

# Urban Regions in the Delta



## Stated preferences of international knowledge workers in The Netherlands

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## HELP UvA-VU (international part): Implications of housing and residential milieu preferences of highly educated international migrants (in creative and knowledge intensive industries) for spatial development of metropolitan areas

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# 1. Introduction

## 1.1 Introduction to HELP-international and the first work package

### Introduction to HELP-international

This research project is an extension to the project Higher Educated Location Preferences (HELP UvA-VU). The objective was to focus on the housing and location preferences (stated and revealed) of international migrants, particularly those with higher-level education and/or skills, and if possible with special attention for sectors of the economy, such as creative and knowledge intensive industries, which are widely regarded to be vital for the Dutch economy.

The attractiveness of cities to these international migrants is widely regarded as one of the key factors for the flourishing and growth of urban areas in the coming decades. The project consists of four projects that will together generate an extensive and up-to-date view on and insight in the housing requirements of this particular category. The highly-skilled international migrants are divided in two categories: the directly immigrating migrants, who obtained their skills elsewhere; and the international students, who obtained their skills in the region and who might or might not consider to stay in the Amsterdam or Eindhoven region.

We will start with an overview of the literature about housing orientations of high-skilled transnational migrants and students (contributions from all projects); this will be followed by an investigation of the stated preferences of high-skilled transnational migrants (project 1); we will add to this an analysis of the kind of relationship that is maintained between international students and the metropolitan area of Amsterdam after the international students finished their studies in Amsterdam (project 2). In project 3, we will build a general model for location choice of high-skilled international migrants and connect the model to a simulation tool that calculates and visualizes the model outcomes under different scenarios. In project 4, the focus will be on the dynamics of the international migrants in general, and those working in creative and knowledge intensive industries, after arrival and after settling in the urban region. How are their residential preferences changing over time and how do they compare with other categories? The remainder of this report will deal with the first work package: the stated preferences of skilled migrants.

### The first work package of HELP-international

This study is based on the outcomes of a 'stated choice' survey, in which almost 2,800 respondents were asked to choose between several alternatives of possible dwelling types, locations and residential milieus and ask them which alternative they would prefer if it would be available. The questionnaire also focused on the relative importance that knowledge workers attach to several soft and hard conditions at the regional and neighbourhood level. In addition, the stated choices of immigrant creative knowledge workers are compared to those of other categories of workers to find out to what extent creative knowledge immigrant workers have residential preferences that

differ from those of other groups. These differences may have to be taken into account in the development of housing projects in the urban region under study.

This subproject complements the stated preference research in the URD project 'Implications of location preferences of highly educated workers for spatial development of metropolitan areas' (HELP UvA-VU, work package 2), which deals specifically with different residential preferences between different occupation groups: technical and creative workers.<sup>1</sup>

## 1.2 Background and societal relevance

As a result of the growing importance of creative and knowledge-intensive sectors in both national and regional economies, combined with a growing internationalisation of the economies, academic and policy interest in transnational migrants in those sectors has grown recently. In TIME of March 5th 2012 (pp. 40-44) it is argued that the international orientation of European economies has helped them to stay important. In this article, it was calculated based on Eurostat data that The Netherlands actually needs over 600,000 international workers extra before 2050 in order to survive in the ever more globalising economy. As a result, cities have to strengthen their links to global pools of creative-knowledge talent in order to remain competitive and must pay increasing attention to the conditions that attract and retain highly skilled international migrants. International migration of highly skilled people serves different purposes in the economy. It can fill short-term labour gaps or be used to address long-term skills shortages and help with the gradual development of a skilled labour force.

Whereas many countries previously pursued restrictive immigration policies, in the past decade, policies were developed by the European Union (EU) and European cities and countries to attract highly skilled foreign workers. This development was spurred by labour shortages in the information technology sector and in parts of service industries such as banking and the health sector. Already in 1999, EU countries formulated a common framework to manage migration and an important role was ascribed to legal migration for the enhancement of the knowledge-based economy in Europe in the 'Hague Programme' of 2004. In 2007, a Blue Card for highly-skilled workers from outside the EU was proposed, which offered them the chance to gain a working and residence permit for the EU. Still, only 34 percent of all highly educated international migrants live in European countries, while the US is the most popular destinations of all OECD countries. Differences between nation states in terms of pensions, social security systems and bureaucracy form significant obstacles to foreign migration within the European Union (Pethe et al., 2010).

Notwithstanding, many urban economies and particularly those with a strong international orientation, have acknowledged a growing inflow of international knowledge workers over the past decade. Also the two regional case studies in this project, the Amsterdam Metropolitan Area and the Brainport area Eindhoven have a growing international population, of which skilled migrants account for a large share of population growth. In the Amsterdam Metropolitan Area already 13 percent of the residents currently is of 'western migrant' origin; in the City of Amsterdam this is even 15 percent. The Eindhoven region offers more high tech employment than regional technical graduates can fill in, which makes the region, at least in the short run, strongly dependent on talents from outside the region, including a growing number of international workers (NRC, 2013).

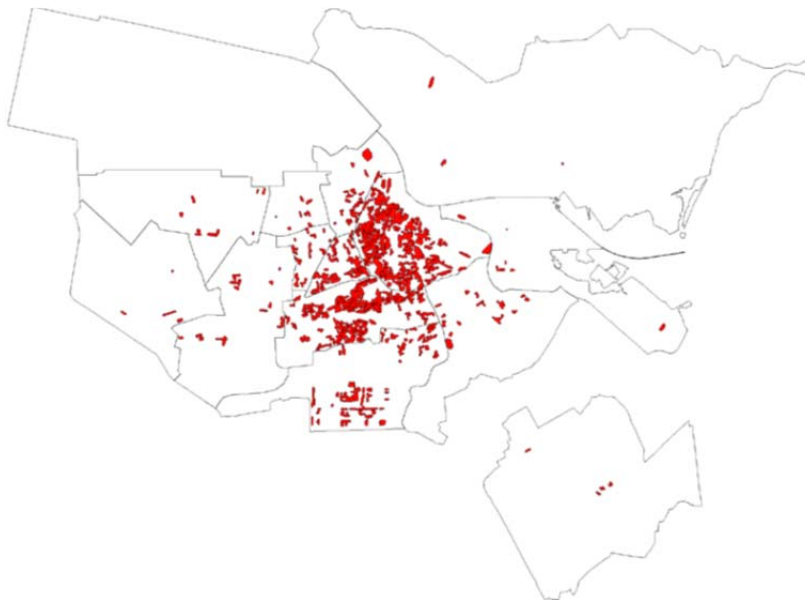
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<sup>1</sup> For the outcomes of this work package, see: Boterman, W.R. & B. Sleutjes (2014) Stated residential preferences of higher-educated workers in Amsterdam and Eindhoven, Amsterdam: University of Amsterdam/ AISSR

The Eindhoven Brainport region expects a steep increase in the number of international migrants until 2020. The number of international knowledge workers already increased from 700 in 2007 to 2,400 in 2012, and is expected to double to approximately 5,000 in 2020. Around 80 percent of the population growth expectedly consists of single-person households. In addition, approximately 29,000 labour migrants that are not necessarily highly-skilled are living in the Eindhoven region. It is a large challenge for both the city and the region to accommodate these workers and to offer housing that meets their demands (Municipality of Eindhoven, 2014).

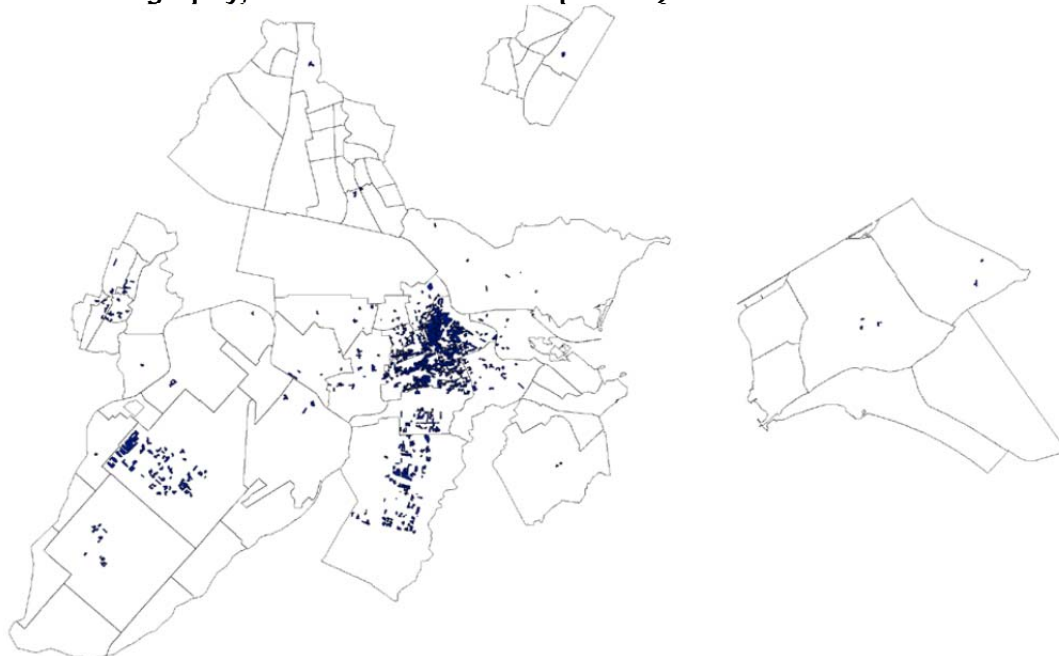
Although an extensive literature exists on the residential preferences of skilled workers in general (see Sleutjes, 2013 for an extensive overview of this literature), there is still a lack of knowledge regarding the specific preferences and behaviour with respect to the dwelling choices and orientations towards certain residential milieus of highly educated international migrants. Still, urban policy makers across Europe have adopted the view that for internationally oriented workers, residential preferences, lifestyle and amenity use deviate from other categories of workers. Florida's (2002) Creative Class theory is particularly popular among policy-makers throughout the US and Europe, who developed policies to attract the 'creative class' to their city. Meanwhile, however, there has been substantial criticism on Florida's work and counter-evidence has been gathered both in the US and in Europe. For example, Martin-Brelot et al. (2010) show, based on a research in 13 European metropolitan areas, that international creative knowledge workers are not necessarily attracted to the city because of amenities, or even housing conditions, but mainly because of employment opportunities and personal networks. Residential conditions hardly played a role for attracting people, but may play an important role in retaining them. In this regard it is very important to take the large variety of skilled migrants into consideration. Whereas some only stay for a short term, many others will settle permanently.

**Figure 1.1 The dispersal of Western migrants across the Amsterdam municipality in 2010. Concentrations are defined as two standard deviations above the mean (>25.6 percent) of Western migrants in the Amsterdam region (Source: Regiomonitor, UvA, Urban Geography, O+S Amsterdam).**



Also, whereas Florida (2002) argued the existence of a new and highly dynamic 'creative class' that would have a strong preference for living in or close to the centres of large cities, concentrations of international migrants from more affluent countries are also found in more suburban locations. For example, Figure 1.1 shows that within the Municipality of Amsterdam, the largest concentrations of Western migrants are found within an axis running from the inner-city southward to the city limits. With the exception of the southern outskirts Buitenveldert, concentrations of Western migrants are small outside the ring road and also north of the River IJ. At the regional level, the City of Amsterdam clearly has the largest concentration of Western migrants (Figure 1.2). However, some larger concentrations can be found in the southern suburb of Amstelveen, the suburb Hoofddorp near Schiphol airport, and in the City of Haarlem, the other urban centre in the region. Outside these places, there are no significant concentrations of Western migrants, indicating that migrants settle down in urban centres, but also in specific suburban places. Still, Western migrants are only one, and generally the most advantaged, segment of international labour migrants. Residential preferences may be different for other categories of migrants.

**Figure 1.2 The dispersal of Western migrants across the Amsterdam Metropolitan Area in 2008. Concentrations are defined as two standard deviations above the mean (>23 percent) of Western migrants in the Amsterdam region (Source: Regiomonitor, UvA, Urban Geography, data from local municipalities).**



Thus, although proximity to urban amenities and a lively residential environment might be essential factors in the choice of residential location for part of the 'creative class', it is not driving all of them. It is important to understand that there are different types of migrants, since this will directly influence the measures which can be used to attract or retain them. There are highly urban-oriented migrants and there are those who seem to prefer more spacious suburban locations, and their housing demands will likely differ accordingly. In that regard it is important to better understand the needs of different sub groups of transnational migrants. Such need cannot be simply derived from the settlement patterns, since these may have developed because of lack of choice. It is therefore important to focus on the 'stated preferences' of international migrants as well. We must expand our knowledge about the residential choice of creative knowledge migrants

and see to what extent their actual behaviour is determined by limitations in the available supply of dwellings, dwelling types and residential milieus. Research on 'stated choice' would add more in-depth insight in their location preferences and the extent to which these are different from other categories of workers and residents.

### 1.3 Structure of report

The remainder of this report is structured as follows. The second part offers an overview of the literature on international knowledge migration, and residential choice. The third chapter describes the process of data collection, the methodology and the variables used in the models, as well as a detailed description of the research population. Chapters 4, 5 and 6 will deal with the three research questions, respectively. The final section will provide a summary of the main results, as well as a number of conclusions and policy recommendations.



## 2. International labour migration and residential preferences of skilled workers: a literature review

This section presents an overview of the literature on international labour migration, as well as the location choice of skilled workers in general, and international migrants in particular. The first sub section deals with classical and modern theories on migration in general, whereas the second sub section will go deeper into the literature on skilled labour migration. The third sub section sketches the insights from the literature on residential location choice.

A large literature exists on location choice and residential preferences of people, and increasingly the distinction between high-skilled and low-skilled workers has been made. However, the literature has not paid much attention to the specific preferences of skilled migrants. Therefore this literature review will mainly focus on residential preferences of skilled workers in general.

### 2.1 General theories on international labour migration

Several theories dealt with the underlying motivations for labour migration. 'Classical migration theories' explain migration processes by emphasizing economic disparities between regions. Migration decisions result from push-factors in the region of origin and pull-factors in the destination area. Classical migration theory also takes spatial distance, migration laws and personal facts into account, since political conflicts or escaping from danger may also steer migration (Bontje et al., 2009).

'Neoclassical migration theories' further elaborated on this push-pull-model and can be subdivided into 'macro-economic' and 'micro-economic' approaches. Macro-economic approaches focus on disparities between places of production and labour markets, including differences in wages and in the supply and demand for labour, but disregard other possible factors (Bontje et al., 2009). On the contrary, micro-economic approaches emphasize rational migration decisions by individual migrants, and individual features, social conditions and migration costs are seen as the main factors influencing the probability of migration. Whereas for highly-skilled workers, the expected income in the destination country increases the incentive to migrate, for non-highly skilled migrants income is of less importance. Rather, through migration, they hope to boost their human capital and, indirectly, their perspectives on the job market. In contrast to classical migration theories, neoclassical theory disregards international political and economic contexts and social boundaries (Massey et al., 1993; Bontje et al., 2009).

The 'new migration economy' approach focuses on both income and the household situation. The theory assumes that households try to maximise their expected income and minimize economic risks. The associated money transfer from abroad, resulting from the migration of one household member, can be used to increase the productivity of the household. Often, this type of migration is temporary, and includes for example guest labourers (Bontje et al., 2009).

The 'dual labour market theory' suggests that migration results from political and socioeconomic factors. From this perspective, the segmentation of the labour market influences labour migration. In advanced industrial societies, there is a dual economy with a capital-intensive primary segment and a labour-intensive secondary segment. The secondary segment is characterised by insecurity and low wages, and unpopular with native workers. Advanced economies therefore depend on labour migration for the secondary segment (Bontje et al., 2009).

The 'world system theory' divides the world into three zones: core, semi-periphery and periphery. International labour migration is presumed to follow the international flows of capital and goods in the opposite direction, and is therefore concentrated in global cities. Migration is a consequence of economic globalisation and the emergence of the capitalistic market in developing countries. International migration primarily appears between former colonial powers and its colonies because of already existing relations in the fields of economy, transport, administration, culture and language (Bontje et al., 2009).

Since the 1990s, migration studies have increasingly focused on the role of social networks (meso level). The 'theory of migration systems' assumes that the intensive exchange of information, goods, services, capital, ideas and persons between specific countries causes a stable system. Migration systems can be formal and informal, including individuals and institutions of both countries. Social ethnic networks, multinational firms, educational institutions or other corporations play an important role. This approach encompasses the economic, political, social, demographical and historical context of migration systems, while taking into account disparities and interdependencies at both ends of the migration flow. Flexible political and economic relations are expected to have a large influence on migration systems. For example, ethnic networks built by migrants and their family and friends are highly relevant. On the one hand, they lower the costs and risks of migration and help to keep in touch with the home region, and on the other hand they help migrants with integration into the host society. However, social networks may also cause dependency and liability, which may hamper integration into the host society (Bontje et al., 2009).

## 2.2 Migration of knowledge workers: from 'brain drain' to 'brain circulation'

One concept that is often linked to the migration of skilled workers is 'brain drain', which assumes permanent migration from less to more developed countries. Economic factors, such as a higher income level in the destination area, are regarded as the main migration motives. Seen from the perspective of 'dependency theory', industrialised societies benefit from a loss of human capital in developing regions (Bontje et al., 2009). However, the theory disregards the fact that highly skilled workers may return to their country of origin, thereby pushing development in their home country through improved skills (Saxenian, 1999). This process is referred to as 'brain circulation' (Bontje et al., 2009).

The increasing internationalisation of the economy has reduced the relevance of the brain drain concept through time (Beaverstock, 1990; Bontje et al., 2009), corresponding with changes in migration systems and processes. In the 1980s, the international financial market was deregulated and many industrial producers moved production units outside their home markets. This resulted in the emergence of a large number of transnational production and service companies, and consequently in the 'brain exchange' of highly skilled professionals within these international organisations. These 'expats' were often sent to a foreign branch for a short period, ranging from a few months to a few years. Although expats generally had little choice in selecting their countries of destination, they were in a privileged position, since they were often compensated through relocation service and a salary that was higher than the home level. Based on studies on expats in the financial service sectors, the geography of their mobility often corresponds closely with the geography of the global cities (Beaverstock 1994; 1996; 2002).

Migration has become a circular movement, implying that migrants return to their home regions after one or more migration steps (Vertovec, 2007). Not only has there been a shift toward the movement of highly skilled workers since the 1980s, but increasingly also migration between advanced capitalist countries takes place, as well as migration from advanced economies to developing countries. Furthermore, a new type of international migration has emerged: 'transnational migration', which has led to the development of international communities and social spaces that are not bounded in one specific national context (Bontje et al., 2009). The concept of 'brain circulation' seems better applicable to the Dutch situation than the concept of 'brain drain' (Petthe & Hafner, 2013).

The brain exchange perspective has been criticized, mainly for its dominant economic perspective, while neglecting the migrant as an individual agent (Scott, 2006). As a result of the technological progress, small actors have become more internationally mobile, increasing the likelihood that highly skilled individual change between small and medium-sized companies, rather than between large multinationals (Bontje et al., 2009). Although theoretical debates and empirical studies so far are mostly focused on expats, this is only a relatively small sub-category of transnational highly skilled migrants. Many higher skilled workers move abroad because on their own initiative, and because of personal motives, rather than job opportunities or career perspectives (Bontje et al., 2009).

In their case study on migrants in the Amsterdam Metropolitan Area, Petthe & Hafner (2013) distinguished between 'demand-related' and 'supply-related' migration. Demand-related migration is related to rising labour demand from companies. It results from the international expansion by companies, the necessity of the exchange of expertise and knowledge for innovations, as well as the need to overcome short-term labour shortages or the shrinking labour force. Supply-related migration relates to the increasing mobility of skilled professionals due to both professional and private reasons. The internationalization of social networks and education, the free movement of citizens within the borders of the EU, humanitarian migration, and the inflow of repatriates all contributed to the increase of supply-migrated migration. In addition, there is a large group of second generation foreign professionals who were born in European countries as offspring of former guest-workers (Petthe & Hafner, 2013).

Demand-related migrants can be subdivided into four categories. A first category is 'corporate migrants', who often work for transnational companies on a short-term basis and generally have higher incomes. This category of migrants attached much value to acquired expertise, working

experience within a company and knowledge, but also hard factors, such as taxation and access to highways or airports, may help to attract this group (Petthe & Hafner, 2013). For international knowledge migrants, the Dutch national government has provided a number of favourable conditions, such as less strict salary criteria, accelerated immigration procedures, generous arrangements for permanent settlement, and tax incentives. Regarding the latter, the '30 percent tax rule' offers a tax reduction to those highly-skilled migrants whose expertise is in high demand on the Dutch labour market. Returns to skills are thus made more progressive, which is especially attractive for those migrants with high incomes (Hercog, 2008).

Besides labour migrants, there are also many 'graduates', including students, recent graduates and 'lifestyle migrants', for whom social networks are important channels for finding jobs and accommodation. Compared to the corporate migrants they earn moderate incomes.

A third category consists of 'European free movers', who often leave their country of origin after graduation or in the early stages of their career. These migrants are often independent, single individuals, and their incomes are rather mixed. Still, the European migrants who move into the Amsterdam region in general belong to the highest income categories.

A final category of demand-related migrants consists of 'migrants from newly emerging countries'. Since the turn of the millennium, Indian and Chinese companies, followed by professionals, have expanded their markets toward Europe. These companies were motivated by shortages in IT professionals in many European countries, the increasing trade between China and Europe, and the removing of barriers to migration from less developed countries. The number of immigrants from China and India to the Amsterdam Metropolitan Area increased from 358 to 1,281 between 1999 and 2006. Most of the Chinese and Indian workers are relatively young (under 35). Compared to other migrant groups, they are often married and have double-income households (Petthe & Hafner, 2013).

## 2.3 Attracting and retaining skilled migrants: the role of soft and hard conditions, and diversity within the creative class

In the literature there are fierce debates about the type of conditions that are needed to attract and retain talented people<sup>2</sup>. Two red threads come forward in the literature: the ongoing importance of hard factors and social capital on the one hand, and the large differences within the 'creative class' on the other.

### *The people-based perspective: the role of diversity and amenities*

One stream of thought, which has dominated urban economic and cultural policies for years, is the 'people-based perspective on economic growth' (Storper & Scott, 2009), which can be subdivided into three main sub strands. The most prominent –in terms of policy influence– sub-strand is Florida's (2002) 'Creative Class Theory', which suggests that economic growth is spurred not only by individuals' level of education but rather by creativity, resulting from social interaction, authenticity and identity. Inspired by Jacobs (1961), Florida considers cities the ultimate location for innovative industries, since cosmopolitan cities are characterized by heterogeneity, which in turn drives creativity and innovations (Florida, 2002; Helbrecht, 2004). The Creative Class Theory

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<sup>2</sup> See Sleutjes, B. (2013), *The Hard and Soft Side of European Knowledge Regions*, Amsterdam: University of Amsterdam/ AISSR, for a more extensive overview of these studies.

is built around the so-called the '3 T's': Talent, Technology and Tolerance. According to Florida (2002), talented and creative people congregate together in metropolitan areas because of tolerance and diversity. These aspects are therefore regarded the keys to economic success.

A second strand within the people-based perspective regards skills and amenities as the main drivers of location choice and urban growth. According to this 'Consumer City' approach, human capital or the availability of skilled workers steers economic growth and these skilled workers are in turn attracted by amenities (Glaeser et al., 2001).

The third strand within the people-based approach is similar to the Consumer City approach, but considers urban amenities as the principal drivers of urban growth and competitiveness in the global race for resources and investments (Clark et al., 2002). It regards cities as 'entertainment machines' and those cities with the most and highest quality urban amenities are most likely to attract human capital. Amenities cover a wide range of facilities, such as attractive residential milieus, shopping centres, cultural functions, restaurants, sports facilities and recreation areas (Jacobs, 1961; Clark et al., 2002). These facilities may help to attract potential employees belonging to certain household types, age groups, educational levels and specific origins to certain areas. Rather than private goods, public goods determine quality of life and therefore Clark et al. (2002) prefer to speak of quality of place.

#### *The ongoing importance of hard conditions and social capital*

The people-based perspective has been subject of strong criticism, mainly for overestimating the role of soft conditions, while underestimating the important role of employment opportunities. Most recent empirical evidence on the location decisions of knowledge workers in European knowledge regions has been gathered in the Accommodating Creative Knowledge (ACRE) project, which included a survey among knowledge workers, both native and international, in 13 European city regions whose local economies are characterized by a (recent) emphasis on human capital. Two overall conclusions of this project should be emphasized. First, in Europe, social capital plays a dominant role in the process of making a relocation decision. The presence of family members or friends, following a partner, or having been born or having studied in a certain region are important reasons for choosing a place of residence. These types of social capital have been neglected by Florida (Brown & Meczynski, 2009; Musterd & Murie, 2010).

Second, besides social capital, hard economic factors are the main drivers of relocation: job opportunities, wages and accessibility (Bontje et al., 2008; Brown & Meczynski, 2009; Martin-Brelot et al., 2010). Thus, people generally do not move to places simply because of their available soft conditions. Rather, people move because of the availability of suitable jobs or because of personal trajectories and networks (Musterd & Murie, 2010). Also Houston et al. (2008) concluded, based on their case study of talented migrant workers in Scotland, that employment opportunities are becoming more rather than less important through time. A recent German study by Buch et al. (2013) showed that all labour market indicators have significant positive influence on migration decisions. Cities with low unemployment, relatively high employment growth and high wages are the most attractive for mobile workers. However, also the quality of life of a city was found to influence residential choice of workers, especially nature amenities such as recreation areas, climatic conditions and accessibility. Also the urban housing market matters, especially flat size (Buch et al., 2013).

A study on international migrants in the Eindhoven region showed a similar pattern. More than 60 percent of the international knowledge workers came to the Netherlands because they considered it as a career opportunity, and almost 50 percent mentioned the attractive scientific climate. Approximately a quarter of the international knowledge workers considered moving to the Eindhoven region as a strategy to gain international experience, and an equal percentage came to the Eindhoven region for study reasons. For 15 percent, the social, economic, political and cultural climate of The Netherlands was the main reason for in-migration, but only 2 percent mentioned the Eindhoven Region as place of residence as the main reason for moving to the Netherlands (Buiskool & Grijpstra, 2006).

Recent empirical evidence on the creative class in Dublin showed the continued importance of hard location factors: costs and size of the dwelling were considered important, just like distance and journey time between home and work and the quality of transport infrastructure. However, soft factors were rarely mentioned among the main reasons for choosing a location. In fact, proximity to pubs or nightclubs was considered unimportant by 42 percent of the population (Lawton et al., 2013).

A study by Hansen and Niedomysl (2009) studied which factors are considered important for migration decisions of the creative class in Sweden. Their study focused on work and career opportunities, culture and entertainment, and outdoor activities and recreation. They distinguished between workers with high and low levels of education and also between different age groups. Differences in migration activities between low and high educated workers were found to be marginal. Only the group of people up to 25 years, including many students, tends to move towards regions with high degrees of quality of life. The next wave of migration occurs after graduation when people move to enter the job market, away from the larger cities and toward lower ranking regions. Thus, migration to places with a high-ranking people climate takes place before people become part of the creative class whereas people move in the opposite direction after entering the creative class. Most migrants that moved more than 20 kilometres stated employment as the main reason for moving (26 percent), followed by social reasons (24 percent) (Hansen & Niedomysl, 2009).

Hansen and Niedomysl (2009) concluded that soft conditions play a secondary role behind hard conditions when making relocation decisions. In addition, the clearest differences between highly and low educated workers concern hard conditions rather than soft conditions. For example, half of all workers considered cultural and entertainment facilities of no importance or small importance for making their migration decision, whereas 18 percent considered this of great importance and 2 percent of utmost importance. No significant differences between workers with high and low levels of education were found in this respect. Similarly, outdoor activities and recreation hardly played a role in making migration decisions, whereas 32 percent of the highly educated workers considered work of utmost importance; more than twice as high as the share of low educated workers. In contrast, for 38 percent of the low educated workers work was not important as a location decision factor, whereas this was the case for 20 percent of the highly educated workers. Career opportunities are considered less important than the job itself, but highly educated workers (15 percent) more often attach high value to this than low educated workers (6 percent). Looking specifically at highly educated workers, it stands out that work is by far the most important factor underlying migration decisions. Still, outdoor activities and recreation, as well as cultural and entertainment facilities, were considered important by 20 percent of the highly educated workers. Interestingly, outdoor activities and recreation are more important for older

migrants, especially for retired persons, and also for people belonging to higher income groups. Cultural and entertainment facilities are more often considered as a migration reason by older migrants, again especially by retired people (Hansen & Niedomysl, 2009). Niedomysl (2010) suggested that amenities should be considered as preferences, rather than needs or demands. These aspects are relevant mainly when other factors –such as jobs and affordable housing—are equal in different potential destinations (Niedomysl & Hansen, 2010).

Miguelez and Moreno (2014) investigated the determinants of the mobility of highly-educated knowledge workers between NUTS2 regions in the European Union. Their research confirms the dominant finding that, in the European context, 'hard' location factors such as job opportunities are the most important factors in attracting native and international knowledge migrants, while natural and cultural amenities are of secondary, but still significant, importance.

#### Heterogeneity within the creative class

Several studies criticized Florida's broad definition of the creative class, which according to them should not be considered one uniform group. The creative class itself is also considered highly diverse and a dichotomy such as that between 'bohemians' and 'nerds' (Kotkin, 2000) is still insufficient to illustrate the diversity within the creative class (Kooijman & Romein, 2007). Thus, *the* creative class on which urban policy should be focused is non-existent. Servillo et al. (2011) suggested that the role that environmental, physical and social attributes play for the attractiveness of a region or city is different for specific groups.

## 2.4 Stated residential preferences<sup>3</sup>

The key concept of this study is residential preference as it is stated by respondents. From the literature it is evident that stated preferences are not the same as revealed preferences, which more apparent in actual residential behavior (practices). Nonetheless, the discrepancies between preference and practice should not be overestimated. The housing aspirations and preferences of people are often surprisingly realistic and hence are a reasonable predictor of actual behavior. Particularly for higher educated groups, who command relatively high volumes of economic and other resources, preference and practice tend to correspond quite strongly as the constraints that operate in –notably- housing markets are more easily overcome. Furthermore, people tend to let their preferences coincide with their actual situation (cognitive dissonance) which makes practices and preference difficult to separate. In any case, this project focuses exclusively on the stated preferences of different groups of workers.

Residential preferences are a black box containing a combination of factors that may be internally coherent but are not necessarily so. Often, in residential mobility studies a distinction is made between aspects of the dwelling and its environment, and the relative situational aspects that are associated with the location (Rossi, 1955; Clark & Dieleman 1996). The first dimension of residential preferences are the characteristics of a dwelling (size, type, price, tenure, architecture, garden, parking space, etc.). These aspects of the dwelling are often related to, but are not the same as, the aspects of direct environment (the neighbourhood) and broader regional context of the environment of the dwelling. Large semi-detached or row houses with a garden for instance are

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<sup>3</sup> This section overlaps with the report for the second work package of HELP, because of the large overlap in focus in the two reports: Boterman, W.R. & B. Sleutjes (2014), *Stated Residential Preferences of Higher Educated Workers in Amsterdam and Eindhoven*, NWO/VerDuS.



much more common in suburban environments than in inner-city areas. Aspects of the neighbourhood may include amenities such as schools, green areas, shopping facilities, but may also concern the social composition of the neighbourhood and (perceptions) of public safety. The locational dimensions of residential choice are again closely related to the other two dimensions but are distinct in the sense that they concern the relative distance to work, amenities, social networks and the like. The relative location or accessibility is thus highly contingent on access to different modes of transportation.

## 2.5 Different residential preferences within the creative class

Several studies looking at residential preferences incorporated household situations and lifestyles as main determinants of residential location choice.

### *Demographic features and lifestyles*

Based on empirical studies on creative and knowledge workers in the European context, the critique that the three people-based approaches consider knowledge workers as one homogeneous group seems to be justified. This statement is confirmed by several empirical studies on (creative) knowledge workers in European city regions, which outlined large differences in residential preferences between different sub-groups of the creative class. Most notable conclusion is that not all knowledge workers prefer metropolitan areas. Different types of regions can be attractive for different types of knowledge workers, based on their lifestyle. In their empirical study on knowledge workers in Scandinavian countries, Andersen et al. (2010) concluded that metropolitan areas are not more or less attractive than suburban areas but rather attract different groups of knowledge workers. Metropolitan areas attract workers because of employment opportunities and retain people because of (cultural) amenities. Smaller urban centres and suburban or rural areas also attract workers because of employment opportunities but retain people especially because of social soft conditions: quietness, space and social cohesion. These cultural and social soft factors may be attractive to different types of individuals. For families, smaller centres seem to be more attractive than metropolitan areas, whereas younger people are mainly attracted to central parts of large cities with a larger cultural and leisure supply (Andersen et al., 2010).

Other studies confirmed that a choice for an urban or a suburban residential milieu is determined by demographic characteristics, rather than by being part of 'the creative class' or not. Residential preferences appear to be strongly correlated with age, especially the preference for highly urban milieus. According to Lawton et al. (2013), the younger age cohorts (under 35) do have residential preferences conforming Florida's creative class thesis, whereas the proportion of individuals living in the urban periphery is largely consistent across age cohorts. Interviews with transnational migrants have pointed at the importance of life cycle and personal trajectory factors (e.g. becoming parents) for making location decisions, even for those living in the inner city districts. Similar findings were presented in studies from Scandinavia (Andersen et al., 2010), Israel (Frenkel et al., 2013) and Australia (Verdich, 2010). Based on these studies, younger knowledge workers -especially singles or couples without children—prefer inner city districts with large concentrations of (cultural) amenities, whereas older and settled knowledge workers more often prefer suburban residential milieus. The decision to move is informed by a complex set of push and pull factors whose importance varies across the life cycle.

Beckers and Boschman (2013) conducted a statistical analysis on the residential preferences of knowledge migrants in the Netherlands and found that for this group, the characteristics of the



local living environment, including urban amenities, do matter for location choices. This group tends to favour highly urban milieus and in general up-market neighbourhoods in or in close proximity to city centres. However, their study also suggested that these residential preferences change during the life cycle. Once individuals start living together or start a family, quieter neighbourhoods become more popular and proximity to school outweighs proximity to work (Beckers & Boschman, 2013).

Similarly, Bendit et al. (2011) concluded after their empirical study on knowledge workers in Tel Aviv that knowledge-workers are attracted to dense urban environments and large cities. They generally prefer communities with a large number of culture and education facilities, and well-established knowledge communities with ample networking opportunities. Also the availability of appropriate housing, as well as mobility and accessibility, are considered important by knowledge workers. In general, they prefer locations that are highly accessible to both their workplace(s) and the metropolitan core. An interesting finding in their study is that the residential location choices of knowledge-workers are related to the main orientation of their activity patterns. Culture-oriented and sport-oriented activity patterns increase the tendency to reside in the metropolitan core, whereas a home-oriented activity pattern increases the propensity to reside in the outer suburbs and the metropolitan fringe (Bendit et al., 2011).

