



**Statistics Netherlands**

Division of Social and Spatial Statistics  
Statistical Analysis Department  
Demography Unit

P.O. Box 4000  
2270 JM Voorburg  
The Netherlands

e-mail: [hncs@cbs.nl](mailto:hncs@cbs.nl)

---

## Population dynamics in the four big municipalities in the Netherlands: selective migration flows to and from the big cities

Han Nicolaas

Paper for the EAPS Population Conference, 21 – 24 June 2006,  
Liverpool, United Kingdom

### **Abstract**

*Population growth in the four big municipalities in the Netherlands (Amsterdam, Rotterdam, The Hague and Utrecht) has been modest during the last decade. However, these cities experience considerable changes in the composition of their population. That has, among other things, to do with immigration from abroad which is mainly focused on the big cities and with migration flows from the big cities to the surrounding municipalities.*

*Not only the numbers of persons that migrate are important, their socio-demographic and economic characteristics are a matter of concern as well. It turns out that the stage of life and the ethnic background of the people who arrive in the big cities differ considerably from those who leave. Selective migration flows of the big cities endanger the economic development of the urban population and lead to segregation.*

*This study shows that the composition of the population of the four big cities in the Netherlands has changed considerably between 1995 and 2005. Against a net outflow of native Dutch people, mainly to the suburbs of the big cities, there is an inflow of people with a foreign background from abroad, in particular people with a non-western background. This process is enhanced by selective developments in natural growth: the native Dutch population show a natural decrease, whereas the non-native population show a natural increase.*

*With respect to the economic characteristics of the ingoing and outgoing migration flows, data are available as from 1999. From 1999 to 2003, the four big cities lost almost 200 million euros in total income earned by the migrants involved in national and international migration flows. A breakdown by ethnicity shows considerable differences between the native Dutch population and the foreign population with regard to these*

*economic flows. Native Dutch people took with them a net amount of almost 900 million euros when leaving the big cities, whereas people with a western and non-western background brought with them a net amount of 500 and 200 million euros respectively when arriving in the city.*

## **1. Introduction**

The development of the four big cities in the Netherlands is a source of concern. Deterioration, unsafety and lacking social cohesion are strongly related to urban areas and the selective composition of their populations. The composition of the population in the big cities differs considerably from that of other cities. Big cities house substantial numbers of persons with lower incomes and persons with a foreign background. Besides, these characteristics often coincide. Selective migration flows may maintain or even enhance such concentrations.

Population growth in the four big cities in the Netherlands has been modest during the last decade. However, these cities experience considerable changes in the composition of their population. On the one hand, there is immigration from abroad which is mainly focused on the big cities. On the other hand, there are substantial migration flows from the big cities to the surrounding municipalities.

The numbers of persons that migrate as well as their socio-demographic and economic characteristics are a matter of concern. It turns out that selective migration flows, international as well as internal migration, result in a net outflow of native Dutch people from the big cities (Latten e.a., 2004). To a large extent, foreign immigrants have taken the place of the native population. During the past four decades, an international migration flow of foreigners with a non-western background is particularly focused on the big cities. As a result, the concentration of non-western foreigners in Amsterdam, Rotterdam, The Hague and Utrecht increased sharply in spite of a growing internal migration flow of non-western foreigners to the suburbs of the big cities. These non-western newcomers often have a weak socio-economic position and often are not capable of joining the existing labour market (Sprangers e.a., 2004). Besides, when jobs can be found in the cities but those who get one live outside these cities, growth due to urban activity and employment not necessarily have to coincide with improvement of the socio-economic position of the urban population.

With respect to native Dutch people, the four big cities experience a net inflow only for people in their twenties. The city as a residence, as the place to be, has lost importance to native Dutch people aged 30 and older and children: in these stages of life the number of native Dutch leavers is higher than the number of arrivals. For foreigners, however, the city seems to fill another role. At least, that can be concluded from the fact that the number of foreign arrivals exceeds the number of departures in all stages of life.

This paper starts with a brief description of the *Social Statistical Dataset* (SSD), the main source for this analysis, followed by the main results. As for the results, a distinction is made between demographic and socio-economic effects of selective migration flows. The four big cities will be compared with each other briefly. The paper ends with some conclusions and suggestions for further research.

## **2. Source: Social Statistical Dataset**

The information in this paper is derived from the *Social Statistical Dataset* (SSD). The SSD is primarily based on register information and data from business and household surveys which is not available in registers. The registers contain demographic data, income tax data, data on labour market participation, the dependence on social security benefits, participation in education and housing facilities. The files of the Population Register form the backbone of the SSD, as all the other files are linked to this register. Linking on a personal identification number has proven to be successful: approximately 99 percent of the records are linked. In some cases, such an identification number is absent. In these cases, the sources are linked on postal code, house number, date of birth and sex. This results in approximately 95 percent of linked records. The linked files form the basis for the work process of the SSD.

Because ultimately the SSD will comprise a very detailed picture of every inhabitant of the Netherlands, data security and confidentiality are important issues. At all costs, Statistics Netherlands must prevent individual data being disclosed as this would seriously damage the bureau's reputation. There are also legal conditions which forbid Statistics Netherlands to publish individual data. Therefore, a strict security regime has been established.

