SCHOOL OF
ECONOMICS AND
MANAGEMENT

Bachelor's programme in Economy and Society

Rent and Relocation

Housing Affordability and Internal Youth Migration Across Swedish Counties, 2016-2024

by

Christian Ranje (christian.ranje@gmail.com)

Abstract

This thesis presents a quantitative analysis of the extent to which changes in regional rental housing costs influence internal net migration among young adults aged 20 to 29 across Sweden's 21 counties between 2016 and 2024. Using a balanced panel dataset and a two-way fixed effects regression model, the study investigates whether rising rental prices constrain mobility into opportunity-rich but high-cost regions. Alongside rent levels, the analysis incorporates regional income, housing supply, and student population as explanatory variables. The results show that higher rents are significantly associated with lower net youth migration, even when controlling for income and other structural factors. In contrast, an increase in newly completed dwellings is consistently linked to higher in-migration among young adults, indicating that housing supply plays a key role in enabling residential mobility. These findings support theoretical perspectives from push-pull and human capital models, highlighting housing affordability as a structural determinant of internal migration. By providing national-level evidence from Sweden, the study contributes to the literature on migration and housing economics and informs ongoing policy discussions about how regional housing markets influence demographic and spatial inequality.

EOSK12

Bachelor's Thesis (15 credits ECTS)

May 2025

Supervisor: Gabriel Brea-Martinez

Examinor: Helene Castenbrandt

Table of Contents

Innehållsförteckning

List of Tables & Figures

1. Introduction

Internal migration is a central driver of regional demographic change and economic adjustment, particularly among young adults who are at a highly mobile stage of life. In Sweden, this mobility has long followed a familiar pattern: individuals aged 20 to 29 move toward metropolitan counties such as Stockholm, Västra Götaland, and Skåne in search of education, employment, and social opportunity. However, these regions are also characterised by rapidly increasing housing costs and limited access to affordable rental units. While previous research has documented general youth migration trends and rising urban rents, less is known about how affordability pressures influence the ability of young adults to access and remain in high-opportunity areas.

This thesis investigates the relationship between regional rental housing costs and internal net migration among young adults in Sweden. Focusing on the 20-29 age group which is a cohort defined by high residential mobility and key life transitions such as post-secondary education, early labor market entry, and household formation, the study aims to evaluate the extent to which housing affordability shapes migration decisions. The analysis covers all 21 Swedish counties (*län*) over the period 2016 to 2024, enabling the investigation of both spatial and temporal patterns in youth migration.

1.1 Research Problem

In recent years, Sweden's housing market has undergone significant structural changes, particularly in its urban counties. Internal migration patterns among young adults (aged 20-29) have become increasingly polarised, with metropolitan regions such as Stockholm, Gothenburg, and Malmö continuing to attract young movers, while many intermediate and rural counties are experiencing stagnation or population decline (Bernard and Kolk, 2020; Sandow and Lundholm, 2019). As the most mobile demographic group, young adults migration decisions are influenced by a combination of education opportunities, labour market access, and housing conditions (Greenwood, 1997; Sjaastad, 1962). However, rising housing costs and constrained rental availability in high-demand urban areas present potential barriers to this mobility (Moretti, 2011; Lind and Kalbro, 2020). According to Boverket (2016; 2019; 2023), average rents have increased significantly over the past decade, particularly in regions with strong economic growth. This development raises a critical policy question: to what extent does housing affordability limit

internal migration among young adults in Sweden? Existing research suggests that affordability may increasingly act as a spatial filter, restricting access to opportunity-rich regions for lower-income youth (Stawarz, Sander and Sulak, 2021; Eliasson and Westerlund, 2024). Understanding the role of housing costs in shaping internal migration dynamics is thus essential for assessing both regional inequality and the inclusiveness of economic opportunity.

1.2 Research Question and Objectives

Research Question

"To what extent do changes in regional rental housing costs influence internal net migration among young adults (aged 20-29) across Sweden's counties between 2016 and 2024?"

Research Objectives

To address this question, the study sets out to achieve five interrelated objectives. First, it aims to construct a balanced panel dataset covering all 21 Swedish counties from 2016 to 2024, integrating variables on internal migration, average rental costs, housing supply, income levels, and university participation. Second, it seeks to estimate the effect of regional rental housing costs on internal net migration among young adults aged 20-29, using a two-way fixed effects regression model that isolates within-county variation over time. Third, the analysis incorporates key control variables, such as average salaries, newly completed dwellings, and student population levels, to account for economic and institutional factors that may influence migration. Fourth, the study applies push-pull theory and human capital theory to interpret the empirical findings and explain how affordability pressures interact with life-course decisions. Finally, it aims to situate the results within the broader academic literature, assessing how Sweden's internal migration dynamics compare to international trends and exploring whether institutional features of the Swedish housing system play a distinctive role.

1.3 Outline of the Thesis

The remainder of the thesis is structured as follows. Chapter 2 presents the theoretical and empirical foundations of the study, including a review of previous research on internal migration in Sweden and internationally. It outlines key conceptual models, namely push-pull theory and human capital theory, and discusses economic drivers of migration such as labor market conditions, housing affordability, and cost of living. Chapter 3 describes the data sources,

variable construction, and sample selection strategy - detailing how the panel dataset was assembled and how key indicators were operationalized. Chapter 4 outlines the methodological framework, including the econometric strategy, regression specification, and rationale for using fixed effects models. Chapter 5 presents and interprets the empirical results in light of the research question and theoretical framework. It discusses the statistical findings, reflects on their consistency with existing literature, and evaluates their implications. Chapter 6 concludes the thesis by summarizing the main findings, assessing their relevance for theory and policy, and suggesting avenues for future research.

2. Theory

This chapter presents the theoretical and empirical foundations of the thesis. It begins by reviewing existing research on internal migration patterns in Sweden, with a particular focus on youth mobility and regional housing conditions. Thereafter, it outlines the conceptual models that inform the analysis, namely push-pull theory and human capital theory, and discusses key economic drivers such as labor market conditions, housing affordability, and cost of living. Together, these perspectives provide the analytical framework used to interpret the relationship between regional rental prices and youth net migration.

2.1 Previous Research

2.1.1 Migration Patterns and Trends in Sweden

Internal migration is a key demographic force shaping regional development in Sweden, particularly among young adults aged 20-29 who make up the most mobile segment of the population (Greenwood, 1997; Sjaastad, 1962). In recent years, this group has increasingly concentrated in metropolitan labour market regions, especially Stockholm, Gothenburg, and Malmö, where access to higher education, employment opportunities, and urban amenities is greatest (Bernard and Kolk, 2020). This urban pull has coincided with a persistent demographic decline in many intermediate and rural counties, resulting in widening regional disparities in both age structure and population growth (Sandow and Lundholm, 2019).

Empirical studies confirm that young Swedes are not only moving more frequently but also undertaking higher-order moves, such as second or third relocations, which reflect changing expectations around career building and housing (Bernard and Kolk, 2020). However, these moves are not evenly distributed across space. Urban regions are absorbing a disproportionate share of these flows, while smaller municipalities, especially those outside commuting distance from major cities, struggle to retain or attract young residents. In the long run, this trend raises concerns about regional imbalance and the sustainability of service provision and labour supply in depopulating areas (Amcoff and Westholm, 2007).

Yet recent research suggests that the ability of young people to move into opportunity-rich regions is increasingly shaped by housing market constraints. The Stockholm rental market, for instance, is characterised by extremely long queuing times, averaging over ten years for central

locations, and tight supply relative to demand (Bostadsförmedlingen i Stockholm, 2023). Data from Boverket (2016; 2019; 2023) show that average rents have increased significantly over the past decade, particularly in growth regions such as Stockholm and Uppsala. These rising costs can pose a serious barrier for younger adults entering the housing market for the first time, especially those without access to parental support or stable income.

Recent econometric evidence strengthens this picture. Eliasson and Westerlund (2024) find that high housing costs in Stockholm reduce geographical labour mobility by lowering net migration inflows from other regions, particularly among younger cohorts. Similarly, housing affordability has been identified as a structural constraint on mobility across urban regions in other European contexts, such as Germany, where Stawarz, Sander and Sulak (2021) demonstrate that escalating housing costs suppress internal migration into economically dynamic areas.

These patterns raise important concerns about the functioning of internal mobility as a mechanism for equalising opportunity. If housing affordability acts as a spatial filter, deterring lower-income youth from moving to cities where jobs and education are concentrated, internal migration may no longer function as an engine of social mobility. Moreover, when regional access is increasingly stratified by income, segregation may deepen both within and between regions (Lind and Kalbro, 2020). Understanding these dynamics is therefore essential for assessing the inclusiveness of Sweden's current housing and regional development model.

2.1.2 Empirical Evidence and Knowledge Gaps

Internal migration has long been recognised as a central feature of Sweden's demographic dynamics, with young adults aged 20-29 constituting the most mobile segment of the population. Their moves are typically driven by transitions related to education, employment, and household formation (Sjaastad, 1962; Greenwood, 1997). Recent research confirms that these migration patterns are not only frequent but increasingly complex. Bernard and Kolk (2020) show that younger cohorts are undertaking more frequent and higher-order residential moves, suggesting greater responsiveness to life-course opportunities and regional labour market conditions. However, while migration behaviours among young adults are relatively well documented, the extent to which structural housing conditions shape these patterns is less thoroughly explored in the Swedish context.