#### *Different preferences between occupational groups*

A number of studies have looked into differences in residential preferences between different occupational sub groups within the workforce. Many of the scholars of gentrification have made an explicit link between employment and residential orientation. The relationship between the urban environment and specific forms of employment is twofold. Specific economic activities have become more urban, and many of the workers in these sectors want to live close to work and hence increasingly settle in (inner) cities (Kloosterman, 2004). The other dimension of this relationship is that people working in specific sectors of work, notably new services such as advertisement, design and finance are part of an emerging new middle class that does not display the same type of taste and residential preferences as the 'traditional' middle class (Butler, 1997). These scholars argued that the transformation of urban space was driven by a newly emerging housing demand for inner-city living associated with a specific class fraction within the broader middle classes. The transformation of specific urban neighbourhoods, gentrification, is indeed strongly associated with a changing occupational profile of these areas (Zukin, 1987; Ley, 2003). Butler and Robson (2003) argue that for explaining the residential practices of the middle classes one has to understand the practices in the fields of consumption, education, housing and employment. The trade-offs that are made between these fields depend on the resources (capital) of the household as well as their household composition and also arguably their residential background and social networks (Boterman, 2013).

A recent empirical study by Lawton et al. (2013) has shown that, based on a case study from Dublin, residential preferences of the creative class- using the broad definition including workers in creative and knowledge intensive industries- are highly diverse. Only half of Dublin's creative workers live in the inner city, whereas 29 percent live in the city outskirts and another 20 percent in the periphery. In general, they found that residential preferences of the creative class do not differ much from the choice characteristics of the general population.

However, when looking more specifically at job categories, a clearer picture emerges. Most notable, whereas workers in cultural or creative industries show a highly-urban residential pattern, the

residential preferences of workers in non-creative knowledge-intensive occupations are more similar to the general public. An empirical study on Amsterdam found that workers in creative occupations had the strongest urban orientation. Of all architects employed in Amsterdam, 71 percent also lived within the city, whereas this was the case for 17 percent of the ICT workers. Apart from architects, also knowledge workers in the public sector (60 percent), in advertising (52 percent) and staff of the social sciences and law faculties of polytechnics and universities (around 50 percent) had predominantly urban residential preferences (Musterd, 2002). These findings are in line with previous studies that differentiated between residential preferences of occupational and educational groups (Helbrecht, 1998; De Wijs-Mulken, 1999).

These findings are also in line with international studies on different occupation groups within the creative class. Kotkin (2000) stated that high-tech workers in the United States do not have a preference for dense urban areas, but rather congregate in safe, suburban communities, which he refers to as 'nerdistans'. A Dutch empirical study by Van Oort et al. (2003) on the residential preferences of Dutch ICT workers has shown that their residential preferences do not differ much from those of highly-skilled workers in general. In line with some of the earlier mentioned studies, their study concluded that residential location choice differs between lifestyle groups and is often related to differences in household situation. About one quarter of all ICT workers preferred a location in or near the city centre, while the rest -generally older and settled workers—prefer a suburban or exurban location. Proximity to the workplace was not considered very important by most ICT workers, as long as they had good accessibility to the workplace: they expressed a high 'commuting tolerance'. A choice for a residential area depends on the characteristics of the house, the neighbourhood and the availability of facilities (Van Oort et al., 2003).

For workers in cultural industries urban centres do appear to be the most popular destinations, since these groups attach more value to living near amenities and meeting places that enable them to live near the 'scene'. Also symbolic values are more relevant to workers in cultural industries. Markusen (2006) confirmed that artists prefer living in urban areas and also make an important contribution to urban development. However, there is also disagreement among scholars on this subject, since other studies found no such evidence even for the most artistic occupational groups that are supposedly highly urban-oriented, or nuanced the relevance of soft factors relative to hard conditions. For example, Borén and Young (2011) concluded after their study on artists' location preferences in the Stockholm region that even for these highly-creative workers, work opportunities are at least as important as city attractiveness. They suggest that a 'one size fits all' policy approach to attracting creative people is therefore likely to be unsuccessful.

#### *Residential preferences of international migrants*

Although a large strand of literature deals with residential preferences of skilled workers, the residential preferences of international knowledge workers have not been researched thoroughly thus far. It does seem to be highly relevant how a city 'looks' and 'feels', and how the housing market is structured and how it functions, in order to *retain* the high-skilled migrants. This is important for the demand-led international migrants, who once entered the city because there was a job and for those who were sent to a city abroad because of labour (Beaverstock, 1994), but perhaps this is even more important for the so-called supply-led migrants, such as the student population or other migrants who entered the place not for a job (Petthe, 2007). They might develop a relation with the city and when they enter the labour market, they start to ask for suitable environments and for dwelling types that fit their profiles. These are not necessarily the same demands as comparable categories of non-migrants have.

The ACRE project has paid some specific attention to the relocation motives and residential preferences of different categories of international migrants, including a case study on Amsterdam (Musterd & Murie, 2010; Musterd & Kovács, 2013). Demand-related migrants can be subdivided into four subgroups in terms of residential preferences. Corporate migrants tend to prefer subcentres in the region, as is symbolized by the Japanese community in Amstelveen, which can be seen as a clear example of corporate migrants. The group of graduates expresses a clear preference for inner-city milieus, particularly the highest income group. Measures to attract the group of free movers should focus on the preference of young single people for inner-city residential environments, with housing in different price categories, and assistance with necessary administrative procedures. The residential preferences of 'migrants from newly emerging countries', especially Indian and Chinese workers, who work in only a selected number of sectors such as IT or trade, range from inner-city housing (one-third) to suburban medium-priced accommodation. Policy-measures aimed to attract this group should take into account employment opportunities for partners and ensure access to both medium- and upper-level housing. In so far companies do not offer relocation services, information in English is important as well for this migrant category (Petthe & Hafner, 2013). Pareja-Eastaway et al. (2010) found that in the Amsterdam Metropolitan Area, housing affordability was the main financial bottleneck for high-skilled migrants: 93 percent of young and 84 per cent of older highly-skilled migrants considered the housing costs 'very expensive' or 'expensive'.

A small number of studies have gained insight in the residential preferences of highly skilled knowledge migrants in the Eindhoven region. However, no reference to Dutch knowledge workers was made. The first one, by Buiskool and Grijpstra (2006) describes a survey among international workers on their valuation of different aspects of living in Eindhoven. A clear distinction can be made between workers at the technical university, who in general are younger and have lower incomes, and knowledge workers working for private companies. Most of the respondents included in their survey live in the city of Eindhoven, while outside Eindhoven the largest concentrations are found in Veldhoven -near ASML—or outside the region, particularly in 's-Hertogenbosch or the Randstad. From the international knowledge workers, 42 percent live in an apartment or flat, whereas 35 percent have a single family dwelling, almost equally spread between detached, semi-detached, corner house and terraced houses. Excluding the group of international knowledge workers working for the university, a higher share (55 percent) is living in a single family dwelling. Most of the international knowledge workers live in rented dwellings (around 70 percent), whereas one fifth is owner-occupier. Almost 10 percent of the international knowledge workers live in an accommodation which is rented or owned by their employer (Buiskool & Grijpstra, 2006).

Regarding the housing situation and their living environment, the international knowledge workers were in general satisfied, except the supply and accessibility of housing. Concerning the supply, the international knowledge workers expressed the need for increasing the volume, diversity and quality of accommodation in the Eindhoven Region. These items were rated as poor or very poor by 40 to 50 percent of all respondents. Particularly, there was high demand for 1-2 bedroom apartments and also for furnished flats. Concerning access, the price of housing was rated negatively by almost 70 percent of all international knowledge workers. In addition, the long waiting lists at agencies were regarded problematic. Furthermore, the international knowledge workers indicated a demand for more information on the housing market, particularly in English language,

and more guidance and assistance with finding accommodation, either through a central contact point for foreign workers or through the employer (Buiskool & Grijpstra, 2006).

The second study was conducted by Vriens and Van der Dam (2011), which was based on a survey among international workers. The international knowledge workers in their sample largely came from Asia (China, India), Eastern Europe (Romania and Poland), but also from Brazil, the USA and Turkey. Based on their results, most of the knowledge workers seek housing in or close to the city centre, with a preference for independent housing, rental dwellings, apartments and studios. Also high demand was expressed for all inclusive housing: furnished dwellings, including internet and telephone connection, and including energy and service costs.

Regarding the price that international knowledge workers are willing to pay, there is a large difference between workers at educational institutes and workers at private companies. Workers at education institutes seek housing up to €550 euro a month, and supply in this category is limited outside the social rented sector. The monthly net income of knowledge workers at education institutes is around €2,000 euros, and these people are in general below 30. Corporation Vestide has taken care of the accommodation of this group in student housing, leading to the displacement of students for whom also a lack of housing is available in the city. Workers at private companies, on the other hand, hardly face problems with finding accommodation. Knowledge workers at private companies in general have higher incomes, approximately between € 30,000 and € 40,000 a year. The larger companies arrange housing for their foreign employees and are familiar with their wishes, or at least they have good contacts with suppliers of private rented dwellings. In some cases the employer pays for housing costs, and their higher income enables them to seek in more expensive segments of the housing market, in which there is a large offer. Problems are thus mainly with younger workers who seek affordable apartments near the centre (Vriens & Van der Dam, 2011).

# 3. Data, methodology and research population

## 3.1 Research design: research questions, methodology and data collection

The research design of this study is specifically geared to uncover to what extent differences exist between the stated preferences of workers in high tech and creative industries on the one hand, and between Dutch and international workers on the other hand, and whether they deviate from other higher educated workers. In order to test whether significant differences exist, this research was designed to enable two main comparisons:

- Dutch-raised workers versus international labour migrants
- Migrants from countries with advanced economies versus migrants from countries with upcoming and less-developed economies

These comparisons between different groups of workers are enhanced by selecting these workers in two different urban contexts: the metropolitan region of Amsterdam and the urban region of Eindhoven. The differences between the two contexts will be controlled for in the analyses, together with differences in occupation (technical and creative workers), demographic aspects and income.

### Research questions

The following three research questions are central in this report:

- *"To what extent do knowledge workers attach importance to hard and soft location factors, and which differences can be observed between Dutch and international workers and between different groups of migrants?"*

The main goal of this question is to study whether Florida's (2002), Glaeser's (2001) and Clark's (2002) criticized assumptions that the -broadly defined- creative class is attracted by soft conditions such as diversity and (cultural, historical or natural) amenities, hold true for international knowledge workers. For local and regional policy-makers, the outcomes of this question may result in recommendations in the fields of cultural policy, the planning of amenities and infrastructure.

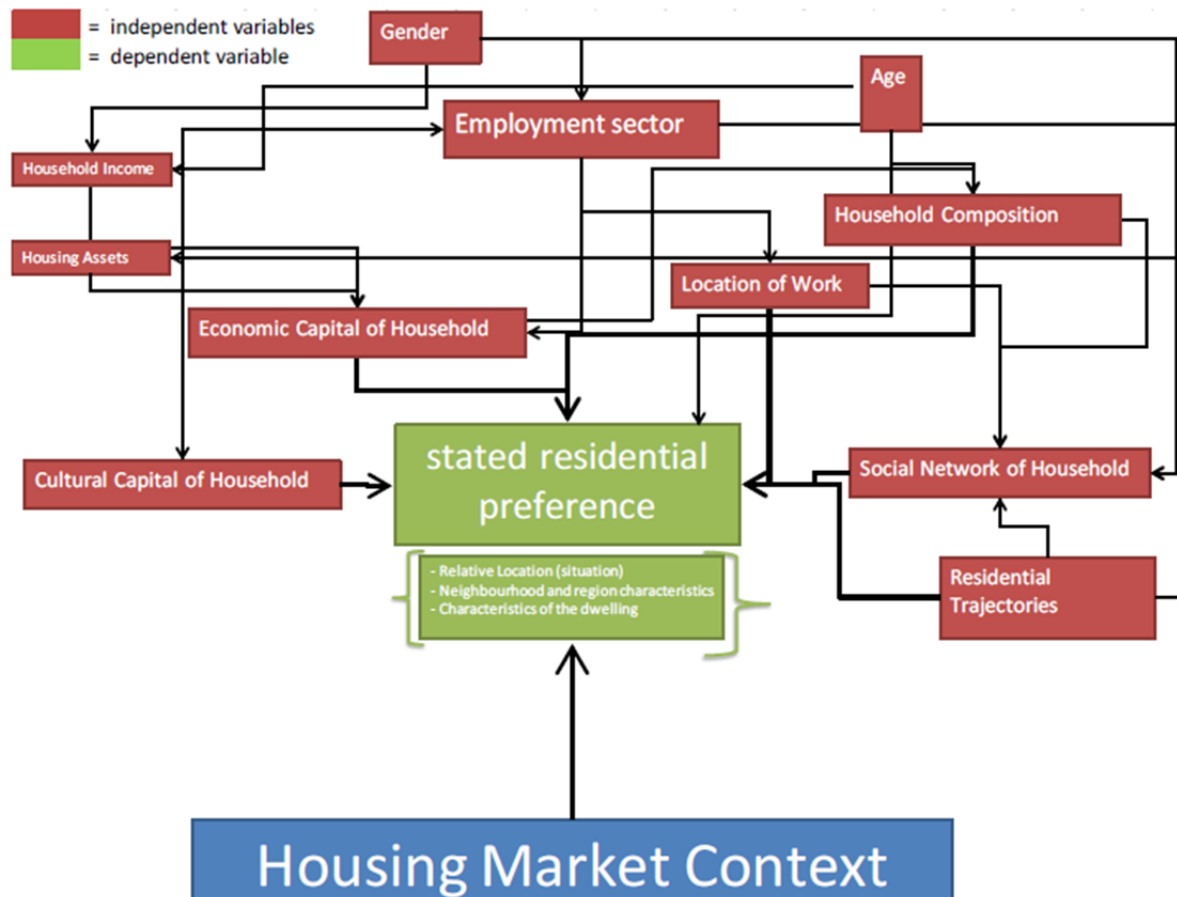
- *"To what extent do stated preferences for urban or suburban residential milieus differ between Dutch and international knowledge workers, and within the group of international workers?"*

- "Which dwelling types and locations are preferred by highly-skilled migrants, and how do these preferences differ between subgroups, and between international and Dutch workers?"

The aim of the second and third questions is to detect differences between the stated residential preferences of Dutch and international workers. For city regions and municipalities with a large and increasing population of skilled migrants, it is important to know if the current housing stock meets the demands of this important section of the regional workforce and whether future building plans should be adapted according to these needs.

#### Data collection

**Figure 3.1 Conceptual model**



The main method for addressing these questions is a large survey utilizing an extensive online questionnaire that was specifically designed for this research<sup>4</sup>. Through this survey among 2,800 (generally) highly-educated respondents, we gathered detailed information about respondents' current place of residence, their relocation propensity and their valuation of specific residential milieus, location factors and housing types. This includes for instance information about amenities

<sup>4</sup> This section overlaps with the report for the second work package of HELP: Boterman, W.R. & B. Sleutjes (2014), *Stated Residential Preferences of Higher Educated Workers in Amsterdam and Eindhoven*, NWO/VerDuS. Both studies were based on the same questionnaire.

in the region and in the neighbourhood; type, size, price, tenure and architecture of the home; but also moving intentions, motivations and satisfaction with environment and home. Also, we collected detailed information about respondents' personal characteristics and background, including their age, household situation, education, occupation, previous residential locations, nationality and previous places of residence. Figure 3.1 above illustrates the conceptual model underlying this questionnaire.

The survey was set out among workers at Shell laboratory in Amsterdam and ASML in Veldhoven (Eindhoven region), as two local examples of large high-tech companies. The Shell employees were sampled with consent of the company on site in Amsterdam. Pollsters from the Research and Statistics of the City of Amsterdam handed out leaflets to employees containing directions to a webpage on which the questionnaire could be completed digitally. ASML employees were approached via internal communications of ASML. All higher educated employees received an internal company email containing a link to the web-based survey. In order to find respondents working in creative industries, the survey was also spread among workers at advertising companies in both cities, in a similar way as the respondents at Shell. This sector was chosen since advertising is the only creative sector with a large representation in both city regions. Later, also other creative sectors were added to boost the low response in this category.

The reference category consists of respondents from resident panels of the Research and Statistics departments of the municipalities of Amsterdam and Eindhoven. For the control group in Amsterdam region inhabitants of the suburban municipality of Almere were also sampled via the resident panel Almere. In Eindhoven no additional sample was made for suburban municipalities. The number of internationals in the reference category was further boosted by spreading the survey through the regional expat panel in Amsterdam and the social media channels of the Expat Centre South in Eindhoven. The participants were awarded with the possibility of winning one of ten dinner checks of 150 euros.

#### Methodology and main dependent variables

The study adopts a quantitative research approach. Each chapter deals with one of the research questions, and starts with descriptive statistics and crosstabs, followed by logistic regression analyses. The aim is to disentangle to what extent the residential preferences and the importance attached to soft location factors is different between Dutch and international knowledge workers on the one hand, and within the group of international knowledge workers on the other hand. Particularly, differences in household situation and occupation are taken into account.

In the fourth chapter, the main variables are related to the importance attached to several soft and hard conditions at the neighbourhood or regional level. Dummy variables have been constructed which indicate whether the respondent considers the supply of the following aspects very important (1=yes, 0=no): cultural amenities, catering amenities, specialty food stores, public green areas, accessibility by car and accessibility by public transport. For the individual cultural amenities, separate dummy variables have been constructed that indicate whether the respondent considers these 'important' or 'very important' (1=yes, 0=no) at the regional level. These cultural amenities are museums, theatres, classical music concerts, pop and jazz music concerts.

The main dependent variable in the fifth chapter is 'urban or suburban' residential preferences. This is measured in three ways. First, respondents were asked to rank a list of names of residential districts from 1 to 10, with 1 standing for the district where they would like to live most and



10 standing for the least popular district. These districts could be subdivided into inner-city, edge-urban or suburban districts, and the average ranking for these categories represent urban or suburban preferences. Similarly, respondents, were asked to rank ten pictures of residential milieus, five of which represent urban milieus and the other five suburban milieus, from 1 to 10. The dummy variables 'urban area in Top 3' (1=yes, 0=no), 'inner-city district in Top 3' and 'suburban area in Top 3' have been constructed in order to investigate which characteristics of workers contribute to having urban, inner-city or suburban residential preferences. Finally, the statement "I would rather live in a big house in the suburbs than in a small apartment in the city" is used as a third measurement of suburban residential preferences, rather than the picture ranking. Respondents who agree or fully agree with this statement are believed to have more suburban preferences than those who do not. The initial five-point scale of this variable was recoded into a dummy variable for 'agreeing or not' (1=yes, 0=no).

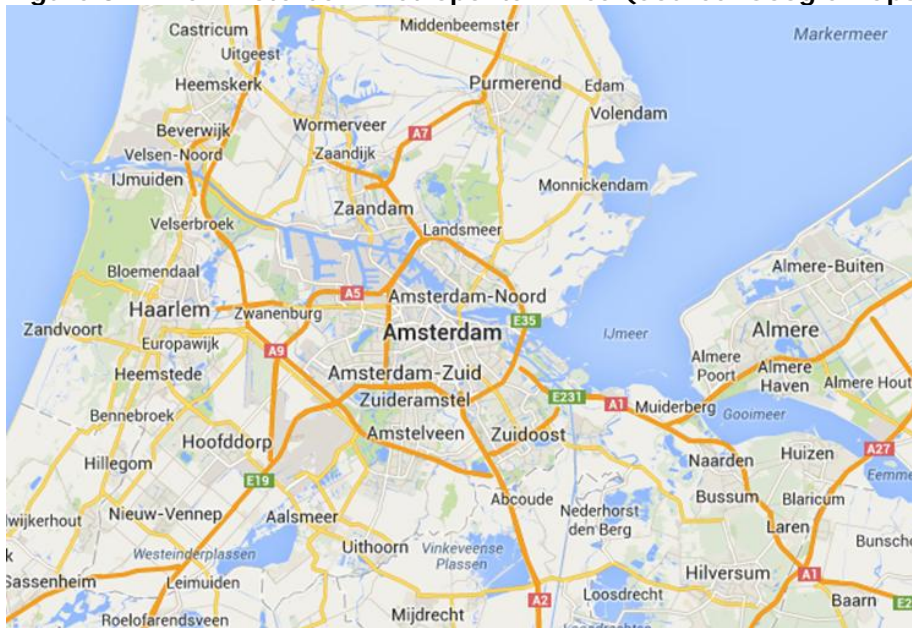
The main dependent variables in the sixth chapter, dealing with housing preferences, are 'upper-level apartment as first choice' and 'detached dwelling as first choice' (1=yes, 0=no). Whereas the preferences for apartments is seen as a proxy for urban residential preferences, the preference for detached dwellings can be considered a proxy for suburban residential preferences.

### 3.2 Research areas

The research was carried out in two metropolitan regions: the Amsterdam Metropolitan Area and the Metropolitan Area Eindhoven<sup>5</sup>.

#### Amsterdam Metropolitan Area

**Figure 3.2 The Amsterdam Metropolitan Area (Source: Google Maps)**



<sup>5</sup> See Sleutjes, B. (2013), *The Hard and Soft Side of European Knowledge Regions*, Amsterdam: University of Amsterdam/ AISSR, for a more extensive description of the two city regions.



Amsterdam is the largest city of the Netherlands with 800,000 inhabitants in 2012 (O+S, 2012). The whole Amsterdam metropolitan region, *Metropoolregio Amsterdam*) has over 2 Million inhabitants. Although it is also the Dutch capital, the government seat is in The Hague. Still, Amsterdam is regarded as the dominant city in the Netherlands in terms of culture and economy.

Within the Netherlands, the Amsterdam Metropolitan Area is the major destination for transnational highly skilled migrants working in creative and knowledge-intensive sectors (Pethe & Hafner, 2013). Amsterdam and the MRA have a very strong profile for knowledge workers, both in terms of hard and soft conditions. Amsterdam has a very diverse economy, which makes the city less vulnerable in times of economic crisis and attracts a broad scope of talent to the city. Several knowledge-intensive sectors are overrepresented in the MRA and Amsterdam is also the dominant city in The Netherlands in terms of creative industries. However, Amsterdam seems to foster this diversity as its main economic strength, whereas the city internationally does not excel in one specific field, and also does not show what it is really good at in particular. Especially the beta sector seems to be given too little attention in Amsterdam, despite its considerable size. This makes it difficult to brand the city internationally and to attract specific talent. The local experts especially noticed a lack of technical talent in the city and, related, a lack of schooling and training possibilities for this group. Building a stronger link between the region's educational institutions - at different levels—and business sector, as well as the establishment of a new technical institute are the main topics on the human capital agenda.

Amsterdam also is known for its strong transport infrastructure and global connectivity, which is mainly the result of the proximity to Schiphol international airport. A downside of the MRA, however, is the high level of congestion. Also, public transport is crowded and regional connections could be improved. In addition, the city is extremely car-unfriendly, with long traffic jams and skyrocketing parking costs. The latter aspect is not necessarily problematic for all groups of knowledge workers, however.

The major weakness of Amsterdam is its housing market, which is expensive and for a large part badly accessible. It is dominated by very cheap apartments in the social sector on the one hand, to which long waiting lists apply, and very expensive dwellings in the private and owner-occupied sectors on the other hand. The middle segment is largely absent. The housing market situation makes it difficult for some groups to find appropriate housing in the city, including expats and creative workers who often earn low salaries, and restricts people with middle incomes living in social housing in their residential mobility.

Besides the housing market, Amsterdam is well endowed in terms of soft factors, however. The city is a popular tourist destination and has a large international population. Amsterdam is known as an entertainment centre with a tolerant atmosphere and liberal values. Furthermore, the city is the dominant cultural centre of the Netherlands, with a broad range of world class museums, theatres and music performances. The city scores high on authenticity, because of its preserved and monumental historic inner city, including the canal belt and the Jordaan neighbourhood (Sleutjes, 2013).

#### *Metropolitan Region Eindhoven*

The city of Eindhoven is located in the south-eastern part of the country, in the province of North Brabant, close to the Belgian and German borders. With 216,036 inhabitants in 2011, it is the fifth largest city of the Netherlands and the major city within the country's second urban network,

Brabantstad, which further includes Breda, Tilburg, 's-Hertogenbosch and Helmond. The Eindhoven region is part of the functional city-region Metropolitan Region Eindhoven (previously *Samenwerkingsverband Regio Eindhoven*, or SRE), consisting of 21 municipalities, with Eindhoven and Helmond being the main urban cores. The region has approximately 745,000 inhabitants.

**Figure 3.3 Map of the Metropolitan Region Eindhoven (Source: Google Maps)**



Eindhoven's main strengths are related to the region's hard factors. The city region has a number of well-functioning clusters in high-tech manufacturing, IT, life-tech and automotive, and active policies to strengthen these clusters. Whereas the city is particularly known for, and thanks most of its strong growth in the 20<sup>th</sup> century to, Philips, the region is nowadays less dependent on one company but is home to three companies in the national Top 5 of R&D investors: Philips, ASML and NXP. According to all of the interviewees, work and career opportunities are also the main reasons for settling in the Eindhoven region. This view is supported by previous surveys among international knowledge workers in Eindhoven.

The city furthermore reinvented itself as a creative city, with a particular focus on design, helped by the presence of the Design Academy and the Technical University TU/e. Another strength of the region that was mentioned by all of the interviewees is the efficient cooperation between the public and private sectors and education institutes in a Triple Helix Structure.

The region's infrastructure is a stronghold, with good rail and road connections to other destinations in the Netherlands but also in Belgium or Germany. There are concrete plans to expand the regional public transport system. The city also has its own airport, although this serves only a limited number of European destinations and is standing in the shadow of Schiphol and the relatively nearby airports of Brussels and Düsseldorf.

On the hard side, a problem that Eindhoven is facing is a shortage of labour for the high tech sector, which is expected to increase further. The companies in Eindhoven demand very specific knowledge, and the Dutch technical universities still deliver too few graduates to fill in these vacancies. As a result, Eindhoven has to attract these workers from abroad, which is reflected in

active internationally targeted branding strategies, including visits of Brainport Development to international career fairs, and strong network links with other European regions with a comparable economic profile (e.g., Aachen, Helsinki). The relatively small size of the university also poses a problem through a lack of critical mass. These issues are tackled at the national level by a Technique Pact, aimed at motivating youngsters for technical studies.

The soft side of the city has been given much attention by local policy makers and institutions, in particular through investments in making the inner city more attractive as an urban space, the transformation of industrial heritage into new urban functions, cultural events and enlarging the cultural supply in English. In terms of its cultural supply, Eindhoven is far behind Amsterdam and other large European cities, but it has a significant cultural offer for a city of its size.

Eindhoven's major strength on the soft side is its large amount of green areas and nature, both within the city and in the wider region, and the large supply of relatively affordable –certainly compared to the Randstad region— family dwellings in a green environment. However, Eindhoven has been lacking residential environments that are attractive to younger people, e.g. singles, who prefer to live in apartments and near urban amenities. Over the past few years, the city has been active in filling this gap by building apartment blocks in the city centre and at Strijp-S, and currently is working on a housing pact specifically for international students and knowledge workers (Sleutjes, 2013).

### 3.3 Research population: Dutch and international knowledge workers

#### *Differences based on origin*

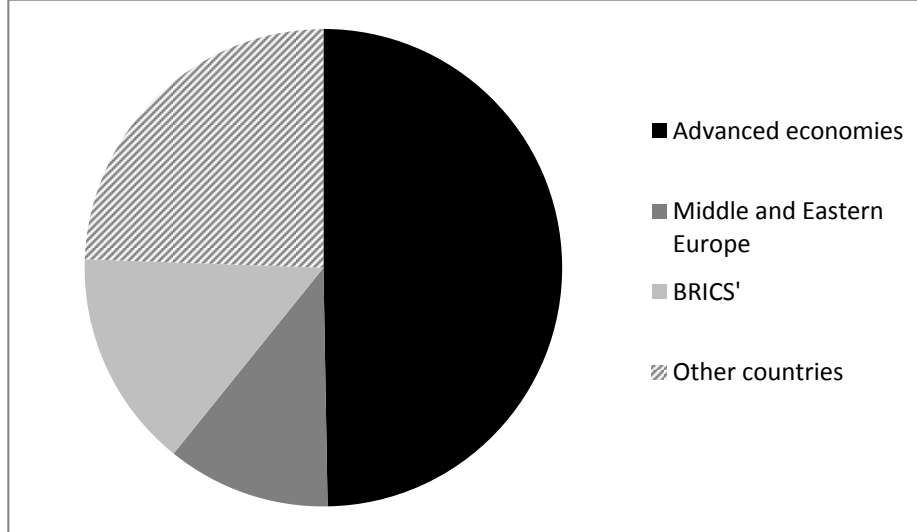
The main focus of this study is on differences between Dutch and international knowledge workers. Of the total population of 2,802 respondents, 1973 (70 percent) were born in The Netherlands or have spent part of their childhood in the Netherlands. 354 workers (13 percent) migrated to The Netherlands as adults and are considered 'internationals' in this study. Persons who are born abroad but moved to The Netherlands as a child are counted among the reference category in this study, since these people cannot be considered knowledge migrants. Of 475 persons (17 percent), their origin is unknown. Of the total valid population, 15 percent belongs to the category of 'internationals', for which a dummy variable has been created (1=yes, 0=no).

In the analysis, also differences between sub categories of internationals will be taken into account. Figure 3.4 shows that half (175) of the migrant population comes from countries advanced economies: Western-Europe, North America, Australia, New Zealand, Israel, Japan and South Korea. The most mentioned countries within this group are Belgium (15 percent), Germany (14 percent), United States (11 percent), United Kingdom (11 percent) and Italy (11 percent).

Another 39 (11 percent) is from Middle and Eastern European countries. The most mentioned countries within this category are Poland (26 percent), Romania (24 percent), Serbia (9.5 percent) and Hungary (9.5 percent). In total 52 workers (15 percent) migrated from countries with emerging economies, the so-called 'BRICS' (Brazil, Russia, India, China and South Africa). In this category, China and India are the most mentioned (both 34.5 percent), followed by Russia (16 percent).

The final 86 (24 percent) originate from other, mainly developing, countries. Because of the large differences in sample size, the migrants have been re-grouped into two categories for the further analyses: migrants from advanced economies on the one hand (50 percent of sample), and all other migrants on the other hand (50 percent). Indonesia and Surinam are the most mentioned individual countries here (15 percent), followed by Iran (8 percent).

**Figure 3.4 Distribution of international workers into four categories**



#### Differences based on occupation and region

Within the group of international workers, differences between occupation categories are the main focus of this study.

	Dutch (total valid N)	Dutch (%)	International (total valid N)	International (%)
Shell (technical Amsterdam)	93	74%	33	26%
ASML (technical Eindhoven)	332	74%	119	26%
Creative Amsterdam	77	92%	7	8%
Creative Eindhoven	66	96%	3	4%
Resident panel Amsterdam	354	87%	54	13%
Expat panel Amsterdam	0	0%	51	100%
Resident panel Eindhoven	854	94.5%	50	5.5%
Expats Eindhoven	0	0%	18	100%
Panel Almere	197	91%	19	9%
<b>Total technical workers</b>	<b>425</b>	<b>74%</b>	<b>152</b>	<b>26%</b>
<b>Total creative workers</b>	<b>143</b>	<b>93.5%</b>	<b>10</b>	<b>6.5%</b>
<b>Total reference category</b>	<b>1,405</b>	<b>88%</b>	<b>192</b>	<b>12%</b>
<b>Total</b>	<b>1,973</b>	<b>85%</b>	<b>354</b>	<b>15%</b>

**Table 3.1 The distribution of Dutch and international respondents across the research population**

Table 3.1 shows that, apart from the two expat panels, the highest shares of internationals are found among the technical categories: both at Shell and at ASML, 26 percent of all 700 respond-

ents (440 valid response) is an international migrant. Among creative workers, the share of internationals is low: 8 percent in Amsterdam and 4 percent in Eindhoven (178 in total, of which 114 valid response). Dummy variables have been created for 'being a technical worker or not' (1=yes, 0=no), or 'being a creative worker or not'. Table 3.1 shows that 25 percent of the total population is employed in the high-tech sector, with higher shares among international workers (43 percent) than among Dutch workers (21.5 percent).

Within the reference categories, in total 12 percent is an international migrant. Obviously, the expat panels in Amsterdam and Eindhoven are completely filled with international migrants, but there is a small difference between the regular resident panels in the two regions. Whereas 5.5 percent of the resident panel in Eindhoven is an international migrant, this is the case for 13 percent of the resident panel in Amsterdam, and for 9 percent of the resident panel in the suburban municipality of Almere.

	<b>Total (N=2,327)</b>	<b>Dutch (N=1,973)</b>	<b>Internationals (N=354)</b>
Technical worker (ASML or Shell), ref.: rest	No(0): 75% Yes(1): 25%	No(0): 78.5% Yes(1): 21.5%	No(0): 57% Yes(1): 43%
Creative worker (creative industries), ref.: rest	No(0): 94% Yes(1): 6%	No(0): 93% Yes(1): 7%	No(0): 97% Yes(1): 3%
Working in Eindhoven, ref.: working in Amsterdam	No(0): 38% Yes(1): 62%	No(0): 36.5% Yes(1): 63.5%	No(0): 46% Yes(1): 54%

**Table 3.2 Population characteristics: occupation and place of work; differences between Dutch and international workers**

According to Table 3.2, 43 percent of the internationals works for a technical company (AMSL or Shell), compared to 21.5 percent of the Dutch workers. In total, 25 percent of the sample is a technical worker and 7 percent of all Dutch workers is employed in the creative industries, compared to 3 percent of the internationals. Since in total, there are only 10 creative internationals among the valid response (6.5 percent), it is difficult to draw reliable conclusions for this specific group of international workers. The specific analysis on the group of international workers will therefore exclude the variable for creative workers.

A regional dummy was included as well, in order to control for differences between the Amsterdam and Eindhoven region. This is necessary, because of the differences in size, economics structure and housing market structure between the two regions. Table 3.2 shows that of the total population, 62 percent is employed in the Eindhoven region. For internationals, this share is somewhat lower, with 54 percent.

***Demographic aspects of research population: age, household composition and education level***

Six control variables related to demographic aspects and human and financial capital have been included into the models (Table 3.3). First, age was taken into account. The average age of the population is 45, and internationals are on average somewhat younger than Dutch workers (38 and 46, respectively). Also the household situation was included into the model, since the literature suggests that households with children are more suburban oriented than households without children. In total, 27 percent of the respondents has a household with children, but Dutch workers more often (35 percent) than internationals (23 percent). Since singles are more likely to prefer

apartments and urban residential milieus, a control for single person households is included as well. Of the total population, 21 percent has a single person household, with only minor differences between Dutch and international workers.

Two measurements of income have been included as well: one distinguishing low-income households (less than 35,000 euros per year) from all others, and one distinguishing high-income households (more than 100,000 euros per year) from the rest. In general, 14 percent of all respondents belongs to the lowest income group, while 21.5 percent belongs to the highest income group. Although differences between Dutch and international workers are small, internationals appear to have somewhat lower household incomes than Dutch workers. This could be related to the lower average age and lower shares of family households among the international group. Finally, level of education was included by distinguishing those with university education (masters or PhD degrees) from the rest.