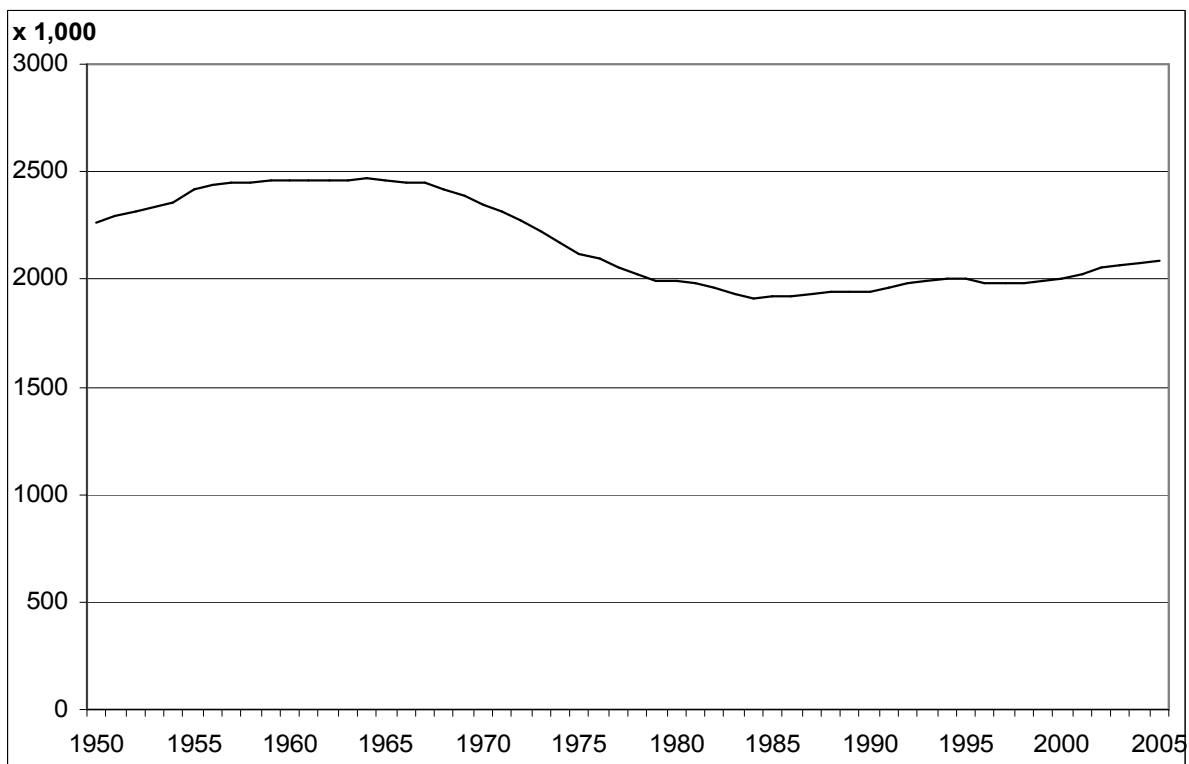
### 3. Results

#### 3.1. The demographic effects

Between 1995 and 2005 the population of the four big cities in the Netherlands increased with 90 thousand people on a total population of more than 2 million inhabitants, an increase of four percent (*graph 1*). In the same period, the total population of the Netherlands increased with some six percent. Besides, more than one half of the growth in the big cities was due to border changes. In 2001 and 2002, the municipalities of Utrecht and The Hague incorporated parts of their surrounding municipalities, without which the growth in the four big cities would only have amounted to 37 thousand people.

#### Graph 1

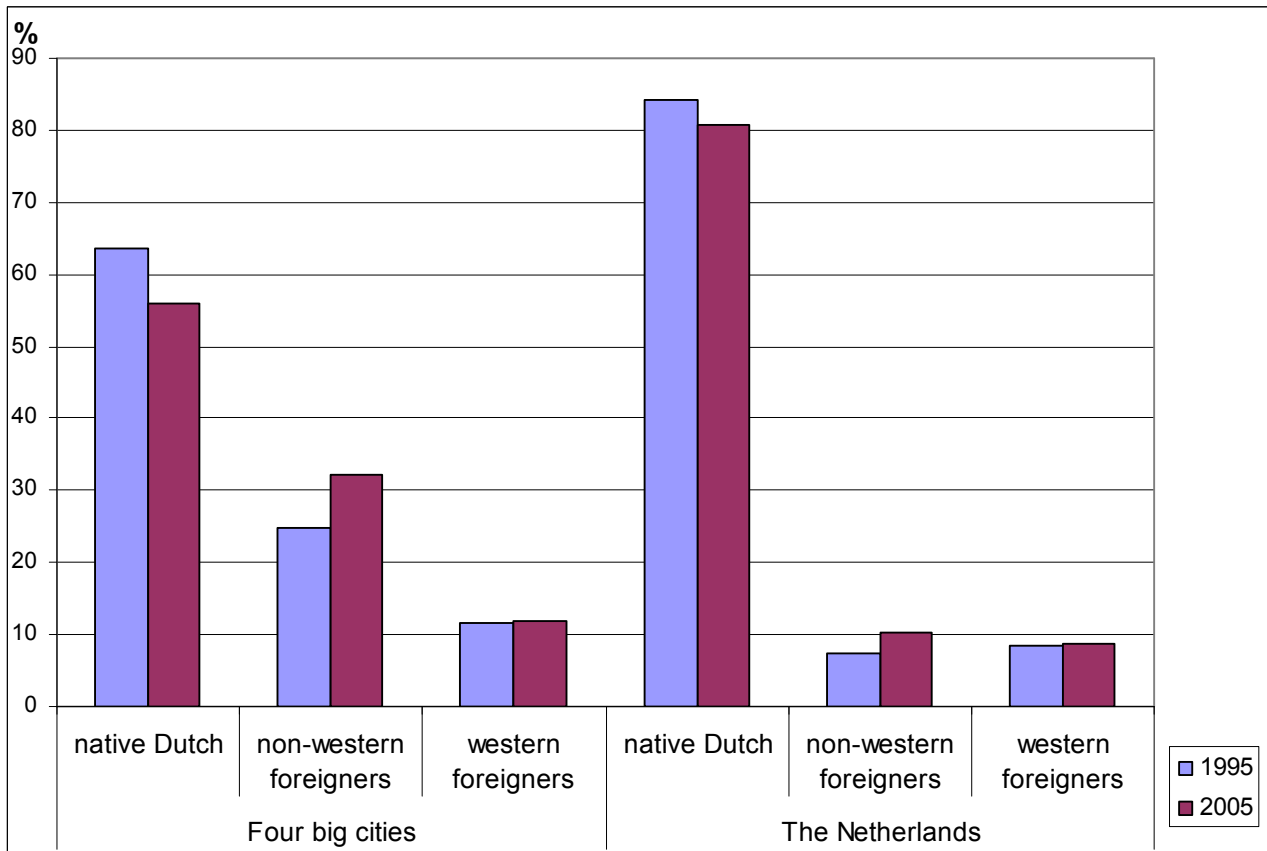
*Population of the four big municipalities in the Netherlands (Amsterdam, Rotterdam, The Hague, Utrecht), 1950-2005*



