



university of
 groningen

cmo stamm.



MASTER THESIS

Staying in the Northern Netherlands (Drenthe, Friesland & Groningen) – Personal & experienced regional characteristics

Anne de Rouw
S3212378
a.de.rouw@student.rug.nl

Supervisors:
C.H. Mulder (RUG)

University of Groningen

Master program Population Studies

Faculty of Spatial Sciences

Final version 5 July 2021

ABSTRACT

In this thesis a focus is put on working aged people (18-64 years old) in the Northern Netherlands that have intentions to stay living at their place of residence. Quantitative research methods are used by conducting analyses on a secondary dataset from Sociaal Planbureau Groningen, Trendbureau Drenthe and Fries Sociaal Planbureau. Staying intentions can differ from person to person and from region to region. It is often assumed that issues concerning livability can be a reason to stay or move out of an area if there is the possibility to move. Livability can be defined as the result of the extent to which the physical environment matches the wishes, ideals and needs of the individual, which can be both positive and negative. So, with a multinomial logistic regression relationships are looked at with personal characteristics and both subjective and objective regional characteristics. The experienced regional characteristics show to have a significant relationship with staying intentions. When the livability is perceived better the likelihood to have intentions to stay increases steadily. Also, multiple personal characteristics show significant results in predicting the intentions to stay.

TABLE OF CONTENTS

Chapter 1: Introduction	3
1.1 Background	3
1.2 Objective	5
1.3 Societal relevance.....	6
1.4 Academic relevance	6
1.5 Research questions	6
1.6 Structure thesis	6
Chapter 2: Theoretical framework	7
2.1 Migration theories	7
2.2 Focussing on immobility	7
2.3 Personal factors and residential (im)mobility.....	8
2.4 Livability place of residence	9
2.5 Staying in areas with population decline.....	9
2.6 Experiences in rural areas.....	10
2.7 Conceptual model.....	10
2.8 Hypotheses	10
Chapter 3: Research design	12
3.1 Type of research and data.....	12
3.2 Population and sampling	12
3.3 Operationalization concepts	13
3.4 Explanation of the methods.....	15
3.5 Ethical issues	16
Chapter 4: Results	17
4.1 Current patterns – Descriptive analysis.....	17
4.2 Personal characteristics – Regression.....	21
4.3 (Experienced) Regional characteristics – Regression	23
Chapter 5: Discussion and conclusion	26
5.1 Conclusion.....	26
5.2 Discussion and recommendations	26
Literature	28
Appendix A – multinomial logistic regression including regional characteristics.....	281

List of figures

<i>Figure 1: Population forecast per municipality 2018-2050 (PBL/CBS, 2020)</i>	4
<i>Figure 2: Average prices owner-occupied houses per municipality in thousands (CBS, 2020)</i>	5
<i>Figure 3: Conceptual model of this thesis</i>	6
<i>Figure 4: Distance between last and current place of residence</i>	13
<i>Figure 5: Most important reasons for staying per age category</i>	17
<i>Figure 6: Proportion of stayers for each rating of general livability</i>	20
<i>Figure 7: Proportion of stayers for different indicators</i>	21
<i>Figure 8: Predicted probabilities for age with 95% confidence interval</i>	22
<i>Figure 9: Predicted probabilities for the general livability with 95% confidence interval</i>	26

List of tables

<i>Table 1: Dependent variable with percentages</i>	13
<i>Table 2: Independent variables for personal characteristics with percentages</i>	14
<i>Table 3: Independent variables for regional characteristics with percentages</i>	15
<i>Table 4: Independent variables for experienced regional characteristics and their mean scores</i>	15
<i>Table 5: Results multinomial logistic regression personal characteristics</i>	21
<i>Table 6: Results multinomial logistic regression experienced regional characteristics added</i>	24
<i>Table 7: LR-test model 1 and 2</i>	24
<i>Table 8: Results multinomial logistic regression regional characteristics added</i>	31

CHAPTER 1: INTRODUCTION

1.1 BACKGROUND

Immobility can be defined as continuity in someone's place of residence over a period of time (Schewel, 2019). To better understand trends in immobility, it is important to know why people have preferences to stay where they are and what constrains them to realize aspirations to move. It is often assumed that issues concerning livability can be a reason to move out of an area if there is the possibility to move (Research en Advies, 2019).

In 2018 the number of people that had intentions to move increased compared to the years before. In 2012 this was about 24 percent of the Dutch population, while in 2018 this was almost 34 percent (WoON, 2018). However, this growth mostly consisted of an increase in people who might wanted to move which was about 23 percent compared to 9 percent who were more certain about wanting to move. This also means that about two thirds of the population do not have intentions to make a move in the upcoming years. For young adults aged 18 till 34 years old, the intentions to move were clearly higher than for other age categories. For most people in the Netherlands, the most important reason to move is the current dwelling and secondly the current living environment is important. However, for single people under the age of 35, living independently is the most important reason and for single people aged above 65 years old, their health and needs are the most important reason to move (WoON, 2018). Gaining information about moving and staying intentions and the wishes people have for housing is important. This information can provide for policy recommendations.

Livability in the Netherlands

More and more people live in an area with a quality of life that is considered 'more than sufficient'. This is specified by the Leefbarometer 2018 (Research en Advies, 2019) which is a tool that estimates the livability in the perception of the inhabitants. Indicators that are important in the Leefbarometer are nuisance and crime, services, housing market supply and physical characteristics of the environment. So, livability is a complex phenomenon containing a collection of concepts. The interpretation of it can differ from person to person and from region to region (VROM, 2004). When looking at regions for example, livability issues are strongly related to urbanity. When the urbanity of a municipality is lower, the livability is often perceived as better (Research en Advies, 2019). Although regional characteristics can play a role, they do not offer a complete explanation for the experienced livability. According to VROM (2004) even in the relatively less appreciated areas most people still positively rate their livability. The importance of aspects of the living environment can depend on the different needs and preferences of people. Some people might find the scenery important, while others prefer to live close to services (Elshof, 2017). According to recent research by WoOn (2018), Dutch households are most satisfied with their dwelling and their living environment. On the other hand, people are often less satisfied with the social cohesion, the extent to which people feel at home in their neighborhood and with their neighbors. Similar to the Leefbarometer analysis (Research en Advies, 2019), WoOn (2018) also found a relationship between urbanity and the appreciation of the livability. For example, in strongly urban areas about 79 percent is satisfied with their dwelling, while in non-urban areas this is 90 percent and the same is shown for the living environment.

Promoting the general livability is a difficult task, because it does not depend only on the objective and tangible living environment, but mainly depends on the subjective experience. The Leefbarometer almost exclusively uses objective indicators, however the usage of subjective indicators is necessary to gain insight into the wellbeing and satisfaction of people themselves and to know what people find important (Gieling et al., 2017). To gain insight into how different groups of people experience their living environment in terms of livability, it is also important to find out the importance attached to different indicators of livability. According to Ruth and Franklin (2014) people develop different needs towards their living environment throughout their life course. Furthermore, perceptions about livability are also geographically spread. The importance of livability indicators can differ per region or place of residence.

Population decline

In regions where the population is declining, the quality of life is more under pressure than in other regions. Several regions of the Netherlands have to deal with population decline. In 2019, 63 out of the 355 municipalities experienced a decline in their population (CBS, 2020A). The main regions experiencing this phenomenon are amongst others north and eastern Groningen and Drenthe. In most of these regions the number of deaths was higher than the number of births and also the net migration was negative. In 2015 the Dutch government identified nine population decline areas with amongst others Noordoost-Friesland, Het Hogeland, Eemsdelta (Appingedam, Delfzijl and Loppersum) and Oost-Groningen which includes the municipalities of Oldambt, Pekela, Stadskanaal, Veendam and Westerwolde. The strongest population decline was seen in het Hogeland in the province of Groningen. Also, the forecast made by the PBL and CBS (2019) clearly shows that the region of the Northern Netherlands is most vulnerable to population decline in the upcoming thirty years, but there are definitely differences between the municipalities as shown in figure 1. Especially the municipalities on the edges of the Netherlands are experiencing the strongest decline (decline of 10% or more), while the municipality of Groningen on the other hand is experiencing a strong growth (growth of 10% or more). So, most urban areas are experiencing a strong growth while smaller municipalities are growing at a rate below the national average (Te Riele et al., 2019).

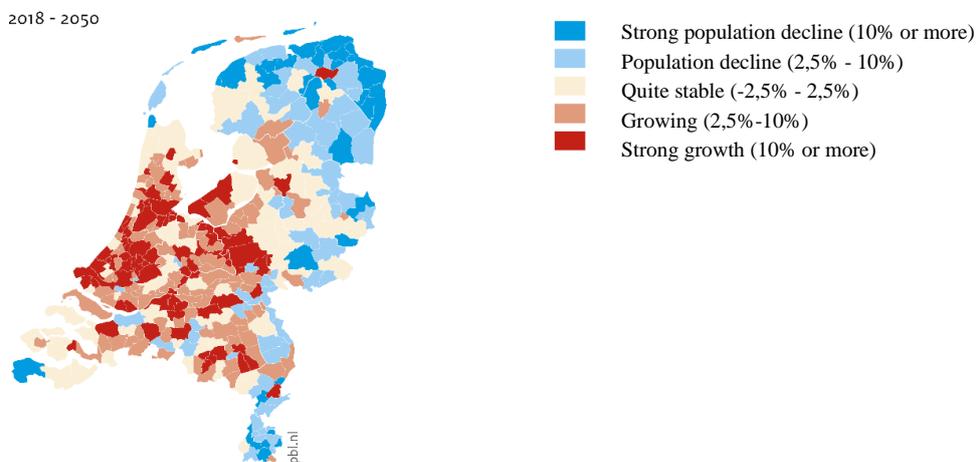


Figure 1: Population forecast per municipality 2018-2050
Source: Te Riele et al. (2019)

So, within the Northern Netherlands there are differences in population change between regions. To gain an understanding about why these differences exist, the local circumstances need to be looked at when considering people's reasons to move or stay in their places of residence. These local circumstances could for example be village characteristics like amenities that can be described as enjoyable living environments (Elshof, 2017). Also, the composition of the population is of importance. The composition of urban areas often looks different from the composition in the rest of the country. In general inhabitants living in the urban areas are younger, higher educated, have higher incomes and are more often women than people living in rural areas (van Leeuwen et al., 2019). There are of course also differences within areas. For example, certain areas in the cities with a lower living environment quality, less well-maintained dwellings and less suitable job opportunities can also experience population decline, while the rest of the city still grows (Van Leeuwen et al., 2019).