	<b>Total (N=2,327)</b>	<b>Dutch (N=1,973)</b>	<b>Internationals (N=354)</b>
Age respondent	Mean: 45	Mean: 46	Mean: 38
Household with children, ref.: all other households	No(0): 72% Yes(1): 27%	No(0): 65% Yes(1): 35%	No(0): 77% Yes(1): 23%
Single person household, ref: all other households	No(0): 79% Yes(1): 21%	No(0): 79% Yes(1): 21%	No(0): 77.5% Yes(1): 22.5%
Low household income <35,000 euros), ref.: rest	No (0): 86% Yes(1): 14%	No (0): 87% Yes(1): 13%	No (0): 82% Yes(1): 18%
High household income (>100,000 euros), ref.: rest	No(0): 79.5% Yes(1): 20.5%	No(0): 79% Yes(1): 21%	No(0): 82% Yes(1): 18%
University educated (Masters or PhD), ref.: rest	No(0): 53% Yes(1): 47%	No(0): 57% Yes(1): 43%	No(0): 30% Yes(1): 70%

**Table 3.3 Population characteristics: age, household situation, income and education level; differences between Dutch and international workers**

*Differences in population characteristics across four categories of migrants*

Table 3.4 shows the differences in the population composition within the group of international workers. Workers from countries with advanced economies relatively more often have a household with children, whereas workers from 'BRICS' countries less often have children. Income differences are also notable within the migrant group. Workers from advanced economy countries are overrepresented in the higher income group and underrepresented in the low income group. Workers from less developed countries relatively more often have lower incomes and less often have higher incomes. The workers from advanced economies and less developed countries are somewhat less often university educated than the average of internationals, but still much more often than Dutch workers and the total population. Workers from 'BRICS' countries and especially workers from Middle and Eastern Europe are predominantly university educated. Whereas the shares of workers from advanced economies (42 percent) and Middle and Eastern Europe (49 percent) employed in technical companies is equal to the average of internationals, workers from 'BRICS' countries much more often have a technical profession. Workers from less developed countries much less often work in the technical sector (30 percent). Workers from advanced economies and from Middle and Eastern Europe are almost equally dispersed across the two city



regions, but workers from 'BRICS' and less developed countries are overrepresented in Eindhoven (respectively 65 percent and 63 percent).

The differences in population size between the four categories, and especially the small sample size of the Middle and Eastern European and 'BRICS' workers, might bias these results. Therefore, in the further analyses, only the difference between migrants from advanced economies and from other countries will be taken into account.

	<b>Advanced economies (N=175)</b>	<b>Middle and Eastern Europe (N=39)</b>	<b>'BRICS' (N=52)</b>	<b>Other less developed countries (N=86)</b>
Age respondent	Mean: 40	Mean: 36	Mean: 34	Mean: 40
Household with children, ref.: all other households	No(0): 72% Yes(1): 28%	No(0): 77% Yes(1): 23%	No(0): 88.5% Yes(1): 11.5%	No(0): 79% Yes(1): 21%
Single person households, ref.: all other household types	No(0): 76% Yes(1): 24%	No(0): 85% Yes(1): 15%	No(0): 81% Yes(1): 19%	No(0): 75% Yes(1): 25%
Low household income <35,000 euros), ref.: rest	No (0): 87% Yes(1): 13%	No (0): 76% Yes(1): 24%	No (0): 85% Yes(1): 15%	No (0): 68.5% Yes (1): 31.5%
High household income (>100,000 euros), ref.: rest	No(0): 76% Yes(1): 24%	No(0): 86% Yes(1): 14%	No(0): 85% Yes(1): 15%	No(0): 93% Yes(1): 7%
University educated (Masters or PhD), ref.: rest	No(0): 33% Yes(1): 67%	No(0): 6% Yes(1): 94%	No(0): 21% Yes(1): 79%	No(0): 39% Yes(1): 61%
Technical worker (ASML or Shell), ref.: rest	No(0): 58% Yes(1): 42%	No(0): 51% Yes(1): 49%	No(0): 36.5% Yes(1): 63.5%	No(0): 70% Yes(1): 30%
Creative worker (creative industries), ref.: rest	No(0): 95% Yes(1): 5%	No(0): 100% Yes(1): 0%	No(0): 100% Yes(1): 0%	No(0): 98% Yes(1): 2%
Working in Eindhoven, ref.: working in Amsterdam	No(0): 54% Yes(1): 46%	No(0): 44% Yes(1): 56%	No(0): 35% Yes(1): 65%	No(0): 37% Yes(1): 63%

**Table 3.4 Population characteristics, differences within group of international workers**

### 3.4 Current actual residential patterns: housing situation and place of residence of research population

Before turning to the stated preferences of the research population, it is good to have an overview of the housing situation and the current actual place of residence of these workers.

#### Housing situation

	Total (N=2,246)	Dutch (N=1,907)	Internationals (N=334)	Migrants advanced economies (N = 168)	Migrants from other countries (N = 165)
Owner-occupied	71%	76%	45%	51%	39%
Private rent	12%	8%	32%	32%	32%
Social rent (housing corporation)	16%	15%	19.5%	14%	25.5%
Other	1%	1%	3%	4%	3%

**Table 3.5 The housing situation based on ownership status; differences between Dutch and international workers.**

Table 3.5 shows that in total 71 percent of the population lives in an owner-occupied dwelling. Among Dutch workers, this share is considerably higher (76 percent) than among international workers (45 percent). Still, the share of migrant owner-occupiers is surprisingly high as nearly half of them own the dwelling they live in. Within the migrant population, migrants from advanced economies tend to live in owner-occupied dwellings more often than migrants from other categories: 51 percent of them is home-owner.

In total, 12 percent lives in a private rented dwelling, but internationals are much more often found in this category (32 percent) than Dutch workers (8 percent). No differences were found within the migrant population. The shares for social rent do not differ strongly across the two groups: 15 percent of Dutch workers and 19.5 percent of internationals live in a social rented dwelling (16 percent in total). Within the migrant population, migrants from advanced economies are relatively less often living in social housing (14 percent), compared to migrants from other, mainly developing, countries (25.5 percent).

	Total (N=2,255)	Dutch (N=1,913)	Internationals (N=338)	Migrants advanced economies (N = 169)	Migrants from other countries (N = 168)
Apartment (upper level)	27%	24%	44%	48.5%	39%
Apartment (ground level)	5%	5%	6.5%	8%	5%
Terraced house/ row house	37.5%	39.5%	26%	17%	36%
Semi-detached house	12%	12.5%	9%	9%	9.5%
Detached house	10%	10%	10%	15%	5%
Other	8%	9%	4%	3%	5%

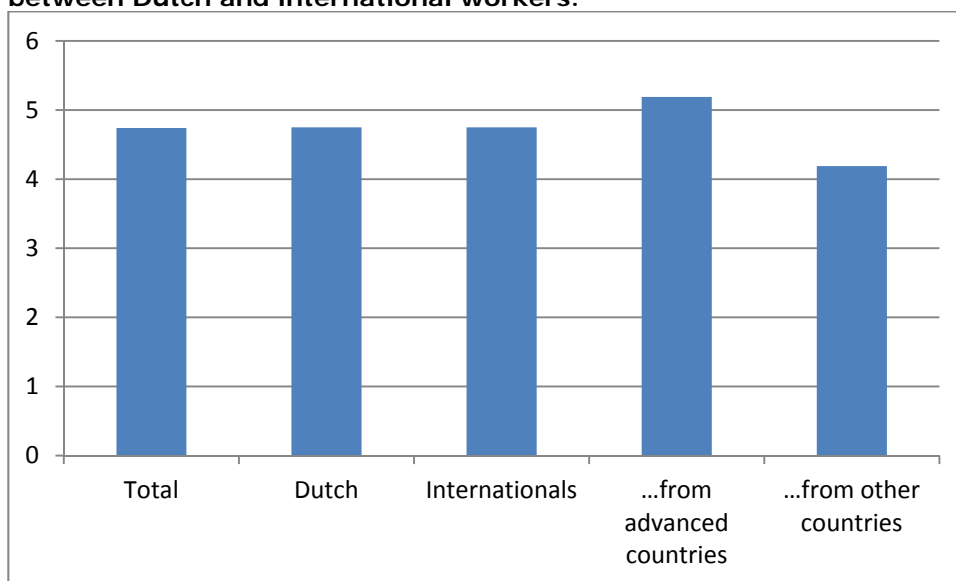
**Table 3.6 The housing situation based on dwelling type; differences between Dutch and international workers.**



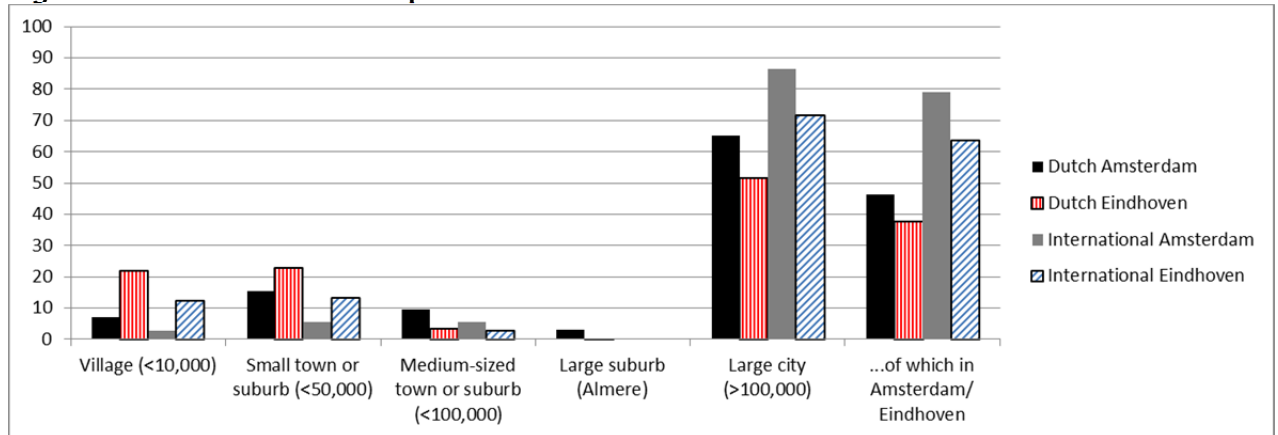
In Table 3.6, it is shown that internationals, and especially those from advanced economies more often reside in upper-level apartments than Dutch workers. Whereas nearly half of the migrants lives in an upper-level apartment, this goes for only 24 percent of the Dutch workers and 27 percent of the total population. Internationals somewhat less often live in terraced or row housing (26 percent) than Dutch workers (39.5 percent) and the total population (47 percent). Especially migrants from advanced economies account for this difference, since only 17 percent of them live in terraced or row housing, whereas the share of migrants from other countries more or less equals that of the Dutch workers (36 percent). Differences with respect to semi-detached and detached housing are small across the different categories. However, within the migrant population, migrants from advanced economies are much more likely to live in detached housing (15 percent) than workers from other (developing or upcoming) countries (5 percent).

Finally, Figure 3.5 shows that regarding housing size, measured in terms of the average number of rooms, there are no differences in general between the Dutch and international workforce. For both groups, the average number of rooms is 4.75. However, we do see that migrants from advanced countries tend to live in larger dwellings (average number of rooms: 5.19) than migrants from other countries (4.19). In fact, migrants from advanced countries on average live in larger dwellings than Dutch workers.

**Figure 3.5 The housing situation based on housing size in number of rooms; differences between Dutch and international workers.**



**Figure 3.6 The current actual place of residence of Dutch and international workers.**



A few conclusions can be drawn from Figure 3.6, which compares the current place of residence of Dutch and international workers in Amsterdam and Eindhoven. Foremost, for all groups large cities (more than 100,000 inhabitants) are the most popular place of residence. There are however a number of notable differences between Dutch workers and internationals and also between workers in Amsterdam and Eindhoven.

In both regions, internationals more often live in large cities than their Dutch colleagues. In the Amsterdam region, 46 percent of all the Dutch workers lives in the city of Amsterdam, whereas this is the case for 79 percent of all international workers. In Eindhoven, a similar pattern can be observed: 72 percent of the international technical and creative workers lives in a city over 100,000 inhabitants (of which 64 percent in Amsterdam), compared to 52 percent of the Dutch workers (37 percent in Eindhoven).

For Dutch workers, other large cities inside (Haarlem) and outside the region are popular residential locations. In total, 65 per cent of all Dutch workers lives in a city larger than 100,000 inhabitants. For internationals, this share is 86.5 percent. These figures indicate that internationals have a stronger preference for living in large cities than Dutch workers, but also that they have a stronger specific preference for living in the city of Amsterdam. Although also a majority of Dutch workers lives in a city of more than 100,000 inhabitants, they are more dispersed across different cities inside and outside the region. For technical and creative workers in the Amsterdam region, the large suburban municipality of Almere is not a popular destination, since 3 percent of the Dutch workers and none of the internationals lives there.

Also for workers in Eindhoven, large cities outside the region appear to be more popular with Dutch workers than with international workers. Among Dutch technical or creative workers, both villages and smaller towns or suburbs are popular alternatives to urban living. Together, these account for 45 percent of their residential locations, compared to 25.5 percent for internationals.

Comparing Amsterdam and Eindhoven, the figures clearly show that workers in the Amsterdam region, both Dutch and international, more often live in urban milieus than workers in Eindhoven. Workers in the Eindhoven region more often live in villages and small towns than workers in the Amsterdam region.

	Total	Dutch	International
<i>Works in the Amsterdam region:</i>			
Lives in Amsterdam	62%	59%	81%
...of which within ring, below IJ	76%	73%	85%
...of which in inner City or Eastern Harbour district	23%	22%	28%
<i>Works in the Eindhoven region:</i>			
Lives in Eindhoven	79%	79,50%	75%
...of which in inner city or Strijp-S	10%	9%	15,50%

**Table 3.7 Place of residence; differences between Dutch and international workers**

Table 3.7 shows that of the total population working in the Amsterdam region, 62 percent lives in the city of Amsterdam. For internationals this share is much higher, with 81 percent, whereas 59 percent of all Dutch workers lives in the core city. This indicates that the international population has a somewhat more urban residential orientation than the Dutch population. Of those living in Amsterdam, 76 percent lives within the ring road and below the IJ, which is generally considered the most popular and upmarket part of the city. Again, the share of internationals living there is larger than the share of Dutch workers, albeit the differences are smaller: 85 percent and 73 percent, respectively. 23 percent of the total population lives in the inner city or the highly gentrified Eastern Harbour district adjacent to it, with only small differences between the Dutch (22 percent) and international (28 percent) populations.

Within the population working in the Eindhoven region, differences between Dutch and international workers are much smaller regarding urban residential patterns: in total 79 percent lives in the City of Eindhoven, while this is the case for 79,5 percent of Dutch workers and 75 percent of internationals. Compared to the figures for the Amsterdam region, it is somewhat surprising that internationals less often live in the city of Eindhoven. However, of those living in Amsterdam, the share of internationals living in the inner-city or the adjacent Strijp-S district is higher than the share of Dutch workers: respectively 15.5 percent and 9 percent.

	Total	Dutch	International
<i>Works in the Amsterdam region:</i>			
Lives in Amsterdam	52%	46%	79%
...of which within ring, below IJ	83%	82.5%	83%
...of which in inner City or Eastern Harbour district	33%	30%	43%
<i>Works in the Eindhoven region:</i>			
Lives in Eindhoven	43%	38%	64%
...of which in inner city or Strijp-S	14%	14%	16%

**Table 3.8 Place of residence of technical and creative workers; differences between Dutch and international workers**

Since the participants in the resident panels automatically live in the municipalities of Amsterdam, Eindhoven or Almere, the residential patterns presented in Table 3.7 may be biased. Therefore, Table 3.8 presents the same descriptives for the technical and creative workers, who were sampled through the company they work for and whose place of residence was therefore unknown. For the Amsterdam region, the figures remain largely similar, although the differences between

Dutch and international workers living within the ring road and below the River IJ have become minimal. Also the shares of both Dutch and international workers living in the inner city or the Eastern Harbour district increased, which indicates that the main research population categories are more oriented toward central urban milieus than the reference categories.

In the Eindhoven region, excluding the resident panels creates a totally different picture regarding the actual place of residence: 64 percent of internationals now lives in the City of Eindhoven, compared to 38 percent of Dutch workers and 43 percent in general. Thus, the share living in the City of Eindhoven decreased for both groups, but the difference between Dutch and internationals increased strongly. The shares of workers living in the inner city or the Strijp-S district increased slightly, while differences between Dutch and international workers became smaller.

## 4. Location choice: the importance of hard and soft conditions

This chapter will seek an answer to the first research question: *"To what extent do knowledge workers attach importance to hard and soft location factors, and which differences can be observed between Dutch and international workers and between different groups of migrants?"*

The first sub section will sketch the main reasons for choosing the Amsterdam or Eindhoven region as a place of residence, whereas the second section deals with the role that urban or suburban location aspects play in making relocation decisions. The third section describes in more detail how Dutch and international workers value different location aspects at the neighbourhood or regional level.

### 4.1 Reasons for choosing the Amsterdam or Eindhoven region

All the respondents in the survey were asked to mention their main reasons for choosing the Amsterdam or Eindhoven region as a place of residence. Table 4.1 shows the different responses to this question by Dutch and international workers in the two city regions.

	Work	Family or partner	Study	Raised / already lived here	Social cultural atmosphere	Only works in region	Other
Dutch Amsterdam	20%	7.5%	16%	23%	13%	12%	8%
Dutch Eindhoven	21.5%	13%	16%	31%	5%	10%	5%
<b>Total Dutch</b>	<b>21%</b>	<b>11%</b>	<b>16%</b>	<b>28%</b>	<b>8%</b>	<b>11%</b>	<b>6%</b>
International Amsterdam	43%	17%	7%	1%	10%	6%	10.5%
International Eindhoven	46%	15%	21%	6%	3%	13%	1%
<i>From advanced economies</i>	47%	18%	6%	3.5%	7%	14%	5%
<i>From other countries</i>	42%	14%	23%	3%	5%	6%	6%
<b>Total international</b>	<b>45%</b>	<b>16%</b>	<b>14.5%</b>	<b>3%</b>	<b>6%</b>	<b>10%</b>	<b>5%</b>
Total Amsterdam	25%	9%	15%	20%	13%	10%	4%
Total Eindhoven	25%	13%	16%	27%	4%	11%	3%
<b>Total</b>	<b>25%</b>	<b>11%</b>	<b>16%</b>	<b>24%</b>	<b>8%</b>	<b>11%</b>	<b>5%</b>

**Table 4.1 The most important reasons for choosing to live in the region**

For 25 percent of the total population, work was the main reason to settle in Amsterdam or Eindhoven, with no difference between the two regions. There are notable differences between Dutch and international workers, however. The share of internationals that moved to the region for employment related reasons is twice as high (45 percent) as the share of Dutch workers for whom

work was the main reason (21 percent). Interregional differences within the Dutch and international population are marginal, and also differences between workers from countries with advanced economies (47 percent) and other countries (42 percent) are small concerning the importance of employment for making location decisions.

For another 16 percent, study was the main reason for settling in the region, with only minor differences between Dutch and international workers, and between the two cities in general. However, study was significantly more important for internationals in Eindhoven (21 percent) than for internationals in Amsterdam (7 percent). Besides the regional difference, study also seems to be much less important as a reason for settling for workers from advanced economies (6 percent) than for workers from other countries (23 percent). This could be explained by the similar standard of education opportunities in other advanced countries, compared to The Netherlands, whereas the Dutch higher education system has an advantage over that of most developing and upcoming countries.

Social networks and familiarity with the region also play an important role for making location decisions, and somewhat more in Eindhoven than in Amsterdam. Whereas for internationals, following a partner or family is more important (16 percent) than for Dutch workers (11 percent), being raised or already living in the region is the most important reason for the Dutch workers (28 percent), but –logically– plays only a minor role for internationals (3 percent).

The social and cultural climate plays only a small role for making location decisions: 8 percent mentioned this as the main reason for choosing to settle in the region. Differences between Dutch and international workers are marginal –for 8 and 6 percent this was the first reason, respectively–, but the social and cultural atmosphere seems to be more important for workers in Amsterdam (13 percent) than for workers in Eindhoven (4 percent). Differences between Dutch and international workers within the two regions are also smaller than the interregional differences within the populations of Dutch and international workers.

There is also a part of the population that works in the Amsterdam or Eindhoven region, but does not live there: 11 percent of Dutch workers and 10 percent of international workers. Within the population of internationals, we see differences between workers in Eindhoven and Amsterdam on the one hand, and differences based on country of origin on the other hand. Whereas 6 percent of internationals in the Amsterdam region lives outside the region, this is the case for 13 percent of internationals in the Eindhoven region. Especially workers from countries with advanced economies tend to live outside the region: 14 percent, compared to 6 percent of other migrants.

Thus, the dominant reasons for choosing to live in the region can be subdivided into hard conditions and personal factors, whereas soft conditions appear to play a more modest role. These findings are in line with previous studies (Niedomysl & Hansen, 2009; Musterd & Murie, 2010; Martin-Brelot et al., 2010).

Two logistic regression models are presented below: one of which shows the characteristics of those workers who moved to the region because of work or study (hard factor), and one that shows which types of workers choose the region because of the social and cultural atmosphere (soft condition).

	Model a: All Exp(B)	Model b: Amster- dam Exp(B)	Model c: Eindhoven Exp(B)	Model d: Dutch workers Exp(B)	Model e: Internationals Exp(B)
Age	.999	1.002	.995	1.003	.972*
Households with children	.888	1.103	.793	.924	1.100
Single person households	1.181	.907	1.438	1.076	1.870
High incomes	1.119	.996	1.163	1.115	1.153
Low incomes	.757	1.114	.541**	.724	1.117
University educated	2.180***	1.949***	2.359***	2.304***	1.609
Creative workers	.697	.786	.581	.669	X
Technical workers	.576***	.848	.424***	.402	1.996
Working in Eindhoven (ref. = Amsterdam)	1.170	X	X	1.065	1.418
International worker (ref. = raised in Netherlands)	2.089***	1.290	3.489***	X	X
Migrant from country with advanced economy (ref. all other migrants)	X	X	X	X	.591
Constant	.494*	.459	.710	.469*	2.031
R-square	.088	.044	.145	.089	.181

\*\*\*  $p < 0.001$ ; \*\*  $p < 0.01$ ; \*  $p < 0.05$

**Table 4.2 Choosing the region because of work or study: differences between Dutch and international workers in the two city regions**

The regression model presented in Table 4.2 confirms that work or study are significantly more important reasons for choosing the region for international workers than for Dutch workers. However, in the Amsterdam sub model, there is no significant association between being an international and moving to the region because of work and study. These factors seem to be particularly important for internationals in the Eindhoven region. Within the migrant population, we found a negative age effect: older workers are less likely to have moved to the region for employment or study-related reasons.

In general, we found that technical workers are less likely to have moved because of employment or study related reasons, except in the Amsterdam region where this effect was not significant. Workers with a university education (master or higher) are more likely to have moved to the region because of work or study.

	Model a: All Exp(B)	Model b: Amster- dam Exp(B)	Model c: Eindhoven Exp(B)	Model d: Dutch workers Exp(B)	Model e: Interna- tionals Exp(B)
Age	.990	.982	1.002	.983	1.007
Households with children	1.110	.947	1.398	.861	4.548*
Single person households	1.758*	2.756**	.809	1.611	3.341
High incomes	1.296	1.830	.876	1.325	.837
Low incomes	.962	.584	2.001	.733	2.938
University educated	1.030	1.331	.665	1.043	.865
Creative workers	3.147***	4.314***	1.625	2.780**	X
Technical workers	.242***	.110**	.433	.276**	.165
Working in Eindhoven (ref. = Amsterdam)	.393***	X	X	.381***	.402
International worker (ref. = raised in Netherlands)	1.026	1.000	1.016	X	X
Migrant from country with advanced economy (ref. all other migrants)	X	X	X	X	1.301
Constant	.170***	.183**	.046***	.273*	.033*
R-square	.116	.143	.048	.109	.238

\*\*\*  $p < 0.001$ ; \*\*  $p < 0.01$ ; \*  $p < 0.05$

**Table 4.3 Choosing the region because of social and cultural climate: differences between Dutch and international workers in the two city regions**

According to the regression model outlined in Table 4.3, there are no differences between Dutch and international workers regarding the social and cultural atmosphere as the main reason for moving to the region. This was to be expected based on the descriptives in Table 4.1. Within the migrant community, households with children are the most likely to choose the social and cultural climate of the region.

We see a clear difference between the Amsterdam and Eindhoven regions. Workers in the Eindhoven region are less likely to have chosen the region because of the social and cultural climate. In Amsterdam, this seems to play a more important role relative to Eindhoven, in line with the descriptives in Table 4.1. Furthermore, the social and cultural climate is more often a decisive location aspect for single-person households and creative workers. For technical workers, this is less often a reason to choose the region. Thus, rather than origin, household situation and occupation explain why people choose a region because of the social and cultural climate.

## 4.2 The valuation of hard and soft conditions at the neighbourhood or regional level

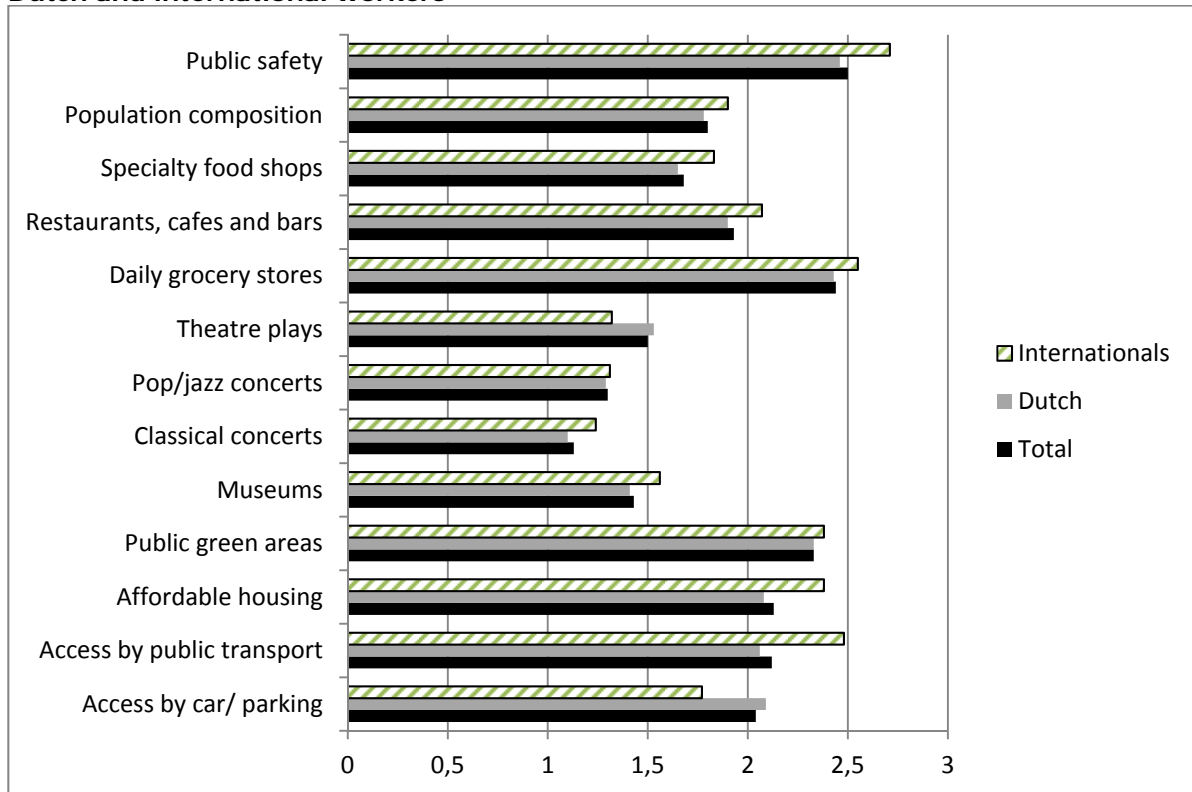
In the survey, the respondents' valuation of several location aspects was measured through a ranking of cultural amenities, catering amenities, specialty food stores and public green areas as soft conditions, and accessibility by car and public transport as hard conditions. This section presents the responses to these rankings (from unimportant to very important), differentiating between Dutch and international workers in the two regions and between different groups of international migrants. After presenting a number of descriptive statistics, logistic regression models are presented that show which types of workers consider these amenities important.



### Descriptive statistics

Figure 4.1 presents the (reversed) ranking (1-4) that was given to several soft and hard conditions at the regional level. A high ranking indicates that an aspect is on average considered important and a low average ranking stands for low importance.

**Figure 4.1 The average reversed ranking (1-4) of regional aspects; differences between Dutch and international workers**



The figure shows that cultural amenities are clearly considered less important than public safety, daily shopping facilities and public green areas on the soft side, and accessibility –at least by public transport- and the availability of affordable housing on the other hand. Both for internationals (2.71) and for Dutch workers (2.46), public safety is the highest ranked aspect at the regional level, followed by daily grocery stores (2.55 for internationals, 2.43 for Dutch). Although for most amenities, differences in average ranking between Dutch and international workers are small, we see that accessibility by public transport is clearly ranked higher by internationals (2.48) than by Dutch workers (2.06). Also affordable housing is ranked more important by international (2.38) than by Dutch workers (2.08). In contrast, accessibility by car is clearly more important for Dutch workers (2.09) than for international workers (1.77). The role of soft conditions at the regional level should not be overrated, however. The cultural amenities are among the lowest ranked aspects both by Dutch and international workers, and with the exception of theatres, all cultural amenities are ranked slightly higher by internationals than by Dutch workers.

**Figure 4.2 Satisfaction with regional aspects (grade 1-10); differences between Dutch and international workers**

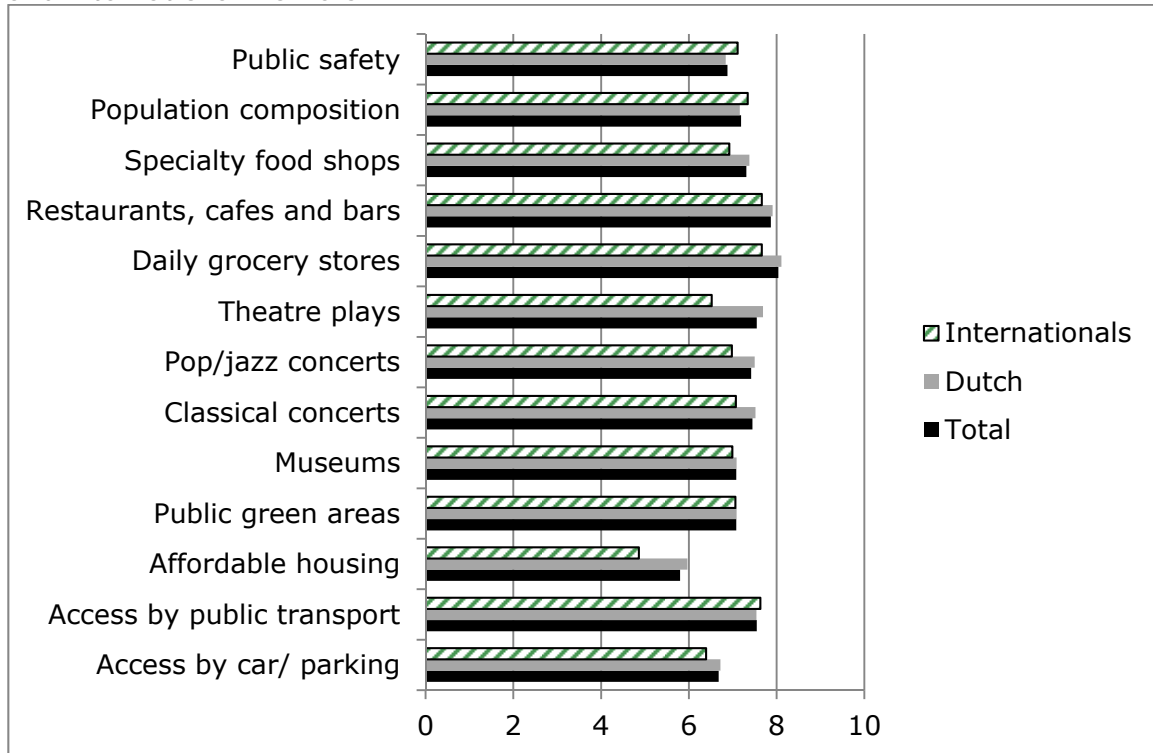
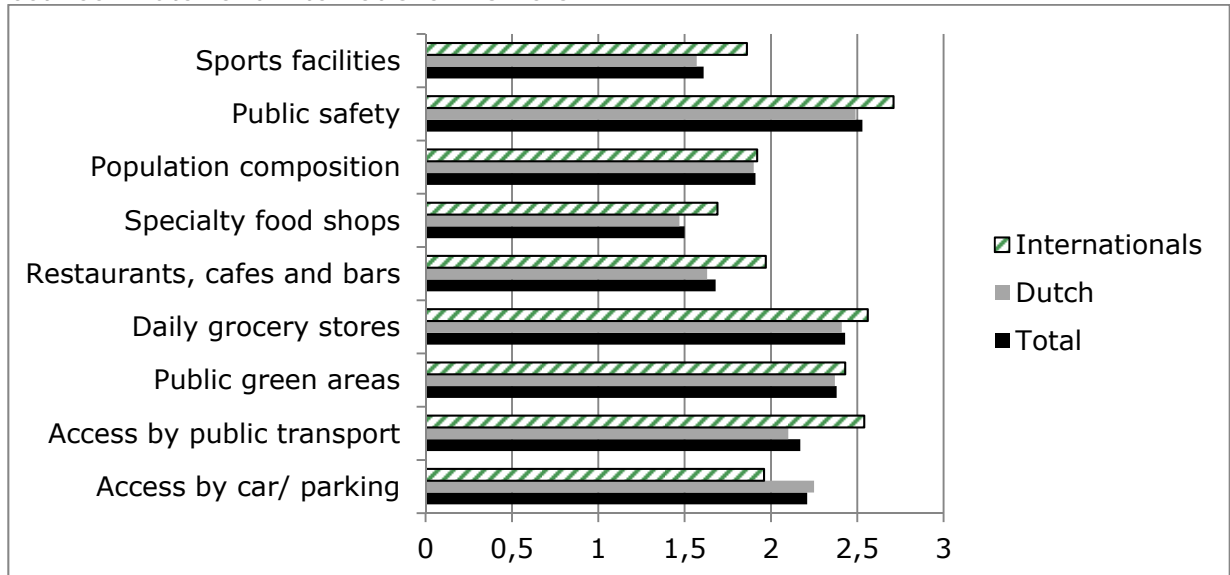


Figure 4.2 shows the satisfaction with regional aspects, based on a grade from 1 to 10 given by the respondents. Grade 1 stands for very dissatisfied, whereas grade 10 stands for very satisfied. In general, both Dutch workers and international workers are rather satisfied with regional aspects, and there are only minor differences between Dutch and international workers. The only exception is 'availability of affordable housing': this aspect is graded with a 5.8 on average, and slightly higher by Dutch workers (5.97). However, among internationals this aspect scores a mean grade 4.86, indicating that especially migrants acknowledge problems, or are at least dissatisfied with the accessibility of the regional housing market. An additional analysis looking at differences between the two regions showed that especially (international) workers in Amsterdam acknowledged problems with the availability of affordable housing: the average grades were 5.09 for Dutch workers and 4.39 for international workers. In Eindhoven, Dutch workers graded affordable housing with 6.56, but internationals were more negative (5.27).

Also, internationals are somewhat less satisfied with theatre plays, but this could be related to language barriers. Catering amenities, daily grocery stores and accessibility by public transport are the highest graded regional aspects.

**Figure 4.3 The average reversed ranking (1-4) of neighbourhood aspects; differences between Dutch and international workers**



At the neighbourhood level, we see that all soft conditions and also accessibility by public transport are ranked higher by internationals than by Dutch workers (Figure 4.3). The highest ranked aspects by internationals are public safety, accessibility by public transport, daily grocery stores and public green areas. For Dutch workers, the picture is similar, except that accessibility by public transport plays a smaller role and is outweighed by accessibility by car, which is among the least important aspects for international workers. Again, we should stress that the role of soft conditions should not be overrated. The highest ranked soft conditions are more general aspects such as public safety and daily shopping facilities. Although clearly more important for internationals than for Dutch workers, amenities such as specialty food stores, sports facilities and also restaurants and bars are among the least important neighbourhood characteristics for both groups. Also the neighbourhood's population composition is not among the most important aspects, neither for international nor for Dutch workers.

