to Healey, people of similar lifestyle tend to make cohesion easily among themselves. This suggests that spatial arrangement of residence should also consider about locating people side by side from the closest similarity of social class. This can be done by avoid locating houses that have a very extreme gap in price. A land use plan should designate ranges of house price in residential areas and cluster residential areas according to similarity of price. By this way, mixes of social class are still achieved but with reduced potentiality of social distrust.

The research finds out that there is a reciprocal influence between urban spatial development, in this case the compact city, and social processes. At first, the compact city introduces spatial arrangement to society's living condition and causes them to adapt with it through, for example, more use of bicycle or walk, residential mobility and residential migration. Contrarily, the way a society perceives its living condition is determinant to the achievement of the goal of the compact city concept. For example, the high density tends to exaggerate negative potentialities, such as congestion, pollution, high price of property, etc., and thus reduces comfortableness in city centres. Failure of mixed use approach in creating social cohesion in high density areas adds more reasons to live away from urban centres. The impact of this is that many people would prefer to live out of city centre and intensify the use of car to commute to their workplaces in the centres. This is counterproductive to the aim of compact city to reduce car use.

To deal with social changes in spatial development policy is not a simple task since it incorporates many external and internal factors. Especially external factors, they are usually inescapable and out of control of the spatial development policy. In case of the Netherlands, individualization, women emancipation, economic growth, immigration are among very influential factors affecting the spatial development concept. Immigration can still be altered in foreign affairs policy. Individualization and women emancipation are global trends and fortunately well welcomed by most of the people in the Netherlands. Economic growth is an achievement that should not be hampered, but even should be encouraged. This makes compact city face bigger challenge than only to provide locally spatial arrangement. This calls for a higher level of coordination, that is, not just in municipality level but in regional level, such as province or even the whole state. A vertical coordination will determine the robustness of the concept. Although compact city is meant to be a spatial planning concept for

an urban area, it will not be able to achieve sustainability if it is not developed by involving regional considerations and interrelations with other cities (De Roo and Miller, 2000). One example is the need of regional coordination to make a balance distribution of labour market. This way can create a relatively even pulling factor of each municipality that no municipality should "bear" heavy burden of high density. Spatial distribution of job market according to specialization implemented in the Netherlands is a good example of innovative approach that serves both spatial and social considerations.

Changes of needs and satisfaction through life course lead to adaptation for living condition that have led to high residential mobility and residential migration. The characteristics of compact city in the Netherlands, which provide smaller dwellings in city centres make households who start raising kids to move out of the centres and stay in urban fringes or suburbs. Contrarily, young people move in to the centres for reasons of cheap dwellings, suitable size of dwelling for singles, proximity to school or workplaces, and proximity to social activities. For old households, they may think to move out of city centres to live in a calmer area in suburbs, or to move to special houses for the elderly to be taken care of. Incorporation of other non-spatial public policies, such as housing subsidy and rent allowance, plays an important role in supporting this condition, that is residential mobility and residential migration, and should be aware of and put in synergy.

Compact city in the Netherlands faces a difficult condition to achieve social cohesion, especially in urban areas. First, it is due to the influence of individualization, and second, the multi-ethnic condition of the society. Living closely with others or meeting with others outside home frequently do not automatically lead to a higher social cohesion. Social cohesion can only be achieved if people from different social classes feel welcome and attached with their environment, and can accept each other and live in diversity. The first two reasons call for a good governance process. A total domination of public and private sectors in the provision of housing and living environment may discourage people's participation and then lead to indifference of their neighbourhood and feel less attached with it. The last reasons suggest that integration policy is an absolute requirement that has to go together with the compact city policy. Compact city concept and integration policy come from different domains but are dependent on each other and should be carried out together. The high density exaggerates social problems but, fortunately, is also the aim of compact city. This means that in middle and lower urbanization compact city approach has contributed to better living condition but in higher urbanization there tends to be problematic social phenomena. Individualization and other ideologies are inescapable influences that work together in shaping the characteristics of the society and this will be a test for the sustainability of compact city. In the future, the success of compact city will depend on the implementation of the integration process, good governance, and regional coordination of municipalities.