Over the past decade, regional housing markets in Sweden have experienced sharp price increases and tightening rental supply. Boverket (2016; 2019; 2023) highlights sustained increases in average rents across counties such as Stockholm, Uppsala, and Skåne. In Stockholm, particularly, long public rental queue times and constrained supply signal mounting barriers for young adults attempting to enter the housing market (Bostadsförmedlingen i Stockholm, 2023). These developments raise important questions about whether housing affordability is influencing internal migration decisions. However, the empirical relationship between rising rents and migration flows, especially at the county level and for specific age groups, has not been systematically quantified across Sweden in recent studies.

Some existing research points to affordability playing a role in shaping internal mobility. Eliasson and Westerlund (2024) find that high housing costs in Stockholm reduce net in-migration, particularly among younger populations. Their findings align with international research, such as the German case study by Stawarz, Sander and Sulak (2021), which demonstrates that housing affordability constrains internal migration into economically dynamic cities. Similarly, Plantinga et al. (2013) show in a U.S. context that higher housing costs reduce the likelihood of selecting a region as a migration destination. Their work is notable for its methodological contribution, suggesting that commonly used housing cost indicators can produce misleading results if not properly specified. Collectively, these studies suggest that housing affordability may represent a structural barrier to migration, even in contexts with strong labour market demand.

In Sweden, however, there appears to be relatively limited recent work that applies a longitudinal, county-level framework to explore the impact of changes in regional rental prices on net migration among young adults. While studies like Sandow and Lundholm (2019) offer important insights into counterurban trends, their focus is primarily on families and professional groups rather than the broader cohort of young adults navigating urban housing markets. Similarly, while Bernard and Kolk (2020) document mobility trends among youth, they do not incorporate housing market variables or focus on regional affordability as a determinant of migration.

Another area where the literature remains limited is the inclusion of comprehensive control variables that allow for a more precise estimation of affordability effects. Regional income levels, housing supply through new construction, and university participation are likely to influence

migration outcomes alongside rental costs, yet these factors are often omitted or handled descriptively. Moreover, while theoretical models such as push-pull theory and human capital theory offer useful frameworks for understanding migration decisions (Sjaastad, 1962), few empirical studies in Sweden explicitly test these theories using migration and housing data in tandem.

The present study aims to contribute to this body of knowledge by estimating the relationship between changes in regional rental housing costs and net internal migration among young adults (aged 20-29) across Sweden's 21 counties between 2016 and 2024. By constructing a balanced panel dataset and applying a two-way fixed effects regression model that includes controls for income, housing supply, and university enrolment, the analysis seeks to assess how affordability pressures may affect youth mobility across different regional contexts. While the scope of this thesis is limited and does not claim to fully close the research gap, it offers a targeted and methodologically robust approach to an issue that appears underexamined in the Swedish empirical literature.

In doing so, the study also contributes to a wider international discussion on whether housing systems are becoming increasingly exclusionary for younger populations. If rental housing costs deter internal migration into regions with concentrated opportunities, this may undermine spatial mobility and reinforce structural inequalities. Understanding these dynamics is therefore essential not only for migration research, but also for informing policy debates around regional development, housing access, and social equity.

2.2 Theories of Migration

Migration refers to the movement of individuals or groups across geographic space and is typically classified as either internal (within a country) or international (across borders). Internal migration plays a particularly important role in shaping demographic and economic dynamics within national contexts, influencing labour allocation, urbanisation, and regional development. A wide range of factors influence the decision to migrate, including economic incentives, institutional arrangements, social networks, and personal life-course events. To understand these complex processes, migration theory provides structured frameworks that explain how and why

individuals move, and under what conditions migration flows emerge or change (Lee, 1966; de Haas, 2010).

This thesis examines internal migration among young adults in Sweden, with a focus on how changes in regional rental housing costs may influence net migration flows. The use of theory is central to this analysis, as it helps connect individual decision-making to broader structural conditions. In particular, three major strands of migration theory inform the analytical framework of this study: push-pull models, human capital theory, and economic-structural perspectives.

Push-pull models offer a foundational view of migration as the result of differential conditions between origin and destination regions. These include factors such as employment opportunities, housing costs, and access to services, which either attract or deter potential migrants (Lee, 1966; Greenwood, 1997). Human capital theory adds a microeconomic perspective, conceptualising migration as a forward-looking investment decision, particularly relevant for young adults who seek to maximise future earnings, education, or quality of life (Sjaastad, 1962). Finally, economic-structural approaches shift attention to macro-level forces, such as regional wage differentials, housing affordability, and spatial inequalities, that shape the constraints and opportunities within which individual decisions are made (Greenwood, 1997; Cameron and Muellbauer, 1998).

Together, these theoretical perspectives provide a framework for analysing how housing markets interact with youth mobility in Sweden. Rising housing costs in opportunity-rich urban regions may alter the cost-benefit balance of migration, and thereby influence who moves, where they go, and who is left behind. The next sections present each theory in greater detail and discuss how they contribute to the empirical and interpretive strategy of this thesis.

2.2.1 Push-Pull Theory

Push-pull theory is one of the most enduring and widely applied frameworks in migration research. At its core, it explains migration as a response to contrasting conditions between origin and destination regions. Individuals are "pushed" to leave areas with unfavourable conditions, such as unemployment, low wages, or housing shortages, and "pulled" toward areas that offer greater opportunities, including better employment prospects, higher wages, education, or improved living standards (Lee, 1966). This dual logic allows for a spatial comparison of

opportunity structures, making the model particularly well-suited to analysing internal migration within national borders.

In Lee's (1966) classic formulation, migration decisions are shaped by factors at the place of origin, factors at the place of destination, intervening obstacles (such as distance, regulations, or moving costs), and personal characteristics. This conceptualisation is especially useful in understanding the migration behaviour of young adults, who are at a life stage characterised by relatively low residential inertia and high responsiveness to educational and labour market conditions. The push-pull framework also allows researchers to incorporate both objective structural factors, like housing availability or unemployment, and subjective preferences, such as perceptions of urban life or career potential.

In the Swedish context, push-pull dynamics are clearly visible in patterns of youth migration. Metropolitan regions such as Stockholm, Gothenburg, and Malmö tend to attract large numbers of young adults due to their concentration of universities, diverse labour markets, and cultural amenities (Bernard and Kolk, 2020). These urban regions thus act as strong "pull" areas. At the same time, many rural and intermediate regions struggle to retain young populations due to more limited educational and employment opportunities, and therefore act as "push" regions (Sandow and Lundholm, 2019; Amcoff and Westholm, 2007).

Importantly, housing costs play a complex role within the push-pull framework. While job opportunities or education may exert a strong pull, high housing costs-particularly in urban rental markets, may counteract that attraction and function as a form of "reverse pull" or "soft barrier." In other words, an area may simultaneously attract and repel migrants, depending on the relative strength of various regional factors. Long rental queue times, rising rents, and supply constraints in Stockholm and other cities (Boverket, 2019; 2023; Bostadsförmedlingen i Stockholm, 2023) illustrate how housing costs may limit the ability of some young adults to move to otherwise opportunity-rich areas.

From a methodological perspective, the push-pull model is highly compatible with regional-level data, as it allows for the comparison of sending and receiving regions over time. By analysing how changes in regional housing costs relate to net migration flows, it is possible to assess the extent to which affordability acts as a constraint on mobility. This thesis applies the push-pull framework to guide the interpretation of empirical results and to assess how shifting housing

market conditions influence the direction and magnitude of youth migration across Sweden's counties.

2.2.2 Human Capital Theory

Human capital theory offers an individual-level, economic explanation of migration, viewing it as an investment decision made to improve long-term well-being. Originally formulated by Sjaastad (1962), the theory conceptualises migration as analogous to an investment in education or training: individuals weigh the expected benefits of relocating, such as higher earnings, better employment prospects, or improved quality of life, against the costs, including moving expenses, foregone income, social disruption, and uncertainty. If the perceived benefits outweigh the costs, the individual chooses to migrate.

This framework is particularly applicable to young adults, who are at a formative stage in their careers and life trajectories. Compared to older cohorts, they tend to have fewer location-specific ties (such as mortgages or children in school), lower opportunity costs, and greater long-term horizons over which to recoup the gains from moving. As such, young people are more likely to relocate in response to variations in regional labour markets, educational institutions, and housing opportunities (Greenwood, 1997; Bernard and Kolk, 2020).

In a Swedish context, many young adults migrate from rural or intermediate counties to larger urban centres where universities, graduate jobs, and broader life opportunities are concentrated. The decision to move often reflects a forward-looking calculation: investing in access to a stronger labour market and better professional development options, even if short-term living conditions such as housing, are less favourable (Eliasson and Westerlund, 2024). At the same time, housing costs directly affect the net return of this investment. If the financial burden of rent in a high-opportunity region like Stockholm outweighs the expected wage gains, some individuals may delay or forgo migration altogether.

