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DO NEW STUDENT RENTALS AFFECT OTHER HOUSING SUBMARKETS? EVIDENCE FROM CHAMPAIGN-URBANA

BY

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THESIS

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ABSTRACT

This paper explores the relationship between student rental housing and other submarkets. I use Champaign-Urbana, Illinois as my case study area — home to the flagship University of Illinois campus. I examine university enrollment data from 1980 to 2018 to track demographic changes in the student population. Then I use decennial census and American Community Survey 5-year estimates from 1990 on to determine the spatial distribution of student renters over time. Finally, I examine shifts in the distribution of rents to determine how the movement of students has affected what Champaign-Urbana's landlords charge across the metropolitan area. I find evidence that a highly visible expansion of luxury student housing since 2008 in Champaign's university adjacent Campustown area has thus far accommodated student growth without spillover to other neighborhoods. Over the past four decades, enrollment at the University has increased rapidly, with much of that growth due to international and out-of-state students, and particularly students from Asia. This occurred parallel to substantial tuition increases — a reaction to decreasing state appropriations for higher education. Because international and out-of-state students pay higher tuition rates and are less likely to receive financial aid, I infer I that they also have access to enough income to afford high rents. As enrollment skyrocketed, decades of public investments and regulatory decisions by the City of Champaign enabled the development of new, high-rise housing in Campustown. This included infrastructure upgrades that nullified the risk of flooding in the area, which lessened risk for developers seeking to build large-scale projects. Together, this incentivized denser development near campus. Areas of Champaign-Urbana with more constrained land use regulations did not see a similar increase in student renter populations, although the neighborhood just north of Campustown has begun to attract more students than in the past.

As Campustown has absorbed higher densities of student renters, I also find areas near campus contain disproportionate numbers of housing units in the top rent quartile for Champaign County. Rents in the area often top $1,000. I conclude that the student housing boom that began around 2008 and continues today is a direct builder response to the University's courtship of upper-income students from the U.S. and abroad. This boom has added a new segment to the metropolitan housing market, essentially making room for new students close to campus with little spillover into surrounding areas. As this boom occurred, the City's regulatory, infrastructure, and placemaking actions funneled growth to one neighborhood.

Because student demographic changes have an impact on housing demand, planners in college towns may benefit from increased coordination with University administrations. In addition, flexible land use regulations, along with strategic investments in infrastructure, can make certain neighborhoods favorable for student housing development, thereby shielding nearby residential areas from the effects of studentification. That said, planners should be mindful of which

boundaries to student neighborhoods are most porous, especially since luxury student housing can push rents upward — something that could have negative effects for existing residents.

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CHAPTER 1: INTRODUCTION

INTRODUCTION AND CASE OVERVIEW

Those traveling to Champaign-Urbana by highway know when they are nearing their destination. After miles of flat farmland, a smattering of high-rise buildings rises in the distance. These buildings are relatively new, the result of changing student appetites, land use regulation, and financial market trends that converged after the Great Recession. But their purpose is an old one — providing a home to students during their studies at the flagship University of Illinois campus.

New student apartments have altered Champaign's skyline, making the once-sleepy college town the site of Illinois' densest neighborhoods outside Chicago. Advertising for these buildings depicts swimming pools, rooftop decks, granite countertops, and in-unit washers and dryers — images that contrast with student accommodations from decades past. This thesis project does not focus on the circumstances of their construction. Instead, the analysis here considers the implications of new student rentals for the residents of Champaign-Urbana, students and nonstudent residents alike.

Using Champaign-Urbana as a case study, this thesis attempts to quantify the degree to which new student rentals affect Champaign-Urbana's other rental submarkets. The analysis here centers on three major questions related to who students are, where they live, and how they affect the cost of housing locally. Because conditions at the University of Illinois and in Champaign-Urbana resemble those in college towns across the U.S., this case study offers lessons for planners outside the local context.

I demonstrate that University enrollment policies affect rental market demand in college towns, because the size of the student population, as well as students' purchasing power, influence the local housing market. Developers build housing based on perceptions of student demand — including students' appetite for amenities and their location preferences. Furthermore, understanding where students have concentrated over time illustrates the local market's ability to accommodate students' housing needs. If student renters spread beyond the boundaries of traditionally student-centric neighborhoods, this has implications for nonstudent renters. Where student and nonstudent submarkets butt up against each other, his could affect housing costs. Affordability is at stake where students compete for others for the same rental units.

All of this presents unique challenges for planners in college towns. In addition to describing trends in the local student housing market, this thesis includes takeaways for practitioners who seek to accommodate student rental demand in a way that avoids climbing rents for students and nonstudents alike.

RESEARCH QUESTIONS AND SUMMARY OF RESULTS

Research Question 1: How Has the Student Body at the University of Illinois Changed Over Time?

The first research question in this thesis asks how the student body at the University of Illinois has changed from 1980 on. I do this to uncover who students are and where they come from — the first step in understanding the local student rental submarket. I explore this question using University enrollment data, as well as U.S. decennial census and American Community Survey estimates for Illinois.

I find that enrollment at the University of Illinois has mirrored trends seen at large, public universities throughout the U.S. Administrators' institutional decisions have the potential to infuse renters into the local housing market. Together, levels of in- and out-of-state enrollment, the cost of tuition and room and board, and policies determining when students may move off campus all contribute to where UIUC's students rent and how much they are able and willing to pay for housing.

Over the decades, the undergraduate and graduate student bodies have both grown. While the number of in-state students has fallen slightly, a large influx of out-of-state domestic students and international students has driven this growth. Students from Asia – and China specifically – make up the majority of international student enrollment. Increasingly, out-of-state domestic students enroll from states outside the Midwest, as well as states with higher median household income than Illinois. Enrollment has shifted as income inequality in Illinois has increased, resulting in a pool of domestic students with greater financial need, as well as a population of students from affluent families.

At the same time, the Board of Trustees has increased tuition, as well as room and board charges. Like at other large, public institutions, out-of-state and international students pay higher tuition rates at the University of Illinois. International students, specifically, are also unlikely to receive financial aid. However, the high cost of a University of Illinois education has not deterred these students from enrolling by the thousands. This demonstrates a growing population of students able and willing to pay a premium for a college degree. I conjecture that this buying power may also manifest on the local housing market, with affluent students able to demand higher-amenity housing in prime locations.

Research Question 2: How has the Spatial Distribution of Student Renters Changed?

The second research question examines how the spatial distribution of student renters has shifted from 1990 to 2018. Understanding where student renters concentrate in the local housing market demonstrates the degree to which studentification (Smith, 2008) has occurred in

Champaign-Urbana. If students have remained constrained to certain neighborhoods, this indicates the student rental submarket is meeting student demand for housing. But if students have moved into new neighborhoods over time, this could indicate two possibilities — first, that student renters have struggled to find adequate housing in their preferred neighborhoods, and second that developers have attracted pioneering students to new neighborhoods by offering a desirable housing product there.

To test the second research question, I examine decennial census data for 1990 and 2000, as well as American Community Survey 5-year estimates for 2006-2010 and 2014-2018. I divide Champaign-Urbana into six subareas and build a Student Rental Index to approximate the popularity of each subarea with student renters. In addition, I examine undergraduate student and graduate student populations at the subarea-level, as well as the concentration of renter households and foreign-born residents.

I find that the traditional boundaries to Champaign-Urbana's student enclave have mostly held up over the decades. Student renters — and especially undergraduates — consistently cluster in areas near the University of Illinois campus. Champaign's Campustown and Midtown neighborhoods, specifically, have seen their population densities rise as growing numbers of students move to the neighborhood. To the west and east of the near-campus area, student populations remained stable, even as enrollment infused thousands of new student residents into the local housing market.

That said, students are now more likely to live just north of Champaign-Urbana's traditional student neighborhood. This suggests one boundary to the student enclave is more porous than others. The northward spread of student renters occurred as students rented suburban-style apartments located about two miles from the main quad. In recent years, developers have also shown a willingness to build student apartments just across the northern edge of the student enclave. This has occurred with no significant net displacement of nonstudent residents.

Research Question 3: How Have Student Rentals Affected Rents Throughout Champaign-Urbana?

The third research question in this thesis considers how the spatial concentration of Champaign-Urbana's students has affected the cost of rental housing from 2000 to 2018. This time range encompasses the housing boom in Champaign's Campustown and Midtown neighborhoods, where developers have constructed luxury high-rise and midrise buildings. Examining changing rents in conjunction with student housing development shows whether filtering has occurred in the local housing market. That is, have new, high-cost housing options

caused older apartments to drop in price? If so, increased student buying power and demand in the student rental submarket could have implications for housing affordability in Champaign-Urbana. I also examine whether impacts from student rentals have affected the wider housing market outside the boundaries of the student enclave.

Using the six subareas defined for the second research question, I used decennial census data for 2000 and American Community Survey 5-year estimates for 2006-2010 and 2014-2018 to track changes in rents. I compared each subarea's share of rental units within Champaign County's rent quartiles for each year. I also calculated median, lower quartile, and upper-quartile rents for each subarea on its own. This allowed me to determine where rents were rising or falling, and at what price points.

I find that new luxury student rentals are associated with rising rents, specifically for apartments leasing at the most expensive price points. Furthermore, neighborhoods experiencing an influx of luxury student apartments show a wide discrepancy between the least expensive quartile of rents and the most expensive. As new student rentals came online near campus they were able to command high rents. Local developers may also have attempted to cash in on students' preference for new, high-amenity apartments by renovating units. Still, the glut of supply in Campustown and Midtown may have stabilized rising rents for student apartments in the north. At the same time, neighborhoods with low concentrations of students have not seen housing costs disrupted as new student apartments came up. This shows the student rental submarket is distinct. It also suggests enabling students to concentrate in certain neighborhoods may shield other residential areas from rising rents.

TAKEAWAYS AND CONCLUSION

Considered together, the dynamics of the local student rental submarket have implications for planning practice. First, the results of this thesis underscore that changing student demographics fuel housing demand in college towns. Understanding how university enrollment and housing policies interface with the local housing market is key for calibrating supply and demand near campus.

In Champaign's case, the local student population grew by nearly 15,000 between 1980 and 2018. These additional students needed somewhere to live. Because the City of Champaign had eased land use regulations and invested in infrastructure near campus, developers were able to build to meet growing demand for housing. If new housing units had not existed to absorb the growing student population, students may have pushed into traditionally nonstudent neighborhoods, resulting in studentification. This indicates that land-use decisions can shield the

wider housing market from the types of disruptions inherent when students concentrate in a neighborhood. As this thesis will demonstrate, those disruptions include changes to rents.

Finally, because student rentals affect rent trends at the neighborhood scale, planners in college towns should be mindful of the edges of student enclaves. If some borders are less penetrable than others, this could indicate certain neighborhoods need tools to give them a say over the location and size of student housing near them.

In the chapter that follows I will provide context for the findings in this thesis by examining literature related to higher education trends, studentification, housing submarkets, and filtering and affordability. Then, in chapter three, I describe the data and methods I used for my analysis. In chapter four I use University of Illinois data to describe changes in enrollment and the student body from 1980 to 2018. The analysis in the next chapter will begin with a brief history of student housing at the University of Illinois, as well as a look into student housing typologies from the 1980s on. Then I will use demographic information related to students to track the geographic distribution of students throughout Champaign-Urbana from 1990 to 2000. In chapter five I will explore changing rents in six areas of Champaign-Urbana in 2000, 2010, and 2018. I will also tie the movement of student renters to the changing cost of housing throughout the metro area. In chapter six I will examine what changing student demographics, the spatial distribution of student rentals, and housing costs say about the local student rental submarket. Finally, I will discuss takeaways for planners in college towns, based on my conclusions about Champaign-Urbana's student rentals.

CHAPTER 2: LITERATURE REVIEW

INTRODUCTION

Studentification: College Students as a Disruptive Force in Local Housing Markets

Studentification is the traditional process through which the student rental submarket interacts with nonstudent submarkets in college towns. Studentification describes the impact of large numbers of college students moving into established residential neighborhoods (Smith, 2008). The transition from a nonstudent to a student-centric area comes with specific social, economic, and cultural changes, as well as physical transformations to the built environment (Smith, 2008). These include an increase in multifamily housing, as well as rising numbers of young adults living with roommates in shared housing (Bailey, 2009). The cycle completes when these nonstudents move out of so-called “student ghetto” or “student enclave” neighborhoods. This allows the “studentification frontier” to spread, butting up against new, previously nonstudent areas (Sage, et al., 2012).

Other characteristics of studentification include population churn as students, who are transient compared to other households, move into and out of studentified neighborhoods (Sage, et al., 2012). Higher education policy is a sometimes overlooked driver of studentification. Enrollment growth, specifically, infuses surplus students into the housing market. This, in turn, forces student renters into previously nonstudent neighborhoods unless student housing supply grows on campus or in established student enclaves (Nakazawa, 2017).

Many authors contend that the distinction between student renters and young adult gentrifiers is becoming blurred (Hubbard, 2009; Smith, 2008; Moos, 2016). Others point to the commodification of student and youth lifestyles (Smith & Hubbard, 2014). However, framing students as “apprentice gentrifiers” could be problematic, because it implies student renters are homogenous, predominantly white and middle class or wealthy. Growing enrollment of international students, as well as greater ethnic and socioeconomic diversity among undergraduates, complicates this framing (Nakazawa, 2017).

The bulk of studentification studies have occurred in the U.K., along with some case studies in Australia, Canada, and the U.S. Studentification manifests differently in different countries, partly due to differing cultural expectations about students leaving home to attend college (Garmendia, et al., 2012). In the U.K., studentification initially occurred as students moved into “houses in multiple occupancy,” where unrelated students lived together in formerly single-family homes (Smith, 2008).

That said, some similarities exist in the types of housing associated with student populations. For example, the predominant housing typology suited to students is multifamily

units (Rugg, et. al., 2002). Studentification studies from the U.K. describe the partitioning of single-family housing into multifamily units, associated with outmigration of families who previously occupied these single-family homes (Rugg, et. al, 2002). As the concentration of student renters in an area intensifies, this leads to a shortage of properties suitable for conversion to student apartments.

A relatively new iteration of studentification involves the construction of new housing specifically designed for and marketed to student renters. College towns in the U.K., U.S., and Canada have experienced the emergence of so-called purpose-built student accommodations (PBSAs). In international contexts, developers have located this housing on brownfield sites away from the urban core. Planners in college towns may have encouraged this as a method of containing student populations, whom locals often perceive as a nuisance population (Sage, et al., 2012). This is one example of how planners can influence the location and form of student housing through local land use regulations (Revington, 2021).

This strategic location of student housing is a reaction to the social red flags that accompany studentification. These manifest through neighborhood-level complaints about student behavior, including an uptick in noise complaints, as well as issues with garbage and waste disposal. Furthermore, community members may voice concerns about neighborhood aesthetics and housing market dynamics. Residents may voice concerns about overbuilding, as well as fears about student housing developers out-bidding families and first-time homebuyers (Sage, et. al 2012). Sage, et. al describe the “studentification threshold” at which neighborhood opposition to influxes of students becomes formalized (2012). In addition to mitigating town-and-gown conflict, construction of student housing away from preexisting residential neighborhoods could also cut down on displacement resulting from student housing development (Revington, 2018; Hubbard, 2009; Nakazawa, 2017).

The development of PBSAs has gained momentum as investors and housing developers seek to tap the student renter market by building housing units marketed toward students specifically. At the same time, universities have increasingly undertaken placemaking efforts as marketing strategies, including neighborhood revitalization efforts near campus (Ehlenz, 2019). To attract student renters, new-build apartments often include amenities, such as private bathrooms, gym facilities, and social spaces, designed to lure in student renters (Smith and Hubbard, 2014).

Many studies on studentification focus on student consumption, rather than on housing production, overemphasizing demand oversupply. However, students’ housing options are typically “geographically, financially, and institutionally predetermined” because students are limited to what they can afford proximate to campus (Nakazawa, 2017). To this point, the rise of

amenity-rich housing for students is a side effect of the financialization of student housing development. Because student housing is countercyclical, investors—including real estate investment trusts—have considered it a safe bet (Revington & August, 2020). In turn, luxury student apartments may have negative implications for student renters because of the high rents they command. Rising levels of student debt could be associated with the high cost of purpose-built student apartments (Revington & August, 2020). At the same time, PBSAs could take pressure off studentifying neighborhoods if students choose to self-segregate in new, student-focused apartments away from nonstudents (Hubbard, 2009).

In their research on studentification in the U.K. city of Brighton, Sage, et. al demonstrate how the private rental market there resulted in ample supply, and even oversupply, of student housing options. This enabled the residential mobility of student renters. The abundance of housing options allowed these students to select housing and neighborhoods that fit their distinct preferences (Sage, et al., 2012). In this way, student renters could command a set of amenities — as well as locations — that were unattainable to student renters in the past.

However, student renters do not always live in segregated neighborhoods. For example, students in one Spanish town took up residence in high-rise apartment buildings, a phenomenon dubbed “vertical studentification.” As a result, their presence was relatively invisible to their nonstudent neighbors (Garmendia, et al., 2012). This also suggests students can coexist with nonstudent residents, and that the type of housing they inhabit plays a role in enabling this. The myriad contexts in which student renters can live gave rise to the more encompassing concept of the “urban dormitory,” which consists of all privately rented accommodations housing students within an urban area (Revington, et al., 2020).

The student rental submarket may also interact with other local submarkets as housing stock in a neighborhood transitions away from student renters. Contrary to studentification, destudentification is the process by which neighborhoods that had transitioned to serve student populations in the past revert to occupation by nonstudent populations. This occurs as nonstudent tenants and families move into housing previously converted to student use (Kinton, et al., 2016). This transition is not a simple one — the changes needed to convert housing stock to student use are expensive and labor-intensive. This disincentivizes families from moving to areas that once housed large concentrations of student renters (Sage, et. al, 2012; Kinton, et al., 2012).

The movements of student renters may also influence conditions in nonstudent neighborhoods in the larger urban area. Foote associated studentification in U.S. college towns with changes in nonstudent neighborhoods, including growing numbers of wealthy

neighborhoods and a declining share of middle-class neighborhoods (2017). This demonstrates how the presence of students may shape the wider housing market.

Higher Education Trends: Rising Costs, Increasing Nonresident Enrollment

In the U.S., student buying power and the cost of higher education are interconnected. Over the years, tuition costs at institutions of higher education have risen disproportionately to income. Tuition at public 4-year colleges and universities jumped by about 35 percent since 2008 (Mitchell, et al., 2017). But as costs continue to climb, enrollment has also increased. Driving this is a sense of the importance of an undergraduate degree for earning potential (Mitchell, et al., 2017).

The upward trajectory of college costs in the U.S. has spiraled in large part because of decreasing taxpayer support for higher education at the federal and state levels. In response to falling state appropriations for higher education, universities have turned to tuition revenue to plug budget gaps. The proportion of education revenues from tuition revenue rose from 20.9 percent in 1908 to 44.0 percent in 2010 (Carlson, 2020). Historically, colleges and universities lean more heavily on tuition revenue during economic recessions (Carlson, 2020; Choudaha, 2017). However, appropriations are slow to bounce back after financial downturns. As of 2020, only 18 states reached pre-recession appropriations levels for higher education, according to the 2020 State Higher Education Finance report.

The process of setting tuition rates at state schools is based on economic and political factors. At public institutions, higher gross state product and median income are positively associated with higher state appropriations for higher education (Doyle, 2012). Other factors, such as conditions at nearby private universities and colleges, can affect state higher education spending. Rising enrollment at private schools is associated with increases in state appropriations for financial aid (Doyle, 2012). Tuition and appropriations are intertwined at public universities. The strong negative correlation between state appropriations and tuition levels demonstrates that appropriations affect tuition, but tuition drives state appropriations as well (Koshal & Koshal, 2000).

Although research shows rising tuition levels do affect student enrollment (Cai and Heathcote, 2018), many public universities are able to demand higher nonresident tuition than others without adverse impacts to enrollment (Baryla & Dotterweich, 2006; Adkisson & Peach, 2008). Baryla & Dotterweich (2006) found a significant positive correlation between nonresident undergraduate student enrollment and tuition costs. Researchers attribute this to the attractiveness of large flagship universities. In general, the cost of an out-of-state education is

less a factor for students crossing state lines than the perceived quality of the institution (Adkisson & Peach, 2008).

Public institutions of higher education view curbing rising in-state tuition rates as a mandate for several reasons. First, lawmakers may see affordable public education as a promise to taxpayers (Doyle, 2012). Furthermore, decision makers often frame accessible in-state higher education as an investment in human capital, since graduating students may choose to keep their talents in-state following graduation (Toutkoushian & Hillman, 2012). Diversity on college campuses may also benefit from manageable in-state tuition rates — a $1,000 increase at a four-year, non-selective school was associated with a 4.5 percent drop in diversity among full-time freshmen (Milea & Orozoco-Aleman, 2019; Allen & Wolniak, 2019).

State schools have changed their approach to housing students to insulate their budgets from shrinking appropriations. Public institutions now provide housing to smaller proportions of their enrolled students than they once did, relying on the private housing market to accommodate the overflow (Laidley, 2014).

Another increasingly common strategy among public institutions is the recruitment of out-of-state students. State institutions charge nonresident students higher rates to offset limitations to what they can charge in-state students for legal, contractual, and political reasons. As a result, public institutions compete for a limited supply of out-of-state enrollment (Gonzalez Canche, 2014).

Increasing the share of out-of-state students enables public institutions to shift the cost of education to these students (who usually pay full price) and away from in-state families (Baryla Dotterweich, 2006). In this way, levels of out-of-state enrollment determine what public universities charge in tuition for out-of-state and in-state students alike (Koshal & Koshal, 2000). Coupled with universities' decision to set tuition charges at a higher level than what in-state students pay, this represents one way U.S. universities seek to plug the budget hole created by falling state appropriations.

Reliance on nonresident students to prop up university budgets has also extended to growing enrollment of international students. From 1980 to 2017, international student enrollment has tripled at U.S. universities, making higher education a major export industry (Bound, et al., 2021). Choudaha (2017) identifies three waves of international student enrollment in the U.S. The first occurred in the late 1990s and early 2000s and corresponded with the rise of the information technology and communications technology fields. Students from abroad sought degrees that matched them with the high demand for skilled labor in these areas. During this first wave, many institutions offered financial aid to students from abroad, many of whom enrolled from countries

such as China, India, and South Korea (2017). In these decades, enrollment mainly occurred among graduate-level students (Choudaha, 2017; Bound, et. al, 2021).

However, in the second wave, which occurred during and immediately after the Great Recession, cash-strapped institutions could no longer provide financial aid to students from abroad. The financial crisis necessitated cuts in state appropriations to higher education. This led U.S. universities to recruit students from abroad (Baryla & Dotterweich, 2006). Large college-age populations in countries such as China and India offer an opportunity to U.S. institutions looking for a pool of enrollees willing and able to pay full tuition (Falcone, 2017). Increased enrollment of international students occurred in large numbers at large, state universities like the University of Illinois at Urbana-Champaign (Bound, et al., 2021).

Because this wave of international enrollment corresponded with the growth of the Chinese middle class (Choudaha, 2017; Falcone, 2017), U.S. universities had a growing pool of students willing and able to pay full price to attend. Other conditions in China gave way to an increase in Chinese students seeking college degrees from U.S. institutions. First, China's one-child policy means families generally only have one child to send to college, meaning they can pool their resources to afford tuition abroad. In addition, reforms to the county's education system increased the number of slots at Chinese universities. However, this increase in the supply of higher education also came with a perceived reduction in quality (Bound, et. al 2021; Falcone, 2017).

The second wave of international student enrollment occurred among undergraduate students, while the previous wave centered on graduate enrollment. In contrast, the third wave, underway now, involves the Chinese economy's slowdown and the likely retraction of international enrollment to follow (Choudaha, 2017).

Stagnating incomes in the U.S. have complicated tuition setting for state institutions. Income inequality is on the rise (Pew Research Center, 2020; Sommeiller & Price, 2018). Educational attainment is one factor — higher levels of education can raise earning potential (Hill, 2016). However, income inequality also affects U.S. families' ability to afford higher education, tying together income differences and educational attainment in a vicious cycle. In the U.S., racial/ethnic groups demonstrate income inequality differently. White and Asian households exhibit higher average incomes, but also greater income inequality within their racial/ethnic group. In contrast, Black and Hispanic/Latinx households experience lower income inequality, but lower average incomes (Akee, et al., 2019). These distinctions could affect each group's ability to access higher education and pay for it.

Furthermore, income inequality has contributed to rising tuition across the U.S. Inequality fuels greater institutional spending on financial aid. Institutions fund this aid through tuition hikes (Hill, 2016). In addition, income inequality tempers state appropriations for higher education, since slow growth in incomes affects tax revenues, affecting state governments' willingness to spend (Hill, 2016). As discussed, shrinking appropriations, in turn, lead to further tuition hikes.

Students' Ability to Influence Housing Markets

Researchers hypothesize several additional ways the student renter submarket could affect local housing affordability. One possible effect student renters have on local populations is "exclusionary displacement," where rising rents due to the presence of student rentals block low-income residents from accessing affordable housing (Sage et al., 2013). In addition, student renters sharing housing can bump up their purchasing power in the local housing market. This can place upward pressure on rents as local landlords recognize the potential for shared accommodations to command higher prices (as well as a steady stream of potential tenants (Laidley, 2014).

Another way the student submarket could affect local rents is through filtering as new construction of student apartments occurs. Filtering is the process by which rental housing commands lower rents as units age. Filtering relies on the assumption that housing units naturally become accessible to lower-earning households as they age, contributing to affordability in a housing market (Rosenthal, 2014). This implies that increases in housing supply are the main factor moderating housing costs. Whether new construction of housing specifically intended for students contributes to filtering is unclear.

This is because student renters are often segregated from nonstudent residents and residentially concentrated in particular neighborhoods (Munro, et al., 2009; Smith & Hubbard, 2014). Students renting housing off campus often live in student enclaves geographically convenient to the university (Allinson, 2006). In addition, more affluent students may become even more cut off from nonstudent residents, as well as their own less affluent peers, as wealthy students access high-amenity housing out of reach to their peers with less affluent backgrounds (Smith & Hubbard, 2014). The presence of international students can lead to a different flavor of segregation, as foreign students cluster in certain apartment complexes away from domestic students (Nakazawa, 2017).

This segregation of student renters may inhibit the interplay of market dynamics among neighborhoods in university towns. This is because forces outside of simple supply and demand may drive rents in neighborhoods with a strong student identity. Increasing the supply of purpose-built student accommodations instead may constrain the housing options landlords

market to student renters (Revington, 2021). In this way, the association of certain housing — such as amenity-rich, high-rise apartments — with student renters exclusively can prevent an oversupply of rental units from tempering rents in other parts of the housing market. As Revington (2021) writes, “Increasing supply may not contribute to lower prices, as neoclassical economics predicts, if this housing can be identified with a particular discrete submarket. The greater the nonsubstitutability between submarkets, the less likely added supply will constitute to overall lower prices across the entire housing market” (p. 1245). This is because purpose-built student housing represents a “micro market” — local renters and landlords perceive this housing stock as partitioned from the general market and unsuitable for other populations (Anderson, 2019).

A Distinct Student Renter Submarket?

Housing submarkets are distinct, often (but not always) spatially defined housing markets within the larger local housing market (Galster, 1996; Jones, et. al, 2005). Researchers employ a variety of statistical techniques, including cluster analysis, to identify and track the interplay of housing submarkets (Hwang, 2005; Wu and Sharma, 2012). In addition to statistical techniques often used to identify housing submarkets, local expertise can also be accurate. The knowledge of local real estate agents, for example, can identify submarkets as accurately as clustering and other methods (Keskin & Watkins, 2017). Those researching submarkets often identify dwelling types and their locations within a housing market and link residents to those housing units. In this way, submarkets research attempts to understand the interplay of demand and supply-side activities in a housing market (Watkins, 2001).

One feature of housing submarkets is imperfect substitutability between housing in different submarkets (Hwang, 2005; Galster, 1996; Jones, et a., 2005). Housing units within a submarket can act as substitutes for one another but are not good substitutes for units in other submarkets. This is because housing within a submarket shares certain traits; these could include the type of housing unit, its location in the community, whether it is available for sale or rent, its condition and quality, and the amenities that come with it (Galster, 1996). Demand is also similar within a specific submarket, as people with similar housing preferences seek out housing that meets their needs (Watkins, 2001). Therefore, student renters represent consumers within their own housing submarket. Students will find housing that suits their needs and preferences within certain neighborhoods and housing typologies, but not others. This supports the existence of a student renter submarket.

Substitutability manifests within the wider housing market as households move from one dwelling unit to another that meets their preferences in a new neighborhood (Jones, et al, 2005).

In addition, “trading up” and “trading down” are common explanations for mobility throughout a housing market (Jones, et. al, 2005). The degree to which student renters “trade up” or “trade down” is unclear. Determining how often students occupy housing outside of traditional student neighborhoods could reveal how distinct the student submarket is. Simply put, influxes of students into previously nonstudent neighborhoods could reveal substitutability within a college town’s market. Conversely, instances where nonstudents begin to occupy housing built for students could erode the distinctness of the student rental submarket.

However, submarkets research has overlooked student rental submarkets (and other niche submarkets). Although some housing segmentation studies (DePaul University, 2018) focus on displacement and mobility due to gentrification — a cousin of studentification — students represent a niche group that behaves differently than traditional gentrifiers (Sage, 2013; Nakazawa, 2017; Revington, 2018).

In addition, the characteristics researchers typically use to identify housing submarkets do not easily describe student renters. These include household mobility data and income. Student cohorts only live in a housing market for a few years before leaving following graduation. Because of this, they consume housing in a unique way. Student renters depart their neighborhoods not to “trade up” within the housing market, but because they enter a new life stage (Revington, 2018). This limits the usefulness of mobility data on student households. In addition, college students often have little or no income (but considerable spending power within a housing market) (Laidley, 2014). Therefore, income data on students is not reflective of their status within a housing market. This demonstrates a need to reevaluate methods of tracking niche housing submarkets, including students.

CONCLUSION

Studentification studies demonstrate that the housing options available to college students determine the interactions between the student rental submarket and other nearby, nonstudent submarkets. Where student housing is scarce, student renters will move into housing once occupied by others. This can have social and cultural implications. It can also affect the built environment in neighborhoods popular with students as new iterations of multifamily housing come online. Recently, developers have attempted to tap the commodification of student lifestyles by offering purpose-built student accommodations, which come with a slate of amenities designed to attract student renters.

Students show a tendency to cluster together, and certain subpopulations of students — such as enrollees from abroad — may self-segregate to a greater degree. In addition, planners have the power to contain student populations by allowing student housing development in

certain neighborhoods. Because students tend to demand housing in specific locations (and with a specific set of amenities), this suggests the existence of a student rental submarket. Students likely consider housing built for nonstudents to be an inferior option. In turn, this could constrain filtering, leading to uncertainty about the ability of added student rental stock to contribute to market-wide affordability.

In this thesis, I attempt to add to research into student rental submarkets. The first research question in this thesis, which considers changing enrollment at the University of Illinois, connects U.S. higher education trends to studentification. Studentification studies began in the U.K. Although more researchers are examining conditions seen in the U.S., such as the rise of purpose-built student accommodations, the connection between state-level U.S. higher education policy represents a gap in studentification literature. Funding for higher education, and resulting institutional decisions about tuition and enrollment, respond to unique political conditions. The conclusions I draw about enrollment at the University of Illinois mirror conditions at other large, state universities in the U.S. Although this is a single case study, these larger higher education trends suggest Champaign-Urbana could offer lessons for other college towns.

Using Champaign-Urbana as a case study also offers a fresh perspective on studentification. Many studentification studies describe conditions in neighborhoods with universities, but not necessarily in college towns like Champaign-Urbana. Again, this is partly because other countries have different customs regarding university attendance (Garmendia, et al., 2012). In Champaign-Urbana, as in other U.S. college towns, the University of Illinois is the major economic driver. By using Champaign-Urbana as a case study, this thesis focuses on the implications of a public, land grant institution's enrollment policies on a local housing market.

Similarly, studentification studies tend to focus on the cultural and social impacts of student populations, as well as students' impact on the built environment. While some researchers have investigated socioeconomic changes in studentifying areas (Foote, 2017), the existing literature has not tracked the specific influence student housing has had on housing costs. By quantifying how luxury student apartments have affected rents in Champaign-Urbana — both within and outside of student enclaves — I hope to reveal truths about the link between housing affordability and student submarkets. This includes a discussion of the extent to which filtering occurs in college towns as student rentals come online in certain neighborhoods.

Housing submarket research overlooks rental submarkets, especially those serving niche populations. Because of this, this thesis adds to submarket research on rental housing markets. This thesis demonstrates the degree to which Champaign-Urbana's student submarket is distinct. It also considers how this niche submarket affects affordability throughout the urbanized area.

The student rental submarket is unusual for several reasons. Students, who only live locally for a few years, age out of student apartments, but do not “trade up” for other housing typologies in the local market. Instead, they often leave town altogether. As discussed in this literature review, student housing has morphed through several housing typologies as developers seek to cash in on shifting student preferences. This suggests the student submarket is often in flux, changing as new cohorts of students arrive to attend college. U.S. college towns may be also unique among housing markets because of the outsized role of the niche student population. As a result, filtering operates differently in college towns. This thesis will establish the degree to which such a population can influence conditions in a housing market, including housing affordability.

In the chapter that follows I lay out the data and methods I use to pinpoint the student rental submarket in Champaign-Urbana, as well as new student rentals’ influence on rents market-wide. The next three chapters take on my three research questions. First, how has the student body at the University of Illinois changed from 1980 on? As part of this analysis, I connect changing student demographics to possible implications for the local rental market. Second, I track the spatial distribution of student renters across Champaign-Urbana from 1990 to 2018. This allows me to pinpoint the degree to which students have spread or congregated within certain neighborhoods. Findings from this analysis reveal student housing preferences, as well as the suitability of the local housing stock for student renters. The findings in this chapter also consider the role of substitutability of housing units within the student and nonstudent submarkets. Finally, I examine changing rents throughout Champaign-Urbana and infer how students’ movements throughout the housing market have affected affordability. Looking at rents illustrates the mechanics of filtering in the local market, as well as the extent to which the local student submarket is distinct.

CHAPTER 3: METHODS AND DATA

INTRODUCTION

As discussed in the previous chapter, this thesis focuses on the effect of new student rentals on Champaign-Urbana's housing market. To do this, I will examine who student renters are, where they choose to live, and how the student rental submarket affects local housing costs. In chapter four I will describe changes in the University of Illinois student body between 1980 and 2018. Then, in chapter five, I will the distribution of students throughout Champaign-Urbana's housing market from 1990 on. Finally, in chapter six, I will examine how the distribution of student renters across Champaign-Urbana's neighborhoods has affects rents. In this chapter, I discuss the data sources and research methods I use to describe the local student renter submarkets in each of the following chapters.

The following sections will describe the quantitative methods I used throughout this thesis. However, to identify key inflection points in Champaign-Urbana's student housing market, this thesis also relies on qualitative evidence from interviews conducted in spring and summer 2019 as part of Dr. Rolf Pendall's research into regulatory changes in Champaign's Campustown neighborhood. This included 19 interviews with municipal planners, developers, university agents, and consultants with planning and/or development expertise in and around the study area. After conducting and transcribing our interviews, we performed a two-cycle coding analysis following Saldana (2015). For our first cycle we used a mixed approach of structural, values, and in-vivo coding. Structural coding involves assigning summative, essence-capturing phrases to chunks of interview transcript text. Values coding involves identifying portions of transcript text that reveal participants' values, beliefs, and attitudes. Finally, in-vivo coding involves using participants' own words as codes. Therefore, our in-vivo codes represented short, pithy quotes from the transcript text. For our second cycle, we used axial coding to reorganize qualitative data split into codes during our first cycle. This process allowed us to identify overarching themes. This involved creating axial "code trees" representing families of codes from the first coding cycle.

The coding process revealed how student housing near campus has changed. In the 1970s and 1980s, for example, student renters often lived in converted single-family homes, many of which were divided into apartments. In the 1990s, small midrise buildings — often containing 24-units apiece — emerged as a common housing typology. This, like other phases in the history of Champaign's multifamily housing stock, was a reaction to the City's regulatory environment. Developers often designed these buildings to sit on stilts above parking to comply with parking minimum requirements. In addition, many buildings had interior courtyards to respond to open space requirements. And from the mid-2000s on, high-amenity, high-rise apartment buildings

began to displace older, lower-density housing stock, including the low-rise multifamily buildings and single-family houses divided into apartments that dominated the area in past decades. Developers continue to construct large apartment buildings to this day throughout Campustown.

OVERVIEW OF METHODS

Research Question 1: How has University of Illinois enrollment changed from 1980-2018?

The purpose of the fourth chapter of this thesis is to describe changes in student enrollment at the University of Illinois' flagship campus at Urbana-Champaign. The unit of analysis is undergraduate student cohorts at the University of Illinois from five academic years — 1980, 1990, 2000, 2010, and 2018. These points in time offer snapshots of characteristics of the UIUC student body that occurred alongside changes to private-market student housing offerings in the area adjacent to the University of Illinois campus.

Examining trends in enrollment and student demographics decade-by-decade facilitates a look into the intended occupants of multifamily housing near campus — the students themselves. Although land-use regulations — specifically parking and open space requirements — determined the physical form of buildings for decades, market demand also contributes to the types of housing developers add to the market, how many units they construct, and where this construction takes place. In addition, examining student enrollment and demographic changes allows for conclusions about shifts in student buying power as these changes occurred.

Enrollment Levels Reveal Housing Demand and Student Buying Power

Raw enrollment numbers, as well as counts of international and out-of-state students, are necessary to understand student housing demand. First, the number of students attending the University of Illinois directly ties to the number of housing units needed to accommodate them as they exit the dormitories and enter the private rental market. Understanding the origins of out-of-state domestic and international students, who pay higher tuition, also allows for conclusions about student wealth and buying power.

To quantify changes in the student body at the University of Illinois, I relied on institutional data from the University of Illinois. This included the Division of Management Information's tenth-day statistical abstracts of student enrollment for fall 1980, fall 1990, fall 2000, fall 2010, and fall 2018 semesters. These reports detail the makeup of the student body as of the tenth day of enrollment each academic year. In addition to detailing the number of full-time and part-time undergraduate and graduate students, these reports break down enrollment by race and

ethnicity, as well as by residency status.[1] Where possible, I omitted data for part-time undergraduate students and considered only those enrolled full-time. I also considered the graduate student body where applicable, but did not include professional students, who make up a small percentage of total enrollment.

Some data from University offices, including that from the Office of Admissions, may cite slightly different total enrollment numbers than the tenth-day statistical abstracts. The discrepancies are inconsequential, and I have noted where they occur. Other sources, such as the University of Illinois' Common Data Set reporting, were not available for every year in this study. The Common Data Set dates to 2003. Therefore, I used this information for years 2010 and 2018 and noted relevant statistics for 2003 where they benefitted this analysis. The Common Data Set included information about undergraduate students' access to financial aid, as well as the proportion of students living in University-owned housing.

In-State Students: Demographic and Income Trends Drive Institutional Decisions

As a public institution, the University draws the largest percentage of its undergraduate enrollment from within the state of Illinois. Therefore, the demographics of the state, specifically at the household level, provide insights into the backgrounds of students at the University. Understanding household demographics at the state level tackles the question of student buying power from another angle. Income inequality within Illinois also ties back to student financial need, which drives university decisions about funding and enrollment. I used decennial census data for 1980, 1990, and 2000, which I accessed through the University of Minnesota's IPUMS National Historical Geographic Information System. In addition, I relied on 2006-2010 and 2014-2018 5-year American Community Survey estimates to report conditions for 2010 and 2018, respectively. Census data allowed me to examine race and ethnicity in Illinois, in addition to household income.

Because this chapter relies on survey data, all numbers reported in this thesis are estimates subject to margins of error reported by the U.S. Census Bureau. For large geographic units, such as the state of Illinois, these margins of error are generally inconsequential. I have noted any instances where this is not the case.

[1] A student's residency status refers to whether the student qualifies for in-state tuition. The University of Illinois is a state tax-assisted institution. Because of this, the University charges lower tuition rates to students who are residents of the state of Illinois, based on a definition set by the University of Illinois' Board of Trustees. Non-resident students include those who are residents of other states, as well as students from outside the U.S. Residency does not refer to whether a student is completing coursework in-person or online. The University does not publicize its level of online enrollment.

