

Studying Abroad, Residential Location In A City Matters.

Thesis on housing preferences and choices of international students in Groningen.

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1. Summary

This research looks into the importance of housing location of international students in Groningen. A literature review together with the quantitative method of a questionnaire survey and a qualitative aspect will answer the following question: 'Do international students in Groningen take location into consideration when choosing where to live?'. The results show that rent is the most important characteristic international students look for when looking for a place to live in Groningen. When looking solely at location factors, the proximity to campus, proximity to the city centre and accessibility are the most important characteristics. Most students take location into consideration when choosing where to live and only a few of the respondents would have chosen another location with the knowledge they have on Groningen now they have lived there for a while. Three-quarters of the respondents indicated that the current housing market influenced their housing choice. The social and cultural capital of international students was often a barrier when looking for housing in Groningen. The research concludes that international students do take location into consideration. However, international students often have to compromise on their housing preferences and sometimes just take whatever they can get.

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2. Introduction

2.1 Background

The uneven balance between housing demand and supply creates a big housing shortage in Groningen, especially for students (The Northern Times, 2020). The housing market is profoundly stuck, graduates do not move to a starter home so only a minimal amount of student houses become available. Additionally, the increasing number of (international) students coming to Groningen each year makes it impossible to keep building houses at the same speed as students are coming in (Hupkens, 2021). The city of Groningen is home to a large number of international students and has the third-largest international students population in the Netherlands (At Home in Groningen, 2021). While domestic students can sometimes stay with their parents for a while, internationals need to find a place before the study year starts (Marée, 2021). This creates a very complex and uncomfortable situation for particularly the international students in Groningen.

Earlier research has shown international students often experience difficulties with finding adequate housing in various countries (Fang & Van Liempt, 2021; Obeng-Odoom, 2012; Verhetsel et al., 2017). In the Netherlands, research has established that international students face ethnic discrimination in the housing market (Fang & Van Liempt, 2021). Additionally, international students have a harder time finding housing than domestic students because they lack the social and cultural capital needed in the housing market (Fang & Van Liempt, 2021). For instance, international students have difficulties with the Dutch language barrier and international students' knowledge of the housing market is not as good as the knowledge of domestic students (Obeng-Odoom, 2012).

Students can take factors such as rent, room size and proximity to campus into account when making their housing choice. Existing literature on the importance of certain factors influencing housing choice is contradictory. Students in Antwerp, Belgium, find the type of housing the main point of interest, followed by rent and size (Verhetsel et al., 2017). The mixed logit model by Nijënstein et al. (2015), concluded rent was the most important factor influencing student housing choices, followed by cycling time to the campus and room size.

Other research concluded that not room characteristics but location factors were the most important to students. For students in Birmingham, United Kingdom, the most important factor influencing housing choice is the proximity to campus (Allinson, 2006). However, almost half of the students in the study by La Roche et al. (2010), indicated they would rather live off-campus than on-campus. This shows even important factors are preferred differently by students and that the preferences can be place dependent.

When students' housing preferences are met, students feel more attached to their residence and are more satisfied with their environment (Khozaei et al., 2012). Within these housing preferences, location factors have an influence on satisfaction and wellbeing. On a small scale, for instance, noise and negative perceptions of safety can cause stress and poorer cognitive and social functioning (Cooper et al., 2010). On a larger scale, Khozaei et al. (2012) showed that living on campus gives a higher perception of safety and security compared to residing off-campus. Additionally, the presence of green in the neighbourhood can improve the individual's health and wellbeing (Kaplan, 2001). The satisfaction of students is also of importance to educational institutions. Thomas & Galambos (2004) explained that when you view students as the consumers of higher education, the institutional success is dependent on the students' satisfaction. Next to the fact that institutions that want to be effective should have satisfied customers, this satisfaction also reinforces the enrolment of future customers (Thomas & Galambos, 2004).

Khozai et al. (2014) highlight that housing preferences in general are studied frequently but the students' housing preferences are often ignored. Furthermore, even less is examined about the specific student group of international students. Fang & Van Liempt (2021) investigate the pathways of how international students in Utrecht find and maintain housing. The study focuses on international students once they are in Utrecht and investigate their pathway from there. How foreign students perceive Groningen before going there and how the limited knowledge on Groningen affects their location choice has not been studied before. The research also showed international students have such a hard time finding housing, they sometimes take whatever they can get. Whether being able to get a room at all in Groningen degrades all housing preferences international students have is unknown.

Additionally, in studies on students' housing preferences, the opinions and voices of the students themselves are often absent (Fang & Van Liempt, 2021). Therefore, the lack of literature on international students' housing preferences and on students' own perspective on the topic in combination with the social and educational importance of location choice makes this topic socially and scientifically important to investigate. Looking at the pathway of how international students found their housing in Groningen and what preferences are most important to them will give information useful to, for instance, international student housing policies and housing developers to see which locations in the city are preferred.

2.2 Research Problem

Due to the current challenging housing market and the weak position international students have on the housing market, international students have a hard time finding decent housing. This could lead to international students in Groningen having to let go of their housing preferences which can alter their housing choice. For future housing developments, getting insight into the location preferences of international students could help improve the housing situation of international students. The objective of this research is to determine the importance of location in the housing choices of international students in Groningen. Therefore, the research question is:

'Do international students in Groningen take location into consideration when choosing where to live?'

The following sub-questions have been formulated:

1. What are important factors influencing housing choice for international students in the city of Groningen?
2. Are international students still content with their location choice after they settled in Groningen?
3. How does the current housing market affect the relation between housing preferences and housing choices of international students in Groningen?

In the following section, the concepts that are used to explain the theory and to relate them to the results are discussed. This is accompanied by a conceptual model showing the relations between the concepts and theories used. Following this, the methodology of how the data for this research is acquired and analysed is written down. Thereafter, the results will be reported following the structure of the sub-questions. This will be followed by the conclusion of the research with answers to the research questions. The paper will finish with references and appendices.

3. Theoretical framework

3.1 Influencing factors

In former studies, the influencing factors on housing preferences have been conceptualised in various ways (Khozaei et al., 2012; La Roche et al., 2010; Mulyano et al., 2020). Since housing preferences are place dependent, the influencing factors that are chosen for this research are the ones that fit best in the context of Groningen. These factors are combined and separated into two categories: location factors and room characteristics. This is done to get more structure in the data analysis and to make it easier to distinguish which housing choices are based on location. Location factors are important to investigate since they relate directly to the main research question. While this research is more about the location factors, a balance between the location factors and room characteristics is needed. Location factors and room characteristics are intertwined and it would thus make no sense to investigate one without looking at the other.

3.1.1 Location factors

The location factors are the spatial considerations that are important for students when looking for housing. The location factors for this research are proximity to campus, proximity to city centre, perception of safety in a neighbourhood, accessibility, proximity to friends and proximity to green. Safety can be defined by socioeconomic conditions such as poverty and drug use and conditions of the physical environment such as empty spaces and poorly lit areas (Health Canada 1997, cited by Butterworth 2000, pp. 16-17). The perception of safety relates to how international students subjectively interpret or regard the conditions of safety in the neighbourhood, this can thus be different to the actual conditions of safety in the neighbourhood. Accessibility is quite a broad concept and is here defined by the ease to enter and exit an area (Zondag & Pieters, 2005). Good accessibility of an area will shorten the distance or time to reach the destination (Rahadi et al., 2020). Proximity to green can either be the distance to a park or the amount of greenery in the neighbourhood itself. The location factors are the primary factors that are analysed in this research.

3.1.2 Room characteristics

The room characteristics are the technical aspects of the room that are important for students when looking for housing. In this study, the four room characteristics used are room size, rent, quality and housing type. Rent is an interesting characteristic as it is influenced by location factors (Berto et al., 2020). Rent is, for example, affected by the proximity to urban green spaces since this gives the neighbourhood benefits such as aesthetics and recreation (Liebelt et al., 2019). The housing quality can refer to the physical condition of a home as well as the quality of the outdoor environment. Features of housing quality are for instance air quality, the presence of mold and the space per individual (Bonney, 2007). Lastly, the housing type determines whether the amenities in a house are shared or belong to one individual.