This is particularly relevant in regions with strong labour demand but limited affordable rental housing. According to Boverket (2016; 2023), rising rents and long waiting times in urban rental markets have become persistent features of Sweden's housing landscape. These costs must be accounted for in the migration decision, especially for younger adults who are more likely to rent than own, have lower incomes, and lack accumulated wealth. In this context, the migration calculus becomes sensitive not just to wage differentials, but also to housing affordability, which

directly impacts disposable income and living standards post-move (Moretti, 2011; Plantinga et al., 2013).

Human capital theory also aligns well with panel data methods that estimate how migration flows respond to regional-level economic changes. It supports the assumption that individuals respond to regional variation in costs and benefits such as changes in housing prices, over time. In this thesis, human capital theory underpins the expectation that rising rental costs in high-opportunity regions may dampen in-migration among young adults, particularly for those with lower income or limited financial support. Conversely, regions that combine opportunity with relative affordability may offer higher returns on migration and thus attract more movers.

Overall, the human capital theory offers a useful lens for understanding the economic logic of migration decisions among young adults and highlights how housing affordability is a central component of that logic. When integrated with structural and regional perspectives, it contributes to a more complete explanation of the demographic and economic forces shaping internal migration in Sweden today.

2.2.3 Economic Drivers of Internal Migration

In addition to individual-level motivations and behavioural models, a substantial body of migration research emphasises the role of broader economic structures in shaping regional mobility patterns. From this perspective, migration is not only a response to personal preferences or life-course transitions, but also a reflection of regional disparities in employment, housing, and living costs. These structural factors determine both the availability of opportunities and the accessibility of specific places. For young adults, whose residential decisions are closely tied to labour market entry and housing access, economic conditions play a particularly decisive role.

Employment opportunities are among the most frequently cited determinants of internal migration. Regions with dynamic labour markets, high job growth, and higher average wages tend to attract in-migration, particularly among young people seeking career entry or advancement (Greenwood, 1997). In Sweden, labour demand is heavily concentrated in the major urban regions; Stockholm, Gothenburg, and Malmö, where diverse economic sectors and higher wages act as strong pull factors (Eliasson and Westerlund, 2024). However, labour market access is not equally distributed. Entry-level job availability, occupational match, and sectoral structure

vary widely between counties. Westerlund (1997) found that employment growth, more than wage differentials alone, significantly influences interregional migration in Sweden, highlighting the importance of job creation rather than static wage levels. Young adults, particularly recent graduates, are especially sensitive to such signals, and their migration patterns tend to mirror regional labour dynamics.

While labour markets shape the demand side of migration, housing markets influence the capacity of regions to absorb newcomers. A mismatch between housing supply and demand, particularly in the rental sector, can constrain migration even when economic opportunities are present. This has become a growing concern in Sweden's major cities, where the combination of population growth, limited construction, and regulatory constraints has resulted in housing shortages and sharply rising rents (Boverket, 2016; 2023). The ability to secure housing upon arrival plays a critical role in whether individuals follow through with planned moves. In Stockholm, the average queue time for a rental apartment through the public system now exceeds ten years for centrally located dwellings (Bostadsförmedlingen i Stockholm, 2023). Even with access to employment or education, the lack of available or affordable housing may lead potential migrants to abandon or delay relocation. Thus, housing constraints can act as a bottleneck that limits the absorptive capacity of otherwise attractive regions.

Regional variation in living costs, particularly housing, but also transport, food, and services, can significantly shape internal migration patterns. While higher wages in urban regions may attract migrants, they may be offset by higher costs, especially for housing. As Moretti (2011) notes, nominal wages in large cities often conceal large differences in real wages - i.e., income adjusted for local living costs. In effect, some cities may appear more attractive than they are once affordability is taken into account. This trade-off is especially relevant for young adults, who are typically more budget-constrained than older, established populations. As a result, net migration decisions may not follow wage signals alone but instead reflect a composite assessment of what standard of living a given region can offer after housing and basic expenses are deducted. This may explain why some smaller or intermediate cities with relatively lower wages still experience youth in-migration: the lower cost of living raises the effective value of income.

Of all economic factors, housing affordability has emerged as a central concern in contemporary migration research, particularly for young adults. Several studies point to affordability constraints

as a key reason why access to economically successful regions may be increasingly selective (Eliasson and Westerlund, 2024; Stawarz, Sander and Sulak, 2021). In Germany, Stawarz et al. (2021) find that rising housing costs in urban regions significantly deter internal migration, even among working-age individuals. Similarly, Plantinga et al. (2013) show that higher housing prices reduce the likelihood of a region being selected by potential migrants in the U.S., unless the costs are offset by income or amenities. In Sweden, regional housing affordability has become a critical issue. Boverket (2019; 2023) documents persistent price increases in both new and existing rental units, particularly in cities with strong labour market performance. The combination of rising rents, tight rental supply, and income constraints among young adults may be narrowing the window of opportunity for interregional mobility. For youth without family support or substantial savings, the financial cost of migration can be prohibitive, even when jobs or education await in the destination region.

This thesis considers housing affordability not simply as a background condition, but as a potentially causal factors influencing internal net migration among young adults. By modelling how changes in regional rental prices relate to youth migration flows over time, this study aims to quantify the extent to which affordability shapes mobility decisions and contributes to emerging spatial inequalities.

3. Data and Variables

The relationship between internal migration and housing affordability is shaped by a range of economic, demographic, and structural factors. To investigate this relationship empirically, this study constructs a panel dataset combining county-level migration flows, rent levels, income, and housing supply across Sweden's 21 counties over the period 2016 to 2024. The primary focus is on young adults aged 20-29, a demographic group characterized by high mobility and sensitivity to regional opportunity structures.

The selection of variables is grounded in the theoretical framework of push-pull migration models and prior empirical studies emphasizing the role of housing costs in shaping migration behavior. Net internal migration serves as the dependent variable, capturing whether counties experience net gains or losses of young residents. Average rent per square meter is the main independent variable, included to reflect housing affordability barriers that may deter in-migration or accelerate out-migration. A set of control variables such as average monthly salary, the number of completed dwellings in multi-dwelling buildings and regional university participation are incorporated to account for regional variation in economic opportunity and housing availability.

All variables are derived from official sources provided by Statistics Sweden (SCB) and have been harmonized to a common county-year structure suitable for panel data regression analysis. Where necessary, higher-level regional data have been mapped to the county level to ensure full coverage across all observations. The following sections provide a detailed description of each variable, including its source, construction, and justification for inclusion in the analytical model.

3.1 Data Sources and Variable Construction

3.1.1 Dependent Variable: Net internal Migration

The dependent variable in this study is net internal migration among young adults aged 20-29. This data was obtained from Statistics Sweden's database *Inrikes flyttningsöverskott efter region, ålder, kön och år*, which records the annual net migration balance (in-migrants minus out-migrants) across Sweden's counties (*län*), disaggregated by age group. The 20-29 cohort was selected due to its high mobility and relevance to key life transitions such as higher education, labor market entry, and household formation. Net migration is measured annually for each county

from 2016 to 2024, offering an indicator of regional demographic attractiveness. As the study's outcome variable, it reflects the extent to which regions succeed or fail in attracting and retaining young residents, which is an essential aspect of spatial population redistribution in the context of housing and labor market dynamics.

3.1.2 Main Independent Variable: Rent per Square Meter

The main explanatory variable is the average rent per square meter for rental apartments. This data was sourced from Statistics Sweden's register *Medelhyra i lägenhet efter region, hyresuppgift och år*, which reports average contract rents per square meter annually for dwellings in multi-dwelling buildings (*flerbostadshus*). These figures include fixed housing-related costs such as heating, water, and property maintenance, providing a comprehensive measure of rental housing cost. The data span the period from 2016 to 2024 and are reported at the county level. Given that individuals aged 20-29 are predominantly renters, this variable is a relevant proxy for housing affordability constraints. It serves as the primary independent variable in the regression analysis and is hypothesized to be negatively associated with net migration: higher rents are expected to deter in-migration or accelerate out-migration among young adults, particularly in regions lacking compensatory economic or institutional benefits.

3.1.3 Control Variable: Average Monthly Salary

Data on regional income levels were extracted from Statistics Sweden's dataset *Genomsnittlig månadslön, kronor efter region, sektor, Yrke (SSYK 2012), kön och år*, which reports average monthly wages across all occupations and sectors. Because income data are only available at the NUTS2 regional level, each region's average salary was assigned uniformly to all constituent counties. For instance, the NUTS2 region *Sydsverige* includes both Blekinge and Skåne, and both were assigned the same salary level. This mapping followed SCB's official classification of NUTS2-to-county correspondences and ensured that all 21 counties in the analysis could be included. Although this method introduces within-region uniformity, it enables meaningful inclusion of a proxy for economic opportunity across counties in the absence of disaggregated income data. Average salary is included as a control variable to account for broader regional differences in earning potential, which may independently affect migration decisions. The dataset covers the period from 2016 to 2022. To preserve panel balance through 2024, salary values for 2023 and 2024 were forward-filled using 2022 levels, based on the assumption of wage rigidity

over short horizons. Moreover, county 24 Västerbotten and 25 Norrbotten had missing values for the year 2019. To maintain a balanced panel and preserve temporal consistency, these missing values were imputed using linear interpolation based on the respective counties 2018 and 2020 salary values. This method assumes a gradual, continuous trend in wage development and is commonly applied in panel data settings to address single-year gaps without introducing structural bias. SCB notes that comparisons between individual years should be made cautiously due to methodological changes, classification revisions, and data corrections (notably for 2021-2022).