In spite of this modest increase in the total population of the four big cities, the composition has changed considerably. On 1 January 1995, one quarter of the population of the big cities had a non-western background. Ten years later, their share has increased to one third while on the other hand the share of native Dutch people fell from 65 to 56 percent (*graph 2*).

Graph 2

Composition of the population in the four big cities in the Netherlands, by origin, as compared with the total population of the Netherlands, 1995 and 2005

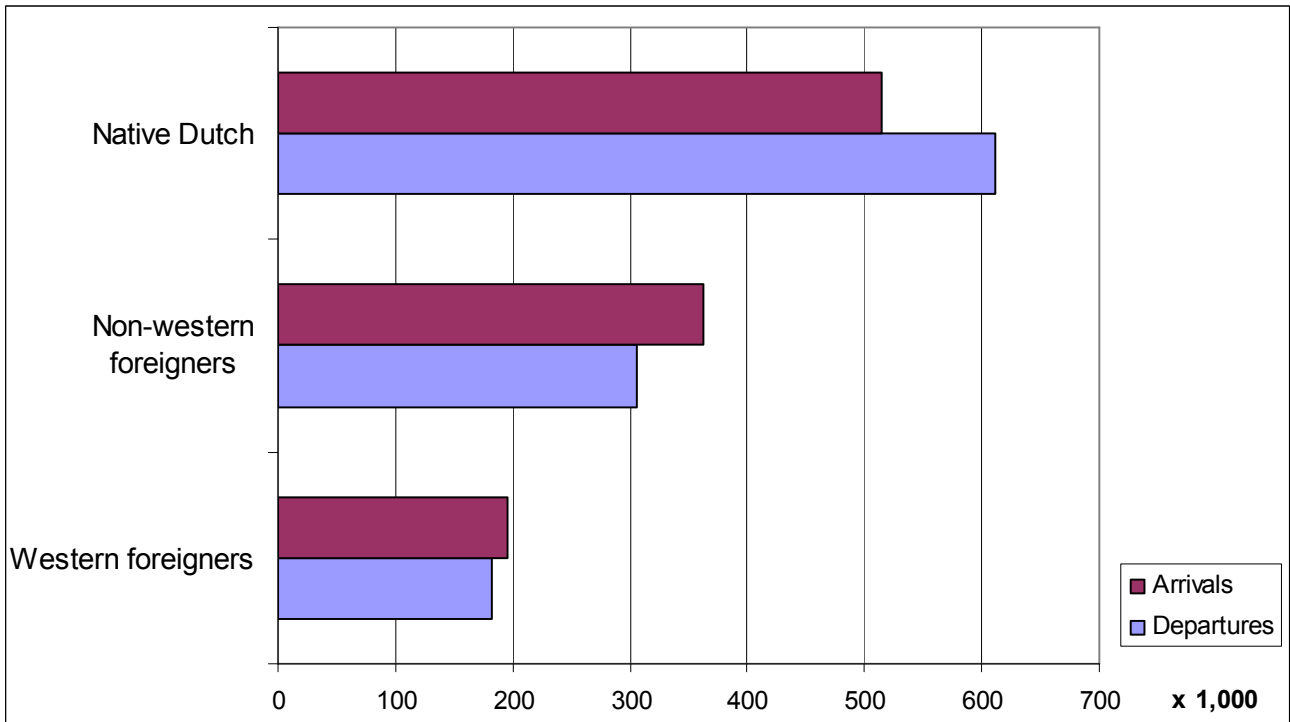


This change in composition is partly a result of a selective development in natural growth. With respect to native Dutch people, the number of deaths exceeds the number of live births. For foreigners, especially foreigners with a non-western background, it is the other way around: the number of live births exceeds the number of deaths (Bontje and Latten, 2005).