3.2 Social and cultural capital on the housing market

To investigate the location choices of international students, the constraints of these choices also need to be included. For international students, important hindrances in finding a house are the social and cultural capital that are needed on the housing market (Fang & Van Liempt, 2021). Social capital is the total actual or potential resources of an individual linked to the membership of a group and the cultural capital is the sum of knowledge, cognitive skills and the education of an individual with which they can acquire or maintain social privileges (Bourdieu, 1986). When used in relation to the housing market, social capital refers to the personal social network of an individual and the cultural capital points to the knowledge an individual has on the housing market and how compatible they are on the local housing market, for instance, by speaking the local language (Fang & Van Liempt, 2021). According to O'Connor (2017) students with more cultural capital are more likely to fit

into and interact with the dominant culture. Additionally, these students can more easily expand this cultural capital which increases the inequality between them and the students with less cultural capital (O'Connor, 2017). Not speaking the local language does not only make it harder to understand the Dutch housing market, but it is also a cause of discrimination. For instance, many Dutch student houses refuse international students because they do not master the Dutch language (Van Kampen, 2021). While this particular factor is outside of the international students' control, it does make it harder to find adequate housing in Groningen.

3.3 Conceptual Model

To see how all the factors that are examined in this research relate to each other, a conceptual framework is made (Figure 1). This conceptual framework shows how different room and location factors can influence housing preferences and how these influencing factors relate to each other. The framework is continued by showing that housing preferences do not automatically lead to a housing choice. This housing choice is also affected by other influences, like the social and cultural capital of international students and the limited choices on the housing market. This whole conceptual framework will be researched in the context of the city of Groningen, and the results are thus not directly applicable to other research areas.

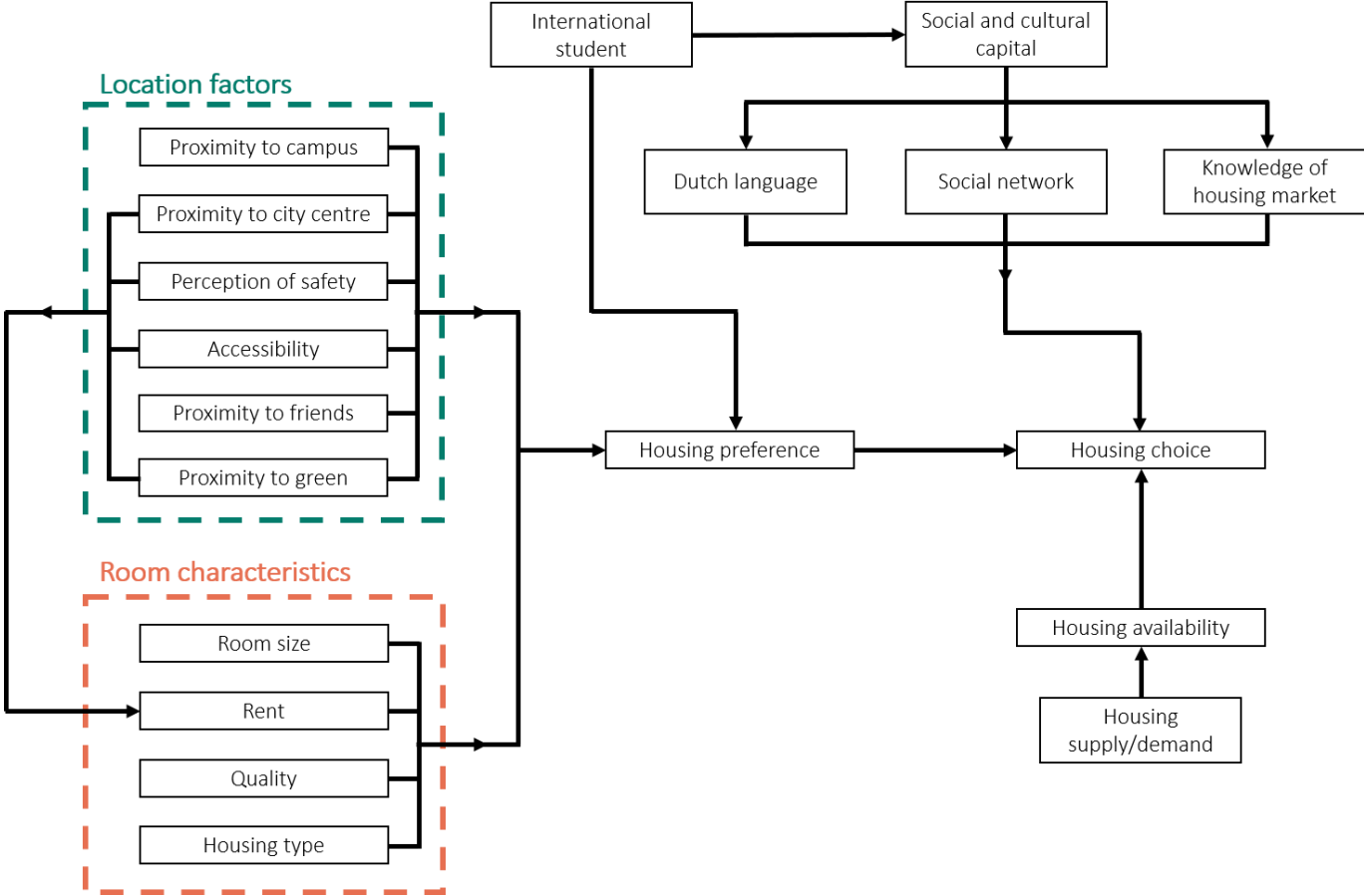


Figure 1: Conceptual Framework

4. Methodology

Because this research looks at the relation between different variables, quantitative research is most fitted for this study (Punch, 2014). Additionally, quantitative models in human geography are often used to acquire more insight on the role of place within social processes (Clifford et al., 2016). Since this research looks at, among other things, the role of location within the process of housing choice, quantitative research is an accurate fit for this study. Furthermore, a smaller qualitative element is added to the method of data collection. Qualitative research is concerned with understanding the meaning to, for instance, decisions, values and beliefs in people's social world (Snape & Spencer, 2003). This qualitative approach will give a better understanding of how international students decide on and value their housing preferences. This is important information because the opinions and voices of students themselves are often absent in previous literature (Fang & Van Liempt, 2021).

4.1 Data Collection

This research elicited international students' preferences and attitudes towards housing locations. Since questionnaire surveys are useful for obtaining people's attitudes and opinions, the data collection is executed through questionnaire surveys (Clifford et al., 2016). To generalize the outcomes about a relationship between variables, at least 30 responses are necessary. The survey will be made with software from Qualtrics and can be seen in Appendix E. The data will be primary data since no database about this topic from international students in Groningen is available. Social media like WhatsApp and Facebook will be used to spread the questionnaire survey since this gives the opportunity to reach many people. In WhatsApp, the survey will be posted in study groups and groups of study associations. The survey will also be sent to people who are not in the sample group with the means for them to spread it further. On Facebook, the survey will be posted on Facebook groups that have common topics of 'International Students' and 'Housing' in Groningen. While spreading the questionnaire survey through the internet gives less control over the data than face-to-face interviews, there will be a bigger sample size with the opportunity to reach a more diverse group of people. According to Punch (2014), compromises in research always have to be made. Since a low response rate could bias the result, the loss of control due to spreading it online is an intentional and well-thought-out compromise.

The online questionnaire survey consists of closed as well as open questions. At the end of the survey, an open question box will function as a way for the participants to add any thoughts or opinions that they would like to share on the topic that they have not been able to share in the detailed questions. The survey will be spread and open to fill out in the month of November 2021. The sample of this research consists of international students in Groningen studying at the University of Groningen or the Hanze University of Applied Sciences Groningen. All students are currently doing their bachelor's or master's studies.