3.1.4 Control Variable: Housing Supply

Data on regional housing supply were drawn from SCB's dataset *Färdigställda lägenheter i nybyggda hus efter region, hustyp och år*, which reports the annual number of newly completed dwellings by building type and county. This study focuses specifically on completed dwellings in *flerbostadshus* (multi-dwelling buildings), the housing form most relevant for young adults who typically rent apartments rather than own detached homes. The variable captures the yearly volume of newly available rental housing for each county between 2016 and 2024. Including housing supply as a control variable helps isolate the effect of rental prices by accounting for variation in regional housing availability. Since rent levels may reflect both demand-side pressures and supply-side constraints, including a supply measure that allows for a clearer distinction between affordability effects and physical access to housing. This control enhances the explanatory power of the model and aligns with theoretical frameworks emphasizing the role of structural conditions in shaping migration behavior - particularly for younger, income-constrained populations.

3.1.5 Control variable: University Participation

This study incorporates a variable measuring regional university participation to capture the scale of higher education engagement across Sweden's 21 counties (län). The data, obtained from Statistics Sweden (SCB), represent the number of individuals enrolled in higher education who reside within a county; either studying in the same municipality or in another municipality within the same county. This variable serves as a proxy for locally concentrated university activity and reflects the density of higher education participation tied to the residential population. It includes

all age groups and both genders, offering a comprehensive view of county-level educational presence. The original data cover the years 2016 to 2023; to ensure a balanced panel through 2024, values for that year were forward-filled based on 2023 levels.

3.1.5 Addition control: Year and County Fixed Effects

To account for structural and temporal heterogeneity, the regression model includes an additional set of control variables designed to isolate the causal relationship between rental prices and youth migration. Year fixed effects are included to control for national-level shocks that may affect all counties simultaneously, such as macroeconomic fluctuations, changes in national housing or education policy, or disruptions related to the COVID-19 pandemic. County fixed effects are employed to capture time-invariant characteristics unique to each region, including geographic location, historical infrastructure development, long-standing institutional differences, and cultural or demographic legacies. Together, these fixed effects strengthen the internal validity of the model by minimizing bias from omitted variable confounding at both the temporal and regional levels.

3.2 Sample Selection

The empirical analysis is based on a balanced panel dataset comprising Sweden's 21 counties (*län*) observed annually from 2016 to 2024. This timeframe was chosen to capture both pre-pandemic and post-pandemic dynamics in internal migration, housing affordability, and regional development. The unit of observation is the county-year, resulting in a total of 189 observations (21 counties × 9 years). All data sources used in the construction of the panel are drawn from Statistics Sweden (SCB), ensuring consistency and national representativeness.

The sample focuses specifically on individuals aged 20-29, a cohort defined by elevated mobility and transitional life stages such as higher education, labor market entry, and early family formation. This age group was selected both for theoretical reasons and due to its empirical significance in shaping regional demographic and economic dynamics. Observations with missing values for any of the key variables; net migration, rent, average salary, housing supply and university participation, were excluded to maintain internal consistency in the model estimation. Where possible, values were imputed (via forward-filling) to preserve panel balance and avoid unnecessary data loss.

3.3 Data Limitations

While the dataset provides a robust foundation for analyzing the relationship between housing costs and youth migration, several limitations should be acknowledged. First, income data were only available at the NUTS2 level and had to be mapped uniformly across all counties within each region. This approach reduces intra-regional variation and may obscure localized income differences. Moreover, income data were only available through 2022; values for 2023 and 2024 were forward-filled under the assumption of short-term wage stability, which may introduce measurement error if actual earnings diverged across counties. A minor imputation was also applied to missing 2019 values for Västerbotten and Norrbotten using linear interpolation, which assumes a steady wage trend that may not reflect real fluctuations.

Second, the housing cost variable captures average contract rents in multi-dwelling buildings but does not distinguish between new and existing tenants, nor does it include secondary market or subletting prices - factors which may better reflect affordability constraints faced by mobile young adults. Similarly, the housing supply variable measures the number of completed units in multi-dwelling buildings but does not account for vacancy rates or the availability of informal rental options.

Third, the use of net migration as the dependent variable precludes analysis of the separate dynamics driving in- and out-migration. While net migration is a valuable summary measure of population change, it may mask offsetting flows that differ in magnitude, composition, or drivers. Disaggregating migration flows and incorporating individual-level microdata would offer a more nuanced understanding of youth mobility decisions.

Finally, limitations apply to the university participation variable. The measure includes individuals of all ages and thus does not specifically capture educational activity among young adults aged 20-29. It should therefore be interpreted as a proxy for the overall higher education environment in each region. Additionally, values for 2024 were forward-filled based on 2023 data to maintain panel balance, an assumption that may not hold in the event of enrollment shocks. The dataset also does not include students who commute across county lines or those enrolled in remote learning, potentially underestimating education-driven migration pressures.

Despite these limitations, the dataset combines rich regional, temporal, and sectoral information from official sources and remains well-suited for investigating how structural conditions shape internal migration among Swedish youth.

4. Methodology

4.1 Analytical Strategy

The central objective of this study is to examine whether regional housing costs, proxied by average rent per square meter in multi-dwelling units, act as a barrier to internal migration among young adults aged 20 to 29 in Sweden. To empirically investigate this question, the study employs a longitudinal research design utilizing panel data comprising all 21 Swedish counties (län) over the years 2016 to 2024. This yields a strongly balanced panel with 189 county-year observations (21 counties × 9 years), enabling robust statistical inference that incorporates both spatial and temporal dimensions.

A two-way fixed effects (FE) regression framework is adopted as the main empirical strategy. This approach is well-suited for controlling for time-invariant unobserved heterogeneity across counties, such as historical development paths, geographic characteristics, long-term economic structures, and persistent institutional differences. Simultaneously, the inclusion of year fixed effects absorbs national-level shocks and temporal dynamics that uniformly affect all counties, such as macroeconomic cycles, nationwide housing market fluctuations, policy reforms, and the COVID-19 pandemic.

The FE model focuses on within-county variation, thereby leveraging changes in rent and other covariates over time within each region to estimate their effects on net youth migration. This estimation strategy effectively removes all between-county cross-sectional variation that might confound the relationship between housing costs and migration, such as the fact that Stockholm and Norrbotten differ not only in rents but also in economic opportunities, urban density, and educational infrastructure.

To improve causal inference and minimize omitted variable bias, the model includes a comprehensive set of theoretically motivated time-varying control variables. First, average monthly salary serves as a proxy for local labor market attractiveness and income potential. Second, the number of completed dwellings in multi-dwelling buildings is used as a proxy for housing supply dynamics. Third, the number of university students per county is included to account for educational opportunities, which are known to be a strong pull factor for young people. Each of these variables is expected to influence internal migration decisions

independently of housing affordability, and their inclusion improves the internal validity of the estimated relationship between rent levels and net youth migration.

Additionally, robust standard errors are clustered at the county level to account for within-county serial correlation and potential heteroskedasticity over time. This is important because migration and rent decisions are likely to be correlated within regions across adjacent years due to institutional inertia, persistent market conditions, and gradual demographic shifts.

Before estimating the full fixed effects model, a stepwise model comparison strategy is employed to understand the added explanatory power and bias correction introduced by each set of controls. The process begins with a simple pooled OLS regression of net migration on rent alone (Model 1), followed by sequential inclusion of average salary (Model 2), housing supply and university students (Model 3), year fixed effects (Model 4), and finally county fixed effects (Model 5). This stepwise approach allows for assessing changes in coefficient estimates, significance levels, and overall model fit (e.g., R-squared values) at each stage of model refinement, offering transparency in how the final results are derived.

4.2 Econometric Model

The baseline empirical specification is a two-way fixed effects panel regression model estimated using Stata's `xtreg, fe` command with clustered standard errors. The model is specified as follows:

$$net\_migration\_it = \beta_1 * rent\_per\_sqm\_it + \beta_2 * avg\_salary\_it + \beta_3 * complete\_dwellings\_it + \beta_4 * university\_students\_it + \gamma\_t + \mu\_i + \varepsilon\_it$$

In this specification, net_migration_it denotes the net internal migration of individuals aged 20 to 29 in county i and year t, computed as the difference between in-migration and out-migration. The variable rent_per_sqm_it represents the average rent per square meter for multi-dwelling apartments in each county-year and serves as a proxy for regional housing affordability. The term avg_salary_it captures the average monthly salary and is used to proxy for regional income potential. The variable complete_dwellings_it refers to the number of completed multi-dwelling housing units and indicates changes in housing supply. The term university_students_it reflects the number of university-enrolled students residing in each county, capturing the educational pull

of regions. Year fixed effects, denoted by γ_t, serve to control for national-level shocks and common time trends, while μ_i captures county fixed effects that account for time-invariant regional characteristics. The term ε_{it} is the idiosyncratic error component, assumed to be uncorrelated with the explanatory variables after conditioning on μ_i and γ_t.