Furthermore, the ethnic composition and the age patterns of migration flows to and from the big cities are highly responsible for this changing population structure. Between 1995 and 2005, 1,073 thousand people arrived in Amsterdam, Rotterdam, The Hague and Utrecht, while 1,101 thousand people moved out of these cities. This resulted in a net outflow of 28 thousand people. The number of native Dutch leavers was 98 thousand higher than the number of arrivals. For foreigners the number of newcomers exceeded the number of leavers: there was a net inflow of 57 thousand non-western and 13 thousand western foreigners respectively. It turns out that the outflow of native Dutch people is almost counterbalanced by an inflow of non-western and western foreigners (*graph 3*). This tendency points to a 'colouring' and 'internationalisation' of the big cities in the Netherlands.

**Graph 3**

*Arrivals and departures in the four big cities in the Netherlands, by origin, 1995-2004 (excluding incorporated areas)*

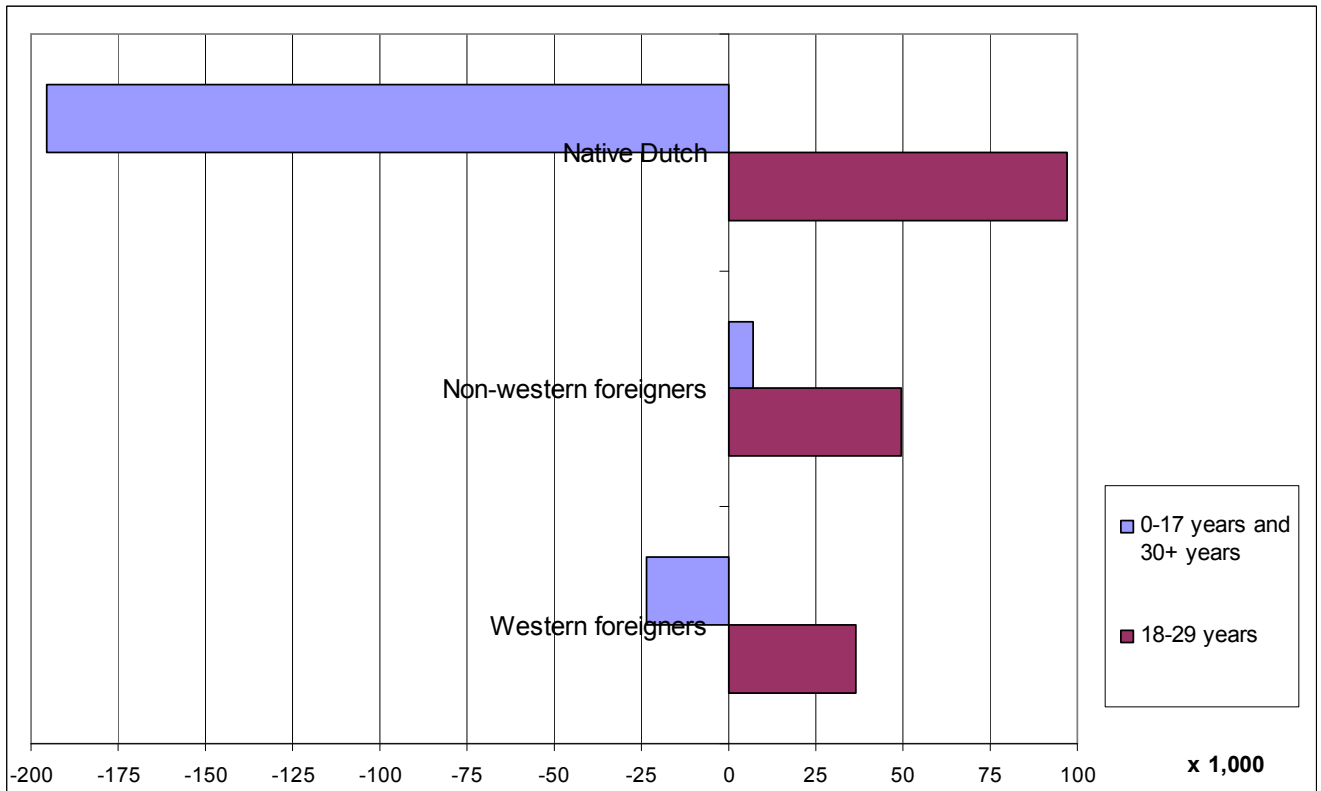


The four big cities are tremendously inviting to young people. The net inflow of people in their twenties amounted to 180 thousand. Not only native Dutch young people arrived in the big cities, but also non-western and western young ones. This shows the attractiveness of the big cities for young people. Institutions for education, appropriate living accommodations and cultural facilities contribute to the big city being a place that suits the life style of these young people.

Against the net inflow of young people, there was a net outflow of people aged 30 and older and 0-17 year-olds, especially of native Dutch people (*graph 4*). For native Dutch people, the big city as a place to live, is not very inviting. When they have children, they are looking for a dwelling in a quieter environment outside the big city. However, this does not apply to non-western foreign families. In general, they are among people with lower incomes who make use of the low-budget dwellings which are widely available in the big cities.

