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Migration and Labour Market Dynamics

A Study of International Migrants and Dutch Natives in the Netherlands

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Abstract
The purpose of this study is to discover differences in labour market participation rates among the Dutch population. Quantitative methods were utilised with data collected using a survey. First, the distributions of different categories are presented. Consequently, the impact of the examined variables on participations rates is discussed. These variables include characteristics such as age, gender, and educational attainment. Not all variables show effects on labour market participation rates. The main findings present differences in employment rates among different categories and emphasises the importance of individual characteristics in labour market participation, showing the complexities for migrants regarding labour market integration. This study provides insights into the distribution of the Dutch labour market, while highlighting the effects of improving data collection systems and our understanding of the Dutch labour market.

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1. Introduction

The Netherlands has been going through a significant shift regarding its position on international migrants, changing from celebrating multiculturalism to the growing of far-right populism as well as having concerns about immigration (van Selm, 2019). However, the Netherlands strongly relies on net immigration for population growth, especially in the economic sector that firmly depends on migrant labour. Other sectors, such as the sport and cultural sector, thrive with involved refugees and immigrants (van Selm, 2019). This shows the wide impact of international migrants in the Netherlands.

Understanding factors that influence the Dutch labour market is becoming progressively important in assessing the integration of migrants into society. Bahar et al. (2022) mentions that diversity in immigration can improve economic performance, due to the skills and knowledge the immigrants bring with their diverse backgrounds.

This study aims to research labour market participation rates to identify any differences in economic performance. It approaches the research gap by investigating the relationship between these changing immigration dynamics in the Netherlands including the participation rates of international migrants and Dutch natives. The main objective is to enhance our understanding of how migration affects the labour market in the Netherlands and how policy actions can promote inclusivity and equality by analysing the demographic variables such as age, gender, and educational attainment. Simpson (2022) concluded that these variables are known to influence participation rates in the labour market. By examining these variables among different demographic groups, strategies can be identified to maximise economic performance. Labour market participation rates also influence the economic growth of a country (ILOSTAT, 2024).
The biggest migrant groups in the Netherlands come from EU countries (excluding the Netherlands) with 63.9% of the Dutch population in 2022 (CBS, 2022). This results in the smallest migrant groups in the Netherlands coming from outside the European Union. This accounts for 35.7% of the Dutch population. Therefore, this study will divide international migrants in two groups: from EU countries and from outside the European Union.

This leads to the research question:
"How does labour market participation differ between international migrants and Dutch natives, and how is this difference influenced by their individual characteristics?"

The research question will be answered using these subquestions:

1. *"What are the key individual characteristics that distinguish international migrants from Dutch natives in the labour market?"*
2. *"How does the rate of labour force participation vary between international migrants and Dutch natives?"*

Structure of the Thesis

This study begins with presenting the theoretical framework, discussing international migration and how it appears in the Netherlands. Several migration theories are discussed, showing their relevance to this study. Following this, the methodology section presents the research method, collected data and discusses the chosen variables, as well as explaining the encountered problems, the planned data analysis, and research ethics. After the methodology, the data analysis is discussed, including the descriptive statistics, similarities between the sample and population data, the multinomial logistic regression results, and the findings are discussed within the theoretical framework together with existing academic literature. Lastly, the key findings are discussed in the conclusion with addressing policy proposals and future research recommendations.

2. Theoretical Framework

2.1 International Migration

Globalisation, driven by growing technology, significantly contributes to international migration. The European Union have promoted migration among member countries by removing barriers. Lowered transportation costs and affordable accommodation have increased the financial accessibility for migrants.
However, war and political instability also affect migration. EU migrants have therefore different experiences within the labour market compared to non-EU migrants, due to different rights, which contributes to participation rates (Wimilaratana, 2016).
Massey et al. (1993) highlights the lack of theories explaining international migration, emphasising the complexities involved with international migration. Migration refers to the movement of people for employment or personal reasons and is seen as a global issue with both benefits and drawbacks (Wimalaratana, 2016). Migration can be beneficial to the development of receiving countries by provided skilled and unskilled labour. However, it may also demand the receiving countries to provide resources and accessibility. Political and economic factors, natural catastrophes, and family reconciliation are common drivers of international migration.

Economic migration occurs due to a variety of reasons, such as seeking to increase individual income, minimising household income risks, or meeting demands for low-wage jobs. These reasons can differ depending on time and space. Economic migration refers to migration from developing to developed countries (Wimalaratana, 2016). While wage differentials, poverty, job opportunities, and other market factors are common drivers of economic migration, new drivers arise during the migration process itself, such as the development of migrant networks or international organisations. These new motivations further influence migration, leading to cumulative causation (Massey et al. 1993). Cumulative causation refers to a vicious cycle where one change within a system starts additional changes in the same direction, which leads to the system separating itself from its original state. This process can result in an accumulation of benefits for some individuals and drawbacks for others (Encyclopedia, 2024).

Political and economic difficulties drive individuals to leave their home countries, with examples such as Afghanistan, Iraq, Libya, and Syria experiencing a great deal of individuals leaving the country. Jennissen (2004) classifies migration into four different types: Labour migration, return migration, chain migration, and asylum migration. Labour migration refers to the movement of individuals for job purposes in another country. This involves high-skilled to low-skilled migrants. Return migration occurs when individuals return to their home country after living abroad for a period of time, commonly returning for at least a year. Chain migration involves the migrating of individuals to join their family members or creating familial connections in another country. Lastly, asylum migration takes place when individuals seek refuge in another country, often due to safety threats or persecution in their home country.

Bells et al. (2010) categorises three groups of international migration; labour migration, forced migration and international retirement migration. Forced migration refers to the movement of asylum seekers and refugees fleeing their home country due to political conflicts, instability, and natural disasters. International retirement migration involves when retirees acquire property abroad as a permanent address, looking for change of lifestyle for instance (Bell et al., 2010; Castles, 2003).