**Figure 4.4 Satisfaction with neighbourhood aspects (grade 1-10); differences between Dutch and international workers**

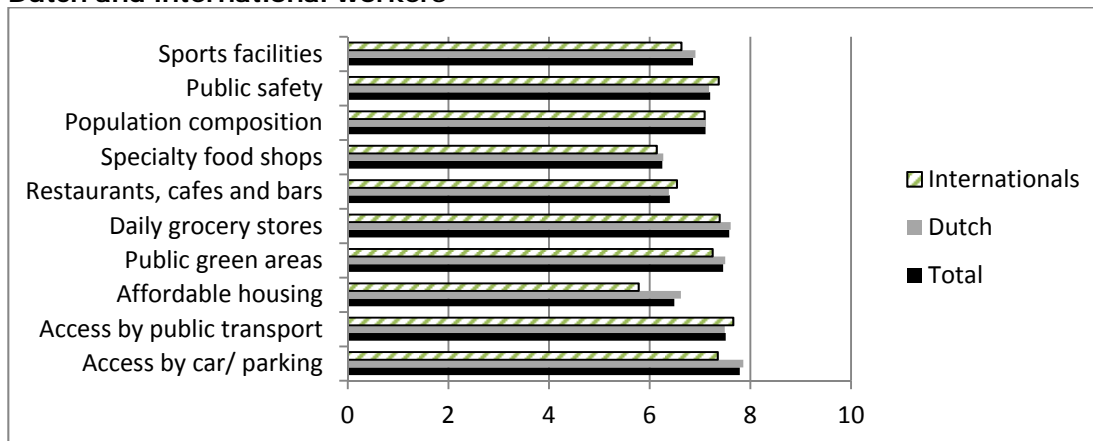


Figure 4.4 illustrates that regarding satisfaction with neighbourhood aspects, differences between Dutch and international workers are rather small, again with the exception of the availability of affordable housing. Internationals grade this with 5.78, compared to an average grade of 6.62 by Dutch workers. However, these grades are higher than at the regional level, indicating that housing is especially considered a regional problem. Accessibility by car and public transport, public green areas and daily grocery stores are the highest graded neighbourhood aspects.

	Cultural amenities	Catering amenities	Specialty foodstores	Public green areas	Accessibility by car	Accessibility by public transport
Dutch Amsterdam	23%	30%	22.5%	50%	40%	58%
Dutch Eindhoven	13%	19%	13%	54%	50%	30%
<b>Total Dutch</b>	<b>17%</b>	<b>23%</b>	<b>17%</b>	<b>52%</b>	<b>47%</b>	<b>40%</b>
International Amsterdam	25%	41%	33%	62%	29%	81%
International Eindhoven	19%	37.5%	26%	56%	57%	60%
<i>From advanced economies</i>	26%	46.5%	36%	58%	39%	66%
<i>From other countries</i>	17%	31%	23%	59.5%	48%	74%
<b>Total international</b>	<b>22%</b>	<b>39%</b>	<b>30%</b>	<b>59%</b>	<b>43%</b>	<b>70%</b>
<b>Total Amsterdam</b>	<b>24%</b>	<b>32%</b>	<b>25%</b>	<b>52%</b>	<b>38%</b>	<b>62%</b>
<b>Total Eindhoven</b>	<b>14%</b>	<b>21%</b>	<b>15%</b>	<b>54%</b>	<b>51%</b>	<b>34%</b>
<b>Total</b>	<b>22%</b>	<b>26%</b>	<b>19%</b>	<b>53%</b>	<b>46%</b>	<b>45%</b>

**Table 4.4 The share of respondents who considers these soft and hard factors very important at the neighbourhood or regional level**

Table 4.4 shows the shares of international and Dutch workers that consider the availability of specific soft and hard conditions very important, at either the neighbourhood or the regional level. The results indicate that the availability of cultural amenities (museums, theatres, classical music concerts and pop and jazz music concerts) at the regional level is considered somewhat more important by internationals than by Dutch workers, although differences are small. 22 percent of internationals values these aspects of high importance, compared to 17 percent of Dutch workers. A notable regional difference exists: both within the Dutch and –albeit to a lesser extent- international population, workers in Amsterdam attach much more value to cultural amenities than workers in Eindhoven: respectively 23 and 13 percent of Dutch workers and 25 and 19 percent of internationals considers cultural amenities very important. We also see that workers from countries with advanced economies consider cultural amenities more important than workers from other countries.

	Museums	Theatre	Classical concerts	Pop and jazz concerts
Dutch Amsterdam	62%	62%	43%	46%
Dutch Eindhoven	37%	51%	24%	39%
<b>Total Dutch</b>	<b>46%</b>	<b>55%</b>	<b>31%</b>	<b>42%</b>
International Amsterdam	66%	42%	39%	42%
International Eindhoven	43%	45%	37%	39%
<i>From advanced economies</i>	<i>61.5%</i>	<i>43.5%</i>	<i>41%</i>	<i>46%</i>
<i>From other countries</i>	<i>46.5%</i>	<i>43%</i>	<i>34%</i>	<i>34%</i>
<b>Total international</b>	<b>54%</b>	<b>43%</b>	<b>38%</b>	<b>40.5%</b>
<b>Total Amsterdam</b>	<b>63%</b>	<b>58.5%</b>	<b>43%</b>	<b>46%</b>
<b>Total Eindhoven</b>	<b>37%</b>	<b>50%</b>	<b>26%</b>	<b>39%</b>
<b>Total</b>	<b>47%</b>	<b>53%</b>	<b>32%</b>	<b>42%</b>

**Table 4.5 The share of respondents who considers these cultural amenities important or very important at the regional level**

Also regarding individual cultural amenities, some differences between Dutch and international workers can be observed. Table 4.5 shows which workers consider museums, theatre plays, classical concerts, and pop and jazz concerts important or very important. Regarding museums, there is a clear regional difference: workers in Amsterdam much more often consider these aspects of importance than workers in Eindhoven. Although internationals attach somewhat more value to museums than Dutch workers, the interregional differences are larger than differences between Dutch and international workers within the two regions. Internationals also more often consider classical concerts important than Dutch workers. Interestingly, the interregional difference are large within the Dutch population, but not within the international population. The valuation of pop and jazz concerts is almost equal across the Dutch and international workers, but these concerts are considered slightly more important in Amsterdam than in Eindhoven. Theatres are the only cultural amenities that are considered more important by Dutch workers than by international workers. Within the group of internationals, migrants from countries with advanced economies clearly more often consider museums and pop and jazz concerts important or very important. However, differences between groups of migrants are smaller regarding the valuation of classical music concerts and even neglectable regarding the valuation of theatres.

Differences between Dutch and international workers are more outspoken concerning the valuation of catering amenities: restaurants, cafes and bars. Whereas 39 percent of internationals considers the availability of these amenities at the neighbourhood or regional level very important, this goes for 23 percent of Dutch workers (Table 4.2). Again, workers in Amsterdam (32 percent) consider catering amenities more important than workers in Eindhoven (21 percent), but within the population of internationals, interregional differences are small: 41 percent in Amsterdam and 37.5 percent in Eindhoven. Also migrants from countries with advanced economies consider catering amenities much more important (46.5 percent) than migrants from other countries (31 percent).

Nearly twice as many internationals (30 percent) than Dutch workers (17 percent) consider specialty food stores very important at either the regional or the neighbourhood level. A similar pattern as the other cultural amenities can be observed: specialty food stores are considered more important in Amsterdam than in Eindhoven, with larger differences between the Dutch population

(22.5 and 13 percent, respectively) than within the international population (33 and 26 percent). Also migrants from advanced economies (36 percent) attach more value to specialty food stores than migrants from other countries (23 percent).

The final soft condition that was studied is the availability of public green areas and parks at the regional and neighbourhood level. Table 4.2 shows that public green areas are valued somewhat higher by internationals (59 percent of utmost importance) than by Dutch workers (52 percent), but compared to cultural amenities, these differences are rather small. Differences between internationals and Dutch workers are more outspoken in Amsterdam (62 percent of internationals, 56 percent of Dutch) than in Eindhoven (56 and 54 percent, respectively).

Also two hard conditions were studied: accessibility by car and by public transport at either the regional or the neighbourhood level. Clear differences can be observed between the valuations of accessibility by car and by public transport. Whereas accessibility by car is considered almost equally important by Dutch and international workers (by 47 percent and 43 percent respectively), international workers attach more value to accessibility by public transport: 70 percent considers this very important, compared to 40 percent of Dutch workers. There is also a clear regional difference: workers in the Eindhoven region clearly attach more value to accessibility by car, whereas accessibility by public transport is regarded more important in the Amsterdam region. Within the regions. Within both regions, internationals consider public transport more important than Dutch workers, while Dutch workers attach somewhat more value to accessibility by car. For migrants from countries with advanced economies, accessibility –both by car and by public transport- is less important than for migrants from other countries.

### 4.3 Who attaches value to soft and hard conditions?

Through regression models, we investigated which groups are the most likely to attach high value to different types of soft and hard conditions. This section describes for each factor which categories of workers are more or less likely to consider this factor important.

#### *The valuation of cultural amenities?*

First, we estimated a model with 'cultural amenities very important' as the main dependent variable. Score '1' for this variable indicates that the respondent considers at least one of the four listed types of cultural amenities very important.

	Model a: All Exp(B)	Model b: Amster- dam Exp(B)	Model c: Eindhoven Exp(B)	Model d: Dutch workers Exp(B)	Model e: Internationals Exp(B)
Age	.998	1.005	.991	.999	.986
Households with children	.825	.586**	1.048	.803	1.019
Single person households	.739	.865	.571*	.726	.719
High incomes	1.056	.985	1.145	1.044	1.105
Low incomes	1.237	1.284	1.111	1.419	.818
University educated	1.422**	1.665**	1.209	1.391*	1.790
Creative workers	1.146	.945	1.513	1.065	X
Technical workers	.541***	.609	.468***	.536**	.468*
Working in Eindhoven (ref. = Amsterdam)	.582***	X	X	.560***	.802
International worker (ref. = raised in Netherlands)	1.727**	1.503	2.152**	X	X
Migrant from country with advanced economy (ref. all other migrants)	X	X	X	X	1.587
Constant	.583	.440	.486	.574	.978
R-square	.068	.058	.053	.056	.090

\*\*\*  $p < 0.001$ ; \*\*  $p < 0.01$ ; \*  $p < 0.05$

**Table 4.6 The availability of cultural amenities in the region is very important; differences between Dutch and international workers in the two city regions.**

Table 4.6, Model a, confirms that within the total population of knowledge workers, the total population, cultural amenities (museums, theatre, classical concerts and pop and jazz concerts) are more often considered very important by international workers than by Dutch workers.

Also a number of the control variables showed significant relationships. Cultural amenities are valued lower by technical workers than by the rest of the workforce. Also workers in the Eindhoven region are less likely to attach high value to cultural amenities at the regional level. Of the demographic controls, only being university educated is significantly and positively related to attaching very high importance to the availability of cultural amenities.

Models b and c show the separate models for the two city regions. Interestingly, the differences between Dutch and international workers on the one hand, and between technical workers and the rest of the workforce on the other, are significant in the Eindhoven region -in accordance with the general model- but not in Amsterdam. This may be due to the fact that cultural amenities are in general considered more important in Amsterdam than in Eindhoven. People who chose to work



and live in the Amsterdam region, both Dutch and international, on average attach more value to the stock of cultural amenities than people who chose for the Eindhoven region. In Eindhoven, education level is not related to the value attached to the availability of cultural amenities in the region. Whereas only in Eindhoven, single person households seem to attach less value to cultural amenities, in Amsterdam particularly households with children less often consider these amenities very important.

Models d and e show the separate models for Dutch and international workers. Within both categories, technical workers attach less value to the availability of cultural amenities in the region. However, the negative relationship between working in Eindhoven and the high valuation of cultural amenities is only valid for Dutch workers, whereas there is no regional effect within the migrant group. For the international population, also education level does not significantly influence the valuation of cultural amenities. This may be due to the fact that a larger share of the international workers is highly educated (70 percent), compared to the Dutch sample (43 percent), as we have seen in Chapter 3. In the model for internationals, an additional variable was included for 'migrant from country with advanced economy', which is not significantly related to the valuation of cultural amenities in the region.

	Model a: All Exp(B)	Model b: Amster- dam Exp(B)	Model c: Eindhoven Exp(B)	Model d: Dutch workers Exp(B)	Model e: Internationals Exp(B)
<b>Age</b>	1.038***	1.032***	1.040***	1.034***	1.063***
<b>Households with children</b>	.873	.905	.852	.828	.855
<b>Single person households</b>	1.044	1.206	.944	.921	1.500
<b>High incomes</b>	1.105	1.153	1.105	1.096	.960
<b>Low incomes</b>	1.041	1.140	.987	1.162	.664
<b>University educated</b>	1.388**	1.216	1.482*	1.405**	1.449
<b>Creative workers</b>	1.344	1.002	1.745	1.366	X
<b>Technical workers</b>	.410***	.373***	.412***	.391***	.408*
<b>Working in Eindhoven (ref. = Amsterdam)</b>	.425***	X	X	.396***	.691
<b>International worker (ref. = raised in Netherlands)</b>	2.246***	1.709*	2.769***	X	X
<b>Migrant from country with advanced economy (ref. all other migrants)</b>	X	X	X	X	1.709
<i>Constant</i>	.262***	.366*	.095***	.335***	.141*
<i>R-square</i>	.194	.084	.144	.187	.254

\*\*\*  $p < 0.001$ ; \*\*  $p < 0.01$ ; \*  $p < 0.05$

**Table 4.7 Museums important: differences between Dutch and international workers in the two city regions**

Similar models have been constructed for individual cultural amenities. Here, the categories 'very important' and 'important' were combined, since at most 10 percent considers each individual cultural amenity important. These models largely confirm the general picture for cultural amenities. Table 4.7 shows that international workers relatively more often consider the availability of museums in the region important than Dutch workers. This finding is robust in the two regional sub models as well. Within the group of international workers, there are no significant differences between different groups of origin, but technical internationals less often consider museums an

important factor. Level of education (positively) and working in Eindhoven (negatively) are only significantly related to the valuation of museums among Dutch workers.

Also in general, technical workers are less likely to attach importance to the availability of museums in the region, since this finding is robust in all models. Workers in Eindhoven less often consider museums important, but this finding is not significant within the migrant population.

Of the demographic controls, an age effect was found in all models, as the importance of museums increases with age. Being university educated is also significantly and positively related to the valuation of museums, except in Amsterdam and for international workers.

	Model a: All Exp(B)	Model b: Amster- dam Exp(B)	Model c: Eindhoven Exp(B)	Model d: Dutch workers Exp(B)	Model e: Internationals Exp(B)
Age	1.048***	1.050***	1.046***	1.046***	1.064***
Households with children	.793	.790	.800	.806	.747
Single person households	.894	.847	.946	.894	.827
High incomes	1.010	1.010	1.058	1.136	.522
Low incomes	1.007	1.081	.919	1.090	.757
University educated	1.494**	1.334	1.587**	1.424**	2.021*
Creative workers	1.580	1.629	1.460	1.432	X
Technical workers	.490***	.440**	.429***	.396***	.637
Working in Eindhoven (ref. = Amsterdam)	.561***	X	X	.469***	1.417
International worker (ref. = raised in Netherlands)	2.137***	1.247	3.860***	X	X
Migrant from country with advanced economy (ref. all other migrants)	X	X	X	X	1.395
Constant	.070***	.076***	.038***	.084***	.040***
R-square	.167	.114	.154	.180	.163

\*\*\*  $p < 0.001$ ; \*\*  $p < 0.01$ ; \*  $p < 0.05$

**Table 4.8 Classical concerts important: differences between Dutch and international workers in the two city regions**

Similar outcomes were found regarding the valuation of classical music concerts (Table 4.8). Internationals significantly more often consider this important than Dutch workers, although in Amsterdam, no difference between Dutch and international workers exists. This may be explained by the in general higher valuation of all cultural amenities in the Amsterdam region, both by Dutch and international workers. Within the migrant population, no differences were found between migrants from advanced economies and others, but in line with the general model, older and university educated migrants more often consider classical concerts important. Occupation in the high-tech sector negatively influences the valuation of classical concerts among Dutch workers, but not among international workers. Also working in Eindhoven only has a negative significant effect for the Dutch workers.

	Model a: All Exp(B)	Model b: Amster- dam Exp(B)	Model c: Eindhoven Exp(B)	Model d: Dutch workers Exp(B)	Model e: Internationals Exp(B)
Age	.983***	.986	.981**	.979***	1.010
Households with children	1.012	1.117	.955	.950	1.138
Single person households	1.225	1.578*	1.020	1.232	1.035
High incomes	.927	.815	1.038	.911	.881
Low incomes	.871	.837	.874	.871	.888
University educated	1.147	1.218	1.077	1.147	1.305
Creative workers	2.962***	2.355**	4.051***	2.973***	X
Technical workers	.520***	.494**	.527***	.546***	.448*
Working in Eindhoven (ref. = Amsterdam)	.865	X	X	.833	1.198
International worker (ref. = raised in Netherlands)	1.006	.965	1.067	X	X
Migrant from country with advanced economy (ref. all other migrants)	X	X	X	X	1.720
Constant	1.636	1.365	1.634	2.067*	.368
R-square	.059	.067	.054	.065	.080

\*\*\*  $p < 0.001$ ; \*\*  $p < 0.01$ ; \*  $p < 0.05$

**Table 4.9 Pop and jazz concerts important: differences between Dutch and international workers in the two city regions**

For the valuation of popular and jazz music concerts, there are no significant differences between Dutch and international workers, as is shown by Table 4.9. In line with findings for other cultural amenities, especially technical workers are less likely to attach high value to classical music concerts. This negative relationship is also the only significant effect within the migrant model, indicating that also among migrants, technicians are the least interested in concerts.

For this specific type of cultural amenity, there is also a significant positive relationship between the valuation and being employed in creative industries. Concerning the demographic controls, we found a negative age effect, except in Amsterdam and among internationals: while older workers attach more importance to classical music concerts, especially younger workers consider popular and jazz music concerts important. In Amsterdam in specific, single-person households relatively often consider pop and jazz concerts important.

	Model a: All Exp(B)	Model b: Amster- dam Exp(B)	Model c: Eindho- ven Exp(B)	Model d: Dutch workers Exp(B)	Model e: Internationals Exp(B)
Age	1.027***	1.014	1.035***	1.024***	1.050**
Households with children	1.043	1.132	.998	1.003	1.225
Single person households	.842	1.038	.737	.911	.533
High incomes	1.230	1.307	1.246	1.291	.994
Low incomes	1.080	1.280	.986	1.075	.867
University educated	1.318*	1.000	1.503**	1.280*	1.410
Creative workers	1.027	.907	1.014	.950	X
Technical workers	.534***	.427**	.564**	.552***	.392*
Working in Eindhoven (ref. = Amsterdam)	.785*	X	X	.704*	1.566
International worker (ref. = raised in Netherlands)	.799	.550**	1.080	X	X
Migrant from country with advanced economy (ref. all other migrants)	X	X	X	X	.898
Constant	.419**	.858	.224***	.527*	.136**
R-square	.090	.065	.104	.075	.192

\*\*\*  $p < 0.001$ ; \*\*  $p < 0.01$ ; \*  $p < 0.05$

**Table 4.10 Theatre important: differences between Dutch and international workers in the two city regions**

The valuation of the availability of theatres at the regional level is in general not different between Dutch and international workers (Table 4.10), contrasting the findings for other cultural amenities. Only in the Amsterdam (model b) we found a negative effect: internationals less often consider the availability of theatres in the region important than Dutch workers. This may be due to a language barrier, since most theatre plays are in Dutch language. In general, workers in Amsterdam attach more value to theatre plays than workers in Eindhoven, which may also explain why this difference is only visible in the Amsterdam region.

Within the model for migrants (e), we found that the importance of theatre plays increases with age and is significantly lower among those with a technical profession. In this respect, migrants do not differ much from the population in general. For Dutch workers (d), also working in Eindhoven (negatively) and being university educated (positively) influence the valuation of theatres.

In general and in line with previous models, technical workers attach less value to theatres, while higher educated and older workers consider this more important. Also a positive age effect is found, as older workers more often attach high value to theatres than younger workers (except in Amsterdam).

#### The valuation of catering amenities

The valuation of catering amenities was measured both at the neighbourhood and the regional scale. The models in tables 4.9 and 4.10 present the characteristics of the workers who attach high value to these aspects at both levels.

	Model a: All Exp(B)	Model b: Amster- dam Exp(B)	Model c: Eindhoven Exp(B)	Model d: Dutch workers Exp(B)	Model e: Internationals Exp(B)
Age	.960***	.956***	.960***	.958***	.964*
Households with children	.691*	.529**	.841	.691*	.625
Single person households	.916	1.021	.776	.837	1.067
High incomes	1.516*	1.271	1.822**	1.562*	1.199
Low incomes	.984	.713	1.209	1.147	.654
University educated	1.441**	1.725**	1.212	1.511*	1.295
Creative workers	2.014**	1.455	3.000**	2.057**	X
Technical workers	.647**	.691	.643*	.593**	.718
Working in Eindhoven (ref. = Amsterdam)	.540***	X	X	.492***	.900
International worker (ref. = raised in Netherlands)	1.362	.929	1.974**	X	X
Migrant from country with advanced economy (ref. all other migrants)	X	X	X	X	1.740
Constant	1.960*	2.704*	.963	2.154*	1.479
R-square	.116	.126	.094	.117	.081

\*\*\*  $p < 0.001$ ; \*\*  $p < 0.01$ ; \*  $p < 0.05$

**Table 4.11 The valuation of catering amenities (restaurants, cafes and bars) in the region; differences between Dutch and international workers**

Table 4.11 shows that only in the Eindhoven region, international workers consider the stock of restaurants, cafes and bars at the regional level significantly more important than Dutch workers. However, at the neighbourhood level, we also find a general positive significant relationship between being an international and the valuation of catering amenities (Table 4.12). Within the migrant community, migrants from countries with advanced economies more often consider catering amenities at the neighbourhood -but not the regional- level of utmost importance. For internationals, catering amenities likely function as meeting places where they can get into contact with Dutch people and other migrants alike. It is perhaps for this reason that internationals prefer to have these amenities within close proximity of their home.

Also occupation matters, since creative workers attach more value to catering amenities at the regional level, whereas technical workers consider these amenities less importance. When looking at the neighbourhood level, the positive effect for being a creative worker only remains significant in the Eindhoven model, whereas the negative effect of being a technical worker loses significance overall.

Regarding demographic aspects, catering amenities at the regional level are generally considered important by high income households and workers with university education, whereas older workers and households with children less often attach high value to these factors. At the neighbourhood level, however, the household situation and level of education are not significantly related to the valuation of catering amenities.

	Model a: All Exp(B)	Model b: Amster- dam Exp(B)	Model c: Eindhoven Exp(B)	Model d: Dutch workers Exp(B)	Model e: Interna- tionals Exp(B)
Age	.955***	.950***	.956***	.956***	.940**
Households with children	.834	.748	.931	.810	.909
Single person households	.966	1.263	.660	.868	1.206
High incomes	1.865***	1.574	2.435**	1.904**	1.782
Low incomes	1.364	.944	2.017*	1.501	1.136
University educated	1.135	1.016	1.225	1.229	.861
Creative workers	1.403	.915	2.676*	1.375	X
Technical workers	.850	.724	.943	.784	.789
Working in Eindhoven (ref. = Amsterdam)	.431***	X	X	.358***	1.003
International worker (ref. = raised in Netherlands)	1.641**	1.011	2.679***	X	X
Migrant from country with advanced economy (ref. all other migrants)	X	X	X	X	1.935*
Constant	1.583	2.681	.464	1.641	2.521
R-square	.122	.094	.127	.113	.107

\*\*\*  $p < 0.001$ ; \*\*  $p < 0.01$ ; \*  $p < 0.05$

**Table 4.12 The valuation of catering amenities (restaurants, cafes and bars) in the neighbourhood; differences between Dutch and international workers**

*The valuation of specialty food stores*

	Model a: All Exp(B)	Model b: Amster- dam Exp(B)	Model c: Eindhoven Exp(B)	Model d: Dutch workers Exp(B)	Model e: Interna- tionals Exp(B)
Age	.983*	.989	.974**	.985*	.968
Households with children	1.118	.947	1.311	1.116	1.182
Single person households	.768	1.130	.409*	.766	.662
High incomes	1.126	1.045	1.344	1.127	1.222
Low incomes	.910	.665	1.203	1.262	.330*
University educated	1.568**	1.658*	1.398	1.598**	1.502
Creative workers	1.732*	1.542	2.204	1.456	X
Technical workers	.633*	.522	.651	.645	.415*
Working in Eindhoven (ref. = Amsterdam)	.555***	X	X	.487***	1.141
International worker (ref. = raised in Netherlands)	2.060***	1.604	2.850***	X	X
Migrant from country with advanced economy (ref. all other migrants)	X	X	X	X	1.543
Constant	.376**	.310*	.282*	.361*	1.076
R-square	.078	.050	.090	.056	.110

\*\*\*  $p < 0.001$ ; \*\*  $p < 0.01$ ; \*  $p < 0.05$

**Table 4.13 The valuation of specialty food stores in the region; differences between Dutch and international workers**

Also the valuation of specialty food stores was measured at both the regional and the neighbourhood level. Specialty food stores are more often highly valued by internationals than by Dutch workers, both at the regional (Table 4.13) and the neighbourhood level (Table 4.14). There are no significant differences between migrants from advanced economies and other migrants.

Within the group of international workers, only technical workers, low income groups (at the regional level) and older workers (at the neighbourhood level) are less likely to attach high value to specialty food stores. Dutch technical workers also consider specialty food stores less important, although this finding is only significant for the neighbourhood level. Only for Dutch workers, also a negative regional effect for working in Eindhoven was found at both the neighbourhood and the regional level. Among Dutch workers, in line with the general model, there is also a negative age effect, a positive effect of level of education (at the regional level) and a positive income effect (at the neighbourhood level).

In general, technical workers and workers in Eindhoven are less likely to consider specialty food stores very important, whereas workers with university education attach more value to these amenities. At the regional -but not the neighbourhood- level, also creative workers consider specialty food stores more important than other types of workers.

	Model a: All Exp(B)	Model b: Amster- dam Exp(B)	Model c: Eindhoven Exp(B)	Model d: Dutch workers Exp(B)	Model e: Interna- tionals Exp(B)
Age	.973***	.979*	.961**	.972**	.963*
Households with children	.953	.703	1.263	.926	1.114
Single person households	.788	.985	.498	.827	.590
High incomes	1.536*	1.514	1.775*	1.644*	1.227
Low incomes	1.415	1.294	1.382	1.689	.837
University educated	1.489*	1.839**	1.078	1.364	2.182
Creative workers	1.041	.780	1.706	.918	X
Technical workers	.487**	.415*	.465**	.462**	.418*
Working in Eindhoven (ref. = Amsterdam)	.544***	X	X	.460***	1.067
International worker (ref. = raised in Netherlands)	1.853**	1.295	3.118***	X	X
Migrant from country with advanced economy (ref. all other migrants)	X	X	X	X	1.975
Constant	.474	.386	.413	.540	.565
R-square	.083	.066	.094	.071	.107

\*\*\*  $p < 0.001$ ; \*\*  $p < 0.01$ ; \*  $p < 0.05$

**Table 4.14 The valuation of specialty food stores in the neighbourhood; differences between Dutch and international workers**



	Model a: All Exp(B)	Model b: Amster- dam Exp(B)	Model c: Eindhoven Exp(B)	Model d: Dutch workers Exp(B)	Model e: Internationals Exp(B)
Age	1.006	1.008	1.003	1.008	.997
Households with children	1.141	.777	1.435*	1.146	1.220
Single person households	.857	.768	.880	.787	1.097
High incomes	.951	.619*	1.137	.919	.990
Low incomes	1.224	1.416	1.074	1.390	.915
University educated	.840	.693*	.965	.881	.755
Creative workers	.558*	.602	.499*	.595*	X
Technical workers	.866	1.765*	.656*	.816	1.344
Working in Eindhoven (ref. = Amsterdam)	1.129	X	X	1.260*	.618
International worker (ref. = raised in Netherlands)	1.483**	2.019**	1.215	X	X
Migrant from country with advanced economy (ref. all other migrants)	X	X	X	X	1.236
Constant	.573*	.618	.693	.483*	1.255
R-square	.020	.067	.030	.023	.033

\*\*\*  $p < 0.001$ ; \*\*  $p < 0.01$ ; \*  $p < 0.05$

**Table 4.15 The valuation of public green in the region; differences between Dutch and international workers**

The final soft condition is public green areas and parks, for which the valuation was also measured at both the regional (Table 4.15) and the neighbourhood scale (Table 4.16). In the general models, we find that public green areas are considered more important by internationals than by Dutch workers, both at the regional and the neighbourhood level. Within the migrant community, no significant differences were found. Within the Dutch population, households with children more often consider public green areas at the neighbourhood level very important, whereas Dutch workers in the Eindhoven region attach more value to public green at the regional scale level than Dutch workers in Amsterdam. Dutch creative workers relatively less often consider public green areas at the regional level very important.

When comparing the two city regions, the positive significant effect of being an international is valid in Amsterdam, but not in Eindhoven. Only when looking at the regional level, differences in occupation were found. Interestingly, whereas technical workers in Amsterdam more often consider public green areas very important, in Eindhoven both technical and creative workers are less likely to consider these aspects very important than the rest of the workforce. The negative effect of being a creative worker is also significant in the general model and the model for Dutch workers only.

Also in general, households with children consider green areas at the neighbourhood level more important than other household types. At the regional level, this is only the case for households with children in Eindhoven.

	Model a: All Exp(B)	Model b: Amster- dam Exp(B)	Model c: Eindhoven Exp(B)	Model d: Dutch workers Exp(B)	Model e: Internationals Exp(B)
Age	1.003	1.008	.999	1.004	1.003
Households with children	1.286*	.924	1.575**	1.296*	1.289
Single person households	.858	.935	.768	.800	1.158
High incomes	1.062	.657	1.479*	1.109	.753
Low incomes	1.132	1.345	.972	1.334	.572
University educated	.943	.834	.990	.985	.783
Creative workers	.689	.661	.695	.705	X
Technical workers	.891	1.129	.800	.886	.966
Working in Eindhoven (ref. = Amsterdam)	1.059	X	X	1.117	.796
International worker (ref. = raised in Netherlands)	1.491**	1.769*	1.382	X	X
Migrant from country with advanced economy (ref. all other migrants)	X	X	X	X	.837
Constant	.611	.593	.705	.546*	1.394
R-square	.016	.037	.041	.016	.027

\*\*\*  $p < 0.001$ ; \*\*  $p < 0.01$ ; \*  $p < 0.05$

**Table 4.16 The valuation of public green in the neighbourhood; differences between Dutch and international workers**

*The valuation of accessibility by car*

	Model a: All Exp(B)	Model b: Amster- dam Exp(B)	Model c: Eindhoven Exp(B)	Model d: Dutch workers Exp(B)	Model e: Internationals Exp(B)
Age	1.000	1.001	1.102	.995	1.044**
Households with children	1.076	.903	1.170	1.021	1.535
Single person households	.956	1.069	.931	1.057	.487
High incomes	1.523**	1.670*	1.607**	1.584**	1.118
Low incomes	.673*	.454*	.825	.575**	1.244
University educated	.731**	.529**	.823	.701**	.881
Creative workers	.684	.836	.541	.696	X
Technical workers	1.370*	.702	1.597**	1.277	2.702*
Working in Eindhoven (ref. = Amsterdam)	2.053***	X	X	1.814***	3.759***
International worker (ref. = raised in Netherlands)	.975	.633	1.197	X	X
Migrant from country with advanced economy (ref. all other migrants)	X	X	X	X	.891
Constant	.290***	.408	.464*	.426**	.024***
R-square	.068	.060	.041	.060	.222

\*\*\*  $p < 0.001$ ; \*\*  $p < 0.01$ ; \*  $p < 0.05$

**Table 4.17 The valuation of accessibility by car and parking space at the regional level; differences between Dutch and international workers in the two regions**

Looking at accessibility as a hard factor, international workers do not appear to attach significantly more or less value to accessibility per car than Dutch workers, both at the regional (Table 4.17) and the neighbourhood scale (Table 4.18). Comparing the sub models for Dutch and international workers, we see that within both groups, workers in Eindhoven attach more value to accessibility by car (at both scale levels) than workers in Amsterdam. However, only within the migrant population, technical workers and older workers are significantly more likely to consider accessibility by car very important (at both scale levels). Although the effect for technical workers is also found in the general model (for the regional level) and the Eindhoven model (both scale levels), the positive age effect is specific for the international population.

For the rest, Dutch workers closely resemble the general population. There is a clear positive relationship between having a high income and the importance of accessibility by car, at both the regional and the neighbourhood level. Only at the regional scale level, there is also a negative effect of having a low household income and for being university educated. For internationals, income and level of education seem unrelated to the valuation of car accessibility.

	Model a: All Exp(B)	Model b: Amster- dam Exp(B)	Model c: Eindhoven Exp(B)	Model d: Dutch workers Exp(B)	Model e: Internationals Exp(B)
Age	1.004	1.008	1.003	1.000	1.032*
Households with children	1.026	1.146	.985	1.013	1.090
Single person households	.904	1.235	.779	.934	.654
High incomes	1.468**	1.763**	1.427*	1.475**	1.391
Low incomes	.759	.568	.909	.698	1.140
University educated	.874	.666*	.989	.861	.870
Creative workers	.640	.844	.489*	.615	X
Technical workers	1.249	.761	1.385*	1.109	2.432*
Working in Eindhoven (ref. = Amsterdam)	1.682***	X	X	1.521***	2.656**
International worker (ref. = raised in Netherlands)	.905	.690	1.076	X	X
Migrant from country with advanced economy (ref. all other migrants)	X	X	X	X	1.004
Constant	.415**	.375*	.668	.557*	.072**
R-square	.046	.053	.029	.037	.155

\*\*\*  $p < 0.001$ ; \*\*  $p < 0.01$ ; \*  $p < 0.05$

**Table 4.18 The valuation of accessibility by car and parking space at the neighbourhood level; differences between Dutch and international workers in the two regions**

	Model a: All Exp(B)	Model b: Amster- dam Exp(B)	Model c: Eindhoven Exp(B)	Model d: Dutch workers Exp(B)	Model e: Interna- tionals Exp(B)
Age	.999	1.000	.994	1.003	.972
Households with children	.525***	.407***	.635**	.496***	.887
Single person households	.920	.880	.900	.820	2.080
High incomes	.760	.619*	.778	.713*	1.188
Low incomes	1.875***	1.819*	1.724*	1.818**	2.047
University educated	1.123	1.315	1.036	1.148	1.055
Creative workers	.552*	.518*	.645	.648	X
Technical workers	.796	1.699*	.516**	.820	.612
Working in Eindhoven (ref. = Amsterdam)	.299***	X	X	.305***	.262***
International worker (ref. = raised in Netherlands)	2.936***	2.866***	3.392***	X	X
Migrant from country with advanced economy (ref. all other migrants)	X	X	X	X	.547
Constant	1.293	1.227	.522	1.120	12.068**
R-square	.195	.155	.096	.146	.210

\*\*\*  $p < 0.001$ ; \*\*  $p < 0.01$ ; \*  $p < 0.05$

**Table 4.19 The valuation of accessibility by public transport at the regional level; differences between Dutch and international workers in the two regions**

Tables 4.19 and 4.20 show that international migrants significantly more often attach high value to accessibility by public transport than Dutch workers, both at the regional and the neighbourhood level. For both spatial levels, these findings are also robust in the two regional sub models. Within both the Dutch and the international population, a negative regional effect was found at both scale levels: workers in Eindhoven relatively less often consider accessibility by public transport very important. Also a positive effect was found between having a low income household and the valuation of accessibility by public transport, although this is not significant for internationals when only considering the regional scale level.