### Graph 4

Net migration flows (internal as well as international migration) in the four big cities in the Netherlands, by origin and age, 1995-2004 (excluding incorporated areas)



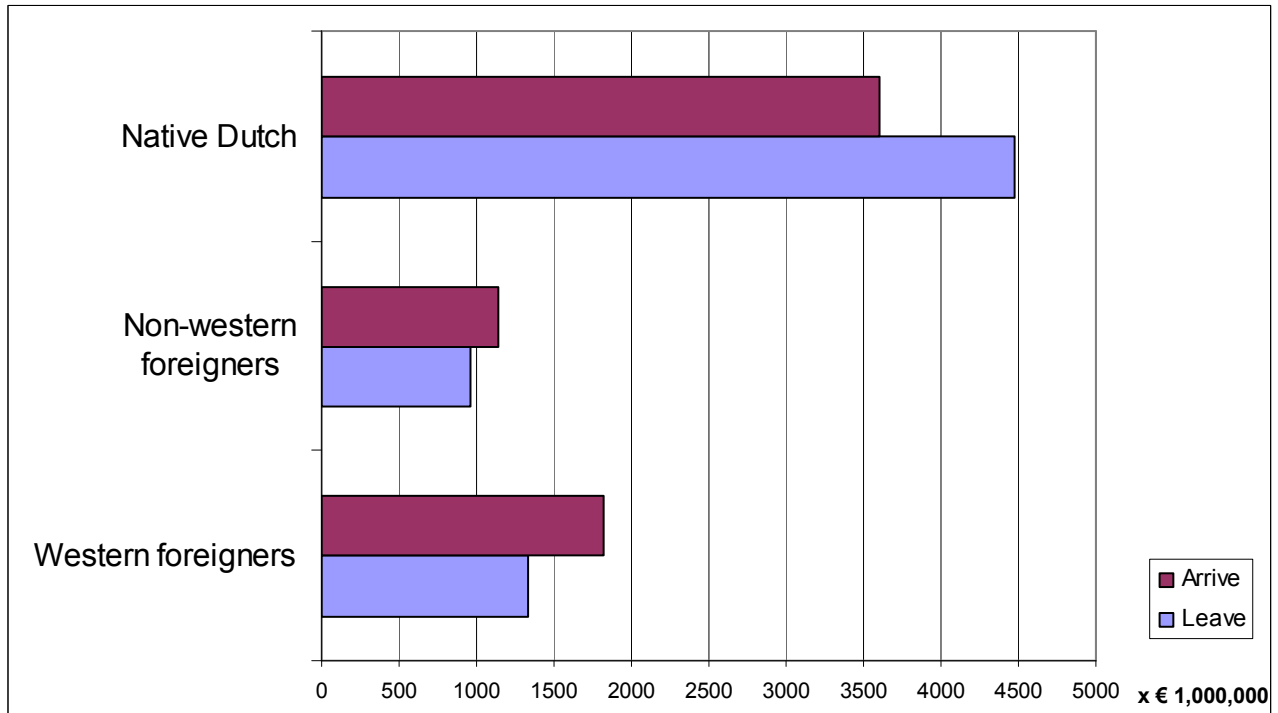
### 3.2. The socio-economic effects

With respect to the economic characteristics of the ingoing and outgoing migration flows, data are available as from September 1999. Therefore, in this paragraph data are presented from September 1999 till September 2003, the most recent period for which economic data are available. In order to compare economic data on incomes with demographic migration flows, demographic data in this paragraph will be presented for the period September 1999 till September 2003 as well.

From September 1999 till September 2003, the four big cities lost almost 200 million euros in total income earned by the migrants involved in national and international migration flows. A breakdown by ethnicity shows considerable differences between the native Dutch population and the foreign population with regard to these economic flows. Native Dutch people who moved to the big cities brought with them an amount of 3,600 million euros. Native Dutch leavers, however, took with them an amount of 4,469 million euros. This resulted in a *negative* net amount of 869 million euros. People with a western and non-western background, however, brought with them a *positive* net amount of 493 and 183 million euros respectively when arriving in the city. As a result, the four big cities lost 194 million euros in total income (*graph 5*).

Graph 5

Total annual incomes of people who arrive in and people who leave the four big cities in the Netherlands, by origin, September 1999 – September 2003



A further breakdown by age shows that native Dutch people aged 30 and older and 0-17 year-olds completely account for the loss of 194 million euros in the four big cities. They took with them a negative net amount of 1,050 million euros when leaving the big cities (*graph 6*). The positive net amount of western foreigners aged 30 and older and 0-17 year-olds is remarkable. In spite of the negative net migration flows in these age groups (*graph 4*), they bring with them a positive net amount of 233 million euros when arriving in the big cities. It turns out that western foreigners who settle in the big cities bring with them a greater amount of money than those who leave the cities.

The difference in total annual incomes between non-western and western foreign migration flows is considerable. Although non-western foreigners show a higher net migration flow than western foreigners (*graph 4*), the latter bring with them a higher amount of euros when arriving in the big cities. This becomes even more obvious if the net migration flows are related, by origin, to the net amount of euros brought in or taken away by those who arrive in or move away from the city.