University Policies Influence Student Demographics and Housing Choices

Students may react to institutional decisions about tuition charges, room and board costs, and other policies related to on-campus housing. How much students are willing and able to pay for higher education may also be tied to how much students choose to pay for housing. Therefore, this thesis also examines changes in tuition, fees, and on-campus housing costs. To consider changes in tuition and fees I relied on information published annually by the University's Office of the Registrar for 2010 and 2018. In addition, I referred to University of Illinois Board of Trustees reports from 1980 to 2010 for more detailed information about resident and nonresident tuition and room and board costs over that period. Because the Office of the Registrar only publishes tuition and fee schedules for academic year 2007-2008 on, these reports filled in gaps in the University's data. These reports also included information about state appropriations for public higher education in the state as well as rationales for increasing enrollment costs over time.

To contextualize tuition, fees, and room and board charges, I also used data from the Integrated Postsecondary Education Data System showing average charges at four-year public institutions in the U.S. from 1980 to 2018. The Department of Education's National Center for Education Statistics collects data from institutions of higher education that participate in federal student financial aid programs. IPEDS is a system of interrelated surveys conducted as part of this effort that measure enrollment, graduation rates, financial aid, and institutional pricing, among other metrics.

Not all University of Illinois students live in off-campus apartments. Therefore, understanding how many students live in dormitories helps approximate the size of the local student renter population. Information about students' decision to live in University-owned housing past their freshman year came from data provided by University Housing, as well as from the Common Data Set. Because this data is only available for recent academic years, I also relied on a 1975 University Housing study. For all years in this study where data was unavailable, I assumed that all freshmen students lived on-campus. This is because the University requires students with fewer than 30 academic credits to live on-campus, with rare exceptions for students with family living locally. I did not take these commuter students into account, but because of their small number this should have a negligible effect on the conclusions from this analysis.

Research Question 2: How has the geographic distribution of student renters changed from 1990 to 2018?

The purpose of chapter five is to describe where student renters were most likely to live in Champaign County from 1990 on and explore how the spatial distribution of student renters has shifted over that time.

First, I offer historical context on student housing trends in Champaign-Urbana over the decades. I describe common housing typologies in the neighborhoods near campus, as well as the regulatory and market forces that influenced the local housing stock over the years. To do this, I rely on qualitative interview evidence from local planners, developers, city council members, and University representatives. I also reviewed city reports, plans, and meeting minutes regarding regulatory changes. Understanding the recent history of student housing allows for discussion of filtering in the local housing market. It also helps match student renters with certain housing units — a cornerstone of housing submarket studies.

In this chapter and the next, I also occasionally refer to specific subdivisions and apartment complexes. The City of Champaign also provided development data, which provides details on construction near campus, including the number of units constructed, bedrooms per project, and project completion dates. Where gaps in this data existed, I relied on aerial images from the Champaign County GIS Consortium, which allowed me to pinpoint when certain developments came online. This was particularly helpful when discussing housing trends outside Champaign's near-campus neighborhoods.

Where Students Live: Using Demographic Markers to Identify Student Populations

To track changes in the spatial distribution of student renters, I first identified demographic variables related to the student renter population. I then use these variables to build the Student Rental Index, which shows where residents resembling student renters live. This was necessary because the U.S. Census Bureau does not cross-tabulate specific data on higher education enrollment, tenure, and age, which together would allow for easy identification of student renters at the census tract level.

The University's record keeping on students' in-term residences presents an additional limitation. Although the University requires students to report their addresses from semester to semester, compliance is low and many students neglect to update their records at the beginning of each school year. As a result, the University cannot provide an accurate, up-to-date list of undergraduate students' addresses.

I define student renters as individuals 20- to 24-years-old who are enrolled in college at the undergraduate level who live in renter-occupied, nonfamily households without a vehicle. I

used sample-based decennial census data for 1990 and 2000 and relied on American Community Survey 5-year estimates for 2006-2010 and 2014-2018 for the following:

- Number of persons enrolled in college at the undergraduate level.
- Number of persons age 20-24
- Number of nonfamily households
- Number of renter-occupied housing units
- Number of households without a vehicle present

Considering the number of college-enrolled students on its own was insufficient for tracking student renters. This is because students enrolled at the University of Illinois often rent housing on the private market but may also elect to live in University-owned housing, such as dormitories. The University requires first-year students, as well as transfer students who have completed fewer than 30 credit hours, to live in University Housing, Private Certified Housing, or a certified fraternity or sorority.

According to the University, 50 percent of undergraduate students lived in University Housing in 2018. In 1974, before the 30-credit-hour requirement, 60 percent lived on-campus. Of course, any students who choose to live in dormitories are not contributing to market demand for student rental housing.

The University's housing facilities, including its undergraduate and graduate dormitories and apartments, are located near campus. They share census tracts with many of the student-oriented apartments owned and run by private landlords. Because both housing types cater predominantly to students, examining census data on school enrollment is not sufficient to differentiate on-campus student populations from off-campus renters.

That said, since the 30-credit hour rule targets the University's youngest students, considering age is one way to exclude on-campus students in this analysis. In 2010 and 2018 respectively, 96.4 and 97.4 percent of the University of Illinois' freshman class were 18 or 19. In both years less than 3 percent of freshmen were 20 and older. Because of this, specifically examining the distribution of only those residents aged 20 to 24 should exclude most freshmen students who are likely to live in dormitories.

Several household-level characteristics are also associated with student renters. First, student renters often share housing with roommates. Others may choose to live alone. Therefore, determining the spatial distribution of nonfamily households can help pinpoint neighborhoods popular with student renters. The U.S. Census Bureau defines nonfamily households as those

consisting of a householder living alone or sharing a home with other people outside of his or her family.

Of course, some students may choose to live locally with family members and therefore live in family households. The University will exempt freshmen and new transfer students from the 30-credit hour rule if those students can prove they are living locally with family and commuting to class. Older students do not require an exemption to live with parents but may also choose to do so. Regardless of class level, these so-called “townies” are not seeking out rental apartments, placing them outside of the focus population for this chapter.

Tenure is another household-level characteristic necessary to define student renters. Undergraduate students, by nature of their low incomes, young age, and high mobility, are unlikely to own their homes. Although one example of a so-called “kiddie condo” development exists in north Urbana, students’ parents, not students themselves, were the target market (Dodson, 2006). Unless they choose to live in University-run housing, undergraduate students rent. Therefore, the location of renter-occupied housing throughout Champaign-Urbana can help pinpoint where students are able to secure housing.

Finally, qualitative evidence suggests University of Illinois undergraduates often do not bring cars to Champaign-Urbana. Local landlords, representatives from the University, and Champaign elected officials and planning staff alike described students’ tendency to not own cars. Many interviewed claimed University of Illinois students were once more likely to own vehicles, but this has declined in recent decades. Several explanations exist for this trend — a strong local public bus system, especially in near-campus neighborhoods; increasing eco-consciousness among young people; families less able to afford a car for their college-aged children following the Great Recession; and students’ preference for dense, urban living where cars are superfluous. In addition, the enrollment trends described in chapter four could play a role. Consistently rising tuition costs could frame the decision to own a car as one more expense, and an elective one at that. The boom in international student enrollment also suggests a growing subset of students without U.S. drivers’ licenses or access to a vehicle stateside. Whatever the explanation, examining the spatial distribution of households with no vehicle is another method of determining where student renters are likely to live.

Data Triangulation and Index Limitations

As discussed, considering where college-enrolled individuals live insufficient for extrapolating the location of student renters. This holds true for the other variables discussed here as well. For example, one limitation of using age on its own to track student renters is that

many Champaign-Urbana residents fall within this age range but are not enrolled in college. In addition, many graduate students fall on the older end of this age range, but local landlords consistently said they consider graduate students to be a separate rental submarket. This analysis also discusses graduate student renters where relevant but does not include them in the student rental market index.

Similarly, tallying nonfamily households is not an effective method of tracking student renters specifically — other Champaign-Urbana residents live alone or with roommates. Many census tracts in the core of Champaign and Urbana contain large percentages of nonfamily households. For example, 80 percent of households were nonfamily households in tract 110 in 2018. However, fewer than 5 percent of residents there were undergraduate students that year. When compared to the distribution of college-enrolled individuals, college students are more concentrated in near-campus census tracts than nonfamily households for all years in this study.

As with nonfamily households, renter-occupied housing units are not limited to students. Renter-occupied housing is even more dispersed throughout Champaign-Urbana than nonfamily households are. Ultimately, this study considers student renters as a submarket contained within the larger ecosystem of renters at large. This underscores the importance of considering tenure in combination with other demographic characteristics to differentiate students from others seeking rental housing.

Finally, students are not the only population that may choose to forgo car ownership. Other locals may live in households without a vehicle for the same reasons students do. For one, Champaign-Urbana's bus system is available to all residents, especially in neighborhoods with good transit coverage. And local families — like the families of University of Illinois students — may find car ownership unaffordable.

These limitations, taken together, underscore the importance of considering several demographic traits in tandem to predict where student renters are likely to live.

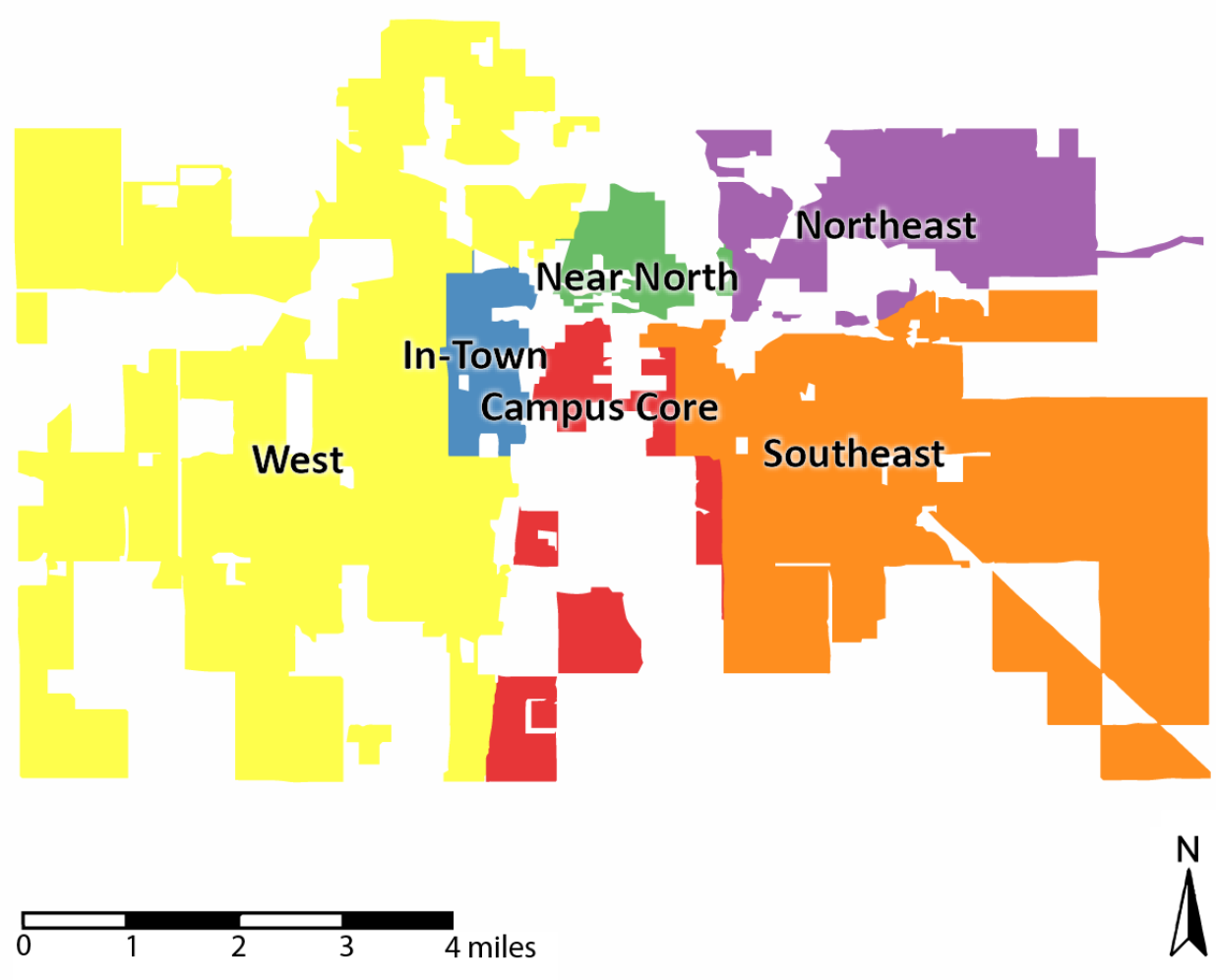
Defining Champaign-Urbana's Subareas

To track the changing popularity of certain neighborhoods with student renters, I grouped Champaign-Urbana's census tracts into six classifications representing areas of town with distinct characteristics. This allowed me to examine the spatial distribution of student renters at a meso-level. Examining Champaign-Urbana as a whole does not allow for a nuanced look at neighborhoods' transition toward and away from the student renter submarket. However, examining change at the census tract level presents challenges because of high margins of error for American Community Survey estimates.

Figure 3.1 illustrates populated residential area encompassed within the six subareas defined here. For a more detailed map of Champaign-Urbana's subareas, see Appendix A. The geographic boundaries for 1990 are identical, except for the northernmost tract in the West grouping. In addition, Appendix B shows which census tracts in Champaign-Urbana correspond to each subarea in 1990, 2000, 2010, and 2018, accounting for changing tract boundaries.

Figure 3.1:

Champaign-Urbana Subareas



First, tracts in the Campus Core grouping encompass Champaign's Campustown neighborhood, as well as areas in Champaign and Urbana that overlap with the University campus itself. The Campus Core classification represents a significant portion Champaign-Urbana's "urban dormitory." The urban dormitory, in this case, refers to all private-market, off-campus student housing located within an urban region (Revington et al, 2020). Therefore, student-focused apartments near campus are part of the urban dormitory, in addition to suburban-style apartments located a mile or more from campus.

According to Champaign city planners and local landlords, the Campus Core is cut off from other, less student-focused areas by the University campus itself to the south and east, the hard boundary of arterial road University Avenue to the north, and railroad tracks to the west. Defining the Campus Core area with these boundaries in mind allows for testing the degree to

which student renters have penetrated these borders over time. The neighborhoods between the railroad tracks, University of Illinois campus, and University Avenue include Champaign's Campustown, an area home to high-rise apartment buildings mostly constructed over the past fifteen years, as well as smaller, often 24-unit buildings, and older single-family homes often divided into apartments for students. It also encompasses the Midtown neighborhood, located between Campustown and the railroad tracks to the west. This transitional neighborhood is home to businesses, as well as some apartment buildings, including several developments constructed in the past ten years.

In addition, the Campus Core contains a portion of Urbana dubbed the "Lincoln-Busey corridor" because it lies between South Lincoln Avenue and South Busey Avenue adjacent to the eastern edge of the University of Illinois campus. This block-wide strip contains small-scale apartment buildings and single-family homes often rented to students (and often divided into multiple rental units). The City of Urbana's Zoning Ordinance includes a design overlay district for the area, which includes aesthetic specifications for residential buildings constructed there.

For this analysis, the Campus Core also includes census tracts that extend south of campus toward the Village of Savoy. These tracts include Ashton Woods and Orchard Downs — apartment complexes owned and managed by the University primarily for graduate students and their families. It also includes apartment complexes in Savoy such as The Place at 117 and The Village at Colbert Park, both of which cater to University of Illinois students, according to their websites.

Census tracts in the In-Town subarea loosely correspond to Champaign's In-Town zoning districts, which the City created in the 1980s. At the time, a main objective was placing limits on multifamily development, especially large-scale, student-focused development into the area (City of Champaign Zoning Board of Appeals, 2016; Knight, 2018). Instead, the In-Town districts allow for a mix of single-family units, duplexes, small multifamily, and some mixed-use development, depending on the specific zoning designation. The two census tracts within the In-Town subarea are located just west of the railroad tracks that comprise the physical boundary of Champaign's near-campus neighborhoods. Because of this zoning district's original purpose, defining In-Town as a distinct subarea allows for analysis of whether regulatory constraints have succeeded in limiting westward student encroachment.

Directly north of University Avenue — the northern boundary of Champaign-Urbana's student neighborhoods — are tracts classified as part of the Near North subarea. These census tracts represent traditionally low-income Black neighborhoods in Champaign, including the Fifth and Hill neighborhood. Located directly north of the University of Illinois campus, the subarea

includes portions of Champaign and Urbana. Census tract 53 to the east includes several suburban-style apartment complexes constructed along Lincoln Avenue in the mid-2000s. These include ONE Illinois South, Capstone Quarters, the Atrium, and the Retreat at Illinois — complexes known for amenities such as tennis courts, swimming pools, and private shuttle service to the University campus. The Champaign and Urbana zoning ordinances each allow for a variety of uses throughout the subarea, including single-family homes, high- and medium-density multifamily, commercial, and medical campus.

Examining demographic changes in the Near North subarea from 1990 to 2018 should reveal the extent to which student renters have crossed the traditional boundary of University Avenue. In addition, this subarea is home to residents that could be vulnerable to rising rental costs and possible displacement. Changes in this neighborhood over time could show which neighborhoods are potential sites of interaction between student renters and long-term residents.

Tracts grouped in the West subarea represent neighborhoods in the west of Champaign. These tracts are predominantly home to single-family neighborhoods, including subdivisions on the fringes of town. However, the subarea also includes several low-density apartment complexes. Unlike those located in the Near North or Campus Core subareas, the websites for these complexes do not target students specifically.

In Urbana to the east, tracts in the Southeast subarea represent residential areas of Urbana, including the West Urbana neighborhood and downtown Urbana. Residents in that neighborhood have traditionally resisted large-scale student housing development, citing concerns about preserving the character of the area. Housing stock here consists of single-family homes, older homes converted into apartments, and small-scale, low- to mid-rise apartment buildings. Despite its identity as a well-to-do family neighborhood, the Southeast subarea represents the portion of Urbana closest to the University of Illinois campus. Because of this, the neighborhood could be desirable to student renters seeking housing convenient to classes and campus life. And although hard edges bound Champaign's near-campus neighborhoods — including railroad tracks and University Avenue — no such physical boundary encloses the Southeast. Therefore, tracking the extent to which students inhabit the Southeast could reveal the effects of Urbana's relatively restrictive zoning on student housing provision.

Finally, the Northeast subarea includes census tracts in the north of Urbana. Neighborhoods in the Northeast are home to single-family homes, green space, and low-rise apartment buildings, with commercial development along major arterial streets, including North

Cunningham Avenue. The southwest edge of this subarea is a little over a mile and a half from the University of Illinois campus.

All other tracts in Champaign County are outside of the scope of this study. These tracts include either rural areas or small outlying cities. Because of their distance from campus and identity apart from the University of Illinois, these areas of the County are home to negligible numbers of students. However, because the bulk of the County's population resides in or adjacent to Champaign, Urbana, and Savoy. Countywide averages are a convenient point of comparison for this analysis.

Excluding Areas Without Housing

Certain subareas with Champaign-Urbana, such as the Northeast, Near North, and West subareas, contain large areas of commercial or industrial land uses. In addition, census tracts contain University-owned land in the core, as well as farmland on the fringes. Although dormitories are located on University property, privately-owned apartments complexes are not likely to be. Except for farmhouses, the rural areas in the area are also not available for housing. However, large areas of land without housing can skew any analysis based on population or household density. This is especially in the Campus Core subarea because areas surrounding campus also contain the University campus itself, as well as University- and privately-owned farmland to the south.

To exclude areas with no residential population from this study, I examined 2010 decennial census populations at the block area. I then eliminated any block in the Champaign-Urbana area with fewer than ten people living on it. This allowed me to estimate the area of land with housing built on it for each subarea. Any calculations involving estimates of people or households per acre use these land areas.

Because census tract boundaries from 1990 to 2018 generally remained the same, except for a handful of tracts splitting into two or combining into one, I used the land areas from this analysis for each year in this study.

Building a Student Rental Market Index

To consider the characteristics of student renters described above, I built an index using census tract-level data for 1990, 2000, 2006-2010, and 2014-2018. First, I calculated the percent of the population consisting of persons enrolled in college at the undergraduate level,[2] as well as

[2] Sample-based decennial census data for 1990 does not disaggregate undergraduate students from graduate students. Therefore, for that year I used the variables "Enrolled in college: Public school" and "Enrolled in college: Private school." For 2000, 2006-2010, and 2014-2018 I used "Enrolled in college, undergraduate years."

the percent of residents age 20 to 24 in each tract. I then calculated the percentage of nonfamily households, the percentage of renter-occupied housing units, and the percentage of households without a vehicle compared to the total number of households for each tract.

Using these percentages, I calculated z-scores for each composite variable based on the mean value for all tracts in Champaign County in all study years combined. Using z-scores based on the mean values for all years combined ensured the z-scores remained comparable over time. This prevents geographic changes over time from being ascribed to standardization within years instead of across years.

Obtaining z-scores enabled me to consider each variable on the same scale, with the score representing the number of standard deviations from the mean for the County-wide value. I then added the z-scores for all variables together for each tract and rescaled the results, resulting in a composite score on a scale from 1 to 100 for each tract. Tracts with a larger composite score are most likely to have a higher concentration of undergraduate tenants. Those with lower scores are more likely to be home to people who are not students. Determining these scores allowed me to visualize my prediction of the concentration of student renters throughout the Champaign-Urbana by mapping the value for each tract. I could then compare the change from 1990 to 2018.

Nativity Data and Student Populations

In addition to the variables included in the Student Renter Index, I also consider other demographic factors. These include the number of foreign-born individuals per subarea or census tract for 1990, 2000, 2010, and 2018. In addition, I examine the concentrations of Asian-born and Chinese-born residents throughout Champaign-Urbana. Examining nativity can help ascertain the geographic distribution of student renters because of rising international student enrollment at the University of Illinois, especially from Asian countries (particularly China). That said, those born outside the U.S. can certainly be nonstudents. Therefore, where I rely on nativity to locate students, I also triangulate my assumptions using age, school enrollment, tenure, and household composition data.

Limitations

As discussed, the University of Illinois is not the only institution of higher education in the Champaign-Urbana metropolitan area. The West subarea is home to Parkland Community College, a public community college enrolling about 7,000 full- and part-time students. Although separate from the University of Illinois student body, this analysis considers Parkland students who rent housing locally as part of the student rental submarket. This is partly a practical decision; the demographics of Parkland students, including their age, enrollment in college,

tenure, and nonfamily household status, make them indistinguishable from University of Illinois students. In addition, interviews with Champaign city staff and local landlords suggest that some Parkland students choose to live near the University of Illinois campus. Those interviewed attributed this to the presumed shared preferences among community college students and University of Illinois undergraduates for an active, urban living environment. They may also choose to live with peers who attend the University of Illinois. Finally, some Parkland students go on to attend the University of Illinois after earning associate degrees. The effect of Parkland students on results should be negligible, both due to the smaller enrollment and because community college students and University of Illinois undergraduate students may represent one submarket when taken in total.

Another limitation relates to changes in how the U.S. Census Bureau records school enrollment. The U.S. Census Bureau only began disaggregating undergraduate students from other students enrolled in higher education in 2000. Before 2000, college enrollment estimates include students on the graduate and undergraduate levels. As a result, this analysis uses 2000 as the comparison year when quantifying growth in undergraduate residents in 2010 and 2018.

The student rental market index in this analysis compares tract-level percentages of individuals and households with certain characteristics to countywide averages. However, using percentages rather than population or household density illustrates different aspects of the changing student rental market.

Considering the percentage of the population or percentage of households illustrates the degree to which certain neighborhoods may be shifting to be more student-centric. This measure may also indicate where student renters may compete with other renters. A census tract with a rising student rental index score could indicate that existing residents of the area may be more likely to encounter students in their neighborhood.

In some cases, this could indicate displacement. However, the percentage of students in a neighborhood can rise without displacement if the number of students increases while the number of nonstudent residents remains constant. This could occur if a large, student-focused apartment building goes up, for example — the apartment building could bring more students in, but they would not be taking over existing housing units. Instead, their presence could be growing in a very specific location within the census tract.

Examining population and household density, rather than a percentage, would control for such changes in the housing stock. Looking at changes in density accounts for the construction of high-rise buildings and the development of formerly vacant or underused parcels. A rising student rental market index value using density could indicate more students moving into

existing housing stock or more students moving into an area due to increased housing stock. However, using density also obscures student renters' potential interactions with nonstudent populations. Student density may increase as overall housing density increases (meaning nonstudent density would increase as well). Therefore, although I refer to population or household density, the student rental market index I have included here is based on percentages, not density.

Research Question 3: How Has the Distribution of Rents Changed Throughout Champaign-Urbana from 2000 to 2018?

The purpose of chapter six is to determine the distribution of high and low rents throughout Champaign-Urbana from 2000 to 2018 given changes in the geographic location of student renters over the same period. For this chapter's analysis I relied on sample-based decennial census data for 2000 and American Community Survey 5-year estimates for 2006-2010 and 2014-2018. Understanding how rents have shifted in areas with high concentrations of students, as opposed to nonstudent-majority neighborhoods, illustrates the effect of student rentals on housing costs at the neighborhood level, as well as throughout the broader housing market.

Tenure and Occupancy: Understanding Local Housing Supply and Demand

To contextualize the analysis in this chapter, I first examine tenure and occupancy data for Champaign-Urbana's six subareas in 2000, 2010, and 2018. I use decennial census data for 2000 (Summary File 3) and American Community Survey estimates for 2006-2010 and 2014-2018 to tally the number of total housing units, renter-occupied housing units, owner-occupied housing units, vacant units, and vacant units for rent. This vacancy data allows me to make assumptions about housing supply and demand throughout Champaign-Urbana and discuss possible effects on rents.

Sorting Housing Units into Champaign County's Rent Quartiles: Comparing Affordability Across Champaign-Urbana's Subareas

To ground my comparison of the Champaign-Urbana subareas, I relied on the following variables at the county level for each study year: the lower contract rent quartile, the contract rent median, and the upper contract rent quartile for specified renter-occupied housing units paying cash rent. These dollar values allowed me to identify the cutoffs to the least expensive, second least expensive, second most expensive, and most expensive quartiles of rents in Champaign County.

I then used these Countywide cutoff values to identify how many units of rental housing fell within each quartile in Champaign-Urbana's six subareas. To do this, I used decennial and American Community Survey estimates of contract rent asked for specified vacant-for-rent housing units at the census tract level. These estimates provide counts of rental housing units for $50, $100, or $250 rent ranges, with the lowest rents counted in $50 intervals and the most expensive counted in $250 intervals. For all years, the lowest range was 0 to $100. For 2000 and 2006-2010 the highest interval includes rents $2,000 and above and for 2014-2018 the highest interval included rents $3,500 and above.

I then used the counts in the contract rent data at the tract level to approximate the number of housing units within each countywide rent quartile. One limitation of putting contract rent data in conversation with rent quartile data is a mismatch in precision. Respondent and sampling error compound this imprecision. Rent quartile limits are precise dollar estimates. However, as discussed, census estimates for contract rent are sorted into $50, $100, or $250 intervals. To reconcile this, I first identified the contract rent range that would contain the quartile estimate. For example, a lower quartile estimate of $428 would fall within the $400 to $449 interval. I then determined which end of the interval was closer in value to the quartile cutoff. In the example case, $428 is closer to $449 than $400. I therefore sorted all housing units with rents lower than $449 into the lowest rent quartile.

As discussed, each subarea in this study includes one or more of Champaign-Urbana's census tracts. Subareas conform to census tract boundaries — they do not contain partial census tracts. In addition, subarea boundaries are consistent for 2000, 2010, and 2018. After determining how many rental housing units fell within each rent quartile for each census tract, I then summed together estimates for every tract within each specific subarea.

This method has limitations. For example, knowing where exactly within the rent interval actual rent values fall is not possible. If 30 households paid rents between $400 and $449 those rents could be evenly distributed throughout that range. Alternatively, every household could have paid exactly $400. Or six households could pay $400 and the rest $440. The distribution of housing units could also vary from rent interval to rent interval. Without data containing the exact rent charges for each individual household this is unknowable. By consistently approximating placing quartile cutoffs at the high or low end of the contract rent interval, I hope to at least achieve consistency where precision is unattainable.

Changing Affordability Within Champaign-Urbana's Subareas

In addition to figuring out how each subarea's rental housing fit within Champaign County's rent quartiles, I also approximated rent quartiles for each subarea on its own. To do this, I used the counts of housing units within each contract rent interval to calculate a weighted median for the subarea. I also determined where the lower and upper quartiles would fall by calculating weighted medians for rents above the subarea-wide median and below.

Again, the imprecision of the contract rent data poses a challenge to precision. To calculate a weighted median, I needed a list of concrete values, not ranges. Therefore, I used the lower limit value in each interval as the rent amount for all households within the range. For this analysis, I assumed households in the $500 to $549 interval all paid $500 and those paying $2,500 and above paid exactly $2,500, for example. Because of this, my approximated subarea quartiles may skew slightly low compared to actual rents. Again, the goal was consistency in the face of imprecision.

My analysis for chapter six also includes counts for rents below or above certain values. For example, I tally the number of apartments in the Campus Core subarea that cost $1,000 a month or more. These counts also rely on contract rents and, again, I can only be as precise as the $50, $100, or $250 ranges allow.

In addition to using contract rent, I also created maps showing median gross rent at the census tract level. Although subareas are the unit of analysis for this chapter, each subarea contains a variety of neighborhoods. For example, the Near North contains established, single-family neighborhoods as well as newer greenfield apartment developments. Visually representing median gross rent for both tracts helps determine which neighborhoods are contributing to rising or falling rents at the subarea level.

Because housing costs are included in the Consumer Price Index, I did not adjust rent values for inflation — each year's lower quartile, median, and upper quartile rents, as well as contract rent estimates, are in current dollars. Put simply, housing costs are one driver of inflation.

Finally, because the decennial census and American Community Survey data presented here are sample-based, margins of error apply. To ensure the results of this analysis are intelligible, I am not superimposing confidence intervals over rent intervals. I have also chosen not to represent margins of error on maps. One advantage of working at the county and census tract scales is that margins of error are lower than they would be for smaller geographies.

CONCLUSION

This chapter discussed the data and methods used to answer the three research questions discussed within this thesis. First, how have the characteristics of University of Illinois students changed from 1980 to 2018? Second, how has the spatial distribution of student renters shifted each decade from 1990 to 2018? Finally, as student renters have chosen certain areas of Champaign-Urbana over others, how has their spatial distribution affected local rents in 2000, 2010, and 2018? To answer these questions, I rely on a combination of qualitative interview evidence, University of Illinois data, decennial census data from 1980, 1990, and 2000, as well as 5-year American Community Survey estimates for 2006-2010 and 2014-2018. I selected demographic variables based on known characteristics of student renters. In the three chapters that follow, I will discuss the results of my analysis and present evidence for my conclusions.

CHAPTER 4: A CHANGING STUDENT BODY

INTRODUCTION

Because the twin cities of Champaign and Urbana are home to the University of Illinois' flagship campus, student renters play an important role in the local housing market. Although land use regulations — specifically parking and open space minimums — affect the type of housing developers may build locally, market demand ultimately drives development. As the regulatory environment in the neighborhoods nearest campus has changed, the characteristics of the University of Illinois' study body have also been in flux. To developers, these students represent potential tenants. Therefore, understanding students' housing needs and preferences is important for developers seeking to build locally, as well as for planners whose choices determine what type of development is allowed and where.

The question of what student renters want in the local housing market depends largely on how many students live locally, as well as student renters' socioeconomic status. In this chapter, I examine University of Illinois enrollment trends to uncover who students are and where they come from — the first step in understanding the local housing market. The number of students, their changing preferences, and their purchasing power all drive demand for student housing. In addition, institutional decisions at the University of Illinois have the potential to infuse renters into the local housing market. Together, levels of in- and out-of-state enrollment, the cost of tuition and room and board, and policies determining when students may move off campus all contribute to where UIUC's students rent and how much they pay.

Students' buying power determines what amenities they can afford. For college students, this buying power is often tied to family wealth, because many remain financially dependent. Students' cultural backgrounds may also shape housing preferences. For example, students from abroad may prefer to live near others from their home countries. If they grew up in high-density cities, they may also be more likely to prefer dense, urban environments or neighborhoods where they can get around without driving. In addition, University admission rates and policies defining who is eligible to live off-campus determine how many students enter the private rental market to begin with.

This chapter describes changes in student enrollment at the University of Illinois' flagship campus at Urbana-Champaign from 1980 through 2018. I find that enrollment at the University of Illinois has increased by nearly 15,000 students at the undergraduate and graduate levels combined. This has implications for the local housing market because any students not living in university residence halls seek housing on the private rental market. Therefore, more students

mean more housing demand. A rise in enrollment of international and out-of-state domestic students accounts for growth in the student body.

As enrollment has increased, so has the cost of tuition. Students attending the University of Illinois face higher costs than in the past. This is especially true for international enrollees and out-of-state domestic students, who face higher tuition charges than students from Illinois. Growing numbers of these students indicate a large population of students willing and able to pay more for a college education. This growing pool of affluent students could translate to increased buying power in the local housing market. As a result, these students may be able to demand luxury housing at a higher cost — something out of reach for student renters in the past. At the same time, income inequality in Illinois demonstrates some in-state students may also be able to afford to spend more on education and housing. Others from less affluent families may struggle to afford tuition and housing costs.

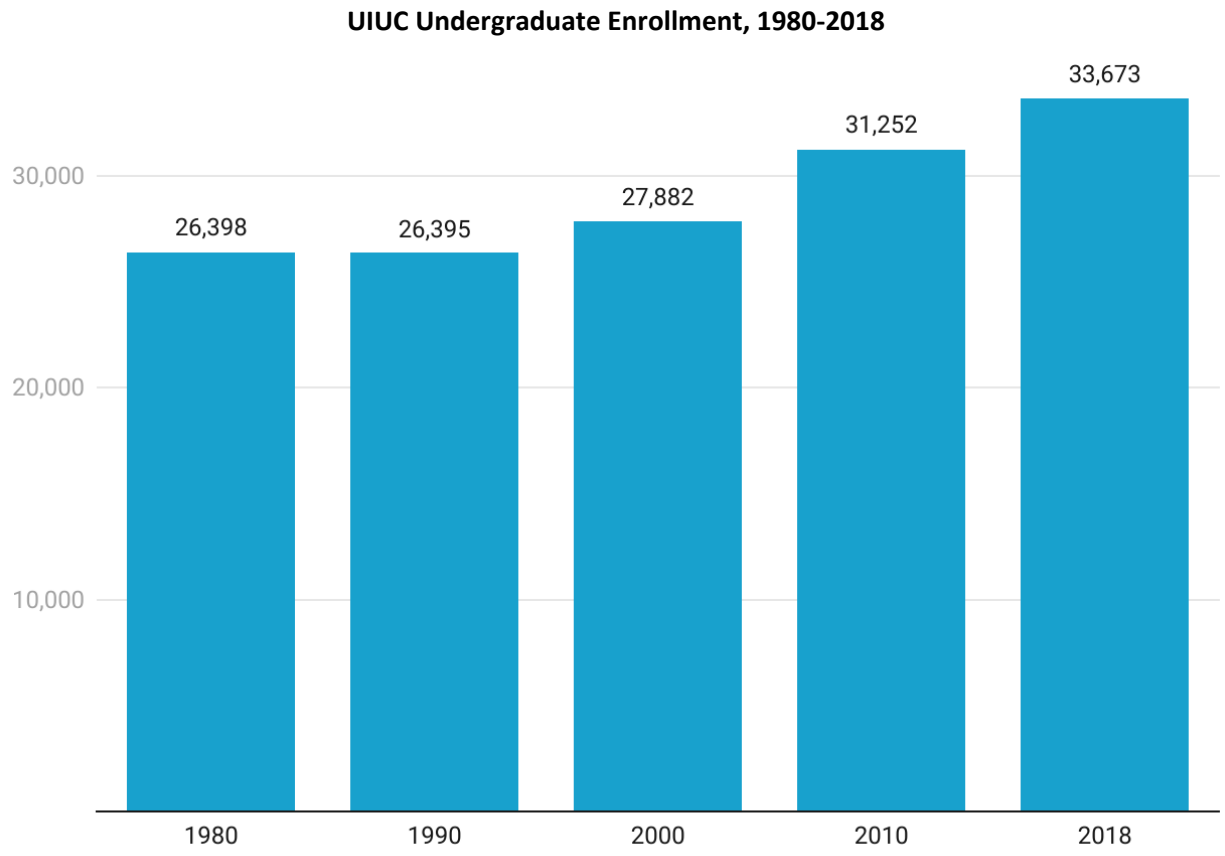
In this chapter, I track the number of students enrolled at the University, as well as the proportion of students enrolling from within Illinois, from elsewhere in the U.S., or from foreign countries. I also examine the cost of tuition and housing facing University of Illinois students. In addition, I consider household-level demographic conditions in Illinois to describe the likely characteristics of in-state students. I then discuss the implications these enrollment trends could have for student demand in the private rental market.

FINDINGS

Growth in Enrollment, Specifically Among Out-of-State and International Students

Enrollment at the University of Illinois is on the rise, especially among undergraduate students. Since 1980, undergraduate student enrollment at the University of Illinois' flagship campus has grown 27.6 percent, adding 7,275 students. In 2018, the University was the 11th largest public university in the U.S. in terms of overall enrollment, with 49,702 students, about 68 percent of whom were undergraduates (Chronicle of Higher Education, 2018). The sharpest rise in the number of undergraduate students occurred after 2000. Over 18 years, the University added 5,791 students, a 20 percent increase. Figure 4.1 shows how undergraduate enrollment has grown since 1980.

Figure 4.1:



Data source: University of Illinois Division of Management Information: Final Statistical Abstracts for 1980, 1990, 2000, 2010, and 2018

Graduate student enrollment has risen even faster than undergraduate enrollment from 1980 to 2018. Over that period, the graduate student body nearly doubled, increasing from 7,343 to 14,672 — a net growth of 7,329 students. For graduate students, the sharpest decade-to-decade enrollment bump occurred following the Great Recession. The University added 5,088 graduate students from 2010 to 2018, a 34.7 percent increase.