6.2   Recommendation

Discussion of the impacts of a spatial planning policy and especially the compact city through only the social paradigm may not give a comprehensive understanding of the whole phenomena. This is true because the factors involved in the processes, that is social, economy and environment, are influencing each other and result in reciprocal impacts. However,

studying by focusing only on a limited aspect, in this case the social aspect, can be a way to reduce the complexity of the observed system and help see the potentiality of the social paradigm to contribute to the development process through the spatial planning policy. This way can also make clear the limitation of the social paradigm and then suggest how the other paradigms should be incorporated in synergy to achieve better solutions.

A comparative study of experiences from other countries, which also implement compact city, such as the United Kingdom, the United States, Australia, Japan, etc., can provide more explanation about interactions among involved factors that influence the implementation process of the compact city policy. For example, in case of homeownership, the compact city is said to create a lack of affordable housing. Situations of homeownership in these countries may be different due to various background factors, that is, whether economic growth, socio-cultural values, etc. Understanding of the influence of the background factors in one country may become an appropriate solution to improve the condition of homeownership problem in other countries.

For implementation purposes, it will not be enough to consider only one aspect because contradictive impacts may be resulted as the response from the other aspects. Implementation of compact city policy should consider all aspects. This effort can provide a more robust plan that can tackle many possible outcomes from the complex system. A study of future tendency also needs to be conducted because the compact city policy, and generally a spatial planning policy, may lead to changes due to the dynamism of the society. As the result, a new situation, which is not previously considered when developing the plan, may emerge. This will be a challenge for the compact city as a sustainable development approach that should serves both the present and the future generation.

For developing countries, such as Indonesia, the socio-cultural characteristics can be very different from those countries, but the main aim of compact city, that is, to achieve sustainable urban development while preserving the environment is worthy to learn and consider to enrich urban development policies. The compact city that promotes the use of bicycle and walk, especially in areas where the land contour is relatively level like in Kalimantan, can be an appropriate spatial planning policy for urban areas facing a rapid urban growth while also have to protect rural areas. As practiced in the Netherlands, the compact city concept can only be well implemented when there is strict law enforcement for rural protection. This urban spatial planning policy should run in synergy with the effort to protect forest and conservation areas to achieve sustainable development.

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Appendix

Website : http://compact-nl.logic-research.com

GENERAL

G1. How long have you been living in the Netherlands ?
- o less than 2 years
- o 2 - 5 years
- o 6 - 10 years
- o more than 10 years

G2. What is your gender ?
- o Female
- o Male

G3. What is your age ?
- o less than 18 year
- o 18 - 40 year
- o 41 - 62 year
- o 63 - 80 year
- o more than 80 year

G4. What is your nationality ?
- o Dutch
- o non Dutch

G5. What is your ethnicity ?
- o Dutch
- o Turk
- o Morocco
- o other European
- o Other: _____

G6. What is your occupation ?
- o Government employee (civil servant, army, police, etc)
- o Private employee
- o Particular (farmer, breeder, businessman, etc)
- o Student
- o Already pension
- o Not work

G7. How much is your monthly earnings/salary in average ?
- o less than 1500 euro
- o 1500 - 5000 euro
- o more than 5000 euro
- o prefer not to say

G8. In which city do you live now ?
- o list of choice of cities in the Netherlands
- o Other: _____

HOME

H1. Which one describes your status at home ?
- o Parent
- o Child

H2. Are you satisfied with the size of your house ?
- o Yes
- o No
- o I don't care

H3. With how many persons are you now living at home ?
- o 1 person
- o 2 persons
- o 3 - 4 persons
- o 5 or more

H4. How many people would you prefer to live in a home ?
- o 1 - 2 persons
- o 2 - 3 persons
- o 3 - 4 persons
- o 4 - 5 persons
- o > 5 persons

H5. How do you prioritize your reason in choosing home ?
(1=highest priority; 5=lowest priority)

Size	o 1	o 2	o 3	o 4	o 5
Price	o1	o 2	o 3	o 4	o 5
Proximity to work/school	o 1	o 2	o 3	o 4	o 5
Neighbourhood	o 1	o 2	o 3	o 4	o 5
Household size	o 1	o 2	o 3	o 4	o 5

H6. What type of building is your house ?
- o Single/detached house
- o Teracced house
- o Duplex/semidetached house
- o Flat/Apartment

H7. What is the status of the house where you live now ?
- o Owned/bought
- o Rent
- o Mortgage

H8. Do you think it is just fine to rent a house and not buy or own it ?
- o Yes
- o No
- o Uncertain

H9. What do you think about house rent in the Netherlands ?
- o Expensive
- o Just proper
- o Cheap

H10. What kind of improvement do you wish for your home now ?
(1=highest priority; 3=lowest priority)

More spacious	o	o	o
More private	o	o	o
More safe	o	o	o

H11. Do you like your neighbourhood ?
- o Yes
- o No
- o I don't care

H12. Do you think there is any improvement of housing condition in the last 10 years ?
- o Yes
- o No
- o I don't know

H12. Would you like to briefly express your opinion about housing provision ?