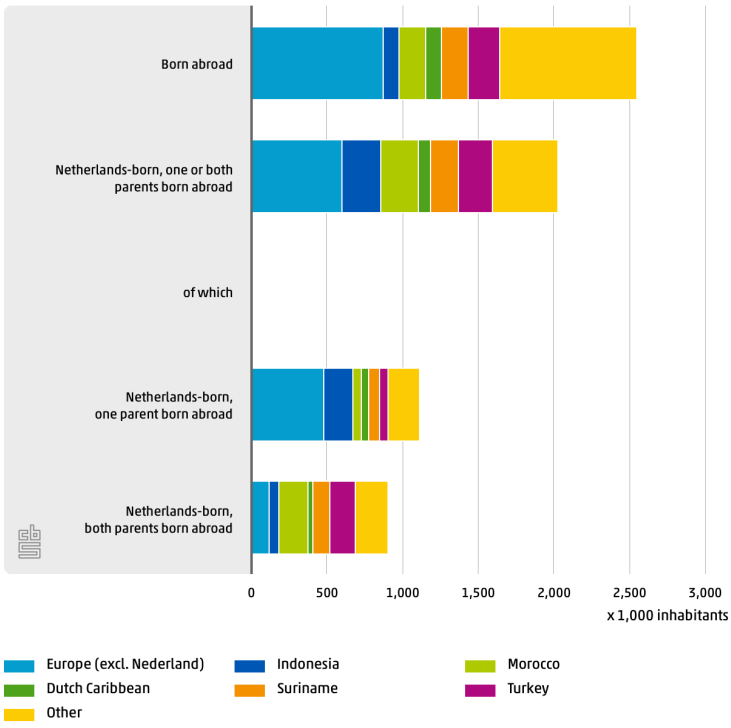

Figure 1: Population of non-Dutch origin, 1 January 2022 (CBS, 2023)

2.2 International Migration in the Netherlands

Around 15 percent, 2.6 million from the 17.6 million citizens of the Dutch population, were born abroad in the year 2022. Whereas almost 12 percent had at least one parent born abroad.

In this study, individuals born outside the Netherlands and who currently live in the Netherlands, are seen as international migrants.

2.5 million citizens in the Netherlands were born abroad in the year 2022. From those citizens 1.7 million were born outside Europe. The largest migrant group in the Netherlands is Turkey with 205 thousand, followed by Suriname and Morocco (CBS, 2023a). Figure 1 demonstrates the amount of the population born outside the Netherlands and illustrates the biggest migrant groups.

Figure 2 shows the reasons of migration of migrants from the European Union, whereas Figure 3 displays the migration reasons of migrants from outside the European Union. In 2021, Labour migration was shown to be the most common migration motive for 38,860 migrants from the EU/EFTA. Labour was followed by family with 29,250 migrants, and education with 21,125 migrants. The motives for 28,240 migrants include other reasons and unknown (CBS, 2022).

For 29,615 individuals outside the European Union, family was the most common migration motive. Furthermore, asylum was secondary with 21,505 migrants, followed by education with 18,465 migrants. Labour as migration motive indicates to be the reason for 18,155 individuals. Finally, only 2845 migrants stated to have other migration motives (CBS, 2022).

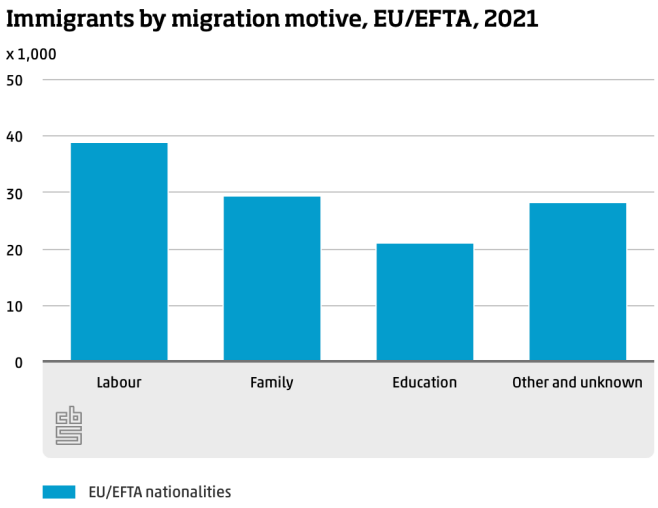

Figure 2 (CBS, 2022)

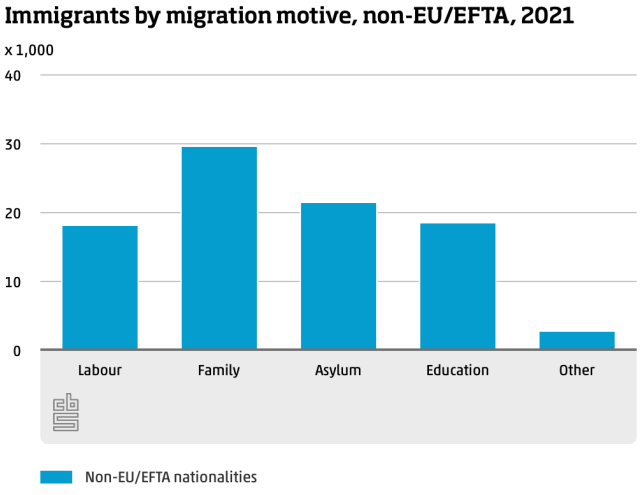

Figure 3 (CBS, 2022)

2.3 International Migration Theories

Theoretical Approach	Level of Analysis	Assumptions
Neoclassical (macro)	Country	Migration as a result of labor market gaps between countries
Neoclassical economics (micro)	Individual	Individual rational actors decide to migrate because a cost-benefit calculation.
New Economics	Household	Individual migrants are influenced by household as a collective actor in economic survival
Dual Labor Market	Structural (Internal)	Structural demands of developed countries
World systems theory	Structural (International)	Market and cultural penetration from the core to peripherals

Figure 4: Four migration theories (Kharal, 2018)

Several theoretical models have been presented to explain the process of international migration, each offering distinct concepts and assumptions. Figure 4 illustrates four migration theories, with the neoclassical economics theory examined across macro and micro levels.