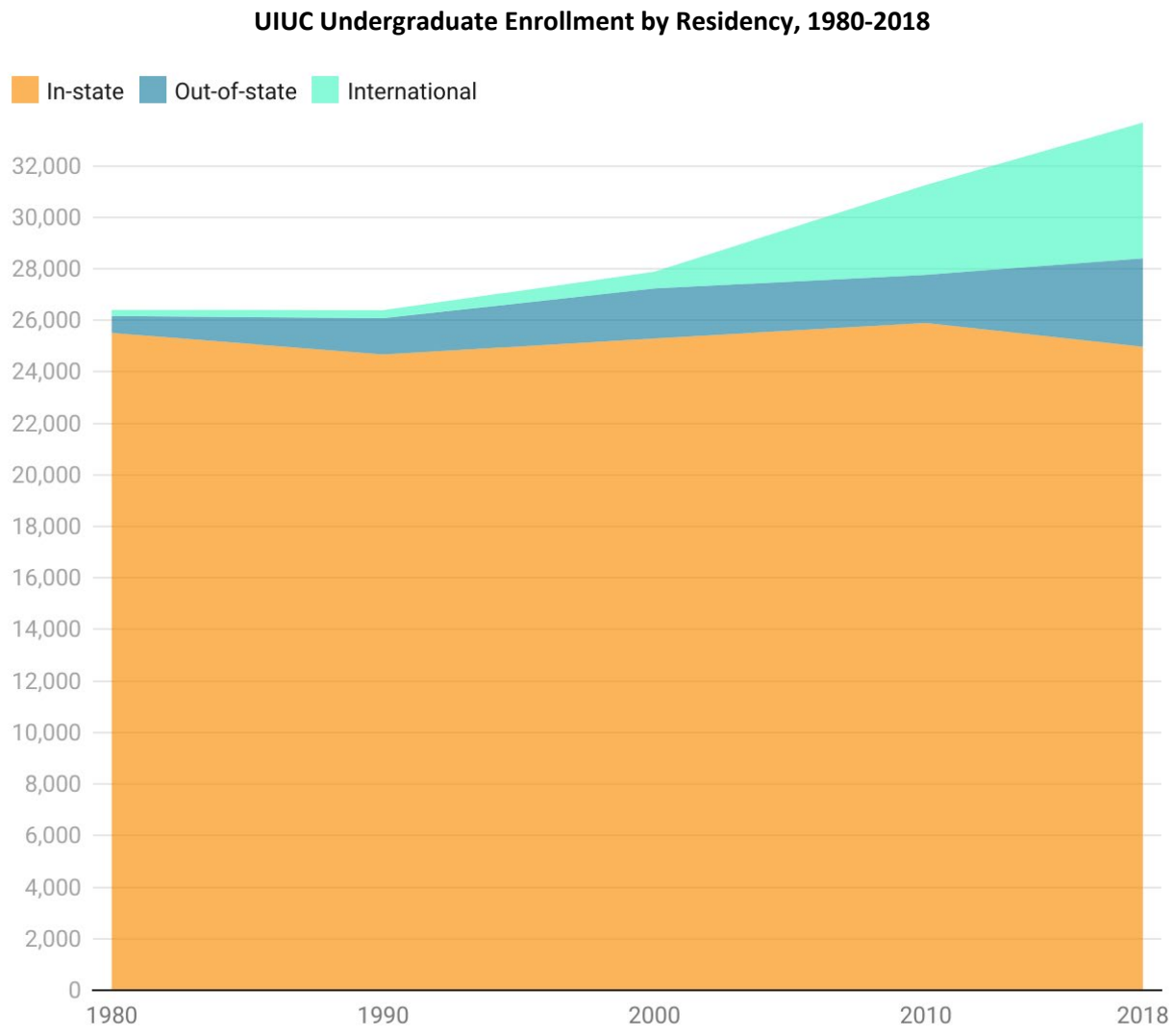
Although relatively few undergraduate students attend the University of Illinois on a part-time basis — 916 or 2.7 percent were part-time in 2018, and 1,114 or 4.2 percent in 1980 — a greater share of graduate students enrolled part-time. This has fluctuated over the years. In 2018, for example, 2,282 (15.6 percent) of graduate students were part-time, compared to only 549 (5.7 percent) the decade prior. In 1980, this share was significantly higher — 28.7 percent of graduate students had part-time status.[3] The proportion of part-time graduate students could be

[3] The University's enrollment statistics only count students enrolled in at least one on-campus course for credit. As a result, these enrollment numbers do not include any students only enrolled in online courses.

meaningful, because students taking a full credit load may be more likely to prefer housing proximate to campus and be less likely to reside outside of the Champaign-Urbana area.

As enrollment of undergraduate and graduate students has grown, the University's in-state undergraduate enrollment has remained steady over the decades. In 1980, 25,508 undergraduate students were Illinois residents. By 2018, the number of in-state students dropped by about 500 students. The proportion of in-state to nonresident students has fallen more sharply. In 1980, Illinois residents made up 96.6 percent of the undergraduate student body, but in 2018 they represented 74.2 percent. Figure 4.2 illustrates these trends.

Figure 4.2:



Data source: University of Illinois Division of Management Information: Final Statistical Abstracts for 1980, 1990, 2000, 2010, and 2018

As the number of in-state students remained stagnant, the University picked up a growing number of domestic students from other states, as well as students from abroad. Out-state enrollment grew from 2.5 percent of the undergraduate student body in 1980 (661 students) to 10 percent in 2018 (3,426 students). This increase has been gradual. Although the number of out-of-state students more than doubled from 1980 to 1990, growth slowed in the following decades. After that, the sharpest increase in enrollment occurred in the years since the Great Recession. From 2010 to 2018, nonresident enrollment increased 83 percent.

Out-of-State Enrollment Could Come with Greater Student Wealth

The home states of students indicate that a growing share of domestic students are from states where residents earn, on average, more than Illinois residents do. In 1980 Illinois had the seventh-highest median household income of all U.S. states. That year, about 10 percent of out-of-state domestic students were from states with higher median household incomes than Illinois. For undergraduate and graduate students combined that number was lower — about 9 percent. Of the top five sending states, most — Missouri, Indiana, Ohio, and Wisconsin — were in the Midwest. Only New Jersey, which sent 32 students — the fifth-highest enrollment — was outside of the region.

In the decades that followed, a greater percentage of domestic students enrolled from states wealthier than Illinois based on median household income. At the same time, Illinois became less wealthy in comparison to other states. In 1990 Illinois had the twelfth highest median household income in the U.S. Three nearby states — Missouri, Ohio, and Indiana — enrolled the most undergraduate students that year. The next five states with the greatest number of UIUC students, however, were coastal — New York, California, New Jersey, Pennsylvania, and Florida. These out-enrolled neighboring Wisconsin and Iowa. Of these, New Jersey, California, and New York each had higher median household incomes than Illinois. In total, about 29 percent of out-of-state domestic undergraduates enrolled from states wealthier than Illinois. For all students at the graduate and undergraduate levels combined, about 28 percent were from higher earning states than Illinois.

In 2000, this percentage ticked up again to about 32 percent. Illinois was the thirteenth wealthiest state that year. The states with the highest enrollment were Missouri and Ohio, followed by California, New York, and New Jersey. Of those, New Jersey was the top earning state that year. California also had a higher median household income than Illinois.

By 2010 over 42 percent of out-of-state undergraduate students were from states that outearned Illinois. For undergraduate and graduate students combined that figure was slightly lower at 31 percent. The top sending states that year were California and New Jersey. Although Missouri and Ohio held the next two slots, New York, Texas, Massachusetts, Florida, Maryland, and Virginia rounded out the top ten. Therefore, only two out of the ten states sending the most students to the University of Illinois were in the Midwest. Of the top ten sending states, Maryland was the highest earning state in the U.S., followed by New Jersey. Massachusetts and Virginia also had higher median household incomes than Illinois. Overall, Illinois had the sixteenth highest median household income in the U.S.

In 2018 nearly two-thirds— 65 percent — of out-of-state domestic undergraduate students came from states with median household incomes greater than Illinois, which was the seventeenth highest-earning state. Only two of the top home states of out-of-state students were in the Midwest — Missouri, which enrolled the sixth most students, and Michigan, which enrolled the tenth most. California, New Jersey, Texas, New York, and Virginia had the highest enrollments overall. Eight of the top fifteen sending states had median household incomes higher than Illinois. However, when considering undergraduate and graduate students combined only about 38 percent of students were from higher earning states.

Using statewide median household income as a reference has limitations. Students from higher earning states may still come from lower earning families. The cost of living in these states may also outstrip Illinois, meaning that out-of-state students' families face higher expenses that temper their spending power.

Enrollment from higher-earning states is driving much of out-of-state enrollment. Enrollment from states outside the Midwest is increasing, indicating that students are choosing the University of Illinois for reasons other than proximity to home. Coupled with the fact that out-of-state students pay higher tuition, these factors point to a growing share of domestic students willing and able to pay higher amounts for schooling.

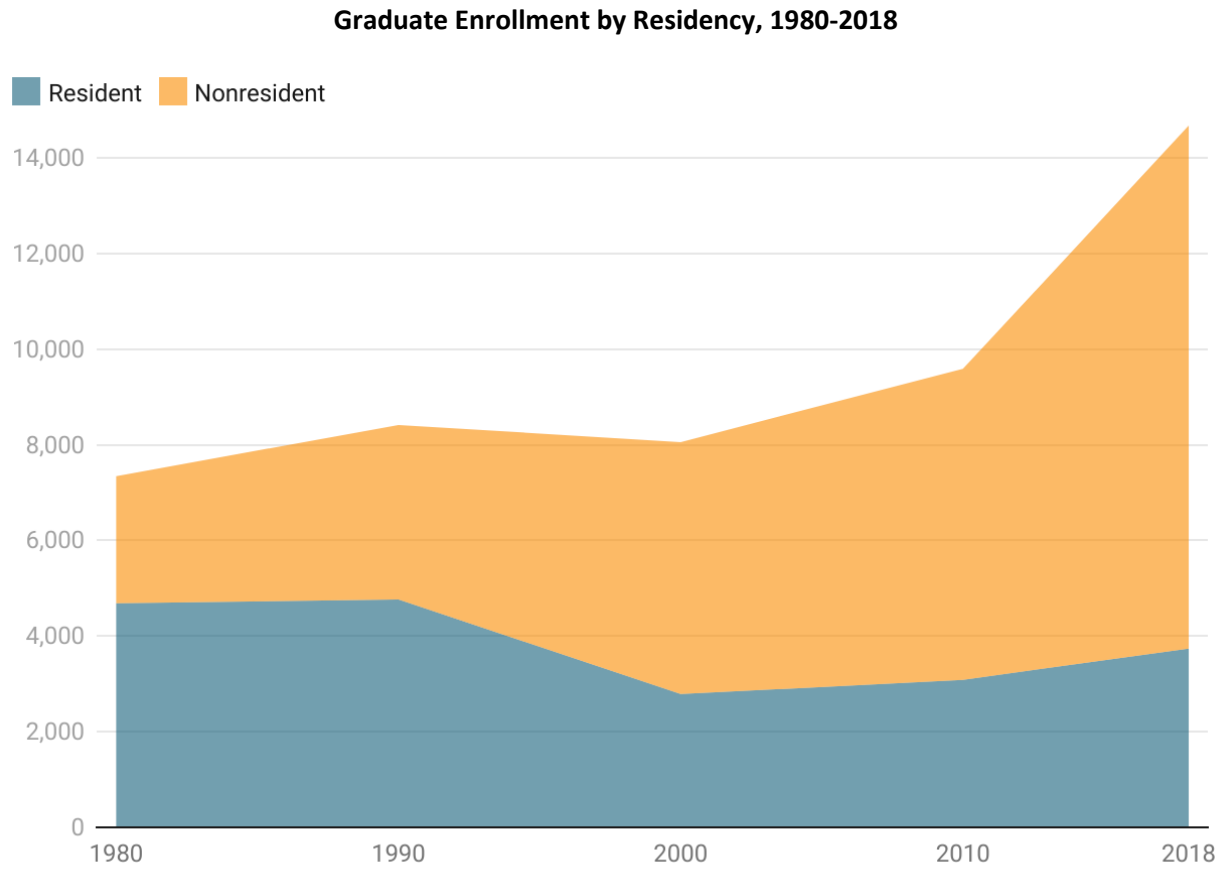
An Influx of International Students

At the same time, undergraduate enrollment of international students exploded from 2000 on. From 1980 to 2000, the number of international students ranged from 229 to 649, or 0.09 to 2.3 percent of the overall undergraduate student body. Then between 2000 and 2010, the University picked up 2,839 international students, more than a 400 percent increase. By 2018, international students made up 15.7 percent of undergraduate enrollment. By that year, more than 1.5 international students enrolled for every domestic, out-of-state student.

Although graduate students have traditionally made up a smaller proportion of all University of Illinois students, their numbers have grown faster than undergraduate enrollment. From 1980 to 2018, graduate enrollment doubled, while undergraduate enrollment increased by 27.2 percent. The sharpest increase in graduate enrollment occurred between 2010 and 2018, when the University gained 5,088 graduate students, more than doubling the graduate population.

As the composition of the undergraduate student body has shifted to incorporate growing shares of nonresident students, the graduate student body has also. In 1980 students from Illinois made up the majority of graduate enrollment at 63.8 percent, or 4,686 students. But by fall 2018, only 25.5 percent of graduate students were from the state — a decline of 38 percentage points. In absolute terms, the University of Illinois gained 8,278 nonresident graduate students but lost 949 in-state students. Figure 4.3 demonstrates this growth in graduate students from out of state.

Figure 4.3:



Data source: University of Illinois Division of Management Information: Final Statistical Abstracts for 1980, 1990, 2000, 2010, and 2018

Increasing numbers of international students account for much of the growth in nonresident graduate enrollment from 1980 to 2018. International graduate enrollment has risen by 360 percent over that period. In 2018, 37.1 percent of all graduate students came from outside the U.S. Thirty-eight years earlier, a more modest 1,182 — or 16.1 percent — of all graduate students were international.

From 1980 to 2018 overall graduate enrollment increased by 7,329 students. Over that period, the graduate student body saw a net increase of 4,265 international students, meaning 58.2 percent of graduate student growth is due to the uptick in students from abroad.

The rise in international students occurred first among the graduate student body, with foreign enrollment picking up among undergraduate students in recent decades. In 1980 the University enrolled 1,443 foreign students, 81.9 percent of whom were graduate students. Only 261 international students enrolled at the undergraduate level that year. More than a fifth of all graduate students came from outside the U.S in 1980.

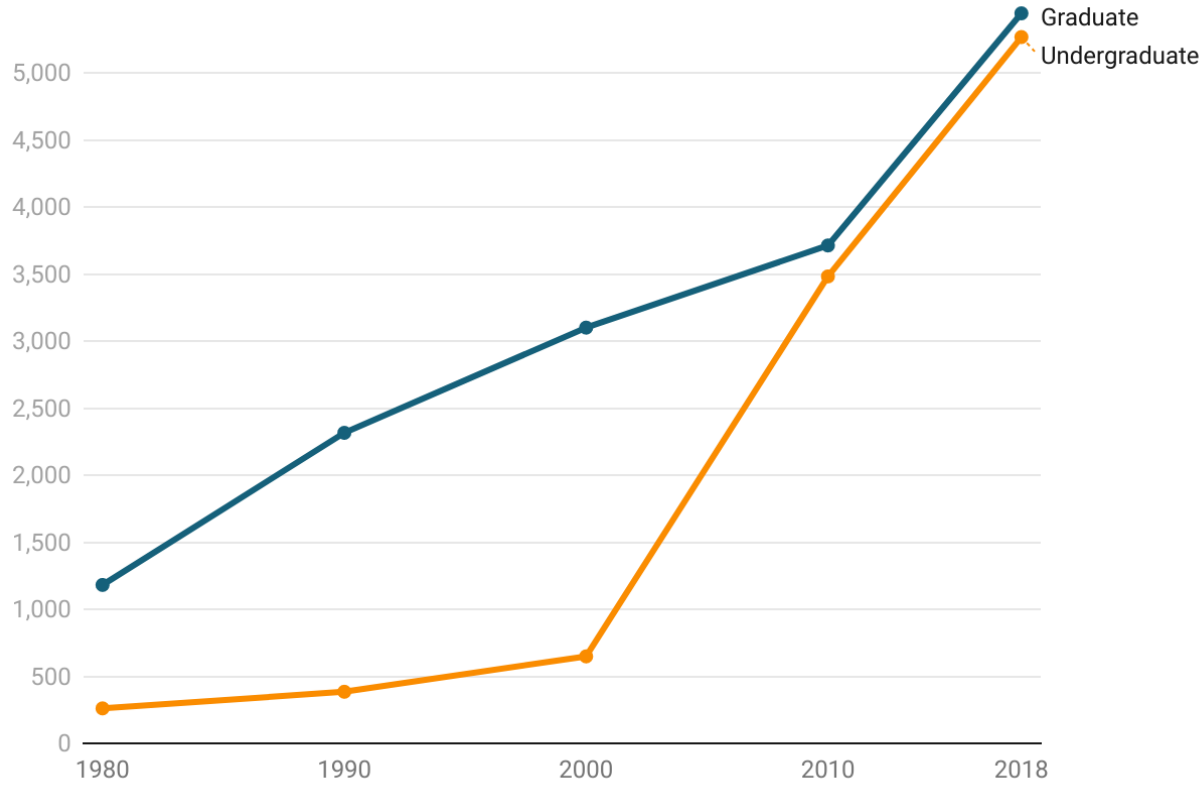
By 1990 the number of international students rose by 87.2 percent across the graduate and undergraduate populations. Still, foreign students only comprised 14.2 percent of the undergraduate student body. Instead, much of the increase occurred at the graduate level, which saw a 96 percent increase in the number of international students. The growth in foreign enrollment slowed from 1990 to 2000, when the undergraduate and graduate cohorts saw a 38.8 percent increase in the number of international students. Undergraduate students accounted for about two-thirds of this growth.

From 2000 on, the undergraduate student body's foreign enrollment has grown at a faster rate than graduate international enrollment. The most dramatic rise happened between 2000 to 2010, when international undergraduate enrollment grew 436.8 percent. At the same time, the number of international graduate students only rose 19.8 percent. Overall, the University of Illinois nearly doubled its international student population that decade. Just over half of international students were graduate-level and just under half were undergraduates in 2010.

Undergraduate enrollment of international students increased 51.3 percent and graduate enrollment rose by 46.6 percent by 2018. Although the numbers of international students in each cohort drew closer in 2018, slightly more international students are enrolled at the graduate level. However, because the University enrolls more than twice as many undergraduates than graduate students, a higher proportion of graduate students are from other countries. Figure 4.4 illustrates undergraduate and graduate enrollment of international students from 1980 to 2018.

Figure 4.4:

Graduate and Undergraduate International Student Enrollment, 1980-2018



Data source: University of Illinois Division of Management Information: Final Statistical Abstracts for 1980, 1990, 2000, 2010, and 2018

Over the decades international students have also made up a significant proportion of nonresident enrollment at the undergraduate level. In 1980, 44.5 percent of nonresident students were from foreign countries. By 1990, this peaked to 63.5 percent of nonresident enrollment, representing a 19 percentage point increase over ten years. Since then, the share of nonresident students from outside the U.S. has fallen. In 2018, international students made up 49.8 percent of nonresident enrollment, the lowest proportion since 1990.

Students From Asia Drive International Enrollment

Since 1980 countries in Asia have topped the list of nations home to University of Illinois' international students at the graduate and undergraduate levels combined. In 1980, 1990, 2000, 2010, and 2018, non-Asian countries only ranked among the top ten sending countries twice. The first time was in 1990 when Brazil and the United Kingdom each enrolled 61 students, ranking them fifth. However, the fourth most represented country was India, which enrolled 201 students

— more than twice as many. Then in 2010 Canadian students made up the fifth largest contingency at 127 students. Still, Taiwan — the fourth most represented country — was home to 459 students. Table 4.1 shows the countries most represented among international students at the University of Illinois from 1980 to 2018.

Table 4.1:

International Enrollment by Country and Academic Level, 1980-2018

Graduate		Undergraduate		Total	
Country	**Enrollment**	**Country**	**Enrollment**	**Country**	**Enrollment**
		1980			
Taiwan	247	Hong Kong	29	Taiwan	256
India	83	Iran	36	Iran	92
South Korea	77	Japan	24	India	89
Japan	60	United Kingdom	20	Hong Kong	84
Iran	56	Venezuela	10	Japan	84
		1990			
China	403	United Kingdom	43	China	418
Taiwan	360	Japan	37	Taiwan	370
South Korea	295	France	34	South Korea	314
India	196	Germany	29	India	201
Japan	100	Malaysia	27	Brazil/U.K. (tie)	61
		2000			
China	649	South Korea	80	China	686
South Korea	507	Singapore	60	South Korea	587
India	320	Japan	46	India	363
Taiwan	234	India	43	Taiwan	255
Turkey	100	United Kingdom	41	Japan	134
		2010			
China	1,204	China	1,119	China	2,323
South Korea	551	South Korea	999	South Korea	1,550
India	463	India	387	India	850
Taiwan	309	Taiwan	150	Taiwan	459
Iran	100	Indonesia	81	Canada	127
		2018			
China	2,628	China	3,153	China	5,781
India	902	South Korea	596	India	1,490
South Korea	422	India	588	South Korea	1,018
Taiwan	233	Taiwan	115	Taiwan	348
Iran	115	Indonesia	90	Indonesia	141

Data source: University of Illinois Division of Management Information Foreign Students by Country for 1980, 1990, 2000, 2010, and 2018

Two countries — Taiwan and India — appeared among the top five home countries of international students in every year in this study. South Korea has appeared in the top five every year since 1990 and has consistently been the second or most third represented country among UIUC foreign students.

Another Asian country, China, has sent the most students to the University of Illinois since 1990. In addition, the gap separating the number of students enrolled from China compared to others has grown. Chinese students outnumbered Taiwanese students, the second most represented, by only 48 in 1990. In 2000, 99 more Chinese students attended than South Korean students — that year's foreign country with the second-highest enrollment. Ten years later that gap had widened to 773 students. By 2018 the University had 4,291 more Chinese students than India, which sent the second most students. Chinese enrollment increased at the graduate and undergraduate levels combined from four students in 1980 to 5,781 in 2018.

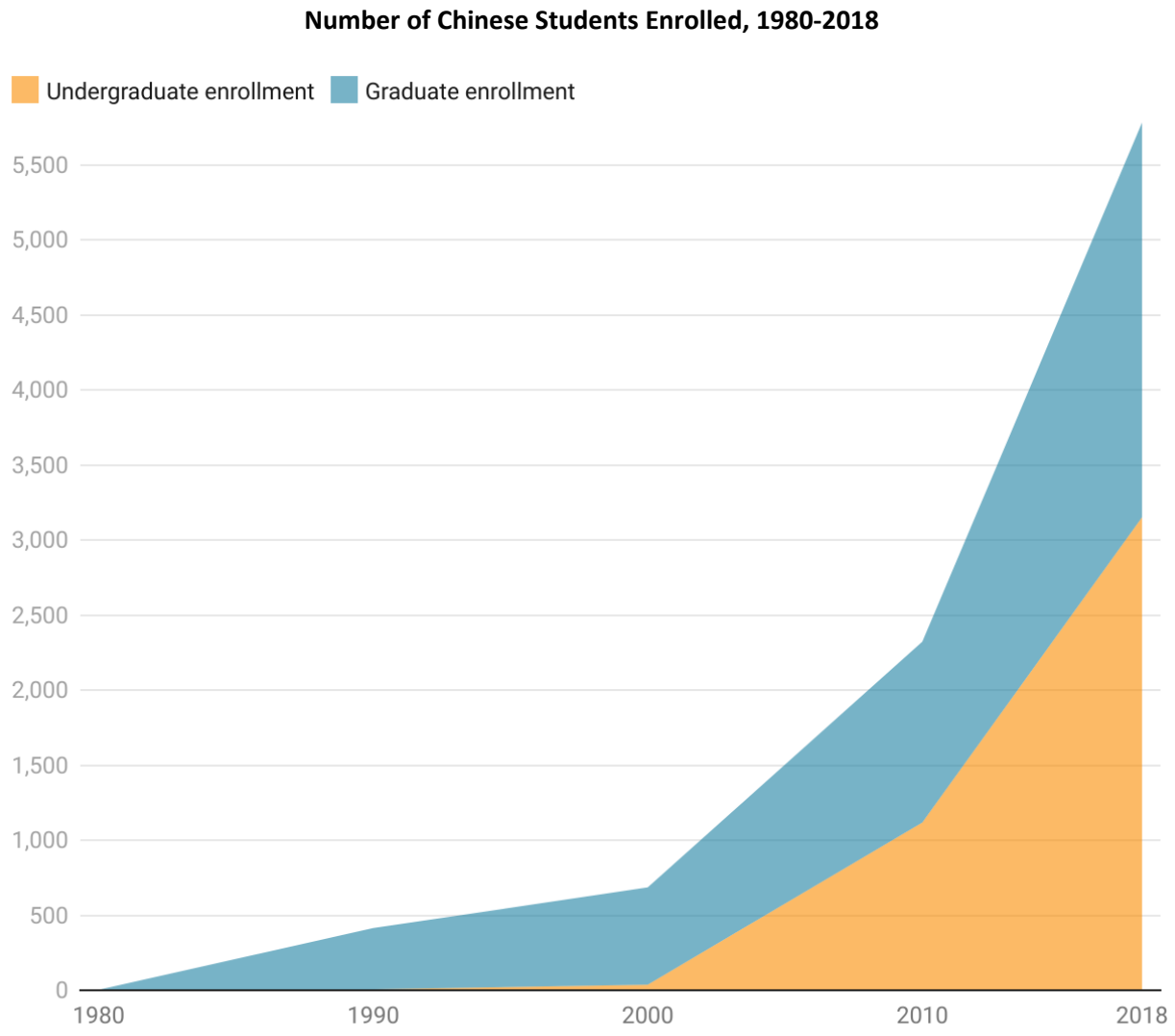
As with the rise in international students generally, the boom in enrollment from Asian countries — and Chinese enrollment specifically — began at the graduate level. In 2018, Chinese students made up the largest share of international graduate enrollment. In total, 2,628 graduate students came from China, meaning Chinese students made up 48.2 percent of the University's 5,447 international graduate students. Chinese students comprised 17.9 percent of the graduate student body as a whole.

This represents a stark contrast to 1980, when only four Chinese graduate students enrolled. In 1990, that number jumped to 412, representing 17.8 percent of the University's 2,317 international graduate students. That year, Chinese students were the largest contingency of international graduate students. Chinese students have out-enrolled graduate students from other foreign countries in the decades since. But the greatest growth in Chinese graduate student enrollment occurred between 2010 and 2018, when the number of Chinese students rose by 1,424, a 118 percent increase.

At the undergraduate level, no single country was home to more than 80 students from 1980 through 2000. By 2010, the top five countries by net enrollment were all in Asia. However, in the decades prior, European nations, such as the United Kingdom, France, and Germany, rounded out those with the highest enrollments. China did not rank among the foreign countries with the highest enrollment until 2010. Still, students from China out-enrolled all other international students that year. The country with the next highest enrollment — South Korea — had about 1,000 fewer students. By 2018 China had over 2,500 more students than South Korea, whose enrollment shrank by about 400 students.

Chinese undergraduate enrollment grew by 1,038 students between 2000 and 2010 and 2,034 from 2010 to 2018. By 2018, net Chinese enrollment at the undergraduate level pushed past the number of graduate students from China. That year, Chinese students made up 93.6 percent of the undergraduate student body. In comparison, Chinese students made up 17.9 percent of the smaller graduate cohort. Figure 4.5 shows growth in Chinese enrollment from 1980 to 2018.

Figure 4.5:



Data source: University of Illinois Division of Management Information: Foreign Students by Country for 1980, 1990, 2000, 2010, and 2018

But while Chinese enrollment has skyrocketed, the numbers of students from other countries at the undergraduate and graduate levels has begun to fall. Of the top five home

countries of international students at the graduate and undergraduate levels combined, only India and Indonesia saw growing enrollment numbers in the past decade. The total number of Indian students increased 75.3 percent from 2010 to 2018. As a result, India rose to become the second most represented foreign country on campus with its enrollment of 1,490 students. South Korea, on the other hand, saw a net loss of 532 students over the same timeframe. While India gained students at both the graduate and undergraduate levels, South Korea's enrollment declined among both cohorts. Taiwan — the fourth most represented foreign country in both 2010 and 2018 — also saw net losses in enrollment.

Increasing Racial/Ethnic Diversity Among Undergraduate Students

As enrollment has grown, the University of Illinois' domestic undergraduate student population has become more ethnically and racially diverse.[4] Enrollment of Asian/Pacific Islander and Hispanic/Latinx students has driven much of this increasing diversity. Asian/Pacific Islander enrollment grew by 654 percent and Hispanic/Latinx enrollment increased more than ten times from 1980 to 2018.

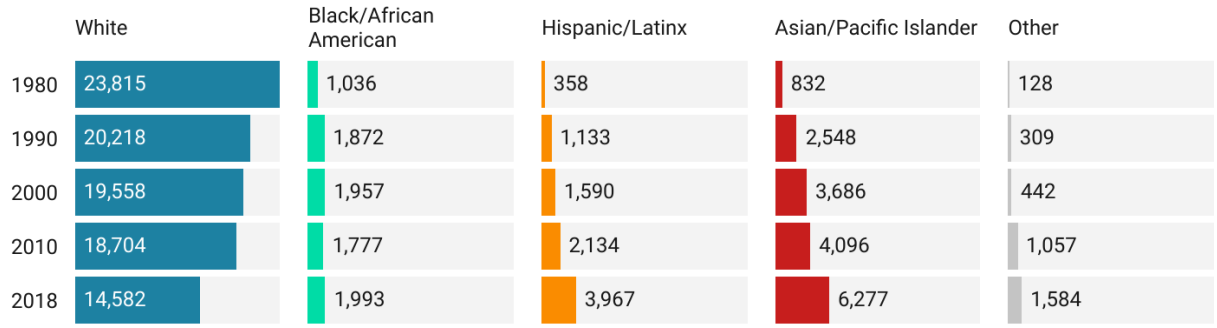
Growth in the number of Asian/Pacific Islander and Hispanic/Latinx students has counteracted another trend — a steady decline in the number of white undergraduate students. Since 1980, white student enrollment dropped by 9,233 students, a 38.8 percent decrease.

At the same time, the number of Black undergraduates has held steady — increasing by a modest 957 students. From 1980 to 1990 Black students rose from 3 percent of the student body to 7 percent, but their share of the student body has remained mostly unchanged since then. In both 2010 and 2018, Black students made up 6 percent of undergraduate students. Figure 4.6 demonstrates these demographic shifts among domestic undergraduate students from 1980 to 2018.

[4]The University of Illinois considers international students separately when reporting race and ethnicity data. This allows for a comparison against demographic changes among Illinois state residents overall.

Figure 4.6:

Race/Ethnicity of Domestic Undergraduate Students, 1980-2018



Data source: University of Illinois Division of Management Information: Final Statistical Abstracts for 1980, 1990, 2000, 2010, and 2018

As the University of Illinois' undergraduate population has grown more diverse, changes in enrollment have mirrored demographic shifts statewide. That is, as the population within each racial/ethnic group has grown or declined, it has also grown or declined in university enrollment. However, some groups are overrepresented or underrepresented compared to their statewide representation. Table 4.2 compares the racial/ethnic makeup of Illinois' population with that of the domestic, full-time undergraduate student body at the University of Illinois.

Table 4.2:

Illinois Population and University of Illinois Undergraduate Enrollment by Race/Ethnicity, 1980-2018

	White		Black/African American		Asian		Hispanic/Latinx of all races	
	Illinois	UIUC	Illinois	UIUC	Illinois	UIUC	Illinois	UIUC
1980	78.0%	91.0%	14.5%	4.0%	1.5%	3.2%	5.6%	1.4%
1990	74.8%	77.5%	14.6%	7.2%	2.4%	9.8%	7.9%	4.3%
2000	67.8%	71.8%	15.0%	7.2%	3.4%	13.5%	12.3%	5.8%
2010	63.7%	67.4%	14.3%	6.4%	4.5%	14.8%	15.8%	7.7%
2018	61.6%	51.3%	14.0%	7.0%	5.4%	22.1%	17.0%	14.0%

Note: 1980 percentages for Asian population include Asian, Pacific Islander, American Indian, Eskimo, Aleut. Hispanic/Latinx percentages for 1980 include individuals with Spanish origin status

Data sources: University of Illinois Division of Management Information: Final Statistical Abstracts for 1980, 1990, 2000, 2010, and 2018; 1980, 1990, 2000 decennial census retrived from Social Exporer: https://www.socialexplorer.com; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

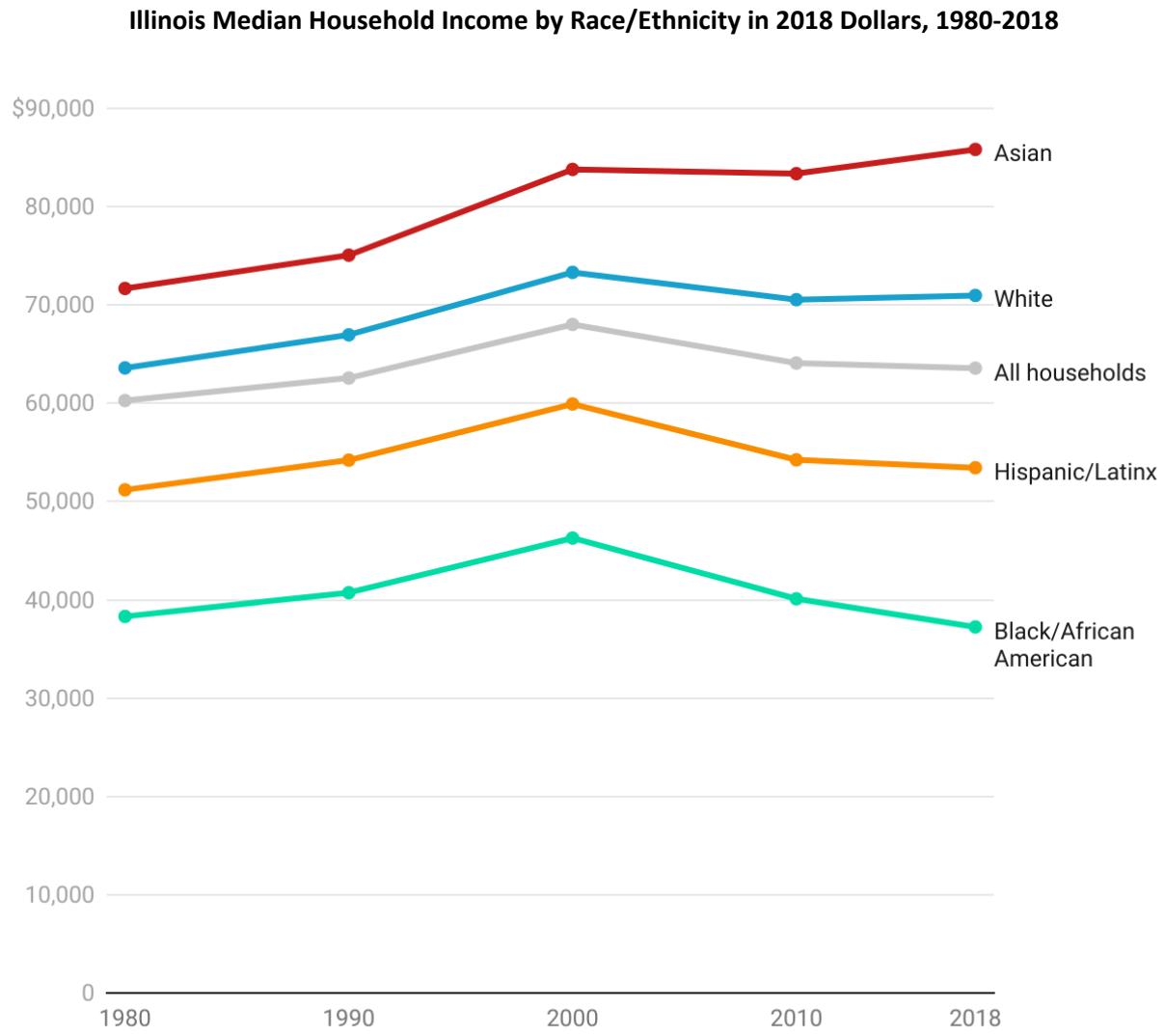
As the state's share of white residents has fallen, white undergraduate enrollment has declined more quickly. Conversely, Asian enrollment has far outstripped growth in Illinois' Asian

population, although both have increased. And although both enrollment of Black students and Illinois' Black population have remained largely steady, the percentage of Black students has remained about half of the percentage of Black residents statewide. Of all racial/ethnic groups, the percentage of Hispanic/Latinx students was the closest to the overall state share of Hispanic/Latinx residents in 2018.

Growing Income Inequality in Illinois

Changes in student demographics have occurred as median household income has risen unevenly among Illinois' ethnic and racial groups since 1980. Examining household-level wealth statewide allows for a snapshot of Illinois families' ability to pay for their children's college education. In addition, adjusting these median household income estimates for inflation enables a more accurate look at families' buying power than current dollars do. Figure 4.7 shows how median household income has changed from 1980 to 2018 in 2018 dollars.

Figure 4.7:



Data source: 1980, 1990, 2000 decennial census sample-based data retrived from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates; Adjusted for inflation using the Bureau of Labor Statistics Consumer Price Index.

Income for households of all races and ethnicities increased in Illinois from 1980 to 2018, except for Black/African American households, which saw their buying power decline slightly. Asian/Pacific Islanders, on average, experienced the fastest income growth. After adjusting for inflation, Asian-American households increased 19.7 percent.

Asian/Pacific Islander households also represent the only group that saw an increase in buying power following the Great Recession. Black/African American households are the group that has recovered the least since 2008 — their income has fallen 19.8 percent since 2000 in

2018 dollars. Hispanic/Latinx incomes have also lagged. Ten years after the recession, households in this group earn about 10.8 percent less than they did in 2000 in 2018 dollars.

Therefore, Asian-American households have both made the greatest gains in buying power as Asian undergraduate enrollment has risen fastest at the University of Illinois. However, enrollment trends do not follow household income trends for other groups statewide.

White families saw the second-highest rise in median household income from 1980 on. Incomes for white households increased 11.6 percent from 1980 to 2018. At the same time, white students represent a smaller overall share of University of Illinois enrollment as their numbers have dropped by more than 8,000 students.

On the other hand, Hispanic/Latinx undergraduate enrollment showed the second-fastest growth from 1980 to 2018. Hispanic/Latinx households have gained 4.4 percent in income after adjustment for inflation, slower growth than Asian and white households. What's more, growth in Hispanic/Latinx household income has lagged statewide growth — Illinois households in 2018 earned 5.5 percent more than they did in 1980 in 2018 dollars. In addition, Black/African American undergraduate enrollment increased by about 957 students even as households experienced a drop in purchasing power.

For all groups, tuition costs have increased as a proportion of median household income over the past four decades. This is most true for Black/African American families. On average, tuition increased 27.1 percentage points compared to the median income for Black households in Illinois. They also have the highest tuition-to-income ratio of any group for all years in this study.

Conversely, Asian-American households, followed by white households, had the lowest proportions of tuition to income in 2018, assuming each household is only sending one student to study at the University of Illinois. Therefore, the state's Asian families appear to be taking advantage of their growing buying power by enrolling in higher education. Still, tuition as a percentage of white household income increased by 15 percentage points from 1980 to 2018. For Asian families, that increase represented nearly 12 percentage points. Table 4.3 shows tuition for Illinois residents as a percentage of median household income from 1980 to 2018.

Table 4.3:

In-State Tuition as a Percentage of Median Household Income in Current Dollars, 1980-2018

	Illinois total	White	Black/African American	Asian	Hispanic/ Latinx
1980	3.3%	3.1%	5.2%	2.8%	3.9%
1990	6.6%	6.2%	10.1%	5.5%	7.6%
2000	8.0%	7.4%	11.7%	6.5%	9.1%
2010	18.6%	16.9%	29.8%	14.3%	22.0%
2018	18.9%	17.0%	32.3%	14.0%	22.5%

Data source: 1980, 1990, 2000 decennial census sample-based data retrived from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 and 2014-2018 American Community Survey 5-year estimates; University of Illinois at Urbana Champaign Office of the Registrar; University of Illinois Board of Trustees Reports

Using median household income statewide as a proxy for in-state students wealth has limitations. For one, medians obscure variation in income within different ethnic and racial groups. Furthermore, the University does not publicize statistics about families' financial need broken down by race or ethnicity. Wealth among in-state undergraduate students may be going up, especially among Asian and white students. On the other hand, enrollment across all racial/ethnic groups could be increasing among top-earning families, but not lower earning families. Another possibility is that the increase in the numbers of out-of-state and international students who pay higher tuition could enable greater enrollment of lower-income in-state students. This final scenario depends on the degree to which revenue from nonresident tuition is funding need-based financial aid for in-state students.