However, within the international population no other significant differences were found. The Dutch population closely resembles the population in general. For accessibility at both the regional and the neighbourhood scale level, a negative effect was found for having a high income and for having a household with children. Only at the neighbourhood level, (Dutch) technical workers are less likely to consider accessibility by public transport very important.

Also a negative effect at both scale levels was found for workers in creative industries, although this effect is only valid for the population in general and for workers in Amsterdam, and not in the other sub models.

	Model a: All Exp(B)	Model b: Amster- dam Exp(B)	Model c: Eindhoven Exp(B)	Model d: Dutch workers Exp(B)	Model e: Internationals Exp(B)
Age	.998	.997	.996	1.000	.986
Households with children	.679**	.497	.868	.666**	.861
Single person households	.954	1.137	.784	.938	1.256
High incomes	.722*	.779	.639*	.692*	1.066
Low incomes	1.960***	1.896*	1.887**	1.762**	2.929*
University educated	1.151	1.385	.990	1.170	1.001
Creative workers	.556*	.454*	.765	.665	X
Technical workers	.667**	.833	.559**	.679*	.590
Working in Eindhoven (ref. = Amsterdam)	.288***	X	X	.285***	.313**
International worker (ref. = raised in Netherlands)	3.014***	2.552***	3.669***	X	X
Migrant from country with advanced economy (ref. all other migrants)	X	X	X	X	.591
Constant	1.299	1.334	.435*	1.198	6.948**
R-square	.197	.135	.092	.148	.188

\*\*\*  $p < 0.001$ ; \*\*  $p < 0.01$ ; \*  $p < 0.05$

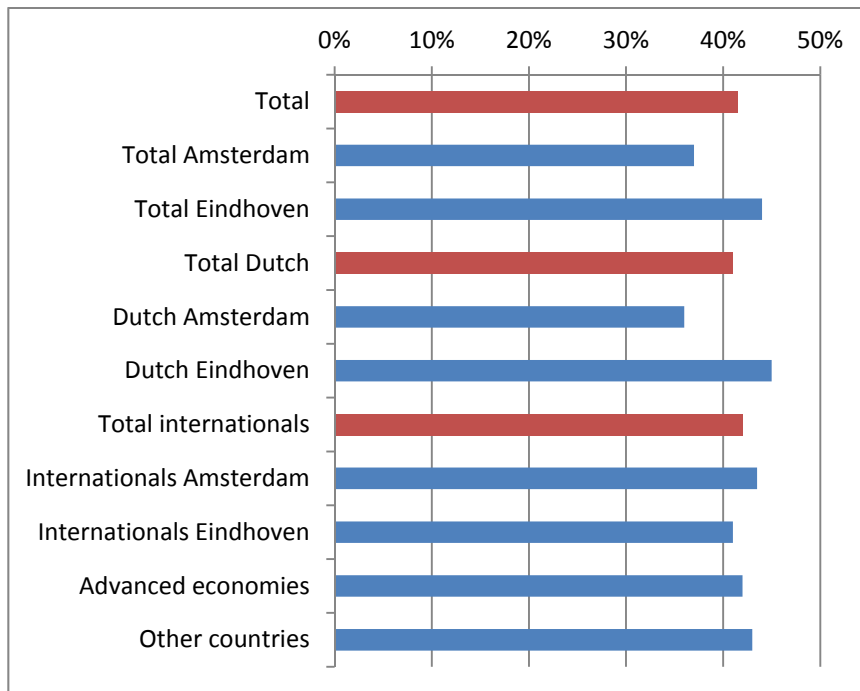
**Table 4.20 The valuation of accessibility by public transport at the neighbourhood level; differences between Dutch and international workers in the two regions**

#### 4.4 The role of diversity

According to Florida's (2002) Creative Class theory, areas characterized by a high degree of diversity are more attractive for workers in creative and knowledge-intensive sectors. In our survey, one statement was included that measures the importance of diversity within the neighbourhood: "I prefer to live in an area where most people are like me". People who agree with this statement tend to prefer more homogeneous residential milieus.

Based on Figure 4.3, 42 percent of the population agrees with this statement, which implies that nearly half of the population has a preference for districts with a homogeneous population. There are no notable differences between the Dutch and international populations in this respect, and also within the migrant community differences are small. Rather, we see some small regional differences, since workers in Eindhoven (44 percent) somewhat more often agree with this statement than workers in Amsterdam (37 percent). An interesting finding is that in Amsterdam, the international population (44 percent) seems to be more supportive of the statement than the Dutch population (36 percent). This could be interpreted in two ways, however: either the internationals prefer a homogeneous area, or they prefer an area with many other international people. In Eindhoven, differences between Dutch workers and internationals are minimal, but Dutch workers (45 percent) have a slightly higher preference for living amongst people like themselves than internationals (41 percent).

**Figure 4.5 Response to statement “I prefer to live in an area where most people are like me”; differences between Dutch and international workers in Amsterdam and Eindhoven**



The most important conclusion that can be drawn from Figure 4.5 is that also among highly-skilled workers, there are nearly equally as many people who prefer homogeneous districts than highly diverse districts.

	Model a: All Exp(B)	Model b: Amster- dam Exp(B)	Model c: Eindhoven Exp(B)	Model d: Dutch workers Exp(B)	Model e: Internationals Exp(B)
<b>Age</b>	.990*	.984*	.993	.992	.975
<b>Households with children</b>	1.193	1.224	1.169	1.184	1.344
<b>Single person households</b>	1.043	1.132	.981	.965	1.607
<b>High incomes</b>	1.286	1.295	1.246	1.308	1.064
<b>Low incomes</b>	.963	1.048	.921	1.046	.697
<b>University educated</b>	.830	.808	.851	.806	1.091
<b>Creative workers</b>	1.139	1.003	1.275	1.171	X
<b>Technical workers</b>	1.307*	1.482	1.295	1.352*	1.103
<b>Working in Eindhoven (ref. = Amsterdam)</b>	1.408**	X	X	1.502**	.967
<b>International worker (ref. = raised in Netherlands)</b>	1.050	1.242	.905	X	X
<b>Migrant from country with advanced economy (ref. all other migrants)</b>	X	X	X	X	.926
<i>Constant</i>	.808	.983	1.037	.709	1.646
<i>R-square</i>	.031	.031	.016	.035	.045

\*\*\*  $p < 0.001$ ; \*\*  $p < 0.01$ ; \*  $p < 0.05$

**Table 4.21 Agrees with statement “I prefer to live in an area where most people are like me”; differences between Dutch and international workers in the two regions**

The regression model presented in Table 4.21 confirms that there are no significant differences between Dutch and international workers, and not between different categories of migrants, regarding the response to this statement. Dutch workers closely resemble the total population, since Dutch technical workers and Dutch workers in the Eindhoven region are relatively more often supportive of this statement, in line with the general model. In the general model, also a negative age effect was found, implying that younger workers tend to prefer districts with people like themselves. This effect did not hold in the other sub-models, however.



## 5. Stated preferences for residential milieus: differences between Dutch and international workers

In the questionnaire, respondents were asked to express their preferences for urban or suburban residential areas, regardless of their actual place of residence or their relocation propensity. In general, the relocation propensity of the population is rather low, since 28 percent of all respondents expects to move within the Netherlands within the following years. Among international workers, relocation propensity is somewhat higher: 39 percent, compared to 27 percent among Dutch workers.

This chapter deals with the second research question: *"To what extent do stated preferences for urban or suburban residential milieus differ between Dutch and international knowledge workers, and within the group of international workers?"*

This study tries to find answers to this question in three ways. First, respondents were asked to rank a list of names of residential districts from 1 to 10, with 1 standing for the district where they would like to live most and 10 standing for the least popular district. These districts could be subdivided into inner-city, edge-urban or suburban districts, and the average ranking for these categories represent urban or suburban preferences. These reversed average rankings will be presented in section 5.1.

Second and similarly, respondents were asked to rank ten pictures of residential milieus, five of which represent urban milieus and the other five suburban milieus, from 1 to 10. The dummy variables 'urban area in Top 3' (1=yes, 0=no), 'urban area first choice' (1=yes, 0=no), 'inner-city district in Top 3' (1=yes, 0=no), 'inner-city district first choice' (1=yes, 0=no) and 'suburban area first choice' (1=yes, 0=no) have been constructed in order to investigate which characteristics of workers contribute to having urban, inner-city or suburban residential preferences. These rankings will be presented in section 5.2, together with regression analyses describing the characteristics of workers with urban or suburban preferences.

Finally, the analysis of the statement "I would rather live in a big house in the suburbs than in a small apartment in the city" is used as a measurement of urban or suburban residential preferences. Respondents who agree or fully agree with this statement are believed to have more suburban preferences than those who do not. The initial five-point scale of this variable was recoded into a dummy variable for 'agreeing or not' (1=yes, 0=no). Section 5.3 will deal with the different

responses to this statement by Dutch and international workers, as well as models that show the characteristics of those workers who support this statement.

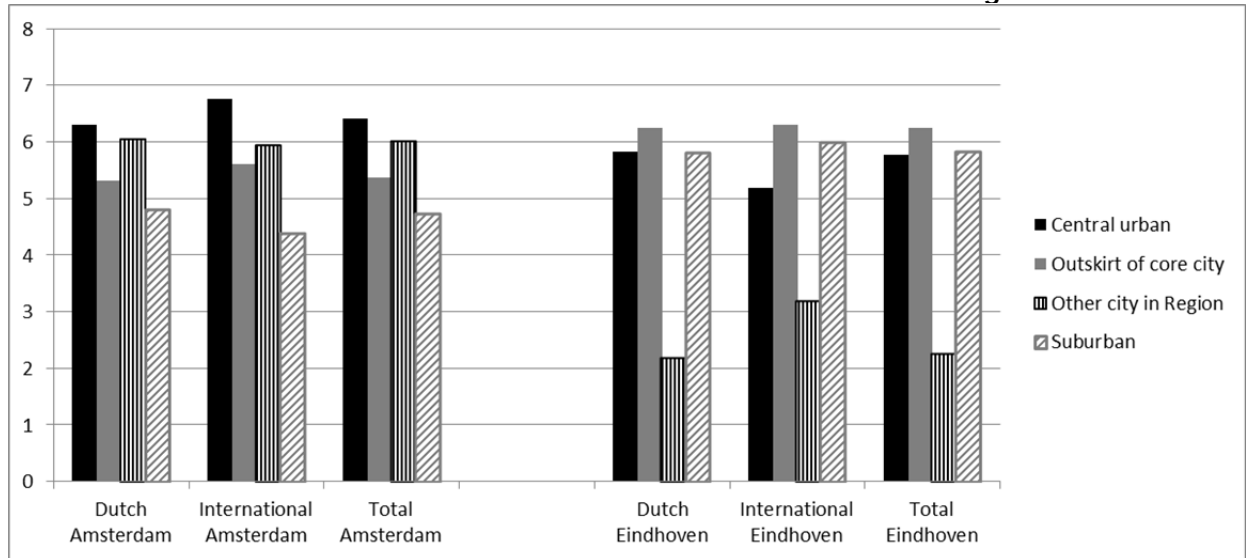
## 5.1 Measuring residential preferences by ranking names of residential districts

Amsterdam Metropolitan Area	Metropolitan region Eindhoven
A) Jordaan B) Indische Buurt C) Watergraafsmeer D) IJburg E) Buitenveldert F) Almere/Hoofddorp G) Abcoude H) Bussum I) Broek in Waterland e.o. J) Haarlem	A) Veldhoven B) Binnenstad Eindhoven C) Woensel Zuid D) Best E) Strijp-S F) Meerhoven G) Brandevoort H) Eersel I) Geldrop J) Binnenstad Helmond
Category 'Central urban': A, B and C	Category 'Central urban': B, C and E
Category 'Outskirt' of core city': D and E	Category 'Outskirt' of core city': F
Category 'Suburban': F, G, H and I	Category 'Suburban': A, D, G, H and I
Category 'Other city in region': J	Category 'Other city in region': J

**Table 5.1 The list of residential districts that respondents in the Amsterdam and Eindhoven regions were asked to rank.**

The respondents were asked to rank ten neighbourhoods, towns or villages from 1 to 10, with 1 representing the district where they would like to live most and 10 standing for the least popular district. The areas listed (Table 5.1) are highly diverse, ranging from highly-urban to outskirts of the core city, suburban and rural areas. Respondents in Amsterdam got a list of districts in the Amsterdam Metropolitan Area, whereas respondents in Eindhoven got a list of districts in the Brainport Region. The list should give a representative overview of residential districts in both regions. For the analysis, the ten districts have been subdivided into four categories, based on their location and similar scores in a factor analysis. These four categories are 'central urban' (A, B and C in Amsterdam; B and E in Eindhoven), 'suburban' (F, G, H, I).

**Figure 5.1 The average reversed ranking (1-10) for the four categories of residential milieus: differences between Dutch and international workers in both regions.**



The rankings have later been reversed, so that the most popular districts have the highest scores. Figure 5.1 shows the average reversed rankings for each category, differentiating between Dutch and international workers in both city regions. An interesting finding is that differences in average ranking are larger between the two city-regions than between Dutch and international workers within the two regions.

In the Amsterdam region, the categories 'central urban' and especially 'other city in the region' are more highly valued than in Eindhoven, whereas in Eindhoven the categories 'outskirt of core city' and 'suburban' are valued higher than in Amsterdam. Apparently, Haarlem is considered an attractive alternative in the Amsterdam region, whereas Helmond is hardly considered attractive in the Eindhoven region.

Looking at differences between Dutch and international workers, a notable finding is that internationals in Amsterdam value central urban milieus somewhat higher than Dutch workers, whereas in Eindhoven, central urban milieus are valued higher by Dutch workers. In Amsterdam, the central urban milieu is the most popular milieu for the general population and both sub groups, followed by 'other city in the region' (Haarlem). In Eindhoven, the most popular residential milieu among the all three populations is Meerhoven, a newly developed outskirt of Eindhoven, located near the ASML campus and the A2 motorway. The second most popular milieu in Eindhoven is the suburban milieu. We do see some slight differences between internationals and Dutch workers in Eindhoven when it comes to valuing the milieus 'central urban' and 'other city in the region'. Whereas central urban milieus in the city of Eindhoven appear less popular with internationals than with Dutch workers, the inner city of Helmond seems to be relatively more popular with internationals than with Dutch workers. Still, it is the least popular category in Eindhoven, for all three populations. Thus, workers in Eindhoven, both Dutch and international, appear to be less urban oriented and more suburban oriented than workers in Amsterdam.

Rank		Dutch (avg. rank)		Internatio- nals (avg. rank)
1	Jordaan	4.27	Jordaan	3.18
2	Watergraafsmeer	4.35	Watergraafsmeer	4.42
3	Haarlem	4.94	Haarlem	5.01
4	Indische Buurt	5.44	Indische Buurt	5.18
5	IJburg	5.55	IJburg	5.28
6	Buitenveldert	5.81	Buitenveldert	5.51
7	Broek in Waterland e.o.	5.83	Abcoude	6.26
8	Abcoude	5.89	Bussum	6.48
9	Bussum	6.03	Broek in Waterland e.o.	6.77
10	Almere/ Hoofddorp	7.01	Almere/ Hoofddorp	6.92

**Table 5.2 The ranking of districts in the Amsterdam Metropolitan Area from most popular (1) to least popular (10); differences between Dutch and international workers**

Table 5.2 shows the average rankings (from 1 to 10, ranging from most to least popular) that were given to the different districts by Dutch and international workers in the Amsterdam Metropolitan Area. The districts marked in green are relatively more popular with Dutch workers compared to international workers (or vice versa) and areas marked in red are relatively less popular. Interestingly, the six most popular districts are exactly the same among Dutch and international workers. Among both groups, the three districts within the ring road in Amsterdam (Jordaan, Watergraafsmeer and Indische Buurt), as well as the City of Haarlem are the most popular choices, whereas the edge-urban districts Buitenveldert and IJburg ended up halfway the table. Although the Jordaan district in the centre of Amsterdam is the most popular district among both categories of workers, based on the exact average rankings given by the two groups, the Jordaan is clearly more popular with international workers (3.18) than with Dutch workers (4.27).

The suburban districts ended up as the bottom four among both groups of workers, but the order is different. Only Almere/ Hoofddorp was clearly the least popular among the two groups of workers. The rural area Broek in Waterland e.o. is relatively more popular with Dutch workers (5.83) than with internationals (6.77). The larger and better accessible suburbs of Abcoude and Bussum ended up slightly higher in the Top 10 of internationals than in the Top 10 of Dutch workers, but in absolute terms they did get a higher average ranking by Dutch workers.

Rank		Dutch (avg. rank)		Internationals (avg. rank)
1	Binnenstad Eindhoven	4.15	Veldhoven	3.61
2	Strijp-S	4.25	Binnenstad Eindhoven	3.95
3	Veldhoven	4.56	Strijp-S	4.25
4	Woensel Zuid	5.55	Meerhoven	4.7
5	Geldrop	5.56	Woensel Zuid	5.29
6	Meerhoven	5.57	Best	6.0
7	Best	5.64	Geldrop	6.31
8	Eersel	6.57	Eersel	6.78
9	Brandevoort	7.08	Brandevoort	7.12
10	Binnenstad Helmond	9.0	Binnenstad Helmond	8.35

**Table 5.3 The ranking of districts in the Eindhoven region from most popular (1) to least popular (10); differences between Dutch and international workers**

In the Eindhoven region, the three least popular districts are the same for Dutch and international workers. The inner city of Helmond has by far the lowest ranking for both groups, but the average ranking among international workers is somewhat higher than the average ranking by Dutch workers. Also Brandevoort, a newly-built district also in the City of Helmond, and the village of Eersel are unpopular with both Dutch and international workers, with only small differences between the average rankings.

At the top end of the Top 10, differences between the two groups are larger. For Dutch workers, the inner city of Eindhoven is the district with the highest average ranking (4.15), followed by the adjacent industrial heritage district Strijp-S. The suburb of Veldhoven ranks third. For internationals, the suburb of Veldhoven got the highest ranking (3.61), which could be related to the fact that ASML is located in Veldhoven and the high-tech campus is located nearby. This may also explain why the edge-urban district of Meerhoven within the city of Eindhoven is more popular with internationals (4<sup>th</sup>, average rank 4.7) than with Dutch workers (6<sup>th</sup>, average rank 5.57).

Veldhoven is followed by the two central urban districts: the inner-city of Eindhoven and Strijp-S. Although these areas end up lower in the Top 10 of internationals, the inner city of Eindhoven is more popular with international workers than with Dutch workers based on the exact average ranking (3.95 compared to 4.15) while Strijp-S got the same average ranking by the two groups (both 4.25).

The district Woensel-Zuid, a traditional working class neighbourhood near the inner city of Eindhoven, got a slightly higher average ranking by internationals (5.29) than by Dutch workers (5.55) in absolute terms, but is relatively more popular with Dutch workers (4<sup>th</sup>) than with internationals (5<sup>th</sup>). The opposite is true for the suburban area Best, which is ranked slightly higher by Dutch workers in absolute terms (5.64, compared to 6.0 for internationals), but higher by internationals relative to other districts. Finally, the suburb of Geldrop is more popular with Dutch workers than with internationals, both based on the average ranking and the Top 10.

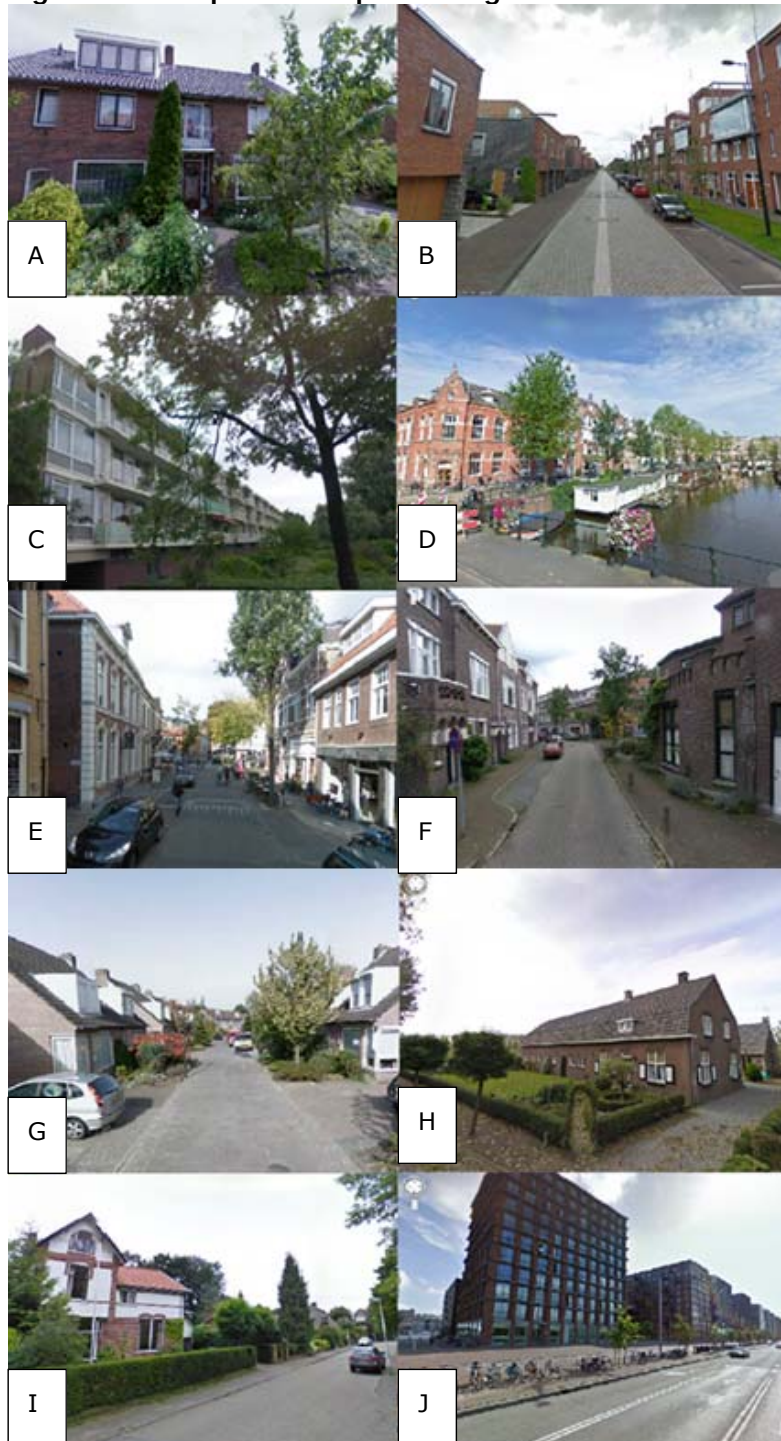
These results suggest that the residential preferences of Dutch and international workers in the Eindhoven region are highly diverse. Whereas in the Amsterdam region especially the urban areas

got high scores, in Eindhoven both urban and suburban areas are very popular. A second overall conclusion is that the districts located close to the main high-tech clusters (ASML and the High-Tech Campus) where many internationals work are more popular with internationals than with Dutch workers. Although internationals give higher average rankings to (most) inner city districts than Dutch workers, the higher rankings for Veldhoven and Meerhoven suggest that proximity to work is at least equally important for international workers than inner-city living.

## 5.2 Measuring residential preferences by ranking pictures of residential milieus

### Descriptive statistics

Figure 5.2 Ten pictures representing urban and suburban residential milieus





In the questionnaire, the respondents were asked to rank the ten pictures in Figure 5.2 from 1 to 10, with 1 standing for the most popular milieu and 10 for the least popular milieu. The pictures can be subdivided in five urban (C,D,E,F and J) and five suburban pictures (A,B,G, H and I). The five urban pictures can in turn be subdivided into historic inner city milieus (D,E and F) and high-rise (C and J). In this section, the different outcomes for Dutch and international workers are presented.

**Figure 5.3 The Top 3 of Dutch (left) and international (right) workers**



Figure 5.3 shows that Dutch and international workers both have highly diverse residential preferences, but there are some differences between the two categories. Although with both groups, the two most popular images represent suburban residential milieus, the picture ranked third is highly contrasting between both categories. Whereas the third most popular picture among Dutch workers is a rural farm, internationals prefer an inner-city canal. This indicates that international workers are slightly more urban oriented than their Dutch colleagues. The differences in ranking between the two categories furthermore indicate that Dutch workers have a stronger preference for

detached housing than internationals, since both picture J (first) and H (third) are among the most popular pictures among Dutch workers.

**Figure 5.4 The Top 3 of internationals in Amsterdam (left) and Eindhoven (right)**



Within the group of internationals, there are differences in residential preferences between Amsterdam and Eindhoven. Figure 5.4 shows that internationals in Amsterdam have a stronger preference for urban residential milieus than workers in Eindhoven. Among the three most popular images with internationals in Amsterdam are two images of inner-city milieus: D (first) and E (third). The three most popular images with internationals in Eindhoven are all suburban. Thus, although internationals are slightly more urban oriented than Dutch workers, there is also a clear regional difference. This may be due to a different population composition in Eindhoven. Internationals in Amsterdam relatively more often moved to the region because of the social and cultural climate (10 percent) than internationals in Eindhoven (3 percent). This indicates that the type of worker that chooses to live in Eindhoven has other priorities than a vibrant inner city life and is therefore in general less likely to have an outspoken preference for highly-urban milieus than the type of workers that chooses Amsterdam.

	Urban in Top 3	Urban first choice	Inner city in Top 3	Inner city first choice	Suburban in Top 3	Suburban first choice
Dutch Amsterdam	70%	45%	62%	42%	78%	55%
Dutch Eindhoven	51%	18.5%	46%	16%	94%	81.5%
<b>Total Dutch</b>	<b>58%</b>	<b>28%</b>	<b>52%</b>	<b>25%</b>	<b>88%</b>	<b>72%</b>
International Amsterdam	76%	53%	70%	49%	73%	47%
International Eindhoven	58%	29.5%	46%	23%	89%	70.5%
<i>From advanced countries</i>	68%	49%	63%	46.5%	77%	51%
<i>From other countries</i>	65%	32%	52%	24%	88%	68%
<b>Total international</b>	<b>67%</b>	<b>41%</b>	<b>58%</b>	<b>36%</b>	<b>82%</b>	<b>59%</b>
<b>Total Amsterdam</b>	<b>71%</b>	<b>46%</b>	<b>64%</b>	<b>43%</b>	<b>77%</b>	<b>54%</b>
<b>Total Eindhoven</b>	<b>52%</b>	<b>20%</b>	<b>46%</b>	<b>17%</b>	<b>94%</b>	<b>80%</b>
<b>Total</b>	<b>59.5%</b>	<b>30%</b>	<b>53%</b>	<b>27%</b>	<b>87%</b>	<b>70%</b>

**Table 5.4 Preferences for urban, inner city and suburban areas (differences between Dutch and international workers in the two cities)**

Table 5.4 shows how often urban, inner-city and suburban residential milieus were ranked among the Top 3 by the total population and different subsections. Clear differences can be observed between, on the one hand, workers in Eindhoven and Amsterdam, and internationals and Dutch workers on the other hand. Whereas 59.5 percent of the total population ranked one of the urban images in their Top 3, this is the case for 71 percent of all respondents in Amsterdam and 52 percent of all respondents in Eindhoven. A comparable difference exists for ranking inner-city images among the Top 3: 64 percent in Amsterdam and 46 percent in Eindhoven (53 percent in general). Although suburban images were often ranked among the Top 3 in both regions (by 87 percent in general), these areas are still somewhat more popular among workers in Eindhoven: 94 percent, compared to 77 percent in Amsterdam. These figures indicate that workers in Eindhoven are on general less urban oriented than workers in Amsterdam.

The differences between internationals and Dutch workers are somewhat smaller than the interregional differences. The shares of internationals who rank urban or inner-city milieus among the Top 3 are somewhat higher than the shares of Dutch workers: respectively 67 percent and 58 percent for internationals, compared to 58 percent and 52 percent for Dutch workers. Internationals also slightly less often rank suburban milieus among the Top 3 than Dutch workers: 82 percent, compared to 88 percent. Within both city-regions, internationals have a higher preference for urban areas and a lower preference for suburban areas than Dutch workers. However, regarding inner-city areas, it is remarkable that the preferences of internationals and Dutch workers are equal in Eindhoven (both 46 percent in Top 3), whereas the differences in Amsterdam reflect the general picture: 70 percent of internationals in Top 3, compared to 62 percent of Dutch workers.

Also within the group of internationals, notable interregional differences can be observed, with internationals in Eindhoven being less urban oriented (58 percent) or inner-city oriented (46 percent) than internationals in Amsterdam (76 percent and 70 percent respectively). Similarly, whereas 89 percent of the internationals in Eindhoven ranked at least one suburban milieu among the Top 3, this is the case for 73 percent of the internationals in Amsterdam. Internationals in



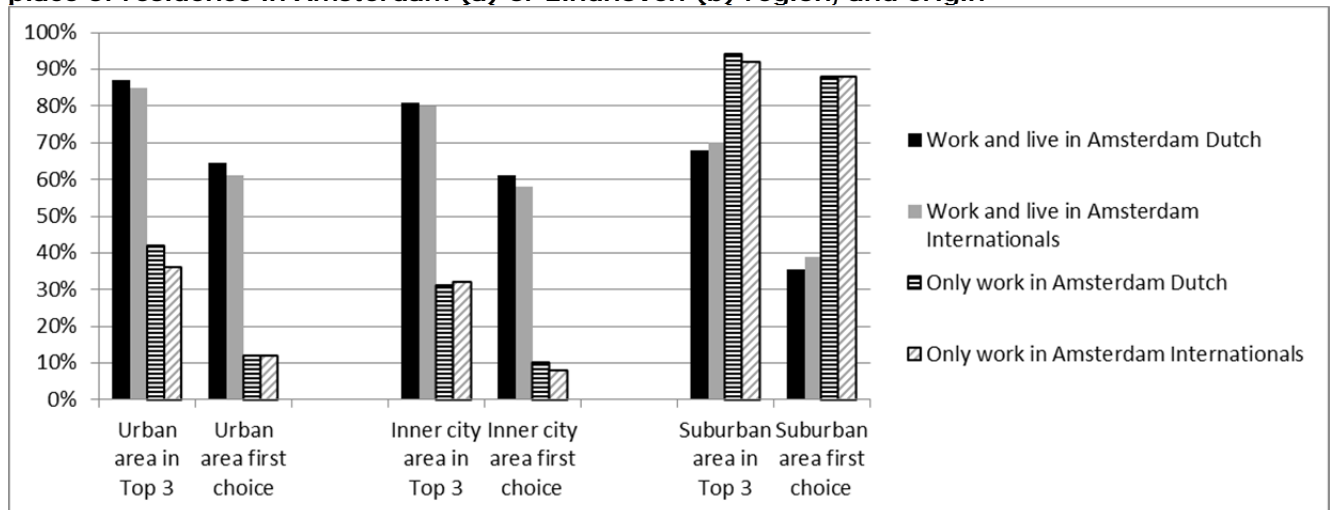
Amsterdam show the highest preference of all groups for urban and inner city milieus, while they have the lowest score for suburban milieus. Dutch workers in Eindhoven have the lowest preference for urban areas and the highest for suburban milieus.

Table 5.4 shows that, in general, residential preferences are rather mixed, but highly educated people tend to have a slight preference for suburban areas. Of the total population, 59 percent chose at least one urban area among the three most preferred milieus, and for 30 percent, an urban area was the first choice. Of the urban areas, inner city districts are clearly more popular than high-rise districts. However, 87 percent mentioned at least one suburban area among the Top 3 and for 70 percent of the total population, a suburban area was even the most popular residential milieu.

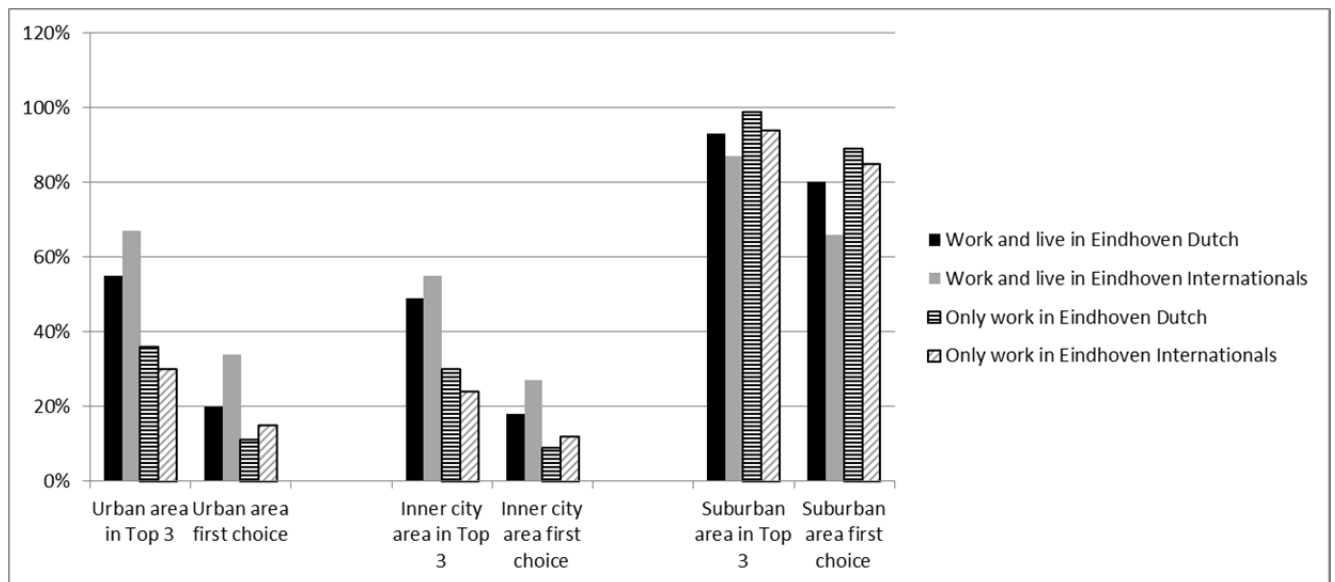
Table 5.4 further indicates that international workers have a somewhat stronger preference for urban areas than Dutch workers, although for both groups suburban districts are the most popular residential milieus. When looking at the Top 3 of most preferred residential districts, differences are marginal: 67 percent of all internationals mentions at least one urban district among the Top 3 (58 percent for Dutch workers) and 82 percent at least one suburban district (88 percent for Dutch workers).