Neoclassical economics highlights wage differentials, employment conditions, migration costs, and individual characteristics. The theory emphasises migration as an individual decision. Opposed to the New Economics of Migration, which considers migration as a household decision to minimise income risks. Dual labour market theory proposes that migration is influenced by demand of business economics, especially in terms of labour requirements. Conversely, the World Systems theory suggests that migration is a consequence of economic globalisation and market expansions (Kharal, 2018).

These theories are not necessarily contradictory considering individuals may try to increase income, while families aim to minimise involved risks (Massey et al. 1993). Out of the four discussed migration theories, the Neoclassical Economics on a micro level and Dual Labour Market Theory will be applied to this research.

Neoclassical Economics Theory

The Neoclassical Economics theory is based on the concepts of resource distribution and marginal equilibrium, which can be beneficial in examining labour migration. This theory suggests that labour migration refers to the moving from high-wage areas to low-wage areas until an equilibrium is reached. The decisions contributing to this phenomenon are made by individuals to maximise their financial well-being and businesses to maximise their revenue and productivity (Olligschlaeger, 1986). Relating the theory to this study indicates that migrants move to the Netherlands in response to better employment opportunities and higher wages compared to their home countries. However, individuals play an important role as well, implying that demographic characteristics such as age, gender, and educational attainment can influence migration decisions and labour market participation.

Dual Labour Market Theory

Dual Labour Market Theory proposes that migration is predominantly driven by pull factors in developed countries, rather than push factors in home countries. It claims that the economic factors of developed countries create a demand for labour, particularly in low-wage jobs that are often dangerous and demanding. These jobs often stay unattractive to the native population, which results in constant job vacancies (European University Institute, 2024).

Employers are not allowed to raise their wages to attract more native citizens without interfering with established wage and social structures. Developed countries thus often depend on a constant supply of labour migrants to fill these vacancies. Consequently, international wage differentials do not influence the demand for labour migrants. This theory agrees with findings that migrants in the Netherlands often get involved with low-wage jobs, despite high educational attainment. It highlights the need for understanding and changing economic and social constructions to address the dependency on labour migrants and guarantee fair labour practices (European University Institute, 2024).

Selection Hypothesis

The Selection Hypothesis explains that the observed differences in behaviour between migrants and natives are not due to migration itself but are caused by the fact that migrants are a group of individuals whose characteristics are more similar to those at their destination rather than their home country (Kulu, 2005). This theory can be used to explain potential differences in labour market participation between migrants and natives. It highlights the importance of considering the diversity within migrant groups and how individual characteristics may influence their integration process, including labour market participation rates.

Each theory offers insights into understanding labour market participation between international migrants and natives in the Netherlands. Neoclassical Economics Theory suggests that individuals move to the Netherlands for better employment opportunities and higher wages, by emphasising rational decision-making and the involvement of individuals characteristics in decision-making.

Dual Labour Market Theory indicates the demand for labour migrants, including the reliance on low-wage jobs, while the Selection Hypothesis highlights the importance of considering individual characteristics when explaining the differences in labour market participation between migrants and natives.

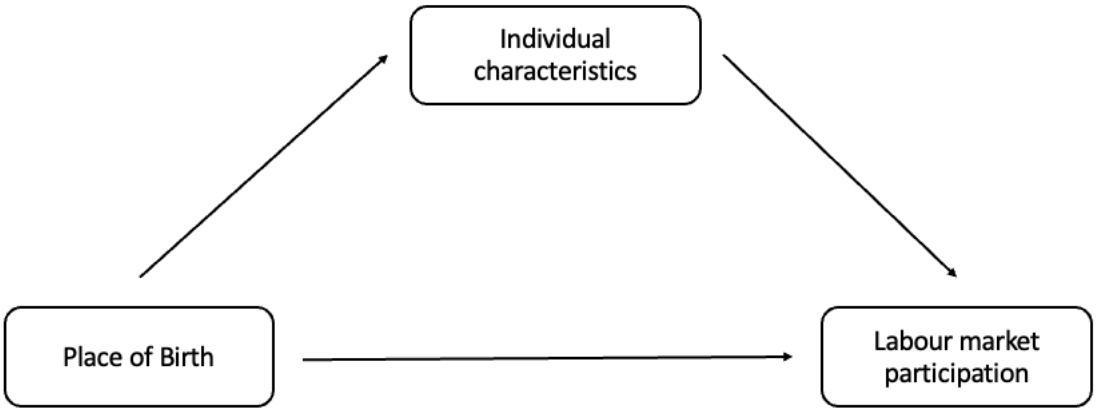

Figure 5: Conceptual model (made by author, 2024)

Understanding if there are differences between migrants and Dutch natives and how they influence labour market participation rates is crucial for policymakers and researchers. Differences in labour market outcomes remain, regardless of the Netherlands' reputation of multiculturalism and tolerance (van Selm, 2019). These differences can be affected by several factors, including individual characteristics such as age, gender, and educational attainment. This process is shown in figure 5.

Based on the previous mentioned theories, these hypotheses are formulated:

"There are significant differences in labour market participation rates between international migrants and Dutch natives."

"The individual characteristics age, gender and educational attainment influence labour market participation among both international migrants and Dutch natives."

3. Methodology

3.1 Research Method

This research follows a quantitative research approach to examine the differences in labour market participation rates between Dutch citizens and international migrants, considering demographic variables including as age, gender, and educational attainment. A quantitative method was chosen to analyse numerical data on labour market participation rates. Initially, the study aimed to gather secondary data, including a dataset from CBS with over 120,000 cases. However, a shift to primary data was chosen, due to the inaccessibility of a dataset with individual data instead of aggregated data.