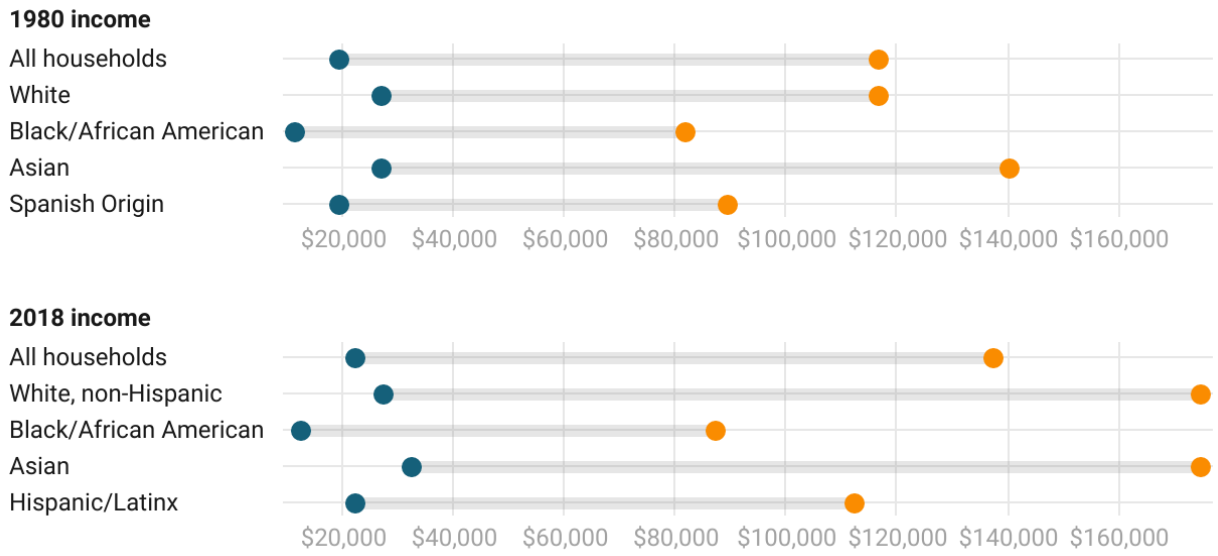
One factor that complicates conclusions about the wealth of in-state undergraduate students is rising income inequality in Illinois. The earning gap between the richest and poorest Illinois residents has widened over the decades.[5] Furthermore, inequality has increased within the state's racial/ethnic groups. One measure of income inequality is the ratio of household income for the top 20 percent of households to the bottom 20 percent. Figure 4.8 shows how

[5]The U.S. Census Bureau reports the number of households with incomes within certain intervals of $5,000, $5,000, 10,000, and $25,000, with intervals at the higher end of the earning scale larger than those at the lower end. For this analysis, I determined how many households comprised 20 percent of the state total. I then used this number to approximate where the household income cutoff fell for the lowest-earning 20 percent of households and the highest-earning 20 percent of households. Because of the range of incomes within the interval, calculating the precise income cutoff for 20 percent of households is not possible. Therefore, income limits discussed here represent the midpoints of income intervals containing approximately 20 percent of Illinois households.

household income for the poorest 20 percent of Illinois residents compared to income for the richest 20 percent from 1980 to 2018.

Figure 4.8:

Income for Lowest Earning 20% and Highest Earning 20% of Illinois Households by Race/Ethnicity in 2018 Dollars, 1980 and 2018



Data source: 1980, 1990, 2000 decennial census retrived from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2006-2010 and 2014-2018 American Community Survey 5-year estimates; Adjusted for inflation using the Bureau of Labor Statistics Consumer Price Index calculator.

In 1980, Asian-American households in Illinois demonstrated the greatest gap between the top 20 percent and bottom 20 percent of earners. This inequality had widened by 2018. However, white, non-Hispanic households are now the group with the largest discrepancy between low- and high-earning households. In 1980, white households experienced less inequality than that for all of Illinois' households regardless of race or ethnicity. However, by 2018 income inequality among white households outstripped that for households statewide.

The wealth gap for Hispanic/Latinx households has also widened, but less dramatically than for white and Asian families. For Black households, the gap between the richest and poorest households remained more constant from 1980 to 2018.

Rising incomes at the top end of the earning scale explain growing income inequality. The top-end incomes for the poorest 20 percent of households have remained relatively unchanged from 1980 to 2018 when adjusted for inflation. At the same time,

The difference in earnings for Illinois' wealthiest and poorest households has increased since 1980. While the gap between the highest and lowest earning household incomes was $20,000 in 1980, the wealthiest earned about $115,000 more than the poorest Illinois families in

2018. This is largely because of increased wealth for the highest earning households. Although the earnings threshold for households with the lowest incomes remained steady, the incomes of the richest 20 percent of families grew much faster. The lowest earning households made less than $6,250 in current dollars in 1980. By 2018 the upper limit for the poorest households had increased 260 percent to $22,500. However, the wealthiest households earned more than $26,250 in 1980 and $137,500 in 2018, a 424 percent increase.

As income inequality statewide has increased, in-state enrollment at the University of Illinois has remained largely unchanged since 1980. However, college-aged residents now represent a smaller share of the state's population. From 1980 to 2018, the number of 18- to 24-year-olds has decreased 19.6 percent. At the same time, the state's total population has risen 12.2 percent. This indicates that to maintain steady in-state enrollment, a greater proportion of the state's young people are enrolling at the University of Illinois than in past decades. This has occurred despite tuition increases, meaning more Illinois families have chosen to pay higher school costs.

Without information on the average incomes of University of Illinois students' families the distribution of students enrolled at various income levels is unknown. However, if students represent families across income levels in Illinois, this indicates that today's wealthiest students come from households that far outearn their peers from lower-income backgrounds. Furthermore, the poorest students have decreased buying power from past decades, since their families' incomes have increased slower than their wealthier peers as the cost of living has increased. This could create disparities in what in-state students can afford to spend on housing throughout their college education.

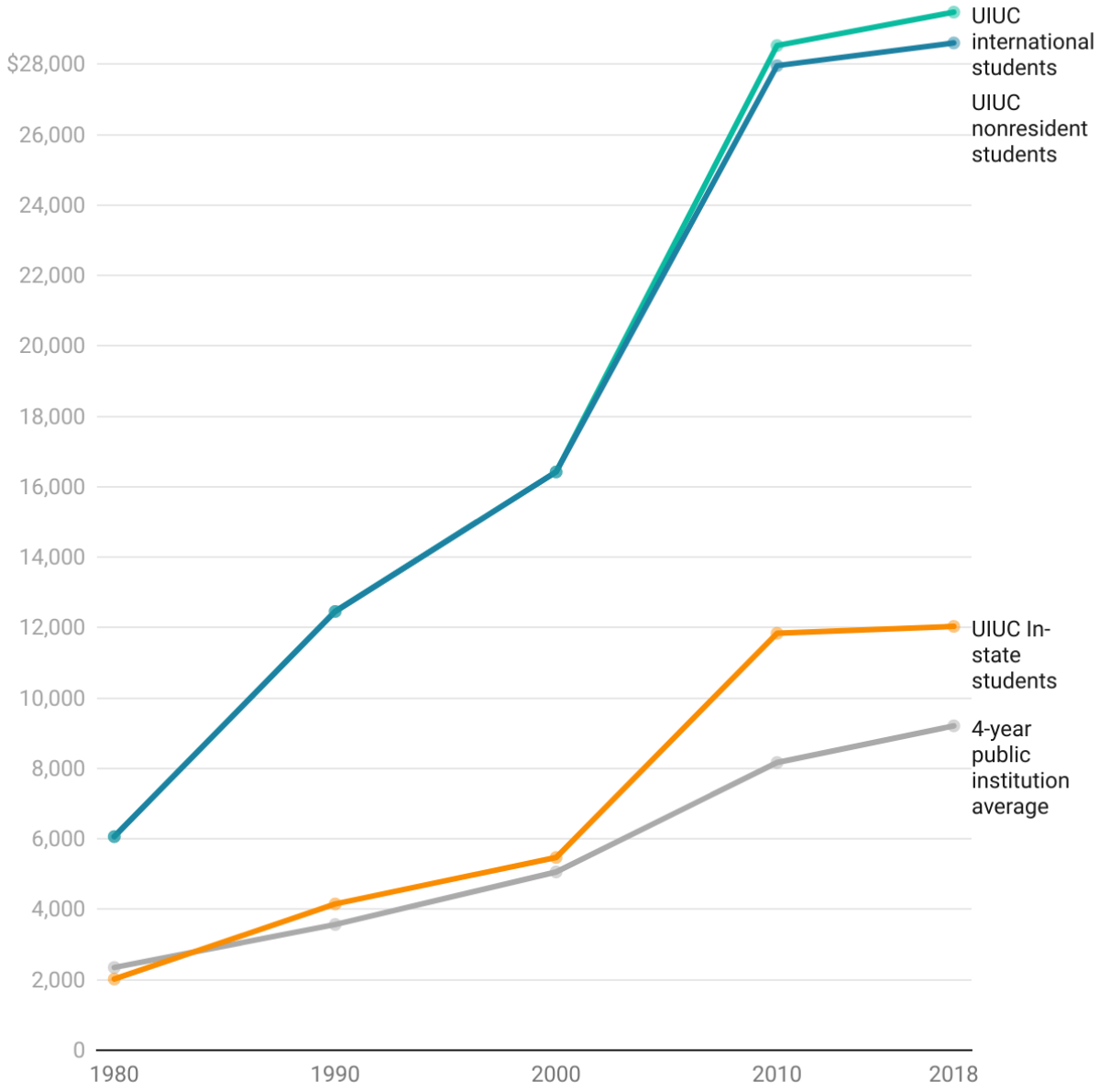
Increasing Tuition, Especially for Out-of-State and International Students

As enrollment has risen at the University of Illinois, tuition has also increased. This reflects national trends at four-year, public institutions in the U.S. Figure 4.9 shows University of Illinois tuition increases by decade from 1980 to 2018, as well as the average tuition and fees at four-year public institutions over the same period.[6]

[6]The University charges students at the undergraduate level different tuition rates depending on several factors. The numbers in this study assume students are paying the University's base rate, but some degree programs charge more than others. International freshmen in engineering, for example, paid $5,218 more than their in-state peers in 2018. And an in-state freshman majoring in engineering faced $5,000 more in tuition charges compared to University's base tuition for freshman overall. As a result, an international student majoring in engineering paid more than $10,000 more in tuition than an Illinois resident majoring in education, liberal arts and sciences, or social work.

Figure 4.9:

University of Illinois Tuition Increases in 2018 Dollars, 1980-2018



Note: National averages contain tuition and fees, while University of Illinois data represents tuition alone.

Data sources: University of Illinois Board of Trustees Reports, 1981, 1991, 2001; University of Illinois Registrar; National Center for Education Statistics

In-state tuition at the University of Illinois has outpaced the national average for four-year, public institutions since 2000. Tuition saw its steepest increase from 2000 to 2010, when costs increased 116.3 percent (not adjusted for inflation). Post-recession, this increase has slowed, with

tuition only rising about 1.7 percent from 2010 to 2018. For students, this means an increase of about $200, compared to an increase of over $6,000 across the prior decade. Overall, in-state students paid over $10,000 more in 2018 than they did in 1980.

Tuition increases have accompanied growing out-of-state and international undergraduate enrollment. Nonresident students — those not from Illinois — face higher tuition charges. From 1980, 1990, and 2000 the University indexed nonresident tuition to in-state tuition. International students and those from other states paid three times the in-state rate. Following the Great Recession, the University ended this policy. Out-of-state tuition was 2.4 times greater than in-state in both 2010 and 2018. In the past decade, international students have also faced a $500 fee in addition to out-of-state tuition charges.

The rate of tuition increase for out-of-state students has also leveled off following the Great Recession, but at a slower rate. Students attending the University from other states saw a tuition increase of 2.3 percent from 2010 to 2018. That said, with higher tuition charges for these students that represent a significantly larger dollar increase — costs went up by $644 from 2010 to 2018, about three times the net increase for in-state undergraduates. As with in-state tuition, out-of-state costs rose more slowly than in-state from 2000 to 2010, increasing 70.3 percent. However, this represents an $11,539 increase, about 1.8 times the dollar amount increase for in-state tuition.

A rising number of out-of-state and international students is associated with a greater number of students who likely pay full tuition — and at a rate double to triple the in-state rate, depending on the year. If all out-of-state and international undergraduate students enrolled at the University paid full tuition in 1980, the University would have collected $5.4 million in tuition payments from those students ($16.9 million in 2018 dollars). But if the University charged all international and out-of-state undergraduates full tuition in 2018, that would amount to $253.4 million. Therefore, the potential for raising revenue through nonresident students' tuition payments is much more substantial today than in the past.

Declining Financial Aid

Of course, not all students pay full tuition. Many undergraduate students receive financial aid. In recent years, the University of Illinois has reported information about financial aid and student financial need through Common Data Set reporting. The Common Data Set initiative represents an effort by institutes of higher education, the College Board, Peterson's, and U.S. News & World Report to improve the accuracy of data on U.S. institutions.

In 2003 — the first year for which Common Data Set reporting is available — 16,277 full-time students applied for need-based financial aid. This represents 57.9 percent of the undergraduate population. Of those, 11,726, or 41 percent of all undergraduates, were determined to have financial need. Almost all of those students received financial aid of some kind. However, only 6,039 — 51.5 percent — of those demonstrating need had their need fully met without loans. The average percentage of need met was 90 percent. For the class that graduated in 2003, 45 percent had taken out loans to finance at least part of their education. On average, those graduating students incurred $15,000 in debt in current dollars.

Total need-based scholarships awarded to University of Illinois undergraduate students came to about $55.9 million in 2003. That year, federal scholarships and grants covered $14,3 million in need-based aid in current dollars. State aid accounted for another $24 million. Institutional awards from the University's endowment or alumni groups and scholarships from other external sources made up the balance. Students borrowed over 52 million in 2003 and their parents took out another 26.9 million in loans. In addition, the University offered over 10 million in tuition waivers (need or non-need-based).

By 2010 the situation had worsened for undergraduate students at the University of Illinois. In total, 17,991 students applied for need-based financial aid, or 59 .3 percent of full-time undergraduate students, a slight uptick. More than three-quarters of those students were determined to have financial need and, again, almost all students determined to have need received need-based aid. However, only 28.8 percent of students with financial need had their need fully met without loans compared to over half of students in 2003.

The percentage of need met for full-time undergraduates awarded need-based aid fall 22 percentage points from 2003 to 68 percent. In 2010, 51 percent of undergraduate students took out loans to finance their education, a six percentage point increase from 2003. On average students borrowed $21,543 in current dollars. Students borrowed over $103 million in total, a nearly 50 percent increase from 2003. Their parents borrowed $66 million — about 40 percent more than in 2003.

In 2010, the University reported the amount of aid awarded to international undergraduate students for the first time. That year, 34 international students received financial aid. This represents only 1 percent of the University's 3,484 international students. The average award to these students was also small — $2,821, or 10 percent of nonresident tuition charges. In total, the University allocated $95,908 to financial aid for international students — far less than the more than 40 million granted to domestic students.

In 2018, 19,491 students applied for need-based aid, or 60.5 percent of the undergraduate student body. Of those, 15,129 were determined to have financial need, representing 77.6 percent of those who applied and 47 percent of all undergraduate students. Ninety-five percent of those determined to have need received aid. In total, 1,575 had their need fully met without loans, or 10.4 percent of those who demonstrated need. This is an 18.4 percentage point increase from 2010. On average, those determined to have need had 66 percent of their financial need met, with their average financial aid package coming to $17,461 in current dollars. Need-based aid specifically came to an average of $15,779 per student in 2018.

That year, undergraduate students borrowed nearly $88.4 million in student loans. Parents also took out $73 million in loans to pay their children's college costs. Federal scholarships and grants came to $39.5 million and state scholarships and grants tallied to $36.8 million. Institutional scholarships and grants, such as those from the University endowment, accounted for nearly $110 million of financial aid. In addition, the University granted $25 million in tuition waivers.

Overall, forty-three percent of the 2018 graduating class took out student loans, with the average principal borrowed at $23,123. That's 37.1 percent higher than in 2010 and 53.1 percent greater than 2003.

As in previous years, virtually none of this aid went to international students. Only 15 foreign undergraduate students received aid out of 5,270 total enrolled, representing 0.3 percent of the University's international enrollment. At $7,163, the average aid they received would only cover about 24.3 percent of tuition for one academic year. This is higher than in 2010, when the average award totaled to only 10 percent of tuition. The University does not publicize how it distributed this aid among students. Therefore, some international students likely received more or less of their total costs covered. While the University provided nearly $110 million in scholarships and grants for domestic students (excluding athletic scholarships), it only set aside $107,451 in awards to international students.

The breakdown of aid across in-state and out-of-state domestic students is less clear. However, because the University of Illinois is a tax-assisted institution, part of its mission is to provide students from Illinois with an affordable education. Therefore, the University prioritizes in-state students when allocating aid. Declining state appropriations for higher education have complicated this mandate — increasingly, tuition revenue must fill budget gaps left by declining state funding. Growing nonresident enrollment and the higher tuition revenue that accompanies it is one way to hold down tuition increases for in-state students and fund financial aid for those

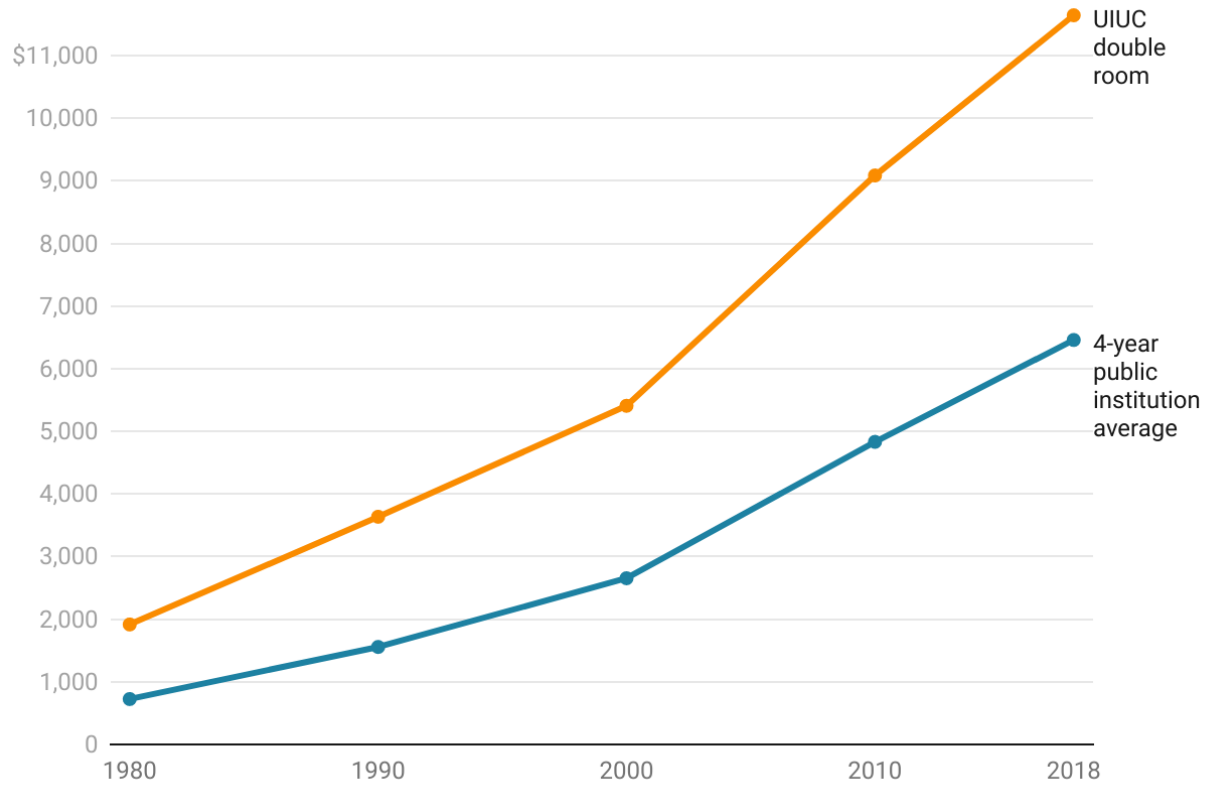
who need it. For these reasons, the majority of institutional financial assistance likely funds in-state students rather than domestic students from other states.

Increasing Cost of Room and Board

As tuition has risen, the cost of room and board has increased as well. Figure 4.10 demonstrates this upward trajectory in room and board costs at the University of Illinois compared to the national average for four-year public institutions.[7]

Figure 4.10:

Room and Board Costs in Current Dollars, 1980-2018



Data sources: University of Illinois Housing Department; University of Illinois Board of Trustees Reports, 1980-2018; National Center for Education Statistics

From 1980 to 2018 room and board costs at UIUC have consistently outstripped the national average. In 1980, the cost of a two-person dorm room at the University of Illinois was $1,191 greater than the national average in current dollars. By 2018, that gap was $5,387. That said, the price of housing at the University of Illinois grew more slowly than the national average

[7] Room and board costs represent the cost of the typical double-occupancy dormitory room. However, room and board costs vary depending on whether a student lives in a double- or single-occupancy room and whether the room has air conditioning.

during that period. Not adjusted for inflation, room and board increased more than five times, compared to a 790 percent increase nationally.

The cost of on-campus housing has risen, but not as fast as the cost of tuition. After adjustment for inflation, the cost of a double dormitory room at the University of Illinois has increased by about $5,500, or 90.5 percent, from 2010 to 2018. Tuition, on the other hand, increased nearly five times.

For students in 1980 on-campus room and board was more expensive than tuition for in-state students. Tuition was $684 in current dollars, while average room and board came to $1,916. As a result, room and board comprised nearly two-thirds of the cost of attendance that year for students who chose to live in University-run housing. For nonresident students, room and board and tuition cost nearly the same amount, with tuition only about $130 more.

By 2018, in-state tuition — at $12,036 — was only about $400 more expensive than room and board for students who live on campus. The cost of a typical double room was $11,644. Out-of-state domestic students paid $28,606 and international students paid $29,480. Therefore, room and board for these students represented less than 29 percent of total costs. The cost of housing — at least for those living on campus — now represents a smaller share of the price of higher education for both in-state and nonresident students. Therefore, it may play a smaller role in students' decisions about whether to attend the University of Illinois than in the past. Housing also represents one cost of education that hits in-state and nonresident students equally.

CONCLUSION

Over the decades, enrollment at the University of Illinois exemplified trends seen at land grant institutions across the U.S. As states have cut back on appropriations for higher education, public universities have raised tuition, as well as room and board costs. In addition, many state schools have worked to attract out-of-state and international students. These students pay higher tuition rates at full sticker price, allowing universities to curb tuition hikes for in-state students and fund financial aid. The University of Illinois has experienced increased enrollment, growing numbers of out-of-state and international students, and rising tuition and room and board costs.

Enrollment trends described in this chapter show University of Illinois students could affect the local rental housing market in several ways. First, the sheer number of new students creates demand for rental housing. Put simply, more students translate to more individuals who need housing in the Champaign-Urbana for the duration of their education.

The housing market's ability to absorb the growth in students depends on the ability of developers to add units of housing to the market. In addition, the location of available housing determines which parts of Champaign-Urbana can accommodate growing student demand. A

dearth of apartments in the neighborhoods nearest campus, for example, could push student renters to other neighborhoods, where they would compete with renters in other submarkets. This competition, in turn, could raise rents in the most in-demand neighborhoods. In addition, increasing concentrations of student renters in areas where students previously did not live could negatively affect existing residents in other ways.

Demographic changes among the student body could also affect the local housing market. Students enrolling from out of state, including international students, are willing and able to pay higher tuition rates. This indicates they may also be willing and able to pay more for housing. In turn, this could drive demand for certain types of housing that past cohorts of students struggled to afford. In-state students may also be wealthier in the past, but this is harder to prove.

Of course, a full picture of the wealth of students' families is not possible — the University does not publicize data about students' financial situations beyond its Common Data Set reporting of need-based financial aid allocation. The fact that students are paying more for school does not necessarily mean they are more able to afford the increased financial burden. Increased reliance on student loans over the decades is one indication that many students' families cannot fund a University of Illinois education out-of-pocket. The dip in the number of in-state students could be another indicator that fewer Illinois families are willing to take on the rising costs of a degree at the state's flagship institution. Income inequality is on the rise in Illinois, which indicates some students may be wealthier, but a growing number may also struggle to afford the high cost of higher education.

The following chapter will track student rental housing demand throughout Champaign-Urbana. Where students live could reveal how prepared the local housing market was to absorb student demand. Change in the geographic distribution of students could support this chapter's hypothesis that students' buying power has increased over the decades.

CHAPTER 5: SPATIAL DISTRIBUTION OF STUDENT RENTERS

INTRODUCTION

As undergraduate student enrollment has grown at the University of Illinois at Urbana-Champaign, developers have built student housing to meet a perceived rise in demand. Since the mid-2000s, this has manifested through the construction of luxury high-rise apartment buildings in Champaign's Campustown area.

As the analysis in chapter four demonstrates, demographic changes — including an increase in international and out-of-state enrollment — suggest many students can afford to pay a premium for amenity-rich apartments convenient to campus. At the same time, income inequality among University of Illinois students may limit some students' ability to afford newly constructed apartments in prime locations. This raises questions about near-campus neighborhoods' ability to absorb students' housing needs at a variety of price points.

Whether student renters have remained segregated in the areas near campus or whether they have spread to outlying neighborhoods, therefore, could reveal truths about students' buying power, as well as their housing preferences. If student renters are demonstrating a preference for housing away from campus — or if they simply cannot afford rents in Campustown — this could challenge local stakeholders' assumptions about student renters' needs. It also may have implications for long-term residents of neighborhoods that are absorbing growing numbers of students.

On the other hand, if the growing number of student renters in near-campus neighborhoods has simply intensified, with little spread into other areas of town, this could indicate local planners' decisions that allowed more intense development in Campustown successfully accommodated changes in demand. This outcome could offer lessons for other college towns, who may wish to adopt land use regulations to allow for greater housing density in traditionally student-oriented neighborhoods.

This chapter explores how the spatial distribution of student renters has changed from 1990 to 2018. I attempt to answer the question of where student renters have lived throughout Champaign-Urbana in 1990, 2000, 2010, and 2018. I will identify major trends in students' residential locations throughout the urbanized area, as well as how the geographic distribution of student renters interacts with that of locals not enrolled in school.

Using decennial census and American Community Survey 5-year estimates, I track the locational decisions of student renters throughout Champaign-Urbana from 1990 to 2018. To do this, I examine characteristics endemic of undergraduate renters, including age, enrollment in college, tenure, residence in nonfamily households, and vehicle ownership. Grouping

Champaign-Urbana's census tracts into five geographic designations then allowed me to explore where students are most likely to live.

First, I situate the student population within the University of Illinois' housing history and review demographic trends related to students in Champaign County generally. I then draw conclusions about where student renters have chosen to live by dividing Champaign-Urbana into six major subareas. This enables me to present the results of the Student Rental Index, which illustrates where the areas in which student renters are most likely to concentrate based on five demographic variables associated with student renters. In the next section I will discuss how the numbers of overall residents, students, renter households, and foreign-born individuals have risen and fallen in Champaign-Urbana's six subareas. I will then take a more granular look at each subarea separately to determine the role each plays in the student and nonstudent rental submarkets. Finally, I will place my evidence about students' movements in conversation with local housing developers and planners' understanding of the student rental submarket in Champaign-Urbana.

I will demonstrate that neighborhoods in the campus core have absorbed growing numbers of student renters, resulting in higher population density. At the same time, student renters are also increasingly likely to live north of the near-campus neighborhood. This illustrates a thinning of some traditional boundaries that have separated Champaign-Urbana's student neighborhoods in the past.

University of Illinois Student Housing History: Reliance on the Private Market

Over the University of Illinois' history, the school has struggled to provide enough housing for its students. Because of this, the University has relied on the private market to accommodate its students' housing needs. Before World War II, the University did not provide dormitories or apartments for its students. Instead, students found accommodations in private rental housing or sororities and fraternities.

Following World War II, college enrollment skyrocketed with the GI bill. In response, the University constructed about 10,000 units of housing to meet demand. In addition, the University set up temporary barracks for 1,600 male students, as well as 750 temporary housing units for married students and staff. Before that, the University had required single male students to live in private homes which the University approved. The University discontinued that policy of certifying housing to combat the area's student housing shortage. According to a 1975 housing study by the University's housing department, discontinuation of University certification led to substandard housing in basements, garages, and attics throughout Champaign-Urbana (Schubert & Katz, 1975). Because post-war enrollment remained high, the University was still relying on

temporary facilities, including barracks, as late as 1956. That year, the University denied admission to hundreds of applicants because of the housing shortage. Among Big Ten universities, the University of Illinois ranked last in its provision of housing for students. In addition, the University's reliance on private rental housing created barriers for Black students and other students of color who faced discrimination from local landlords (Carrie, 1990; Schubert & Katz, 1975).

In the decade that followed, the University housed students in residence halls as well as "approved housing" — housing on the private market that the cities of Champaign and Urbana determined were compliant with safety and livability standards. In 1975, the University began certifying housing by requiring landlords to sign a declaration of nondiscrimination on the basis of race, religion, or national origin. Landlords offering "approved housing," however, were not bound by this nondiscrimination declaration (Carrie, 1990; Schubert & Katz, 1975).

The University's requirements allowing certain students to live off-campus gradually changed over the years. From 1958 to 1962, the University required all unmarried undergraduate students under age 25 to live on campus or in certified housing. In 1963, the University reduced that age limit to 23, reducing it further in 1967 to age 21. From 1971 to 1975, the University required students to live in University certified housing until they had completed at least 60 credit hours of coursework, effectively barring freshmen and sophomores from renting on the private market (University of Illinois Department of Housing, 2021).

However, in 1975 the University considered changing its residency requirements. This was a response to two developments — student proposals for elimination or reduction of the 60-credit hour rule, as well as court challenges to credit hour requirements at other U.S. universities.

To determine the impact of a credit hour change, the University Housing department undertook a study to determine how many students would leave University-owned housing if the University were to lower this requirement. Two options were under consideration: either allowing those 21 or older who had completed at least 30 credit hours to live off campus or dispensing with the age and credit hour requirements altogether, which would allow any student to live off-campus. Ultimately, the University reduced the credit hour requirement to 30, a policy that remains in place today.

The study found that, if the University were to reduce the credit hour requirement from 60 to 30, between 310 and 660 students were likely to leave University Housing for options on the private market. This would create 230 to 487 new households, according to the study. The study's authors also laid out their concerns about what these additional student renter households could mean for the Champaign-Urbana rental market at large (Schubert & Katz, 1975).

Although the 1975 housing study preceded the focus timespan of this analysis, several of its conclusions could still apply today. First, researchers identified several factors that guided students in their decision to live on or off-campus: parental approval and financial support, the work involved in finding a private-market apartment versus the simpler process of renewing a room contract, housing market conditions, such as low vacancy, and peer pressure from friends. Chapter four of this thesis discusses the role of family wealth in students' ability to access college education and, by proxy, afford housing during their time as students. Similarly, the 1975 study found that over 75 percent of undergraduate students surveyed paid less than half of their school expenses themselves. This indicates parents were likely to fund their children's college education.

In addition, researchers' inquiry into the state of the local housing market offers lessons for determining the challenges student renters face on the private market, as well as the ability of the market to absorb student demand. For example, the 1975 study warned low vacancy rates could constrain the mobility of these student renters throughout the housing market, and possibly force many into substandard or overpriced units. The study's authors also voiced concerns about the areas of Champaign-Urbana where student demand would be focused. In response to that question, researchers evaluated the existing supply of housing in those areas and asked whether that supply could absorb this increase in demand. To determine this, researchers asked students to identify the areas of town where they would seek rental housing. Eighty percent of students said they would seek housing in the five census tracts adjacent to the University. All of these tracts are in the Campus Core subarea. Researchers noted that vacancy rates fell closer to campus. Ultimately, the study concluded that not enough housing units existed near campus to absorb increased student demand if the University were to allow more students to live off campus (Schubert & Katz, 1975).

Although this chapter picks up 15 years after the University's housing study, rising enrollment at the University — as well as students' changing buying power and housing preferences — raise similar concerns as the decision to lift the 60-credit-hour requirement did in 1975. The capacity of near-campus neighborhoods to absorb growing numbers of students has implications for other residents of Champaign-Urbana. The authors of the 1975 study warned that influxes of students into previously non-student areas could result in displacement. A lack of adequate rental housing could also push up the cost of rents for students and nonstudents alike. In addition, students unable to afford housing in prime locations near campus could find themselves in farther flung neighborhoods. This could create a subpopulation of students

isolated from their wealthier peers, living in housing situations less conducive to studying, and dealing with long commutes to and from class and school activities.

RESULTS

Champaign County's Growing Population

The flagship University of Illinois campus straddles the twin cities of Champaign and Urbana, located within Champaign County in central Illinois. As the University of Illinois enrollment has grown, so has the population of Champaign County. Between 1990 and 2018 Champaign County added 36,423 residents, a 21 percent increase. At the same time, the county gained 18,599 new households from 1990 on. This 29 percent increase suggests Champaign County's average household size is slightly larger than in the past.

Just under half of all Champaign County households rent their housing. The County gained 9,209 renter households between 1990 and 2018, a 31.7 percent increase. This is about the same pace as growth in households of all tenure. Therefore, while 45.5 percent of households rented in 1990, that percentage only grew by one percentage point by 2018, when 46.4 percent of all households were renters.

Many of Champaign County's renter households are likely comprised of college students. This is because the University of Illinois' presence means a large college student population calls Champaign County home. Of the county's total residents, 39,784, or 23 percent, were enrolled in higher education in 1990. As the University of Illinois' enrollment has shot up, so has the local student population. By 2018, 48,850 Champaign County residents were enrolled in higher education, an increase of 9,066 individuals. Therefore, the county's percentage of students compared to the rest of the population was 23.3 percent — about the same as in 1990.

Although some student residents were likely students at Parkland Community College, located in Champaign, many more enrolled at the University of Illinois. In 1990, the University enrolled 34,808 students at the graduate and undergraduate levels combined. This indicates most University of Illinois students live within the county, rather than commuting in from elsewhere in the state.

In 2000 the U.S. Census Bureau disaggregated undergraduate students and graduate students in its reporting of the count of individuals enrolled in school at the university level. In that year, 33,095 Champaign County residents were undergraduate students, or 18.4 percent of the county's total population. Including graduate students, residents enrolled in college at all levels made up 23.8 percent of residents.

By 2018, 37,432 of the County's population were undergraduate students, or 17.9 percent of the population. This represents a 13.1 percent increase from 2000. Therefore, overall population growth outpaced the rise in undergraduate residents. This shows that while undergraduates represent a significant share of the local population, they are not the only contributors to population growth countywide. That said, increasing numbers of students could be acting as a multiplier for population growth in an economy defined by the local university.

Of the County's 33,095 undergraduate student population, 30,094 lived within Champaign-Urbana in 2000. Therefore, fewer than ten percent of the county's undergraduates lived outside of the cities of Champaign and Urbana and the Village of Savoy. Undergraduates made up nearly a quarter of Champaign-Urbana's total population that year. In addition, the University of Illinois' undergraduate enrollment was only 27,882 that year, meaning some of those undergraduate residents were students at other institutions, including Parkland Community College.

By 2018, Champaign-Urbana's undergraduate population had increased by 4,196. That year, only 3,142 — or 8.4 percent — of Champaign County's undergraduate students lived outside of Champaign-Urbana. Therefore, the majority — but not all — of the University of Illinois' undergraduate students lived locally.

Champaign County's undergraduate residents have traditionally outnumbered its graduate student population. Still, the county's share of graduate students is also growing. In 2000, 9,618 graduate students lived in the county, representing 5.4 percent of the total population. By 2018, that number had grown to 11,418, or 5.5 percent of Champaign County's residents overall.

From 2000 to 2018, the number of graduate students living in Champaign-Urbana specifically increased by 19.2 percent. According to decennial census and American Community Survey 5-year estimates, the number of graduate students living locally increased from 9,089 in 2000 to 10,838 in 2018. This accounts for the bulk of graduate students living in Champaign County. In 1990, fewer than 6 percent of the County's graduate students lived outside the urbanized area. By 2018, Champaign-Urbana was home to 11,418 graduate students. Therefore, Champaign-Urbana residents also made up about 95 percent of graduate students countywide.

According to the University of Illinois Division of Management information, 14,672 graduates enrolled in 2018, meaning 73.9 of the graduate student body elected to live in Champaign, Urbana, or Savoy.[8] That is a decrease from 2000, the first year for which census

[8] University of Illinois enrollment statistics only count students enrolled in at least one on-campus course taken for credit. Additional graduate students not participating in on-campus coursework could live within Champaign-Urbana or elsewhere.

data is available for individuals enrolled in higher education at the graduate level. That year, 94.8 percent of the University of Illinois' graduate students lived in Champaign-Urbana.

As more people — students or otherwise — flock to the area, they make choices about where to live. This affects local housing markets for renter- and owner-occupied households alike. Students — who tend to rent their housing — make up a significant housing submarket in Champaign County, specifically in Champaign, Urbana, and the nearby Village of Savoy (referred to here as the "urbanized area").

As explored in chapter four, the University of Illinois enrolled 26,395 undergraduate students in 1990, according to the Office of the Registrar. That year, 18,582 of those students were sophomores, juniors, and seniors, making them eligible to live off-campus under the University of Illinois' 30-credit-hour rule. Those upperclassmen were eligible to live off-campus, rather than in University residence halls or private certified housing. These older students were likely to seek housing on the private rental market. In 2018, 26,188 University of Illinois students were sophomores, juniors, and seniors. This represents a 40.9 percent increase in the number of students permitted to live off-campus compared to 1990.

As discussed in chapter four, growing numbers of international students have driven enrollment increases at both the undergraduate and graduate levels. Because these students often pay full tuition at higher, nonresident rates, this could indicate a growing population of students with greater wealth. Examining the location of foreign-born individuals can help pinpoint where these students rent housing, even though students do not make up the entirety of Champaign-Urbana's foreign-born population.

In 1990, Champaign County was home to 10,554 foreign-born individuals. This increased to 25,088 in 2018, a 138 percent increase. The University of Illinois international student population in 1990 was 1,443, meaning students made up only 13.7 percent of the county's foreign-born population, assuming those students resided within the county. By 2018, international students made up 10,717 of Champaign County's 25,088 foreign-born residents. This is equivalent to 42.7 percent of the county's foreign-born population. The true proportion of the foreign-born population comprised of students may be lower, however, mainly depending on how many international graduate students reside outside of the area.

Student Rental Index Results: Student Renters Remain Clustered Near Campus

The Student Rental Index is a composite index built using each subarea's variation from the mean based on the percentage of the population or percentage of total households for five composite variables: undergraduate population, population ages 20 to 24, renter households, nonfamily households, and households without a vehicle. For more information about the Student

Rental Index, refer to chapter three of this thesis. These variables each capture characteristics inherent to undergraduate student renters. Higher index values indicate a higher likelihood that the population of a subarea resembles student renters.

Changes in index values over time indicate that student renters have not remained constrained to neighborhoods in the Campus Core over the decades. All Champaign-Urbana subareas saw at least a one-point increase in index scores between 1990 to 2018. Figures 5.1 through 5.4 show how the geographic distribution of Student Rental Index values has changed over that period. Subareas shaded in darker blue represent those with higher index scores, while lighter shading represents lower index scores. For a more detailed map of Champaign-Urbana's subareas, see Appendix A.