4.2 Data Analysis

The data analysis will be done with the help of statistical methods. Since there are many variables involved in this research and the questions will have different outputs (e.g. open answers, ranked answers, closed answers) it will not be possible to analyse this data with one method. The statistical methods are determined by the measurement levels of the variables and the relationship between the variables. To simplify the complicated data the three main stages of quantitative analysis will be put together to make a useful analytical framework (Punch, 2014). The three main stages consist of simple descriptive analysis, two-variable relationships and joint and multivariable relationships. Firstly, a descriptive analysis will be done, doing this will make the complex data easier for the researcher to understand and it will also show the distribution of the variables. Techniques like the mean, standard deviation, frequency distributions, bar charts, and histograms will be used for this step.

After this first look at the data the relationships between variables will be analysed according to the two-variable relationship analysis. Some two-variable relationships will be singled out and given a closer look, this choice will be based on the research questions. The sub-questions often look how one concept influences another concept. The statistical variables that relate to these concepts will then be compared to each other. To look at the relationships between variables cross-tabulations and contingency tables can be used (Burt et al., 2009). Since these are more descriptive tools in which patterns will be visible by their distributions, it will be good to also test this relationship with a more formal test (Punch, 2014). Therefore, measures like the chi-square test will be used to determine if a relationship between the variables exists (Burt et al., 2009). Since a great deal of the data has expected counts of cells that are too small to do a chi-square test, a Fisher's Exact test will often be done as a replacement.

In the third step, joint and multivariable relationships analysis, it will be possible to see if relationships exist between more than two variables. Additionally, to analyse the data on the location questions 10, 11 and 12, choropleth maps will be made with GIS software. By comparing the maps it will become clear whether there are differences between the outcomes of the three questions and what this difference is.

4.3 Ethics

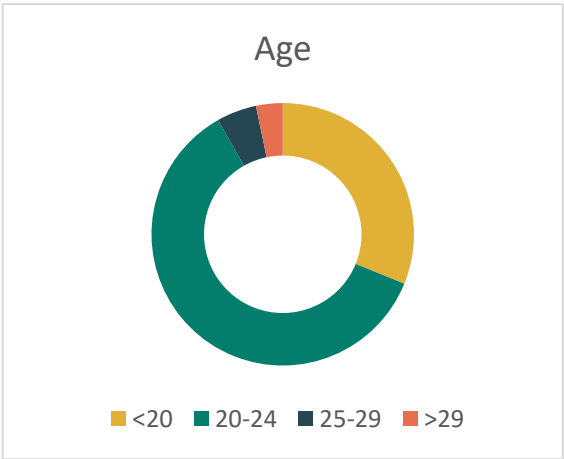
With regards to privacy, the data collection will be anonymous. Since the questionnaire survey is online, not even the researcher knows the identity of the participants. The questionnaire survey will clearly mention confidentiality and the fact that filling in the survey means consenting for using the data in this study. For this study specifically, the privacy of residential locations is important. Respondents are asked to spatially show their residential location. Since individuals' identities might be traced back through their specific residential location, participants are asked to indicate in which neighbourhood they live instead of an exact location. Additionally, it is important that the integrity of the study will be secured concerning academic conduct and misconduct (Punch, 2014). This means this study will not falsify information, plagiarise other studies or violate other codes of conduct.

4.4 Reflection

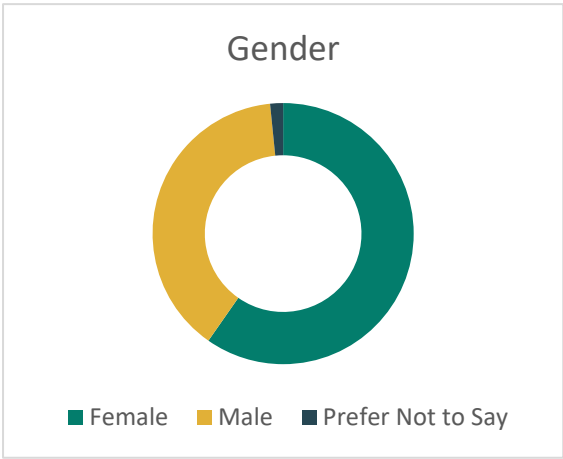
Looking back, there are a few points that can use some improvement for the next time. Firstly, because of the way questions were asked to the respondents (often yes/no questions) it was sometimes hard to test for causation. It might be helpful to rephrase questions the next time in order to direct the questioning towards relations. However, this should be done carefully since it is not wanted to also push the respondents in a certain direction from the beginning. Additionally, the research looks at the perception of safety of international students. It is however not clear how international students perceive safety, how they interpret safety and if everyone perceived safety the same. Finally, the map in Appendix A was used so respondents could look in which neighbourhood they live. However, not everyone might be that good with maps and know where they live by just seeing that map. To make sure the answers respondents give to these kinds of questions are accurate another way of presenting this should be thought about.

5. Results

Out of the 112 respondents on the questionnaire survey, 62 respondents meet the requirements of being an international student living in Groningen doing a bachelor/master at the University of Groningen or at the Hanze University of Applied Sciences Groningen and finishing the survey. These 62 respondents are used for the data analysis. Out of the respondents, 97% of the students is studying at the University of Groningen. The respondents study at 10 different faculties and most of them study at the faculties of 'Science and Engineering' or 'Economics and Business'. The respondents are between the ages of 18 and 36 and the mean age is 21. There are slightly more woman included in the research than other genders. A pie chart for the gender and age of the respondents is given in Graph 1 and Graph 2.

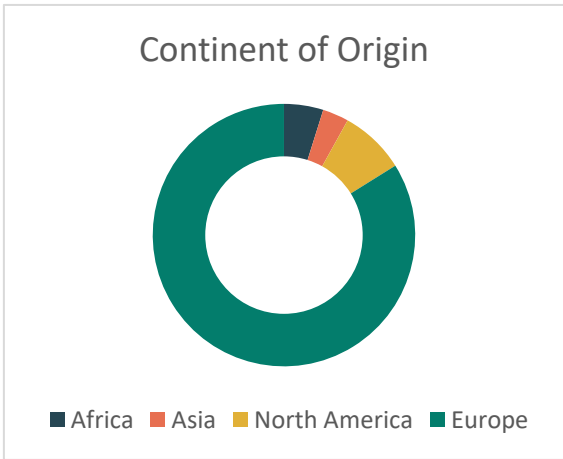


Graph 1: Pie Chart Age Respondents



Graph 2: Pie Chart Gender Respondents

The respondents originate from 30 different countries with the most respondents coming from Germany (6 respondents) and Romania (5 respondents). Most of the respondents' country of origin is located in Europe, as can be seen in Graph 3.



Graph 3: Pie Chart Continent of Origin Respondents

The results are divided into categories relating to the three sub-questions that were asked in the introduction of this paper.