Housing market Northern-Netherlands

According to Statistics Netherlands (CBS, 2020B), at the end of 2019 existing owner-occupied homes in the whole of the Netherlands were more expensive than the year before. The greatest change in prices of all provinces was seen in the province of Groningen with 8,4 percent, which was also the greatest growth in 14 years in this province. The second highest growth was seen in the province of Drenthe, which shows that these Northern provinces experience higher growth in owner-occupied home prices compared to the rest of the Netherlands. In the last quarter of 2020, the prices reached a record (CBS, 2021) with again the highest growth in the province of Groningen.

To gain a better insight into the differences in owner-occupied home prices in the Northern Netherlands the numbers for all the municipalities of the Northern Netherlands are used. Clear differences are visible between the municipalities. The municipalities of Delfzijl, Pekela and Oldambt have the lowest average price and are all located in the province of Groningen. On the other hand, the municipalities of Vlieland, Schiermonnikoog and Terschelling have the highest on average prices in the Northern Netherlands. These three municipalities are located in the province of Friesland and they all belong to the Wadden Islands, which would probably explain the highest prices. Besides the Wadden Islands, the municipalities of Tynaarlo, Noordenveld and de Wolden show the highest prices in the Northern Netherlands.

Friesland		Drenthe		Groningen	
Municipality	Average price	Municipality	Average price	Municipality	Average price
Achtkarspelen	216,5	Aa en Hunze	284,8	Appingedam	194,8
Ameland	321,2	Assen	228,7	Delfzijl	155,1
Dantumadeel	234,2	Borger-Odoorn	233,7	Loppersum	192,4
de Friese Meren	268,8	Coevorden	236	Groningen	258,9
Harlingen	216,4	Emmen	205,7	het Hogeland	188,8
Heerenveen	257,8	Hoogeveen	209,7	Midden-Groningen	206,7
Leeuwarden	215,9	Meppel	255,7	Oldambt	175,8
Noardeast-Fryslan	194,8	Midden-Drenthe	261,2	Pekela	161,3
Ooststellingwerf	238,2	Noordenveld	292,8	Stadskanaal	185,5
Opsterland	254,9	Tynaarlo	309,8	Veendam	187,5
Schiermonnikoog	350,8	Westerveld	279,5	Westerkwartier	240,8
Smallingerland	233,5	de Wolden	290,8	Westerwolde	210,2
Sudwest-Fryslan	225,7				
Terschelling	327,5				
Tietjerksteradeel	235,6				
Vlieland	404,1				
Waadhoeke	209,1				
Weststellingwerf	233,4				

Figure 2: Average prices owner-occupied houses per municipality in thousands (2019).
Source: CBS (2019)

Impact COVID-19

It is important to note that this thesis is conducted in times of the coronavirus and this might have an effect on the daily lives and livability perceptions of people. Research by Sociaal Planbureau Groningen and Trendbureau Drenthe (CMO STAMM, 2020) shows that in the first wave of the coronavirus in the Netherlands, between 7-9 percent of people living in Groningen or Drenthe lost their job or parts of it and even more people worried about their job and income. This could have financial implications for their perceptions of livability, but also moving intentions. Also, about three quarters of the respondents noted that their social contacts were very limited and the social life of their neighborhood had come to a standstill.

1.2 OBJECTIVE

The purpose of this thesis is to look into staying intentions. Both the regional characteristics of a place and the experienced regional characteristics of different groups of people, as experienced regional characteristics might tell more about what people actually feel about living in their place of residence even though the regional characteristics can be seen as being negative aspects. Both these characteristics and the personal characteristics of working aged people (18-64 years old) in the Northern Netherlands are looked at to help explain a relationship with staying in the current place of residence of people in the Northern Netherlands. This is being done by using a panel survey on livability conducted in the three northern provinces of the Netherlands: Drenthe, Friesland and Groningen¹. This thesis therefore adds to the literature on staying instead of moving with a focus on experienced regional characteristics.

¹ trendbureaudrenthe.nl www.fsp.nl sociaalplanbureaugroningen.nl

1.3 SOCIETAL RELEVANCE

In order to keep people in their place of residence, it is important to know what keeps them there and how they perceive the livability. As presented in the background, several municipalities in the Northern Netherlands are labelled as areas with population decline which might have an important role in staying intentions, because for example services and amenities are less available. Also, currently the housing prices in the Northern provinces are record high, which could make it more difficult for inhabitants to move, or for other to stay in their place of residence. But, different groups of people, like for example young adults might rate their livability different than other groups and therefore it is important to know which factors play a role in these different perceptions. The assessment of livability can be of high relevance for urban and regional planners to get a better understanding of what keeps people living in their place of residence. This thesis can provide insight into what does influence or what does not influence the flows of residential mobility of different people in the Northern Netherlands.

1.4 ACADEMIC RELEVANCE

As is being touched upon in the theoretical framework, research on immobility has been relatively new. A big body of research focuses on migration while immobility is often only perceived as the absence of mobility instead of focusing on actual staying behavior and intentions (Stockdale & Haartsen, 2018). Even though annually only a small proportion of people moves compared to people that are staying, migration studies still dominate the literature (Stockdale et al., 2018). This makes it academically relevant to add to this body of research.

1.5 RESEARCH QUESTIONS

The main question answered in this thesis is: *To what extent do personal, regional and experienced regional factors have a relationship with staying intentions in the Northern Netherlands for the working aged population (18-64 years old)?* To get a first look at this relationship, we want to know what the reasons for intending to stay of the working aged population themselves are, which groups of those people are staying and how the situation looks like in different regions in the Northern Netherlands. Therefore, this first question is descriptive in nature to start exploring the topic and gain some first insights. The second question is focused on personal characteristics to investigate a relationship with staying intentions between different groups of people. The literature also explores the current findings with regards to staying and personal factors. And the last question is focused on the regional characteristics of the places of residence and the experienced regional characteristics to gain insights in both objective characteristics of a place and the perceived or subjective characteristics. Again, both these characteristics are first explored in the existing literature.

- I. What are the current patterns of staying intentions for people aged 18-64 in the Northern Netherlands?
- II. Which personal characteristics contribute to explaining the staying of people aged 18-64 in the Northern Netherlands?
- III. How do regional characteristics and experienced regional characteristics of the places of residence people aged 18-64 influence their staying intentions?

1.6 STRUCTURE THESIS

Now that an introduction is being made in the background and objectives and research questions are presented for this thesis, the next section introduces the theoretical framework with the most important theories and a literature review to explore the current debates regarding residential mobility with a focus on immobility intentions. Also, livability issues are explored. With a conceptual model the relationship between the relevant concepts is visualized. Chapter 3 elaborates upon the research methods and the data used as well as give a definition of the important concepts. Next in chapter 4 the results are being presented and the final chapter consists of a conclusion and discussion.

CHAPTER 2: THEORETICAL FRAMEWORK

2.1 MIGRATION THEORIES

One of the first approaches to internal migration was centered on individual decision-making. When a person wants to make a move out of their place of residence, someone first looks at the costs and benefits of migrating. Human capital is linked to this theory of costs and benefits. Migration is viewed as the investment in human agency. However, this approach is mostly valid in a situation of voluntary migration, where there is a ‘optimum’ division of resources (Piché & Dutreuilh, 2013). Migration can give people access to opportunities that are beyond their current activity space. Those opportunities can be jobs that provide higher incomes, but they can also entail better educational opportunities (Kooiman et al., 2018). Migration can be the result of outbalancing the positive parts of a destination and the negative elements at origin. This outbalancing can mean that there are intervening opportunities between the place that someone currently resides and the destination (Piché & Dutreuilh, 2013).

Theories of migration have also been included within the life course approach (Clark, 2013). Moves that people make are often linked to life course events like marriage, starting the working career and having children. Whether someone decides to move or stay can also be determined by properties of the neighborhoods (Lee et al., 1994). Lee et al. (1994) found that both individual and contextual data can distinguish movers from stayers. So, besides human capital, location-specific capital, also known as ‘local ties’ (Mulder & Malmberg, 2014), play a role in moving intentions. Location-specific capital can be economic and social capital that cannot be easily located to another destination, because it is bound to a specific place. For example, this could be a person’s house or neighborhood including the social ties connected to this. In this thesis the main interest is on the ties to the (experienced) regional characteristics of the place of residence. When the local ties are very strong for a person this is expected to decrease the likelihood to migrate (Mulder & Malmberg, 2014).

2.2 FOCUSING ON IMMOBILITY

Immobility and staying – often used interchangeably in the literature - have been studied much less than migration (Stockdale & Haartsen, 2018). Immobility is often only perceived as the absence of movement instead of focusing on actual staying behavior and intentions. According to Schewel (2019) this focus overlooks the forces that constrain or resist migration drivers. Similar to migrating, staying is very diverse and the decision to stay can change with new life stages. Schewel (2019) notes that immobility can be defined within different spatial and temporal frames like residential or international immobility, immobility throughout the life course or intergenerational immobility. With regards to time dimensions, immobility can be ranging from one-day immobility (Adeel & Yeh, 2018) to longer term or even lifelong immobility (Erickson et al., 2018). Therefore, not surprisingly, stayers are pictured in the literature as a complex group similar to those who are mobile. In this thesis immobility is defined on a residential scale. Residential mobility compared to other forms of migration refers to short distance moves (Atkins, 2017). Immobility, just like migration is being distinguished from moves that are made in everyday lives, like when going to work or school for example. Immobility may then be seen as no change in residence for a specific amount of time (Schewel, 2019).

Aspiration-capability framework

Mata-Codesal (2018) describes three different types of stayers, namely persons that actually want to stay and are able to stay called ‘desired immobility’, persons that actually want to leave, but do not have the ability to do so called ‘involuntary immobility’ and ‘acquiescence immobility’ which is found among persons that do not have any clear aspirations to move or stay. According to the aspiration-capability framework, two suggestions are made for why a person would stay in their place of residence very similar to Mata-Codesal (2018). The first explanation is that someone lacks the capability to move and the second explanation suggests that staying is a voluntary (acquiescent) preference (Schewel, 2019). Many of the migration theories are based on more simple push-pull models or on the idea of individual income maximization (de Haas, 2021). De Haas (2021, page 2) conceptualizes migration according to

the aspiration-capability framework as “*a function of people’s capabilities and aspirations to migrate within given sets of perceived geographical opportunity structures*”. He argues that often there is no meaningful understanding of the concept of human agency in these theories on push-pull models and income maximization. Agency is the ability of people – although limited – to make choices independently and change structures that are shaping and restricting opportunities or freedoms of people. For example, perceptions of people vary a lot across different social and cultural contexts and might change throughout the life course and due to societal changes. Depending on those perceptions people may – or may not – have the desire to move. So, even when exposed to the same sort of sets of external factors like push and pull factors, dissimilar groups will have different aspirations to migrate (de Haas, 2021). This pictures a vision where moving and staying both are seen as complementary actions of migratory agency and where mobility is not just the act of moving, but someone’s capability to make decisions about where to live, including the option to stay (de Haas, 2021). Stockdale and Haartsen (2018, page 2) thus called for:

“An immobility perspective: *a perspective that considers stayers as active participants and staying as an active process*”

People who stay are important for the rural development and the sustainability of the rural community (Stockdale & Haartsen, 2018). The aspects that people base their decision to stay on can be related to social connections at their place of residence, specific personal characteristics and location-specific resources for example (Dufhues et al., 2021). These literature findings described above provide evidence that residential processes, including the process of immobility, are fluid.