Figure 5.1:

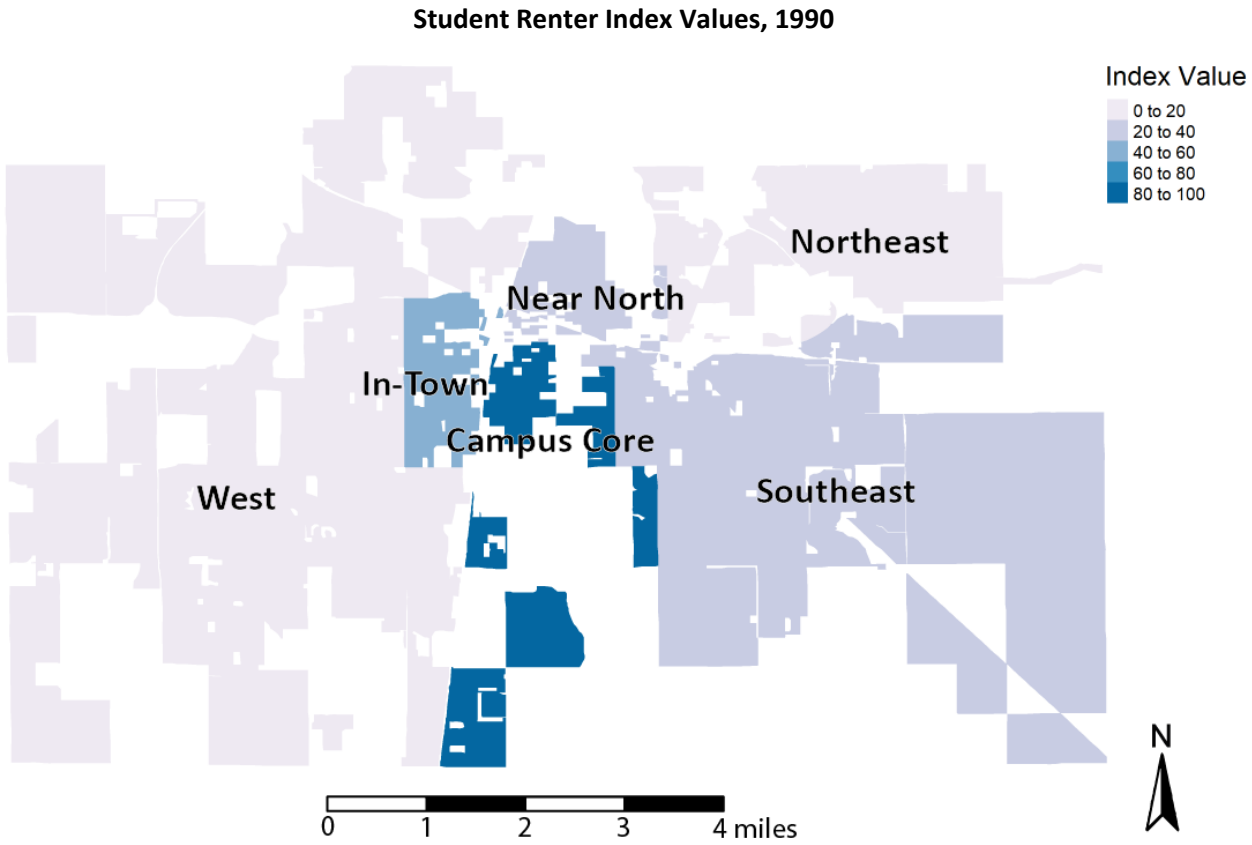


Figure 5.2:

Student Renter Index Values, 2000

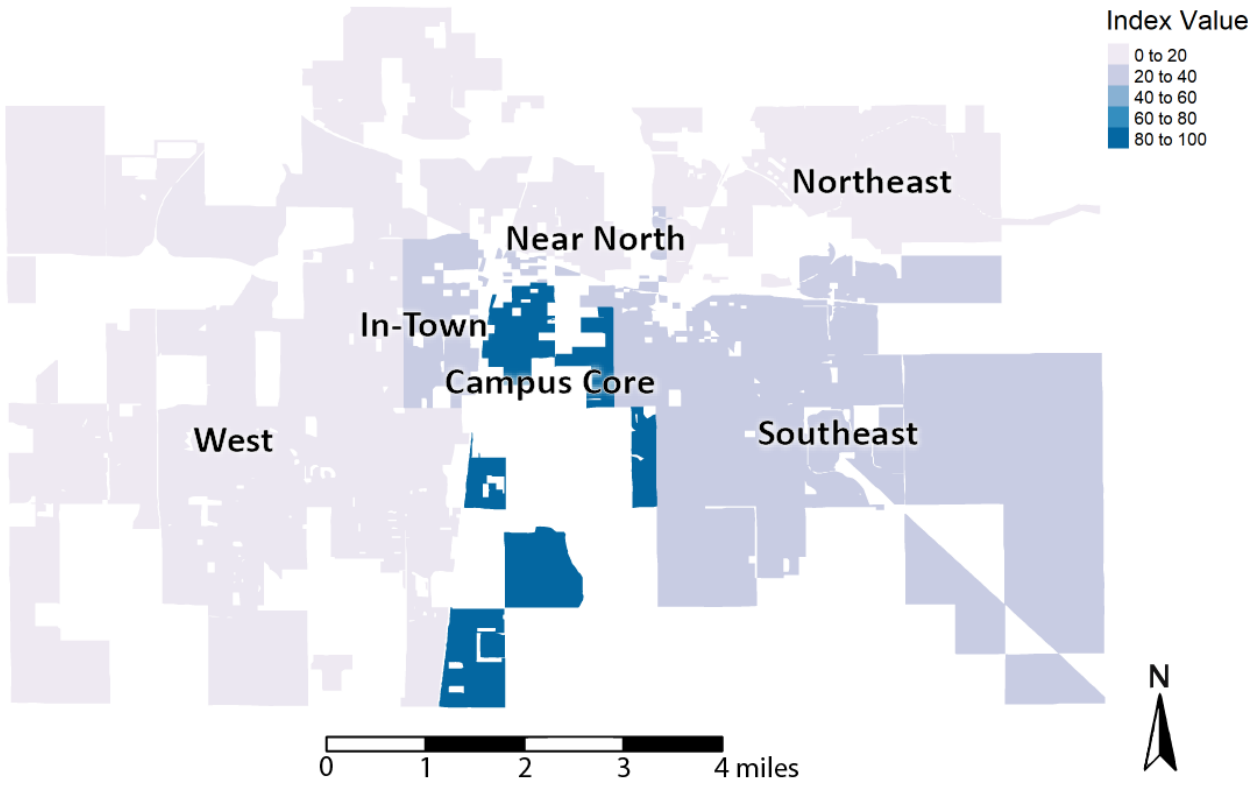


Figure 5.3:

Student Renter Index Values, 2010

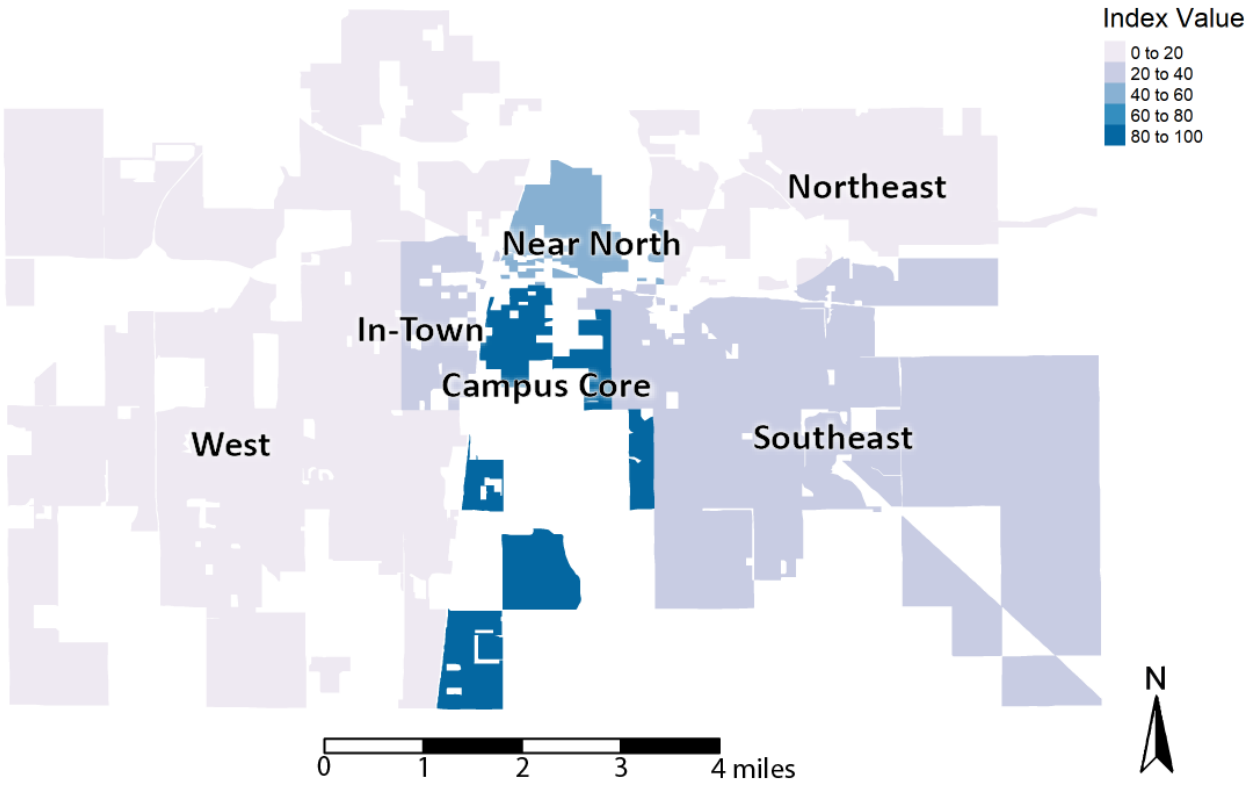
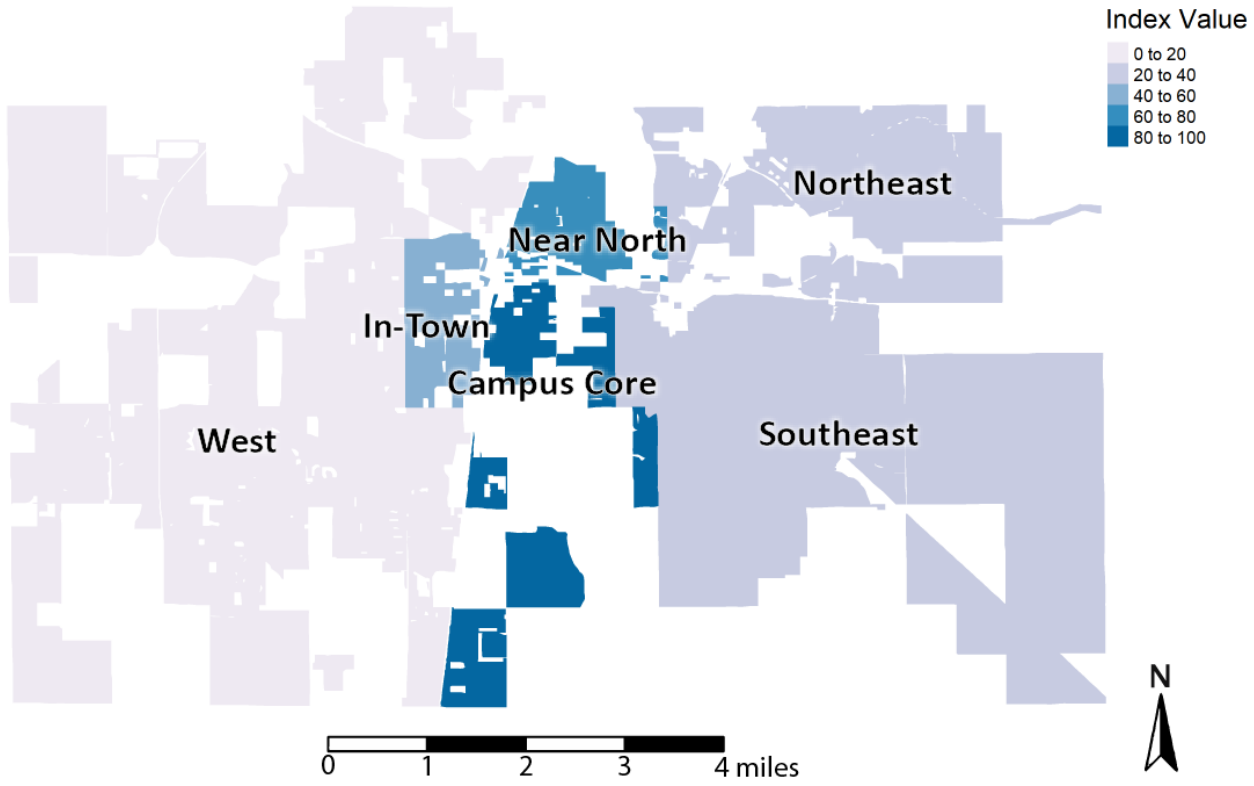


Figure 5.4:

Student Renter Index Values, 2018



From 1990 to 2018 Student Rental Market index values increased most in the Near North. This indicates student renters are likely pushing north of University Avenue, which had been a hard boundary in the past. The maps above also show index values rising over time in the Northeast and fluctuating in the In-Town subarea. This suggests property owners north of University Avenue are making new and previously built housing available to students more so than in past decades. This has allowed student renters to push past the boundaries that traditionally separated student neighborhoods from other parts of town.

However, as student housing developers tested traditional neighborhood boundaries, students also show a growing tendency to live close to the University. In 1990, 2000, 2010, and 2018 alike, the Campus Core earned a far higher index score than other subareas. High index values in the Campus Core rose over time, bolstering claims by local planners and developers about the growing popularity of dense, urban-style housing near campus.

Meanwhile, the West and Southeast areas have seen little change. This shows that while some students may choose to live north or west of the Campus Core, certain parts of Champaign-Urbana remain insulated from student renters.

However, all six subareas experienced at least a small increase in index values between 1990 and 2018. Table 5.1 shows index values for each area for 1990, 2000, 2010, and 2018. It also shows the degree to which index values changed from 1990 to 2018.

Table 5.1:

Student Rental Index Values by Subarea, 1990-2018

	Campus Core	Near North	In-Town	Southeast	Northeast	West
1990	92	30	41	26	14	6
2000	93	36	38	28	15	7
2010	93	49	39	30	14	9
2018	100	61	42	29	21	11
Index change:	**8**	**31**	**1**	**3**	**7**	**5**

Students Most Concentrated in the Campus Core

As discussed, the Campus Core had the highest index values for every year in this study. The closest another subarea came to the Campus Core's index value was in 2010 when the Near North scored 44 points lower. This demonstrates that student renters have always dominated the Campus Core's rental housing market.

Furthermore, changes in the subarea's population and household composition show that the Campus Core is becoming more student-centric compared to other subareas in Champaign-Urbana. In 1990, the subarea's index score was 92, 51 points above any other subarea's score. But by 2018, that index value had grown to 100, the highest possible. The greatest jump in index scores occurred between 2010 and 2018 when the subarea gained seven index points.

As discussed in chapter four, the fastest growth in undergraduate enrollment occurred between 2000 and 2010. Over that period, 3,370 additional undergraduate students enrolled at the University. However, over that decade the Campus Core's index value only increased by one point. The index value only significantly increased over the next decade when undergraduate enrollment grew by 2,421 students. Therefore, this lag indicates that demographic changes in the Campus Core responded to more than sheer numbers of students. Other factors, such as housing preferences, student buying power, and the availability of certain housing options, likely played a role.

The jump in Campus Core index values coincided with construction of high-rise student housing developments that came online from 2010 onward. This change in the subarea's housing stock enabled the subarea to absorb growing numbers of University of Illinois students. Construction of dense, high-rise apartments allowed more renter households to move in. Proximity to the University of Illinois, as well as purpose-built apartments marketed toward students, ensured this housing targeted young people, and specifically students. A common policy of renting by the room, rather than the unit, made the subarea prime for nonfamily households. Finally, the City of Champaign's decision to ease, and then eliminate, parking minimums near campus responded to the likelihood of the subarea's residents foregoing car ownership (Pendall, et. al, 2021).

Growing Student Renter Population in the Near North

Although the Campus Core solidified its identity as a student-centric area, the Near North saw the most dramatic increase in its Student Rental Market Index values. From 1990 to 2018, that subarea's index score more than doubled as it gained 31 index points. In 1990, the Near North lagged both the Campus Core and In-Town neighborhoods' index values. By 2018, only the Campus Core had a higher index value. Although In-Town's index score was 11 points higher than the Near North's in 1992, by 2018 the Near North's score pulled ahead by 19 points. This illustrates the Near North's transition to an area popular with people enrolled in college, young people, renters, individuals living alone or with roommates, and those without cars — all characteristics of undergraduate student renters.

Meanwhile, index values in the In-Town neighborhood have risen and fallen, never by more than three points per decade. This indicates student rental demand in that subarea has been relatively stable. Still, In-Town transitioned from being the subarea with the second highest index score in 1990 and 2000 to the third in 2010 and 2018. This occurred not because of major demographic changes within In-Town, but instead because of rising student rental demand in the Near North.

Similarly, the Southeast's student rental index values remain relatively steady over the decades. This subarea consistently lagged the Campus Core, Near North, and In-Town subareas. However, its index values are at least ten points higher than the Northeast. This indicates middling student rental demand in this part of Champaign Urbana. The Southeast, which spans east Urbana, downtown Urbana, and the west Urbana neighborhood a block from campus. This subarea's proximity to campus compared with the lower-scoring Northeast and West subareas could be one reason for its higher scores. However, as discussed later in this analysis, the area's

housing stock and identity may represent barriers to the type of student-centric housing development seen in the Campus Core and Near North.

The Northeast picked up seven points between 1990 and 2018. However, this analysis will show that over the same period the area's student population decreased. This decline occurred among undergraduate and graduate student residents alike. Therefore, the subarea's rising Student Rental Market index scores are likely connected to a rise in demographic conditions associated with students, but not specific to them. For example, a rise in renters, as well as nonfamily households, could offer one explanation. Students are likely to rent and live with roommates, but those not enrolled in school may also seek out such living situations.

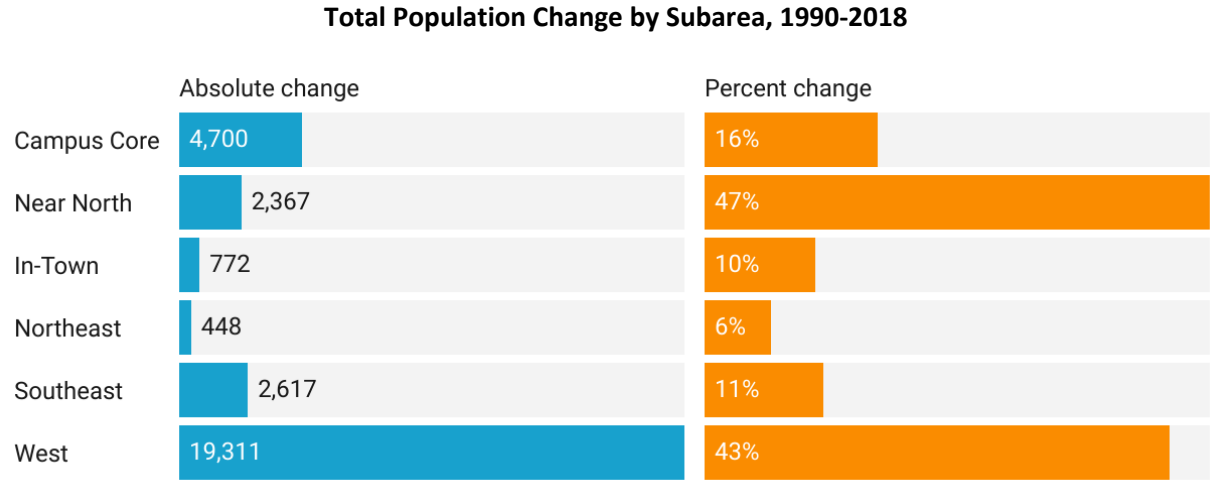
Finally, the West consistently earned the lowest student rental index scores. This indicates that, of all areas of town, students — or those demographically like them — were least likely to live in that subarea from 1990 on. For the first three decades of this study, the West had index scores in the single digits. Still, the subarea's index values ticked up by five between 1990 and 2018. Therefore, the area may be more amenable to students than in the past.

Population Trends

Growing Population Across Champaign-Urbana's Six Subareas

From 1990 to 2018, all subareas of Champaign-Urbana experienced population growth. Figure 5.5 shows change in the population of the Campus Core, Near North, In-Town, Southeast, Northeast, and West subareas, respectively.

Figure 5.5:



Data sources: 1990 and 2000 decennial census 100% data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

In absolute terms, the West gained the most population, adding more than 19,000 people from 1990 to 2018. The Campus Core added the second most residents. However, the Near North experienced the greatest population growth relative to its smaller number of existing residents. That subarea gained 2,367, less than the West, Campus Core, and Southeast. However, this represented a 47 percent change in the number of people living in the Near North.

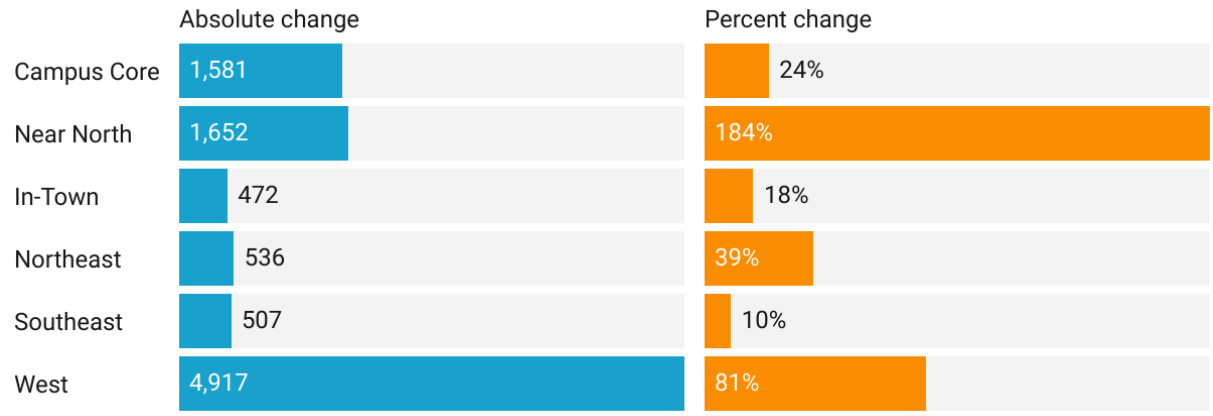
On the other hand, the Southeast, In-Town, and Northeast subareas each saw modest rates of growth compared with other parts of Champaign-Urbana. In absolute terms, the In-Town and Northeast subareas picked up the fewest new residents.

Increasing Numbers of Renter Households Across Champaign-Urbana

The six subareas also saw uneven increases among renter households, although all parts of town gained renters from 1990 to 2018. Figure 5.6 shows changes in each subarea's count of renter households, as well as the percent change over the same period.

Figure 5.6:

Change in Renter Households by Subarea, 1990-2018



Data sources: 1990 and 2000 decennial census 100% data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

Again, the West gained the most renter households, picking up nearly 5,000 between 1990 and 2018. As with population, the Near North experienced the fastest growth in its renter households. It nearly tripled the number of renters within its boundaries. At the same time, the Near North gained the second most renter households overall, after the West. Although the Campus Core only experienced a 24 percent increase in renter households — a modest change compared with the Near North, West, and Northeast — it gained nearly as many new renter

households as the Near North. The Southeast saw the smallest uptick in renters of any subarea in Champaign-Urbana, gaining 507, a 10 percent rise.

Taken together, this demonstrates that demand for rental housing — as well as each subarea's ability to absorb that demand — is uneven across Champaign-Urbana. Conditions in the West, for example, allowed the subarea to absorb thousands of new renter households. As for the In-Town, Northeast, and Southeast subareas, renters were either uninterested in living in those areas or unable to fund suitable units to rent.

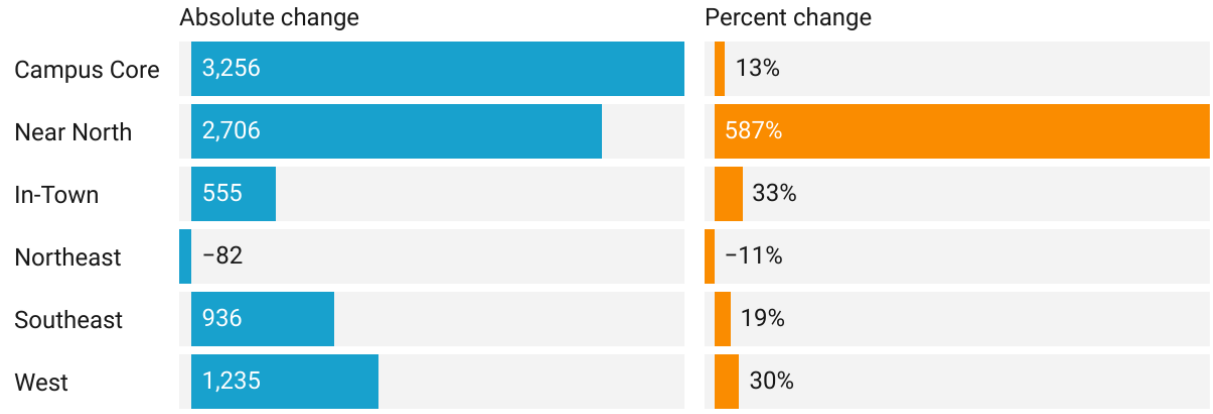
These uneven increases in each subarea's share of renter households do not reveal whether the housing stock in each part of town was sufficient to accommodate demand for housing there. For example, more than 1,500 renter households moved to the Campus Core between 1990 and 2018. Whether a limited number of rental units capped this number is unclear. Changes in vacancy, as well as shifts in the rents Campus Core apartments demand, can paint a more detailed picture of conditions in that subarea and others.

Student Population on the Rise in All Subareas Except the Northeast

Student residents increased their presence in certain parts of town, eschewing others. Figure 5.7 illustrates changing numbers of student residents in Champaign-Urbana's six subareas from 1990 to 2018. This chart considers undergraduate students and graduate students together.

Figure 5.7:

Student Population Change by Subarea, 1990-2018



Data sources: 1990 and 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

The Campus Core and Near North absorbed the largest increases in student residents of all subareas between 1990 and 2018. Although both subareas gained thousands of students, this

represented more of an upheaval for the Near North than the Campus Core. Because the Campus Core has traditionally been a student-majority neighborhood, its 3,256 additional student residents only drove a 13 percent increase in its total student population. Just across University Avenue, the Near North's student population skyrocketed from a meager 461 in 1990 to 3,167 in 2018. As a result, the subarea's student population increased nearly seven times over 28 years.

In addition, because the Campus Core is home to all of the University of Illinois' residence halls and student apartments, growth in enrollment explains the spike in student residents there. As discussed, the University requires first-year students to live on campus with few exceptions. Larger freshmen classes translate to more student residents in Campus Core neighborhoods containing dormitories. In addition, some upper classmen and graduate students also choose to live in University-owned housing. However, the University does not operate housing in the Near North. Therefore, all of the growth in student residents there is due to students residing in private-market housing.

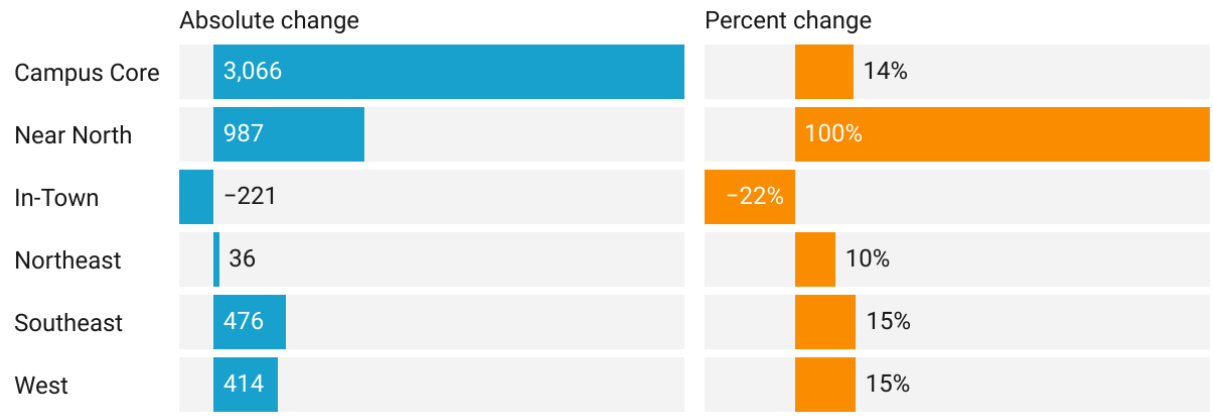
Aside from the Near North and Campus Core, all areas absorbed student residents except for the Northeast. That area of Champaign-Urbana was not popular with students for any year in this study. Although the Northeast lost 82 student residents, that represents an 11 percent decline in the subarea's overall student population.

Undergraduates Attracted to the Campus Core and Near North

In 2000, the U.S. Census Bureau began reporting the number of residents enrolled in college at the undergraduate and graduate levels separately. This allows for a more precise look at differences in neighborhood preference among these two subsets of the student body. Figure 5.8 shows the change in undergraduate student residents among the six subareas from 2000 to 2018.

Figure 5.8:

Change in Undergraduate Student Population by Subarea, 2000-2018



Data sources: 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

This demonstrates that undergraduate students flocked to the Campus Core and Near North in far greater numbers than in other subareas. The Campus Core's increase in undergraduate residents was more than three times greater than the increase in the Near North. Still, that subarea's additional 987 undergraduate residents represented more than twice the increase in residents seen in the Southeast and West.

The Near North's undergraduate students doubled between 2000 and 2018, making this the subarea with the most dramatic change in student population. Although the Campus Core gained more undergraduates, their growing numbers only represented a 14 percent increase due to the subarea's traditionally large undergraduate student population. Therefore, although the Campus Core's undergraduate student growth well outpaced other subareas, its rate of growth was on par with the Southeast and West.

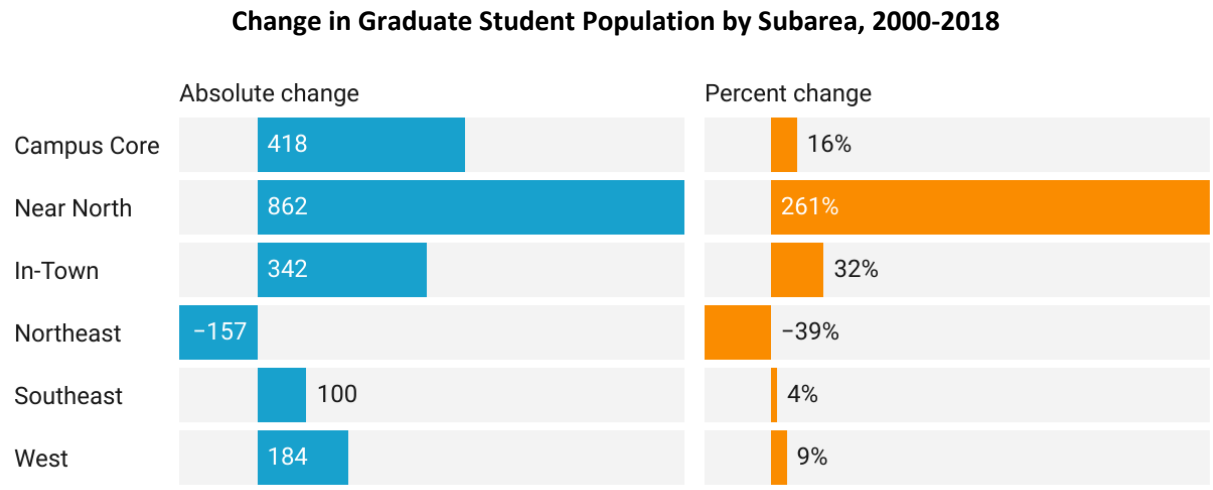
Only In-Town saw a decline in the number of undergraduates living there. That subarea's loss of 221 residents represented a 22 percent hit to its overall undergraduate population. Although it did not lose students, the Northeast barely held onto them — its 10 percent increase in undergraduate population reflects the small numbers of students living in the area to begin with.

The Southeast and West both experienced a 15 percent increase in their respective undergraduate populations. For the Southeast, which had a 10 percent increase in its overall population, this means growth in undergraduates slightly outpaced population growth overall. However, the West's population boom of 81 percent between 1990 and 2018 eclipses the additional 414 undergraduate students who moved to the subarea from 2000 on.

Graduate Student Population Rising Fastest in the Near North

Graduate students, with their smaller overall numbers, distributed across Champaign-Urbana differently than undergraduates between 2000 and 2018. Figure 5.9 breaks down their movements over that period.

Figure 5.9:



Data sources: 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

The area that absorbed the greatest number of graduate student residents from 2000 to 2018 was the Near North. In total, 862 additional graduate students moved to that subarea, more than tripling that population. The Near North added almost as many new graduate student residents as undergraduates. Therefore, demand among graduates and undergraduates is more evenly balanced than in other areas of town.

To the south, the Campus Core's graduate population increased by 16 percent, similar to its rate of growth for undergraduate students. This subarea gained the second most additional graduate student residents, following the Near North.

Where In-Town lost undergraduate residents, it picked up graduate students, increasing their numbers by nearly a third. Its 342 new graduate residents nearly match the absolute growth seen in the student-heavy Campus Core.

Meanwhile, the Northeast was the only subarea to lose graduate student population from 2000 to 2018. The Southeast and West subareas each saw small increases in graduate students, but growth among these residents fell short of total population growth. As a result, graduate students do not represent a major driver of population change in those areas.

Figure 5.10 shows the percentage of student residents compared to each subarea's total population in 2000, 2010, and 2018.

Figure 5.10:

Data sources: 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

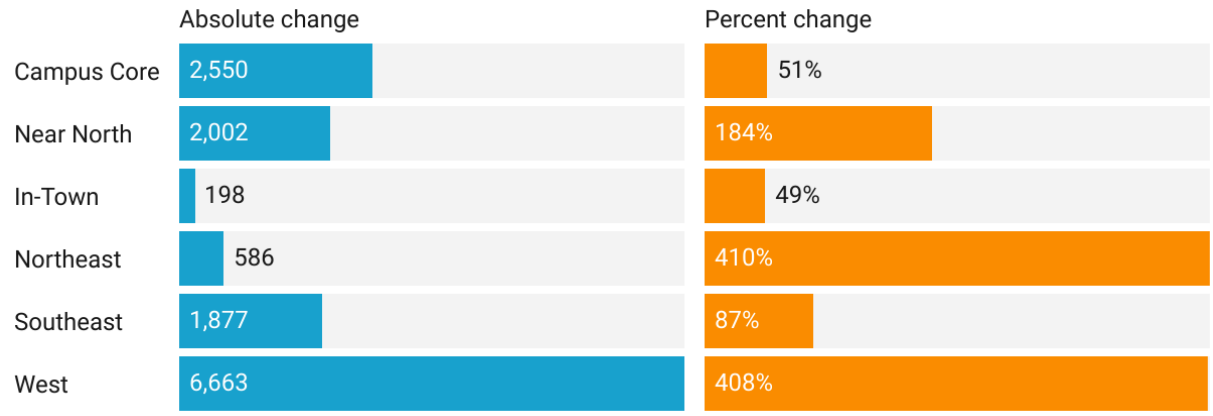
As discussed in chapter four, ballooning numbers of foreign students, and specifically those from Asia, have contributed to rising enrollment at the University of Illinois. Because these students pay full tuition at higher, nonresident rates, this could indicate a growing population of students with greater spending power in the local housing market. As a result, this population can afford to be selective about where they live throughout Champaign-Urbana and can likely pay higher rents if they choose.

Rise in Foreign-Born Population Due to Factors Other Than International Student Enrolment

Champaign-Urbana's foreign-born population grew from 9,462 residents in 1990 to 23,338 in 2018 — a 147 percent increase. No subarea experienced a decline in its number of foreign-born residents. Figure 5.11 shows changes in the foreign-born population by subarea from 1990 to 2018.

Figure 5.11:

Foreign-Born Population Change by Subarea, 1990 to 2018



Data sources: 1990 and 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

Increasing numbers of foreign-born residents account for more than half of total population growth in the Campus Core from 1990 to 2018. Because of the student-heavy nature of that subarea, many of these individuals were likely University of Illinois students. Compared with the rising student population, which generally kept pace with increases in the total number of Campus Core residents, the 51 percent increase in foreign-born residents far outpaces overall population growth. This demonstrates the influence of changing student demographics on near-campus neighborhoods.

The Near North saw even faster growth in its foreign-born population. There, the number of foreign-born residents nearly tripled. In absolute terms, the Near North gained only 548 fewer additional residents born overseas than the Campus Core. This occurred despite the Near North's relatively small population — the subarea had 17.3 as many total residents as the Campus Core in 1990 and 20.9 as many in 2018. Because this increase occurred parallel to the subarea's rise in student population, additional foreign-born Near Northers are likely also students.

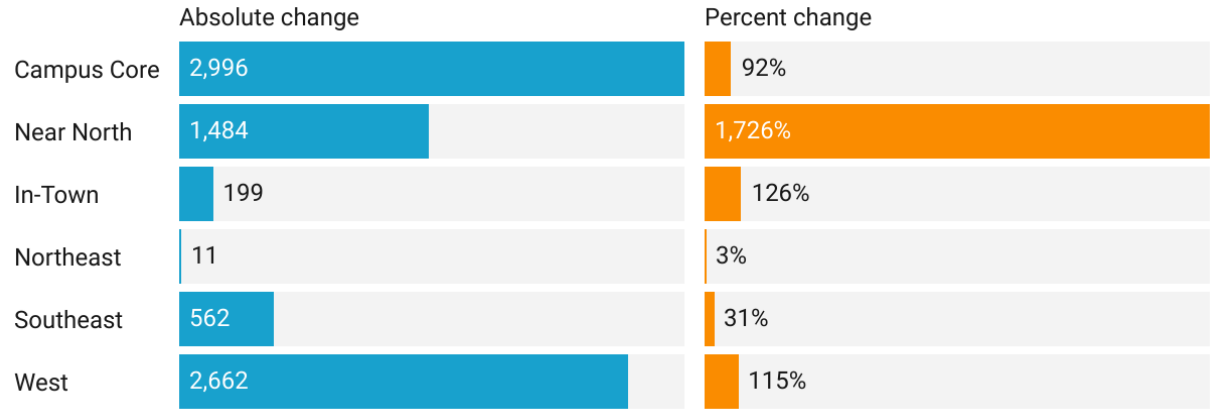
Three other subareas — the Northeast, southeast, and West, also saw dramatic growth in their foreign-born populations. However, because this growth did not occur parallel to rising numbers of student residents, these new residents are less likely to be students. This is especially true in the West, where new foreign-born residents outnumbered new student residents by about 5,500. In the Southeast, almost twice as many people born outside the U.S. moved in as students.

Asian-Born Residents On the Rise Where Student Residents Concentrate

From 2000 on, the U.S. Census Bureau began tracking the home continents of foreign-born individuals. Because Asian students accounted for most international students at the University of Illinois from 1980 on, examining where those born in Asia live reveals more about students' housing choice than foreign-born population counts more generally. Figure 5.12 breaks down changes in the Asian-born population among the six subareas from 2000 on.

Figure 5.12:

Asian-born Population Change by Subarea, 2000-2018



Data sources: 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

From 2000 to 2018, the Campus Core's Asian-born population nearly doubled, increasing by almost 3,000 people. This is similar to the area's growth in foreign-born residents from all parts of the world, confirming that rising numbers of Asian students are most likely choosing to live in near-campus neighborhoods.

However, the Near North neighborhood has also seen a significant increase in its Asian-born population, despite its location farther from the University's main quad. The nearly 1,500 additional Asian-born individuals living in Near North represent an astronomical demographic change for the subarea, which only had 86 Asian-born residents in 2000.

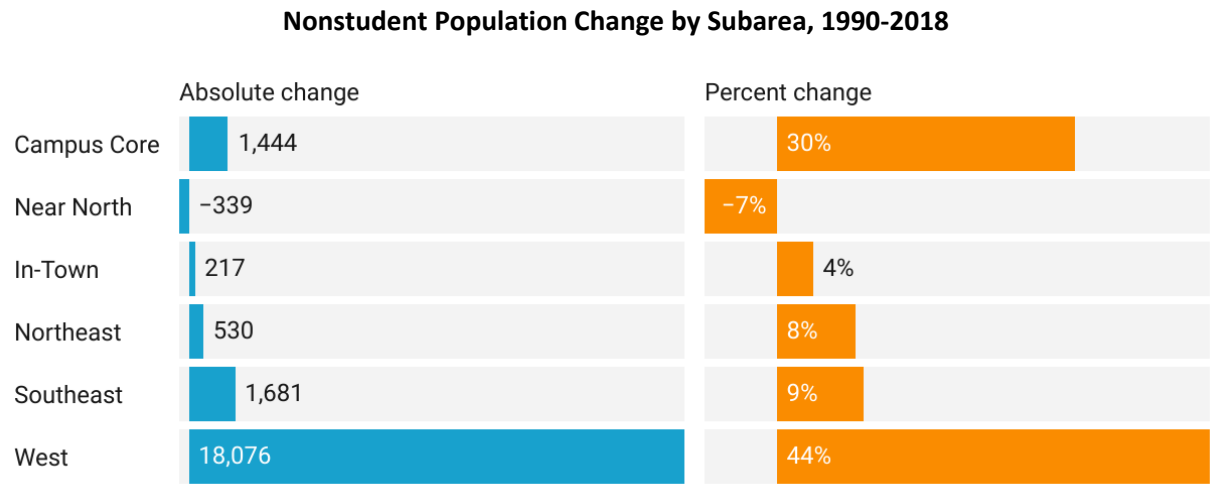
All subareas saw significant growth in their Asian-born populations, except for the Northeast. This further suggests the Northeast's housing market serves rental submarkets other than students.

However, of subareas other than the Campus Core and Near North, In-Town is the only part of Champaign-Urbana where growth in the Asian-born population tracks with trends in counts of foreign-born residents more generally. This indicates that in the Southeast and West, those born in other parts of the world explain growth in the number of residents born overseas. Based on the demographics of University of Illinois students, this means these additional residents are also less likely to be students.