5.1 Important factors influencing housing choice

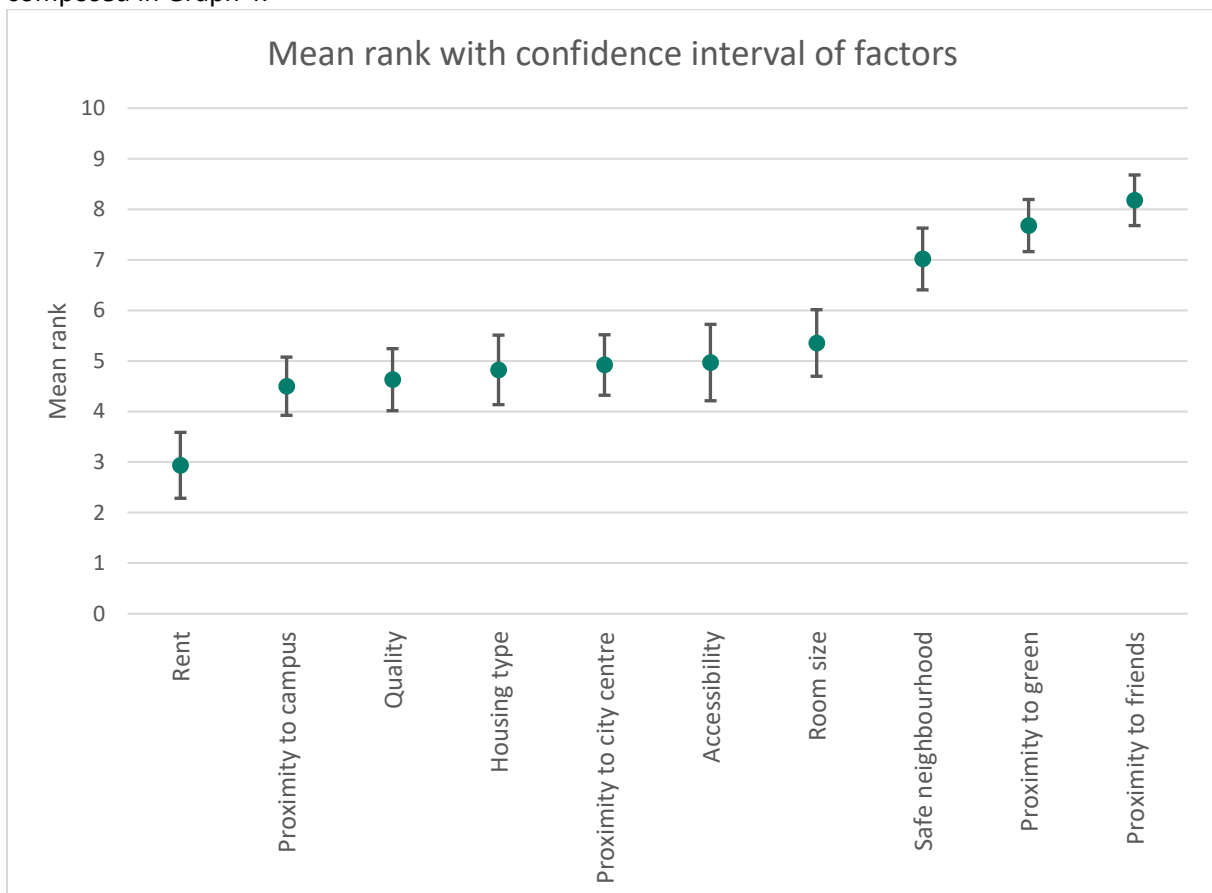
Ten factors were taken into account when looking at the influence of housing preferences on housing choice. The respondents were asked to rank the factors that were most important to them the first time they were looking for a room in Groningen from 1 being most important and 10 being least important. In Table 1 the mean and median rank of the factors are given sorted from lowest to highest mean rank.

Factors	Mean Rank	Median Rank
Rent	2.94	2.00
Proximity to campus	4.50	4.00
Quality	4.63	4.00
Housing type	4.82	4.50
Proximity to city centre	4.92	5.00
Accessibility	4.97	5.00
Room size	5.35	5.00
Safe neighbourhood	7.02	8.00
Proximity to green	7.68	8.00
Proximity to friends	8.18	9.00

Table 1: Mean Rank and Median Rank of Factors

Rent and proximity to campus have the lowest mean rank and the lowest median rank together with quality. Proximity to friends and proximity to green have the highest mean rank and together with safe neighbourhood they have the highest median rank.

From the mean rank a difference can be observed between the factors. To look whether the difference between the factors is significant, a confidence interval error bars graph has been composed in Graph 4.



Graph 4: Confidence Interval Error Bars with Mean Rank

Graph 4 shows the mean ranks as dots with the confidence intervals around them in error bars. Factors are significantly different from each other when the error bars do not overlap. Therefore, the factor rent is significantly different from all other factors. Proximity to campus, quality, housing type, proximity to city centre, accessibility and room size are not significantly different from one another but they are significantly different from the other factors. Proximity to green is significantly different from all factors except safe neighbourhood and proximity to friends. While it is hard to see in the graph, safe neighbourhood and proximity to friends do not overlap and are thus both significantly different from each other and all other factors except proximity to green. Thus, with 95% certainty it can be said that rent is more important for international students in Groningen than all other factors and a safe neighbourhood, proximity to green and proximity to friends are all less important than all other factors.

The results found are in line with the findings of Nijënstein et al. (2015) that also concluded rent is the most important factor influencing housing choice followed by cycling time to campus, which is comparable to proximity to campus. Rent is the second most important factor according to Verhetsel et al. (2017) and proximity to campus is concluded most important by Allinson (2006). All of these indicate rent and proximity to campus are two of the most important factors influencing housing choice. When taking the average mean rank of room and location factors, the room characteristics together have a mean rank of 3.75 and location factors a mean rank of 6.67. This indicates room characteristics influenced the housing choices of respondents the most when they were first looking for a room in Groningen. Since this topic is contradictory in current literature, several earlier articles found similar results (Nijënstein et al., 2015; Verhetsel et al., 2017), while other research found that location characteristics are more important (Allinson, 2006; La Roche et al., 2010). This again shows the place dependency on housing preferences.

However, from these average mean ranks of location and room characteristics no direct inferences about the unimportance of location factors can be made since there are large variances within the importance of different location factors. Additionally, two-thirds of the respondents indicated they took location into consideration when moving to Groningen. Location is thus an important factor, especially in relation to campus and the city centre. Lastly, being the least important is not the equivalent of not being important.

5.2 Location choice

To investigate whether international students are still content with their location choice after they settled in Groningen their housing location when they first moved to Groningen, their current location and the location they would prefer to live if there were no constraints (such as money and availability) were compared. The difference in the number of international students living in each neighbourhood when they first moved to Groningen and where international students would prefer to live is shown in Table 2.

Neighbourhoods	First Location	Preferred location	Sum	Difference
Centrum	19	25	+ 6	+ 32%
Helpman	1	0	- 1	- 100%
Hoogkerk	2	0	- 2	- 100%
Nieuw-West	6	2	- 4	- 67%
Noorddijk	5	0	- 5	- 100%
Noordwest	11	5	- 6	- 45%
Oosterparkwijk	1	2	+ 1	+ 100%
Oud-Noord	4	8	+ 4	+ 100%
Oud-West	4	18	+ 14	+ 350%
Oud-Zuid	7	1	- 6	- 86%
Zuidwest	2	1	- 1	- 50%
Total	62	62	0	

Table 2: Amount of People in Different Neighbourhoods

The neighbourhood that is preferred by most people is the city centre, followed by Oud-West. When looking at how many people already lived in these neighbourhoods in the first place, Oud-West shows the biggest increase in people wanting to move there for the sum as well as the percentile difference. The biggest decreases in the total amount of people from first to preferred location are in the neighbourhoods Noordwest and Oud-Zuid. For the percentile difference Helpman, Hoogkerk and Noorddijk do have the highest percentage decrease.

These shifts can also be observed in Figures 2 and 3 which shows the maps of the number of respondents living or wanting to live in each neighbourhood of Groningen. A map of Groningen indicating all different neighbourhoods can be found in Appendix A. Figures 2 and 3 more clearly show a pattern of people preferring to live more near the centre of the city.



Figure 2: Map First Housing Locations Groningen

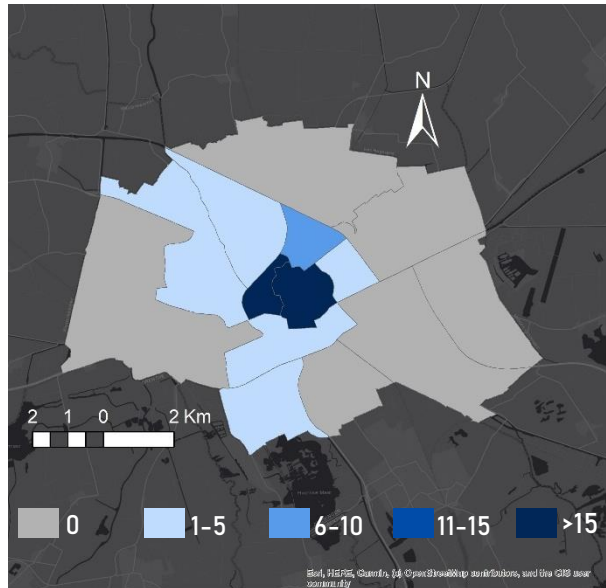


Figure 3: Map Preferred Housing Locations Groningen

Of all preferred housing locations 19 people chose the same neighbourhood as they lived in when they first moved to Groningen. Of these 19 people, 58% first lived and preferred to live in the city centre. Thus, many people want to move to the city centre and the people already living there when they first moved to Groningen want to stay there.