Constraints

Many approaches to immobility have focused a lot on involuntary immobility. This kind of immobility is a result of constraints that are countering the freedom and aspiration to make a move (Schewel, 2019). External forces that are out of the control of the decision-maker can be preventing intentions turning into actual behavior (Desbarats, 1983).

Much of the literature on immobility experiences are currently focusing on the life course and events as potential triggers to re-evaluate the decision to stay (Thomassen, 2021). However, other motives for staying like personal factors and the physical and cultural environment are less studied. The next part of the theoretical framework explores these motives in the little amount of literature available, therefore also including residential mobility as a whole to find out more about these relationships in order for this thesis to conduct its analysis using these regional and personal characteristics.

2.3 PERSONAL FACTORS AND RESIDENTIAL (IM)MOBILITY

People with a highly educated background tend to move more frequently, however they are considered as important assets for regional development. Moves out of peripheral regions by those people may therefore present a loss of human capital (Latten et al., 2017). Logically, upcoming academics between 18 and 22 are concentrated mainly in the student cities in the Netherlands, including Groningen in the Northern Netherlands. Less educated on the other hand have limited choices about where to live. But research on lower income individuals shows that on the one hand lower incomes were seen to be less attached to their neighborhoods (Taylor et al., 1985), while Williams et al. (1992) found that low incomes and also lower education are correlated with place attachment.

As seen in many analyses the likelihood that someone moves or stays is age-dependent and most often has a peak around 20-24 years old (Clark, 2013). After that age it declines steadily when age increases. For younger women these rates are a little bit higher, while this reverses at older ages from which men are more likely to move. Older people’s length of stay is also greater making them more attached to their place than younger people (Anton & Lawrence, 2014). Clark et al. (2017) found that the length of stay increases the likelihood to continue to stay. This predictor is seen as an important factor of place attachment, because an increased length of stay in the place of residence increases the likelihood of local ties. According to Hay (1998) there is also a stronger place attachment for people who are born in their

place of residence compared to people who already have lived somewhere for a long time, but moved there in the past.

When a person does not have a job, this may result in either a higher or a lower likelihood of moving. Economically seen, someone that is unemployed will move more frequently because they want to find a job and search for employment opportunities (Herzog et al. 1993). However, unemployment can also result in a lack of resources to make a move. Therefore, someone might not be able to look for housing or might not have the information to find job opportunities elsewhere (Lehtonen & Tykkyläinen, 2010). Furthermore, people that are homeowners are seen to be more likely to stay than renters, because they have invested in their place of residence resulting in an attachment to the place (Anton & Lawrence, 2014). Similarly, Hay (1998) found that renters more often planned to move away, because they had weak attachment to the place.

2.4 LIVABILITY PLACE OF RESIDENCE

Livability is a term that is frequently used to talk about the quality of the environment people live in (van Leeuwen et al., 2020). Leidelmeijer et al. (2008) defined livability as the result of the extent to which the direct and indirect physical environment matches the wishes, ideals and needs of the individual, which can be both positive and negative. Features of places of residence and areas can influence inhabitant's life satisfaction (Lee et al., 1994). Neighborhoods are one of the most basic environmental units that our social life takes place in, so therefore definitely influencing its residents. Satisfaction has been defined as the evaluation of attributes of the social and physical environment (Hur & Morrow-Jones, 2008) and satisfaction can be seen as a measure of place attachment (Clark et al., 2017). The concept can be linked to objective circumstances, but also to emotions. According to Brown (2003) the satisfaction of someone in a community is related to someone's subjective evaluations of their own well-being combined with how well the local place can meet the personal needs of someone. These needs can both relate to physical and social characteristics and are important considerations for understanding someone's experiences in their living environment (Erickson et al., 2018). Clark et al. (2017) finds that besides family roots and connections to the community, satisfaction about the neighborhood is a significant predictor of moving or staying behavior. A high feeling of satisfaction among inhabitants gives reasons to stay, while a low satisfaction can make people decide to move out of the neighborhood (Hur & Morrow-Jones, 2008).

2.5 STAYING IN AREAS WITH POPULATION DECLINE

Regions which have population decline experience a population moving in and out of these places which is often very selective. Places that experience population decline are financially more vulnerable and need to provide all kinds of public services from a decreasing financial base (Bagchi-Sen et al., 2020). This decreasing financial base can negatively affect the environment to meet the needs of the people living there (van Leeuwen et al., 2020). For example, it can be challenging to keep a minimal level of service provision of public facilities. The closing down of public services can result in difficulties to reach certain groups of people and therefore mostly impact vulnerable groups in society. For policy makers the topic of urban and rural shrinkage is very relevant, because the phenomena is currently spread across many developed countries. According to Hoekstra et al. (2018) there is a growing debate that in order to solve the livability problems of these shrinking areas, interventions by the government are needed. One of the fields that policies have a direct impact on is housing, namely making housing more affordable and accessible for a variety of the population. Policies should not ignore population decline, but accept it and meet the needs of the current residents (Hoekstra et al., 2018). According to Guimarães et al. (2016) when dealing with population decline, policy makers should be asking what makes it that residents decide to stay in their place of residence. Guimarães et al. (2016) address factors that play a role in whether people remain in or leave a shrinking city. They state that pull and push factors in these areas are central to measuring their attractiveness. For a case study done in Portugal they find that there is a need by the residents to assure job opportunities in these areas. Also, social ties and place attachment were considered important by the residents.

2.6 EXPERIENCES IN RURAL AREAS

Debates have been going on for a long time about the concept of ‘rurality’ (Rye, 2006). At the end of the 20th century, inspired by the cultural turn in the social sciences, a new understanding of the concept was formed. Instead of the rural being a material or objective reality, it was proposed to be defined as a subjective and socially constructed reality. So, instead of questioning what rurality is, now the question is how people’s minds construct the idea of rurality (Rye, 2006). There can thus be made a distinction between objective or concrete characteristics of rural places and subjective or abstract characteristics (Halfacree, 1995). These images shaped by people living in rural areas can be understood as related to structural factors in the daily life of these people. These experiences in rural areas might have an influence on the moving intentions of people living there.

There are several features of rural life that are important for many people. These features are for example that rural areas are seen as more natural than urban areas and the feeling of belonging to a community is more accentuated (Rye, 2006). Tönnies concepts of *gemeinschaft* and *gesellschaft* characterize rural communities on one side and urban areas on the other, also putting forward the importance of being close to each other in rural areas. However, not all these perceptions might be positive about rural life. Studies show that mainly rural youth have doubts by the community closeness which might result in strict social control (Rye, 2006).

2.7 CONCEPTUAL MODEL

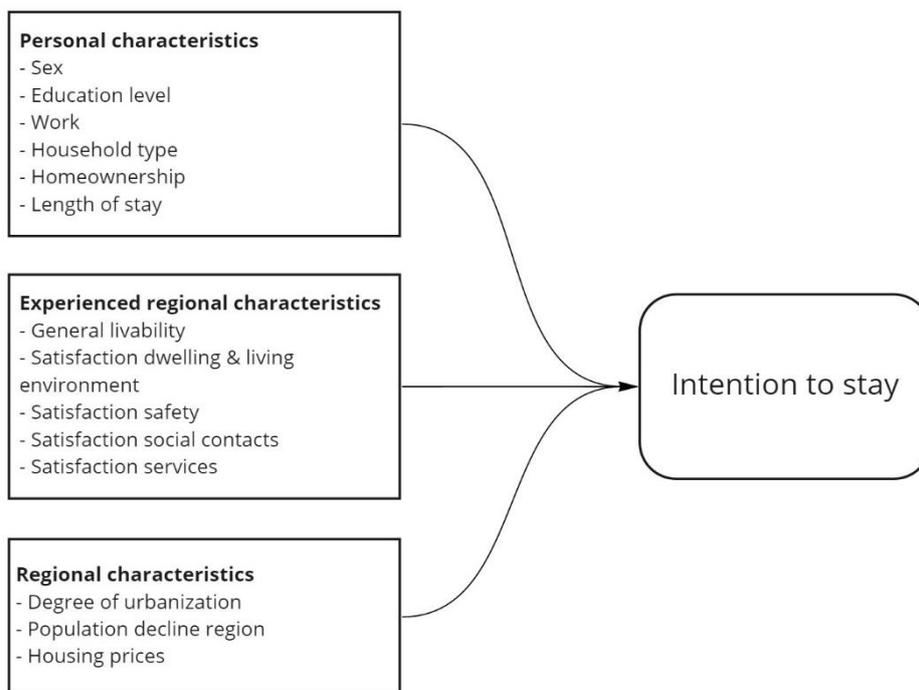


Figure 3: Conceptual model for intentions to stay

Figure 3 shows the conceptual model of this thesis. The main focus is on the intention of an individual to stay living in their place of residence. The conceptual model builds upon the aspiration-capability framework proposed by Schewel (2019) and de Haas (2021) amongst others. Capabilities are connected to the personal characteristics, where someone can lack the capability to stay or move due to these characteristics. On the other hand, aspirations are connected to the experienced regional characteristics, where people depending on their perceptions of the place of residence may – or may not - have the desire to move.

2.8 HYPOTHESES

Based on the main and sub questions of this thesis and the academic literature three sets of hypotheses are set up. These hypotheses are tested in chapter 4 which presents the results of the analyses. All hypotheses are being tested to the likelihood to have intentions to stay in the place of residence by working aged people in the Northern-Netherlands. The first hypotheses are linked to the personal characteristics of the respondents. It is expected that:

1a: People are more likely to have the intention to stay in their place of residence when their age increases.

1b: Higher educated are less likely to have intentions to stay in their place of residence.

1c: People that are home-owners are more likely to have intentions to stay in their place of residence.

1d: The longer a person has already lived in their place of residence the more likely it is to stay.

For some indicators it is unsure whether it is expected to increase or decrease the intentions to stay. For example this was seen for unemployment and income in the literature. The second set of hypotheses is related to experienced regional characteristics. It is expected that:

2: An increase in the perceived livability increases the likelihood to have intentions to stay.

Lastly, regional characteristics are tested to the likelihood to have intentions to stay.