**Graph 6**

*Net annual incomes of people who arrive in and people who leave the four big cities in the Netherlands, by origin and age, September 1999 – September 2003*

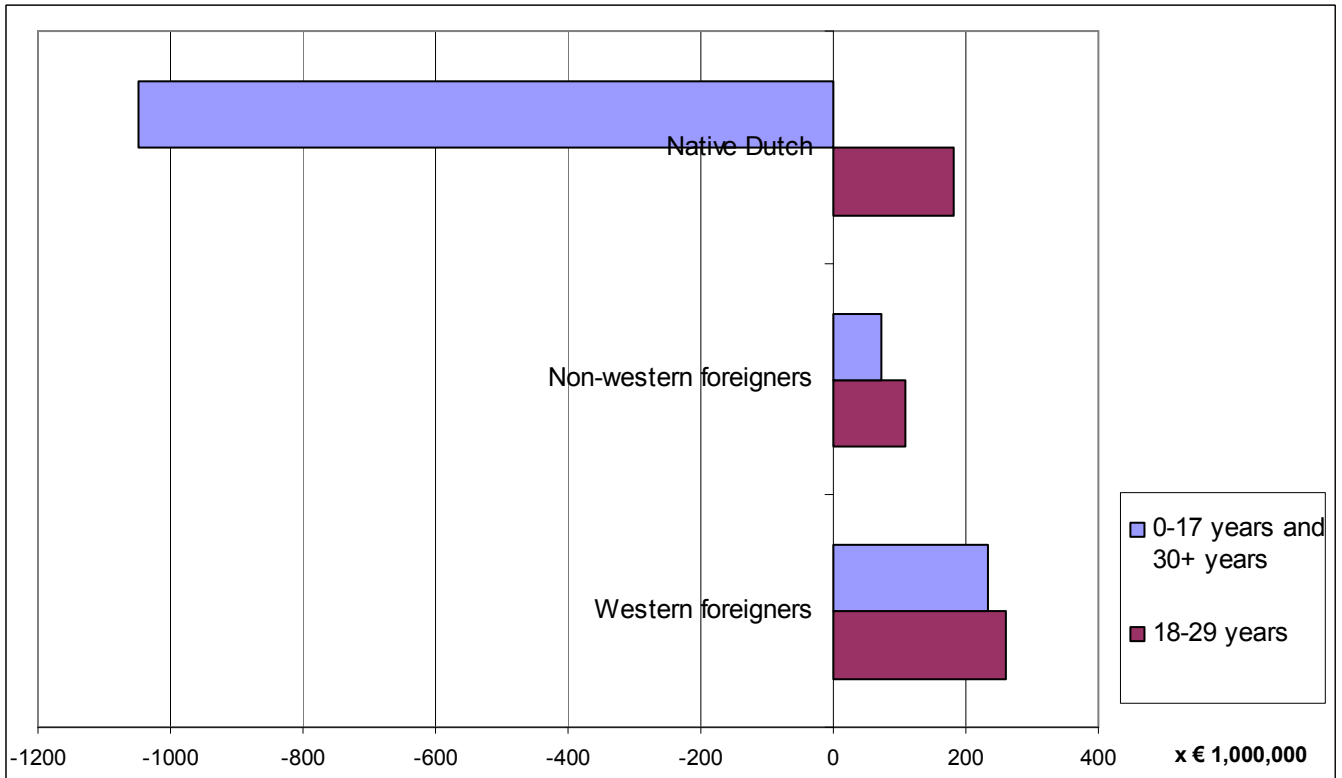


Table 1 shows the net migration flows, the net annual incomes of migrants and, as a result, the extra annual income of every extra person arriving in or leaving the four big cities. For western foreigners, every extra person arriving in the big city brings in an extra annual income of 42 thousand euros. For non-western foreigners, this extra annual income is 5 thousand euros. On the other hand, every native Dutch person leaving the big city took with him an amount of more than 25 thousand euros.

**Table 1**  
**Net migration flows and net annual incomes of migrants in the four big cities in the Netherlands, by origin, September 1999 - September 2003**

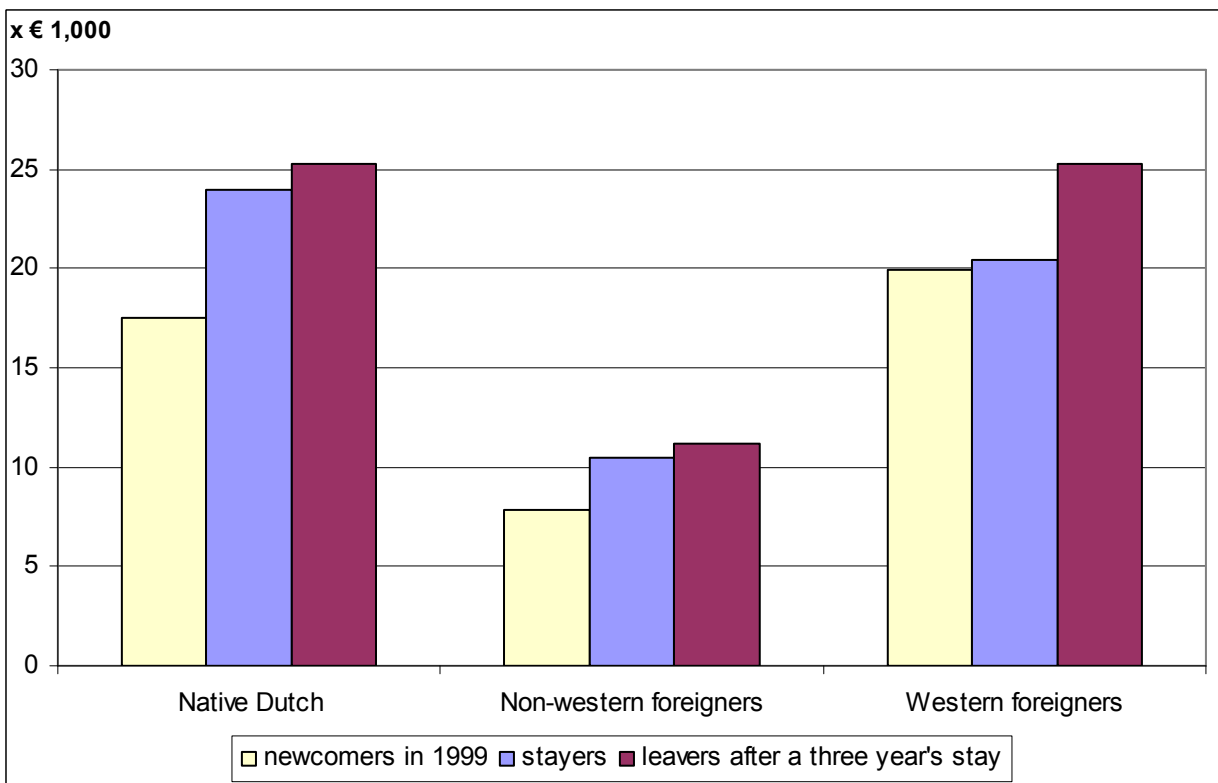
	Net migration flows	Net annual incomes	Extra annual income per extra person
	x 1,000 persons	x € 1,000,000	€
Native Dutch	- 34.5	- 869	- 25,225
Non-western foreigners	34.4	183	5,325
Western foreigners	11.7	493	42,127