Estimation is conducted with standard errors clustered at the county level (i) to address heteroskedasticity and autocorrelation in the residuals. The use of a strongly balanced panel ensures that all counties are equally represented across the study period, minimizing concerns related to attrition or irregular time coverage. Missing data in the control variables, particularly average salary and university student numbers, were addressed using linear interpolation and forward-filling methods to preserve panel balance while minimizing distortions. All variables were manually inspected to ensure correct unit scaling and reasonable distributional properties.

A Hausman test was conducted to compare fixed effects and random effects models. The null hypothesis of orthogonality between the regressors and unobserved heterogeneity was rejected at the 5% significance level, confirming the appropriateness of the fixed effects estimator.

This econometric specification allows for credible identification of the relationship between regional rent levels and youth internal migration flows, accounting for potential confounding factors and unobserved heterogeneity that would otherwise bias simpler regression models.

5. Empirical Analysis

5.1 Overview

This chapter presents the empirical findings of the study and interprets them in relation to the theoretical and empirical literature reviewed in earlier chapters. It aims to shed light on how regional housing affordability affects internal migration among young adults in Sweden and places the results within a broader academic and policy-relevant context. The chapter is structured in three key sections. First, it outlines and discusses the results of the regression analysis in detail. Second, it interprets these findings through the lens of the study's theoretical framework, focusing on push-pull theory and human capital theory. Third, it compares the results with existing international and Swedish literature and reflects on the contributions, policy implications, and potential avenues for future research. All statistical tables and visualizations referenced throughout the discussion are located in the appendices.

5.2 Empirical Findings from Statistical Analysis

The study's primary objective was to determine whether housing affordability, proxied by average rent per square meter for multi-dwelling rental units, acts as a constraint on internal migration flows among young adults aged 20 to 29. To this end, a strongly balanced panel dataset was constructed, covering all 21 Swedish counties over a nine-year period (2016-2024). The main analytical tool employed was a two-way fixed effects regression model, which accounts for both time-invariant county characteristics and year-specific national shocks. Additional explanatory variables included average salary (as a proxy for economic opportunity), the number of newly completed dwellings in multi-dwelling buildings (as a proxy for housing supply), and the number of university students residing in each county (to reflect educational pull factors).

Table 1 - Descriptive Statistics

Variable	Mean	Std. Dev.	Min	Max
Net migration (20–29)	-78.5	1375.2	-1149	6551
Rent per sqm (SEK)	1098.3	157.8	850	1400
Avg. salary (SEK)	31 745	1 364	29 732	34 894

Completed dwellings	2 138	1 362	180	6 781
University students	15 492	12 940	1 827	47 213

Note: Descriptive statistics are based on 189 county-year observations (21 counties × 9 years). Values are rounded to one decimal where applicable.

Source: Own calculations based on data from Statistics Sweden (SCB 2024a–e).

Descriptive statistics reveal extensive variation across Swedish counties with respect to net migration, rent levels, income, housing completions, and student population. Youth net migration varies from substantial losses to large gains (ranging from -1,149 to +6,551), indicating wide regional disparities in attractiveness to young people. Similarly, rents span from 850 to 1,400 SEK per square meter, reflecting the stark difference between metropolitan and rural housing markets. Completed dwellings also vary significantly (180 to 6,781 annually), underscoring the importance of accounting for regional supply-side dynamics. These variations provide a rich foundation for identifying statistically and substantively meaningful patterns.

Model 1 - Baseline Regression: Rent Only: No Controls, No Fixed Effects

Variables	**Coef.**	**Std. Err.**	**P>|t|**	**Significant**
rent_per_sqm	4.44	0.584	0.0	Yes

Note: This model includes only the main independent variable (rent per square meter). No controls or fixed effects are included. Results represent raw association.

Source: Own calculations based on data from Statistics Sweden (SCB 2024a–e).

Model 2 - OLS with Income Control: Rent + Average Salary

Variables	**Coef.**	**Std. Err.**	**P>|t|**	**Significant**
rent_per_sqm	0.86	1.046	0.41	No
avg_salary	0.237	0.059	0.0	Yes

Note: This model controls for regional income using average monthly salary, accounting for labor market differences across counties.

Source: Own calculations based on data from Statistics Sweden (SCB 2024a–e).

In the initial regression specification (Model 1), rent per square meter was found to be positively and significantly associated with youth net migration. This initially surprising finding is likely attributable to the confounding influence of urban opportunity structures: regions with high rents,

such as Stockholm and Gothenburg, also offer strong labor market and educational pull factors. However, when income was added to the model (Model 2), the coefficient on rent lost statistical significance. This result underscores the need to account for underlying economic drivers that co-vary with housing costs.

Model 3 - OLS with Full Controls: Rent, Income, Housing Supply & University Students

Variables	Coef.	Std. Err.	P>|t|	Significant
rent_per_sqm	0.3	0.586	0.609	No
avg_salary	-0.016	0.036	0.653	No
complete_dwellings	0.414	0.049	0.0	Yes
university_students	-0.0079	0.008	0.329	No

Note: This specification includes controls for income, housing supply (completed dwellings), and university student population to isolate the effect of rent more robustly.

Source: Own calculations based on data from Statistics Sweden (SCB 2024a–e).

Model 4 - OLS with Time Fixed Effects: Full Controls + Year Dummies

Variables	Coef.	Std. Err.	P>|t|	Significant
rent_per_sqm	0.76	0.695	0.277	No
avg_salary	0.143	0.058	0.014	Yes
complete_dwellings	0.341	0.057	0.0	Yes
university_students	-0.0094	0.0081	0.251	No

Note: Year fixed effects are included to account for national trends and common shocks affecting all regions over time (e.g., COVID-19, economic policy changes).

Source: Own calculations based on data from Statistics Sweden (SCB 2024a–e).

When additional controls were introduced (Model 3), only housing supply remained statistically significant, suggesting that increases in the number of completed dwellings may alleviate pressure on local housing markets and thereby facilitate youth in-migration. Model 4 included time fixed effects to account for macro-level dynamics such as COVID-19, national policy changes, or cyclical fluctuations in migration behavior. In this specification, the coefficient on rent remained insignificant, and housing supply retained its positive and significant association.

Model 5 - Two-Way Fixed Effects: Full Controls + County and Year Fixed Effects

Variables	Coef.	Std. Err.	P>|t|	Significant
rent_per_sqm	-5.1	1.981	0.018	Yes
avg_salary	-0.552	0.301	0.081	No
complete_dwellings	0.082	0.016	0.0	Yes
university_students	0.073	0.038	0.067	Marginal

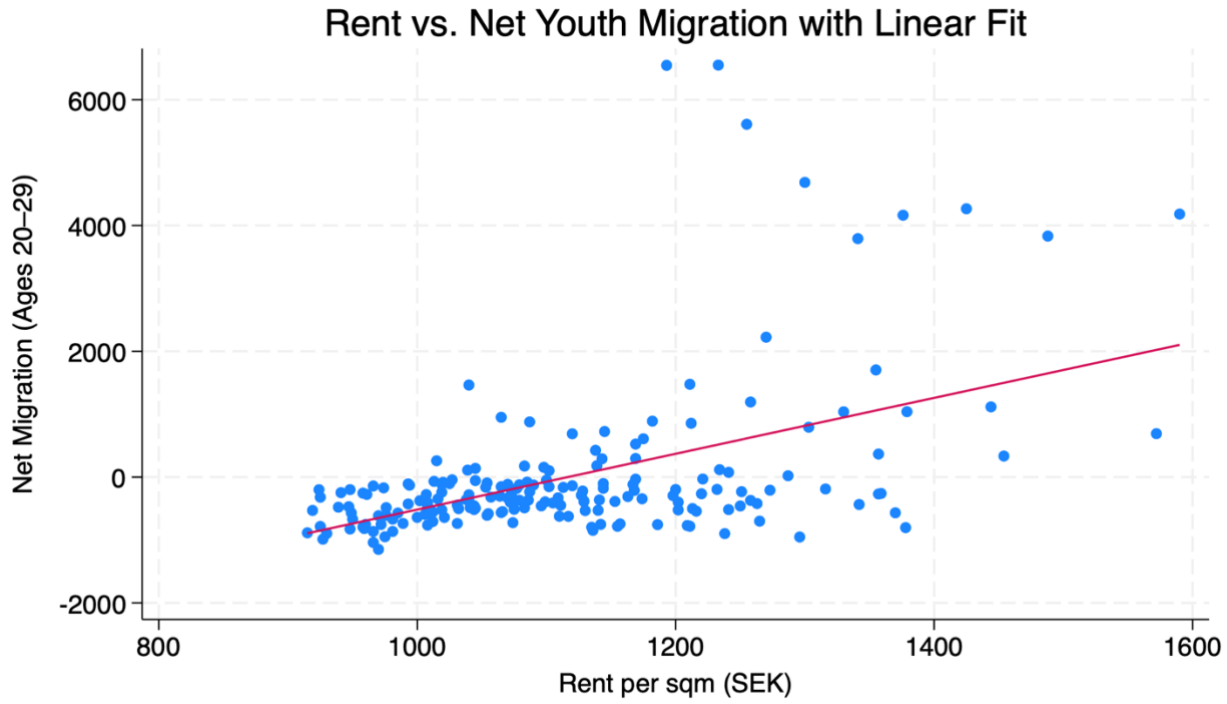
Note: Two-way fixed effects model controlling for both county and year effects. This isolates within-county variation over time and is the preferred specification.