3a: People living in more urbanized areas are less likely to have intentions to stay.

3b: People living in an area experiencing population decline are less likely to have intentions to stay.

CHAPTER 3: RESEARCH DESIGN

This section describes the choices made in research methods in order to be able to provide an answer to the research questions. Also, the most important concepts from the theoretical framework are operationalized here and some ethical issues are discussed.

3.1 TYPE OF RESEARCH AND DATA

In this thesis quantitative research methods are used to answer the research questions. A secondary dataset from Sociaal Planbureau Groningen, Trendbureau Drenthe and Fries Sociaal Planbureau is used for the analysis which has been received via CMO STAMM. Quantitative research involves a numeric or statistical approach to research design and tries to find explanations and predictions that can be generalizable to the population under study (Mehmetoglu & Jakobsen, 2017). The secondary data used has been collected through a panel survey in all the three provinces which was received by 15.000 inhabitants and filled in by about 8.000 people. The general topic of the survey is the inhabitants' experienced livability in their place of residence. According to Sociaal Planbureau Groningen (2020) *“the survey provides insights into the experiences of residents and the differences between groups of people and regions”*. This survey was done three times already with two year intervals, which makes it possible to track the experienced livability over time. For this thesis, the most recent survey that took place in October 2020 is used to look at the most current patterns.

According to Schewel (2019) it is challenging to study staying behavior from a methodological perspective, because the desire to stay is rarely included into surveys. However, a considerable part of this survey is devoted to the migration intentions and behavior of the respondents and also includes questions on reasons for staying. Therefore, it is possible to gather information on how many people would like to stay in the coming two years or actually stayed in the past two years. Furthermore, this panel survey consists of many questions regarding the perceived livability of the respondents on several topics like their house, living environment, amenities and social networks.

The data consist of information on postal code level, however this part of the data could not be accessed in the data for the province of Friesland due to ethical issues. Therefore, the data will be used on the municipality level. As the data of all three provinces is merged together, some variables do not correspond or are not available for one or more of the datasets, however some information would be important to add in the analysis. Therefore, data is added corresponding the municipality codes of each place of residence of the individuals in the data which has been retrieved from CBS municipality characteristics. The characteristics added are the population growth or decline forecast 2018-2050 and the average housing prices in the municipality. It is important to note however that the respondents answered to this survey about their place of residence. The municipality level does therefore not always correspond with the area that the respondent thinks about.

3.2 POPULATION AND SAMPLING

The survey was spread among the existing panels in all three provinces by the different research institutions. All panels consist of inhabitants of 18 years and older and they are a mix of males, females, young, old, different education levels and higher and lower incomes from different regions in the provinces. Because of the number of respondents and the included diversity, the dataset is a good reflection of the population of the Northern Netherlands. However, the province of Drenthe is underrepresented in this Panel with 891 respondents compared to Friesland with 3,384 respondents and Groningen with 3,507 respondents.

Because the research question is focused on the working age population, the analysis looks at the age category of 18-64 years old. In total this makes up 4,051 respondents of the Panel survey. Within these ages, young adults (18-34) are a underrepresented group in the respondents compared to the other age categories with only 581 respondents. The age group 35-49 consists of 1,047 respondents and the age

group 50-64 of 2,423 respondents. Although these groups are not similar in the amount of respondents, the current Dutch population also has the biggest proportion of people in the age groups of 50-64, making it more justifiable. The age group including people 65 years and older is not included in this research, because in this thesis the focus is put on the working age population. This age group has in common that they need to take into account their work or maybe still study location and can thus be regarded more similar than the 65 years or older age group. Individuals in this age category are dropped from the dataset.

3.3 OPERATIONALIZATION CONCEPTS

Dependent variable

There are multiple ways to interpret staying in the dataset. The first way is people who actually moved or stayed in the past 2 years and the second way is people that have intentions to move or stay in the upcoming 2 years. Besides these two survey questions, it was also asked what distance people moved if they had moved in the past 2 years. Graph 4 shows that more than half of the respondents that moved in the past 2 years moved within 5 kilometers of their past place of residence. As was seen in the theoretical framework these short distances moves can also be considered as staying (Atkins, 2017).

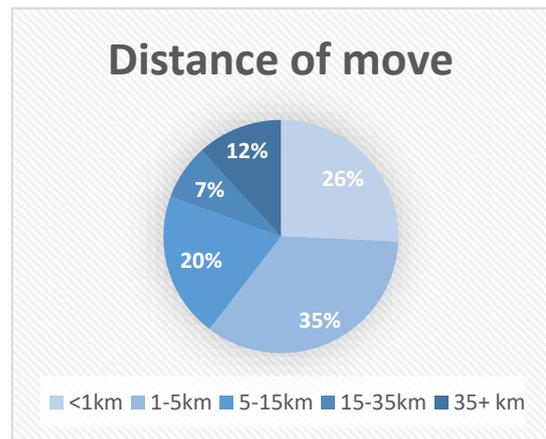


Figure 4: Distance between last and current residence

However, in this thesis the choice is made to analyze people's intentions to move or stay. First of all, actual moving behavior only occurs when there are no restrictions preventing the move, which could miss the people wishing to move, but being unable to do so. Also, the current characteristics of the respondents might not be covering the situation before the actual moving behavior anymore, so these characteristics better fit the question of moving intentions. Furthermore, the question was asked what the most important reasons are for respondents to stay in their current place of residence and this question is linked to the moving intentions and not to the actual moving behavior. However, a limitation of using intentions instead of behavior is that now we do not have information about the distance of the moves, meaning that a differentiation between moves over a short or long distance cannot be made.

The question *Do you have intentions to move within the next 2 years?* is thus used as the dependent variable for all people aged 18-64 years old. The question consists of three answer options: yes (n=322), meaning that the respondent has intentions to move within the next 2 years; maybe (n=900), meaning that the respondent might want to move within the next 2 years; and no (n=2,632) meaning that the respondent has no intentions to move within the next 2 years and thus wants to stay at its current place of residence (table 1). Instead of merging the yes and maybe categories, maybe will be looked at as separate category as well as it has quite a large size. There are 197 of the 4,051 respondents that did not fill in this question. These observations are dropped, because there is no way of knowing the value of the dependent variable.

Intentions to move	Percentage
Yes	8.35%
Maybe	23.35%
No	68.29%

Table 1: dependent variable with percentages

Independent variables – personal characteristics

The research question focusses on personal characteristics on one side and (experienced) regional characteristics on the other side. The dataset contains several indicators for both these characteristics. Firstly, personal characteristics include the sex and age (between 18 and 64 years old) of the respondents to control for in the model. Next, education is included in the model which is measured in three different categories (low, middle and high). Type of household contains five categories, namely single households, married or cohabiting households, households with children and a category for other and unknown household. Home-ownership is a dummy variable with renters and home-owners as categories. Also, information on work has been gathered, which is divided into five categories. A small category of respondents answered to be “retired” (41 observations). These were dropped out of this analysis, because the focus of this thesis is on the working-age population. Furthermore, information on the time a respondent has been living in the current place of residents is included. With this variable difference between respondents that have long been connected to their place and respondents who have not are shown. Because this variable is on a scale of 1 to more than 20 years it is used as a continuous variable in the analysis. Similarly, a variable is added which indicates whether a respondents has or has not moved in the past 2 years, which is a dummy variable. Lastly, for personal characteristics the variable for “making ends meet” is included as there is no variable on income, so this variable shows whether or not a respondent has experienced difficulties in making ends meet with their income. As most of these variables are categorical, it is necessary to set a reference category. In table 1, the first-mentioned category of each variable is the reference category. The last column of the table also shows the percentages per category of each categorical variable and the mean for the continuous variables.

Variables	Definition	Percentage/mean
Sex	0= Male 1= Female	49.77% 50.23%
Age	Continuous variable	49.8 years old
Education	1= Low 2= Middle 3= High	11.54% 36.50% 51.96%
Work	1= Working 2= Not working 3= Studying 5= Other	77.35% 13.92% 5.08% 2.16%
Making ends meet	1= No difficulties 2= Has to pay attention 3= Difficult	57.35% 31.55% 11.10%
Household	1= Single 2= Married or cohabiting 3= Household with (minor) children 4= Other 5= Unknown	13.83% 35.88% 33.23% 4.49% 12.57%
Home-ownership	1= Home-owner 2= Renting	85.35% 14.14%
Length of stay	Continuous variable	15.4 years
Moved in the past 2 years	1= Yes 2= No	10.46% 89.54%

Table 2: Independent variables for personal characteristics with percentages

Independent variables – regional characteristics

From the theory it was made clear that a distinction could be made between objective and subjective regional characteristics. Both these characteristics can be found in the data. Firstly, the structural regional characteristics. In the panel survey people filled in their place of residence, which can be classified by certain criteria, namely the province that the panel took place and the municipality that the place of residence belongs to. The data already contains variables for the size of the place and the degree of urbanization. However, more regional characteristics are added to the data measured for the municipality. Firstly, a variable for population decline is added which is retrieved from the 2018-2050 forecast as was seen in figure 1. This variable is being included as a dummy with negative population growth on the one hand and positive growth on the other hand. Furthermore, the housing market prices per municipality are added as was seen in figure 2. This variable is also included as a dummy with housing prices below 250,000 euros and housing prices above this price.

As the municipality level is used, instead of the postal code level on which the already existing regional characteristics were based, dummy variables are created of the size of the place of residence and the level of urbanity. In table 2 all the variables are shown together with the percentages per category.

Variables	Definition	Percentage
Panel	1= Groningen	52.01%
	2= Friesland	36.53%
	3= Drenthe	11.45%
Level of urbanity	0= Little urban	51.69%
	1= Strong urban	48.31%
Population growth	0= Negative growth	53.72%
	1= Positive growth	46.28%
Average prices owner-occupied homes	0= Lower than 250	78.90%
	1= Higher than 250	21.10%

Table 3: independent variables for regional characteristics with percentages

Independent variables – subjective regional characteristics

The last set of independent variables are the subjective regional characteristics. Subjective meaning that the respondents rated the regional characteristics themselves. The first variable included is the rating of the general livability of the place of residence of a respondent. This is rated by giving a mark between 1 and 10, the last one being the highest. Besides the general livability, also the satisfaction with the dwelling, the satisfaction with the safety of the place of residence, the satisfaction with social contacts and the satisfaction with services are rated from 1 till 10. These are being used as continuous variables in the analysis. Table 3 shows all five indicators with the corresponding average rating of the respondents.