_____

_____

_____

WORK

Questions W1 - W3 for working people only.

W1. In general, what dyou think about your current job ?
- o very satisfied
- o satisfied
- o neutral
- o less satisfied
- o not satisfied

W2. Based on your answer in number W1 previously, how do you prioritize your choice for job
(1=highest priority; 5=lowest priority)

Proximity to home	o 1	o 2	o 3	o 4	o 5
Good salary	o 1	o 2	o 3	o 4	o 5
Appropriate with my skill	o 1	o 2	o 3	o 4	o 5
Company's management aspect	o 1	o 2	o 3	o 4	o 5
Employment tenure	o 1	o 2	o 3	o 4	o 5

W3. What do you think about your transport cost to work ?
- o cheap
- o proper
- o expensive

SCHOOL

Questions S1 tS3 for students or parents who have children in school age.

S1. In general, what do you think about your current school ?
- o Very satisfied
- o Satisfied
- o Neutral
- o Less satisfied
- o Not satisfied

S2. Based on your answer in number S1, how do you prioritize/compare your choice for school? (1=highest priority; 3=lowest priority)

Proximity to home	o	o	o
Good quality	o	o	o
Affordable tuition fee	o	o	o

S3. What do you think about your transport cost to school ?
- o Cheap
- o Proper
- o Expensive

TRANSPORTATION

T1. How do you rank the frequency of your type of daily transport ?
(1=highest rank; 5=lowest rank)

Walk	o 1	o 2	o 3	o 4	o 5
Bicycle	o 1	o 2	o 3	o 4	o 5
Motorcycle	o 1	o 2	o 3	o 4	o 5
Private car	o 1	o 2	o 3	o 4	o 5
Bus / Train	o 1	o 2	o 3	o 4	o 5

T2. What do you think about your total expense for transportation (including any type of vehicle) ?
- o Cheap
- o Proper
- o Expensive

T3. What do you think about the availability of transport facility in the city ?
- o Too few
- o Enough
- o Too many

T4. In general, what do you think about the fulfilment of your need of transportation ?
- o Very satisfied
- o Satisfied
- o Neutral
- o Less satisfied
- o Not satisfied

T5. Do you think there is any improvement of transportation facility in the last 10 years ?
- o Yes
- o No

T6. Would you like to briefly express your opinion about transportation facility in general.
_____
_____
_____

LEISURE

L1. What do you think about the availability of recreation space in your neighbourhood ?
- o Not enough
- o Enough
- o Too much

L2. Based on your answer in number L1, how do you prioritize/compare your reason ?
(1=highest priority; 5=lowest priority)

Proximity to home	o 1	o 2	o 3	o 4	o 5
Variety of choice	o 1	o 2	o 3	o 4	o 5
Safety	o 1	o 2	o 3	o 4	o 5
Cost	o 1	o 2	o 3	o 4	o 5
Healthy environment	o 1	o 2	o 3	o 4	o 5

L3. What do you think about the cost for leisure you spend ?
o Cheap
o Proper
o Expensive

L4. How do you prioritize/compare your need for outdoor recreation facility ?
(1=highest priority; 5=lowest priority)

Neighbourhood playground	o 1	o 2	o 3	o 4	o 5
City park	o 1	o 2	o 3	o 4	o 5
Home terrace / garden	o 1	o 2	o 3	o 4	o 5
Sport centre	o 1	o 2	o 3	o 4	o 5
Amusement site	o 1	o 2	o 3	o 4	o 5

L5. In general, what do you think about the availability of recreation facility ?
o Very satisfied
o Satisfied
o Neutral
o Less satisfied
o Not satisfied

PARTICIPATORY

P1. What do you think about participation to improve your neighbourhood ?
o It is important and I have ever got involved
o It is important but I have never got involved
o It is not important
o I don't care

P2. Do you have the chance to express your opinion about living condition in the city ?
o Yes
o No
o I don't know
o I don't care