The Fisher's exact test has a p value of 0.558, meaning the difference between where international students lived when they first moved to Groningen and where they would want to live is not significantly different. However, the difference between where international students currently live and where international students would prefer to live is significant. This result is surprising since it suggests international students moved to a location in Groningen they preferred less. Figure 4 shows a map of the number of people currently living in which neighbourhood. A larger version of the maps can be seen in Appendices B, C and D.

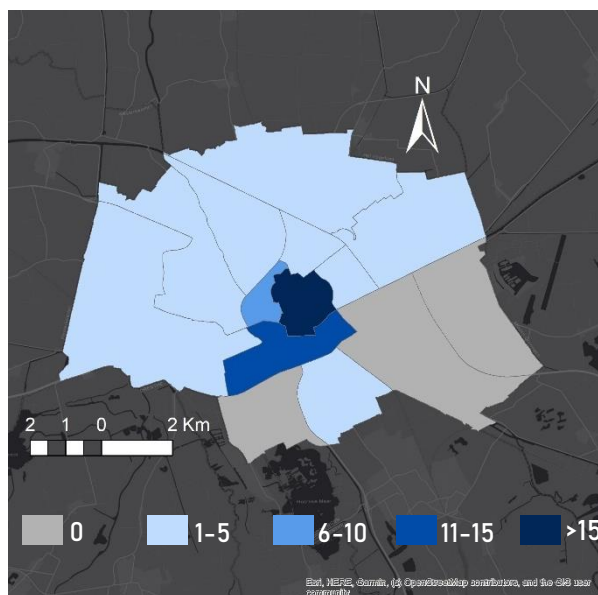


Figure 4: Map Current Housing Locations Groningen

To measure the strength of the relationship between current and preferred housing locations of international students, measures of association are calculated. The value of Cramér's V for the significant difference between current and preferred location is 0.455. This means the significant difference can be interpreted as a moderate strength of the relation.

The reason international students housing location is currently more different from their preferred location can be explained by the movement of students from their first housing location to locations that they actually prefer less. While it is not clear in the maps, more people moved out of the city centre, while this is the most preferred area to live in. Additionally, even more people than that lived there before moved to Oud-Zuid which is not a preferred area to live in. This also shows location is not the only or main factor taken into account when finding a place to live.

Looking back, only 18% of the respondents would choose another location to live in now they have lived in Groningen for some time. This in combination with not finding a significant difference between international students' first housing location and their preferred housing location shows finding a location to live in while sometimes not knowing the city very well or never even having been there can still be very successful.

The respondents that would choose another location give as the main reason that the housing location of their first residence was too far away from everything. Especially the distance to the city centre or the university was too far. Another reason that was given was that the housing location was too expensive and they now realised there are cheaper locations to live in. This confirms there is a strong relation between location factors and rent, which is visualised in the conceptual framework (chapter 3.3).

5.3 Current housing market

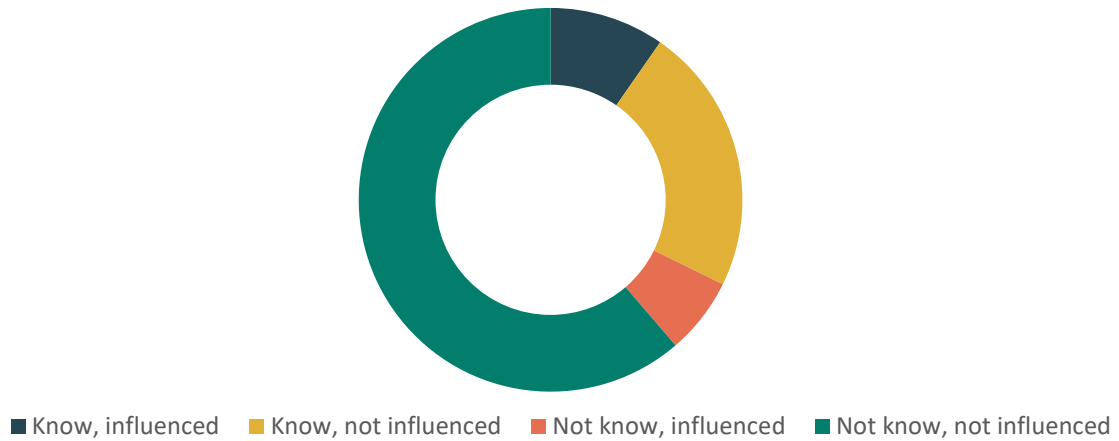
95% of the respondents indicate that location is a housing characteristic that they normally (so not necessarily in Groningen) find important. However, only 63% of the respondents indicated that location was a characteristic that they seriously took into account when looking for a place to live in Groningen. A Fisher's exact test showed the difference between the two variables is significant. So there is a significant difference between whether internationals normally find location important and whether international take location into account in Groningen.

An explanation for this difference could be the current housing market in Groningen. Out of all respondents, 79% indicated that the shortage in housing availability made them compromise between some of their housing preferences. Furthermore, all but two of these respondents also indicated that the shortage in housing influenced their housing choice. Thus, the housing market has an influence on international students' housing preferences and choices in Groningen.

Next to the housing crisis on the housing market, the amount of social and cultural capital of international students on the housing market in Groningen can also be an explaining factor. Of all respondents, 66% expressed they found the Dutch language to be a barrier when looking for housing in Groningen. This shows the language barrier can create difficulties in the house finding process, this is confirmed by earlier research (Obeng-Odoom, 2012).

A third of the international students already knew 'a few' other people that were living in Groningen when they started looking for a place to live. None of the respondents expressed to already know 'a lot' of people when they started to look for a place to live in Groningen. Only 16% of the respondents indicated that their social connections in Groningen influenced their housing choice. Graph 5 shows the relation between already knowing people when starting to look for a place to live (know and not know) and whether social connections influenced housing choice (influenced and not influenced).

Social relations and their influence on housing choice



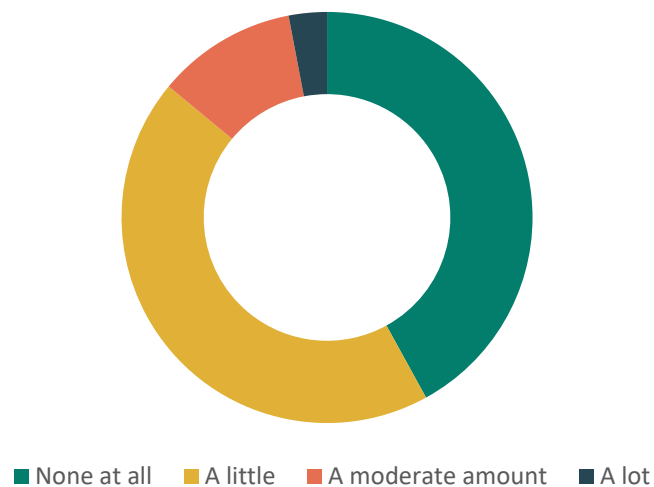
Graph 5: Pie Chart Knowing Other People and Social Connections Influencing Housing Choice

Strangely, there were a few people who did not know anyone in Groningen when they started looking for a place to live but were influenced in their housing choice by their social connections in Groningen. A possible explanation for this is that international students made social connections while they were searching for housing.

A Fisher's exact test for the two different variables gives a p-value of 0.063. So, there is no significant relation between knowing people in Groningen when starting to find a place to live and whether social connection in Groningen influences the housing choices of international students.

Graph 6 shows the knowledge of the respondents on the housing market when they started looking for a place to live in Groningen. Most of the respondents indicated that they had little knowledge of the housing market before coming to Groningen or none at all. Not one respondent indicated that their level of knowledge was 'a great deal'.

Knowledge on Housing Market



Graph 6: Pie Chart Knowledge on Housing Market

With a Fisher's exact test, the relation between the knowledge on the housing market and the amount of times international students visited Groningen before starting to look for a place results in a p value of 0.016. This means the relation between the two variables is significant. For the measures of association, the tau-c measurement gives a value of 0.191. Therefore, the relation between the variables is a weak and positive relation. The positive relation indicates that if one variable goes up, the other also goes up and if one goes down, the other one also goes down. Thus, the more times international students visit Groningen before starting to look for a place, the more knowledge international students have on the housing market.