Differences are more outspoken when studying only the first choice. Whereas 28 percent of all Dutch workers has the highest preference for an urban district, this is the case for 41 percent of all internationals. Within the group of international workers, especially migrants from advanced economies have the highest preference for urban areas: almost half of this group (49 percent) prefers urban areas. All other categories of migrants have a much stronger first preference for suburban areas than for urban areas: respectively 64.5 percent of migrants from Middle and Eastern Europe, 61 percent of migrants from 'BRICS' and even 74 percent of migrants from less developed countries stated a suburban area as their first choice. The group of migrants from advanced economies also shows the highest preference (46.5 percent) of all subgroups for inner city districts, while they have the lowest score of all migrants for high-rise districts (3.5 percent).

**Figure 5.5 Preferences for urban, inner-city or suburban areas; differences according to place of residence in Amsterdam (a) or Eindhoven (b) region, and origin**



a)



b)

As Figure 5.5 illustrates, the current actual place of residence also influences preferences for urban, inner-city or suburban residential milieus. Comparing figures a and b, it shows again that workers in Amsterdam, both Dutch and international, more often have urban preferences and less often suburban preferences, than workers in Eindhoven. In Eindhoven, also workers who both live and work in the core city are predominantly suburban oriented, whereas urban areas are the most popular among workers who live and work in the City of Amsterdam.

Differences between Dutch and international workers are somewhat larger in Eindhoven than in Amsterdam. Internationals who both live and work in the City of Eindhoven are more urban oriented than Dutch workers who both live and work in the city. Although Dutch workers who live outside the core city are more urban oriented than internationals, internationals who only live in the city more often have a first preference for an urban or inner-city area.

People who both work and live in Amsterdam or Eindhoven much more often have a preference for urban or even inner-city districts than people who only work in the region. These differences are, however, much larger in the Amsterdam region than in the Eindhoven region. Especially people who work and already live in the City of Amsterdam have highly urban stated residential preferences.

Also, in the Eindhoven region, suburban residential preferences do not differ much between people who both live and work in Eindhoven and people who only work in the city but live elsewhere. In the Amsterdam region, however, people who work in the City of Amsterdam but live elsewhere much more often have suburban stated residential preferences than people who both live and work in the city.

*Who prefers urban and suburban residential milieus?*

	Model a: All Exp(B)	Model b: Amster- dam Exp(B)	Model c: Eindhoven Exp(B)	Model d: Dutch workers Exp(B)	Model e: Interna- tionals Exp(B)
Age	.992	.981*	.998	.998	.955**
Households with children	.706**	.714	.690*	.789	.478*
Single person households	1.833***	2.172**	1.694**	1.971***	1.434
High incomes	1.269	.884	1.611**	1.246	1.757
Low incomes	1.296	1.064	1.401	1.228	2.019
University educated	1.465**	1.918**	1.253	1.423**	1.754
Creative workers	2.497**	2.867*	2.231*	2.614**	X
Technical workers	.464***	.442**	.520***	.431***	.512
Working in Eindhoven (ref. = Amsterdam)	.522***	X	X	.524***	.475*
International worker (ref. = raised in Netherlands)	1.309	1.048	1.489	X	X
Migrant from country with advanced economy (ref. all other migrants)	X	X	X	X	1.131
Constant	2.688**	4.614**	1.073	2.016*	13.282**
R-square	.142	.138	.090	.144	.184

\*\*\*  $p < 0.001$ ; \*\*  $p < 0.01$ ; \*  $p < 0.05$

**Table 5.5 Urban areas ranked among Top 3: images C, D, E, F and J**

Table 5.5 shows the outcomes of a logistic regression model that studied which characteristics of workers are related to a preference for urban areas, measured by ranking urban images (C, D, E, F and J) among the Top 3 of most popular residential milieus. The outcomes show that in general a preference for urban areas is more determined by demographic aspect and by occupation than by descent. Households with children, technical workers and workers in Eindhoven more often have a lower preference for urban residential milieus, whereas this type of milieu is more popular with single-person households, workers with university education and workers in creative industries. In the general model, international workers do not significantly more often prefer urban areas than Dutch workers.

Also in the separate models for Amsterdam and Eindhoven, international workers are not found to be significantly more or less urban oriented than Dutch workers. The most notable differences between the two cities are related to demographic aspects. Only in Amsterdam, the preference for urban milieus decreases with age and there are no significant income effects. In Eindhoven, both low and high income groups are more likely to have a preference for urban areas. Apparently, especially middle-income households in the Eindhoven region are less urban oriented. The positive effect of having completed university education from the general model is also significant in Amsterdam, but not in Eindhoven.

The separate models for the two city-regions show that the urban preferences of Dutch workers resemble those of the total population. For internationals, the model shows that urban preference decreases with age and is lower for households with children. Again, an interregional difference is found: internationals in Eindhoven have a smaller preference for urban areas than internationals

in Amsterdam. Compared to the model for Dutch workers, income, education level and working for a technical company are not significantly related to urban preferences. The dummy for creative workers was not included in these sub models, because of the very low number of creative internationals (ten in total, of which seven in Amsterdam).

	Model a: All Exp(B)	Model b: Amster- dam Exp(B)	Model c: Eindhoven Exp(B)	Model d: Dutch workers Exp(B)	Model e: Interna- tionals Exp(B)
Age	.990	.984	.997	.991	.979
Households with children	.539***	.673	.425***	.571***	.396*
Single person households	1.501**	1.828*	1.321	1.348	1.823
High incomes	.977	.924	1.125	.891	1.351
Low incomes	1.044	.838	1.208	1.160	1.026
University educated	1.684***	2.265***	1.229	1.720***	1.626
Creative workers	2.850***	3.744***	2.166*	2.597***	X
Technical workers	.521***	.390**	.665	.396***	.807
Working in Eindhoven (ref. = Amsterdam)	.320***	X	X	.301***	.425*
International worker (ref. = raised in Netherlands)	1.488*	1.157	1.907**	X	X
Migrant from country with advanced economy (ref. all other migrants)	X	X	X	X	1.930*
Constant	1.128	1.240	1.907**	1.166	
R-square	.201	.166	.085	.206	.183

\*\*\*  $p < 0.001$ ; \*\*  $p < 0.01$ ; \*  $p < 0.05$

**Table 5.6 Urban areas first choice: images C, D, E, F and J**

Table 5.6 takes a closer look at differences in urban preferences within the population of international workers, again through a logistic regression model. Because of the large diversity in countries of origin within the population of internationals, a dummy for Western migrants was included in the logistic regression model in order to control for possible cultural differences. The model for all internationals shows the same age, household and regional effects as Table 5.2, but no significant differences between Western and non-Western migrants. However, when investigating internationals in the two city-regions separately, it becomes clear that in Amsterdam Western migrants have a stronger preference for urban milieus than non-Western migrants, whereas in Eindhoven, no significant effect is found. All three sub models do not show a significant effect of working in a technical sector.

Regarding the role of demographic aspects for urban preferences, some differences between internationals in Amsterdam and Eindhoven can be seen. Just like the model for Eindhoven in general, internationals in both high and low income households have a stronger urban preference in Eindhoven, whereas income is not related to urban preferences for internationals in Amsterdam. The negative effect of age in the general model is significant for internationals in Eindhoven, but not for internationals in Amsterdam. Just like the general model, migrant households with children are less likely to prefer urban milieus in the Amsterdam region, but no significant effect was found in Eindhoven.

	Model a: All Exp(B)	Model b: Amster- dam Exp(B)	Model c: Eindhoven Exp(B)	Model d: Dutch workers Exp(B)	Model e: Interna- tionals Exp(B)
Age	.989*	.979*	.995	.993	.972
Households with children	.809	.831	.784	.896	.528
Single person households	1.800***	1.873*	1.751**	1.805***	1.642
High incomes	1.358*	.938	1.723**	1.360*	1.252
Low incomes	1.132	1.168	1.098	1.224	1.128
University educated	1.511***	1.990***	1.271	1.515**	1.652
Creative workers	2.531**	2.420*	2.560*	2.531**	X
Technical workers	.450***	.490**	.488***	.394***	.776
Working in Eindhoven (ref. = Amsterdam)	.545***	X	X	.573***	.361**
International worker (ref. = raised in Netherlands)	1.223	1.176	1.249	X	X
Migrant from country with advanced economy (ref. all other migrants)	X	X	X	X	1.512
Constant	2.148**	3.296*	.942	1.730	4.543*
R-square	.131	.127	.081	.134	.168

\*\*\*  $p < 0.001$ ; \*\*  $p < 0.01$ ; \*  $p < 0.05$

**Table 5.7 Inner city areas ranked among Top 3: pictures D, E and F**

In Table 5.7, the results of a logistic regression model that studied which characteristics of workers are related to a preference for inner-city areas, measured by ranking inner-city images (D, E and F) among the Top 3 of most popular residential milieus are displayed. The results resemble those of the model for urban areas: a preference for urban areas is more related to demographic aspect and by occupation than by descent. Besides a negative age effect, technical workers and workers in Eindhoven more often have a lower preference for inner-city residential milieus, whereas this type of milieu is more popular with singles, high income groups, workers with university education and workers in creative industries. In the general model, international workers do not significantly more often prefer inner-city areas than Dutch workers.

Also in the separate models for Amsterdam and Eindhoven, international workers are not found to have a significantly higher or lower preference for inner-city areas than Dutch workers. Interestingly, working for a technical firm is negatively related to a preference for inner-city milieus for Dutch workers, but not for internationals. There are again some differences related to demographic aspects. There were no significant effects for age and education level in Eindhoven, while only in Eindhoven higher income households have a stronger preference for inner-city milieus.

Directly comparing Dutch and international workers leads to different outcomes. The sub model for Dutch workers resembles the total model, with the exception of the age effect, which is not significant in the Dutch model. Within the group of internationals, only the regional dummy was significant: internationals in the Eindhoven region are less likely to rank urban pictures among the Top 3 than internationals in the Amsterdam region.



	Model a: All Exp(B)	Model b: Amster- dam Exp(B)	Model c: Eindhoven Exp(B)	Model d: Dutch workers Exp(B)	Model e: Interna- tionals Exp(B)
Age	.984**	.978**	.991	.985*	.972
Households with children	.586***	.734	.462***	.600**	.446
Single person households	1.397*	1.755*	1.177	1.186	1.931
High incomes	1.093	1.053	1.230	.968	1.616
Low incomes	1.169	1.045	1.245	1.339	1.107
University educated	1.634***	2.206***	1.158	1.741***	1.367
Creative workers	2.872***	4.220***	1.854	2.598***	X
Technical workers	.502	.400**	.617	.390***	.732
Working in Eindhoven (ref. = Amsterdam)	.314***	X	X	.299***	.408*
International worker (ref. = raised in Netherlands)	1.346	1.132	1.662*	X	X
Migrant from country with advanced economy (ref. all other migrants)	X	X	X	X	2.743***
Constant	1.229	1.256	.351*	1.286	1.196
R-square	.193	.170	.065	.198	.214

\*\*\*  $p < 0.001$ ; \*\*  $p < 0.01$ ; \*  $p < 0.05$

**Table 5.8 Inner-city areas ranked first choice: pictures D, E and F**

When looking at who mentions inner-city areas (pictures D,E and F) as the first choice, we see that only in the Eindhoven region, there is a significant positive effect of being an international worker (Table 5.8). Within the population of internationals, migrants from countries with advanced economies are more likely to mention an inner-city district as first preference than other migrants.

In general, we see that creative workers are more likely to prefer inner-city living than other workers. Only in the Eindhoven model this relationship is not significant. Among workers in Eindhoven and Dutch workers, technicians are less likely to prefer inner-city living. Workers in Eindhoven also on average express a lower preference for inner city residential milieus.

Regarding the demographic control variables, most results are in accordance with Table 5.7, except we find a significant negative effect for households with children. Only in Amsterdam and among the international population, there is no significant difference between households with and without children.

	Model a: All Exp(B)	Model b: Amster- dam Exp(B)	Model c: Eindhoven Exp(B)	Model d: Dutch workers Exp(B)	Model e: Interna- tionals Exp(B)
Age	1.010	1.016	1.003	1.009	1.021
Households with children	1.855***	1.485	2.350	1.751***	2.524*
Single person households	.666*	.547*	.757	.742	.548
High incomes	1.024	1.082	.889	1.122	.740
Low incomes	.957	1.193	.828	.862	.974
University educated	.594***	.442***	.814	.581***	.615
Creative workers	.351***	.267***	.462*	.385***	X
Technical workers	1.918***	2.564	1,503	2.523***	1.239
Working in Eindhoven (ref. = Amsterdam)	3.121***	X	X	3.327***	2.351*
International worker (ref. = raised in Netherlands)	.672*	.864	.524**	X	X
Migrant from country with advanced economy (ref. all other migrants)	X	X	X	X	.518*
Constant	.886	.806	3.255	.858	.768
R-square	.201	.165	.085	.206	.183

\*\*\*  $p < 0.001$ ; \*\*  $p < 0.01$ ; \*  $p < 0.05$

**Table 5.9 Suburban areas first choice: images A, B, G, H, I and J**

Table 5.9 shows the results of a regression model that investigates which factors contribute to suburban residential preferences. Since 87 percent mentioned a suburban area among the Top 3, we restrict our analysis to mentioning suburban area as first choice. The findings largely contradict the findings for urban and inner-city areas. We find that in general and in the Eindhoven model, international workers are less likely to mention a suburban district as first choice.

Within the population of internationals, migrants from countries with advanced economies are less likely to have a first preference for a suburban area than migrants from other countries. In general, workers in Eindhoven and technical workers have a stronger preference for suburban areas, whereas a suburban preference is less likely for creative workers.

With respect to demographic aspects, the preference for suburban areas is stronger for households with children and weaker for single person households. Also university-educated workers less often prefer suburban areas.

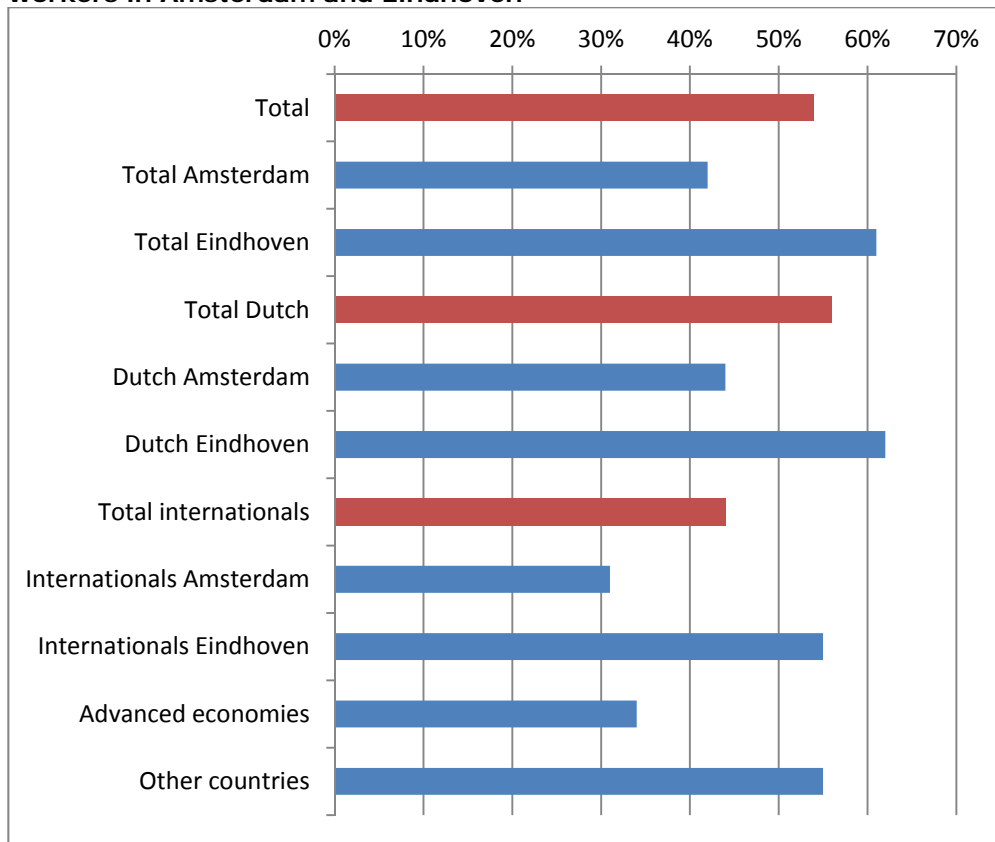
### 5.3 Statement “I would rather have a big house in the suburbs than a small apartment in the city”

#### Descriptive statistics

Since suburban areas are popular with a large majority of the workers – 87 percent mentioned these in the Top 3-, the analysis of the statement “I would rather live in a big house in the suburbs than in a small apartment in the city” has been used as an additional measurement of suburban residential preferences. Respondents who agree or fully agree with this statement are be-

lieved to have more suburban preferences than those who do not. The initial five-point scale of this variable was recoded into a dummy variable for 'agreeing or not' (1=yes, 0=no).

**Figure 5.6 Response to statement “I would rather live in a big house in the suburbs than in a small apartment in the city”; differences between Dutch and international workers in Amsterdam and Eindhoven**



In general, 54 percent of the respondents agree or strongly agree with this statement (Figure 5.6). Again, differences between internationals and Dutch workers on the one hand, and inter-regional differences between Amsterdam and Eindhoven on the other hand, can be observed. The category that most often agrees with the statement is Dutch workers in Eindhoven (62 percent), whereas internationals in Amsterdam have the lowest score (31 percent).

While 56 percent of Dutch workers would choose a large house in the suburbs over a small apartment in the city, this is true for 44 percent of all internationals. In Eindhoven, 61 percent (strongly) agrees with this statement, compared to 42 percent in Amsterdam. Within both cities, the internationals less often agree with this statement than Dutch workers. The internationals in Eindhoven are clearly more suburban oriented than the internationals in Amsterdam: with 55 percent, their share is even higher than that of the general population.

Within the group of internationals, also striking differences with respect to category of origin come to the fore. 34 percent of the migrants from advanced economies would choose a large house in the suburbs over a small apartment in the city, while more than half (55 percent) of the migrants from other countries agree. Again, migrants from advanced economies (Western migrants) appear to be the most urban oriented migrants.

*Who agrees with statement "I would rather have a big house in the suburbs than a small apartment in the city"?*

	Model a: All Exp(B)	Model b: Amster- dam Exp(B)	Model c: Eindhoven Exp(B)	Model d: Dutch workers Exp(B)	Model e: Interna- tionals Exp(B)
Age	1.016**	1.020*	1.014*	1.015**	1.025
Households with children	1.777***	1.358	2.160***	1.681***	3.182**
Single person households	.518***	.577*	.487***	.580**	.323**
High incomes	.964	.947	.992	1.009	.773
Low incomes	1.128	.933	1.313	.580**	2.072
University educated	.599***	.443***	.743	.593***	.525
Creative workers	.491**	.458*	.533	.512**	X
Technical workers	3.319***	2.968***	3.543***	3.412***	4.713***
Working in Eindhoven (ref. = Amsterdam)	2.066***	X	X	2.110***	1.522
International worker (ref. = raised in Netherlands)	.618**	.738	.533**	X	X
Migrant from country with advanced economy (ref. all other migrants)	X	X	X	X	.414**
Constant	.386**	.410	.733	.399**	.261
R-square	.201	.155	.162	.188	.290

\*\*\*  $p < 0.001$ ; \*\*  $p < 0.01$ ; \*  $p < 0.05$

**Table 5.10 Rather a big house in the suburbs than a small apartment in the city; differences between Dutch and international workers in the two city regions**

Table 5.10 presents the outcomes of a model that depicts the characteristics of respondents who agree with this statement and therefore have suburban residential preferences. In the general model, being an international worker has a significant negative relationship with suburban preferences. Also, the model confirms that workers in Eindhoven are more suburban oriented than workers in Amsterdam. Regarding occupations, the general model finds that creative workers are less suburban oriented whereas technical workers are more suburban oriented. The latter finding is robust in all sub models.

Regarding the demographic controls, a positive relationship can be observed for households with children. Having children clearly stimulates suburban residential preferences, except in the Amsterdam model where this relationship is not significant. This finding confirms earlier studies that in Amsterdam, there is a trend that families with children increasingly prefer to stay in the city (Boterman, 2013). Furthermore, single person households show a robust negative relationship. This group generally prefers an apartment in the city over a larger house in the suburbs.

Also suburban preferences increase with age: older workers more often agree with the statement. Finally, having completed university education decreases the likelihood of having suburban residential preferences.

The sub models for the two city regions only differ with respect to the international worker dummy: whereas in Eindhoven, international workers are less suburban oriented than Dutch workers, this relationship is not significant in the Amsterdam model.

Comparing Dutch workers to international workers, it becomes clear that the results for Dutch workers resemble the general model, whereas among international workers, only households with children and technical workers show significant associations with suburban residential preferences, and both are positive.

## 6. Housing preferences: differences between Dutch and international workers

A final way of measuring residential preferences is by looking at the desired types of dwellings and locations by both Dutch and international workers. This chapter seeks an answer to the following research question: *"Which dwelling types and locations are preferred by highly-skilled migrants, and how do these preferences differ between subgroups, and between international and Dutch workers?"*

In the first section (6.1), the main considerations when choosing a new home are outlined, differentiating between Dutch and international workers. These considerations may be related to characteristics of the dwelling, characteristics of the neighbourhood and the location of the dwelling. Section 6.2 presents the preferences for specific dwelling types and also looks at preferences with respect to size and costs when choosing a new dwelling.

### 6.1 The main considerations when choosing a new home

The respondents were asked to rank several considerations if they were to choose a new home from 1 to 8, with 1 standing for most important and 8 for least important. These aspects were related to characteristics of the dwelling itself, the neighbourhood and the location relative to other places and persons.

Figure 6.1 below shows that for both groups of workers, dwelling size is most often mentioned among the three most important dwelling aspects, with minimal differences between the two groups and within the group of migrants. This is followed by having a private garden (by Dutch workers) and relatively low costs (by internationals).

The figure shows that the preferences of international and Dutch workers with regard to dwelling aspects differ especially concerning building style and architecture and having a private garden. Whereas 37.5 percent of all internationals ranked building style and architecture among the main considerations, the share for Dutch workers is much lower with 25 percent. Within the migrant community, differences between workers from advanced economies and other countries.

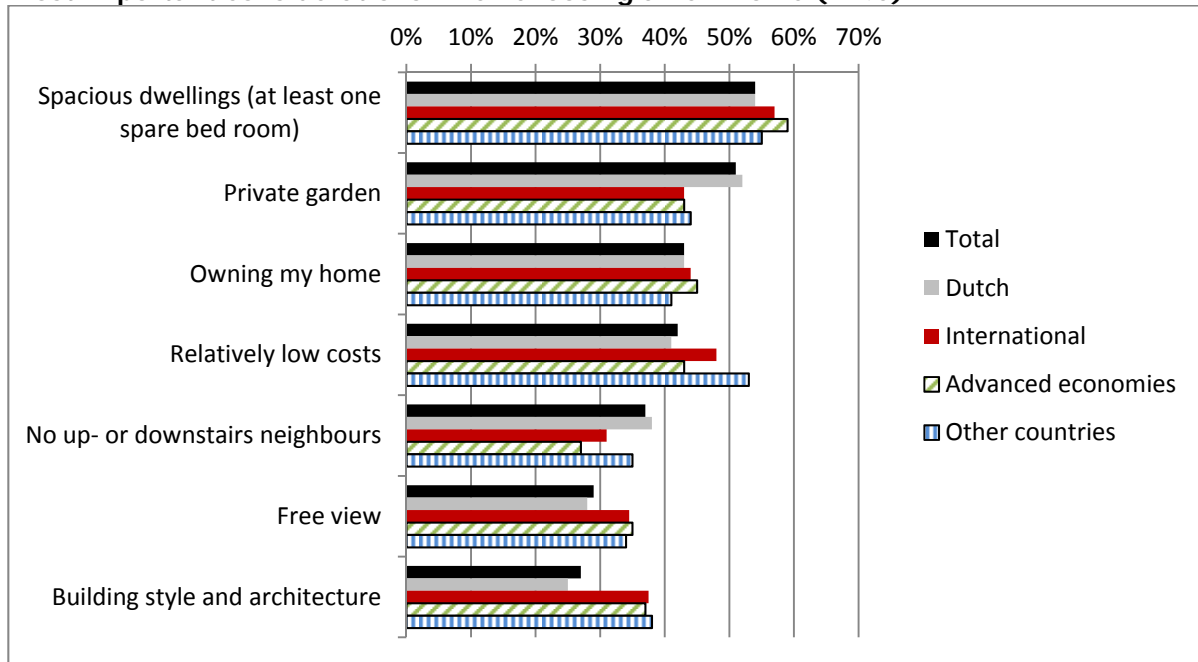
Dutch workers seem to attach somewhat more value to having a private garden than internationals: for respectively 52 percent and 43 percent this was among the three main considerations. Internationals (48 percent) also relatively more often than Dutch workers (41 percent) consider relatively low housing costs important. Within the migrant population, especially migrants from

non-advanced or upcoming economies consider low costs very important: 53 percent, compared to 43 percent of workers from advanced economies.

Internationals also less often than Dutch workers (38 percent) mentioned 'no upstairs or downstairs neighbours' among the three most important considerations: 31 percent, and even 27 percent for migrants from advanced economies. A free view is, however, valued higher by internationals (35 percent in Top 3) than Dutch workers (28 percent), with no significant differences within the migrant group.

With respect to home-ownership, differences between Dutch and international workers are minimal, however.

**Figure 6.1 The share of those mentioning these dwelling characteristics among the 3 most important considerations when choosing a new home (in %)**



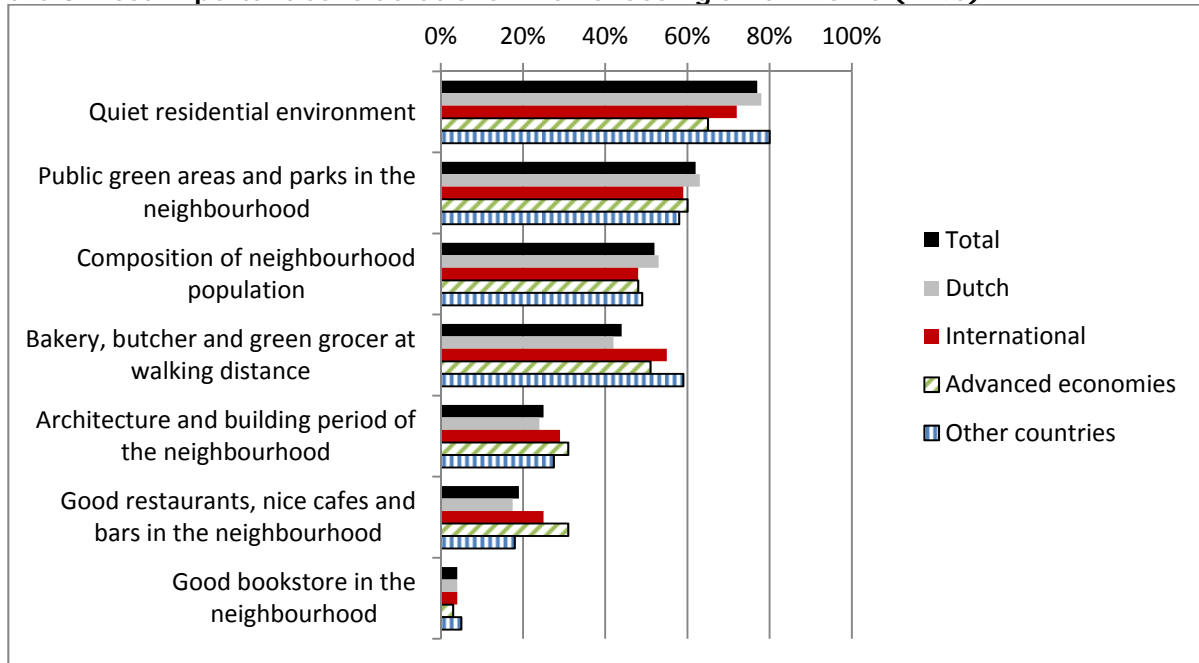
Regarding characteristics of the neighbourhood (Figure 6.2), the most important aspect for both Dutch and international workers is a quiet residential environment. In total, 77 percent mentioned this among the three most important aspects, with only small differences between Dutch (78 percent) and international workers (72 percent). Differences within the migrant group are more outspoken, since 80 percent of migrants from non-advanced or upcoming economies mentioned a quiet residential environment in their Top 3, compared to 65 percent of workers from advanced economies.

For both groups, public green areas and parks in the neighbourhood come at second place, with only minimal differences between Dutch and international workers and within the migrant group. Differences between Dutch and international workers are the largest concerning daily shopping facilities, such as a bakery, butcher or green grocer within walking distance. For internationals, this is the third most important neighbourhood aspect (55 percent in Top 3), whereas for only 42 percent of all Dutch workers this is one of the three most decisive neighbourhood aspects. Within the migrant community, especially works from less developed or upcoming economies prefer

these amenities close by (59 percent). The population composition ranks third overall and for Dutch workers, and fourth for internationals.

All other neighbourhood aspects are only mentioned in the Top 3 by a minority of both groups. Architecture and building period of the neighbourhood is surprisingly more important than catering amenities in the neighbourhood. Both aspects are ranked higher by internationals than by Dutch workers. For restaurants, cafes and bars, the difference between workers from advanced economies (31 percent among Top 3) and other countries (18 percent) is striking. Good bookstores are generally not considered important at the neighbourhood level.

**Figure 6.2 The share of those mentioning these neighbourhood characteristics among the 3 most important considerations when choosing a new home (in %)**



Related to the location of the home (Figure 6.3), proximity to work is the most important location aspect for both groups, but even more for internationals (69 percent in Top 3) than for Dutch (60 percent), and particularly for migrants from other countries than advanced economies (75 percent).

The most striking difference between Dutch and international workers is related to proximity to a public transport hub (Table 6.3). This was among the main considerations for 38 percent of Dutch workers and for a majority of 61 percent of international workers, for whom this is even the second most important consideration (4<sup>th</sup> for Dutch workers).

Other aspects that were mentioned in the Top 3 by approximately half of the respondents are 'close to the city centre' and 'close to nature areas'. In general the valuation of proximity to the city centre does not strongly differ between Dutch (50 percent in Top 3) and international workers (55 percent), but especially migrants from advanced economies attach high value to this: for 63 percent this is among the three main location characteristics. For proximity to nature, differences between Dutch and international workers and within the migrant group are minimal.



Proximity to the highway, to relatives and to friends are the least important location factors; on ly a minority considers these among the three most decisive location aspects. These aspects, and especially proximity to relatives for an obvious reason, are ranked higher by Dutch workers than by internationals. Within the migrant community, one striking difference is that workers from non-advanced economies attach much more value to being close to the highway: 28 percent in Top 3, compared to 13 percent of migrants from advanced economies.

**Figure 6.3 The share of those mentioning these location characteristics among the 3 most important considerations when choosing a new home (in %)**

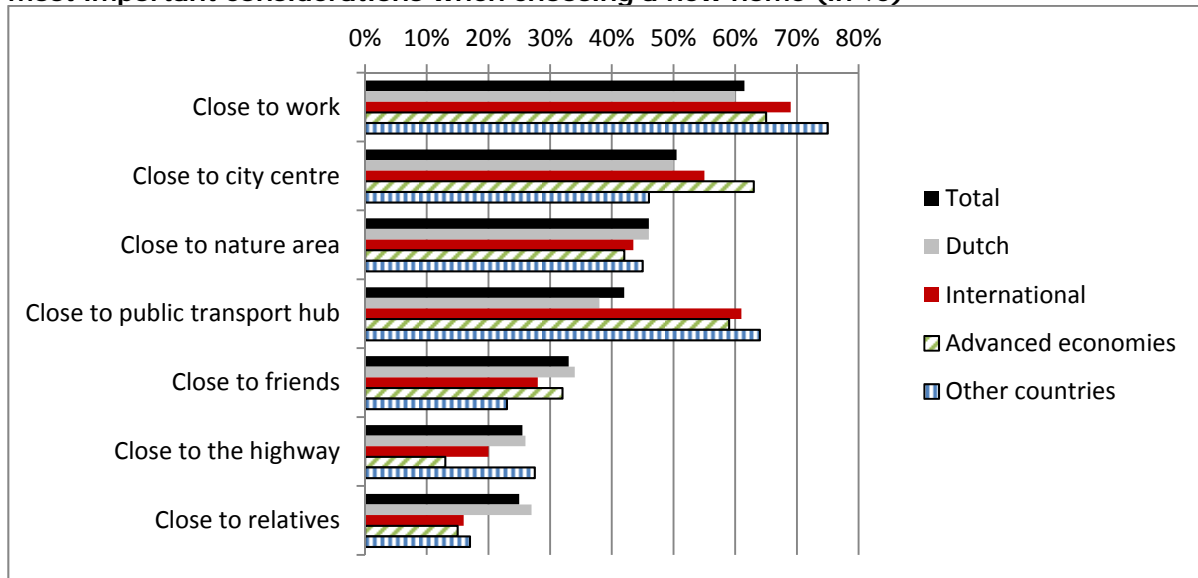


Table 6.1 shows how often each consideration is mentioned among the three most decisive considerations when choosing a new home. The five aspects that were most often mentioned in the Top 3 are marked with grey. A first notable finding is that the differences between Dutch and international workers are marginal when it comes to the most decisive considerations when making a location decision. Both Dutch and international workers most often mentioned 'quiet residential environment', as a neighbourhood characteristic, among the three most decisive factors. For Dutch workers, the first rank was shared with having a private garden, whereas this was only the sixth most important aspect for international workers.

For the rest, particularly aspects of the dwelling itself are mentioned among the three most decisive factors, for both groups. Relatively low housing costs is the second most important consideration for international workers, and the fourth most important aspect for Dutch workers. The size of the dwelling is also considered important: the aspect 'spacious dwelling' ranks third for Dutch workers and fourth for internationals. Finally, ownership is considered important, as this was ranked fifth by Dutch workers and, somewhat surprisingly, third by internationals.

Regarding the location of the dwelling, only proximity to work is among the five most important aspects for internationals (fourth rank); for Dutch workers this aspect is ranked sixth. Proximity to the city centre ranks seventh for both groups, but almost all other location aspects fall outside the Top 10.

Besides the quietness of the residential area, most other neighbourhood aspects fall outside the Top 10 of most decisive factors. The only exceptions are proximity to butchers, green grocers and bakery's for internationals (ranked 8<sup>th</sup>) and the composition of the neighbourhood population for Dutch (ranked 8<sup>th</sup>) and international (ranked 10<sup>th</sup>) workers.

	Dutch abs.	<b>Dutch rank</b>	Inter- national	<b>Inter- national rank</b>
H: Private garden	562	<b>1</b>	63	<b>6</b>
H: Building style and architecture	121	<b>15</b>	30	<b>12</b>
H: Owning my home	390	<b>5</b>	76	<b>3</b>
H: No up-or downstairs neighbours	227	<b>9</b>	24	<b>15</b>
H: Relatively low housing costs	409	<b>4</b>	83	<b>2</b>
H: Spacious dwelling	519	<b>3</b>	69	<b>4</b>
H: Free view	144	<b>12</b>	28	<b>13</b>
N: Composition of neighbourhood population	250	<b>8</b>	35	<b>10</b>
N: Public green areas and parks	143	<b>13</b>	34	<b>11</b>
N: Quiet residential environment	562	<b>1</b>	92	<b>1</b>
N: Bakery, butcher, green grocer at walking distance	172	<b>11</b>	50	<b>8</b>
N: Good bookstore	2	<b>20</b>	0	<b>20</b>
N: Architecture and building period	72	<b>18</b>	12	<b>18</b>
L: Close to work	322	<b>6</b>	69	<b>4</b>
L: Close to highway	45	<b>19</b>	8	<b>19</b>
L: Close to public transport hub	140	<b>14</b>	46	<b>9</b>
L: Close to/ in city centre	302	<b>7</b>	54	<b>7</b>
L: Close to relatives	117	<b>16</b>	15	<b>17</b>
L: Close to friends	99	<b>17</b>	16	<b>16</b>
L: Close to nature areas	184	<b>10</b>	27	<b>14</b>

**Table 6.1 Most important considerations when choosing a new home: number of times aspects are mentioned among the 3 most important and decisive considerations and the relative ranking; differences between Dutch and international workers.**

## 6.2 Preferences with respect to characteristics of dwellings

In the survey, respondents were also asked to formulate their preferences with respect to specific dwelling types.