A literature review was performed to select the proper variables and survey layout. Snowball sampling methods were used to gather a desirable number of respondents, which was a minimum of 30 respondents. This minimum is based on the Central Limit Theorem, stating that sample sizes that are 30 or above are viewed as a sufficient amount, meaning that the sample has a normal distribution (Ganti, 2024). Snowball sampling causes a risk of sample bias, since respondents are gathered via referrals, possibly leading to an overrepresentation of respondents with similar characteristics. This can alter the sample and decrease its representativeness. Additionally, sampling error cannot be estimated using snowball sampling, as well as calculating statistical significance accurately (InnovateMR, 2023). There is a risk that the sample represents smaller networks rather than the broader population. However, snowball sampling is useful in this study given to its advantage in accessing participants, improving the accuracy and reliability of the data. In this case, snowball sampling was useful considering it is also a time-saving method (InnovateMR, 2023).

A stratified random sampling method was used on the age groups and place of birth, ensuring that each age group and migration status of the population is equally represented. This meant approaching more individuals within the age groups 45-54 years and 55+ and born abroad, since the sample initially overrepresented the age groups 18-24 and 25-34 and individuals born in the Netherlands. As a result, the sample data notably represents this study's population.

3.2 Data Collection and Analysis

Data was gathered through several social media platforms, including WhatsApp, Instagram, Facebook, and LinkedIn. Qualtrics was employed to create the survey. The sample was relatively small with 88 cases. There was only one missing value, and the case was not removed due to the small sample size. The missing value included the age variable. The remaining variables were present and were used to analyse statistical relationships between them, utilising SPSS. The link to the survey can be found in the reference list. The used survey questions and the consent and information form can be found in the appendix.

The analysis included two main steps. Descriptive analysis was performed to present the demographic characteristics and labour market participation rates, followed by a multinomial logistic regression to examine the influence of independent variables on employment rates. The descriptive statistics were compared to the statistics of the Dutch population to ensure representativity of the population.

A multinomial logistic regression was performed due to the dependent variable being nominal and the presence of multiple independent categorical variables (Statistics Solutions, 2024). By conducting a multinomial logistic regression, the relationships between individual characteristics and labour market participation rates can be examined.

The reference category for categorical independent variables in a multinomial logistic regression cannot be changed in SPSS manually. SPSS uses the category with the highest value as reference category by default. Therefore, all the variables were recoded. The variables were originally coded with the first category given a value of 1, yet the largest categories of the variables age, gender, and place of birth were placed in the first category. Therefore, the smallest categories of these variables had the highest value. Consequently, these variables were recoded as the biggest group having the highest values, and the smallest categories the lowest values. The variable educational attainment was not recoded. The category 'doctorate' was added to the category 'university', the biggest category, resulting in 'university' coded as the highest value. Therefore, there was no need to recode the variable educational attainment.

The remaining survey questions are not included in the analysis because the survey included more questions than initially necessary. More survey questions were added to increase the number of variables that could be chosen for this study. Eventually, age, gender, and educational attainment were selected because of the final theoretical framework and similar existing academic literature.

3.3 Research Ethics and Data Management

The consideration of research ethics and data management is crucial in examining the differences in labour market participation rates between international migrants and Dutch natives, particularly regarding personal data based on the General Data Protection Regulation (GDPR). Personal information such as individual characteristics and employment status are highly confidential. It is necessary to guarantee the protection of respondents' personal data (EC, 2023). Participants had to give data consent prior to filling out the survey. Transparency, fairness and confidentiality are part of the GDPR's privacy principles that maintain ethical principles (EX, 2023), consequently protecting the integrity of the study.

Several measures were utilised to minimise the associated risks with research ethics and data management.

Data consent from the respondents was acquired prior data collection, followed by an information sheet describing the purpose of this study, how the data will be used, and the rights concerning the data of the participants. Any personal information that can be used to identify participants was deleted, including their location and IP address while filling out the survey. The remaining data was saved on the UG google drive protecting the data from unauthorised access. To avoid collecting sensitive information that is not relevant to this study, only the necessary amount of personal data was collected. The data will be deleted when no longer needed. Transparency, one of the GDPR's privacy principles, is maintained by communicating with the participations how the data is utilised and managed. Research ethics and data management risks are minimised by applying these procedures, protecting participants' rights and data, and contributing to the integrity of the research. The data management plan can be found in the appendix.

4. Results

4.1 Descriptive Statistics

Table 1 presents the place of birth distributions of the participants. Around 50% of the sample is born in the Netherlands and the other half of the sample is born outside the Netherlands, which was done purposely to observe the differences between international migrants and Dutch natives.

Table 1: Distributions of Place of Birth for the Native and Immigrant Populations (%s)

Birthplace	Percent
The Netherlands	53.4
Country within Europe (excl. the NL)	21.6
Country outside Europe	23.9
Prefer not to say	1.1
Total	100.0

Table 2: Distributions of the Native and Immigrant Populations (%s)

Age groups	The Netherlands	Country within Europe (excl. the NL)	Country outside Europe
1. 18-24	38,0	21,1	14,3
2. 25-34	12,9	26,3	33,3
3. 35-44	17,0	26,3	28,6
4. 45-54	10,7	21,1	19,0
5. 55 and above	21,4	5,2	4,8
Gender	**The Netherlands**	**Country within Europe (excl. the NL)**	**Country outside Europe**
Female	66,0	63,0	43,0
Male	34,0	37,0	57,0
Educational attainment	**The Netherlands**	**Country within Europe (excl. the NL)**	**Country outside Europe**
Secondary school	12,8	21,1	14,2
Secondary vocational education (MBO)	14,9	5,3	4,8
Higher vocational education (HBO)	38,3	31,6	28,6
University education (WO)	34,0	42,0	52,4

The age, gender, and educational attainment distributions of the participants are shown in table 2. The youngest participants are aged 18, while the oldest participants belong to the 55+ group. This variable includes one missing case. As mentioned in the data collection section, the variables gender, education attainment, place of birth, and migration status of this participant are still used in different parts of this research.
From the participants born in the Netherlands, the least number of participants belong to the age group 45-54, indicating a slight underrepresentation of this age group. However, the smallest group belongs to the age category 55+. This is similar for the participants born outside Europe.
These observed distributions from the participations born outside the Netherlands indicate migration patterns and potential migration motivations. The prevalence of participants aged 25-54 years and born outside of the Netherlands suggest labour or educational migration. The participants within the age category 25-34, that are born outside of Europe, indicate a higher chance of migration for educational opportunities instead of employment.