Nonstudents Flock to the West

As certain subareas in Champaign-Urbana have become more popular with students, population growth among the nonstudent population has also been unevenly distributed. All subareas have seen at least small increases in their nonstudent population except for the Near North. Figure 5.13 shows changes in the number of nonstudent residents in each subarea from 1990 to 2018.

Figure 5.13:



Data sources: 1990 and 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

Although the Campus Core's student population has grown at about the same rate as the subarea's overall population, its nonstudent population has grown faster. From 1990 to 2018 the Campus Core has picked up an additional 1,444 nonstudents. This means new undergraduate residents outnumber new nonstudent residents by about two to one. Still, the total number of nonstudents has increased 30 percent.

Meanwhile, the Near North is the only subarea in Champaign-Urbana where the number of nonstudent residents has declined. The dip in nonstudents only represents a 7 percent decrease from 1990 to 2018. In addition, the subarea gained population from 2000 on. But compared to the steep increase in students living in the Near North, this stagnation of nonstudents could signal a shift in demographics.

Of all subareas, the West has experienced the greatest rise in nonstudent residents since 1990. Over 18,000 residents who were not enrolled in college moved in between 1990 and 2018, representing a 44 percent increase. (These residents could also include children.) No other subarea gained even one-tenth of the West's absolute growth in nonstudents. Considered along with the subarea's large growth in rental households this indicates that nonstudent renters are an important submarket in this part of Champaign-Urbana.

The three remaining subareas — In-Town, the Northeast, and Southeast — each saw moderate growth in their number of nonstudent residents. The Southeast saw the second-highest absolute increase in nonstudents, but that population's 9 percent growth is slightly slower than the subarea's 11 percent overall increase in total residents.

Table 5.2 shows the total population, total student population, and number of renter households for each subarea in 1990, 2000, 2010, and 2018.

Table 5.2:

Total Population, Student Population, and Renter Households by Subarea, 1990-2018

Campus Core			
Year	**Total population**	**Student population**	**Renter households**
1990	29,366	24,619	6,709
2000	28,194	24,391	7,414
2006-2010	35,162	30,143	7,564
2014-2018	34,066	27,875	8,290
Near North			
Year	**Total population**	**Student population**	**Renter households**
1990	5,068	461	897
2000	5,087	1,318	1,074
2006-2010	5,733	1,954	1,602
2014-2018	7,435	3,167	2,549
In-Town			
Year	**Total population**	**Student population**	**Renter households**
1990	7,547	1,674	2,628
2000	8,046	2,108	2,735
2006-2010	7,806	2,070	2,803
2014-2018	8,319	2,229	3,100
Southeast			
Year	**Total population**	**Student population**	**Renter households**
1990	23,833	4,908	5,159
2000	24,914	5,830	5,887
2006-2010	26,113	5,777	6,036
2014-2018	26,450	5,844	5,666

Table 5.2 (continued):

Northeast			
Year	**Total population**	**Student population**	**Renter households**
1990	7,338	725	1,361
2000	7,060	764	1,372
2006-2010	7,248	864	1,396
2014-2018	7,786	643	1,897

West			
Year	**Total population**	**Student population**	**Renter households**
1990	44,976	4,135	6,084
2000	50,927	4,772	7,226
2006-2010	56,915	5,748	8,704
2014-2018	64,287	5,370	11,001

Data sources: 1990 and 2000 decennial census sample-based and 100% data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

Campus Core

Student Housing Development Drives Increased Density Near Campus

As the population of the Campus Core neighborhoods rose from 29,366 in 1990 to 34,066 in 2018, the area's population density also ballooned as high-rise buildings came online near campus. In 1990, the Campus Core was home to about 20 people per acre. In 2018 that number rose to more than 23 residents per acre.[9] The Campus Core's household density has also increased. In 1990, the subarea contained 4.7 households per acre, which inched up to 6.2 by 2018.

The neighborhoods nearest to the University of Illinois' main quad have remained the Campus Core's densest over the years. However, many have intensified their density as new high- and midrise apartments have gone up. In 1990, tract 4 — located directly west of campus — was home to 55 residents per acre. Tract 3, containing Champaign's Campustown and Midtown

[9] Population density for the subarea as a whole excludes any census blocks that contain fewer than ten residents. Many census tracts in the Campus Core contain parts of the University of Illinois campus without residential buildings. In addition, tracts such as tracts 14 and 60 contain farmland. These open spaces distort population density calculations since other parts of these census tracts are densely populated. However, population density figures reported for census tracts on their own do not exclude uninhabited areas.

neighborhoods, was second densest at 27 people per acre. Tract 59, located on the eastern edge of campus in Urbana nearly matched tract 3's density at 26 residents per acre.

By 2018, Champaign's near-campus neighborhoods gained population density following the construction of new high-rise and midrise buildings. The Campus Core tract with the highest population density was tract 4.01, located just west of the University of Illinois' main quad. That tract had more than 79 people per acre in 2018. Its density of students specifically was also high — the tract home to approximately 74 college students per acre that year. Tract 4.02, directly to the west, contained 50 people per acre. Campustown was next densest, with about 46 residents per acre. Midtown's density was 29 people per acre. However, tract 59 in Urbana saw its population density drop to 19 people per acre.

As expected, household density was also highest in areas nearest campus, with campus-adjacent neighborhoods in Champaign gaining households over the decades. In 1990, tracts 3 and 4 had the highest household densities at 12.9 and 12.1 households per acre, respectively. The next densest tract was tract 59. It was home to 3 households per acre.

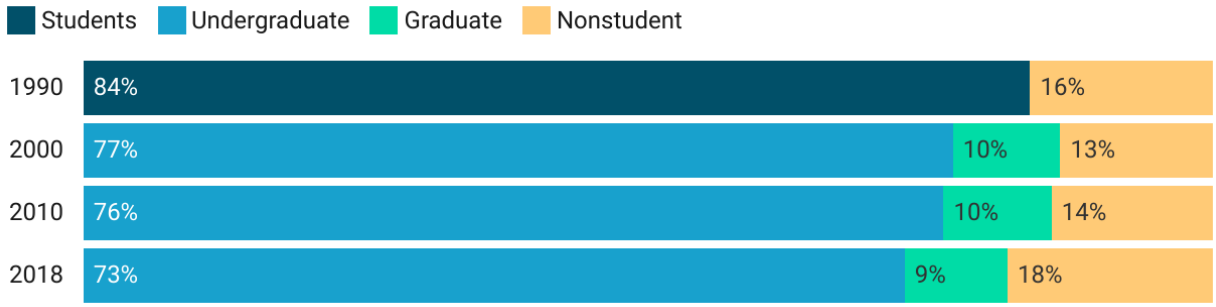
In 2018, Champaign's Campustown neighborhood (tract 3.01) had the highest household density, at 17.5 households per acre. Tract 4.01, located west of campus along Neil Street and the Illinois Central Railroad tracks, was the next densest, with 17 households per acre. Champaign's Midtown neighborhood (tract 3.02) had 15.3 households per acre. Meanwhile, tract 59's household density was more stable at 3.6 households per acre.

Campustown and Midtown Solidify Popularity with Undergraduate Students

Of all subareas in Champaign-Urbana, the Campus Core traditionally has the most concentrated student population. Since 1990 the subarea's undergraduate and graduate students together have never dipped below 82 percent of the total population. Figure 5.14 shows how the Campus Core's population breaks down across student and nonstudent residents from 1990 to 2018.

Figure 5.14:

Campus Core Population Composition, 1990-2018



Data sources: 1990 and 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

In 1990, the Campus Core was home to 24,619 college students, including both undergraduates and graduate students. In total, 83.8 percent of the subarea's population were students that year. By 2000, the student population remained steady at 24,391. However, due to outmigration of nonstudent residents, students made up a greater share of the overall population that year at 86.5 percent. This year represented the peak of the Campus Core's student population as a percentage of its total residents.

Over the next decade, the Campus Core gained an additional 5,752 student residents, putting its student population at 30,143. Those students represented 85.7 percent of the population — on par with where the subarea was ten years prior. However, by 2018 the Campus Core's student population dipped slightly to 27,875, meaning students made up 81.8 of the subarea's total population. This is the smallest share of students in all years of this study. Still, in absolute terms, the Campus Core was home to 3,256 more students than in 1990, a 13.2 percent increase.

The Campus Core's population in group quarters, including students living in University-owned and private certified dormitories, as well as sororities and fraternities, fluctuated between about 12,000 to over 14,000 per year. Inconsistency from year to year may be related to varying University of Illinois freshmen class sizes since the University requires first-year students to live on-campus or in certified housing. Tracts 14, 59, and 60 each contained large numbers of residents in group quarters in all years in this study.

However, census tract 3.02 was not home to any residents in group quarters. Tract 3.01 had only 165 residents in group quarters in 2018. About 700 residents lived in group quarters in

tract 4.02 in 2010 and around 800 in 2018. Therefore, most student residents of these neighborhoods rented houses or apartments.

Undergraduate Students in the Campus Core

In 2000, the U.S. Census Bureau began recording school enrollment status for undergraduate students and graduate-level students separately. This data reporting change made tracking undergraduate student renters as a unique submarket possible. Compared to other areas of Champaign-Urbana, the Campus Core's undergraduate population grew the most in absolute terms, increasing by 3,066 between 2000 and 2018. This represents a 14.1 percent change. Therefore, new undergraduate residents accounted for 88 percent of net student population growth in the Campus Core over that period.

However, from 2000 to 2018 the Campus Core's share of undergraduate student residents compared to graduate students and nonstudents declined by four percentage points, even as the absolute number of undergraduates grew. Increasing numbers of nonstudent residents drove this shift — the Campus Core picked up 2,388 additional nonstudents between 1990 and 2018.

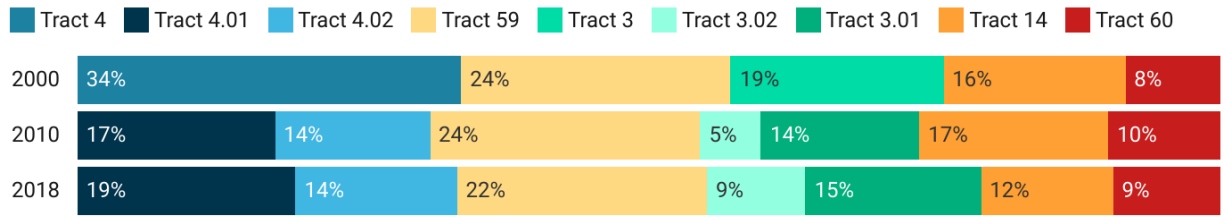
Compared to skyrocketing enrollment at the University of Illinois, growth in the Campus Core's undergraduate population was modest. From 2000 to 2018, the undergraduate student body grew by 5,791, a 20.8 percent increase. This indicates that as student numbers rose, many University of Illinois undergraduate students found housing outside of the Campus Core.

At 21,705 in 2000, the Campus Core's undergraduate student population represents 77.8 percent of the University of Illinois' enrollment of 27,882. By 2018, the area's 26,783 students were equivalent to 79.5 percent of undergraduate enrollment (33,673). This means the Campus Core's additional undergraduate residents represent about 48.5 of the University's net growth in undergraduate enrollment over that period. However, some of those student residents may be enrolled at schools other than the University of Illinois. Champaign is also home to Parkland Community College — students attending that institution are also likely to live within Champaign-Urbana.

Figure 5.15 shows the percentage of the Campus Core's total undergraduate residents who lived within each of the subarea's census tracts in 2000, 2010, and 2018.

Figure 5.15:

Campus Core Undergraduate Population by Census Tract, 2000-2018



Data sources: 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

The percentage of undergraduates within each census tract has remained relatively stable over the decades. Tracts 4.01 and 4.02 — created by a split of tract 4 in 2010 — were home to about one-third of all Campus Core undergraduates in 2000, 2010, and 2018. Tract 59, which contains portions of campus as well as the Lincoln-Busey corridor in Urbana, has traditionally been home to just under a quarter of all undergraduates in the subarea. Tract 60, home to the University of Illinois' Pennsylvania and Florida Avenue residence halls, has hovered around ten percent.

Meanwhile, Champaign's Campustown and Midtown neighborhoods combined have seen their undergraduate population rise by five percentage points from 2010 to 2018. Therefore, more students are choosing housing in those near-campus neighborhoods. In addition, this indicates that those areas, which have seen a boom in student housing development over the past decade, have been able to accommodate this growing demand.

The opposite is occurring in tract 14. This tract includes the University's Ikenberry Commons North and South residence halls, as well as apartments and single-family homes in the Village of Savoy to the south. The percentage of Campus Core undergraduate students living there has fallen four percentage points. This may have occurred due to upperclassmen increasingly choosing to forgo apartments in Savoy.

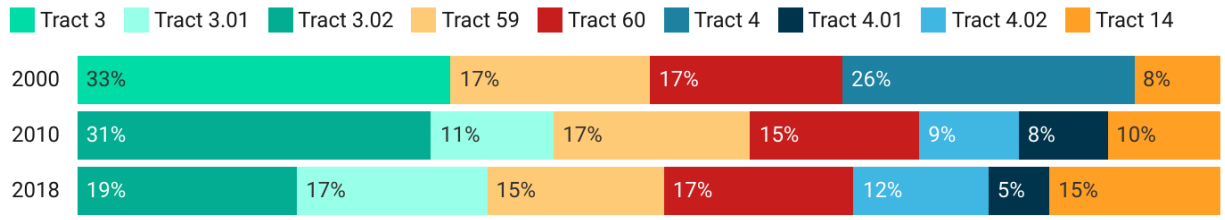
Graduate Students in the Campus Core

While the graduate student population in the Campus Core has hovered between 9 and 10 percent of total residents since 2000, this has occurred as the population of the subarea has risen by more than 20 percent. Growth in the graduate student population was slightly slower — 15.6 percent from 2000 to 2018. The subarea had a lower percentage of graduate students than the Near North and In-Town subareas in 2018. But in absolute terms, the Campus Core is home to the most graduate student renters of any subarea in Champaign-Urbana.

From 2000 to 2018 the Campus Core's graduate student population has become more evenly spread across the subarea's neighborhoods. However, most graduate students choose to live in census tracts close to campus. Figure 5.16 shows the percentage of the Campus Core's total graduate students who lived in each of the subarea's census tracts in 2000, 2010, and 2018.

Figure 5.16:

Campus Core Graduate Student Population by Census Tract, 2000-2018



Data sources: 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

In 2000, about 59 percent of the Campus Core's 2,686 graduate student residents lived in tracts 3 or 4, Champaign neighborhoods closest to the main quad. Tract 60 — the location of the Orchard Downs apartment housing mainly graduate students and their families — and 59 — home to Urbana's Lincoln-Busey corridor — each housed similar shares of graduate students. Tract 14, which includes the Ashton Woods complex, as well as subdivisions in the Village of Savoy, had the smallest share of graduate student residents that year.

In the decade that followed, the Campustown and Midtown neighborhoods gained popularity with graduate students. About 42 percent of graduate students living in the Campus Core lived in tracts 3.01 (Campustown) and 3.02 (Midtown) that year. At the same time, the percentage of graduate students in the neighborhoods directly west of the main quad fell by 9 percentage points. However, the graduate student population as a percentage of total residents was largely stable from 2000 to 2010.

Tract 14's share of the Campus Core's graduate student population also declined by seven percentage points between 2000 and 2018. From 2010 to 2018 specifically, tract 14 saw its absolute number of graduate student residents fall by 256. This underscores the possibility that graduate students — like undergraduates — may increasingly prefer dense, urban housing convenient to campus. These preferences could be causing them to reject apartment options in Savoy.

Foreign-Born Residents Increasingly Cluster Near Campus

As discussed, much of the rise in enrollment at the University of Illinois is due to increasing numbers of international students. These students, who are willing and able to pay nonresident tuition without institutional financial aid, may also have higher buying power on the rental housing market. The Campus Core's foreign-born population increased by 2,550 between 1990 and 2018. Over that period, the University of Illinois' enrollment of international undergraduate students shot up by 4,955. This suggests that many — but not all — of these international students sought out housing in the Campus Core. Table 5.3 shows how the subarea's foreign-born population has increased over time.

Table 5.3:

Foreign-born Population in the Campus Core, 1990-2018

	Total population	Foreign-born population	% Foreign-born	Asian-born population	Chinese-born population
1990	29,366	5,009	17.10%	*N/A*	*N/A*
2000	28,194	4,455	15.80%	3,255	*N/A*
2006-2010	35,162	6,386	18.20%	4,775	1,591
2014-2018	34,066	7,559	22.20%	6,251	3,215
Percent change:	16.0%	50.9%		92.0%	102.1%

Data sources: 1990 and 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

The largest jump in the Campus Core's foreign-born population occurred between 2000 and 2010, when the foreign-born population shot up by 43.3 percent, or 2,385 people. This was also the decade when international undergraduate enrollment spiked by 1,931 students, an increase of more than five times. This, coupled with the Campus Core's high student population, implies international enrollment drove the rise in foreign-born residents in the subarea.

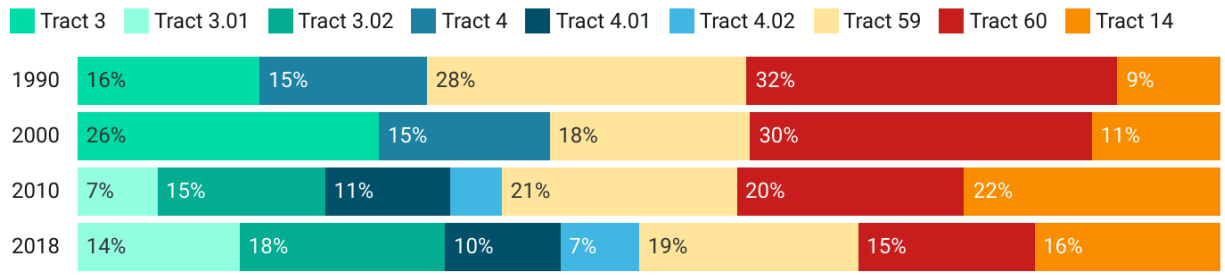
In addition, as the University of Illinois' share of students from Asia rose, so did the Asian-born population in the Campus Core. The subarea's Asian-born population nearly doubled between 2000 and 2018. The number of foreign residents from Asia rose by 46.7 percent from 2000 to 2010, and then again by 30.9 percent between 2010 and 2018. In 2000, individuals from Asia made up 11.5 percent of the Campus Core's population. By 2018, that had risen to 18.3 percent.

Residents from China accounted for a large portion of this growth, at least from 2010 to 2018. The Campus Core's Chinese-born population increased by 1,624 over that decade, more than double what it was. Concurrently, the University of Illinois enrolled an additional 3,460 students from China at the undergraduate and graduate levels combined. If all Chinese-born individuals living in the Campus Core were students, this means about half of those new students chose to live in the subarea. Those from China specifically accounted for 9.4 of the Campus Core's total population, 42.5 percent of the foreign-born population, and 51.4 of the Asian-born population. From 2010 to 2018, the Chinese-born population more than doubled while the Asian-born population increased by nearly a third.

As the Campus Core's foreign-born population grew between 2010 and 2018, residents from other countries increasingly chose to live in the neighborhoods closest to campus. Figure 5.17 shows each Campus Core census tract's share of the subarea's foreign-born population in 1990, 2000, 2010, and 2018.

Figure 5.17:

Campus Core Foreign-Born Population by Census Tract, 2000-2018



Data sources: 1990 and 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

From 1990 to 2010, between 58 and 59 percent of the Campus Core's foreign-born residents lived in Campustown, Midtown, tracts 4.01 and 4.02, or tract 59, which contains parts of Campus, as well as Urbana's Lincoln-Busey corridor.

Tracts 4.01 and 4.02 (formerly tract 4) have always been home to around 15 percent of the Campus Core's foreign-born residents. At the same time, Campustown and Midtown have become more popular with those born outside the U.S. over time. The percentage of foreign-born residents in those neighborhoods has risen by 16 percentage points from 1990 to 2018. In the past decade, larger shares of foreign-born residents have chosen to live in tract 3.01 (Campustown) specifically.

To the east of the subarea, Urbana's tract 59 has seen the opposite trend. Its share of the subarea's foreign-born population fell about 9 percentage points from 1990 on. By 2010 tracts 59 and 14 had similar shares of residents born outside the U.S. But over the next decade tract 14 saw its popularity with foreign-born residents recede. That year, tract 59 was the census tract with the largest share of graduate student residents. However, that occurred not as tract 59 grew more popular, but as graduate student residents became more distributed among the Campus Core's census tracts.

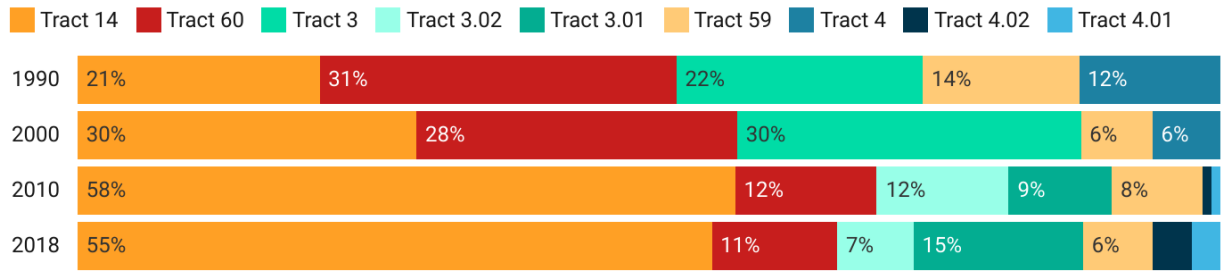
Farther from the main quad, tract 60 was the area of the Campus Core with the greatest share of foreign-born residents in 1990 and 2000. International graduate students outnumbered undergraduate international students at the University of Illinois in those decades. This enrollment trend explains the concentration of international residents in tract 60, the location of the University's Orchard Downs complex. However, by 2018 Midtown, tract 59, and tract 14 were all home to more foreign-born residents than tract 60. Between 1990 and 2018, the tract's share of the Campus Core's foreign residents fell by 17 percentage points. That nearly counteracted the 16-percentage point increase seen in tracts 3.01 and 3.02 combined.

A Small (But Rising) Number of Nonstudents in the Campus Core

While both undergraduate and graduate student residents of the Campus Core have become more evenly spread across the subarea over time, a larger proportion of nonstudent renters have clustered in the two census tracts farthest from the University of Illinois main quad. Figure 5.18 shows the percentage of the Campus Core's nonstudent population living within each of the subarea's census tracts from 1990 to 2018.

Figure 5.18:

Campus Core Nonstudent Population by Census Tract, 2000-2018



Data sources: 1990 and 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

Over half of the Campus Core's 4,747 nonstudent residents lived in census tracts 14 and 60 in 1990. However, in the decades since these tracts have attracted a growing share of nonstudents compared to other Campus Core tracts. By 2018, tracts 14 and 60 were home to two-thirds of the subarea's 6,191 nonstudents.

This accumulation of nonstudents away from campus has occurred due to tract 14's growing popularity with this group. The tract's share of the Campus Core's nonstudents increased by 34 percentage points from 1990 to 2018. By 2018, the tract was home to more than half of all nonstudents in the subarea. In absolute terms, tract 14 picked up 1,444 nonstudent residents over that time.

Most housing in the Champaign portion of the tract is University-owned and includes undergraduate residence halls, as well as the Ashton Woods apartment complex serving graduate students and their families. Therefore, some nonstudent residents of this subarea may represent spouses, children, and other family members of graduate students. However, the growing share of nonstudents in tract 14 is likely due to greenfield subdivision development in the Village of Savoy. New housing there includes single-family homes as well as apartment complexes.

At the same time, tract 60's share of nonstudent residents has declined. Nearly one-third of all Campus Core nonstudents lived there in 1990, but this declined by 20 percentage points by 2018. That year, census tract 3.01 — Champaign's Campustown neighborhood — had a greater share than tract 60 did.

An increase in nonfamily households in tract 60 may offer one explanation for the falling nonstudent population there. While the tract was home to 110 nonfamily households in 1990, this ballooned to 597 2018. Only 13.4 percent of the tract's households were composed of unrelated people in 1990, but 79.9 percent were in 2018.

Tract 60 is home to the University of Illinois' Orchard Downs apartment complex, which primarily houses graduate students and their families. Therefore, the tract's nonstudent residents are likely to be spouses or family members of enrolled students. A rise in nonfamily households indicates more Orchard Downs residents could be living alone or with roommates, rather than with spouses and children. Of course, fewer spouses and children translates to fewer nonstudent residents in tract 60.

Nonstudents may be more likely to resist living near students, with a few exceptions. Tract 59's off-campus housing is located along the eastern edge of the University of Illinois campus in Urbana. That census tract's share of the Campus Core's nonstudents decreased by

eight percentage points between 1990 and 2018. In absolute terms, the nonstudent population fell from 648 to 381 over that time.

The neighborhoods directly west of the main quad have also decreased in popularity with nonstudents. In 1990, 12 percent of the Campus Core's nonstudent population lived in tract 4, representing 588 residents. However, by 2018 only 6 percent of the subarea's nonstudents lived in tracts 4.01 and 4.02 combined. In 1990, tract 4 was home to 588 nonstudents. By 2010, this plummeted to only 81. But by 2018 the nonstudent population inched back up to 364. Therefore, this part of the Campus Core may be gaining popularity with nonstudents once again.

Meanwhile, nonstudent demand for Champaign's Campustown and Midtown neighborhoods has increased in absolute terms. Taken together, Midtown and Campustown were home to 1,024 nonstudent residents in 1990, which grew to 1,331 in 2018. Over the past decade, Campustown's nonstudent population, specifically, more than doubled. Four hundred and fifty-two nonstudents lived there in 2010, which grew to 918 in 2018. Midtown, however, experienced a small decline in its total nonstudents, losing 166 such residents. This rise in nonstudents shows that housing along Green Street is desirable across submarkets.

However, other demographic trends in tracts 3.01 and 3.02 demonstrate that new nonstudent residents may resemble student renters in many ways. First, the percentage of residents ages 20 to 24 in these neighborhoods has hovered around 70 percent since 1990. Most individuals living in Campustown and Midtown are as young as undergraduate upperclassmen. In addition, 93.8 percent of households in tracts 3.01 and 3.02 combined were nonfamily households. This was two percentage points lower in 1990. Therefore, Campustown and Midtown residents are unlikely to consist of spouses or children, like student renter households. Not a single Campustown or Midtown household owned their home in 2018 — another similarity to student renter households. Finally, just over half of Campustown and Midtown households owned a vehicle.

Near North

Suburban-Style Apartments Remain a Draw for Student Renters

Of all subareas in Champaign-Urbana, the Near North has experienced the most dramatic influx of new student renters from 1990 on. At the same time, the subarea has seen a spike in its total population and households. As students have moved in, they have also affected tenure, nativity, age, and vehicle ownership in the Near North.

The Near North is far less dense than the Campus Core. Still, population density is on the rise there. In 1990, the subarea's residential land was home to nearly eight residents per square

acre. By 2018, that had risen to nearly 12 people per acre. In absolute terms, the Near North gained 2,367 households between 1990 and 2018.

The Near North's population was once evenly divided between its two census tracts. Tract 2, directly north of the Campus Core across University Avenue, had 2,021 residents in 1990. Tract 53 to the east had slightly more — 2,586. However, this population rift widened over the decades. Tract 2 began to lose population. More than 300 people left the neighborhood between 1990 and 2018. At the same time, tract 53's population ballooned. From 1990 to 2018 the tract gained 2,693 additional residents, nearly doubling.

Household density rose even faster. In 1990, the Near North contained about three households per acre. That rose to more than five households per acre in 2018. The subarea's total households rose by 1,491 from 1990 on. This increase in households occurred mainly in the east of the subarea. While census tract 2's count of households remained stable over the decades, census tract 53 gained 1,461 new households from 1990 to 2018.

Tenure in the area has become more tilted toward renter households over the decades. In 1990, just under half of the subarea's households rented. But by 2018, 78.8 percent were renters. This has occurred both as the Near North has added renter households and lost homeowners. From 1990 to 2018 the subarea lost 161 owner households. At the same time, its total renter households increased by 1,652, nearly doubling.

In 1990, tract 2 and tract 53 were each home to about half of the Near North's renter households. However, by 2000 tract 53 had 783 renter households to tract 2's 291. This divide grew larger still over the next decade, when tract 53 was home to 1,234 renter households, 721 more than in tract 2. By 2018, 2,036 renter households lived in tract 53 while only 513 lived in tract 2.

Along with this shift in tenure has come a shift in household composition. In 1990, 687, or 37.6 percent of the Near North's households. were nonfamily households. By 2018, the subarea had gained 1,773 additional nonfamily households. As a result, most of the subarea's households — 62.3 percent — were nonfamilies that year.

In addition, the subarea's share of 20- to 24-year-olds exploded between 1990 and 2018. In 1990, 529 residents were within this age range, representing 10.4 percent of the total population. By 2018, nearly five times as many young adults lived in the Near North. The subarea's 2,568 20- to 24-year-olds made up 34.5 percent of the total population that year.

Until 2010, the western portion of the Near North was predominantly a neighborhood for families. In 1990, 2000, and 2010 fewer than one-third of households in census tract 2 were nonfamily households. However, in 2018 more than half (54.7 percent) were nonfamily

households. To the east, tract 53's share of nonfamily households also increased dramatically. In 1990, 42.2 percent of households there were nonfamily households. In 2000, this percentage rose above half, to 56.3 percent. This upward trend continued, and by 2018, 80.2 percent of the tract's 2,533 households were nonfamily households.

Unlike in other student-heavy areas of Champaign-Urbana, vehicle ownership has increased in the Near North. In 1990, 28 percent of the subarea's households did not have a vehicle. By 2018 that had decreased to just over a fifth of all households.

An increase in vehicle ownership among residents of census tract 2 has driven this. In 1990, 43.8 percent of the tract's households did not have a vehicle. However, by 2018 that had dipped to only 9.1 percent. That year, only 71 households had no vehicle, down from 331 in 1990.

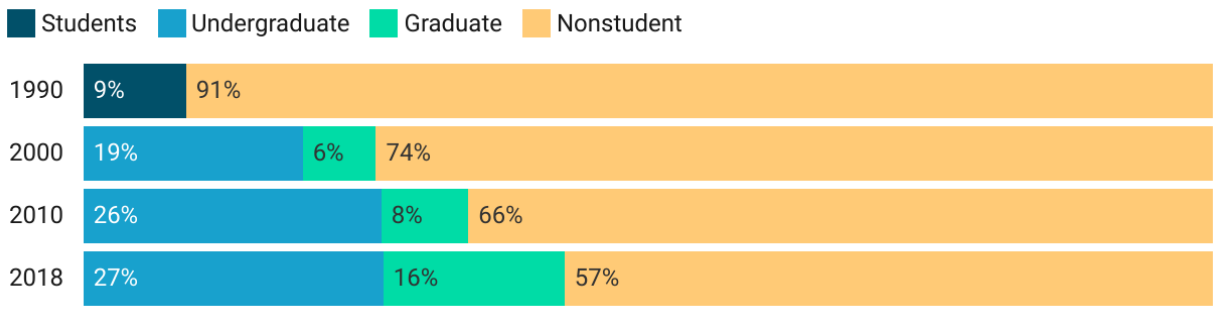
In tract 53, where most of the Near North's students live, between 15 and 17 percent of households got by without a vehicle from 1990 to 2010. In 2018 this rose to about a quarter of all households. The location of the housing may play a role. Tract 53's apartment complexes are located along North Lincoln Avenue in Urbana. Although large numbers of students call this area home, the commute to campus is over a mile. Therefore, students may be more likely to rely on cars (or public transportation) to get to class. In addition, student housing in tract 53 is far from grocery stores and other amenities residents may need.

Graduate Students and Undergraduates Alike Flocking to the Near North

An influx of student residents explains demographic shifts in the Near North. While nonstudents still outnumber students in the Near North, the subarea's share of nonstudent residents has increased from 461 in 1990 to 3,167 in 2018. At the same time, the Near North's nonstudent population has declined slightly. Figure 5.19 shows the percentage of the Near North's population comprised of students and nonstudents in 1990, 2000, 2010, and 2018.

Figure 5.19:

Near North Population Composition, 1990-2018



Data sources: 1990 and 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

In 1990, the Near North's nonstudent residents outnumbered students by more than ten to one. Only 461 students lived in the subareas that year. However, students have risen as a percentage of the population since then. Over the next decade, the student population nearly tripled to 1,318. New undergraduate student residents made up three-quarters of the overall student population.

From 2000 to 2010, another 525 undergraduate students moved to the Near North, bringing the undergraduate population to 1,513. In 2010, undergraduates made up 77.4 percent of the subarea's student residents, a higher proportion than in 2000. On their own, undergraduate students represented more than a quarter of the Near North's total population that year.

The share of undergraduates as a share of the Near North's total population only inched up one percentage point over the next decade. Still, this occurred as the population of the Near North continued to rise. In absolute terms, the subarea added 462 undergraduate residents from 2010 to 2018, a 30.5 percent increase.

The total number of students living in the Near North rose much faster. From 2010 to 2018, the student population grew by 1,213. This represents a 62.1 percent rise. A jump in graduate student residents drove this. Over eight years, the Near North gained 751 graduate students, more than doubling their population.

By 2018, the Near North's undergraduate student residents still outnumbered its graduate students, but graduate students were gaining ground. That year, 1,192 graduate students and 1,975 undergraduates called the subarea home. Together, university students at all academic levels made up 43 percent of the Near North's total population in 2018.

This student population has concentrated in the east of the subarea. Although census tract 2 is located directly north of the Campus Core, that neighborhood has traditionally housed a small number of students. In 1990, 109 students lived there, representing only 5.1 percent of the total population. By 2018, this had risen to 183 total students. Because the overall population of tract 2 remained largely unchanged, this meant students rose to 10.1 of the neighborhood's overall population that year.

At the same time, census tract 2 has a small share of young adults relative to residents of other ages. From 1990 to 2018 the subarea's total 20- to 24-year-olds never climbed above 12 percent of the total population.

To the west, in tract 53, individuals in this age range only made up 11.9 percent of all residents in 1990. However, that neighborhood's percentage of 20- to 24-year-olds has risen since. By 2018, it jumped to 42.7 percent of all residents. Between 1990 and 2018 tract 53 gained 2,055 residents ages 20 to 24. This neatly corresponds to the census tract's growing student population, which increased by 2,617 over the same period. Tract 53 was home to 352 students in 1990 and 349 20- to 24-year-olds. In 2018, the tract had 2,969 student residents.

International Students Make Up a Large Share of New Near North Residents

As the University of Illinois international student enrollment has spiked, the Near North's foreign-born population has also jumped. Given the concurrent rise in the subarea's student population, international students may account for much of the Near North's population boom. Of all subareas, new residents from outside the U.S. have accounted for the greatest share of overall population growth in the subarea. New foreign-born residents represent 84.6 percent of overall population growth in that subarea from 1990 to 2018. Table 5.4 shows the number of foreign-born residents in the Near North in 1990, 2000, 2010, and 2018.

Table 5.4:

Foreign-born Population in the Near North, 1990-2018

	Total population	Foreign-born population	% Foreign-born	Asian-born population	Chinese-born population
1990	5,068	126	2.50%	N/A	N/A
2000	5,087	242	4.80%	86	N/A
2006-2010	5,733	937	16.30%	710	257
2014-2018	7,435	2,128	28.60%	1,570	967
Percent change:	46.70%	1,588.90%		1,725.60%	276.30%

Data sources: 1990 and 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

Much of the increase in foreign-born residents is due to large amounts of new residents born in Asia. Between 2010 and 2018, the Near North gained 860 residents from Asia. This comes to 72 percent of the area's gains in foreign-born inhabitants over the same period, a net increase of 1,191 people.

In total, new foreign-born residents made up about 70 percent of the subarea's rise in population over that decade. Asian-born individuals specifically account for 72.7 percent of foreign-born growth. In turn, those from China accounted for 82.6 percent of Near North's increase in residents born in Asia from 2010 to 2018. Individuals from China were responsible for 59.6 percent of foreign-born growth and 41.7 percent of overall population growth.

Foreign-born individuals have clustered in census tract 53, located north of University Avenue to the east. This census tract contains several apartment complexes marketed toward student renters, despite their relative distance from the University of Illinois campus. Many came online in the late 1990s and early 2000s along North Lincoln Avenue in Urbana. The tract was home to 119 foreign-born individuals in 1990, accounting for 94.4 percent of the subarea's total foreign-born population. By 2000, that population was still small — 178 of the Near North's 242 foreign-born residents lived in tract 53. But in 2010 the subarea's foreign-born population jumped. That year, all 937 residents born outside the U.S. lived in tract 53.

By 2018, both tract 2 in the west and tract 53 in the east experienced a large influx of residents from other countries. Tract 2 picked up 282 foreign residents. However, tract 53's foreign-born population rose to 1,846 from 937, nearly doubling. Residents in that census tract accounted for 86.7 of the Near North's total foreign-born population.

Through 2010, the Campus Core consistently had Champaign-Urbana's largest percentage of foreign-born residents. That subarea has consistently been home to the largest

number of foreign-born people. However, the Near North's rate of foreign-born population growth has outpaced that in the Campus Core. And by 2018, foreign-born individuals made up a higher percentage of the Near North's total population than the Campus Core.

The Near North's nonstudent population has not kept pace with the influx of students. From 1990 to 2010, the subarea experienced a net loss of 331 residents. The greatest decline in nonstudent population occurred between 1990 and 2000 when the Near North lost 838 total nonstudents. Over the next decade, the nonstudent population remained flat. However, from 2010 to 2018 the number of nonstudents began to grow again. The subarea picked up 489 new nonstudents over that period, a 12.9 percent increase. This was not enough to offset the population loss experienced between 1990 and 2018, but it indicates growing nonstudent interest in the Near North.

Like in the Campus Core, this indicates that a growing number of Champaign-Urbana's nonstudents are willing to live alongside student renters. It also suggests students and nonstudents may compete for the same housing in certain areas of town.

In-Town

Plateauing Population

Other than the Northeast, In-Town experienced the smallest population growth of any Champaign-Urbana subarea. This is true both in absolute terms and relative terms — the subarea only gained 773 residents from 1990 to 2018, representing a growth of 10 percent.

In-Town is also one of the least populated subareas of Champaign-Urbana, along with the Near North and Northeast. However, the subarea's residential land area is smaller, meaning In-Town has higher population density than those other subareas. From 1990 to 2018 In-Town was home to between 10.5 and 11.6 residents per acre. This population density fluctuated along with the total population. Between 1990 and 2000, In-Town gained 499 residents before losing 240 over the next decade. Then, between 2010 and 2018, In-Town's population rose by 513 again.

As In-Town's population rose and fell, its total households were more stable. Household density remained around six households per acre from 1990 to 2018. The subarea had 4,079 total households in 1990 and had added 411 more by 2018.

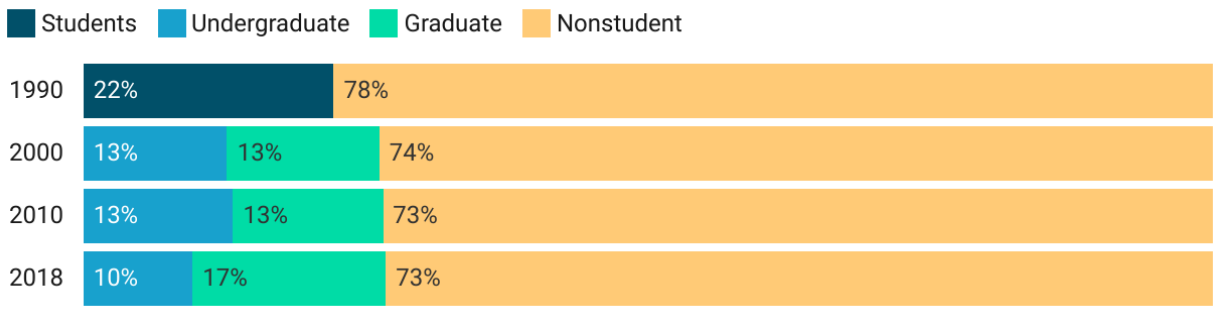
As the number of households has remained flat, In-Town's share of renter households has inched up. Renters have always outnumbered homeowners — in 1990 2,628 households (64.4 percent) rented their homes. By 2018, this had increased slightly to 69 percent, or 3,100 renter households.

A Small, Stable Student Population

In-Town's student population has risen steadily over the decades. However, compared with other subareas these increases have been modest. Figure 5.20 shows the percentage of In-Town's residents who were undergraduate and graduate students and nonresidents in 1990, 2000, 2010, and 2018.