### 3.3. Income increase for native Dutch and non-western foreigners

When they arrive in the big cities, non-western foreigners already have a lower income per capita than other newcomers. While native Dutch and western newcomers in the big cities in 1999 had a per capita income of 17.5 and 19.9 thousand euros respectively, for non-western foreigners this was only 7.8 thousand (graph 7).

#### Graph 7

*Annual income per capita of newcomers in the four big cities in 1999, stayers and leavers after a three year's stay in the four big cities, by origin*



The difference is not only accounted for by earnings, but also by labour participation rates and age composition of the groups of newcomers. Non-western foreigners arriving to marry a partner already living in the Netherlands, or non-western asylum migrants, for example, often have no source of income when they arrive, After three years, the average income had risen for both leavers and stayers-on, but the differences by ethnic background remained substantial. Per capita incomes of non-western foreigners who left the city increased by almost the same percentage as those of native Dutch people. In Amsterdam, Rotterdam, The Hague and Utrecht the income of native Dutch city dwellers who left after three years was 44 percent higher than when they arrived in the city. For non-western foreigners this increase was not much smaller, at 42 percent. The city as an enrichment plant, where the people who leave are cleverer and more prosperous, is apparently only a relative phenomenon.

### 3.4. The four big cities compared

Amsterdam, Rotterdam, The Hague and Utrecht differ not only with respect to demographic flows but with respect to socio-economic flows as well. Between September 1999 and September 2003, Amsterdam was the only city of the four big cities with a negative net migration flow. The number of people who left Amsterdam exceeds the number of people who arrived by 6 thousand. Utrecht, The Hague and Rotterdam showed positive net migration flows of 9 thousand, 7 thousand and 2 thousand respectively.

In spite of these positive net migration flows, all cities, with the exception of the city of Utrecht, experienced negative net migration flows for *native Dutch* people. For non-western and western foreigners, all cities experienced positive net migration flows. Net migration for *western foreigners* in Amsterdam and The Hague is almost twice as high as in Rotterdam and Utrecht. The attractiveness of Amsterdam and The Hague to international labour migrants might be responsible for this remarkable difference. Rotterdam has, with 14 thousand persons, by far the highest surplus of *non-western foreigners*, followed by The Hague (10 thousand), Amsterdam (7 thousand) and Utrecht (3.5 thousand).

With respect to socio-economic flows, the differences between the four big cities are even more pronounced. The Hague is the only city of the four big cities in the Netherlands with a positive net amount of total incomes earned by the migrants involved in migration flows (*table 2*).

**Table 2**  
**Net migration flows and net annual incomes of migrants in the four big cities in the Netherlands, September 1999 - September 2003**

	Net migration flows	Net annual incomes
	<i>x 1,000 persons</i>	<i>x € 1,000,000</i>
Amsterdam	- 6.4	- 148
Rotterdam	1.8	- 252
The Hague	6.9	232
Utrecht	9.2	- 26
Total of four big cities	11.6	- 194

Even with a positive net migration of 2 thousand persons, Rotterdam suffers the biggest loss of annual incomes due to internal and international migration flows. This is mainly caused by a negative net amount of 349 million euros that native Dutch migrants took with them when leaving Rotterdam, only partly compensated by a positive net amount of 97 millions euros of foreigners (*table 3*). It has to be said that only annual incomes of internal and international migrants are involved here. People who already lived in the big cities and did not move out in this period (the stayers) are ignored.

In Amsterdam and The Hague, the positive net amount brought in by western foreigners when arriving in the city is much higher than that of western foreigners in Rotterdam. It is possible that Amsterdam and The Hague are attractive to another type of labour migrants. Amsterdam has a varying economic structure, while the focus of Rotterdam is for the greater part on its harbour (Burgers and Musterd, 2002). Is it arguable whether what benefits the harbour also benefits the city of Rotterdam. The so-called professionals move to Amsterdam, which is reflected in the high number of foreign head-quarters that settled in Amsterdam like the head-quarters of ING and ABN AMRO, two international banks.