Variables	Mean
General livability	7.7
Dwelling	8.1
Safety	7.5
Social contacts	7.1
Services	7.0

Table 4: independent variables for subjective regional characteristics and their mean scores

3.4 EXPLANATION OF THE METHODS

The first research question is answered by using descriptive methods like cross-tabulations and summary statistics. The second and third research questions are answered by using multinomial logistic regression analysis to investigate both the effect of personal characteristics and the effect of (experienced) regional characteristics on the intentions to move. A multinomial logistic regression is used because the dependent variable has three options (yes, maybe and no) which are nominal, because there is no natural ordering. Two of the categories of the dependent variable are compared separately to the category chosen as the reference category (Mehmetoglu & Jakobsen, 2017). The reference category is the last category where a respondent does not have the intention to move in the upcoming two years (no). The categories yes (1) and maybe (2) are thus separately being compared to the category for no. This choice was made, because the question asked to the respondents was about the intentions to move and yes and maybe both indicate that someone (might) wants to move. However, the focus of the analyses is on not having intentions to move, which is considered as having intentions to stay. The following equation is used for the multinomial model with a dependent variable with three categories:

$$L1 = \ln \frac{P(Y = Yes)}{P(Y = No)} = \beta_0 + \beta_1 * X_1 + e$$

$$L2 = \ln \frac{P(Y = Maybe)}{P(Y = No)} = \beta_0 + \beta_1 * X_1 + e$$

The first equation thus compared the category yes (wants to make a move) to the category no (does not want to make a move) and the second equation compares maybe (might want to make a move) to the category no again. After that, extra groups of variables are added in each consecutive model. Model 1 includes all experienced regional characteristics as independent variables. In model 2 the personal characteristics are added and finally in model 3 the objective regional characteristics are added.

3.5 ETHICAL ISSUES

When conducting research it is important at all times to take into account ethical considerations. For this thesis ethical issues mainly concern privacy issues of the surveyed group from the panel. First of all, the handling of the data is important, because the data cannot be looked into by third parties. Therefore, the data is being locked with a password at all times and is never left open in a public space where other people can enter. Also, in this thesis there are no references made to an individual person or any indicators that can lead to the identification of an individual person. As the postal code data could not be used due to identification issues, all postal codes are deleted from the dataset. Lastly, taking part in the panel is completely voluntary and can be terminated at any time.

CHAPTER 4: RESULTS

4.1 CURRENT PATTERNS – DESCRIPTIVE ANALYSIS

The first research questions is: *What are the current patterns on staying intentions for people aged 18-64 in the Northern Netherlands?* This question can be answered by using descriptive statistics on the data. As was seen in the methods, about 68% of all respondents aged 18-64 years old has intentions to stay living in their place of residence in contrast to about 9% of the panel that has intentions to move (table 1, methods chapter). There is also a group of 23% that responded that they might want to move in the upcoming two years, which means that there is quite a large group of people that is unsure about moving or not.

Reasons to stay

In the panel survey the question is asked: *What are the most important reasons for staying at your current place of residence?* This question is only asked to respondents that filled in that they were not planning to move within the next two years, so that leaves 2,735 people that answered this question. In total there are eleven different options to answers this question and a maximum of three could be picked by the respondent, so multiple could be picked. Figure 6 shows for three different age categories the share of people that picked a reason as one of the most important reasons to stay. For all these three age groups combined, the top three reasons to stay are: satisfied with current house, satisfied with current living environment and closeness of family or friends. This last reason shows one of the largest differences between young adults (18-34 years old) and the other age categories. Almost 50% of the young adults picked this as one of their most important reason to stay, while for respondents aged 35-49 this is about 33% and for respondents aged 50-64 this is 25%. A cause of this could be that younger people are still more connected to their parents or even still living at their parents place and they might have a bigger circle of friends at their place of residence.

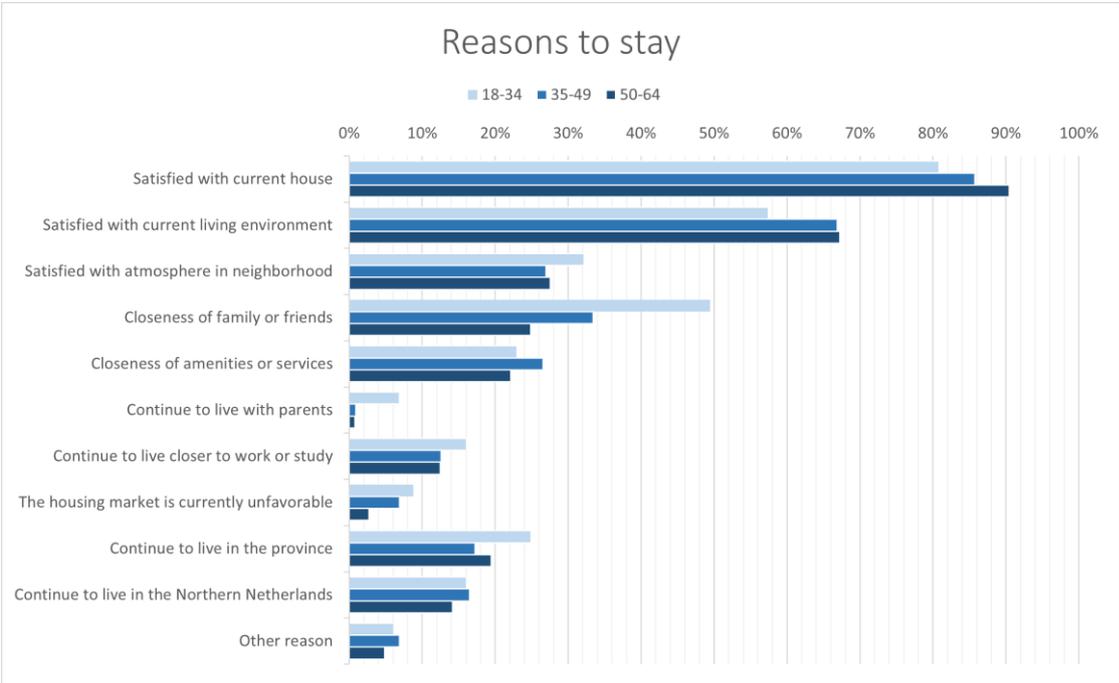


Figure 5: Most important reasons for staying per age category.

Other small differences in age are also visible. The satisfaction with the current house and living environment are named more often by older people, while many of the other reasons, like the atmosphere in the neighborhood, family or friends and continue to live in the province are reported more frequently by younger respondents. Overall, some of these reasons seem to be less important reasons to stay for the respondents. For example, continue to live closer to work or study is given a lot less importance compared to the dwelling, living environment or family and friends. Also, continue to live in the

province and in the Northern Netherlands are less important than the other reasons, but especially the unfavorable housing market is not filled in by many respondents and might not play a big role in the Northern Netherlands although the housing prices are record high as seen in the introduction of this thesis.

Respondents were also given the option to fill in “other reason”, which gave them the opportunity to give an open answer to the question about reasons for staying. However, these data were only accessible for the panel surveys in Groningen and in Drenthe. Still, these answers can give a deeper understanding of people’s reasons to stay. A large proportion of the open answers consists of people saying that their own or their partner’s business is located at or around their house, which are mostly agricultural businesses. As it is hard to move this business somewhere else, this is an important reason to stay even though some people might want to make a move.

*“Our **business** is here and almost impossible to move somewhere else.”*

*“My partner has its **own business**, so we cannot move. I would like to live in Noord-Holland though.”*

Furthermore, respondents find the space, nature and peace and quiet important reasons to stay living at their place of residence. These people mostly live in rural parts of the Northern Netherlands, where there is more space.

*“The **freedom**, the limited buildings and the absence of high-rise in the area. For me, freedom is mainly the farmland and a nature reserve in the immediate walking environment.”*

Children can also be the reason that people do not have intentions to move, because they do not want to let their children change schools and they have everything they like in their neighborhood.

*“We stay living here for **our children**. They live within cycling distance of primary and secondary school. And they can go to the shopping center, cinema, friends and sports by bike. In the future a study: We live within walking distance of the station to Groningen. And they don’t want to move.”*

*“I want my **children** to be able to stay at their current school.”*

Also, financial reasons are named often as constraints to make a move. Other respondents name it as a reason to stay, because they found a big house which is relatively cheap to the rest of the Netherlands. Some respondents also relate this to the unfavorable housing market at the moment.

*“Moving is **too expensive** for us now and the housing prices are too high everywhere right now”.*

*“I live **very cheap**. That is the most important reason to not make a move.”*

In Groningen issues due to the earthquakes are also visible, because some respondents got damage to their dwelling from the earthquakes meaning that their house is not easy to sell, because it lowered the value of their house. Also, the coronavirus pandemic is mentioned by some respondents as a reason to not make a move now, because of the uncertainty that comes with it.

*"Our house cannot be sold due to the huge amount of **damage** because of the **earthquakes**."*

*"Even if we wanted to, we cannot go back to Noord-Holland (where we come from). Because of the **earthquakes**, the value of our house is way less than a house in the west of the Netherlands."*

*"Moving during the **pandemic** seems very unwise."*

Lastly, place attachment to the environment and the dwelling of the respondent were also seen in the reasons to stay.

*"We feel at **home** here."*

*"I have **grown into my own house**. It has been in the family for generations. It feels like a warm coat."*

These open answers show that there are reasons to stay for people because there are things constraining them to make a move. For example, some people experience financial constraints due to the earthquakes causing damage to their house. Another constraint for moving is when children still live at home and they do not want to move because of them. On the other hand, there are also respondents that have no intentions at all to move, because they are very satisfied with their living context. For example, quite some respondents talk about feeling attached to their place of residence or appreciate the space and house they have a lot. These open answers give a close link to the aspiration-capabilities framework (Schewel, 2019; de Haas, 2021) and also shows that even if someone has aspirations to make a move this is not always possible, because of constraints and thus connecting to the capability to move.

Individual characteristics and staying

Amongst people there are differences in the proportion of intended stayers. When looking at the sex of the respondents, 67% of all men want to stay living in their current place of residence. For women this is 69%, so a little bit more. Some more clear differences are seen for the education level of the respondents. Of all lower educated, 73% does not have intentions to move, while this is 69% for higher educated and 65% for people in the category middle. A big difference shows for students compared to people that are working. 28% of all students wants to stay living at their place of residence, while for the respondents that have a job this is 70% and for people without a job this is a little bit lower with 63%. Also, single people show a lower proportion of stayers (59%) than people that are married or cohabiting (73%) and households with children (69%). Of all respondents that are renters, about 50% is a stayer, while 71% of people that are homeowners wants to stay.