Source: Own calculations based on data from Statistics Sweden (SCB 2024a–e).

The most fully specified model, Model 5, includes both year and county fixed effects and is the preferred specification. In this model, the coefficient on rent becomes negative and statistically significant, indicating that higher rents are associated with lower net migration among young adults. Specifically, a one SEK increase in rent per square meter corresponds to an average reduction of 5.1 young migrants per county-year, holding other factors constant. This finding is particularly important because it suggests that housing affordability acts as a barrier to migration even when local wages and other characteristics are held constant.

Housing supply, as measured by completed dwellings, continues to show a robust and positive association with youth migration across all model variants. This suggests that new construction is critical to enabling residential mobility. University student numbers become marginally significant in the fixed effects specification, hinting at the potential importance of educational infrastructure in drawing young adults to specific regions. By contrast, the effect of average salary becomes statistically insignificant once regional fixed effects are accounted for, suggesting that enduring regional characteristics may matter more than annual fluctuations in income levels.

Figure 1 - Scatterplot of Rent and Net Youth Migration Across Swedish Counties, 2016-2024



Note: Each point represents one county-year observation. The plot shows the raw bivariate relationship between regional rental housing costs and net internal migration of individuals aged 20-29. The upward-sloping line reflects an OLS fit across all observations, without controlling for fixed effects or other confounding factors.

Source: Own calculations based on data from Statistics Sweden (SCB 2024a–e).

To complement the regression analysis, Figure 1 in the "Figures" section presents a scatterplot illustrating the relationship between average rent per square meter and net youth migration (ages 20-29) across Sweden's 21 counties. The graph displays a positive bivariate trend, where higher average rents are associated with higher levels of youth net migration. This figure serves as a visual representation of the baseline regression results shown in Table 1, which also report a positive and statistically significant association between rent levels and youth migration before controlling for other variables. However, this relationship is likely driven by the concentration of labour market opportunities and universities in high-rent urban regions such as Stockholm, Gothenburg, and Malmö. These confounding factors attract young adults but also coincide with higher housing costs, thereby masking the true effect of affordability on mobility.

When regional income, housing supply, and time and county fixed effects are introduced in later models, the direction of the relationship reverses. The preferred fixed effects model indicates that higher rents are negatively and significantly associated with net youth migration, implying that affordability constraints limit access to opportunity-rich regions. The contrast between Figure 1 and the fully specified model underscores the importance of controlling for structural differences across counties. While the raw data suggest a positive correlation, this is a spurious association that disappears once deeper regional characteristics are taken into account. Thus, Figure 1 illustrates not only the initial appearance of the data, but also the need for more rigorous methods to uncover the hidden barriers to youth mobility.

5.3 Interpretation in Relation to Theoretical Framework

The results presented above are broadly consistent with the theoretical perspectives outlined in Chapter 2. According to push-pull theory, migration results from a combination of repelling conditions in the origin region (e.g., lack of jobs or affordable housing) and attractive conditions in the destination region (e.g., employment opportunities or educational institutions), moderated by intervening obstacles such as housing costs or institutional barriers. In this study, high rental prices function as one such intervening obstacle. While economically vibrant regions may exert strong pull forces, they also tend to have higher housing costs, which may deter or prevent young adults from relocating. The emergence of a statistically significant negative effect of rent in the preferred model supports this theoretical proposition.

From the standpoint of human capital theory, migration is viewed as a form of investment, whereby individuals relocate to maximize the returns to their education, skills, and labor. Young adults are particularly sensitive to this calculus because they are in a transitional life stage, often facing student debt, limited savings, and precarious employment. In such contexts, even small increases in housing costs can disproportionately affect their mobility decisions. The finding that rent suppresses net migration among young adults is therefore consistent with human capital theory, particularly when affordability becomes a binding constraint on the ability to access economic and educational opportunities.

The robust effect of housing supply also aligns well with both theoretical perspectives. A greater number of completed dwellings may reduce structural bottlenecks and improve access to housing, especially in regions with high latent demand. In effect, housing construction can alleviate both push and pull pressures by reducing out-migration from undersupplied areas and enabling in-migration to better-served ones. This supports arguments made in both historical and contemporary studies, such as those by Cameron and Muellbauer (1998) and Boverket (2019), emphasizing the central role of housing supply in internal migration processes.

By contrast, the lack of a robust effect for average salary-after controlling for time-invariant regional characteristics-suggests that nominal income differences may be insufficient on their own to explain youth mobility. This is in line with the argument by Moretti (2011) that real income, adjusted for cost-of-living, is a more meaningful measure of economic opportunity.

Similarly, the weak impact of university participation likely reflects data limitations, such as the inclusion of all age groups or failure to distinguish between remote and on-campus learners. Nonetheless, the marginal significance of this variable in the preferred model hints at the potential role of educational hubs in shaping regional demographic patterns.

5.4 Comparison with Existing Literature

The findings from this study provide important insights into how regional rental housing costs shape internal migration flows among young adults in Sweden. The preferred model, which controls for both year-specific shocks and time-invariant county characteristics, shows that higher rents are significantly associated with lower net migration among individuals aged 20-29. This indicates that housing affordability operates as more than a contextual background condition; it actively limits mobility into high-cost regions. These results contribute to a growing body of evidence suggesting that affordability acts as a structural constraint on migration, particularly among younger cohorts who are more reliant on the rental housing sector and less financially resilient.

This conclusion aligns closely with Eliasson and Westerlund (2024), who demonstrate that high rental costs reduce net in-migration to Stockholm, especially for younger individuals. Their findings support the idea that affordability operates as a spatial filter, restricting who can access dynamic urban labour markets. While their study is geographically limited to a single city-region, this thesis extends the analysis to all 21 Swedish counties, revealing that the affordability-mobility relationship is not isolated to Stockholm but appears across a range of regional contexts. In doing so, the present study strengthens the case for viewing affordability as a national, rather than purely metropolitan, policy concern. It also provides stronger causal inference by accounting for unobserved regional and temporal heterogeneity using fixed effects.

The findings are also broadly consistent with international literature. In Germany, Stawarz, Sander and Sulak (2021) find that affordability significantly suppresses migration into opportunity-rich regions, implying that housing costs can counteract even strong economic pull factors. This thesis adds further weight to their conclusion by identifying similar patterns in Sweden, a country with a highly regulated rental market and a strong welfare state. In a U.S. context, Plantinga et al. (2013) find that traditional indicators of housing costs, when properly

adjusted, yield negative effects on migration probability, particularly among younger, mobile populations. Their methodological contribution highlights the importance of specification. This is reflected in this study's progression through multiple model variants, where the sign and significance of rent coefficients shift depending on the inclusion of income and fixed effects. Taken together, the international literature and the present results reinforce the idea that high housing costs systematically deter mobility, even in diverse institutional contexts.

At the same time, this study helps clarify seemingly contradictory findings within the broader empirical landscape. The initial positive association between rent levels and net migration (Model 1) appears inconsistent with affordability constraints but is likely due to omitted variable bias. High-rent regions also tend to offer better labour markets and educational institutions. This finding mirrors the logic of push-pull theory (Lee, 1966; Greenwood, 1997), in which urban centres simultaneously attract migrants with strong opportunities and repel them with high living costs. When income and fixed effects are added, the positive association disappears and is replaced by a significant negative coefficient, indicating that high rents do indeed deter migration when underlying economic opportunities are held constant. This confirms the importance of controlling for confounding factors when analysing the role of housing in migration behaviour.

The consistently positive effect of housing supply across all model variants is another important contribution. It suggests that increasing the stock of multi-dwelling rental housing may ease affordability pressures and enable more young adults to relocate to attractive regions. This supports Lind and Kalbro's (2020) argument that new construction, especially of so-called "basbostäder" or entry-level units, is crucial to achieving socially sustainable urban development. It is also consistent with findings from Plantinga et al. (2013), who link increased housing stock to greater mobility. These results have direct policy relevance and suggest that supply-side interventions could mitigate affordability-driven immobility, particularly among youth.

The insignificance of income in the fully specified model provides a noteworthy contrast to conventional assumptions about migration drivers. While income levels are often treated as key pull factors, the results here suggest that annual wage variation may be less influential than regional structural characteristics such as institutional capacity, housing access, or urban form. This observation is in line with Westerlund (1997), who found that employment opportunities and job creation were more significant predictors of migration than wage differentials. Similarly,

the marginal significance of student population levels indicates that while educational institutions can attract young adults, their influence may be secondary to housing market conditions, particularly when housing near campuses is in short supply or unaffordable.