	Total	Total Dutch	Total inter-nationals	Advanced economies	Other countries
Apartment (upper level)	19%	17%	33%	35%	30%
Apartment (ground level)	7%	7%	8%	11%	4%
Terraced housing/ row housing	14%	14.5%	12%	6%	19%
Semi-detached	16%	17%	10%	9%	11%
Detached	37%	37%	33.5%	35%	32%
Other	7%	8%	4%	3%	5%

**Table 6.4 The most preferred dwelling type; differences between Dutch and international workers (in %)**

Table 6.4 shows that the preferences for specific types of housing do not differ much between Dutch and international workers, with the exception of upper level apartments. Whereas 17 per cent of Dutch workers would prefer most to live in an upper level apartment, this is the case for one third (33 percent) of all international workers. Since apartments are generally found more in (central) urban districts than in suburban areas, this finding again points into the direction that international workers are more urban oriented than Dutch workers.

	Model a: All Exp(B)	Model b: Amster- dam Exp(B)	Model c: Eindhoven Exp(B)	Model d: Dutch workers Exp(B)	Model e: Interna- tionals Exp(B)
Age	1.001	.983	1.025*	1.015	.944**
Households with children	.247***	.271***	.171***	.307***	.182**
Single person households	2.122***	1.925**	2.461**	2.544***	1.443
High incomes	.954	1.006	.886	.983	1.156
Low incomes	.873	.750	.995	.850	.999
University educated	1.760***	2.105***	1.323	1.850**	1.383
Creative workers	1.447	1.385	1.110	1.769	X
Technical workers	.564*	.546	.648	.437**	.592
Working in Eindhoven (ref. = Amsterdam)	.275***	X	X	.246***	.407*
International worker (ref. = raised in Netherlands)	2.262***	1.362	4.547***	X	X
Migrant from country with advanced economy (ref. all other migrants)	X	X	X	X	1.552
Constant	.267**	.635	.024***	.129***	4.544
R-square	.251	.193	.193	.257	.248

\*\*\*  $p < 0.001$ ; \*\*  $p < 0.01$ ; \*  $p < 0.05$

**Table 6.5 The first preference for an upper-level apartment; differences between Dutch and international workers in the two city-regions**

In line with the generally stronger urban preferences by international workers, we found that international workers are also more likely to prefer upper-level apartments than Dutch workers (Table 6.5, Model a). Again, a strong regional effect is visible, since workers in the Eindhoven region are less likely to prefer upper-level apartments than workers in Amsterdam. We also found that technical workers –the least urban oriented occupational group– has a weaker preference for apartments than workers in other occupations.

Apartments also seem to be preferred more by university-educated workers. As was to be expected, the preference for housing types is also related to the household situation. Households with children show a lower preference for upper-level apartments, whereas single-person households show a higher preference for apartments, except in the migrant sample. Within the migrant category, we did find a negative age effect, however, indicating that especially young international workers want to live in apartments.

	Model a: All Exp(B)	Model b: Amster- dam Exp(B)	Model c: Eindhoven Exp(B)	Model d: Dutch workers Exp(B)	Model e: Interna- tionals Exp(B)
Age	.997	1.006	.992	.994	1.012
Households with children	1.396**	1.454	1.421*	1.284	2.092*
Single person households	.645*	.797	.574*	.624*	.770
High incomes	2.198***	1.566	2.805***	2.268***	1.681
Low incomes	.491**	.766	.381**	.455**	.588
University educated	.906	.677	1.017	.898	1.009
Creative workers	.563	.359	.760	.597	X
Technical workers	1.945***	2.057**	1.842***	2.016***	1.812
Working in Eindhoven (ref. = Amsterdam)	1.879***	X	X	1.796***	2.443*
International worker (ref. = raised in Netherlands)	1.061	1.046	1.146	X	X
Migrant from country with advanced economy (ref. all other migrants)	X	X	X	X	1.183
Constant	.242***	.189**	.523	.294***	.097**
R-square	.156	.088	.172	.159	.158

\*\*\*  $p < 0.001$ ; \*\*  $p < 0.01$ ; \*  $p < 0.05$

**Table 6.6 The first preference for detached housing; differences between Dutch and international workers in the two city-regions**

Table 6.6 shows which workers have a first preference for detached housing. Being an international or not does not relate to the preference for detached dwellings, which could be expected since similar shares within these two groups have a first preference for detached housing. The outcomes are in contrast to the results for upper-level apartments concerning demographic aspects: especially households with children, technical workers and workers in the Eindhoven region are likely to prefer detached housing. Also workers with high income households are more likely to mention detached housing as the first choice. Workers with low-income households or single-person households are less likely to have a first preference for detached dwellings. Within the migrant population especially households with children and workers in the Eindhoven region express a stronger preference for detached dwellings.

	<b>Total</b>	<b>Dutch</b>	<b>International</b>	<b>Advanced economies</b>	<b>Other countries</b>
<i>Ownership</i>					
Owner-occupied	<b>66%</b>	<b>69%</b>	<b>49.5%</b>	45%	44%
Rent social sector	<b>8.5%</b>	<b>8%</b>	<b>11%</b>	7.5%	15%
Rent private sector	<b>6%</b>	<b>4%</b>	<b>20%</b>	20%	21%
Other	<b>3%</b>	<b>2%</b>	<b>4%</b>	4%	4%
I do not know	<b>17%</b>	<b>17%</b>	<b>15%</b>	14%	16%
<i>Other characteristics</i>					
Number of bedrooms (avg.)	<b>2.39</b>	<b>3.27</b>	<b>2.32</b>	2.26	2.38
Size in m <sup>2</sup> (avg.)	<b>106</b>	<b>171</b>	<b>101</b>	92	109
Average asking price range (X 1,000)	<b>200-300</b>	<b>200-300</b>	<b>200-300</b>	225-350	150-250

**Table 6.7 Preferences regarding the new dwelling if one would relocate**

Concerning ownership status, Table 6.7 makes clear that internationals have a weaker preference for owner-occupied dwellings than Dutch workers, although still nearly half of all internationals would prefer to be home-owner after a supposed relocation. Internationals have a much larger preference for renting in the private sector: 20 percent, compared to 8 percent of Dutch workers and 8.5 percent of the total population. Within the migrant community, migrants from other countries are more likely to prefer social rented dwellings than workers from countries with advanced economies. For all other dwelling types, differences are minimal.

Table 6.5 furthermore shows that Dutch workers have a preference for larger dwellings compared to internationals, both in terms of square metres (171 and 101 respectively) and the number of bedrooms (3.27, compared to 2.32 for internationals). Regarding the range of the asking price, differences between Dutch and international workers are neglectable, but migrants from advanced countries prefer much more expensive dwellings than those coming from other countries.

# 7. Conclusions and policy recommendations

This final chapter describes the main conclusions and policy recommendations, based on the study on stated residential preferences. First, a short summary of the main results is given in section 7.1. The second sub-section will deal with the answering of all three research questions, and the third sub section will end with the overall conclusions and some policy recommendations for urban and regional policy-makers in the field of spatial and housing policy.

## 7.1 Summary of main results

As a final illustration of differences in residential preferences, based on the analyses in Chapters 4, 5 and 6, we constructed Figure 7.1, which shows the relative importance given to four concepts by different categories of workers. The following four concepts have been constructed:

First, the concept 'URBAN' was constructed, which represents several indicators of preferences for urban residential milieus and amenities. The measurement was based on the following indicators:

- Urban area first choice
- Rather a small apartment in the city than a large house in the suburbs
- Apartment upper level as first choice
- Cultural amenities very important (at regional level)
- Catering amenities very important (at regional or neighbourhood level)
- Accessibility by public transport very important (at regional or neighbourhood level)

If a respondent had a positive response to at least one of these indicators, we registered that the respondent scored on 'URBAN'.

Second, the concept 'SUBURBAN' was constructed, which measures preferences for suburban residential milieus and amenities. The measurement was based on the following indicators:

- Suburban area first choice
- Green amenities very important at neighbourhood level
- Accessibility by car very important at neighbourhood level
- Detached dwelling as first choice
- Rather large house in the suburbs than a small apartment in the city

If a respondent had a positive response to at least one of these indicators, we registered that the respondent scored on 'SUBURBAN'.

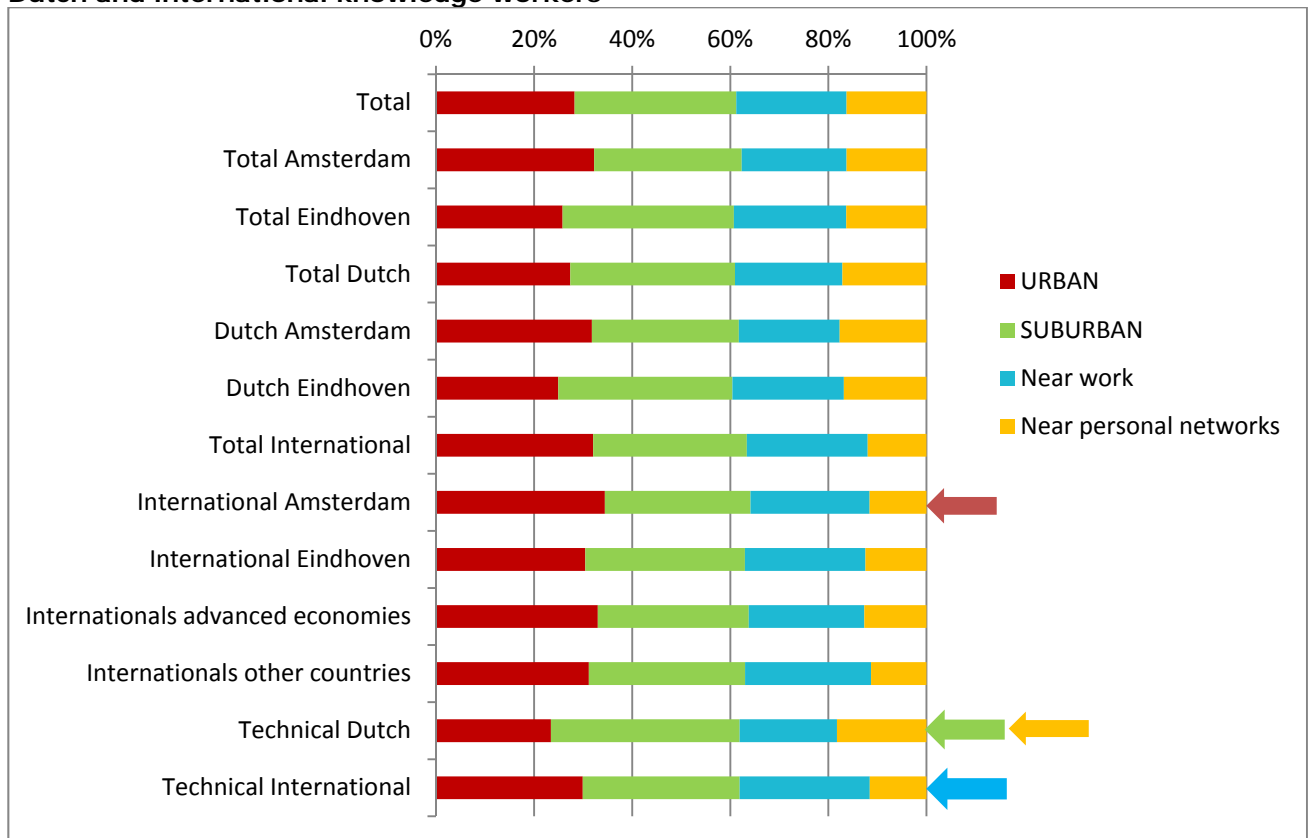
Third, the concept 'Near work' was constructed, which indicates that the proximity to the work place plays a decisive role in the respondent's location choice. If the indicator 'Close to work' was ranked among the three most decisive considerations when looking for a new home, we registered that the respondent scored on 'Near work'.

Finally, the concept 'Near personal networks' measures the importance given to the proximity of family and friends. If the indicators 'Close to family' or 'Close to friends' were mentioned among the three most decisive considerations when looking for a new home, the respondent scored on 'Near personal networks'.

The latter two concepts were included, since employment on the one hand, and personal networks and familiarity on the other hand, played an important role in the decision to settle in the two regions for large shares of the population.

For each sub category of Dutch and international knowledge workers, we calculated the share of respondents that regarded these four dimensions important. The shares for all four indicators were then summed up and made relative (total 100 percent), in order to allow for an easier comparison between the different categories of workers. Figure 7.1 presents the different scores between several sub groups of Dutch and international workers.

**Figure 7.1 The relative importance attached to four indicators by different sub groups of Dutch and international knowledge workers**



The results clearly show that suburban and urban preferences are rather mixed, across all sub categories of the population. However, the indicator 'URBAN' has the highest scores among international workers and workers in Amsterdam. For international workers in Amsterdam, urban indicators are the most important. The lowest scores were found for Dutch workers in the Eindhoven region, and especially for Dutch workers occupied in the high-tech sector. For the indicator 'SUBURBAN', we see a contrasting picture: relative scores are higher among Dutch workers and in the Eindhoven region. The highest score was found for Dutch workers occupied in the technical sector.

Thus, a threefold distinction can be made regarding preferences for urban or suburban areas, which already came forward in the separate analyses in Chapters 4, 5 and 6. The first dimension in this distinction is the region, since workers in Eindhoven are on average more suburban oriented and less urban oriented than workers in Amsterdam. The second dimension is origin, since international workers are on average more urban oriented than Dutch workers. The third dimension is based on occupation, since also within the Dutch and international population, technical workers are clearly more suburban oriented than Dutch workers.

Besides specific urban or suburban indicators, proximity to work seems to be relatively important as well, especially for international workers. Technical international workers show the highest relative scores for this indicator. Proximity to personal networks is relatively less important, and has higher scores among Dutch workers.

The results in this picture give a good summary of the main results found in Chapters 4, 5 and 6. We will now turn to the answering of the three research questions in the following section.

## 7.2 Answering of research questions

- *"To what extent do knowledge workers attach importance to hard and soft location factors, and which differences can be observed between Dutch and international workers on the one hand, and within the group of internationals on the other hand?"*

The fourth chapter indicated that soft conditions are not important aspects for the attracting of knowledge workers, Dutch nor international. A large majority of workers entered the Amsterdam or Eindhoven region because of work or study-related reasons, or -especially among Dutch workers- because they were familiar with the region. The social and cultural climate hardly played a role, even in the Amsterdam region, and is also not more important for internationals than for Dutch workers. Ensuring sufficient employment that matches the skills and specializations of the regional work force, seems to be the most successful way of attracting talent to the region, both Dutch and international.

The analyses also showed soft factors such as cultural amenities, catering amenities, specialty shopping facilities and green amenities are, on average, valued higher by international workers than by Dutch workers and by skilled workers in general. Within the group of migrants, those coming from countries with advanced economies generally show the highest valuation of soft conditions. This indicates that soft conditions might play a role for retaining skilled migrants in particular. However, we should keep in mind that even among Western migrants, only a minority considers these aspects very important. Also a comparison of the average grading of different types



of location factors (hard and soft) shows that the aspects that are considered most important, both by Dutch and international workers, are public safety, the offer of daily shopping facilities, accessibility and affordable housing, whereas cultural amenities are among the least important aspects for both groups. An interesting finding is that affordable housing is among the most important regional aspects, but is also the aspect workers are the least satisfied with, and international workers in particular. Although grades are relatively low in both regions, especially in Amsterdam affordable housing is regarded problematic.

When looking at soft conditions only, safety, public green areas and catering amenities outweigh cultural amenities. Thus, the role of cultural amenities at the regional level should not be neglected, but also not be overrated. Investing in affordable housing, infrastructure, green areas, regular shopping facilities and public safety may be more successful for the retaining of skilled workers (Dutch and international) than a strong policy focus on cultural amenities.

- *"To what extent do stated preferences for urban or suburban residential milieus differ between Dutch and international knowledge workers, and within the group of international workers?"*

Chapter 5 made clear that international workers have a higher preference for urban areas and a lower preference for suburban areas than Dutch workers. Also some notable differences related to occupation and work region came forward. Creative workers are more likely to prefer urban and inner city areas and are less likely to mention a suburban area as their first choice. For technical workers, the opposite pattern is visible: they have a stronger preference for suburban areas and less often mention urban or inner-city areas as their first choice. Workers in Eindhoven much more often mention an suburban area, and less often an urban or inner-city area, as their first choice than their colleagues in Amsterdam.

Furthermore, we see that university educated workers more often have a first preference for urban or inner-city districts, but less often mention suburban areas as their first choice than workers with a lower level of education. Households with children, on the contrary, are more likely to have a first preference for suburban areas and less often choose urban or inner-city milieus as their first choice. Age is only significantly related to mentioning inner-city milieus as the first choice: older workers are less likely to do so than younger workers. Still, it should be stressed that in total, 70 percent of the population has a first preference for a suburban area, and this is even the case for 59 percent of the international migrants.

In this respect it is also important to mention the large regional differences between Amsterdam and Eindhoven, since especially workers in Eindhoven (both Dutch and international) are predominantly suburban oriented. International workers in the Eindhoven region gave higher rankings to the urban pictures than Dutch workers and also their average ranking for the urban districts in the name rankings was higher than for Dutch workers. However, suburban areas were the most popular choice among internationals in both the picture and the name rankings. Especially suburban that are located near the most important employment clusters turned out to be popular. In the Amsterdam region, urban districts were the most popular among both types of rankings among internationals. Apparently, the type of international that chooses to live in the Eindhoven region has on average more suburban residential preferences to start with, compared to internationals choosing for the Amsterdam region as a place of work.

- *"Which dwelling types and locations are preferred by highly-skilled migrants, and how do these preferences differ between subgroups, and between international and Dutch workers?"*

In line with the stated preferences for residential milieus, we found that internationals more often than Dutch workers have a first preference for (upper-level) apartments. Within the population of migrants we did not find differences based on categories of countries of origin, but household situation and age matter. Households with children and older migrants are less likely to prefer apartments. We should stress, however, that still less than half of all migrants prefers to live in apartments. In fact, the share of migrants that prefers detached dwellings is even slightly higher than the share of those who prefer apartments. Also the differences within Dutch and international workers are much smaller regarding the preference for detached dwellings.

Again, a clear regional difference was found, since the preference for apartments is higher in Amsterdam than in Eindhoven. Still, in Eindhoven the relative demand for apartments by internationals is higher than for Dutch workers. In Amsterdam, internationals do not have a significantly higher or lower demand for apartments than Dutch workers.

Looking at the most decisive factors when looking for a new home, Dutch and international workers are not very different from one another, although Dutch workers attach relatively more value to having a garden, whereas internationals affordability is relatively more important. For both groups, characteristics of the dwelling are mentioned most among the most decisive factors (ownership, space and costs), followed by the location of the neighbourhood relative to work. The most decisive factor for both groups, however, is a quiet residential environment, which again illustrates that both Dutch and international knowledge workers are not necessarily all looking for vibrant urban buzz. Other neighbourhood characteristics play a more modest role when making relocation decisions, however.

### 7.3 Overall conclusions and policy implications

#### Overall conclusions

Wrapping up the main findings of the study, a number of overall conclusions can be drawn. First, international workers stand out as somewhat more urban oriented than Dutch workers. Not only do internationals significantly more often than Dutch workers have a first preference for urban and inner-city districts –and less often for suburban areas–, they also less often prefer a big house in the suburbs over a small apartment in the city and express a much larger preference for upper-level apartments. Still, we have to stress that a majority of knowledge workers prefer to live in a suburban surrounding. Although this is somewhat less the case for internationals than for Dutch workers, still 59 percent has a first preference for a suburban area. Thus, although international migrants are more urban oriented relative to Dutch workers, they are still predominantly suburban oriented in absolute terms.

Related to the prior point, the second conclusion is that international workers should by no means be considered a homogeneous group. Demographic aspects play a large role in shaping residential preferences, confirming previous studies in this field (Andersen et al., 2010; Verdich, 2010; Frenkel et al., 2013). Also among internationals, older respondents and households with children are

less urban oriented and show a smaller preference for apartments. Also technical internationals are less urban oriented than other international workers, in line with earlier work on the residential preferences of the technical workforce (Kotkin, 2000; Van Oort et al., 2003). Also different sub groups based on country of origin show different residential preferences, with Western migrants being more urban oriented and less suburban oriented than other categories.

Third, the study's results show that hard conditions are relatively more important than soft conditions for the attracting of international workers. For international migrants in particular, work and study are the dominant reasons for choosing a city, whereas the social and cultural climate plays only a small role. These findings are in line with recent studies (Storper & Scott, 2009; Musterd & Murie, 2010; Lawton et al., 2013) criticizing the overemphasis on soft conditions in influential literature that has been taken up by urban policy makers all over the world (Florida, 2002; Clark et al. 2002; Glaeser et al., 2001). Although international workers significantly more often attach high importance to cultural amenities and catering amenities, these aspects are by no means the most important location aspects for them. Rather, affordable housing, daily shopping facilities, a quiet residential environment and accessibility are considered important by international workers, and in this respect they do not differ much from their Dutch counterparts. Especially the availability of affordable housing was seen as a point of concern, especially for international workers.

Fourth, a striking difference exists between workers in Amsterdam and Eindhoven. Both in general, and within the population of skilled migrants, workers in Eindhoven are significantly less urban oriented and more suburban oriented than workers in Amsterdam. Also, workers in Eindhoven tend to have lower preference for apartments than workers in Amsterdam. In line with this, it is also striking that many of the significant associations between being an international and the preference for urban, inner-city or suburban areas were confirmed in the Eindhoven sub model, but not in the Amsterdam model. This indicates that people choosing to work in the Amsterdam region on average are more urban oriented to start with. Differences between Amsterdam and Eindhoven are also larger than differences between Dutch and internationals within these two regions.

Finally, we have to stress that being an international is by no means the most important determinant of residential preferences. Rather, demographic aspects and also occupation seem to make the difference. In general, we found that the preference for urban areas decreases with age and increases with education level. Also, households with children have a clear suburban preference. With respect to occupation, technical workers tend to be less urban oriented and more suburban oriented, whereas creative workers are the opposite. Similar outcomes were found with respect to the preference for apartments<sup>6</sup>.

#### *Policy implications*

In order to attract and retain international knowledge workers, policy-makers in metropolitan regions should keep the high diversity of the population of (international) knowledge workers in mind. The descriptive statistics of this study showed that in fact residential preferences of knowledge workers, Dutch and international, are highly diverse. For internationals, the preferences for urban and suburban milieus are almost equal. Therefore, although the study's results indicate a higher preference by international workers for urban milieus and soft conditions, we

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<sup>6</sup> See: Boterman, W.R. & B. Sleutjes (2014) Stated residential preferences of higher-educated workers in Amsterdam and Eindhoven, Amsterdam: University of Amsterdam/ AISSR

have to stress, in line with Servillo et al. (2011) that it would be short-sighted for urban and regional policy-makers to adopt one-size-fits-all policies for the attracting and retaining of knowledge workers.

Rather, it is important for policy-makers to have a clear picture of the types of workers that live in their city and which types of workers are the main future population growth categories, before developing housing plans. Particularly the demographic composition and the occupation structure of knowledge workers are important in this respect. Especially households with children and technical workers are less urban oriented than other groups of workers. These differences also exist within the international population: although international workers are somewhat more urban oriented than Dutch workers, still a majority of them prefer suburban areas. This preference should not be overlooked, and investing in highly urban residential milieus and (cultural) amenities might therefore not be the best strategy to attract workers, whether Dutch or international.

The large differences between Amsterdam and Eindhoven, regarding both the preferences for urban or suburban milieus and the valuation of amenities, suggest that different types of policies are needed in both regions. Eindhoven as a tech pole with many suburban residential environments in a green area should, based on our results, be highly attractive for the dominant types of workers there. After all, we found that workers choosing for the Eindhoven region are more suburban oriented, including the internationals. Following Kotkin (2000), Eindhoven's green and suburban milieus make the city attractive for the more suburban oriented technical workers and families with children, both Dutch and international. This is a strength that should be cherished, certainly at the regional level.

Although we see a good match between the preferences of the regional workforce and the regional housing market, Eindhoven should make sure that there is a sufficient number of (affordable) apartments in the city as well. Although workers in the Eindhoven region are in general more suburban oriented, the internationals among them are somewhat more urban oriented and also relatively often prefer apartments. Given the increasing internationalization of the Eindhoven region, as a result of short-term labour shortages (NRC, 2013), and the expectation that young and single international workers account for 80 percent of the regions' population growth until 2020, keeping up with the urban environments remains a challenge for the region. This is exactly the type of residential milieu that Eindhoven is lacking, especially compared to larger cities such as Amsterdam. However, these developments should not go at the expense of the suburban character of the city and region as a whole, and should mainly be restricted to the inner-city and the areas directly surrounding the inner city.

Amsterdam has a sufficient offer of highly urban milieus, which are preferred by a large part of both Dutch and international workers in the region. Also, in the Amsterdam region, there seems to be less tendency by households with children to suburbanize than in the Eindhoven region, which indicates that the city is increasingly becoming attractive for households with children. Thus the residential milieus in the Amsterdam Metropolitan Area meet the demands of the regional workforce to a large extent. The same goes for cultural amenities, which are not only available to a larger extent, but also higher valued by workers in the Amsterdam region than by workers in the Eindhoven region.

However, the issue of affordability is an important issue in the Amsterdam region. The low average grade given to the availability of affordable dwellings of the preferred type by internationals

in Amsterdam should be taken seriously by policy makers in the Amsterdam Metropolitan Area. A paradox in urban policies is that many cities are restructuring inner city neighbourhoods, including the construction of owner occupied dwellings in the more expensive segment and the cleaning-up of public space. As a result, parts of the inner city become more attractive to people with higher incomes, which is also reflected in residential patterns over the past decade. These inner-city areas are also the ones that are most popular with large segments of international knowledge workers. Having many high income groups is beneficial from the city's viewpoint, since it brings in higher tax revenues. However, since not all (international) knowledge workers earn high incomes, the housing market in the parts of the city most attractive to them become more difficult to access. This is a factor that should seriously be taken up by local and regional policy makers, since this may make Amsterdam less attractive for (international) talent in the long run. Recent and planned policies to make the city more attractive for middle-income households, for example through the selling of social rented dwellings may in the longer run close the door to the city for mainly younger (international) talents that are (yet) outside the highest income ranges.

# Nederlandse samenvatting

## Inleiding

In de internationale literatuur over de woonvoorkeuren van 'kenniswerkers' woedt er al enige jaren een debat over de vraag of werknemers in kennisintensieve en creatieve sectoren een specifiek stedelijke voorkeur hebben. Ze zouden worden aangetrokken door specifiek stedelijke voorzieningen zoals bijvoorbeeld uitgaansmogelijkheden, musea en theatervoorstellingen. Bovendien zouden zij prijs stellen op de diversiteit die stedelijke gebieden eigen is en ook graag in appartementen wonen. Er is veel onderzoek gedaan naar de vraag wat er een rol speelt in het aantrekken van deze groepen tot stedelijke gebieden, maar de conclusies zijn niet eenduidig. Er is wel veel beleid geformuleerd dat stoelt op sommige van deze inzichten.

Dit onderzoek is opgezet met als doel om een aantal vragen die naar ons inzicht nog niet goed uitgezocht zijn te beantwoorden. Hiertoe hebben we een studie opgezet die twee contrasterende groepen hoogopgeleide werknemers met elkaar vergelijkt: Nederlandse en internationale kenniswerkers. Door deze vergelijking op dezelfde manier te organiseren in twee stedelijke regio's, Amsterdam en Eindhoven, wordt de vergelijking verder betrouwbaar gemaakt. Bovendien dient deze regionale selectie nog een ander belangrijk doel. Door middel van een vergelijkende studie tussen deze twee regio's is het ook mogelijk om te onderzoeken of er een verschil is tussen de woonvoorkeuren van hoogopgeleiden in stedelijke regio's met contrasterende economische profielen.

De drie hoofdvragen van het onderzoek zijn:

- *"In hoeverre hechten kenniswerkers belang aan harde en zachte locatiefactoren, en welke verschillen zijn zichtbaar tussen Nederlandse en internationale kenniswerkers, en binnen de groep internationale kenniswerkers?"*
- *"In hoeverre verschilt de voorkeur voor stedelijke en suburbane woonmilieus tussen Nederlandse en internationale kenniswerkers, en binnen de groep internationale kenniswerkers?"*
- *"Welke woningtypen en woonlocaties hebben de voorkeur van internationale kennismigranten, en hoeverre verschillen deze voorkeuren binnen de groep kennismigranten, en tussen migranten en Nederlanders?"*

## Methoden

Het onderzoek is gehouden onder verschillende hoogopgeleide groepen: ten eerste werknemers van twee high-tech bedrijven: ASML Lithography in Veldhoven in de Eindhoven regio en Shell

Technology Centre in Amsterdam Noord. De tweede groep is gerekruteerd onder werknemers van reclamebureaus in Amsterdam en Eindhoven. Verder zijn er via bewonerspanels in Amsterdam, Almere en Eindhoven hoogopgeleide werknemers in beide regio's benaderd. Tenslotte zijn er ook nog internationale werknemers geselecteerd via de expat centres van beide steden. Uiteindelijk zijn er 2802 mensen bereid gevonden om aan de enquête te beginnen en hebben er 1835 respondenten de enquête volledig ingevuld. De enquête was online te bereiken, maar men is er via interne communicatie (ASML, Shell; Expat Centre), via flyers (Shell, reclamebureaus) of via de onlinepanels (bewonerspanels) op gewezen. De flyers zijn verspreid door enquêteurs van Bureau Onderzoek en Statistiek van de gemeente Amsterdam. De dataset is opgeschoond en uitvoerig bewerkt voorafgaand aan de analyse. Alle respondenten zijn op basis van hun werkzaamheden en opleidingsrichting ingedeeld in verschillende studieachtergronden en sector waarin ze actief zijn.

68 Stated residential preferences of higher educated workers in Amsterdam and Eindhoven

Er zijn door deze bewerking 767 technische werknemers; 223 creatieve werknemers en 777 werknemers in andere sectoren (de referentiegroep). Binnen de bruikbare sample bevinden zich 354 internationale kenniswerkers, waarvan de helft uit welvarende (Westerse) landen. De data zijn uiteindelijk gebruikt voor lineaire en logistische regressieanalyse waarin verschillende aspecten van woonvoorkeuren van de groepen onder de loep zijn genomen.

## Bevindingen

Een rode draad in de bevindingen van het stated preferences onderzoek is dat internationale kenniswerkers er meer stedelijke woonvoorkeuren op nahouden dan kenniswerkers die in Nederland zijn opgegroeid. Niet alleen geven zij vaker aan een eerste voorkeur te hebben voor een stedelijk gebied – en minder vaak voor een suburbaan gebied –, zij prefereren ook minder vaak een groot huis in de suburbs en hebben twee keer zo vaker een eerste voorkeur voor een appartement.

Toch dient te worden opgemerkt dat in absolute zin nog altijd een meerderheid van de internationals (59 procent) de eerste voorkeur heeft voor een suburbaan woonmilieu. Voor de totale sample is dit zelfs 70 procent. Deze bevindingen sluiten aan bij de kritiek op Florida's 'creatieve klasse theorie'. Net als de 'creatieve klasse' in het algemeen, vormen ook internationale kenniswerkers geenszins een homogene groep met uniforme woonvoorkeuren. Ook binnen de migranten spelen huishoudenskenmerken en leeftijd een belangrijke rol voor woonvoorkeuren, en zijn er daarnaast verschillen op basis van beroepsgroep: vooral huishoudens met kinderen en technische kenniswerkers hebben relatief vaak een suburbane voorkeur. Daarnaast blijkt dat binnen de migrantenpopulatie migranten uit Westerse landen de meest stedelijke woonvoorkeur hebben.

Een belangrijk verschil bestaat daarnaast tussen de twee regio's. Zowel in het algemeen als binnen de migrantenpopulatie blijken kenniswerkers in de regio Eindhoven de minst stedelijke woonvoorkeuren te hebben, zowel waar het gaat om woonmilieu als om woningtype. De verschillen tussen de twee regio's zijn zelfs sterker dan de verschillen tussen Nederlandse en internationale kenniswerkers daarbinnen. Dit suggereert dat de kenniswerker die voor Eindhoven kiest een ander type kenniswerker is dan de Amsterdamse kenniswerker.

Tot slot bevestigt het onderzoek de uitkomsten van eerder onderzoek dat Florida's creatieve klasse theorie de rol van zachte locatiefactoren overschat. Vooral voor internationale kenniswerkers is werk of studie vaak de reden geweest om voor de regio te kiezen; zelfs twee keer zo vaak als onder Nederlanders. Het sociale en culturele klimaat speelt hierbij slechts een bescheiden rol. Ook het belang dat door zowel Nederlandse als internationale kenniswerkers aan zachte locatiefacto-

ren wordt gehecht is beperkt, zeker vergeleken met aspecten als bereikbaarheid en betaalbare woonruimte. Vooral culturele voorzieningen spelen een beperkte rol, hoewel deze wel vaak prominent op de beleidsagenda staan als het gaat om het aantrekken van talent. Hoewel internationale kenniswerkers ten opzichte van Nederlanders vaker waarde hechten aan culturele voorzieningen en horeca, vindt ook binnen deze groep slechts een minderheid deze aspecten echt belangrijk. Voorzieningen voor dagelijkse boodschappen een rustige, veilige leefomgeving worden daarentegen veel belangrijker gevonden. In dat opzicht verschillen Nederlandse en internationale kenniswerkers nauwelijks van elkaar. Interessant is ook dat betaalbare woonruimte als een belangrijk regionaal aspect wordt beschouwd, maar dit aspect relatief slecht wordt beoordeeld –in Amsterdam zelfs onvoldoende-, en vooral door internationale kenniswerkers.

Ook waar het gaat om het aantrekken van internationaal talent sluiten wij ons aan bij Servillo e.a. (2011) dat het kortzichtig is om één beleid uit te schrijven voor het aantrekken van al het talent. Hoewel de resultaten duiden op een sterkere voorkeur voor stedelijke woonmilieus en stedelijke (culturele) voorzieningen onder migranten, blijken deze voorkeuren in absolute zin erg uiteen te lopen.

Het is vooral belangrijk voor beleidsmakers om een helder beeld te hebben van de typen (internationale) kenniswerkers die in de stad of regio wonen, of daar in de nabije toekomst verwacht worden. Als dit vooral technische kenniswerkers en veel huishoudens met kinderen betreft, dan is vol inzetten op hoogstedelijke woonmilieus wellicht niet de beste strategie om talent aan te trekken of te binden, terwijl dit voor jonge alleenstaande internationals (vooral buiten de technische beroepsgroep) wel aantrekkingskracht heeft. Gezien de grote diversiteit binnen de groep internationale kenniswerker is het vooral belangrijk voldoende keuzemogelijkheden te hebben binnen de regio.