There were no significant relations found between social and cultural capital of international students. So, no relation between knowledge on the housing market, Dutch language barrier and the social connections. This is not in line with what O'Connor (2017) mentions about social and cultural capital. When you already have capital, new capital should be easier to expand and thus a positive relationship between the different kinds of capital would exist. A reason this positive relation did not show up in these results could be that all international students have a low amount of almost all capital.

At the end of the survey an open question gave the respondents the option to add comments to the survey. Of the respondents that made use of this, the most common remarks were that due to the housing shortage the rents are extremely high. Therefore, many of the respondents almost only looked at the characteristic of rent and compromised on the other characteristics. However, often even then the rent was more expensive than what they wanted. One of the respondents wrote: *'I think many people didn't have much of a choice at all, at the end of the day you take what you can get.'* This is in line with the conclusions of the research done in Utrecht that states international students sometimes take whatever they can get because finding housing is so difficult (Fang & Van Liempt, 2021). A few respondents also mention that they feel they are being discriminated against on the housing market because they are internationals and that they also had more trouble because they did not speak Dutch. This confirms the ethnic discrimination described in earlier research is also present in the Dutch housing market (Hupkens, 2021; Van Kampen, 2021; Fang & Van Liempt, 2021). Some respondents also mentioned that xenophobia from Dutch students made it hard for them to find housing.

6. Conclusions

This research started out by posing the question: 'Do international students in Groningen take location into consideration when choosing where to live?'. It is concluded that international students do take location into consideration when choosing where to live. However, there are other factors than location that weight more heavily in the housing choosing process.

The housing factor rent is concluded to be the most important for international students when they were first looking for housing in Groningen. Room characteristics seem to have a bigger influence in the housing preferences of international students than location factors. However, the results also confirm the relation in the conceptual model of location and rent. Rent is very dependent on location and the location and room characteristics are thus intertwined. Two-thirds of the international students did take location factors into consideration when they moved to Groningen. Proximity to city centre, proximity to campus and accessibility are more important factors than perceived safety, proximity to green and proximity to friends.

More than 80% of the international students would not choose another location to live in now they have lived in Groningen for a while. From this, in combination with no significant difference found between the first location and preferred location, it can be concluded that international students are content with their initial location choice. This also shows international students are certainly capable of making a decent housing choice before they move to Groningen and before they have acquired more knowledge about the city. A pattern of international students preferring to live close to the city centre of Groningen can be observed.

While almost all international students normally take location into consideration when finding housing, a third of them did not do this when looking for housing in Groningen. Four-fifth of the international students compromised on their housing wishes because of the current housing market. Some even indicated the challenging housing market did not give them much of a choice at all. Additionally, the lack of social and cultural capital was often a barrier for international students when finding housing in Groningen. Visiting Groningen before moving there increases the cultural capital of international students and can thus make it easier to find housing. Lastly, the international students not knowing the local language is a cause of ethnic discrimination in the housing market in Groningen.

Future housing development should look at both rent and location factors when finding new locations. A balance between proximity to the city centre and the rent should be found in order to satisfy the housing preferences of international students in Groningen.