The majority born in the Netherlands and born in Europe consist of females, while within the group of being born outside Europe there is a high prevalence of male participants. These differences indicate different migration choices and opportunities among females and males. The higher proportion of female participants born in the Netherlands and Europe suggests a tendency for females from Europe to move to the Netherlands. This can be motivated by circumstances such as job opportunities, education or improving quality of life. Conversely, the higher representation of males across the participants born outside Europe may indicate inequitable employment opportunities or other factors that may increase the male migration to the Netherlands. To examine the underlying causes behind these statistics and how policies can play a significant role to contribute to gender equality, further research is necessary.
The largest proportion of the participants born in the Netherlands has a degree in higher vocational education. On the contrary, the biggest group of individuals born in Europe, excluding the Netherlands and born outside Europe, have a university degree. These statistics may suggest that a substantial number of people move to the Netherlands for higher vocational education or university education. Having a university degree is the most common among all three birthplace groups, which highlights the importance of education as a migration driver.

The Social and Cultural Planning Office (SCP, 2020) shares that in 2020 more than 80% of the Dutch population obtained a degree after finishing secondary school. Similar to these numbers, 85% of the sample of this study stated to have higher education levels than secondary school, indicating a considerable amount of representativeness regarding the educational attainment of the Dutch population.
However, SCP (2020) also shared that 40% of the Dutch population obtains a secondary vocational education degree, while 40% owns higher vocational education or university degrees. In this sample, only 10% reported to have secondary vocational education as educational attainment, and 73% of the participants reported to have higher vocational education or university degrees. This suggests a substantial difference between this sample and the Dutch population, indicating low representativity in educational attainment in this study. A possible explanation for this low representativity could be the utilisation of snowball sampling. This sampling method refers to the use of networks to gather respondents, thereby the collected data may have been affected by the characteristics and backgrounds of the participants.

Table 3: Sample Labour Force Status Distributions (%s)

Birthplace	Employed	Unemployed	In training / education	Not in the labour market
The Netherlands	79	9	10	2
Country within Europe (excl. the NL)	63,2	15,8	15,8	5,2
Country outside Europe	76,2	9,5	14,3	-

Table 4: CBS Labour Force Status Distributions (%s)

Birthplace	Employed	Unemployed	In training / education
The Netherlands	72,1	3,2	23,2
Country within Europe (excl. the NL)	68,1	5,9	24
Country outside Europe	70,4	4,2	21

Individuals born in the Netherlands have the highest employment rates in the sample and population data, as shown in table 3 and 4. Similarities are found between the sample and population with high unemployment rates of individuals born within Europe (excluding the Netherlands), and the unemployment rates of individuals born outside Europe being the second highest. Both table 3 and 4 reveal variations regarding the training / education category. The tables show similarities in individuals born in Europe (excluding the Netherlands) having the highest in training / education rates. However, the CBS data consists of more students and a lower unemployment rate. The sample shows a lower student rate and higher unemployment rate. This can be explained by the absence of survey instructions in terms of the categorisation of students, possibly causing some participants to choose ‘unemployed’ instead of ‘in training / education’ or the other way around. This may lead to differences in employment status between the sample and the population, potentially caused by misclassification.

The sample data may indicate that individuals from outside the European Union are more likely to migrate to the Netherlands for employment reasons, or that they get employed quicker than individuals from the European Union (excluding the Netherlands). However, employment rates could also be caused by factors, such as educational attainment or other personal characteristics.

4.2 Inferential Statistics

A multinomial logistic regression is performed because the dependent variable, labour market participation rates, is considered a nominal(categorical) variable. Multicollinearity should be checked prior to conducting the multinomial regression (Bhandari, 2024). First, a linear regression of all independent variables with the dependent variable, employment status, was performed to check the Variance Inflation Factor (VIF) values.

Heckman (2015) reported that VIF values should be around 1 to continue the regression analysis with confidence. Table 7 can be found in the appendix, showing that all independent variables had VIF values of around 1.

The analysis compares all international migrants born outside the Netherlands with the native population since there are small differences between individuals born in Europe (excluding the Netherlands) and those born outside Europe, taking into consideration the length of this study and to enhance comprehensibility.

The significance level for this analysis is equal to 0.10, as the sample size is relatively small. All values that are close to this significance level are discussed as well.

One of the encountered problems in this analysis are the different categories. The analysis would have been more clear if employed and unemployed were the only categories of the variable employment status. The categories not in the labour market and in training / education were added to the category unemployed.

Looking at the national statistics, many individuals move to the Netherlands for education. Therefore, the category in training / education is discussed in the descriptives statistics. The category is not a separate category in the regression analysis, since a small proportion of the participants reported to be in training / education and international students are allowed to work during their education in the Netherlands.

The biggest groups of the categorical predictors are used as reference categories. These are shown underneath table 9. Employed is used as reference category, the category unemployed is compared to employed. All variables have wide confidence intervals, showing high degrees of uncertainty. This indicates that the sample size was too small, yet the odds ratios will still get interpreted.

Table 8 implies that the overall model is significant, with a p-value of 0.015, because $0.015 < 0.10$, indicating that the model is a good fit for the sample data. This does not suggest that all independent variables have a significant effect on the dependent variable, but at least one.