Regional characteristics and staying

When looking at the size of the place of residence of the respondents it shows that the smaller the size, the higher the proportion of stayers. So, for example, 79% of people living in a place with less than 500 inhabitants is a stayer, while 60% of people living in a place with more than 15.000 inhabitants is a stayer. The level of urbanity shows a similar pattern as the size of the place of residence. Namely, when a place of residence is categorized as not urban at all, the proportion of stayers is higher than in more urbanized areas. Lastly, when taking a look at the three provinces it shows that in Groningen about 65% of the respondents has staying intentions, while for Drenthe and Friesland this is both about 72% and thus higher than in Groningen. A simple reason for this is probably the high number of students living in the city of Groningen that often have a lot higher moving intentions.

Satisfaction place of residence

Most people in the Northern Netherlands are satisfied with the livability in their place of residence. On average, the general livability is rated with a 7.7. In Groningen this is a little bit lower with a 7.6 and in Friesland this is a little bit higher with a 7.8. This is also visible on a lower level. Those living in the municipalities of Delfzijl, Loppersum and Appingedam (all located in the province of Groningen) rate their livability the lowest, while people living in the municipalities of Noordenveld, Meppel and the Waddeneilanden rate their livability the highest in the Northern Netherlands. There are many different aspects associated with livability. Table 3 already showed some of these aspects and the average rating of the respondents. Some of these might matter more in the intention to stay than others which will be looked at in the regression model as well. When looking more into the ratings of the general livability by the respondents in combination with the decision to stay, it shows that people that rate their livability very high also have the highest proportion of people that intend to stay living in their place of residence (figure 7). So, for example, of all respondents that rated the general livability with a 9, about 80% has intentions to stay. On the other hand, when respondents rated the general livability quite low, the amount of people that want to stay was a lot lower.



Figure 6: Proportion of stayers for each rating of general livability

Four more specific indicators were also rated by the respondents as seen in table 3. These indicators are the dwelling and living environment, safety, social contacts and services. Figure 7 shows the relationship of these four indicators with the intention to stay. First of all, what is noticeable is that all four lines differ from the relationship of general livability with staying intentions which is almost linear. All four indicators are very similar though at high ratings as then the amount of people that intent to stay is also high. However, the ratings between 1 and 8 show quite some differences between the four. For example, services show a high proportion of people that intent to stay quite even throughout the ratings and is thus even high when services are rated very poorly. On the other hand, dwelling and living environment is quite similar to the general livability, starting very low and growing when the ratings increase. The satisfaction with the safety and with social contacts also look similar to each other. These two also show a clear increase when the ratings increase as well, but they start a lot higher already than the dwelling and living environment. However, these results have to be interpreted with caution, because there are also less respondents for the lower ratings. This low number of observations could be the reason for the fluctuations at the low ratings.

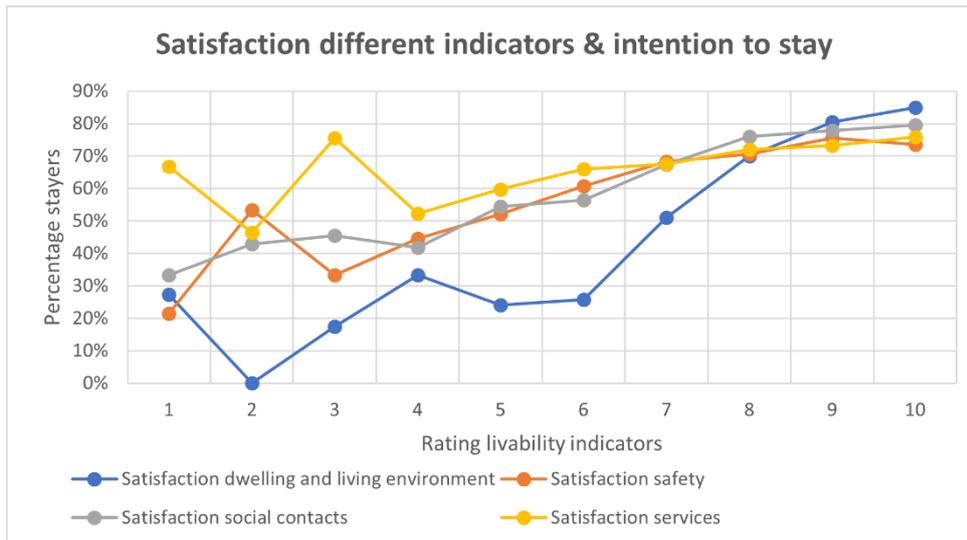


Figure 7: Proportion of stayers for different indicators

4.2 PERSONAL CHARACTERISTICS – REGRESSION

The first model includes all personal characteristics as independent variables. Table 4 shows the results of the multinomial logistic regression conducted with these variables. These results are related to the second research question: *Which personal characteristics contribute to explaining the staying of people aged 18-64 in the Northern Netherlands?* Since the third category of the dependent variable (no) was assigned to be the baseline category, there are no coefficients or tests provided for this level. The other categories of the dependent variable can be used to determine which of the independent variables significantly predict whether a person falls into the ‘yes’ category versus the ‘no’ (baseline) category and the same goes for the ‘maybe’ category.

	Coefficient	Standard error	Coefficient	Standard error
Intentions to move	Yes		Maybe	
<u>Sex</u> reference: male female	-0.319**	0.155	-0.128	0.103
<u>Age</u>	-0.060**	0.008	-0.039**	0.006
<u>Education</u> reference: low Middle High	-0.131 -0.019	0.252 0.253	0.428** 0.510**	0.185 0.185
<u>Work</u> reference: working Not working Studying	-0.126 0.641*	0.242 0.346	0.198 0.702**	0.115 0.310
<u>Making ends meet</u> reference: no difficulties Has to pay attention Difficult	0.169 0.981**	0.175 0.232	0.199* 0.741**	0.115 0.169
<u>Household</u> reference: single Married or cohabiting Household with (minor) children Other Unknown	-0.113 0.015 0.563 -0.231	0.255 0.243 0.374 0.317	-0.267 -0.480** -0.335 -0.205	0.165 0.165 0.327 0.189
<u>Home-ownership</u> reference: homeowner Renting	0.898**	0.202	0.407**	0.155
<u>Length of stay</u>	0.020*	0.011	0.017**	0.008
<u>Moved in the past 2 years</u> reference: yes No	0.448*	0.231	1.04**	0.196

<u>Constant</u>	-0.048	0.513	-0.631*	0.375
Regression model statistics: Number of observations: 2,453 LR chi2(34): 332.02 Pseudo R2: 0.0817				
*Significant at 5% **significant at 10%				

Table 5: results multinomial logistic regression personal characteristics.

In general, the model shows some clear significant relationships which are being discussed below. However, quite some variables or categories are not statistically significant and the standard errors are also quite large. Large standard errors show that the sample means are more widely spread around the population mean and may thus not closely represent the population. A reason for this could be the relatively small sample size which makes it harder to approach statistical significance. The pseudo R2 is not computed in the same way as the R-square in OLS regression. As such, the pseudo R2 cannot be interpreted as proportion of variance accounted for as you would in the context of OLS regression. Nevertheless, McFadden's pseudo-R-square can be thought of as an index of the proportionate improvement in model fit relative to the null model (Pituch & Stevens, 2016). The pseudo R2 can also be compared to the two other models which is done in the model fit section.

There are a few variables or categories significantly predicting the dependent variable. When taking the exponents of the coefficient it will get the results in odds ratios. When the odds ratios are smaller than 1, respondents are less likely to have intentions to move (for the yes category) and when they are higher than 1 the intentions to move increase. The same is true for the maybe category. The first set of coefficients represents a comparison between people that do not have intentions to move (baseline category) and those that do have intentions to move (yes). The second column represents the coefficients for people that might have intentions to move compared to not having intentions to move.

Relationship between sex and intentions to move

The sex of the respondent is a significant predictor ($b = -.319$, $p < 0.05$) in the model and thus females are less likely to have intentions to move than not to make a move compared to men. According to the model, the odds of having intentions to move for females are $\exp(-0.319)$ or 0.727 times the odds of not having intentions to move (reference dependent variable) for males (reference for sex). However, no significant relation is found for the category of might wanting to move compared to not wanting to move.

Intention to move decreases with age

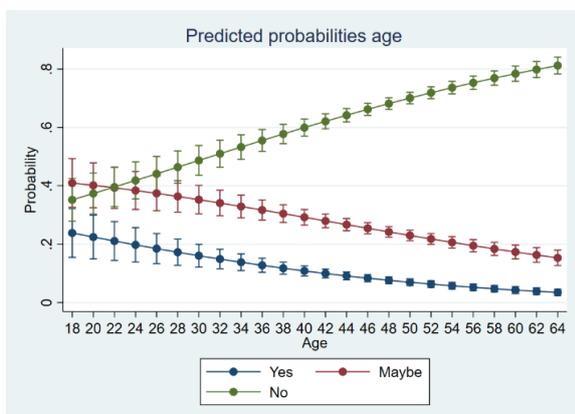


Figure 8: predicted probabilities for age with 95% confidence interval.

The age of the respondents significantly predicts the intention not to make a move for both the yes and the maybe category in the regression. Both coefficients are negative and thus increasing age is associated with a lower likelihood of having intentions to (maybe) move compared to not making a move. However,

although the general trend is decreasing, it is interesting to look at younger and older individuals and the intentions to move within 2 years. In order to visualize this relationship, the probabilities per age are plotted in a graph in which all other independent variables are kept at their mean. Figure 8 shows this graph with lines for all three outcomes of the dependent variable. For the yes and maybe outcome the predicted probabilities are decreasing with age, although the maybe outcome category is a bit higher for all ages. The no outcome on the other hand shows an increase with increasing age. These results are supporting hypothesis 1a.

Positive effect education level and students

Middle and high education level compared to a low education level shows a positive coefficient for maybe wanting to move compared to not wanting to move. As was expected in hypothesis 1b, when looking at higher educated compared to lower educated, the odds of maybe wanting to move compared to not wanting to move are times 1.655 higher and this difference is statistically significant. No relationship is found for having intentions to move compared to not having intentions to move. Respondents that indicated that they are students also show a positive coefficient, indicating that students compared to people that are working are more likely to maybe have intentions to move. Again, no relationship is found for the yes category of the dependent variable.

Difficulties with making ends meet increases intention to move

The coefficient for difficulties with making ends meet is relatively strong and positive for intentions to move (0.981 corresponding with 2,667 times the odds) and a little bit smaller for maybe wanting to move (0.741 corresponding with 2,098 times the odds). Both results are statistically significant and thus show that the intentions to (maybe) move compared to not have intentions to move increase for people that have difficulties to make ends meet compared to people who do not have difficulties making ends meet. So, people that have to live from a lower income seem more likely to decide to make a move. A reason for this could be that those with lower incomes are likely to search for better (income) opportunities elsewhere.