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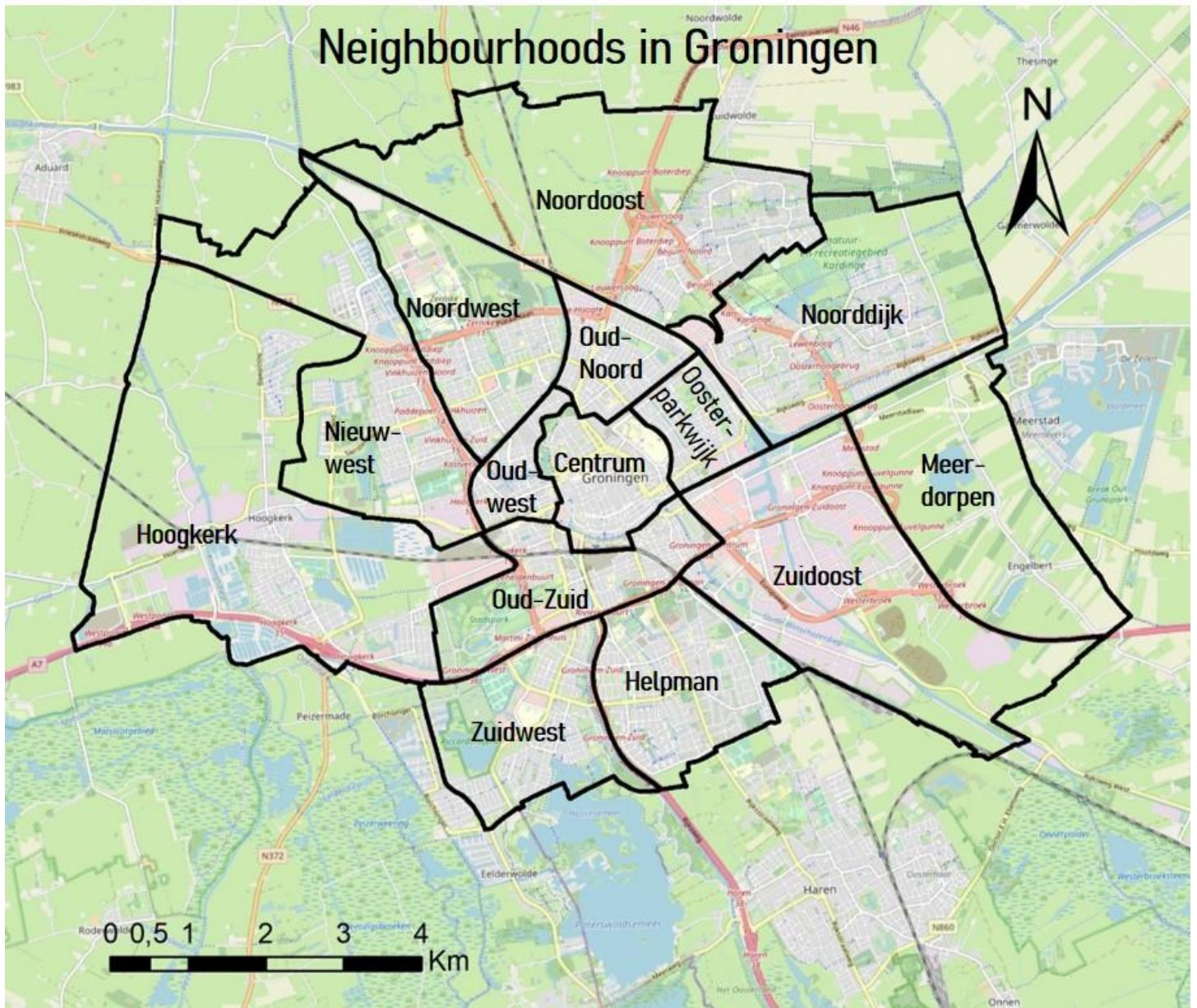
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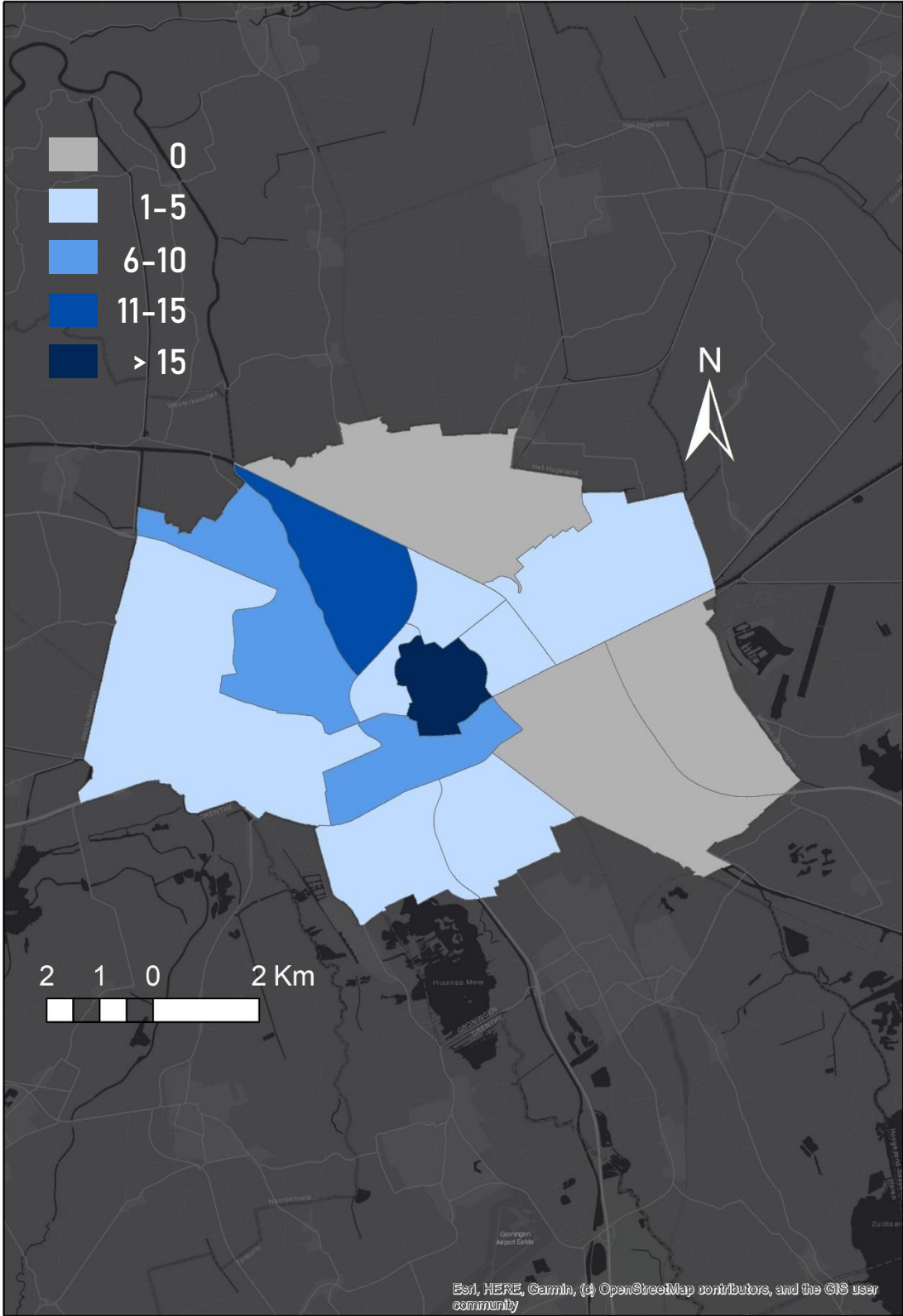
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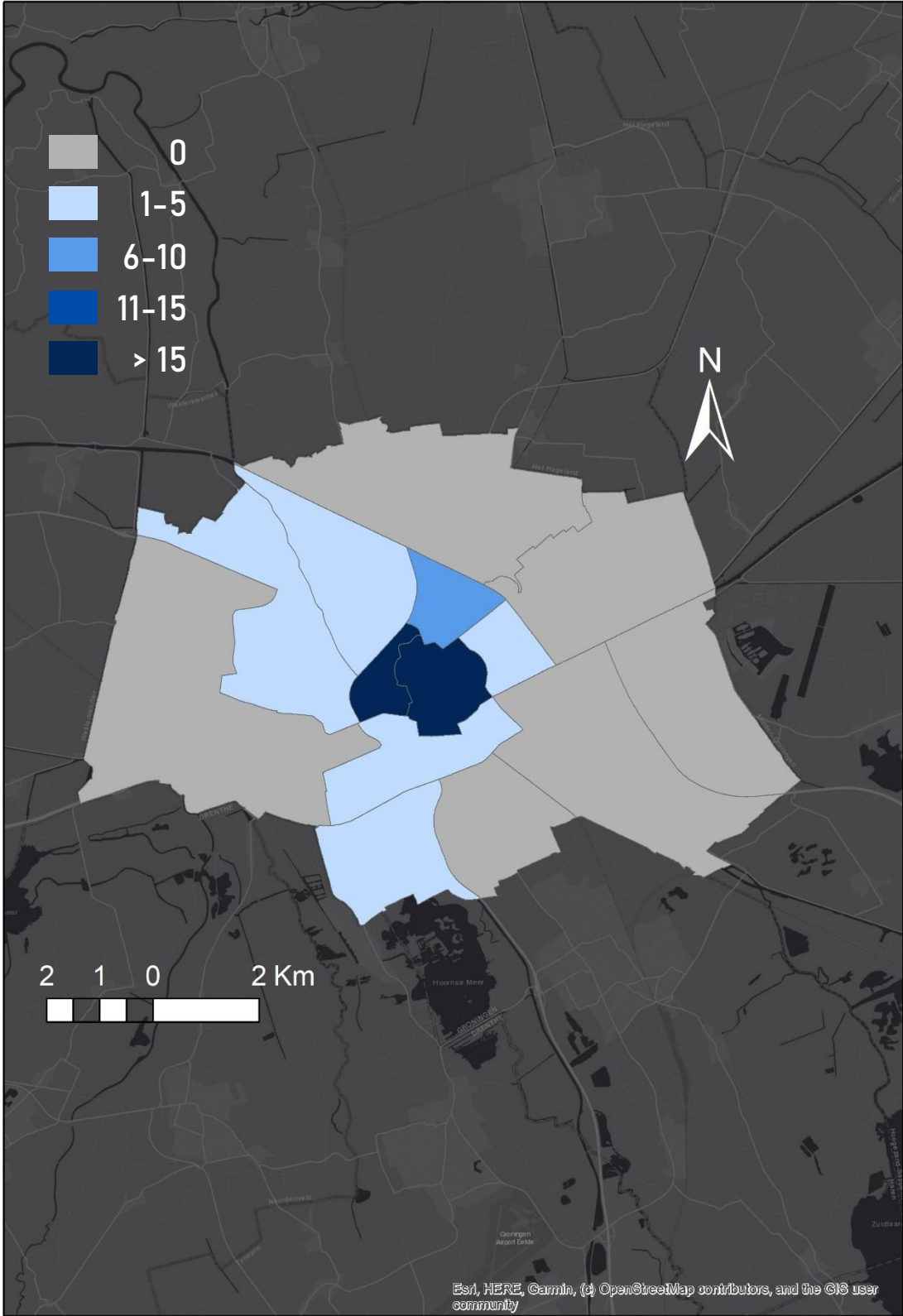
Appendix A: Map of Neighbourhood in Groningen