Table 8: Model Fitting Information

Model	Sig.
Final	0,015

*Table 9: Parameter Estimates Model**

Independent variable	**Unemployed**	**Unemployed**
	Odds Ratio (p-value)	*Confidence intervals*
Age		
25-34	1.177 (0.834)	0.258 - 5.377
35-44	0.478(0.386)	0.090 - 2.533
45-54	0.248(0.254)	0.023 - 2.714
55 and above	0.252(0.255)	0.023 - 2.706
Gender		
Male	1.420 (0.587)	0.4 - 5.038
Educational Attainment		
Secondary school	12.187 (0.007)	2.005 - 74.077
Secondary vocational education (MBO)	0.842(0.890)	0.074 - 9.608
Higher vocational education (HBO)	3.421 (0.082)	0.857 - 13.653
Place of Birth		
Europe (Excl. the NL)	2.029 (0.334)	0.483 - 8.515
Outside Europe	1.210 (0.799)	0.278 - 5.265

*Reference categories:
- Employment status: Employed
- Age: 18-24
- Gender: Female
- Educational Attainment: University
- Place of Birth: The Netherlands

Variable 1 "Age"

The age category of 18-24 is the reference category for this variable, since most participants reported to fall within this age group.

Table 9 displays the odds ratio for every age category. The odds ratio for the 25-34 age group is 1.177, meaning that people in this category may have a 17.7% higher chance of being unemployed than individuals in the 18-24 category. Nevertheless, this category has a p-value of 0.834 > 0.1, meaning being in the age category of 25-34 may not affect the probability of being employed.

The odds ratio for individuals in the 35-44 age category is 0.748, which implies that they may have a 52.2% lower chance of being unemployed compared to those in the 18-24 age category. The p-value of 0.386 suggests that there may not be a significant difference between these age groups.

The odds ratio of 0.248 for the 45-54 age groups show a 75.3% lower chance of being unemployed compared to the 18-24 age group. The odds ratio for the 55+ age group is 0.252, which is similar to the previous category. This suggests that those in the 55+ age group may be 74.8% less likely to be unemployed compared to those in the 18-24 age group. The p-values of these two categories are reported as 0.254 and 0.255, which are both relatively close to the significance level of 0.1, indicating that individuals older than 45 may be less likely to be unemployed compared to younger individuals, as well as a higher chance of significantly affecting participation rates.

Variable 2 "Gender"

The reference category for this variable is female, since the biggest group of the sample identify as female. The odds ratio of male is presented as 1.420, indicating being those who identify as male can increase the chance of being unemployed by 42% compared to females. The p-value is equal to 0.587 > 0.1. Therefore, there may be a higher chance that gender does not have a significant effect on labour market participation. If the sample size would increase, it could suggest that individuals who identify as male may be more likely to be unemployed than females.

Variable 3 "Educational Attainment"

The reference category for this variable is the biggest category, university education.

Table 9 reports that the odds ratios of the categories secondary school and higher vocational education (HBO) are both higher than 1 (12.187 and 3.421), with the odds ratio of secondary school being almost 4 times higher than higher vocational education. This indicates that individuals who only have a secondary school degree may be 4 times more likely to be unemployed compared to individuals who have a higher vocational education degree, and 12 times more likely to be unemployed compared to individuals with a university degree.

However, the odds ratio of the category secondary vocational education (MBO) is reported as 0.842, suggesting that having a secondary vocational education degree could decrease the chance of being employed by 15.8% compared to having a university degree. This can be explained by the fact that MBO students are provided with practical training for skilled labour in a specific sector, while HBO and university students are trained for a wide variety of sectors, creating a more competitive labour market. Nonetheless, the categories secondary school and HBO both have a p-value lower than 0.1 (0.007 and 0.082), suggesting both categories could significantly influence labour market participation rates, with participants in one of these categories may be more likely to be unemployed. The confidence interval of secondary school is 2.005 to 74.077, which means there is a high chance that the odds ratio of the population is more than 2.

This suggests that individuals with only a secondary school degree could have a higher chance of being unemployed than those with a university degree. However, the confidence interval of secondary school is extremely high which can indicate uncertainty in the sampling method.

Variable 4 "Place of Birth"
The reference category for this variable is the Netherlands, since international migrants and Dutch natives are being compared. Those who were born in Europe (excluding the Netherlands) have an odds ratio of 2.029, meaning that they are around twice as likely to be unemployed than individuals born in the Netherlands. The p-value of 0.334 is relatively close to the significance level of 0.1, suggesting that a bigger sample may reveal significant differences in participation rates between dutch natives and migrants born in Europe.
The category born outside Europe has an odds ratio of 1.210, indicating that those born outside Europe may be 21% more likely to be unemployed compared to Dutch natives. This could be explained by the fact that individuals from outside Europe may migrate due to job opportunities rather than other migrations motives.
The p-value of being born outside Europe is reported as 0.799, suggesting that being born outside Europe may not significantly affect the probability of being unemployed. This could suggest that being born in Europe (excluding the NL) has a higher chance of affecting labour market participation rates than being born outside Europe.

The previous formulated hypotheses are turned into null hypotheses:
"There are no significant differences in labour market participation rates between international migrants and Dutch natives."
Since the sample is relatively small and the p-value of born in Europe is 0.334, we can say that the results indicate that there may be significant differences in labour market participation rates between international migrants and Dutch natives, especially between migrants born in Europe and Dutch natives. However, with the p-value of born outside Europe (0.799), we fail to reject this hypothesis.

"The individual characteristics age, gender, and educational attainment do not influence labour market participation among both international migrants and Dutch natives."
The variable gender has a p-value of 0.587, and $0.587 > 0.1$. Therefore, we fail to reject this hypothesis for the variable gender. However, some categories within the variables age and educational attainment have p-values close to or under the significance level of 0.1. Consequently, we reject this part of the hypothesis, suggesting that age and educational attainment could influence labour market participation rates among international migrants and Dutch natives.

4.3 Comparison to Other Academic Literature

Barret et al. (2006) conducted a similar study about labour market participation rates among migrants in Ireland. Comparing the article with this study, both underscore the high educational attainment among migrants, indicating migration patterns among high educated migrant groups. Both studies found higher unemployment rates among migrants as well. Conversely, the Irish study reported higher employment rates among migrants compared to the native population, while this study observed that Dutch natives show higher employment rates than migrants.