Figure 5.20:

In-Town Population Composition, 1990-2018



Data sources: 1990 and 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

In-Town's student population as a percentage of its total population rose by about five percentage points between 1990 and 2018. Over that time, the subarea gained 555 student residents at both the undergraduate and graduate levels. Still, nonstudents outnumber the subarea's students nearly three-to-one. This means In-Town's population composition resembles that of the Southeast the most.

However, compared to the Southeast subarea, In-Town's student population is less clustered geographically. The northern portion of the subarea contains the City of Champaign's central business district, as well as the residential neighborhood to the west. This area's student population rose from 1990 to 2000, then declined again. In 1990, 878 students lived in tracts 1 and 6 combined. That population there peaked in 2000, when 1,080 students lived there. Tracts 1 and 6 combined in 2010 to form tract 110. By 2018, that tract's student population had shrunk slightly to 924 residents. Relative to the population at large, this put students at 22.9 percent of the population in 1990. This reached a high of 26.7 percent in 2000 but declined to 22.1 percent by 2018.

In-Town's student population has grown most in the southern portion of the subarea. Census tract 5 stretches south from West Springfield Avenue to West Kirby Avenue. This places it directly west of the University of Illinois' athletic campus, as well as Champaign's Campustown

neighborhood. The raised Illinois Central railroad tracks, as well as South Neil Street, a busy artery, create a physical boundary between tract 5 and campus. Between 1990 and 2018, tract 5 gained 509 additional student residents, a 63.9 percent increase. While students accounted for only 21.4 percent of tract 5's total population in 1990, this increased by 10 percentage points by 2018. That year, tract 5 was home to 1,305 students.

Although In-Town's student population grew from 1,674 people in 1990 to 2,229 in 2018, the subarea's undergraduate population decreased over that time. In 2000, 1,026 undergraduate students called In-Town home. However, this fell to 805 in 2018. In-Town's share of Champaign-Urbana's total undergraduate population has also fallen. The subarea has never been a stronghold with undergraduates — only 3.4 percent of Champaign-Urbana's undergraduate students lived there in 2000. But by 2018, In-Town was home to only 2.3 percent of all undergraduates.

Much of this decline occurred as students moved out of In-Town's northern neighborhoods. This part of the subarea lost 348 undergraduate residents between 2000 and 2018. By 2018, only 196 undergraduates lived in tract 110, representing only 4.7 percent of the population. To the south, tract 5 gained 127 undergraduate residents from 2000 to 2018. Undergraduates were 14.7 percent of the tract's total population in 2018. This was slightly higher than in 2000 when undergraduates made up 12 percent of all residents.

Considered alongside steep increases in University of Illinois enrollment over the past 20 years, this suggests low demand for In-Town's rental housing among undergraduate students. While the numbers of students living locally exploded, they did not flock to In-Town. Instead, In-Town was the only subarea in Champaign-Urbana to lose undergraduate residents. Much of this decline occurred between 2010 and 2018 when new housing options popped up in Champaign's near-campus neighborhoods. This could have made In-Town's housing options, farther from the main quad and cut off by raised railroad tracks and a busy road, unattractive in comparison. In addition, Campustown's dense, urban environment may have eclipsed the appeal of living in Champaign's downtown.

However, as undergraduates turned away from In-Town, the subarea's graduate student population increased. In 2000, 1,082 graduate students lived in In-Town. By 2018, the subarea had a graduate student population of 1,424. Although that 342-person increase is modest, this makes graduate students In-Town's fastest growing constituency. Those added graduate students represent 31.6 percent growth in population among this group.

In 2018, In-Town was home to 13 percent of Champaign-Urbana's graduate students, up one percentage point from 2000. Therefore, the subarea's popularity among graduate student

residents has remained relatively stable compared to the Southeast, which has seen its percentage of Champaign-Urbana's graduate students decline.

Graduate students have been more evenly split among In-Town's north and south neighborhoods than undergraduates. In 2000, tracts 1 and 6 were home to 536 graduate students, or 14 percent of the total population. That year, tract 5's 546 graduate students made up 13.6 of total residents. By 2018 graduate students were slightly more likely to live in the north, in and around Champaign's downtown. Tract 5 had 728 graduate student residents, accounting for 17.5 of the total population. In comparison, tract 110 was home to 696 graduate students, or 16.8 percent of its total population.

Foreign-Born Population Remains Largely Unchanged

Unlike other subareas in Champaign-Urbana, the In-Town neighborhood has experienced only modest increases in its foreign-born population. That population grew by only 198 residents between 2000 and 2018. This is the smallest increase of any subarea in Champaign-Urbana, both in relative and absolute terms. However, In-Town was never home to a large foreign-born population. Table 5.5 shows the subarea's share of foreign-born residents in 1990, 2000, 2010, and 2018.

Table 5.5:

Foreign-born Population in In-Town, 1990-2018

	Total population	Foreign-born population	% Foreign-born	Asian-born population	Chinese-born population
1990	7,547	402	5.3%	N/A	N/A
2000	8,046	597	7.4%	158	N/A
2006-2010	7,806	635	8.1%	241	49
2014-2018	8,319	600	7.2%	357	27
Percent change:	10.2%	49.3%		125.9%	-44.9%

Data sources: 1990 and 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

The distribution of these residents throughout In-Town does not reveal whether they were also students. In 1990, In-Town's foreign-born population was evenly divided among its north and south neighborhoods. However, by 2000 60 percent of In-Town's total foreign-born population lived in tract 5 to the south. By 2018, tract 110 was home to 338 individuals born outside the U.S., representing 56.3 percent of In-Town's foreign-born population. To the south,

tract 5 had 262 residents from other countries. Tract 110 was less popular with undergraduate students. Still, the relatively small number of foreign-born residents in In-Town suggests these residents are less likely to be undergraduate students.

Growing Popularity Among Nonfamily Households, Renter Households, and Young Adults

However, other characteristics associated with student renters are on the rise among In-Town's residents. This could explain why the subarea has seen increases in its Student Rental Market index even as its undergraduate population has stagnated. As discussed, the subarea has seen increasing numbers of renter households. Furthermore, the subarea's share of young adults has grown. In 1990, 14.1 percent of In-Town's population was between the ages of 20 and 24. This peaked in 2010 when 19.2 percent of In-Towners fell within this age range. By 2018 this had decreased slightly to 18.9 percent of the subarea's residents.

At the same time, more of In-Town's households have nonfamily status, meaning they consist of individuals or unrelated people living together. In 1990, 64.9 percent were nonfamily households. Over the decades this rose steadily until 2018 when 73.7 percent were nonfamily households. As discussed in this analysis, students are likely to live with roommates, but others may also choose this housing situation. The area's modest increases in young adults and graduate students could explain this shift.

In contrast, the subarea's share of households with no vehicle has fallen slightly over the years. In-Town was always an area with relatively high vehicle ownership — in 1990, 16.9 percent of In-Town households got by without a vehicle. By 2018, only 13.5 percent of households had no vehicle. This represents another way In-Town residents are different than undergraduate student renters.

Considering all of this holistically, In-Town represents a neighborhood traditionally cut off from Champaign-Urbana's undergraduate student population. Not only have the boundaries separating In-Town from the Campus Core held up, but a small number of undergraduates have chosen to leave the area. This has occurred even as the undergraduate student body has ballooned. This suggests students are unwilling to cross Neil Street and the raised railroad tracks that act as a partition to campus. In addition, student renters may find In-Town's distance from the main quad difficult to stomach.

However, In-Town's identity as a nonstudent-majority area may have broken down if other neighborhoods — specifically the Campus Core and Near North — had not been able to absorb growing numbers of student residents. In-Town is as proximate to the main quad as the Near

North, which has experienced large influxes of students. In addition, In-Town is a majority-renter subarea, indicating the subarea has rental housing available for those who seek it.

Finally, while the Campus Core has seen high-rise development over the past decade, so has In-Town. Developments in downtown Champaign such as M2 on Neil and the Quarters indicate the subarea is adding housing options. These developments are not marketed toward students and may offer a different set of amenities. Still, their presence indicates Champaign's central business district is poised to offer a dense, urban living environment that students find attractive. Demographic trends, on the other hand, show student renters are not interested.

Southeast

Population Growth Without Shifting Demographics

The Southeast is Champaign-Urbana's third most populous subarea, following the West and the Campus Core. Like most other subareas in Champaign-Urbana, the Southeast is growing. In 1990 the subarea had 23,833 residents and in 2018 its population was 26,450. In absolute terms, the subarea has gained about as many residents as the Near North between 1990 and 2018. However, the Southeast's relatively large starting population means these new residents have resulted in less demographic upheaval than in the Near North.

For one, the Southeast's population density has remained relatively stable from 1990 to 2018. The subarea's residential land was home to 2.9 residents per acre in 1990. By 2018, that had increased slightly to 3.2 residents per acre. Population density varied widely across the Southeast's neighborhoods. In 1990, the census tract with the most residents per acre was tract 52, which was home to nearly 12.5 residents per acre. Tract 58 also had high population density, with 11.3 people per acre. At the other end of the spectrum, only 1.1 people per acre lived in tract 57. Like overall population density, tract-level population density remained largely unchanged in 2018. tract 58 had the highest density that year, with 11.3 residents per acre. Tract 111 was home to 8.9 people per acre. Fewer than one person per acre lived in tract 57.02, which contains agricultural land to the east of city limits.

As the Southeast's population rose, its count of households did also. In 1990, the Southeast had 10,455 total households. This increased by 1,122 by 2018 to 11,577 households. Like with population density, household density was relatively flat in the Southeast. The subarea was home to 1.3 households per acre in 1990. By 2018, the Southeast had 1.4 households per acre of residential land.

Like other subareas of Champaign-Urbana, the southeast has experienced an uptick in renter households. The Southeast has always been more evenly divided among renters and

homeowners than other parts of town. In 1990, under half of households — 46.9 percent — rented. Ten years later the proportion of renters peaked at 51.5 percent of total households. In 2010 and 2018 respectively, 50.5 and 48.9 percent of households rented.

Several factors set the Southeast apart from more student-centric areas of Champaign-Urbana. For one, the Southeast's share of nonfamily households is lower than other subareas, including the Campus Core, Near North, and In-Town.

However, the Southeast has also seen a gentle rise in its number of nonfamily households over time. In 1990, 46.9 percent of households consisted of a single individual or a group of unrelated individuals. By 2018, over half — 52.9 percent — were nonfamily households.

Compared with the Campus Core and Near North subareas, vehicle ownership is high in the Southeast. Still, this has decreased slightly over the decades. Only 10.8 percent of Southeast households had no vehicle in 1990. By 2018, 14.5 percent of households got by without a vehicle.

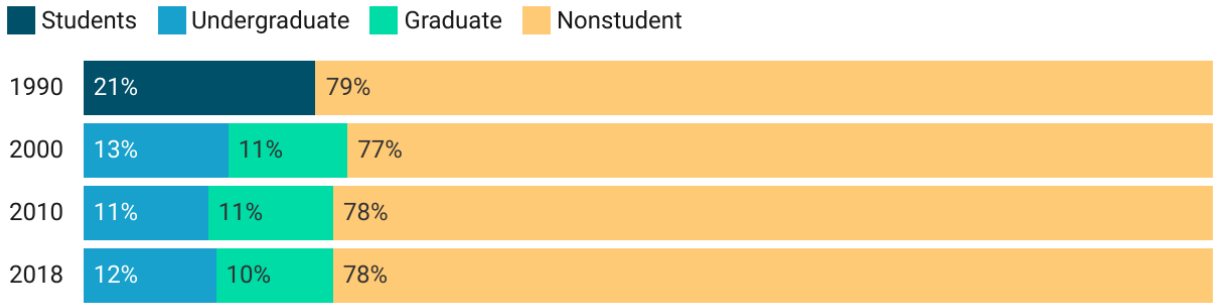
Stagnating Growth in the Student Population

In addition, the Southeast's share of residents ages 20 to 24 has increased over time. In 1990, 14 percent of Southeast's residents fell within this age range. By 2018, 16.4 percent did. This has occurred as students have moved into the subarea. New student residents accounted for 23.4 percent of all new residents from 1990 to 2018. Therefore, more than three-quarters of population growth in the subarea occurred among nonstudents. The Southeast's student population grew fastest from 1990 to 2000, when the subarea attracted 922 new student residents, an 18.8 percent increase. But over the following decade the student population has stagnated. This suggests that, as University of Illinois enrollment shot up, the Southeast could not accommodate new demand for student housing. The subarea did become less popular with students. However, students either found other neighborhoods more desirable or limits to the subarea's housing stock presented a barrier to students hoping to move to the Southeast.

Whatever the cause, students have accounted for 21 and 24 percent of the Southeast's total population from 1990 through 2018. Figure 5.21 shows the proportion of undergraduates, graduate students, and nonstudent residents over time.

Figure 5.21:

Southeast Population Composition, 1990-2018



Data sources: 1990 and 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

Not only has the Southeast's overall share of students held steady, but student residents' distribution throughout the subarea has remained predictable over the decades. Two areas of the Southeast have consistently been home to the largest shares of the subarea's student residents. Census tracts 51 and 52 combined stretch from the University's quad into Urbana's central business district to the east, just north of tract 58. That neighborhood contained 1,768 student residents in 1990. Only a handful lived in tract 51, which encompassed downtown Urbana. In total, students made up 57.6 percent of these census tracts' total residents.

Tract 58 is an area of west Urbana sometimes referred to as the "state streets" because its streets bear the names of U.S. states. This neighborhood is located a block from the eastern edge of the University of Illinois campus. In 1990, 1,517 students lived there, representing 36.7 percent of the total population.

These were also the Southeast neighborhoods most popular with students in 2000, 2010, and 2018. By 2018, tract 111 had the highest number of student residents at 1,663. This tract encompasses what was once tracts 51 and 52 — the U.S. Census Bureau combined them in 2010. Students made up 69.3 percent of the tract's total population, more than 12 percentage points higher than in 1990. To the south, 1,580 students lived in tract 58 by 2018. This represented 39 percent of the overall population.

The Southeast neighborhood least popular with students also remained consistent across the decades. From 1990 to 2018, tract 55 had the smallest student population. This neighborhood is east Urbana and reaches from the western edge of downtown to the edge of the city. That tract had 532 student residents in 1990 and 513 in 2018.

Only one Southeast census tract saw a significant increase in its student population. In 1990, tract 57 had 805 student residents. In 2010, that census tract split into two — tracts 57.01 and 57.02. By 2018 their combined student population reached 1,258. This was 453 higher than in 1990, representing a 36 percent increase in total students. This neighborhood sits just south of tract 58.

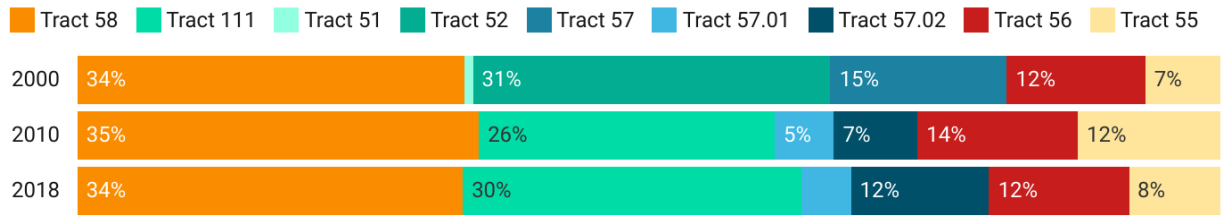
The Southeast's undergraduate population fluctuated slightly over the years. Between 2000 and 2010, the subarea lost 311 undergraduates. However, over the next decade most returned and the undergraduate population rebounded to 3,110 residents.

The graduate student population experienced an opposite trendline. In 2000, 2,634 graduate students lived in the Southeast. This climbed to 2,892 in 2010 before dipping to 2,734. Therefore, slightly more graduate students live in the subarea than in 2000.

The Southeast tracts with the highest population are also the most popular with undergraduate students. In 2000, 2010, and 2018 tract 58 had the largest student population followed by tract 111 (tracts 51 and 52 combined in 2000). Figure 5.22 shows the distribution of undergraduate residents across the Southeast's census tracts in 2000, 2010, and 2018.

Figure 5.22:

Southeast Undergraduate Population by Census Tract, 2000-2018

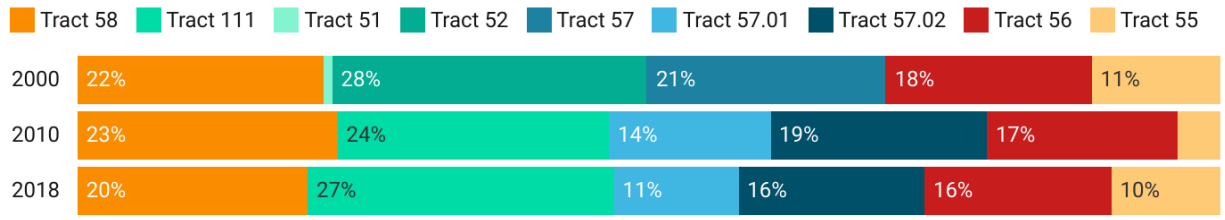


Data sources: 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

Graduate students have generally lived more evenly spread throughout the Southeast. Figure 5.23 shows the percentage of the subarea's graduate student population who lived within each census tract in 2000, 2010, and 2018.

Figure 5.23:

Southeast Graduate Student Population by Census Tract, 2000-2018



Data sources: 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

Although it was less popular with undergraduate students, tracts 57.01 and 57.02 combined have solidified their share of graduate student residents over time. By 2018, as many graduate students lived there as lived in tract 111. The tract with the next highest share of graduate students was tract 58. About a fifth of all graduate students in the Southeast lived within that tract.

While only 36 percent of undergraduates lived outside of tracts 58 and 111, more than half of Southeast's graduate students lived elsewhere in 2018. This shows an increased willingness among graduate students to live in areas farther from campus. It also shows that undergraduates cluster to a degree that graduate students do not.

While the overall student population has held steady, the Southeast's foreign-born population nearly doubled from 1990 to 2018. In 1990, 9 percent of all residents were born outside the U.S. By 2018, more than 4,000 households, representing 15.2 percent of the population, were foreign-born.

The Southeast's foreign-born population made its greatest jump between 1990 and 2000 when 1,179 new residents arrived. Therefore, the most dramatic rise in foreign-born residents occurred before the influx of international undergraduate students. This suggests these residents were either graduate students or nonstudents. Table 5.6 shows the subarea's foreign-born population from 1990 to 2018.

Table 5.6:

Foreign-born Population in the Southeast, 1990-2018

	Total population	Foreign-born population	% Foreign-born	Asian-born population	Chinese-born population
1990	23,833	2,149	9.0%	N/A	N/A
2000	24,914	3,328	13.4%	1,849	N/A
2006-2010	26,113	3,621	13.9%	2,091	958
2014-2018	26,450	4,026	15.2%	2,411	1,309
Percent change:	11.0%	87.3%		30.4%	36.6%

Data sources: 1990 and 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

However, growth in the Southeast's foreign-born population has lagged other subareas since 2010. While 25 percent of Champaign-Urbana's foreign-born residents lived in the Southeast in 2000, only 18 percent did in 2010. This indicates that this growing population is increasingly choosing to live in other parts of town, such as the Near North. Considered alongside university enrollment trends, this shows that other subareas have been more attractive to new international students at greater rates than the Southeast.

That said, the subarea's Asian-born population has increased over time as more students from Asia enrolled at the University of Illinois. In 2010, Asian-born individuals accounted for 57.7 percent of foreign-born residents. By 2018, 59.9 percent of foreign-born residents were from Asia. The fastest increase in Asian-born residents occurred between 2010 and 2018 when that population grew by 15.3 percent.

Whether increasing numbers of foreign-born and Asian-born individuals were students is unclear. However, the timing and degree of these increases track with University of Illinois enrollment trends. The Southeast's rise in foreign-born population occurred faster than its increase in students. This suggests the subarea's students may have been more likely to come from outside the U.S., including from Asia.

Northeast

A Growing Share of Renter Households

By 2018 the Northeast was Champaign-Urbana's least populous subarea. This was not because of a decline in overall population, but instead because of the rapid increase in residents moving to the Near North. Before 2010, the Northeast's population was more than 2,000 greater than the Near North's.

The Northeast had the most stable total population from 1990 to 2018. In 1990, 7,338 people called the subarea home. By 2018 that number grew by only 448 people.

Population density in this subarea was relatively low. In 1990, the Northeast had 2.8 residents per acre. This remained constant until 2018 when the subarea's density was 2.9 per acre. Household density is also low. In 1990 the Northeast housed 1.2 households per acre and in 2018 it had 1.4 per acre. Growth in households outpaced population increases. While the subarea gained 448 residents from 1990 to 2018, it gained slightly more households — 555. This indicates that household sizes in the Northeast are on the decline.

The subarea picked up nearly as many renter households as households overall from 1990 to 2018. While the Northeast was home to 1,361 renter households in 1990, by 2018 that number was 1,897.

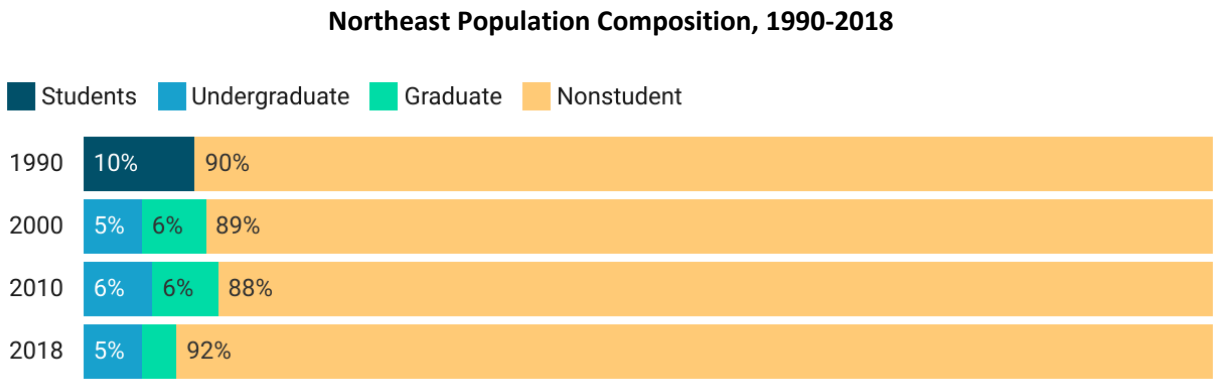
In 1990, 41.8 percent of households rented their homes. However, by 2018 tenure was more evenly split in the Northeast. That year 49.8 percent of households — just under half — rented.

While residents are now more likely to rent their homes, they are not more likely to be students. The Northeast was the only subarea to experience a decline in its total student population. In 1990, 725 students lived in the subarea, but by 2018 that had dropped to 643. Still, the subarea has had the smallest student population of any in Champaign-Urbana since 2000. Before that, only the Near North was home to fewer student residents.

Insignificant Student Population

The Northeast's population composition most resembles that of the West, just on a smaller scale. From 1990 to 2018, the Northeast's nonstudent population never dropped below 88 percent of the total population. Figure 5.24 shows the share of Northeast residents who were students and nonstudents in 1990, 2000, 2010, and 2018.

Figure 5.24:



Data sources: 1990 and 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

The Northeast's total share of Champaign-Urbana's undergraduate population never rose above 1.2 percent. Considered alone, the subarea's undergraduate population has remained steady. In 2000, 265 undergraduates lived in the Northeast. By 2018, 401 called the subarea home.

Graduate students once lived in the Northeast in similar numbers to undergraduates. In 1990, 399 graduate students lived there. However, the subarea only had 242 graduate student residents by 2018.

Champaign-Urbana's graduate students were more likely to live in the Northeast than the Near North in 2000. However, the subarea lagged all others. In the decades that followed the Northeast was the least popular subarea with graduate students, just as it was for undergraduates. In 2010 and 2018, respectively, 4.1 and 2.2 percent of Champaign-Urbana's graduate student population lived in the Northeast.

Foreign-Born Population Growing, But Not Because of International Students

The subarea's foreign-born population rose much faster than its student population. Foreign-born residents outnumber the subarea's student population. This indicates that rising numbers of students are not fueling a rise in foreign-born residents, as is occurring in some other subareas. Table 5.7 shows the Northeast's foreign-born population in 1990, 2000, 2010, and 2018.

Table 5.7:

Northeast Population Composition, 1990-2018

	Total population	Foreign-born population	% Foreign-born	Asian-born population	Chinese-born population
1990	7,338	143	1.9%	N/A	N/A
2000	7,060	439	6.2%	331	N/A
2006-2010	7,248	1,035	14.3%	388	36
2014-2018	7,786	729	9.4%	342	48
Percent change:	6.1%	409.8%		3.3%	33.3%

Data sources: 1990 and 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

The Northeast saw its greatest spike in its foreign-born population between 2000 and 2010 when its number of foreign-born residents increased by 596 people. Over the next decade, the subarea lost foreign-born residents. Still, by 2018 the Northeast had more than five times as many residents from outside the U.S. as it did in 1990.

In 2000, three-quarters of the subarea's foreign-born residents were from Asia. This fell to less than half by 2010. In 2018, 46.9 percent of foreign-born residents came from Asia. Over those 18 years, the absolute count of Asian individuals held steady, even as the foreign-born population skyrocketed. This further suggests that the rise in residents from other countries is not because of student in-migration to the Northeast. This is because international students largely come from Asian countries, and specifically China. In the Northeast, only a handful of individuals were Chinese born.

Despite a dearth of students, the Northeast's Student Rental Index score rose from 14 in 1990 to 21 in 2018. This likely occurred as the subarea attracted residents that resembled student renters in other ways. For one, the area's rising number of renter households could have played a role. In addition, the subarea's share of nonfamily households has increased. While 42 percent of households were nonfamilies in 1990, this rose to 56.6 percent in 2018. The Northeast's population of young adults has also risen. In 1990, 11.2 percent of residents were between the ages of 20 and 24. By 2018, this had increased to 15.5 percent.

However, the Northeast's households do not resemble student renters in another key way. The subarea has among the lowest rates of vehicle ownership. In 1990, only 5.7 percent of households did not own a vehicle. That rose to 6.9 percent by 2000. But by 2018 this dropped even lower. that year, 3.3 percent of residents went without a car.

West

A Quickly Growing Population

The West is the most populous subarea in Champaign-Urbana, with 44,976 residents in 1990 and 64,287 in 2018. This makes the West the subarea with the greatest absolute increase in population over that time. In 1990, the subarea was home to 2.8 people per acre of residential land. Since then, the population density has risen steadily as the West has attracted new residents. By 2018, its population density was 5.4 residents per acre. Only the Near North and Campus Core saw faster densification of their residential land area. However, the West is still less dense than those subareas. The rise in population came also with an increase in the West's household density. In 1990, the West had 1.5 households per acre. By 2018 that climbed to 2.3 households per acre.

Since 1990, most of the West's population growth has occurred in the south of the subarea. In 1990, census tract 12.02 was home to 8,737 people. This was the most populous tract in the West, but also the subarea's largest geographically, at 9,239 acres. Over the next ten years this rose to 11,648, an increase of 26.1 percent. In 2010, the U.S. Census Bureau divided this tract into four— tracts 12.03, 12.04, 12.05, and 12.06. These tracts combined added another 3,193 people in 2010. By 2018, 18,119 people lived in this part of the West. That accounted for 28.18 percent of the West's total population, while in 1990 only 19.4 percent of the West's residents lived in tract 12.02.

In addition, the subarea saw population growth in the north. Census tract 9 encompasses Parkland Community College, the Kraft Heinz manufacturing plant, and surrounding residential neighborhoods, as well as agricultural land to the west. In 1990, that tract was home to 6,838 people, or 6.3 percent of the West's residents. Over the next 28 years that area gained 4,625 new residents and by 2018 11,463 people lived there, representing 17.8 percent of the West's total population.

The West's northernmost census tract also saw significant population growth. Tract 8 in Champaign contains big box retails stores and has also seen significant development of apartments over the decades. In 1990, that tract was home to 1,700 people. This was the least populous census tract in the West at the time. Residents there accounted for only 3.8 percent of the West's total population. By 2018, 5,853 people lived there, or 9.1 percent of all West residents. The fastest growth occurred between 2000 to 2010, when the neighborhood added more than 2,000 people.

The subarea has a higher homeownership rate than other parts of Champaign-Urbana. However, it has also seen the largest increase in renter households of any subarea. In 1990,

about a third of the West's households rented their homes. This rose steadily over the decades and by 2018 40.5 percent of all households were renters. While the subarea added 9,183 total households from 1990 to 2018, it accumulated 4,917 additional renter households specifically. This indicates a growing rental market in the West.

However, the rise in renter households is occurring faster than the subarea's rise in student population, suggesting students are not the main factor driving the rental market. From 1990 to 2018 the West experienced 80.8 percent growth in its number of renter households. At the same time, the subarea's student population increased from 4,135 to 5,370, a 29.9 percent increase.

Census tracts in the north of the West subarea had lower rates of homeownership than in the south in 1990. That year, the census tract with the highest proportion of renters was tract 8, where 50.2 percent of all households rented. In tracts 10, 9, and 7 more than 40 percent of households rented. In addition, 44.2 percent of tract 12.01's households were renters, the highest in the south of the subarea. The tracts with the lowest percentage of renter households were tract 12.02 in the southwest of Champaign and tract 11, where 15.3 percent of households rented.

Renters remained concentrated in the north of the subarea. By 2018, tract 8 remained the census tract with the West's highest percentage of renter households. That year, 68.3 percent of households rented, an increase of 18 percentage points. This occurred as nearly 1,000 renter households moved to the neighborhood between 1990 and 2018.

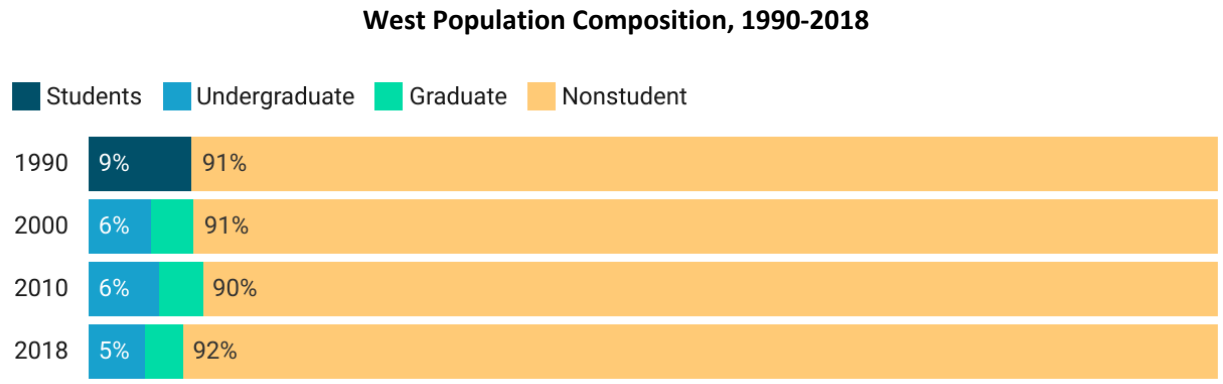
Tract 9.01 also had an uptick in renter households. In 2000, 1,045 households rented. This rose to 1,136 in 2018, accounting for 60.7 percent of all households. In neighboring tract 9.02, a smaller share — 41.9 percent — were renters. In tract 7, located just north of Champaign's downtown, 52.7 percent of all households rented. Homeowners outnumbered renters in all other census tracts. Areas with the lowest rates of renter households in 2018 were all in southwest Champaign. This included tract 12.06 (10.8 percent), tract 12.04 (19.5 percent), and tract 12.03 (20.4 percent).

A Majority Nonstudent Subarea

In absolute terms, the West's student population is large. The subarea is home to nearly as many students as the Southeast, which only lags the Campus Core in absolute numbers of student residents. However, the West also has the largest total population of any subarea in Champaign-Urbana, and more than twice the population of the Southeast. Therefore, students have accounted for ten percent or less of the subarea's residents. Figure 5.25 shows the

percentage of the West's residents who were students and nonstudents in 1990, 2000, 2010, and 2018.

Figure 5.25:



Data sources: 1990 and 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

Although the absolute number of students in the West has grown, the nonstudent population has increased faster. In total, 40,841 nonstudents lived in the subarea in 1990. By 2018, 58,917 lived there, a 44.3 percent increase. The student population, meanwhile, increased from 4,135 to 5,370, representing 29.9 percent growth.

The West's student population is not as clustered as in other subareas, such as the Near North or Southeast. The census tract with the largest share of the West's student population was tract 9 in 1990. That year, 815 students lived there, accounting for 20 percent of the subarea's total student residents. To the east of the subarea, 19 percent of the West's students lived in tract 13. Tracts 12.01 and 12.02 were home to 17 and 18 percent of students, respectively. However, these tracts were also geographically much larger than tracts 9 and 13.

Over the decades that followed, the West's students became more scattered across the subarea's census tracts. By 2018 no single tract contained more than 15 percent of the subarea's students.

Both tracts 9 and 13 split into two in 2010. By 2018, these areas remained popular with the West's students. Twenty-three percent of the subarea's students lived in tracts 9.01 and 9.02 combined, with students favoring tract 9.02 almost two to one. Because Parkland Community College is in tract 9.02 this could explain this area's draw for students. Furthermore, this suggests these students are less likely to be University of Illinois students.

Of all census tracts, tract 9.02 saw the greatest increase in student residents from 1990 to 2018. This could be due to rising enrollment at nearby Parkland Community College, or at least

rising student interest in living near campus. In 2000, only five percent of the West's students lived there, although 13 percent lived in neighboring tract 9.01. That share increased ten percentage points by 2018, when tract 9.02 was home to 830 students, the most of any of the West's census tracts. Concurrently, neighboring tract 9.01's proportion of the West's student population fell to 8 percent, or 468 students. Nearly all students in these tracts were undergraduates.

Tracts 13.01 and 13.05 had a smaller share of the subarea's students than in 1990 — 16 percent lived there in 2018, down three percentage points. To the south, tract 12.01 also became less popular with students. In 1990, 706 lived there, representing 17 percent of the West's students. By 2018, the tract was home to 11 percent of the subarea's student residents, accounting for 597 students in total. Tract 10 also lost students — 507 lived there in 1990, or 12 percent of the West's students. In 2018, the tract only had 412 students, accounting for 7 percent of all such residents in the subarea.

The areas of the West most popular with undergraduate students are not the census tracts closest to the University of Illinois campus. In 2000, the tract with the third most undergraduate residents was tract 13.01. That tract is located across Neil Street and the raised Illinois Central Railroad tracks, putting it south and west of the core of campus. However, the other two tracts relatively popular with undergraduates were tracts 12.01 and 10. These tracts sit to the west and to the north of the In-Town subarea, respectively.

By 1990, tract 13.01 had fallen out of favor with the West's undergraduate students. While 15 percent of the subarea's undergraduate residents lived there in 2000, only 2 percent did in 2018. That year tract 12.01 remained the most popular with undergraduates, followed by tract 12.05 in the far west of the subarea. Tract 8, in the northernmost part of Champaign, had the third-highest undergraduate population.

This indicates that proximity to campus is not the primary factor determining where undergraduate students choose to live in the West subarea. This is true for University of Illinois students, as well as those seeking degrees at Parkland Community College. Instead, the availability of rental properties could play a role. Still, the tracts popular with undergraduate students are not those with the highest percentages of renter households. This indicates that student renters in the West are not in direct competition for housing with nonstudent renters.

Graduate students, on the other hand, were most likely to live in tract 13.02 in 2000. This tract contains the bulk of the Village of Savoy. Like undergraduates, they also found tract 13.01 and 12.01 attractive. However, graduate students were less likely to live in Savoy by 2018. While 21 percent of the West's graduate students lived there in 2000, only 6 percent did by 2018.

Instead, the tract with the largest graduate student population was tract 8, located in north Champaign near Champaign-Urbana's big-box retailers. Again, this indicates that graduate student renters in the West likely consider factors other than proximity to campus when choosing where to live.

Foreign-Born Population on the Rise (Who Are Unlikely to be Students)

Like other subareas in Champaign-Urbana, the West has seen an influx of foreign-born residents. Table 5.8 shows the subarea's foreign-born population in 1990, 2000, 2010, and 2018.

Table 5.8:

Foreign-Born Population in the West, 2000-2018

	Total population	Foreign-born population	% Foreign-born	Asian-born population	Chinese-born population
1990	44,976	1,633	3.6%	N/A	N/A
2000	50,927	4,340	8.5%	2,324	N/A
2006-2010	56,915	7,221	12.7%	2,091	958
2014-2018	64,287	8,296	12.9%	4,986	1,492
percent change:	42.9%	408.0%		114.5%	55.7%

Data sources: 1990 and 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

Several tracts in the West subarea are home to concentrations of foreign-born residents. Tracts 12.04 and 12.05 are 22.3 and 22.1 percent foreign-born, respectively. Tract 8 is 20.2 percent foreign-born. However, because of the low shares of students in these areas, these foreign-born locals are not likely to be enrolled in higher education.

The West is relatively unattractive not only for student renters, but also to those sharing characteristics with them. Young adults made up a small subset of the West's overall population. In 1990, the West had 3,034 residents between the ages of 20 and 24, representing 6.7 percent of the population. By 2018, 4,599 individuals in this age range lived in the subarea. Those residents accounted for only 7.2 percent of all residents.

The West's households are also more likely to be families than individuals or those living with roommates. In 1990 about a third of the West's households were nonfamilies. However, this climbed to 42.1 percent as the subarea added 5,550 nonfamily households between 1990 and 2018. However, the West remained the subarea with the smallest proportion of nonfamily households.

Finally, only 6.2 percent of households in the West had no vehicle. Unlike other subareas in Champaign-Urbana, this rate did not increase over the years. By 2017, 6.8 percent of households did not have a vehicle. In absolute terms, 1,836 households went without a car, up from 1,003 in 1990. This suggests those living in the West need vehicles to carry out their day-to-day activities.

CONCLUSION

As the University of Illinois enrollment has grown since 1980, thousands of additional student renters have entered Champaign-Urbana's housing market. Because student renters — and specifically undergraduate renters — are demographically distinct from other, nonstudent residents, tracking their geographic distribution is possible using decennial census data and American Community Survey estimates. The analysis in this chapter shows that the neighborhoods nearest the University of Illinois campus have mostly absorbed the growing student population. As in past decades, students are most likely to live in the Campus Core, and specifically in the census tracts adjacent to the University of Illinois' main quad. The Campus Core's population density has increased as students moved in. This indicates that the boom in housing construction in Champaign's Campustown and Midtown neighborhoods enabled the subarea to accommodate students who wished to live within walking distance of campus. The Campus Core remains Champaign-Urbana's student enclave.

That said, all subareas in Champaign Urbana have experienced an increase in their Student Renter Index scores. In addition, all subareas but the Northeast have seen at least small increases in their student population. This indicates that although most students seek out and secure housing in the Campus Core, others are amenable to housing options in other subareas.

The boundaries to Champaign-Urbana's student enclave are unevenly porous. The Southeast, In-Town, and West subareas have taken on small shares of student renters compared with their overall populations. Therefore, the Campus Core's eastern and western edges are holding strong. Student renters remain unlikely to cross the raised Illinois Central Railroad tracks or push past the eastern edge of campus. The movements of student renters throughout Champaign-Urbana have demonstrated that geographic location is a primary driver of housing demand.

However, the Near North subarea presents evidence that Champaign-Urbana's studentification frontier has rolled across University Avenue to the north of the Campus Core. Although the subarea has taken on fewer additional student residents than the Campus Core, its student population was six times larger in 2018 than it was in 1990. Because student renters now

make up a much larger proportion of the Near North's total residents than in the past, this could have implications for longtime, nonstudent residents.

The following chapter will explore how influxes of student renters have tracked with rents across Champaign-Urbana's six subareas. Accommodating thousands of additional student residents has required changes to the local housing stock. In turn, these changes to the housing ecosystem could associate with rising rents. In addition to the sheer volume of student housing demand, students' changing demographics indicate their ability to afford amenity-rich, luxury housing has increased. This could also affect rents. If new student rentals do disrupt housing costs, this could have implications for the Campus Core, where student housing demand is concentrated. In addition, the Near North could experience upheaval as growing numbers of students move in, changing the rental geography. Finally, other subareas with more diffuse student housing demand may offer a counterexample of what occurs where student renters are not a major submarket.