Finally, the descriptive and visual analysis reinforces the statistical results by offering intuitive, accessible evidence of the rent-migration relationship. The scatterplot shows a clear downward trend, confirming that counties with higher rental prices tend to experience lower net youth migration. Although some counties deviate from the trend, often due to large student populations or unique labour market characteristics, the overall pattern is robust. This visual evidence not only complements the regression models but also underscores the structural nature of affordability constraints. It suggests that affordability is not merely a statistical artifact but a visible and policy-relevant determinant of regional population change.

In summary, the findings of this thesis broadly support and extend previous research. Housing affordability appears to meaningfully constrain the internal mobility of young adults in Sweden, even in a context with strong welfare provisions and regulated rental markets. The results align with both national and international literature and contribute empirical support to theoretical models that view migration as a function of both opportunity and constraint. By linking housing costs to youth migration across all Swedish counties over a nine-year period, this study underscores the importance of integrating housing policy with regional development and youth mobility strategies

5.5 Contributions

This thesis makes several contributions to the study of internal migration and housing affordability in Sweden, particularly with regard to the mobility patterns of young adults. While prior research has established that young people are the most mobile demographic group and that urban regions continue to attract large inflows, relatively little empirical work has examined the causal effect of housing affordability on youth migration across all Swedish counties. By addressing this gap, the study contributes to both the national and international literature in three primary ways.

First, the thesis provides new empirical evidence on how regional rental housing costs influence internal net migration among young adults aged 20-29. While earlier studies have highlighted

rising housing costs in metropolitan regions, few have systematically quantified their impact on migration flows at the subnational level. The results show that, when controlling for income, housing supply, and education-related factors, higher rents are significantly associated with lower net migration among young adults. This finding suggests that housing affordability is not merely a secondary consideration but a central factor shaping access to opportunity-rich regions.

Second, the study offers a methodological contribution by applying a two-way fixed effects regression model to a balanced panel dataset spanning 21 counties over a nine-year period (2016-2024). This approach enables the isolation of within-county variation in housing costs and migration flows, while accounting for unobserved heterogeneity across regions and time. The inclusion of relevant control variables, such as completed dwellings, average income, and student population, strengthens the robustness of the findings and provides a more nuanced understanding of the factors driving youth migration.

Third, the thesis contributes to theoretical discussions by demonstrating how structural housing constraints interact with individual decision-making, as framed by push-pull theory and human capital theory. The findings support the argument that affordability functions as a spatial barrier, reducing the ability of younger, less economically secure individuals to migrate toward high-opportunity areas. This reinforces the idea that internal migration is shaped not only by potential gains in education or employment, but also by the costs and constraints associated with accessing those opportunities.

In conclusion, this thesis contributes to a more comprehensive understanding of internal migration dynamics in Sweden by integrating housing affordability into the analysis of youth mobility. It also provides a foundation for future research and policy debates on how regional housing markets may support or hinder spatial access to opportunity for younger generations.

5.6 Limitations

Even though this thesis provides meaningful insights into the relationship between housing affordability and youth internal migration in Sweden, several limitations should be acknowledged to clarify the scope and interpretation of the findings.

To begin with, although the panel dataset covers all 21 Swedish counties from 2016 to 2024 and is strongly balanced, the use of county-level data may mask important variations within counties.

Large and diverse regions such as Stockholm or Västra Götaland contain both high-cost urban centres and lower-cost peripheral municipalities. As a result, aggregated data may understate spatial inequality or misrepresent localised dynamics in migration and housing affordability. In addition, the measurement of rent is based on average cost per square meter in multi-dwelling rental units. While this proxy provides consistency across regions and time, it does not fully capture the actual affordability faced by individuals. Rent data do not reflect variation in housing unit size, condition, or tenure security, and they omit relevant financial factors such as disposable income, housing subsidies, or access to informal rental arrangements. As a result, the measure of affordability may be imprecise in capturing the lived economic burden of housing among young adults. Moreover, while the use of a two-way fixed effects model helps mitigate bias by controlling for unobserved time-invariant regional characteristics and national-level shocks, there remains a risk of omitted variable bias. Factors such as transportation connectivity, quality of education institutions, or the availability of student housing may influence migration decisions but are not included in the model. Additionally, the model is not designed to capture potential feedback effects, such as the possibility that migration itself influences local housing markets or housing policy responses over time. Another important consideration is the time frame of the study. Although the dataset spans nine years, the period includes structural and cyclical fluctuations such as the COVID-19 pandemic, which may have temporarily affected migration behaviour, housing construction, and residential preferences. While the inclusion of year fixed effects helps control for such macro-level disruptions, the long-term behavioural consequences of events like the pandemic are difficult to separate from broader structural trends. Finally, the thesis adopts a quantitative and regional focus, which is valuable for identifying macro-level patterns but does not address individual-level motivations or decision-making processes. Factors such as social networks, family support, lifestyle preferences, or risk perceptions are not observable in the available data, even though they may strongly shape migration outcomes. As such, the findings should be interpreted as describing structural tendencies rather than deterministic effects at the individual level.

6. Conclusion

6.1 Research Aims and Objectives

The central aim of this thesis was to explore whether regional housing affordability shapes internal migration patterns among young adults in Sweden in a measurable and meaningful way. More specifically, it sought to investigate whether high rental costs limit the ability of people aged 20 to 29 to relocate within the country and whether other regional characteristics - such as housing supply, local income levels, and the presence of universities - help explain variations in youth migration flows. The study placed housing affordability not as a background issue, but as a core structural factor influencing regional demographic change.

Grounding the investigation in push-pull theory and human capital theory allowed for a more grounded interpretation of internal migration decisions. Migration is not only about where people want to go, but whether they can afford to get there and stay. This thesis therefore aimed to connect abstract theoretical expectations with tangible, lived realities facing young adults in Sweden.

The research was guided by five interrelated objectives that shaped the structure and analytical approach of this study. First, the study aimed to construct a consistent and comprehensive panel dataset covering Sweden's 21 counties from 2016 to 2024. This involved integrating county-level data on internal migration, rental prices, housing completions, income levels, and university participation in order to support a robust quantitative analysis. Second, the study set out to estimate the causal impact of regional rental prices on net internal migration among young adults aged 20-29. To achieve this, it employed a two-way fixed effects regression model that could isolate the effect of rent levels while accounting for unobserved time-invariant regional characteristics and national-level temporal shocks. Third, the study included additional explanatory variables such as average salary, housing supply, and higher education engagement, to control for potential confounding influences and to test whether these factors independently shaped youth mobility patterns. Fourth, the empirical results were interpreted through the lens of push-pull theory, human capital theory, and multiple additional studies made on the subject of internal migration that emphasize the roles of opportunity, constraints, and life-course decisions in migration behavior. Finally, the study aimed to position its findings within both the Swedish

and international literature on internal migration, assessing to what extent the observed dynamics reflect broader trends or country-specific institutional features. To situate the findings within the broader literature, both Swedish and international, to assess what is specific and what is general about the observed patterns.

All five objectives were successfully fulfilled. The fixed effects regression models showed a statistically significant negative relationship between rent levels and youth migration, even after accounting for other important regional characteristics. The findings suggest that affordability does matter. Moreover, the consistent and positive effect of housing completions supports the idea that improving supply conditions can offset cost pressures and enable mobility. The weaker results for salary and university presence may reflect that even when income or education opportunities are available, housing access remains a decisive gatekeeper.

6.2 Addressing the Research Question

The central research question guiding this thesis was: "To what extent do changes in regional rental housing costs influence internal net migration among young adults (aged 20-29) across Sweden's counties between 2016 and 2024?" The findings provide a clear and evidence-based answer: changes in rental housing costs significantly influence internal net migration among young adults, and the effect is both statistically robust and substantively meaningful.

The two-way fixed effects regression model revealed that, when controlling for structural differences between counties and national trends over time, higher average rent levels are associated with a statistically significant decrease in net migration among individuals aged 20-29. Specifically, an increase in rent per square meter is linked to a reduction in net youth migration, suggesting that rising housing costs act as a deterrent to in-migration or as a push factor for out-migration. Importantly, this effect persists even when accounting for potential confounding factors such as average salary, housing supply, and university participation. While regions with strong labor markets or educational institutions are often assumed to attract youth, this study shows that such pull factors are not sufficient to retain or attract young adults if housing costs are prohibitively high. In contrast, the presence of newly constructed housing - especially in multi-dwelling rental buildings - consistently correlates with increased net youth migration, indicating that adequate supply can partially offset affordability pressures. The strength of the relationship

between rent levels and migration outcomes was further reinforced through graphical analysis (Figure 1), which showed a clear negative trend between county-level rents and net youth migration. Even when visually accounting for potential outliers or special cases (such as university towns), the overarching pattern remains clear: higher rents correspond with lower net gains or higher net losses of young residents. Taken together, the results demonstrate that changes in regional rental housing costs are not peripheral but central to understanding the geography of youth mobility in Sweden. The findings suggest that affordability is not merely a background condition, but a threshold factor that actively shapes whether and where young people move. This conclusion is in line with international research and extends those insights to the Swedish context using detailed and recent data.