Homeownership and household type

As expected in hypothesis 1c, renters are more likely to have intentions to move than homeowners. The model shows a quite strong positive coefficient for the yes outcome (b=.898, p<0.05) and a little lower for the maybe outcome (b=0.407, p<0.05). The independent variable household type has only one significant relationship. When living in a household with (minor) children compared to being single, the intention to maybe make a move decreased (-0.480).

Length of stay and a recent move

Again, only the maybe outcome of the dependent variable shows a statistically significant relationship. The intention to maybe want to move compared to not want to move increases with the amount of time someone has lived at their current place of residence (odds times 1.017) and when someone did not recently move compared to someone who did move, the odds to maybe want to move were 2.829 times higher than not wanting to move. So, it seems that having lived longer at the place someone is currently living increases the intention to might want to move, which is supporting hypothesis 1d.

4.3 (EXPERIENCED) REGIONAL CHARACTERISTICS – REGRESSION

In the second model the experienced regional characteristics are added to the previous model and the third model adds the regional characteristics. Again, the baseline category for these models is ‘no’ compared to the other categories ‘yes’ and ‘maybe’. Both models relate to the third research question of this thesis: *How do regional characteristics and experienced regional characteristics of the places of residents of people aged 18-64 influence their staying intentions?*

	Coefficient	Standard error	Coefficient	Standard error
Intentions to move	Yes		Maybe	
<u>Sex</u> reference: male				

female	-.109	.167	-.044	.106
<u>Age</u>	-.054**	.009	-.035**	.006
<u>Education</u> reference: low				
Middle	.107	.276	.554**	.192
High	.254	.278	.661**	.193
<u>Work</u> reference: working				
Not working	-.344	.264	.103	.158
Studying	.922**	.373	.850**	.319
<u>Making ends meet</u> reference: no difficulties				
Has to pay attention	-.253	.191	.016	.120
Difficult	.288	.259	.404**	.179
<u>Household</u> reference: single				
Married or cohabiting	.146	.279	-.174	.171
Household with (minor) children	.184	.265	-.446**	.171
Other	.701*	.406	-.294	.339
Unknown	.162	.343	-.039	.196
<u>Home-ownership</u> reference: home-owner				
Renting	.526**	.221	.241	.162
<u>Length of stay</u>	.024*	.012	.016**	.008
<u>Moved in the past 2 years</u> reference: yes				
No	.300	.245	1.03**	.201
<u>General livability</u>	-.274**	.087	-.207**	.061
<u>Satisfaction dwelling and environment</u>	-.718**	.065	-.384**	.050
<u>Satisfaction safety</u>	.065	.071	-.017	.048
<u>Satisfaction social contacts</u>	-.208**	.062	-.098**	.045
<u>Satisfaction services</u>	.086	.064	.087**	.042
<u>Constant</u>	7.542**	.842	3.98**	.614
Regression model statistics: Number of observations: 2,453 LR chi2(40): 607.40 Pseudo R2: 0.149 **significant at 5% *significant at 10%				

Table 6: results multinomial logistic regression experienced regional characteristics added.

The pseudo R2 of the second model is 0.149 compared to 0.0817 in the first model, which is an improvement in the model fit. An LR-test can also be performed to test for the difference between the models. The LR test requires that one model is nested in the other model, so here the second model contains all the parameters from the first model plus one or more variables. The results of the LR-test show that adding the experienced regional characteristics to the model results in a statistically significant improvement in model fit.

Likelihood-ratio test (Assumption: m1 nested in m2)	LR chi2(10) = 275.38
	Prob > chi2 = 0.0000

Table 7: LR-test model 1 and 2

Relationship experienced livability with moving intentions

The general livability, satisfaction with the dwelling and living environment and the satisfaction with social contacts are all statistically significant predictors of both the yes and the maybe category in the model. The satisfaction with services is also significant for the maybe category, however the satisfaction with safety does not show a relationship for both categories of the dependent variable.

The three significant predictors for both models all have a negative coefficient that tells us that when the rating of these indicators increase, the likelihood to (maybe) have intentions to move decreases compared to not having intentions to move. Especially the rating of the satisfaction of the dwelling and living environment has a strong relationship compared to the other indicators. Namely, the odds of having intentions to move decreases times 0.488 compared to not having intentions to move. These results indicate that the intention to stay increases when the rating of these indicators increases, which was also expected from the literature. Interestingly, the satisfaction of services shows a different result. An increase in the rating of the satisfaction of services increases the likelihood to maybe make a move.

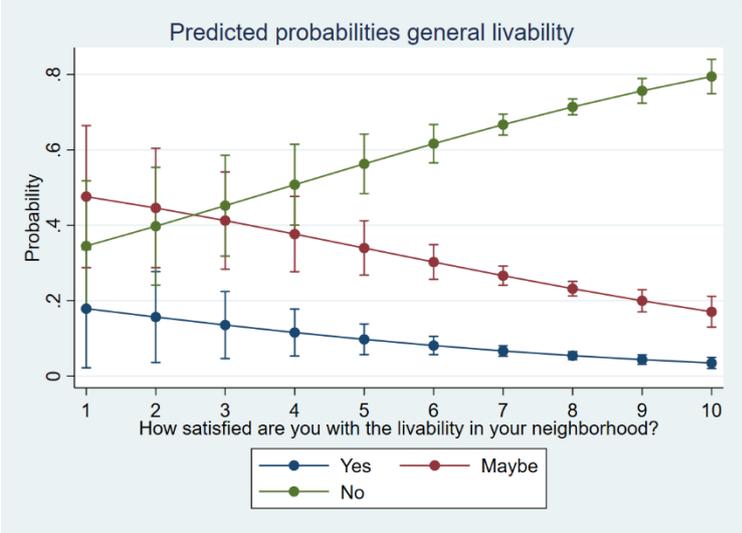


Figure 9: predicted probabilities for the general livability with 95% confidence interval.

When plotting the predicted probabilities for the general livability these results are clearly visible. For not having intentions to move, the probability increases when the ratings increase. For both having intentions to move and maybe having intentions to move, the probabilities decrease when the ratings are higher.

Model including regional characteristics

Finally, the regional characteristics are added to the model. In appendix A the results of the last multinomial logistic regression can be found with its coefficients and standard errors. Also, the significance levels are shown with 5% and 10%. An LR-test could not be conducted again, because the models before differ in the number of observations. The model including the regional characteristics has less observations, because the municipal reclassifications made it not possible to pair all observations from the panel. The R2 however did increase from 0.1494 to 0.1604, which could indicate a small increase in model fit.

Of the three regional characteristics, only urbanity shows a statistically significant effect. The model shows a positive predictor meaning that people living in areas that are not urban compared to urban areas are more likely to have intentions to move compared to not having intentions to move. Hypothesis 3a expected that people living in more urbanized areas are less likely to have intentions to stay, because for example it was found that the livability is often perceived less in urban areas which could result in lower staying intentions. So, this hypothesis is not supported by these outcomes. Unfortunately, no significant relationships show for the population decline variable and the owner-occupied housing prices.

CHAPTER 5: DISCUSSION AND CONCLUSION

5.1 CONCLUSION

The goal of this thesis was focused on staying intentions and the relationship with both objective and subjective regional characteristics. The following main question was formulated: *To what extent do personal, regional and experienced regional factors have a relationship with staying intentions in the Northern Netherlands for the working aged population (18-64 years old)?* Quite some personal characteristics showed to have an influence on people's staying intentions and also the experienced regional characteristics showed a clear relationship. On the other hand, the regional characteristics only had one significant effect and might be of less importance for staying intentions in the Northern Netherlands.

Although there has been a lot of focus on migration in research, stayers form a much bigger group in society. In this thesis the focus is set on people that have intentions not to make a move. From a policy perspective, seeing stayers as people who choose to stay means they can be an asset to communities instead of being seen as geographically stuck or immobile (Erickson et al., 2018). Stockdale and Haartsen (2018) thus called for an immobility perspective, where stayers are seen as active participants and staying itself as an active process which is constantly evaluated. In this thesis the aspiration-capabilities framework is used to show that on the one hand people can have aspirations to stay or make a move and on the other hand there is the ability to stay or make a move. By using the intentions to stay instead of the behavior, the people that aspire to stay or move are observed in a better way. With the open answers given by the respondents it was also shown that some people are in a situation of involuntary staying. For example, it was seen that the earthquakes in Groningen decreased the value of houses, which made it impossible for people to move. These results indeed show the some more geographically stuck stayers. However, many more people indicated that they were perfectly happy with their dwelling or living environment and indicated that they felt at home or attached to their place of residence. This means that they aspired to stay which looked like a voluntary decision to stay.

Some livability indicators were given more importance by the respondents than others. The dwelling and living environment are especially important reasons to stay when compared to for example living close to work or study or continuing to live in the Northern Netherlands. This was also indicated by Gieling et al. (2017) who said that people give different importance to different indicators. The results from the multinomial logistic regression also show a stronger effect for the satisfaction with dwelling and living environment than for the satisfaction with social contacts. But although these differences show in the indicators, it was clear that when there is an increase in the satisfaction with the livability, the staying intentions also increased. However, no clear results were found for satisfaction with safety and services.

The housing market seemed to not have such a big influence on the staying intentions. An unfavorable housing market was picked as an important reason to stay by less than 10 percent of the respondents. Also, the owner-occupied housing prices seemed to have no significant results in the multinomial logistic regression. The same can be said about living in an area experiencing population decline. No differences were found between municipalities where the population is declining and municipalities which are growing. Also, none of the open answers indicated anything about population decline or its causes.

5.2 DISCUSSION AND RECOMMENDATIONS

The panel survey that has been used in this thesis is focused on the livability of the respondents and not necessarily on moving and staying intentions. Therefore, it might have missed some extra details about these intentions. To gain some more insight into the intentions to move, it would be recommended to include questions in a survey about where people would like to move and what distance they would like to move. This way a distinction can be made between people really wanting to leave the region they live

in compared to people that want to move, but do not want to leave their region. People that do not want to leave the region they come from, might then still be considered as stayers as their daily living environment does not change that much (Atkins, 2017). Another recommendation for the survey is to include an answer category which states that a respondent is staying involuntary. This way also a distinction can be made between people that are voluntary and involuntary stayers.

The survey was conducted in October 2020, during the second wave of the COVID-19 pandemic. Although no questions have been asked about corona to the participants directly, the pandemic could still have an influence on people's livability perceptions and moving intentions. Some people also indicated the pandemic as a constraint to make a move at the moment in the open answers. However, as no indicators about the coronavirus were included, this is more a disclaimer for this thesis.

The choice was made to look into the moving and staying intentions instead of the actual moving or staying behavior. However, it remains to be seen whether people's wishes to move give a good picture of what is really to be expected in future moving behavior as wishes are not always interchangeable.