In de regio Eindhoven lijkt de suburbane woningmarkt goed aan te sluiten bij de overwegend suburbaan georiënteerde hoogopgeleide bevolking, die voor een belangrijk deel uit de technische beroepsgroep bestaat- een beroepsgroep met een bovengemiddeld suburbane voorkeur (zie ook Boterman & Sleutjes, 2014). Toch dient er met het oog op de verwachte groei van het aantal jonge alleenstaande internationals blijvend rekening te worden gehouden met het aanbod aan betaalbare appartementen in de centrale delen van de stad. Op regionaal niveau is het echter van belang dat het groene en suburbane karakter van de regio behouden blijft. In beide regio's, maar vooral in de regio Amsterdam is betaalbare woonruimte een punt van aandacht, aangezien dit als problematisch wordt ervaren door veel, vooral internationale, kenniswerkers. Recente ontwikkelingen als het verkleinen van de voorraad sociale huurwoningen om de stad aantrekkelijker te maken voor midden-inkomens kunnen juist averechts werken en de stad op iets langere termijn onbetaalbaar maken voor diegenen die er het graagst willen wonen: jonge, alleenstaande (internationale) kenniswerkers.



# References

- Andersen, K.V., M.M. Bugge, H.K. Hansen, A. Isaksen & M. Raunio (2010), One Size Fits All? Applying the Creative Class Thesis onto a Nordic Context, *European Planning Studies*, 18 (10), pp. 1591-1609
- Beaverstock, J.V. (1990), New international labour markets: The case of chartered accountants, *Area*, 22, pp. 151-158
- Beaverstock, J.V. (1994), Rethinking skilled international labor migration - World cities and banking organizations, *Geoforum*, 25 (3), pp. 323-338
- Beaverstock, J.V. (1996), Revisiting high-waged labor-market demand in the global cities - British professional and managerial workers in New-York-City, *International Journal of Urban and Regional Research*, 20, pp. 422-445
- Beaverstock, J.V. (2002), Transnational elites in global cities: British expatriates in Singapore's financial district, *Geoforum*, 33 (4), pp. 525-538
- Beckers, P., & S. Boschman (2013), *A place called home: Residential choices of highly skilled migrants in the Netherlands and the role of local amenities*, Paper presented at the 7th International Conference of Population Geographies (ICPG) in Groningen, the Netherlands, 25-28 June 2013
- Bendit, E., A. Frenkel, & S. Kaplan, S. (2011), *Residential location choice of knowledge workers in a "Startup Metropolis": The role of amenities, workplace and lifestyle*, Paper presented at the 51st European Congress of the Regional Science Association International, 30 August – 3 September 2011, Barcelona
- Bontje, M., H. Pethe, K., F. Petrasch & K. Tuppinger (2009), *Amsterdam: an attractive creative knowledge region? The view of transnational migrants*, Amsterdam: AMIDSt, University of Amsterdam
- Borén, T. & C. Young (2013), The Migration Dynamics of the "Creative Class": Evidence from a Study of Artists in Stockholm, Sweden, *Annals of the Association of American Geographers*, 103 (1), pp. 195-210
- Boterman, W.R. (2013), Dealing with diversity: middle-class family households and the issue of 'Black' and 'White' schools in Amsterdam, *Urban Studies*, 50 (6), pp. 1130-1147.
- Brown, J. & M. Męczyński (2009), 'Complexcities': Locational Choices of Creative Knowledge Workers, *Built Environment*, 35 (2), pp. 238-252
- Buch, T., S. Hamann, A. Niebuhr & A. Rossen (2013), What Makes Cities Attractive? The Determinants of Urban Labour Migration in Germany, *Urban Studies*, Published Online 14 August 2013; DOI: 10.1177/0042098013499796

- Buiskool, B. & D. Grijpstra (2006), *Attracting and embedding international knowledge workers in the Eindhoven Region: A study on the composition, perceptions and expectations*, Leiden: Research voor Beleid BV
- Butler, T (1997), *Gentrification and the middle classes*, Aldershot: Ashgate
- Butler, T., & G. Robson (2003), *London calling: the middle classes and the re-making of inner London*, London: Berg Publishers
- Clark, W.W.A. & F.M. Dieleman (1996), *Households and housing: Choice and outcomes in the housing market*, New Brunswick NJ: Centre for Urban Policy Research, Rutgers University
- Clark, T.N., R. Lloyd, K.K. Wong, P. Jain (2002), Amenities drive urban growth, *Journal of Urban Affairs*, 24 (5), 493-515.
- De Wijs-Mulken, E. (1999), *Wonen op stand. Lifestyles en landschappen van de culturele en economische elite*, Amsterdam: Spinhuis
- Florida, R. (2002), *The Rise of the Creative Class and How it's Transforming Work, Leisure, Community and Everyday Life*, New York: Basic Books
- Frenkel, A., E. Bendit & S. Kaplan (2013), The linkage between the lifestyle of knowledge-workers and their intra-metropolitan residential choice: A clustering approach based on self-organizing maps, *Computers, Environment and Urban Systems*, 39, pp. 151-169
- Glaeser, E.L., J. Kolko & A. Saiz (2001), Consumer City, *Journal of Economic Geography*, 1, pp. 27-50
- Hansen, H.K. & T. Niedomysl (2009), Migration of the creative class: evidence from Sweden, *Journal of Economic Geography*, 9 (2), pp. 191-206
- Helbrecht, I. (1998), *The Creative Metropolis; services, symbols and spaces*, Paper presented at the yearly conference for the association of Canadastudies, Grainau
- Helbrecht, I. (2004), Bare Geographies in Knowledge Societies – Creative Cities as Text and Piece of Art: Two Eyes, One Vision, *Built Environment*, 30 (3), pp. 194-203
- Hercog, M. (2008), The Role of the State in Attracting Highly-skilled migrants; The Case of the Netherlands, *Eipascope*, 2008/3, pp. 19-24
- Houston, D, A. Findlay, R. Harrison & C. Mason (2008), Will attracting the “creative class” boost economic growth in old industrial regions? A case study of Scotland, *Geografiska Annaler: Series B, Human Geography*, 90 (2), pp. 133-149
- Jacobs, J. (1961), *The Death and Life of Great American Cities*, New York: Random House
- Kloosterman, R.C. (2004), Recent employment trend in the cultural industries in Amsterdam, Rotterdam, The Hague and Utrecht: A first exploration, *Tijdschrift voor Economische en Sociale Geografie*, 95 (2), pp. 243-252
- Kotkin, J. (2000), *The new geography: how the digital revolution is reshaping the American Landscape*, New York: Random House
- Lawton, P., E. Murphy & D. Redmond (2013), Residential preferences of the ‘creative class’?, *Cities*, 31 (2), pp. 47-56
- Ley, D (2003), Artists, aestheticisation and the field of gentrification, *Urban Studies*, 40 (12), pp. 2527-2544
- Markusen, A. (2006), Urban development and the politics of a creative class: evidence from a study of artists, *Environment and Planning A*, 38, pp. 1921-1940

Martin-Brelot, H., M. Grossetti, D. Eckert, O. Gritsai & Z. Kovács (2010), The Spatial Mobility of the 'Creative Class': A European Perspective, *International Journal of Urban and Regional Research*, 34 (4), pp. 854-870

Massey, D.S., J. Arango, G. Huga, A. Kouaouci, A. Pellegrino & J.E. Taylor (1993), Theories of international migration: a review and appraisal, *Population and Development Review*, 19 (3), pp. 431-466.

Migueluez, E. & R. Moreno (2014), What attracts knowledge workers: the role of space and social networks, *Journal of Regional Science*, 54 (1), pp. 33-60

Musterd, S. (2002), *De Nieuwe Amsterdamse Kernvoorraad; Woonmilieus in de Creatieve Culturele Kennisstad*, Amsterdam: Bestuursdienst, Gemeente Amsterdam

Musterd, S. & A. Murie (eds.) (2010), *Making Competitive Cities*, Chichester: Wiley-Blackwell

Musterd, S. & Z. Kovács (eds.) (2013), *Place-making and Policies for Competitive Cities*, Chichester: Wiley-Blackwell

Niedomysl, T. (2010), 'Towards a conceptual framework of place attractiveness: a migration perspective', *Geografiska Annaler: Series B, Human Geography*, 92 (1), pp. 97-109

Niedomysl, T., & H.K. Hansen (2010), What matters more for the decision to move: Jobs versus amenities, *Environment and Planning A*, 42, pp. 1636-1649

NRC (2013), Burgemeester Eindhoven vreest tekort aan goed personeel, *NRC Handelsblad*, January 7, 2013

O+S (2012), *Amsterdam In Cijfers 2012*, Amsterdam: Gemeente Amsterdam, Bureau Onderzoek en Statistiek

Pareja-Eastaway, M., M. Bontje & M. d'Ovidio (2010), Attracting Young and High-Skilled Workers: Amsterdam, Milan and Barcelona, In: S. Musterd, S. & A. Murie (eds) *Making competitive cities*. Chichester: Wiley-Blackwell, pp. 192-207

Pethe, H. (2007), Un-restricted agents? International migration of the highly skilled revisited, *Social Geography*, 3, pp. 211-236

Pethe, H., S. Hafner & P. Lawton (2010), Transnational Migrants in the Creative Knowledge Industries: Amsterdam, Barcelona, Dublin and Munich, In: Musterd, S. & A. Murie (eds.), *Making Competitive Cities*, Chichester: Wiley-Blackwell, pp. 163-191

Pethe, H. & S. Hafner (2013), Internationalisation and Policies towards Transnational Migration, in: Musterd, S. & Z. Kovács (eds.) (2013), *Place-making and Policies for Competitive Cities*, Chichester: Wiley-Blackwell

Rossi, P.H. (1955), *Why families move: A study in the social psychology of urban residential mobility*, Glencoe: Free Press

Saxenian, A. (1999), Silicon Valley's new immigrant entrepreneurs, Public Policy Institute of California.

Scott, S. (2006), The social morphology of skilled migration: The case of the British middle class in Paris, *Journal of Ethnic and Migration Studies*, 32, pp. 1105-1129

Servillo, L., R. Atkinson & A.P Russo (2011), Territorial attractiveness in EU urban and spatial policy: A critical review and future research agenda, *European Urban and Regional Studies*, Published online December 21, 2011, DOI: 10.1177/0969776411430289

Sleutjes, B. (2013), The Hard and Soft Side of European Knowledge Regions, HELP UVA VU Report, no 1), Amsterdam: UvA

Storper, M. & A.J. Scott (2009) Rethinking human capital, creativity and urban growth, *Journal of Economic Geography* (9) pp. 147-167

Van Oort, F., A. Weterings, A. & H. Verlinde (2003), Residential amenities of knowledge workers and the location of ICT-Firms in the Netherlands, *Tijdschrift voor economische en sociale geografie*, 94 (4), pp. 516-523

Verdich, M. (2010), Creative Migration? The attraction and retention of the 'creative class' in Launceston, Tasmania, *Australian Geographer*, 41 (1), pp. 129-140

Vertovec, S. (2007), *Circular migration: the way forward in global policy?*, Oxford: International Migration Institute, University of Oxford

Vriens, J. & S. Van der Dam (2011), Huisvesting van de International Knowledge Workers in Zuidoost-Brabant, Eindhoven; Een onderzoek naar woonwensen, Eindhoven: Gemeente Eindhoven

Zukin, S. (1987), Gentrification: culture and capital in the urban core, *Annual Review of Sociology*, 13, pp. 129-147

# Appendix: questionnaire

## Questionnaire Residential Preferences Higher Educated Workers

Dear participant, whether you are self-employed, work for a small or large company or are employed by the government, you are asked to participate in this survey because you work in the Amsterdam / Eindhoven. Through this survey we try to gain insight into your housing preferences and how they relate to your work and your background.

The survey begins with a set of questions about your current residential situation. The second set of questions is about your work and education. The questionnaire concludes with questions about whether you intend to move. Thank you very much for your cooperation!

### First part: Household, dwelling and neighbourhood.

#### **1. Which of the following statements applies best to your situation: (Amsterdam)**

- ☐ I came to live in the Amsterdam region because of my work
- ☐ I came to live in the Amsterdam region because of my partner and family
- ☐ I looked for a job in the Amsterdam region because I grew up here
- ☐ I looked for a job in the Amsterdam region because I already lived here and I didn't want to leave
- ☐ I looked for a job in the Amsterdam region because I could get a house in the Amsterdam region
- ☐ I came to live in the Amsterdam region because I like the social and cultural atmosphere
- ☐ I came to live in the Amsterdam region because of another reason
  
- ☐ I don't live in the Amsterdam region, but I do work there (**go to question 8**)

#### **2. Which of the following statements applies best to your situation: (Eindhoven)**

- ☐ I came to live in the Eindhoven region because of my work
- ☐ I came to live in the Eindhoven region because of my partner and family
- ☐ I looked for a job in the Eindhoven region because I grew up here
- ☐ I looked for a job in the Eindhoven region because I already lived here and I didn't want to leave
- ☐ I looked for a job in the Eindhoven region because I could get a house in the Eindhoven region

- ☐ I came to live in the Eindhoven region because I like the social and cultural atmosphere
- ☐ I came to live in the Eindhoven region because of another reason
- ☐ I don't live in the Eindhoven region, but I do work there (**go to question 8**)

3. How long have you been living in (the region of) Amsterdam ..... year(s)  
(Amsterdam)

4. How long have you been living in (the region of) Eindhoven ..... year(s)  
(Eindhoven)

5. In which country and town did you grow up? (where did you live throughout  
(most of your) childhood)

.....

6. What is your current postal code 

--	--	--	--	--

--	--

7. For how long have you been living at your current address? .....  
Year/month

8. For how long have you been living in The Netherlands? .....years

9. What is your country of birth?

10. What is your nationality?.....

11. What is the nationality of your partner?.....

12. Do you or your partner have any close relatives... (Amsterdam)

- |                          |                              |                             |
|--------------------------|------------------------------|-----------------------------|
| In Amsterdam?            | <input type="checkbox"/> yes | <input type="checkbox"/> no |
| In the Amsterdam region? | <input type="checkbox"/> yes | <input type="checkbox"/> no |
| In the Netherlands?      | <input type="checkbox"/> yes | <input type="checkbox"/> no |

13. Do you or your partner have any close relatives... (Eindhoven)

- |                          |                              |                             |
|--------------------------|------------------------------|-----------------------------|
| In Eindhoven?            | <input type="checkbox"/> yes | <input type="checkbox"/> no |
| In the Eindhoven region? | <input type="checkbox"/> yes | <input type="checkbox"/> no |
| In the Netherlands?      | <input type="checkbox"/> yes | <input type="checkbox"/> no |

14. Do you or your partner you have any good friends ... (Amsterdam)

- |                          |                              |                             |
|--------------------------|------------------------------|-----------------------------|
| In Amsterdam?            | <input type="checkbox"/> yes | <input type="checkbox"/> no |
| In the Amsterdam region? | <input type="checkbox"/> yes | <input type="checkbox"/> no |
| In the Netherlands?      | <input type="checkbox"/> yes | <input type="checkbox"/> no |

15. Do you or your partner you have any good friends ... (Eindhoven)

- In Eindhoven? ☐ yes ☐ no
- In the Eindhoven region? ☐ yes ☐ no
- In the Netherlands? ☐ yes ☐ no

*The next questions are about the characteristics of your current dwelling*

**16. How many bedrooms are there in your home?**

..... bedrooms

18b How many square meters does your current home measure?

..... m<sup>2</sup>

**17. What type of dwelling do you live in?**

- ☐ Apartment (upper level)
- ☐ Apartment (ground level)
- ☐ Terraced house/row house
- ☐ Semi-detached
- ☐ Detached house
- ☐ Other, namely.....

**18. Do you own your home, or do you rent?**

- ☐ I own my home
- ☐ I rent my home in the private sector
- ☐ I rent my home from a housing association
- ☐ Other, namely.....

**19. What are your net monthly expenses on housing**

***Monthly rent/mortgage payments, after tax benefits (huursubsidie, hypotheekrenteaftrek)?***

- ☐ less than 366 euros
- ☐ 366-664 euros
- ☐ 664 euro to 1000 euros
- ☐ 1000 euro to 1500 euros
- ☐ more than 1500 euros

**20. Could you characterise your neighbourhood in three key words?**  
(for instance: green, quiet, homogeneous)

.....

**21. Could you indicate how satisfied you are with the following amenities/aspects of the Amsterdam region? Please mark with a number from 1 to 10 (1= very poor, 10 = excellent) (Amsterdam)**

Access by car/parking space

Access by public transport

Availability of affordable housing (of the type you prefer)

Public green areas

Offer of museums

Offer of classical concerts

Offer of pop/jazz concerts

Offer of theatre plays

Daily groceries stores (bakery, butcher, supermarket)

Restaurants, cafés and bars

Speciality food shops (wine shop, delicatessen, organic food)

Composition of population

Public safety


**22. Could you indicate how satisfied you are with the following amenities/aspects of the Eindhoven region? Please mark with a number from 1 to 10 (1= very poor, 10 = excellent) (Eindhoven)**

Access by car/parking space

Access by public transport

Availability of affordable housing (of the type you prefer)

Public green areas

Offer of museums




Offer of classical concerts	<input type="checkbox"/>
Offer of pop/jazz concerts	<input type="checkbox"/>
Offer of theatre plays	<input type="checkbox"/>
Daily groceries stores (bakery, butcher, supermarket)	<input type="checkbox"/>
Restaurants, cafés and bars	<input type="checkbox"/>
Speciality food shops (wine shop, delicatessen, organic food)	<input type="checkbox"/>
Composition of population	<input type="checkbox"/>
Public safety	<input type="checkbox"/>

**23. Could you indicate how important it is for you to have these amenities in/aspects of the region?**

Access by car/parking space	<input type="checkbox"/> very important	<input type="checkbox"/> im- portant	<input type="checkbox"/> not so important	<input type="checkbox"/> unim- portant
Access by public transport	<input type="checkbox"/> very important	<input type="checkbox"/> im- portant	<input type="checkbox"/> not so important	<input type="checkbox"/> unim- portant
Public green areas	<input type="checkbox"/> very important	<input type="checkbox"/> im- portant	<input type="checkbox"/> not so important	<input type="checkbox"/> unim- portant
Offer of museums	<input type="checkbox"/> very important	<input type="checkbox"/> im- portant	<input type="checkbox"/> not so important	<input type="checkbox"/> unim- portant
Offer of classical concerts	<input type="checkbox"/> very important	<input type="checkbox"/> im- portant	<input type="checkbox"/> not so important	<input type="checkbox"/> unim- portant
Offer of pop/jazz concerts	<input type="checkbox"/> very important	<input type="checkbox"/> im- portant	<input type="checkbox"/> not so important	<input type="checkbox"/> unim- portant
Offer of theatre	<input type="checkbox"/> very important	<input type="checkbox"/> im- portant	<input type="checkbox"/> not so important	<input type="checkbox"/> unim- portant
Daily groceries stores (bakery, butcher, supermarket)	<input type="checkbox"/> very important	<input type="checkbox"/> im- portant	<input type="checkbox"/> not so important	<input type="checkbox"/> unim- portant
Restaurants, cafés and bars	<input type="checkbox"/> very important	<input type="checkbox"/> im- portant	<input type="checkbox"/> not so important	<input type="checkbox"/> unim- portant
Speciality food shops (wine shop, delicatessen, organic food)	<input type="checkbox"/> very important	<input type="checkbox"/> im- portant	<input type="checkbox"/> not so important	<input type="checkbox"/> unim- portant
Composition of population	<input type="checkbox"/> very important	<input type="checkbox"/> im- portant	<input type="checkbox"/> not so important	<input type="checkbox"/> unim- portant
Public safety	<input type="checkbox"/> very important	<input type="checkbox"/> im- portant	<input type="checkbox"/> not so important	<input type="checkbox"/> unim- portant

**24. Could you indicate how satisfied you are with the following amenities in /aspects of your neighbourhood? Please mark with a number from 1 to 10 (1= very poor, 10 = excellent)**

Access by car/parking space	<input type="text"/>
Access by public transport	<input type="text"/>
Availability of affordable housing (of the type you prefer)	<input type="text"/>
Public green areas	<input type="text"/>
Daily groceries stores (bakery, butcher, supermarket)	<input type="text"/>
Restaurants, cafés and bars	<input type="text"/>
Speciality food shops (wine shop, delicatessen, organic food)	<input type="text"/>
Composition of population	<input type="text"/>
Public safety	<input type="text"/>
Sports facilities	<input type="text"/>

**25. Could you indicate how important the following points are for you in respect to your neighbourhood?**

Access by car/parking space	<input type="checkbox"/> very important	<input type="checkbox"/> im- portant	<input type="checkbox"/> not so important	<input type="checkbox"/> unim- portant
Access by public transport	<input type="checkbox"/> very important	<input type="checkbox"/> im- portant	<input type="checkbox"/> not so important	<input type="checkbox"/> unim- portant
Public green areas	<input type="checkbox"/> very important	<input type="checkbox"/> im- portant	<input type="checkbox"/> not so important	<input type="checkbox"/> unim- portant
Daily groceries stores (bakery, butcher, supermarket)	<input type="checkbox"/> very important	<input type="checkbox"/> im- portant	<input type="checkbox"/> not so important	<input type="checkbox"/> unim- portant
Restaurants, cafés and bars	<input type="checkbox"/> very important	<input type="checkbox"/> im- portant	<input type="checkbox"/> not so important	<input type="checkbox"/> unim- portant
Speciality food shops (wine shop, delicatessen, organic food)	<input type="checkbox"/> very important	<input type="checkbox"/> im- portant	<input type="checkbox"/> not so important	<input type="checkbox"/> unim- portant
Composition of population	<input type="checkbox"/> very important	<input type="checkbox"/> im- portant	<input type="checkbox"/> not so important	<input type="checkbox"/> unim- portant
Public safety	<input type="checkbox"/> very important	<input type="checkbox"/> im- portant	<input type="checkbox"/> not so important	<input type="checkbox"/> unim- portant
Sports facilities	<input type="checkbox"/> very important	<input type="checkbox"/> im- portant	<input type="checkbox"/> not so important	<input type="checkbox"/> unim- portant

*Obviously this list with amenities is by no means complete. There are many aspects of your neighbourhood and the city region that could also be very important to you.*

**26. Are there any, other than those mentioned above, aspects or amenities of the neighbourhood that are important to you?**

1.....

2.....

3.....

**27. Are there any, other than those mentioned above, aspects or amenities of the Amsterdam region that are important to you? (Amsterdam)**

1.....

2.....

3.....

**28. Are there any, other than those mentioned above, aspects or amenities of the Eindhoven region that are important to you? (Eindhoven)**

1.....

2.....

3.....

**29. What is your gender? .....**

**30. How many people are in your household, including you?**

**Afhankelijk van aantal volgende vraag op aan laten sluiten**

**31. What is your age and that of the members of your household?**

**You**

**(Partner)**

**(Eldest child)**

**(Youngest child)**

**(Others).....**

**(Others).....**

Routing: alle volgende vragen over de partner hierop aansluiten

**32. What is your highest completed level of education?**

- ☐ Primary school
- ☐ Lower secondary school
- ☐ Upper secondary school
- ☐ Higher vocational
- ☐ University (bachelors)
- ☐ University (masters)
- ☐ PhD

**33. What and where did you study? (For example: *BA communication at University of Birmingham; MA communication at University of York*)**

.....  
.....

**34. What is the highest completed level of education of your partner?**

- ☐ Primary school
- ☐ Lower secondary school
- ☐ Upper secondary school
- ☐ Higher vocational
- ☐ University (bachelors)
- ☐ University (masters)
- ☐ PhD

Vraag alleen voor 'higher vocational' en hoger

**35. What and where did your partner study? (For example: *BA communication at University of Birmingham; MA communication at University of York*)**

.....

**36. What is the highest completed level of education of your father?**

- ☐ None
- ☐ Primary school
- ☐ Lower secondary school
- ☐ Upper secondary school
- ☐ Higher vocational
- ☐ University (bachelors)
- ☐ University (masters)
- ☐ PhD

**37. What is the highest completed level of education of your mother?**

- ☐ None
- ☐ Primary school
- ☐ Lower secondary school
- ☐ Upper secondary school
- ☐ Higher vocational
- ☐ University (bachelors)
- ☐ University (masters)
- ☐ PhD

**38. What is the gross annual income of your household before tax? (Your income and that of your partner together)**

- ☐ less than 12.000 Euros per year
- ☐ 12.000 to 35.000 Euros per year
- ☐ 35.000 to 50.000 Euros per year
- ☐ 50.000 to 70.000 Euros per year
- ☐ 70.000 to 100.000 Euros per year
- ☐ 100.000 to 150.000 Euros per year
- ☐ 150.000 to 200.000 Euros per year
- ☐ More than 200.000 Euros per year

**39. Which newspapers do you read regularly? (multiple answers possible)**

- ☐ I do not read any newspapers
- ☐ New York Times
- ☐ The Guardian
- ☐ Le Monde
- ☐ Frankfurter Allgemeine Zeitung
- ☐ Other international newspapers, namely.....
- ☐ De Telegraaf
- ☐ AD
- ☐ De Volkskrant
- ☐ NRC Handelsblad
- ☐ NRC Next
- ☐ FD
- ☐ Trouw
- ☐ Het Parool
- ☐ Eindhovens Dagblad
- ☐ Other, namely.....

**40. Which political party do you support? (multiple answers possible)**

- ☐ I am not allowed vote and/or do not take an interest in Dutch politics (**go to question 41**)
- ☐ CDA (Christian democrats)
- ☐ PvdA (labour)
- ☐ VVD (conservative liberals)
- ☐ SP (socialist party)
- ☐ PVV (Wilders) (nationalist)
- ☐ Groen Links (greens)
- ☐ Christen Unie (Christian conservative)
- ☐ D66 (liberals)
- ☐ SGP (Christian conservative)
- ☐ PvdD (Party for the animals)

☐ Other, namely .....

**41. How would you describe your political position/ideology:**  
(for instance: conservative or liberal)

.....

**42. Do you or your partner own a car?**

☐ Yes, I own a.....(please write down the brand and model)

☐ Yes, several, a;.....(please write down the brands and models)

And a: .....

☐ No, but I do have a lease car

☐ No, but I do have a subscription to a shared car (greenwheels, car2go, connectcar a.o.)

☐ No, but I do have one at my disposal

☐ No.

**43. How many hours do you work per week (paid)?**

Number of hours (You).....

**44. How many hours does your partner work per week (paid)?**

Number of hours (partner).....

**45. How often do you work from home?**

☐ I (almost) always work from home

☐ I often work from home

☐ I work from home regularly

☐ I sometimes work from home

☐ I (almost) never work from home

**46. How long does it take you and your partner to commute to work using the following transport modes:**

	<u>You</u>	<u>Your Partner</u>
On foot	<input type="text"/> minutes <input type="checkbox"/> n.a.	<input type="text"/> minutes <input type="checkbox"/> n.a.

By bike	<input type="text"/>	minutes <input type="checkbox"/> n.a.	<input type="text"/>	minutes <input type="checkbox"/> n.a.
By car	<input type="text"/>	minutes <input type="checkbox"/> n.a.	<input type="text"/>	minutes <input type="checkbox"/> n.a.
By public transport	<input type="text"/>	minutes <input type="checkbox"/> n.a.	<input type="text"/>	minutes <input type="checkbox"/> n.a.

**47. Please, describe as precisely as possible your profession, job, and the company/government branch you work for (for example: economist, data analyst at the sales department for Delta Lloyd)**

.....

.....

.....

**48. Please, describe as precisely as possible your partner's profession, job, and the company/government branch he/she works for (for example: economist, data analyst at the sales department for Delta Lloyd)**

.....

.....

.....

**49. For how long have you been working for your current employer (or yourself if you are self-employed)**

.....years/months

**50. Could you indicate to what extent you agree with the following statements:**

***I could only do my job in Amsterdam/Eindhoven***

☐ I agree completely      ☐ I agree    ☐ Neutral      ☐ I disagree      ☐ I disagree completely

***I would rather live in a big house in the suburbs than in a small apartment in the city***

☐ I agree completely      ☐ I agree    ☐ Neutral      ☐ I disagree      ☐ I disagree completely



***My work is an important part of my identity***

☐ I agree completely      ☐ I agree      ☐ Neutral      ☐ I disagree      ☐ I disagree completely

***My neighbourhood is an important part of my identity***

☐ I agree completely      ☐ I agree      ☐ Neutral      ☐ I disagree      ☐ I disagree completely

***I feel at home in my neighbourhood***

☐ I agree completely      ☐ I agree      ☐ Neutral      ☐ I disagree      ☐ I disagree completely

***I prefer to live in an area where most people are like me***

☐ I agree completely      ☐ I agree      ☐ Neutral      ☐ I disagree      ☐ I disagree completely

***Third part: Moving Yes or No?***

***The next part will address the question whether you want to move or not and what your motivations are.***

**51. How do you assess the chance that you will move within the Netherlands in the next two years?**

%

**(at more than 50% proceed to Q47; less than 50% proceed to Q48)**

**52. What is for you, or would be the most important reason(s) to move?**

***(multiple answers possible)***

- ☐ I would like to buy a house
- ☐ I would like to rent
- ☐ I would like a bigger home
- ☐ I would like to live closer to my relatives or friends
- ☐ I have been offered a job elsewhere by the same employer
- ☐ I have found a job elsewhere
- ☐ My partner has found a job elsewhere
- ☐ I would like to live cheaper
- ☐ I would like to leave this neighbourhood
- ☐ I would like to leave this city/region
- ☐ I would like to have a garden
  
- ☐ Other, namely.....

**53. What is, or would be the most important reason(s) not to move?**  
*(multiple answers possible)*

- ☐ I am very attached to my home
- ☐ I am very attached to my neighbourhood
- ☐ I don't want to leave this town
- ☐ I can't afford to move
- ☐ I have my friends here
- ☐ I have my relatives here
- ☐ I live close to where I work
- ☐ My children go to school here
  
- ☐ Other, namely.....

**54. How likely is it that you will move *outside the Netherlands* within the next two years?**

%

(at more than 50% proceed to Q48; less than 50% proceed to Q50)

**55. What is, or would be the most important reason(s) to move away from the Netherlands?**

- ☐ Career opportunities elsewhere
- ☐ Offered a job by same employer in another country
- ☐ My partner has found/ is looking for a job in another country
- ☐ Return to country of origin for personal or family related reasons
- ☐ Do not like the economic and political climate of the Netherlands
- ☐ Do not like the social and cultural climate of the Netherlands
- ☐ Do not want to bring up my children in the Netherlands
  
- ☐ Other.....

**56. Are you actively searching for a new home?**  
*(multiple answers possible)*

- ☐ Yes, I search actively on the web or via newspapers
- ☐ Yes, I have hired a real estate agent
- ☐ Yes, I'm listed at Woningnet/Woonbedrijf
- ☐ Yes, I search in other ways
- ☐ No

**57. If you were to move, would you rather rent or buy your home?**

- ☐ Buy
- ☐ Rent in the private sector
- ☐ Rent from a housing association
- ☐ Other, namely.....

**If you were to search for a home, what would your search criteria be?**

**58. What would be your price range? (Select an under- and upper-limit by clicking the arrows).**

**Asking Price**

€ 200.000	▼	€ 550.000	▼
-----------	---	-----------	---

**Rent per month**

€ 300	▼	€ 400	▼
-------	---	-------	---

**59. What neighbourhoods/towns would or do you consider? (Amsterdam)**

- ☐ My own current neighbourhood
- ☐ A neighbourhood within the ring road in Amsterdam, namely.....
- ☐ A neighbourhood elsewhere in Amsterdam, namely.....
- ☐ A municipality in the Amsterdam region\*, namely.....
- ☐ A municipality outside the Amsterdam region\*, namely.....
- ☐ Other, namely.....

**60. What neighbourhoods/towns would or do you consider? (Eindhoven)**

- ☐ My own current neighbourhood

- ☐ A neighbourhood within Eindhoven, namely.....
- ☐ A neighbourhood elsewhere in the Eindhoven region, namely.....
- ☐ A municipality outside the Eindhoven region\*, namely.....
- ☐ Other, namely.....

**61. What type of dwelling would you look for?**

- ☐ Apartment (upper level)
- ☐ Apartment (ground level)
- ☐ Terraced housing/row house
- ☐ Semi-detached
- ☐ Detached
- ☐ Other, namely.....

**62. How many bedrooms and square meters floor area?**

Minimal number of bedrooms..... minimal M<sup>2</sup>.....

*When you move you will take the location, the neighbourhood and the aspects of your home into account. Often moving involves a trade-off between location and dwelling. The following questions will deal with these issues:*

**63. What are the most important issues with regard to the dwelling itself?**

*(Please rank the following points, 1 is most important, 7 is least important)*

- A. Private Garden
- B. Building style and architecture
- C. Owning my home
- D. No up- or downstairs neighbours
- E. Relatively low housing costs
- F. Spacious dwelling (at least one spare (bed) room)
- G. Free view

- 1.....
- 2.....
- 3.....
- 4.....
- 5.....
- 6.....
- 7.....

**64. With respect to your neighbourhood?**

*(Please rank the following points, 1 is most important, 7 is least important)*

- A. Composition of neighbourhood population
- B. Public green areas and parks in the neighbourhood
- C. Quiet residential environment
- D. Bakery, butcher, green grocer at walking distance
- E. Good restaurants, nice cafe's and bars in the neighbourhood
- F. Good bookstore in the neighbourhood
- G. Architecture and building period of the neighbourhood

- 1.....
- 2.....
- 3.....
- 4.....
- 5.....
- 6.....
- 7.....

**65. With respect to the location of your home?**

*(Please rank the following points, 1 is most important, 7 is least important)*

- A. Close to work
- B. Close to the high way
- C. Close to a public transport hub
- D. Close to/in the city centre

E. Close to relatives

F. Close to friends

G. Close to nature areas

1.....

2.....

3.....

4.....

5.....

6.....

7.....

**66.** What are for you the most important and decisive considerations of all aspects listed above?

Top 3 van vraag 63, 64 en 65 in beeld

1.....

2.....

3.....

**67. In which neighbourhoods/towns would you prefer to live and where would you rather not live? (Amsterdam)**

*(Please rank the following points, 1 is most attractive, 10 is least attractive)*

K) Jordaan

L) Indische Buurt

M) Watergraafsmeer

N) IJburg

O) Buitenveldert

P) Almere/Hoofddorp

Q) Abcoude

R) Bussum

S) Broek in Waterland e.o.

T) Haarlem

- 1.....
- 2.....
- 3.....
- 4.....
- 5.....
- 6.....
- 7...
- 8.....
- 9...
- 10.....

**68. In which neighbourhoods/towns would you prefer to live and where would you rather not live? (Eindhoven)**

*(Please rank the following points, 1 is most attractive, 10 is least attractive)*

- K) Veldhoven
- L) Binnenstad Eindhoven
- M) Woensel Zuid
- N) Best
- O) Strijp S
- P) Meerhoven
- Q) Brandevoort
- R) Eersel
- S) Geldrop
- T) Binnenstad Helmond

- 1.....
- 2.....
- 3.....
- 4.....
- 5.....
- 6.....
- 7...
- 8.....
- 9...
- 10.....

69. Could you rank these residential environments:  
(which do you find most attractive?)







- 1 (Most attractive).....
- 2.....
- 3.....
- 4.....
- 5.....
- 6.....
- 7.....
- 8.....
- 9.....
- 10.....

Final remarks:

**Would you have recommendations for the local or national government concerning your residential environment?**

.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....

**Do you have any suggestions or comments about the questionnaire?**

.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....

# Urban Regions in the Delta

Meer informatie

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