In short, this study provides empirical evidence that regional rental costs significantly influence net migration among young adults. The findings show that affordability constraints are a key factor in shaping who moves where, when, and why - and they call attention to the structural nature of these constraints in a national housing market characterized by undersupply, rent regulation, and rising urban demand.

6.3 Practical Implications

The findings of this study are not only relevant for academic debate, but also for decision-making by planners, local governments, housing authorities, and national policymakers. The message is simple but critical: economic and educational opportunities are not enough if people cannot afford to live near them. Moreover, to attract and retain young adults in especially competitive urban regions, municipalities must treat housing affordability as a key strategic concern. This might involve increasing the construction of small rental units, streamlining planning processes, supporting non-profit developers, and easing regulations that block densification in central areas. Without these steps, regions risk missing out on the contributions of younger residents, both economically and socially. Furthermore, the weak association between university participation and youth migration further suggests that educational pull factors can be neutralized by housing barriers. If students cannot afford to live near campus, they may commute long distances, choose to study elsewhere, or rely on temporary arrangements. Over time, this may affect not only enrollment but also local innovation capacity and graduate retention.

Beyond economics, these results also raise questions about fairness. Many young adults do not have family support to fall back on when housing is unaffordable. If rental prices prevent them from living independently or accessing opportunity-rich regions, existing inequalities may deepen. Addressing affordability is therefore not just about mobility, but about social inclusion and intergenerational equity.

6.4 Future Research

This thesis opens several avenues for future research. Although the analysis covered all counties in Sweden, county-level data may be too broad to capture finer-grained differences. Future studies should examine migration dynamics at the municipal or neighborhood level to identify local effects more clearly. Another area for improvement is the use of net migration as the dependent variable. While net migration provides a useful summary, it conceals differences between in- and out-migration. Disaggregating these flows could clarify whether high rents deter arrivals, encourage departures, or both. Additionally, individual-level data would help move closer to causal interpretation. While this study controls for unobserved regional and temporal effects, richer data on individual characteristics - such as education, income, household structure, and financial background - would allow for more precise modeling of how young people respond to housing costs. It would also be useful to explore how institutional features of Sweden's housing system interact with migration behavior. Issues like rent control, allocation systems, queue lengths, and informal rental markets likely shape affordability in ways that average prices alone cannot capture. Combining quantitative and qualitative methods may offer a fuller picture of the constraints facing young movers. Finally, future work could examine how housing affordability interacts with other aspects of precarity, such as job insecurity or student debt. Migration is rarely shaped by one factor alone. A more holistic model that reflects the complex realities of young adulthood would strengthen both the academic and policy relevance of this field.

6.5 Chapter Summary

This final conclusive chapter has revisited the aims and objectives of the study, reflected on the main results, and considered their practical significance and theoretical relevance. The core message is that housing affordability matters for internal migration - not marginally, but

substantially. Without accessible rental housing, even opportunity-rich regions may struggle to attract or keep young adults.

The study makes a strong case that regional population flows are not just shaped by labor markets or universities, but by structural housing conditions that either enable or constrain mobility. In doing so, it has contributed empirical insights to the Swedish context and reinforced findings from other European countries facing similar pressures. The thesis has met its research objectives through careful data construction, transparent statistical analysis, and a clear theoretical framework. The conclusions drawn are based on statistical evidence and point to actionable recommendations for both researchers and policymakers. In the end, enabling young people to move where the opportunities are (and stay there) depends not only on jobs or education, but on having somewhere they can afford to live. Recognizing this is essential for building inclusive, sustainable, and thriving regions in contemporary Sweden.

References

Amcoff, J. and Westholm, E., 2007. Understanding rural change: Demography as a key to the future. *Futures*, 39(4), pp.363-379.

Bernard, A. and Kolk, M., 2020. Are young Swedes moving more? A cohort analysis of internal migration by move order. *European Journal of Population*, 36(3), pp.601-615.

Bostadsförmedlingen i Stockholm, 2023. *Statistik om kötider och tilldelning*. [online] Stockholm: Bostadsförmedlingen. Available at: https://bostad.stockholm.se/statistik/summering-av-aret-2023/ [Accessed 4 May 2025].

Boverket, 2016. *Bostadsmarknadsenkäten 2016*. [online] Stockholm: Boverket. Available at: https://www.boverket.se/sv/om-boverket/oppna-data/bostadsmarknadsenkaten/ [Accessed 3 May 2025].

Boverket, 2019. *Bostadsmarknadsenkäten 2019*. [online] Stockholm: Boverket. Available at: https://www.boverket.se/sv/om-boverket/oppna-data/bostadsmarknadsenkaten/ [Accessed 3 May2025].

Boverket, 2022. *Bostadsmarknadsenkäten 2022*. [online] Stockholm: Boverket. Available at: https://www.boverket.se/sv/om-boverket/oppna-data/bostadsmarknadsenkaten/ [Accessed 3 April 2025].

Boverket, 2023. *Bostadsmarknadsenkäten 2023*. [online] Stockholm: Boverket. Available at: https://www.boverket.se/sv/om-boverket/oppna-data/bostadsmarknadsenkaten/ [Accessed 3 May 2025].

Cameron, G. and Muellbauer, J., 1998. The housing market and regional commuting and migration choices. *Scottish Journal of Political Economy*, 45(4), pp.420-446.

de Haas, H., 2010. The internal dynamics of migration processes: A theoretical inquiry. *Journal of Ethnic and Migration Studies*, 36(10), pp.1587-1617.

Eliasson, K. and Westerlund, O., 2024. Housing markets and geographical labour mobility to high-productivity regions: The case of Stockholm. *European Urban and Regional Studies*, 31(3), pp.259-280.

Greenwood, M.J., 1997. Internal migration in developed countries. In: M.R. Rosenzweig and O. Stark, eds. *Handbook of Population and Family Economics*. Vol. 1B. Amsterdam: Elsevier, pp.647-720.

Lee, E.S., 1966. A theory of migration. *Demography*, 3(1), pp.47-57.

Lind, H. and Kalbro, T., 2020. *Socialt hållbar bostadsförsörjning i Stockholms stad: Tänkbara strategier*. Stockholm: Kommissionen för ett socialt hållbart Stockholm.

Moretti, E., 2011. Real wage inequality. *American Economic Journal: Applied Economics*, 3(2), pp.129-151.

Plantinga, A.J., Détang-Dessendre, C., Hunt, G.L. and Piguet, V., 2013. Housing prices and inter-urban migration. *Regional Science and Urban Economics*, 43(2), pp.296-306.

Sandow, E. and Lundholm, E., 2019. Which families move out from metropolitan areas? Counterurban migration and professions in Sweden. *European Urban and Regional Studies*, 27(3), pp.276-290.

Sjaastad, L.A., 1962. The costs and returns of human migration. *Journal of Political Economy*, 70(5), pp.80-93.

Statistiska centralbyrån (SCB), 2024a. *Inrikes flyttningsöverskott efter region, ålder, kön och år*. [online] Stockholm: SCB. Available at:

https://www.statistikdatabasen.scb.se/pxweb/sv/ssd/START__BE__BE0101__BE0101J/Flyttningar97/table/tableViewLayout1/[Accessed 2 May 2025].

Statistiska centralbyrån (SCB), 2024b. *Medelhyra i hyreslägenhet efter region, hyresuppgift och år*. [online] Stockholm: SCB. Available at: https://www.statistikdatabasen.scb.se/goto/sv/ssd/BO0406Tab01 [Accessed 2 May 2025].

Statistiska centralbyrån (SCB), 2024c. *Genomsnittlig månadslön, kronor efter region, sektor, yrke (SSYK 2012), kön och år*. [online] Stockholm: SCB. Available at: https://www.statistikdatabasen.scb.se/pxweb/sv/ssd/START__AM__AM0110__AM0110A/LonYrkeRegion4A/table/tableViewLayout1/[Accessed 2 May 2025].

Statistiska centralbyrån (SCB), 2024d. *Färdigställda lägenheter i nybyggda hus efter region, hustyp och år*. [online] Stockholm: SCB. Available at: https://www.statistikdatabasen.scb.se/pxweb/sv/ssd/START__BO__BO0101__BO0101A/LghReHustypAr/table/tableViewLayout1/[Accessed 2 May 2025].

Statistiska centralbyrån (SCB), 2024e. *Studenter på universitet och högskolor efter bostadslän, studielän, kön och år*. [online] Stockholm: SCB. Available at: https://www.scb.se/hitta-statistik/statistik-efter-amne/utbildning-samt-forskning-inom-hogskolan/hogskolevasende/studenter-och-examinerade-i-hogskoleutbildning-pa-grundniva-och-avancerad-niva/?menu=open [Accessed 2 May 2025].

Stawarz, N., Sander, N. and Sulak, H., 2021. Housing affordability and internal migration in Germany: A panel data approach. *Population, Space and Place*, 27(6), e2429.

Westerlund, O., 1997. Employment opportunities, wages and interregional migration in Sweden 1970-1989. *Journal of Regional Science*, 37(1), pp.55-73.