LITERATURE

- Adeel, M., & Yeh, A. G. O. (2018). Gendered immobility: Influence of social roles and local context on mobility decisions in Pakistan. *Transportation Planning and Technology*, 41(6), 660–678.
- Anton, C.E., & Lawrence, C. (2014). Home is where the heart is: the effect of place of residence on place attachment and community participation. *Journal of Environmental Psychology*, 40, 451-461.
- Atkins, M. T. (2017). “On the move, or staying put?” An analysis of intrametropolitan residential mobility and ageing in place. *Population Space and Place*, 24, 1-14.
- Bagchi-Sen, S., Franklin, R.S., Rogerson, P., & Seymour, E. (2020). Urban inequality and the demographic transformation of shrinking cities: The role of the foreign born. *Applied Geography*, 116.
- CBS. (2020A). Randgemeenten bij grote steden groeiden in 2019 het meest. Retrieved on 05/05/2021 from: <https://www.cbs.nl/nl-nl/nieuws/2020/01/randgemeenten-bij-grote-steden-groeiden-in-2019-het-meest>.
- CBS. (2020B). Grootste prijsstijging in de provincie Groningen. Retrieved on 16/02/2021 from: <https://www.cbs.nl/nl-nl/nieuws/2020/04/grootste-prijsstijging-in-de-provincie-groningen>.
- CBS. (2021). Prijzen bestaande koopwoningen stijgen in 2020 door naar recordniveau. Retrieved on 16/02/2021 from: <https://www.cbs.nl/nl-nl/nieuws/2021/03/prijzen-bestaande-koopwoningen-stijgen-in-2020-door-naar-recordniveau>.
- Clark, W. A. V. (2013). Life course events and residential change: unpacking age effects on the probability of moving. *Journal of Population Research*, 30: 319-334.
- Clark, W.A.V., Duque-Calvache, R., & Palomares-Linares, I. (2017). Place attachment and the decision to stay in the neighbourhood. *Population, Space and Place*, 23, 1-16.
- CMO STAMM. (2020). Vervolgonderzoek naar gevolgen coronacrisis voor inwoners van Groningen en Drenthe. Retrieved on 4-6-2021 from: <https://cmostamm.nl/vervolgonderzoek-naar-gevolgen-coronacrisis-voor-inwoners-van-groningen-en-drenthe/>.
- Desbarats, J. (1983). Spatial choice and constraints on behavior. *Annals of the association of American geographers*, vol. 73(3), 340-357.
- Dufhues, T., Möllers, J., Traikova, D., Buchenrieder, G., & Runschke, D. (2021). Why villagers stay put – A structural equation model on staying intentions. *Journal of Rural Studies*, 81: 345-357.
- Elshof, H. (2017). *Local population decline in rural North-Netherlands*. University of Groningen.
- Erickson, L.D., Sanders, S. R., & Cope, M.R. (2018). Lifetime stayers in urban, rural, and highly rural communities in Montana. *Population, Space and Place*, 24, 1-12.
- Gieling, J., de Vries, I., & Haartsen, T. (2017). Subjectieve leefbaarheid: een nieuwe meetmethode getest. *Rooilijn*, 50(3), 172-179.
- Guimarães, M.H., Catela Nunes, L., Barreira, A.P., & Panagopoulos, T. (2016). What makes people stay in or leave shrinking cities? An empirical study from Portugal. *European Planning Studies*, v24(9), 1684-1708.

- Haas, H. de (2021). A theory of migration: the aspirations-capabilities framework. *Comparative Migration Studies*, 9(8): 1-35.
- Halfacree, K. H. (1995). Talking about rurality: social representations of the rural as expressed by residents of six English parishes. *Journal of Rural Studies*, v11(1), 1-20.
- Hay, R. (1998). Sense of place in developmental context. *Journal of Environmental Psychology*, 18, 5-29.
- Herzog, H., Schlottmann, A., & Boehm, T. (1993). Labor force mobility in the United States: migration, unemployment and remigration. *International Regional Science Review* 9, 43-58.
- Hoekstra, M.S., Hochstenbach, C., Bontje, M.A., & Muster, S. (2018). Shrinkage and housing inequality: Policy responses to population decline and class change. *Journal of Urban Affairs*, v42(3), 333-350.
- Hur, M., & Morrow-Jones, H. (2008). Factors that influence residents' satisfaction with neighborhoods. *Environment and Behavior*, vol 40(4), 619-635.
- Kooiman, N., Latten, J., & Bontje, M. (2018). Human Capital Migration: A Longitudinal Perspective. *Tijdschrift voor Economische en Sociale Geografie*, v109(5), 644-660.
- Latten, J., Kooiman, N., & Bontje, M. (2017). Toenemende ruimtelijke verschillen in opleiding. *Demos*, 33(6), 1-4.
- Lee, B.A., Oropesa, R.S., & Kanan, J. W. (1994). Neighborhood context and residential mobility. *Demography*, vol 31(2), 249-270.
- Leeuwen, E. S. van, Halleck, S., & Hogenboom, V. (2019). Does population decline lead to a “populist voting mark-up”? A case study of the Netherlands. *Regional Science Policy & Practice*, v13(2), 279-301.
- Leidelmeijer, K., Marlet, G., Iersel, J. van, Woerkens, C. van, & Reijden, H. van der. (2008). De leefbarometer; leefbaarheid in Nederlandse wijken en buurten gemeten vergeleken; rapportage instrumentenontwikkeling. Amsterdam: RIGO/ Atlas voor gemeenten.
- Lehtonen, O., & Tykkyläinen, M. (2010). Self-reinforcing spatial clusters of migration and socio-economic conditions in Finland in 1998-2006. *Journal of Rural Studies*, vol. 26(4), 361-373.
- Mata-Codeçal, D. (2018). Is it simpler to leave or to stay put? Desired immobility in a Mexican village. *Population, Space and Place*, v24(4).
- Mehmetoglu, M., & Jakobsen, T.G. (2017). Applied Statistics using STATA: a Guide for the Social Sciences. Sage Publications Ltd.
- Mulder, C.H., & Malmberg, G. (2014). Local ties and family migration. *Environment and Planning A*, vol 46, 2195-2211.
- Piché, V., & Dutreuilh, V.C. (2013). Contemporary migration theories as reflected in their founding texts. *Population*, vol. 68(1), 141-164.
- Pituch, K. A., & Stevens, J. P. (2016). *Applied multivariate statistics for the social sciences (6th edition)*. Routledge.

Research en Advies. (2019). *Leefbaarheid in Nederland 2018: een analyse of basis van de leefbarometer 2018*. Retrieved on 19-6-2021 from <https://leefbaarometer.nl/resources/Leefbaarheid%20in%20Nederland%202018.pdf>.

Riele, S. te, Huisman, C., Stoeldraijer, L., Jong, A. de, Duin, C. van, & Husby, T. (2019). *PBL/CBS Regionale bevolkings-en huishoudenprognose 2019-2050, belangrijkste uitkomsten*. Den Haag: Centraal Bureau voor de Statistiek.

Rye, J.F. (2006). Rural youths' images of the rural. *Journal of Rural Studies*, 22(4), 409-421.

Schewel, K. (2019). Understanding immobility: Moving Beyond the Mobility Bias in Migration Studies. *International Migration Review*, 328-355.

Stockdale, A., Haartsen, T. (2018). Editorial introduction: Putting rural stayers in the spotlight. *Population, Space and Place*, v24(4).

Stockdale, A., Theunissen, N., & Haartsen, T. (2018). Staying in a state of flux: A life course perspective on the diverse staying processes of rural young adults. *Population, Space and Place*, 24(8): 1-10.

Taylor, R.B., Gottfredson, S.D., & Brower, S. (1985). Attachment to place: discriminant validity, and impacts of disorder and diversity. *American Journal of Community Psychology*, 13, 525-542.

Thomassen, J. A. K. (2021). The roles of family and friends in the immobility decisions of university graduates staying in a peripheral urban area in the Netherlands. *Population, Space and Place*, 27(2): 1-14.

VROM. (2004). Leefbaarheid van wijken. Retrieved on April 8, 2021 via URL: <https://www.rijksoverheid.nl/documenten/rapporten/2004/03/01/leefbaarheid-van-wijken>.

WoOn. (2018). *Ruimte voor wonen: de resultaten van het WoonOnderzoek Nederland 2018*. Den Haag, Nederland: Ministerie van Binnenlandse Zaken en Koninkrijksrelaties.

Williams, D.R., Patterson, M.E., Roggenbuck, W., & Watson, A.E. (1992). Beyond the commodity metaphor: examining emotional and symbolic attachment to place. *Leisure Sciences*, 14, 29-46.

APPENDIX A – MULTINOMIAL LOGISTIC REGRESSION INCLUDING REGIONAL CHARACTERISTICS

VARIABLES	(1) Ja	(2) Misschien
Sex: female	-0.0669 (0.194)	0.0430 (0.132)
Age	-0.0457*** (0.0108)	-0.0313*** (0.00737)
Education level: middle	0.171 (0.330)	0.766*** (0.254)
Education level: high	0.304 (0.336)	0.781*** (0.259)
Work: not working	-0.306 (0.309)	-0.00210 (0.200)
Work: studying	1.104*** (0.414)	0.888** (0.363)
Making ends meet: has to pay attention	-0.401* (0.223)	-0.0385 (0.149)
Making ends meet: difficult	0.337 (0.301)	0.502** (0.224)
Household: married or cohabiting	0.262 (0.329)	0.0487 (0.214)
Household: household with children	0.425 (0.315)	-0.106 (0.213)
Household: other	0.989** (0.458)	0.119 (0.379)
Household: unknown	0.459 (0.491)	-0.161 (0.309)
Homeownership: renting	0.817*** (0.254)	0.496** (0.197)
Length of stay	0.0221 (0.0144)	0.0135 (0.0103)
Moved in the past years: no	0.332 (0.274)	1.052*** (0.233)
General livability	-0.284*** (0.102)	-0.209*** (0.0745)
Satisfaction dwelling and environment	-0.687*** (0.0761)	-0.364*** (0.0614)
Satisfaction safety	0.0623 (0.0808)	-0.0299 (0.0581)
Satisfaction social contacts	-0.151** (0.0718)	-0.107** (0.0531)
Satisfaction services	0.0902 (0.0772)	0.0518 (0.0529)
Population growth 2018-2050: Negative	0.0580 (0.265)	0.115 (0.172)
Owner occupied prices: below 250,000	0.240 (0.359)	0.0918 (0.227)
Urbanity: not urban	0.510** (0.210)	0.0812 (0.147)

Constant	6.088*** (0.986)	3.565*** (0.753)
Observations	1,605	1,605

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 8: results multinomial logistic regression regional characteristics added