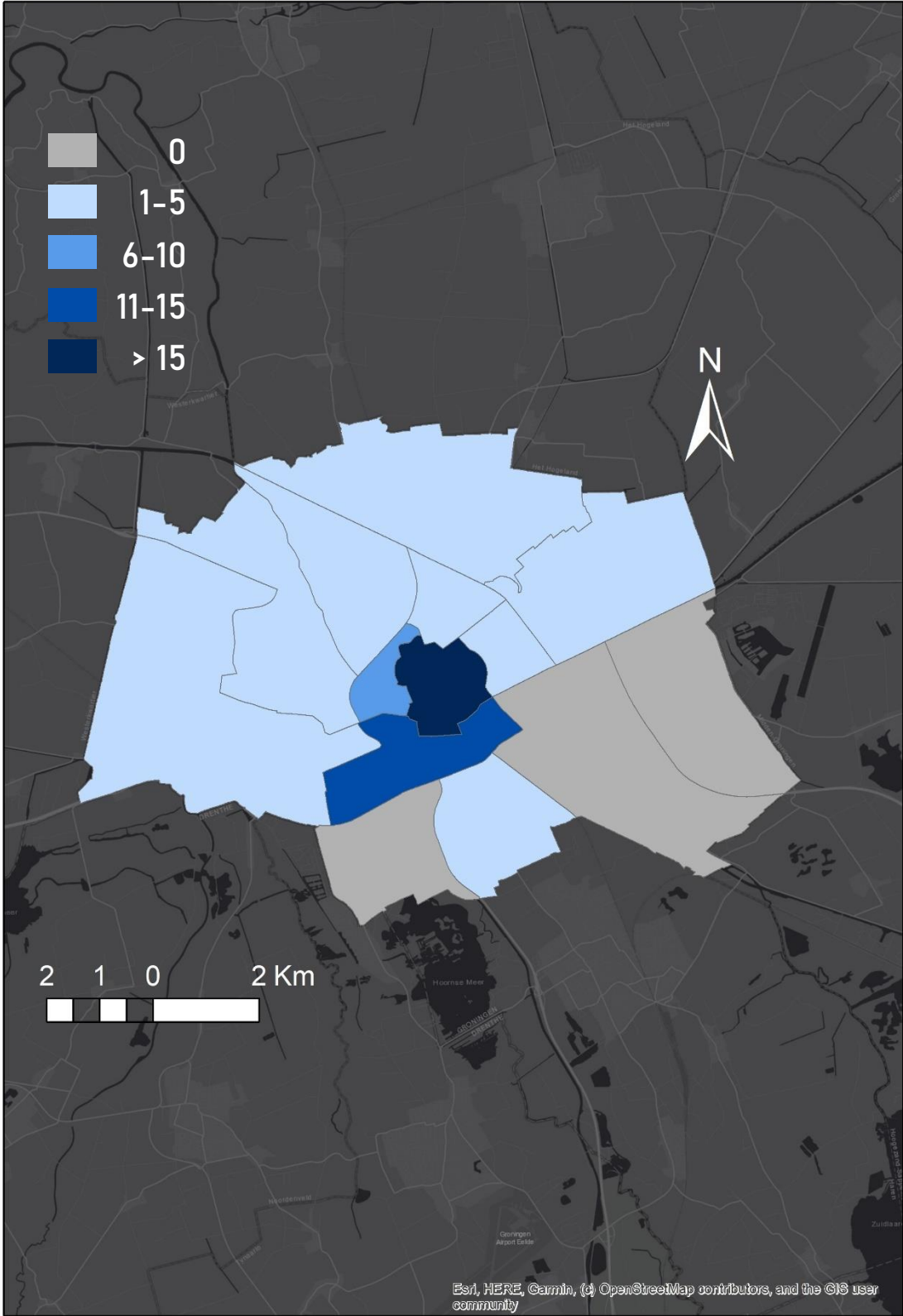
Appendix B: Map First Housing Location in Groningen



Appendix C: Map Preferred Locations in Groningen



Appendix D: Map Current Locations in Groningen



Appendix E: Questionnaire Survey

Thesis Survey: Housing Choices

Start of Block: Default Question Block

Thank you for taking the time to respond to this survey!

In this survey housing choices of international students in Groningen will be investigated, especially in relation to location. The different factors influencing housing choices will be explored and whether international students are still content with their location choice after they have settled in Groningen. This survey is anonymous and by filling in the survey you consent with using your answers for this research.

Page Break

Q1 Are you an international student?

Yes

No

Skip To: End of Survey If Are you an international student? = No

Q2 In which university are you currently enrolled?

University of Groningen

Hanze University of Applied Sciences Groningen

Other

Skip To: End of Survey If In which university are you currently enrolled? = Other

Q3 Are you currently enrolled in a Bachelor/Master study?

Yes

No

Skip To: End of Survey If Are you currently enrolled in a Bachelor/Master study? = No

Q4 Do you live in the city of Groningen?

Yes

No

Skip To: End of Survey If Do you live in the city of Groningen? = No

Q5 What is your age?

Q6 What is your sex?

- Male
- Female
- Other
- Prefer not to say

Q7 In which faculty are you currently enrolled?

▼ Hanze - Hanze Summer School ... RUG - University of Groningen/Campus Fryslân

End of Block: Default Question Block

Start of Block: Country



Q8 What is your country of origin?

▼ Afghanistan ... Zimbabwe

Q9 How many different residences have you lived in as a student in the city of Groningen (including your current residence)?

- 1
- 2
- 3
- 4
- More than 4

Skip To: Q11 If How many different residences have you lived in as a student in the city of Groningen (including... = 1

Q10 In which neighbourhood of Groningen did you live when you first started studying here?

- Centrum
 - Helpman
 - Hoogkerk
 - Meerdorpen
 - Nieuw-west
 - Noorddijk
 - Noordoost
 - Noordwest
 - Oosterparkwijk
 - Oud-Noord
 - Oud-West
 - Oud-Zuid
 - Zuidoost
 - Zuidwest
-

Q11 In which neighbourhood of Groningen do you currently live?

- Centrum
 - Helpman
 - Hoogkerk
 - Meerdorpen
 - Nieuw-west
 - Noorddijk
 - Noordoost
 - Noordwest
 - Oosterparkwijk
 - Oud-Noord
 - Oud-West
 - Oud-Zuid
 - Zuidoost
 - Zuidwest
-

Q12 Without considering barriers and constraints (e.g. money and availability), in which neighbourhood would you want to live?

- Centrum
- Helpman
- Hoogkerk
- Meerdorpen
- Nieuw-west
- Noorddijk
- Noordoost
- Noordwest
- Oosterparkwijk
- Oud-Noord
- Oud-West
- Oud-Zuid
- Zuidoost
- Zuidwest

Page Break

Q13 How long have you been living in Groningen?

- 0.5 year
 - 1 year
 - 1.5 years
 - 2 years
 - 2.5 years
 - 3 years
 - Longer than 3 years
-

Q14 Would 'location' normally (not just in Groningen) be a characteristic that you find important when looking for housing in a city?

- Yes
 - No
-

Page Break

The following questions are about the first time you were looking for a place to live in Groningen.

Q15 How much knowledge did you have about the housing market in Groningen when you started looking for a place to live?

- None at all
 - A little
 - A moderate amount
 - A lot
 - A great deal
-

Q16 How many times did you visit Groningen before you started looking for a place to live in Groningen?

- Never
 - 1 time
 - 2 times
 - 3 times
 - 4 times or more
-

Q17 Looking back, would you have chosen another location to live in now you know more about the city since you have lived there for some time?

- Yes, because: _____
- No

Q18 Did you know other people in Groningen when you started looking for a place to live?

- No
 - Yes, a few
 - Yes, a lot
-

Q19 Did your social connections in Groningen influence your housing choice?

- Yes
 - No
-

Q20 Was the Dutch language a barrier for you when you were looking for a place to live?

- Yes
 - No
-

Page Break

Q21 When you were looking for a room in Groningen, what variables were most important for you? (Rank them from 1 – most important, to 10 – least important by dragging them)*

* explanation of some variables:

- **Accessibility:** the ease to enter/exit your neighbourhood and how this influences the time to reach your destination
- **Housing type:** whether the amenities in a house are shared or belong to one individual (e.g. shared room/private room/studio)
- **Proximity to green:** can either be the distance to a park or the amount of greenery in the neighbourhood itself
- **Safe neighbourhood:** feeling of safety can be determined by socioeconomic conditions (e.g.: poverty and drug use) and conditions of the physical environment (e.g. empty spaces and poorly lit areas)

_____ Accessibility
_____ Housing type
_____ Proximity to campus
_____ Proximity to city centre
_____ Proximity to friends
_____ Proximity to green
_____ Quality
_____ Rent
_____ Room size
_____ Safe neighbourhood

Q22 Is location a factor that you seriously took into account when you were looking for a place in Groningen?

- Yes
- No
-

Q23 Was the ownership of the property an important factor for you when you were looking for a place to live? (e.g.: privately owned or via a housing corporation)

Yes

No

Q24 What means did you use to find housing? (more answers possible)

Register with a housing corporation

Social media

Via the university

Online housing platform (e.g. Kamernet)

Via friends

Other, namely: _____

Q25 When you first came to Groningen did you live in temporary international students housing from a housing corporation? (e.g. from SSH)

Yes

No

Q26 Did the shortage in housing availability influence your housing choice?

Yes

No

Q27 Did the shortage on housing availability make you compromise on some of the housing wishes you had?

Yes

No

Q28 Do you have anything to add to this survey? Any explanations to your answers or comments on the topic?

End of Block: Country