The Hague hosts many international organisations, embassies, consulates, international schools and head-quarters of multinationals. The city council of The Hague set great value on this international community and calls themselves 'the juridical capital of the world'.

**Table 3**  
**Net annual incomes of migrants in the four big cities in the Netherlands,**  
**by origin, September 1999 - September 2003**

	Native Dutch	Non-western foreigners	Western foreigners	Total migration flow
<i>x € 1,000,000</i>				
Amsterdam	- 442	16	278	- 148
Rotterdam	- 349	68	29	- 252
The Hague	- 23	88	167	232
Utrecht	- 55	11	19	- 26
Total of four big cities	- 869	183	493	- 194

The impact of western foreign migration flows on the big cities is obvious, but it has ongoing consequences. A strong focus on internationalisation of a city might create, for example, employment in service industries, and will not be unnoticed on the housing market either.

In almost two thirds of all neighbourhoods in The Hague, for example, do live at least 10 percent western foreigners. They do not live here *at random*, but concentrate in certain expensive, grave and classic neighbourhoods. In Amsterdam, western foreigners often live in the historic neighbourhoods in the centre of the town and in the south where housing prices are at the highest levels (Raets, 2005).

In this way, social inequality is getting more and more perceptible in a spatial way, also due to the fact that this inequality strongly coincides with the ethnic background of internal and international migrants.

#### 4. Conclusions and further research

The four big cities in the Netherlands experience a considerable change in the composition of their population. On 1 January 1995, one quarter of the population of the big cities had a non-western background. Ten years later, their share has increased to one third while on the other hand the share of native Dutch people fell from 65 percent in 1995 to 56 percent in 2005. Apart from selective developments in natural growth (the native Dutch population show a natural *decrease*, whereas the foreign population show a natural *increase*), selective migration flows to and from the big cities are responsible for this considerable change. Against an outgoing migration flow of native Dutch people, there is an ingoing flow of foreigners, for the greater part foreigners with a non-western background.

With respect to annual incomes, the positive net amount of almost 700 million euros foreigners bring in, cannot compensate the huge net outflow of almost 900 million euros native Dutch people took with them when leaving the city. Although only annual incomes of internal and international migrants are involved in these amounts and people who stay in the big cities are ignored, it is plausible that selective migration flows play a role in the unfavourable development of incomes in the big cities. In fact, it is obvious that the ethnic composition of migration flows has an impact on economic characteristics of city dwellers.

The process of *invasion* (a substitution of native Dutch people by foreigners) may lead to *succession* if the ingoing group make up the majority. In fact, this is already the case for non-western 0-18 year-olds children in Amsterdam and Rotterdam: 55 percent of the 0-18 year-olds in these two cities have a non-western background. Furthermore, invasion and succession may lead to increasing *segregation*, where data on a municipal level only gives a limited insight of what is going on in districts and neighbourhoods.

The question arises whether the big cities will be able to stop these processes and stem the outflow of mainly native Dutch people in their thirties with higher incomes. What kind of measures can cities actually take, and what measures have they already taken, to stop these processes?

- cities can hamper the admission of non-western foreigners by making higher demands on incomes or having a job (Rotterdam is already doing so);
- cities can become more attractive to native Dutch people by creating better housing accommodations and better facilities with regard to day care and a more safe environment;
- cities can conduct a *dispersal policy* in order to oppose ongoing segregation (Rotterdam successfully tries to do this. In fact, among the four big cities, Rotterdam is the only one showing a decreasing segregation of non-western foreigners between 1998 and 2004);
- cities can try to persuade high-educated non-residents who travel to the big cities for their work every day, to live in the cities in order to bring in purchasing power.

Further research is necessary to get a better insight in the reasons why native Dutch people leave the big cities. A few examples for further investigation are given below:

- an analysis of the characteristics of neighbourhoods before and after the migration may lead to a better insight in the needs of people moving out;
- a further analysis of the characteristics of leavers and stayers in the big cities can provide a better view on the motives of these groups;

- an expansion of the analysis towards the level of districts and neighbourhoods gives more insight in migration processes and their demographic and socio-economic effects within the big cities;
- an expansion of the analysis with respect to socio-economic aspects leads to a better insight in, for example, the kind of jobs people are looking for when arriving in the big city.

## References

Bontje, M. and J. Latten (2005), Selective migration in big cities. *Rooilijn: magazine for science and policy in area planning*, 1, January 2005, pp. 17-22. University of Amsterdam, Department of Geography and Planning, Amsterdam (in Dutch).

Burgers, J. and S. Musterd (2002), Understanding urban inequality: A model based on existing theories and an empirical illustration. *International Journal of Urban and Regional Research*, 26, 2, June 2002, pp. 403-413. Blackwell Publishers.

Latten, J., M. Bontje and H. Nicolaas (2004), Population dynamics in the four big cities. *Population Trends*, 2004-2, pp. 59-68. Statistics Netherlands, Voorburg/Heerlen (in Dutch).

Raets, B. (2005), Living at the edge of town. *Webmagazine*, 12 September 2005. Statistics Netherlands, Voorburg/Heerlen (in Dutch).

Sprangers, A., A. Zorlu, J. Hartog and H. Nicolaas (2004), Immigrants on the labour market. *Social Economic Trends*, 2004-2, pp. 27-37. Statistics Netherlands, Voorburg/Heerlen (in Dutch).