Another similar research is Semyonov's (2017) study. They observed the effects of migrant status on the probability of well-paid job accessibility, although it does not align with the results of this study. According to the sample data, migrant status does not significantly affect labour market participation rates, despite the findings that age and educational attainment do play a significant role in labour market participation rates.

Furthermore, Semyonov (2017) emphasises the significance of country differences in integration policies regarding migrants, and how that affects labour market integration. To conclude, the findings of this study and similar research indicate that migrant groups are more likely to have higher education levels and tend to acquire esteemed job opportunities

4.4 Comparison to Theoretical Framework

Age and educational attainment playing a significant role in labour market participation aligns with the Selection Hypothesis, considering individuals could potentially prefer to migrate to destinations with similar age and education levels. The findings support the Neoclassical Economics Theory, since individuals with higher education levels may seek higher-paid job opportunities to improve their financial well-being. The economic barriers for migrants observed by the Dual Labour Market theory can possibly be solved by migrants obtaining higher education levels. Labour migrants not being able to acquire higher education levels can be caused by other factors, including financial or social barriers.

The study's findings and theories emphasise the significance of policies aiming to improve educational and job opportunities for migrants and to mitigate labour market barriers. As a result, Labour market participation rates and integration can be enhanced for the entire population, leading to an inclusive and equal work environment.

5. Conclusion

This study's findings reveal education or job opportunities to be potential migration drivers. Differences in migration preferences among males and females are also found, highlighting the prevalence of females in the category born in the Netherlands and Europe compared to the prevalence of males in the category born outside Europe.

The result of educational attainment underscores the importance of higher education levels in all groups, since the regression revealed individuals with only a secondary school degree may be more likely to be unemployed compared to higher educational attainment. The sample representativity showed to be relatively high when compared to the CBS data. Notable differences found between the sample and population data are the proportions of students and unemployed individuals, while similarities were found in employment rates. Higher unemployment rates and lower training / education rates were observed in the sample data.

However, the lack of clarity in one of the survey questions could have caused this, regarding when to choose unemployed or in training / education.

These results emphasise the significance of considering sampling biases and clarity of survey questions. Particularly taking into consideration the differences in employed and in training / education.

Comparing the findings with the Dual Labour Market theory shows how to potentially mitigate the employment barriers migrants experience in the labour market. Despite the fact that international migrants reveal to have high education levels, these barriers may lead them to work lower-wage jobs.

These barriers can consist of financial or social barriers as well. The Selection Hypothesis emphasises how migrants are often seeking places that consist of individuals with similar characteristics. For instance, individuals in training or education may be more likely to migrate to countries with high student rates, or women may be more likely to migrate to countries known for their gender equality. Understanding migration drivers and structural barriers migrants experience is crucial to improve integration for migrants in the labour market. The significance of considering economic and individual characteristics and to fully understand the labour market dynamics is emphasised by these findings.

One of this study's strengths is the analysis of labour market participation of international migrants and Dutch natives, while using primary data and examining representativity within the sample to enhance the integrity of the research. To ensure representativity the sample data was compared to population data, provided by the Central Agency for Statistics.

Potential sampling bias, the dependency on primary data, and the small sample size are the main limitations of this study, potentially affecting the plausibility of the study. Furthermore, other variables should have been taken into account to increase comprehensibility of labour market participations rates among the population. To understand the complexities of the labour market other variables, such as type of job and working full or part-time, should be considered as well.

Future research could focus on different factors within the labour market to enhance our understanding, including the socio-economic environment and labour market integration. Future qualitative research could use this study as a foundation and inspiration for their research. Qualitative research may involve language barriers, individual skills and personal experiences, revealing factors that influence labour market integration and job accessibility. Recommendations for future quantitative research are long-term monitoring of labour market characteristics.
Assessing the effectiveness of migration and employment policies could be beneficial for labour market integration. Furthermore, policy recommendations could be minimising economic barriers for international migrants and enhancing data monitoring systems to improve labour marking outcomes for migrant populations.

Overall, future research is necessary to manage the mentioned limitations and enhance our understanding of labour market complexities for international migrants and Dutch natives.

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Link to survey:
https://qualtricsxmnj6678qs5.qualtrics.com/jfe/form/SV_3DXkpNCTMlQK42G

Appendix

Consent and information form

Dear respondent,

This questionnaire aims to explore the differences between migrants and dutch natives regarding labor market participation differences, as well as the influence of individual characteristics on these differences. The results will be used for my Bachelor Thesis at the university of Groningen.

- The survey will take 3-5 minutes.
- The survey is anonymous, and the data will be handled securely and confidentially.
- The data will be deleted after the research is finished.
- You are free to withdraw your consent to participate at any time.

For any further questions, do not hesitate to connect me:
l.t.f.feenstra@student.rug.nl

By continuing to the survey, you consent to your data being used for my Bachelor thesis at the university of Groningen.

Survey

1. What is your age?
- 18-24
- 25-34
- 35-44
- 45-54
- 55+
- Prefer not to say

2. What do you identify as?
- Female
- Male
- Other / prefer not to say

3. Where were you born?
- The Netherlands
- Country within Europe (other than the Netherlands)
- Country outside of Europe
- Prefer not to say

4. What is your highest obtained educational degree
- Primary school
- Secondary school
- Secondary vocational education (MBO)
- Higher vocational education (HBO)
- University education (WO)
- Doctorate (Ph.D, Ed.D, etc)

5. How would you describe your current employment status?
- Employed (self-employed or employee)
- Unemployed (actively seeking employment)
- In training / education
- Not in the labor market
- Do not know / Prefer not to say

6. How long have you been employed in the Netherlands (even if you are now unemployed)?
- Less than 1 year
- 1-2 years
- 3-5 years
- 5-10 years
- More than 10 years
- Prefer not to say

7. Have you experienced any periods of unemployment since reaching working age?
- Yes
- No
- Prefer not to say

8. If yes, how long was the longest period of unemployment?
- Less than 1 year
- 1-2 years
- 3-5 years
- 5-10 years
- More than 10 years
- Not applicable / answered no the previous question
- Prefer not to say

9. How satisfied are you with your current employment situation?
- Extremely dissatisfied
- Somewhat dissatisfied
- Neither satisfied nor dissatisfied
- Somewhat satisfied
- Extremely satisfied
- Prefer not to say

10. Have you encountered any challenges or barriers in securing employment in the Netherlands?
- Yes
- No
- Prefer not to say

11. If yes, please specify the nature of these challenges
- Language barriers
- Lack of work experience
- Cultural differences
- Visa or work permit restrictions
- Lack of information resources
- Not applicable / answered no the previous question
- Other / prefer not to say

12. Do you intend to remain in the Netherlands for employment?
- Yes, I intend to remain in the Netherlands for employment
- No, I plan to leave the Netherlands for employment
- I do not know / prefer not to say

13. Do you think that it is more difficult for migrants* to find a job in the Netherlands?
- Yes
- No
- I do not know / prefer not to say

*Migrants in this study are defined as individuals who are born outside the Netherlands

Data Management Plan

1. General	Lucia Feenstra
1.1 Name & title of thesis	Migration and Labour Market Dynamics: A Study of International Migrants and Dutch Natives in the Netherlands
1.2 *(if applicable)* Organisation. Provide details on the organisation where the research takes place if this applies (in case of an internship).	

2 Data collection – the creation of data	
2.1. Which data formats or which sources are used in the project? For example: - theoretical research, using literature and publicly available resources - Survey Data - Field Data - Interviews	Provide a short description of the sources/data that you are going to use. Theoretical research, using literature and publicly availables resources and Survey Data
2.2 Methods of data collection What method(s) do you use for the collection of data. (Tick all boxes that apply)	☐ Structured individual interviews ☐ Semi-structured individual interviews ☐ Structured group interviews ☐ Semi-structured group interviews ☐ Observations ☒ Survey(s) ☐ Experiment(s) in real life (interventions) ☐ Secondary analyses on existing data sets (if so: please also fill in 2.3) ☒ Public sources (e.g. University Library) ☐ Other (explain):
2.3. (If applicable): if you have selected 'Secondary analyses on existing datasets': who provides the data set?	☐ Data is supplied by the University of Groningen. ☐ Data have been supplied by an external party. (Please mention the party here). Data.Overheid.nl

3 Storage, Sharing and Archiving	
3.1 Where will the (raw) data be stored *during* research? If you want to store research data, it is good practice to ask yourself some questions: • How big is my dataset at the end of my research?	☐ X-drive of UG network ☐ Y-drive of UG network ☒ (Shared) UG Google Drive ☐ Unishare ☐ Personal laptop or computer ☐ External devices (USB, harddisk, NAS)

• Do I want to collaborate on the data? • How confidential is my data? • How do I make sure I do not lose my data? Need more information? Take a look at the site of the Digital Competence Centre (DCC)) Feel free to contact the DCC for questions: dcc@rug.nl	☐ Other (explain):
3.2 Where are you planning to store / archive the data after you have finished your research? Please explain where and for how long. Also explain who has access to these data NB do not use a personal UG network or google drive for archiving data!	☐ X-drive of UG network ☐ Y-drive of UG network ☒ (Shared) UG Google Drive ☐ Unishare ☐ In a repository (i.e. DataverseNL) ☐ Other (explain): The retention period will be [...] years.
3.3 Sharing of data With whom will you be sharing data during your research?	☒ University of Groningen ☐ Universities or other parties in Europe ☐ Universities or other parties outside Europe ☐ I will not be sharing data

4. Personal data	
4.1 Collecting personal data Will you be collecting personal data? If you are conducting research with personal data you have to comply to the General Data Privacy Regulation (GDPR). Please fill in the questions found in the appendix 3 on personal data.	Yes/no
If the answer to 4.1 is 'no', please skip the section below and proceed to section 5	
4.2 What kinds of categories of people are involved? Have you determined whether these people are vulnerable in any way (see FAQ)? If so, your supervisor will need to agree.	My research project involves: ☒ Adults (not vulnerable) ≥ 18 years ☐ Minors < 16 years ☐ Minors < 18 years ☐ Patients ☐ (other) vulnerable persons, namely (please provide an explanation what makes these persons vulnerable)
4.3 Will participants be enlisted in the project without their knowledge and/or consent? (E.g., via covert observation of people in public	Yes/no If yes, please explain if, when and how you will

places, or by using social media data.)	inform the participants about the study.
4.4 Categories of personal data that are processed. Mention all types of data that you systematically collect and store. If you use particular kinds of software, then check what the software is doing as well. Of course, always ask yourself if you need all categories of data for your project.	☐ Name and address details ☐ Telephone number ☐ Email address ☒ Nationality ☐ IP-addresses and/or device type ☒ Job information ☐ Location data ☒ Race or ethnicity ☐ Political opinions ☐ Physical or mental health ☐ Information about a person's sex life or sexual orientation ☐ Religious or philosophical beliefs ☐ Membership of a trade union ☐ Biometric information ☐ Genetic information ☒ Other (please explain below): `age, gender and educational attainment`
4.5 Technical/organisational measures Select which of the following security measures are used to protect personal data.	☐ Pseudonymisation ☐ Anonymisation ☐ File encryption ☒ Encryption of storage ☐ Encryption of transport device ☒ Restricted access rights ☐ VPN ☐ Regularly scheduled backups ☐ Physical locks (rooms, drawers/file cabinets) ☐ None of the above ☐ Other (describe below):
4.6 Will any personal data be transferred to organisations within countries outside the European Economic Area (EU, Norway, Iceland and Liechtenstein)? If the research takes places in a country outside the EU/EEA, then please also indicate this.	Yes/no If yes, please fill in the country.
5 – Final comments	
Do you have any other information about the research data that was not addressed in this template that you think is useful to mention?	

Table 7

Table 7: Multicollinearity check among variables

Independent variable	VIF	Multicollinearity
Age	1.18	No
Gender	1.13	No
Educational Attainment	1.05	No
Migration status	1.28	No