CHAPTER 6: RENTS AND THE STUDENT RENTAL SUBMARKET

INTRODUCTION

As nearly 15,000 additional students came to Champaign-Urbana to attend the University of Illinois, the local rental housing market has changed to accommodate them. As discussed in chapter five, student renters have remained clustered in the Campus Core, although the Near North's student population has also ballooned. In this chapter. Without new housing development, these students may have spread to other subareas. But new student rentals in the Campus Core kept student renters contained.

Because students represent a distinct housing submarket, their disinterest in housing outside the Campus Core and Near North could influence how filtering occurs as new student rentals come online. This chapter seeks to quantify the effect of the student submarket on marketwide affordability, for students and nonstudents alike.

New construction near campus has affected housing costs within the local housing market. In this chapter, I track the distribution of rents from 2000 to 2018 in Champaign-Urbana at the subarea level. I find that housing development behind the local studentification frontier is associated with rising rents among the most expensive rental units. As a result, a large gap exists between the cost of the most- and least-expensive rentals in neighborhoods with large concentrations of students.

Subareas with smaller student populations have avoided this disruption in rents. This indicates that increased student rental stock near campus has shielded nonstudent neighborhoods from rising housing costs. It underscores the distinctness of the local student rental submarket.

In this chapter, I begin by considering rent trends for Champaign County as a whole. Then I discuss Champaign, Urbana, and Savoy specifically. Finally, I examine rent trends in each of the six subareas. This enables me to place the changing geography of housing costs in conversation with the distribution of student renters over the same period. In areas with high concentrations of students, or where the student population has grown or shrunk significantly, I break down rents at the census tract scale. This is because the student rental submarket has likely shaped housing demand, and therefore prices, in those areas. In other areas of Champaign-Urbana with less student influence I discuss changes at the subarea scale.

Champaign-Urbana Subareas and Student Rental Demand

Each Champaign-Urbana subarea illustrates a different scenario within Champaign-Urbana's rental market. Whether these scenarios reflect conditions in other college towns is

outside the scope of this study. However, the demographic shifts among the six local subareas have generalizable characteristics.

The Campus Core provides an example of what occurs within a student-majority area when luxury student rentals come online. On the other hand, while this area saw an increase in its student (and nonstudent) residents, it did not experience a shift in the proportions of each population. This subarea epitomizes what happens when student rental housing becomes denser in an already dense, student-heavy area. It also illustrates the local effects of an increase in high-amenity, luxury housing. In this way, the subarea is an embodiment of shifts in student demand toward a new housing typology.

The Near North, in comparison, represents an area experiencing a significant influx of student residents, especially compared with its nonstudent population. Fewer students live in the Near North than the Campus Core, but their population has grown at a much faster rate — 587 percent compared with 13 percent in the Campus Core. This subarea has also seen the sharpest increase in its renter households of any subarea in Champaign-Urbana. Therefore, changes in this subarea reflect an increase in rental housing demand and specifically student housing demand. In addition, the student rental housing in this subarea differs from that in the Campus Core. While the Campus Core is home to new, high-rise apartments, student housing in the Near North includes suburban-style, low-rise complexes with a different set of amenities. Because of this, this area acts as a counterweight to changes in the Campus Core's rental stock. The Near North provides an example of what happens to rents when one type of housing goes out of vogue in favor of another type of housing in a different area of town.

Meanwhile, the Southeast represents a subarea with a significant but plateauing student population. Although the Southeast has picked up population generally, the area has also seen a decrease in renter households. Conditions in the Southeast reflect an area without any increase in student housing demand and less rental housing supply in general.

The In-Town subarea also has a relatively stable student population, although it has lost undergraduate residents, specifically, from 2000 to 2018. But unlike in the Southeast, In-Town has experienced significant growth in its share of rental households. It represents an area with mostly stable student housing demand, but strong rental market demand overall. As a result, any changes to rental prices in this subarea occur due to the nonstudent submarket.

The Northeast represents an area that is losing student population, although it was never home to a significant share of individuals enrolled in higher education. This low-population subarea has seen its housing stock become more renter-centric over the decades, but not because of student housing construction. Any change in rents in the Northeast, therefore, has

occurred due to factors other than student in-migration. That said, dynamics in Champaign-Urbana's rental market as a whole, which include student demand, could affect prices in the Northeast.

The West has seen the largest growth in rental housing among the subareas in this study. At the same time, the subarea is not home to a significant share of students as a percent of the total population. Although the subarea has seen absolute growth in its student population, these student residents are also relatively dispersed throughout the subarea's large geographic area. Changes in the West's rents likely reflect shifts in the nonstudent submarket instead.

In this chapter, I first compare rents in Champaign County generally for 2000, 2010, and 2018. I then compare changes in rents in Champaign-Urbana to the county. Finally, I examine how rents in the six subareas of Champaign-Urbana compare to the county, as well as to other subareas locally. I also describe vacancy and tenure trends among the six subareas. Throughout this, I tie back trends in the local rental market to shifts in student and nonstudent populations in each subarea.

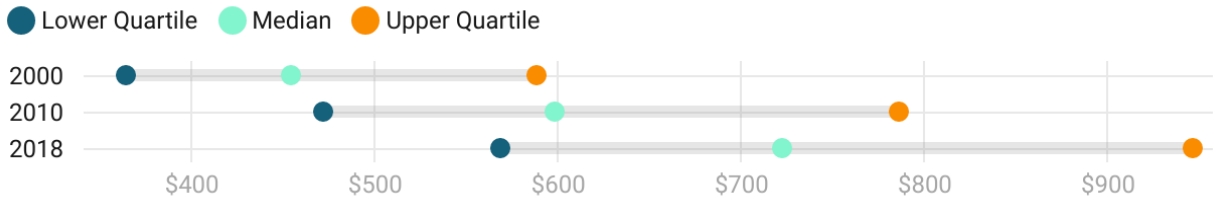
RESULTS

Rents at All Levels Increasing Countywide, with Low and High Rents Rising at Similar Rates

The amount of rent Champaign County tenants pay has followed three major trends from 2000 to 2018. First, rents at all price points have increased from 2000 to 2018. Second, the absolute difference between the lowest rents and the highest rents has grown larger. Finally, rents at the top end of the market have risen slightly faster than rents below the countywide median and in the lower quartile. Figure 6.1 demonstrates these trends.

Figure 6.1:

Champaign County Rent Quartiles, 2000-2018



Data sources: 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

From 2000 to 2018 the cost of the highest 25 percent of rents grew faster than the quartiles below it. Rents at the upper end of the market increased by 60.8 percent from 2000 to 2018. The largest jump in the highest-cost rents occurred between 2000 and 2010, when the

upper quartile cutoff rose by $198, a 33.6 percent increase. Over that duration, the cutoff to the upper rent quartile grew by $358.

In contrast, the County's least expensive rents grew at the slowest rate. In absolute terms, the County's lower quartile rents increased the least, growing by $204 from $365 to $569. This represents a 55.9 percent increase, about five percentage points less than the highest rents.

The rate of change for Champaign County's median rent grew faster than low-end rents but slightly lower than the most expensive rents. The median increased 58.9 percent, from $455 to $723 — an absolute difference of $268. Table 6.1 shows the cutoffs for each rent quartile for 2000, 2010, and 2018.

Table 6.1:

Champaign County Rent Quartiles, 2000-2018

Year	Lower Quartile	Median	Upper Quartile
2000	$365	$455	$589
2010	$473	$599	$787
2018	$569	$723	$947

Data sources: 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

Comparing the ratio of the lower rent quartile to the upper quartile shows that the gap between the top rents and the lowest rents in the county has remained largely constant. In 2000, the lower quartile cutoff was 62 percent of the upper quartile. Then, for both 2010 and 2018, that ratio held steady at about 61.1 percent. This slight narrowing of the ratio of high rents to low rents further demonstrates that a greater number of renter households may be paying higher rents.

Overall, the most households — 4,032 — paid between $400 and $450 a month in Champaign County. One hundred and thirty-five households paid more than $2,000 and 169 households paid less than $100 each month.

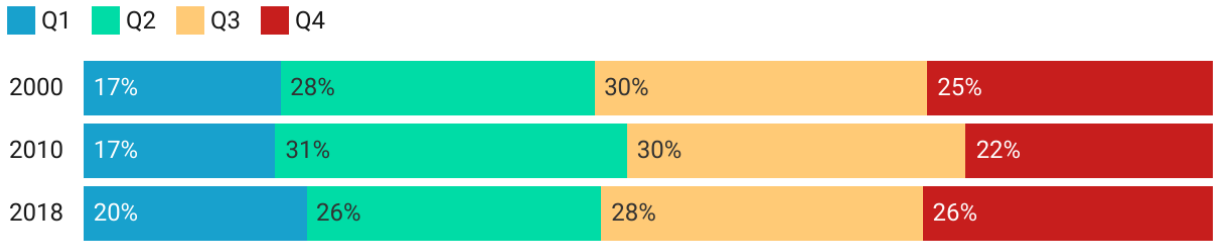
Comparing Champaign-Urbana to the County

Rents in Champaign-Urbana are relatively distributed throughout Champaign County's rent quartiles for each year in this study. The proportion of rents within each quartile have shifted slightly from year to year, but rents skewed marginally higher than the county at large in 2000, 2010, and 2018. This indicates that rental housing in more rural areas of Champaign County comes at a lower price point. Of all years, the largest share of renters paid more expensive rents than the countywide median in 2000. The following decade, the smallest share of renters —

about 52 percent — paid rents above Champaign County's median. Figure 6.2 shows the share of renter-occupied housing units in each county rent quartile for 2000, 2010, and 2018.

Figure 6.2:

Percentage of Champaign-Urbana Housing Units Within County Rent Quartiles, 2000-2018



Data sources: 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

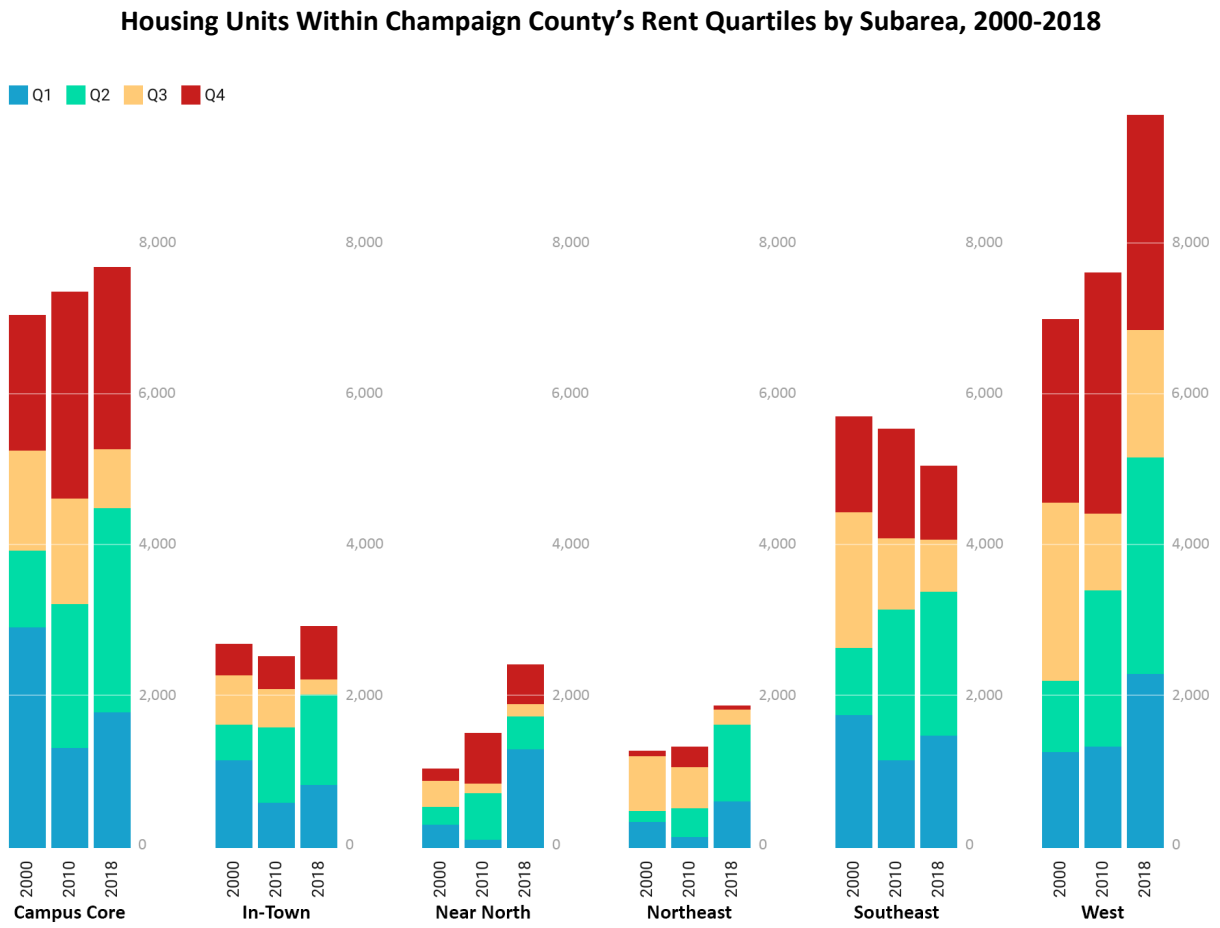
Across all three decades, the smallest share of households (between 17 and 20 percent) paid rents in the county's least expensive quartile. The second and third quartiles — those just below and above Champaign County's mean — contained the largest number of households in each study year.

In contrast, the percentage of rents at the extremes — that is, those in the county's top and bottom quartiles — has fluctuated from 2000 to 2018. The smallest proportion of renter households paid rents among Champaign County's most and least expensive in 2010. By 2018, the percentage of households paying the most and least expensive rents grew by 6.5 percentage points from the decade prior. Therefore, more renters are either in high-price or low-price housing than in the past.

Subarea Comparison

Champaign-Urbana's six subareas have added rental housing at different rates. In addition, not every subarea has an even proportion of units within Champaign County's rent quartiles. Figure 6.3 shows the number of rental housing units in each subarea in 2000, 2010, and 2018. It also breaks down these units among Champaign County's rent quartiles.

Figure 6.3:



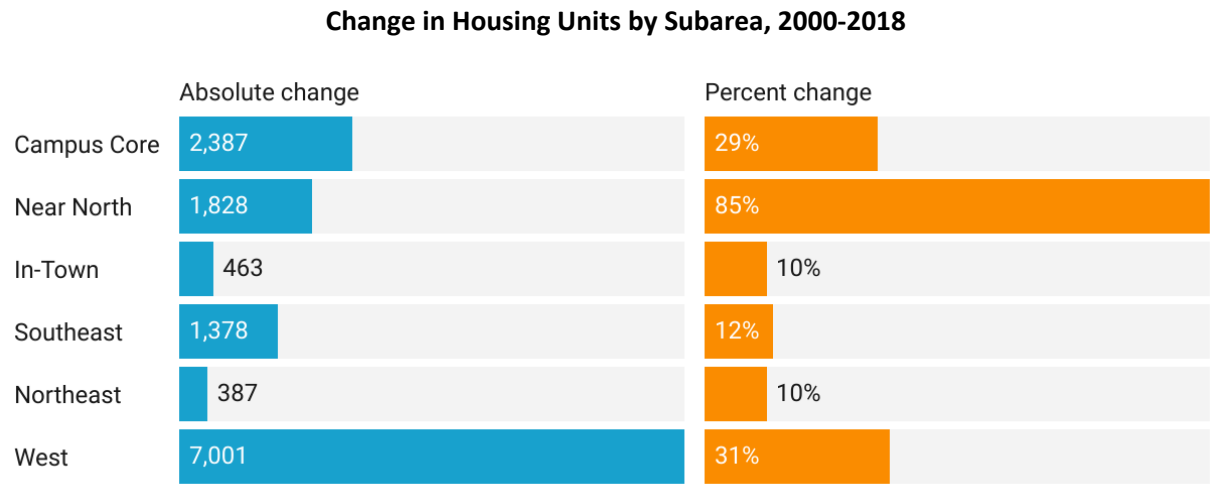
Data sources: 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

The following section compares tenure and occupancy of housing units across the six subareas. I begin with growth in housing units, both owned and rented, followed by a general discussion of vacant units and rental vacancy rates. I then discuss how the concentration of student residents, in conjunction with housing production, has affected rents in each subarea.

Occupancy and Tenure in Champaign-Urbana's Subareas

All subareas of Champaign-Urbana added units to their overall housing stock between 2000 and 2018. Figure 6.4 shows absolute and percent change in each subarea's total number of housing units between 2000 and 2018.

Figure 6.4:



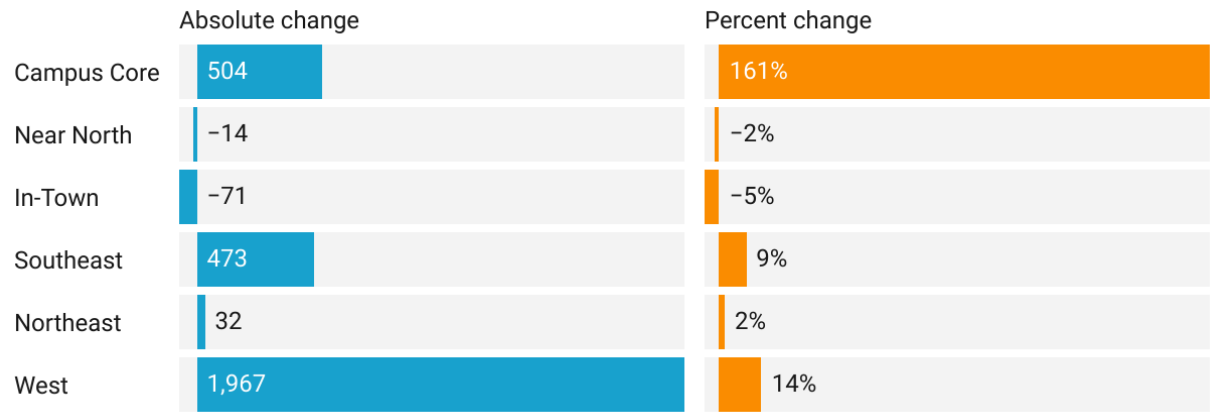
Data sources: 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

Of all subareas, the West gained the most new units in absolute terms, adding more than twice as many as the Campus Core. Both of those subareas increased their housing stock by slightly less than one-third. Although the Near North added fewer units overall, it nearly doubled its total housing from 2000 to 2018. The Southeast added nearly as many units as the Near North but its larger number of total units meant this change only accounted for a 12 percent increase in the subarea's housing.

Three of the six subareas picked up new owner-occupied units over the decades. While the West, Campus Core, and Southeast all experienced net increases in owner-occupied housing, In-Town, the Northeast, and the Near North all saw their owner-occupied housing stock shrink. Figure 6.5 shows change in the number of owner-occupied housing units in each Champaign-Urbana subarea from 2000 to 2018.

Figure 6.5:

Change in Owner-Occupied Housing Units by Subarea, 2000-2018



Data sources: 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

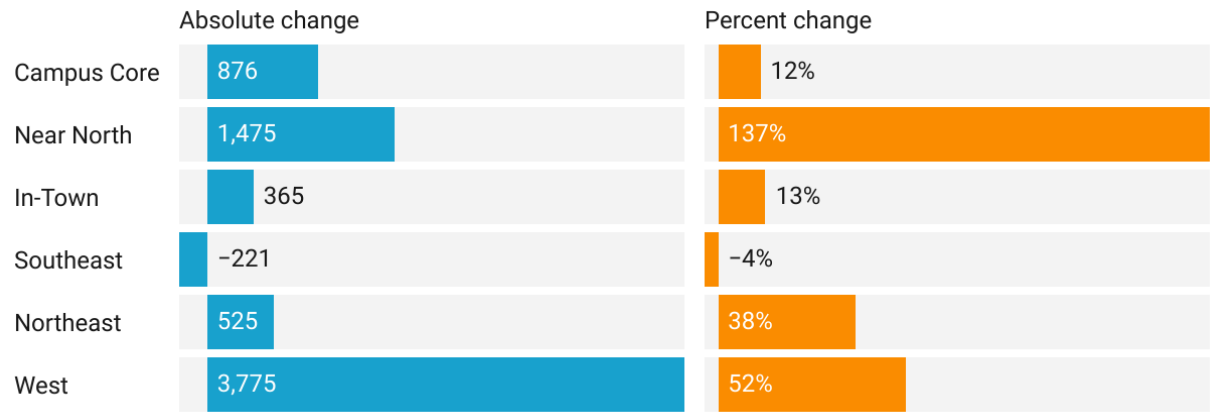
The West gained about four times as many units of owner-occupied housing as the subarea with the next greatest increase. However, the West is also Champaign-Urbana's most populous subarea. Compounding this, the West had the highest homeownership rates of any subarea in both 2000 and 2018. As a result, the subarea's nearly 2,000 additional units of housing only represented growth of 14 percent over that period.

The Campus Core gained about as many new units of owner-occupied housing as the Southeast. Considering its traditionally low homeownership rate, this represented a 161 percent increase in the Campus Core's owner-occupied units. The Southeast, on the other hand, experienced an increase of less than 10 percent. The Northeast gained negligible new units of owner-occupied housing. At the same time, the Near North lost an insignificant number of units. In-Town's decline in owner-occupied housing was also small, representing a loss of 5 percent. This underscores how most of Champaign-Urbana's subareas have seen decreasing rates of homeownership over the decades.

All subareas except the Southeast gained renter-occupied housing units between 1990 and 2018. Figure 6.6 shows how the number of renter-occupied housing units has changed in all six subareas from 2000 to 2018.

Figure 6.6:

Change in Renter-Occupied Housing Units by Subarea, 2000-2018



Data sources: 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

As with increases in overall housing units and those occupied by homeowners, the West added the most renter-occupied units. In fact, the subarea added nearly twice as many renter-occupied units as owner-occupied units. The additional rentals represented a larger shift in the West's housing stock, increasing the subareas available rental housing by more than 50 percent.

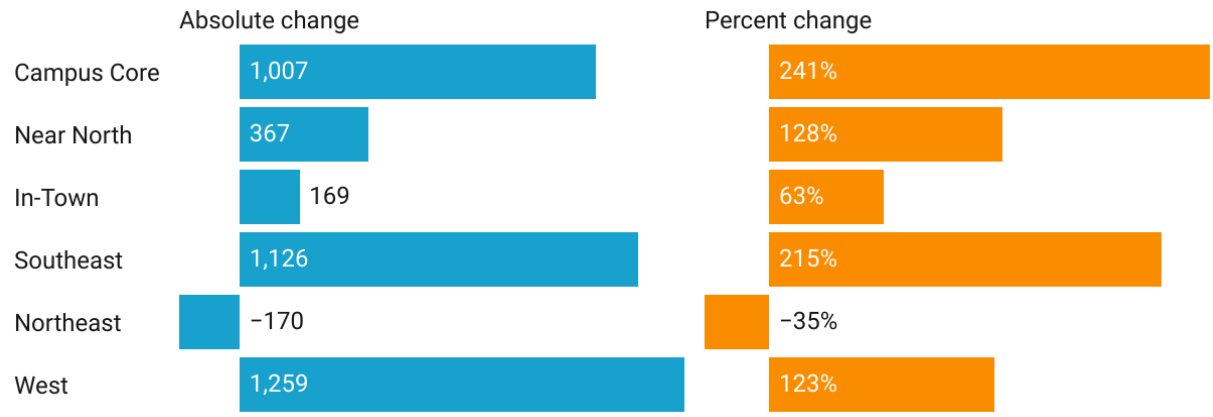
The Near North experienced the second greatest absolute increase in renter-occupied housing. The more than 1,400 units added there account for nearly all of the subarea's new housing. Furthermore, those additional rentals more than doubled the subarea's housing capacity.

The Campus Core added fewer than 1,000 units. Still, in the decade prior that subarea saw an additional 205 renter-occupied units come online, indicating that by 2000 the Campus Core was already midway through a housing boom. In-Town and the Near North also saw increases in their rental housing stock.

However, most subareas also experienced dramatic growth in their total vacant housing units. Figure 6.7 shows each subarea's change in vacant housing units regardless of tenure between 2000 and 2018.

Figure 6.7:

Change in Vacant Housing Units by Subarea, 2000-2018



Data sources: 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

The West, Southeast, and Campus Core each gained more than 1,000 units of vacant housing between 2000 and 2018. In relative terms, the Campus Core experienced the fastest growth in its vacant units. However, the Southeast also saw its share of vacant housing more than triple. The West, which had the highest absolute increase in vacant units, saw its vacant housing more than double. This was also true in the Near North, although that subarea's increase in vacant housing only included additional 367 units to the West's 1,259. In-Town saw the most modest increase in vacancy, but its 169 units still represented a 63 percent increase. In contrast, the Northeast saw its share of vacant housing shrink by more than a third.

Examining vacancy among each subarea's rental stock specifically shows how unoccupied rental housing is driving vacancy generally. Table 6.2 shows rental vacancy rates for each of the six subareas in 2010 and 2018 — before and after the housing boom near campus. It also shows rental vacancy rates for Champaign County and the state of Illinois.

Table 6.2:

Rental Vacancy Rate by Subarea, 2010 and 2018

	2010	2018
Campus Core	3.7%	10.0%
Near North	12.7%	15.2%
In-Town	7.1%	6.2%
Southeast	9.3%	11.3%
Northeast	11.7%	7.8%
West	7.5%	6.2%
Champaign County	8.4%	9.8%
State of Illinois	7.6%	6.4%

Data sources: 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

The Campus Core, Near North, and southeast were the only subareas where rental vacancy rose between 2010 and 2018. As Campustown and Midtown experienced a housing boom, the Campus Core's vacancy rate increased from 3.7 percent in 2010 to 10 percent in 2018. While the subarea had low vacancy compared to Champaign County in 2010, its vacancy reflected county levels by 2018.

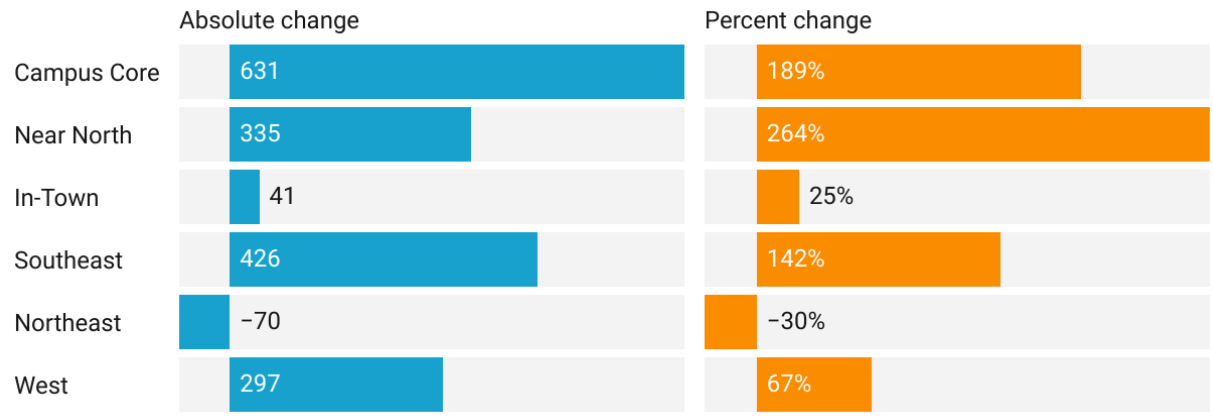
The Near North began the decade with higher vacancy than the Campus Core and Champaign County as a whole. Rental vacancy there was 12.7 percent, which rose to 15.2 percent in 2018. Vacancy rates in the Near North outstripped those in Champaign County and Illinois both years.

Although the Southeast also saw its rental vacancy grow, the rise was less dramatic than in the Campus Core or Near North. In 2010, 9.3 percent of rentals were vacant. By 2018, 11.3 percent were.

Figure 6.8 shows changes in each subarea's count of vacant housing units available for rent from 2000 to 2018.

Figure 6.8:

Change in Vacant Housing Units for Rent by Subarea, 2000-2018



Data sources: 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

Unleased rental units account for more than 60 percent of the Campus Core's increase in vacant units. These unoccupied units could be vacant for a variety of reasons. They could represent units landlords were unable to lease or homes currently for sale. However, they could also represent new units that had not yet come online at the time this data was collected. Other units may go unleased for other reasons — for example, due to maintenance or tenant turnover.

For the Near North, almost all of the increase in vacant housing units is due to empty rental stock. Although the Southeast added more vacant rentals than the Near North, this accounted for less than 40 percent of its increase in vacant units overall. However, in the West growing numbers of unleased rentals were outstripped by growing vacancy outside of the rental market.

Campus Core: Rising Rents and Large Price Disparities

Housing Supply

The Campus Core's total housing stock rose by nearly a third as units came online throughout the subarea between 2000 and 2018. Going back a decade, the subarea gained more than 3,000 units of new housing, bringing its total units from 7,364 in 1990 to more than 10,500 in 2018. Table 6.3 shows the Campus Core's count of housing units, as well as the number of owner-occupied, renter-occupied, vacant, and vacant units for rent in 2000, 2010, and 2018.

Table 6.3:

Campus Core Housing Units by Tenure and Vacancy, 2000-2018

	Total housing units	Owner-occupied units	Renter-occupied housing	Total vacant units	Vacant, for rent
2000	8,145	314	7,414	417	334
2010	9,424	743	7,564	1,117	314
2018	10,532	818	8,290	1,424	965
Percent change:	**29.3%**	**160.5%**	**11.8%**	**241.5%**	**188.9%**

Data sources: 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

By 2000 the subarea was already caught up in a housing boom. From 1990 to 2018, half of the subarea's increase in housing units was due to construction of new rental housing. The Campus Core added 3,168 total housing units over that time, 1,581 of which were rentals. The subarea gained 781 units of housing between 1990 and 2000, specifically, including 705 renter-occupied units. Between 2000 and 2018 it gained 2,387 more. Of those, 876 were occupied by renters.

The subarea's housing market remained heavily tilted toward renters. That said, the subarea has added owner-occupied housing over time. In 1990, only 3.9 percent of the Campus Core's housing stock was owner-occupied. By 2018 this increased to 7.8 percent. From 2000 to 2010, housing construction nearly doubled as the subarea added 1,279 new units. This time, most were owner-occupied units — the subarea only gained 150 renter-occupied units that decade.[10] That soon changed. Between 2010 and 2018, the housing boom continued. The Campus Core gained 1,108 new housing units. Of those, 726 were renter occupied.

At first, housing construction mainly kept pace with demand. In 2000, 408 of the Campus Core's housing units were unoccupied. Most of those empty units — 334 — were unleased rentals. That put vacant units at 5.1 percent of the area's overall housing stock. This was about the same as in 1990, when 408 were vacant (344 were unleased rental units). That year, 5.5 percent of all housing units were vacant.

However, as the Campus Core's housing stock ballooned, so did vacancy in the subarea. Between 2000 and 2010 the number of vacant units nearly tripled to 1,117. Owner-occupied units

[10] The American Community Survey estimates represent averages for 2006, 2007, 2008, 2009, and 2010 average. Therefore, most of the housing permitted in 2007 and 2008 did not come online until the end of the period.

accounted for much of this vacancy — only 314 rental units went unleased that year, representing less than a third of vacancies.

The Campus Core retained large numbers of vacant units by 2018. That year, 13.5 percent of the subarea's housing units were vacant, compared to 11.9 percent the decade prior. However, vacant rental units were the driving factor in 2018. Of all vacant units, 67.8 percent were vacant units available for rent. Overall, the Campus Core's share of vacant units has increased by 1,007 since 2000.

A Student Housing Boom Comes with More High-Cost Units, With Rents Stabilizing Over Time

Although the Campus Core has traditionally been a student-majority subarea, it has continued to add student residents over the years. The subarea gained 3,483 student residents from 2000 to 2018, a 14.3 percent increase. Most of these — 3,066 — were undergraduates. However, the number of nonstudents has also risen. An additional 2,388 residents were not enrolled in higher education, an increase of 62.8 percent. The subarea's share of students has fallen slightly, from 86.5 percent of the population in 2000 to 81.8 percent in 2018. The Campus Core is also the subarea with the second-fastest population growth, following the West.

Most housing within the Campus Core is renter-occupied — 91 percent in 2018, down from 95.9 percent in 2000. The subarea picked up 876 renter households over that period, representing 11.8 percent growth. The area added a smaller number of owner-occupied housing — 504 — from 2000 to 2018.

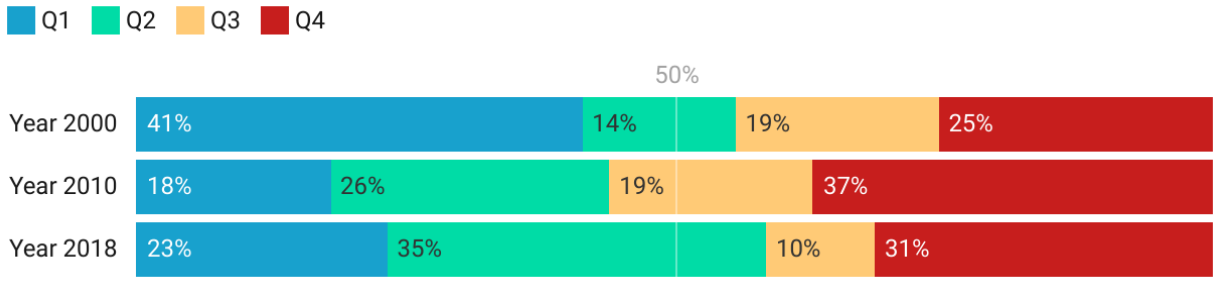
Because the Campus Core's population is predominantly students and renters, it represents the area of Champaign-Urbana that most demonstrates the effect of student housing demand on the local housing market. Changes in rents in this subarea are likely responding specifically to changes in student preferences, as well as shifts in student housing stock.

Like in other subareas in Champaign-Urbana, rents increased in the Campus Core from 2000 to 2018.[11] But even as the cost of rental housing has gone up, the subarea's rents stabilized compared to Champaign County from 2010 to 2018. This followed a decade where the Campus Core was home to a disproportionate number of the County's high-end rents. Figure 6.9 breaks down the distribution of Campus Core rental units across Champaign County's rent quartiles in 2000, 2010, and 2018.

[11] The Campus Core is home to thousands of students living in the University of Illinois' residence halls. No other Champaign-Urbana subarea is home to dormitories. Because the U.S. Census Bureau classifies residence halls as group quarters, rather than housing units, the cost of room and board is not included in rent data. Only units rented on the private market affect rent quartiles, rent intervals, or other variables cited here. That said, as discussed in chapter four, the price of on-campus housing has risen along with tuition.

Figure 6.9:

Percentage of Campus Core Rental Units Within Champaign County Rent Quartiles, 2000-2018



Data sources: 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

In 2000, more than 50 percent of the Campus Core's tenant households paid less than the countywide median rent of $455. However, by 2010 the majority (56 percent) of rentals in the Campus Core cost more than the countywide median. This occurred even as Champaign County's median rent increased by $144, or 31.6 percent.

This increase in above-median rents occurred primarily due to a growing number of units in the county's most expensive quartile. In 2000, a quarter of renter-occupied units fell in the top rent quartile, meaning those units cost more than $589. By 2010, this increased by 12 percentage points. Thirty-seven percent of Campus Core units were in the most expensive quartile of rents, costing more than $787. In absolute terms, 1,800 units were in the top rent quartile in 2000. Over the next decade, that more than doubled to 2,734.

In contrast, the number of renter-occupied housing units in the lowest quartile of rents fell 23 percentage points from 2000 to 2010. More Campus Core rental units were within the cheapest rent quartile than any other in 2000. That year 2,921 units rented within that quartile. But by 2010 this quartile contained the smallest number of units. That year, this fell to 1,323, meaning the absolute number of rental units in the least expensive rent quartile more than halved over ten years. This occurred even as the high-end cutoff to the lowest rent quartile increased from $365 to $473 over the decade.

Relatively few rental units in the Campus Core were moderately priced compared to Champaign County at large in 2000. Rents were polarized. Two-thirds fell within the top and bottom rent quartiles that year, meaning only one-third of rents were in the two quartiles closest to the median rent of $455.

While most Campus Core renters faced rents in the highest and lowest quartiles in 2010, the share of units in the center quartiles filled out. Forty-five percent of renter households paid rents in quartile just above and just below the countywide median that year.

By 2018, the distribution of rents in the Campus Core more closely resembled those in 2000 than in 2010. The percentage of rents above the countywide median of $723 was 41 percent — only three percentage points off the 2000 share. Therefore, although a small majority of rents were more expensive than Champaign County's median in 2010, this had stabilized by 2018. In addition, 45 percent of Campus Core rental units fell within the center two quartiles, the same proportion as in 2010. Still, a significant share of units was within the most expensive rent quartile — 31 percent. That represented a slight decline from the 37 percent of top-quartile rents in 2010 but was six percentage points higher than in 2000. While the number of units in the top quartile declined by 316 from 2010 to 2018, it increased by 618 units from 2000 to 2018.

And while the absolute number of high-end rents increased from 2000 to 2018, the Campus Core lost 1,132 units in the county's least expensive rent quartile during that time. The sharpest decrease in the lowest-cost rental units occurred between 2000 and 2010, when it dropped by 1,598 units. However, from 2010 to 2018 the Campus Core regained 466 units in this quartile, again indicating that rents in the area may be stabilizing, at least compared to Champaign County as a whole. Still, this rebound in the number of more affordable units occurred as rents in the bottom quartile increased by $160. This underscores the relative nature of using rent quartiles to quantify affordability. Some units may have fallen into the lowest quartile by nature of prices elsewhere in the housing market rising, rather than rents in the Campus Core falling.

Comparing the number of Campus Core rental units to total rental units across all subareas also shows the subarea's high-end rents ramping up from 2000 to 2010, followed by a readjustment from 2010 to 2018. In 2000, the Campus Core was home to 29 percent of all Champaign-Urbana rental units in the highest countywide rent quartile. By 2010 this share shot up — 49 percent of Champaign-Urbana housing units with top quartile rents were in the Campus Core. But in 2018 the Campus Core's 2,418 rental units in the most expensive quartile represented only 32 percent of Champaign-Urbana's priciest units, closer to the subarea's share in 2000.

On the other hand, the Campus Core's portion of Champaign-Urbana's least expensive units fell between 2000 and 2010 but did not bounce back from 2010 to 2018. In 2000, Campus Core units comprised 68 percent of Champaign-Urbana rental units within the county's lowest rent quartile. At the time, the subarea represented 28.8 percent of renter-occupied households in all six subareas combined — the highest proportion of any year in this study.

Ten years later, the Campus Core accounted for only 30 percent of all Champaign-Urbana rents in the county's bottom rent quartile. The Campus Core's share of renter households

also fell over the same period, but only slightly to 26.0 percent. This is due to other subareas adding rental housing at a faster rate than the Campus Core. From 2000 to 2010, the number of renter households increased 12.3 percent in the In-Town, Near North, Northeast, Southeast, and West subareas combined. Meanwhile, the number of renter households in the Campus Core only grew by 2 percent. Therefore, the net increase in rental housing in other subareas may explain the hollowing out of the subarea's bottom quartile rental units.

By 2018, the Campus Core's share of all subareas' lower quartile rents had only ticked up two percent. The Campus Core's share of Champaign-Urbana's renter households held also held steady at 25.5 percent. While the Campus Core's total renter households grew 9.6 percent, all other subareas combined continued to outpace this growth at 17.9 percent.

Overall, Campus Core's number of renter households rose by 11.8 percent between 2000 and 2018. The rest of Champaign-Urbana saw a larger increase of 32.4 percent. At the same time, the number of Campus Core units with rents in Champaign County's lowest rent quartile dropped by 1,132, or 38.9 percent. For all other subareas combined, the number of bottom-quartile rents tripled, representing a net increase of 2,679 units. As discussed in chapter five, even though subareas outside the Campus Core picked up renters from 1990 on, student renters only represented a significant share of this growth in the Near North.

While the proportion of Campus Core units below Champaign County's median rent rose from 2000 to 2018, the number of units costing at least $1,000 a month also increased. In 2010, 531 Campus Core units cost $1,000 or more, representing 7 percent of the subarea's total rental units. Although this represented a small share of the subarea's total rental units, these high-cost units made up 45 percent of the 1,178 units renting for $1,000 and more across Champaign-Urbana's six subareas.

Over the next ten years, the Campus Core added units priced $1,000 or higher at a faster rate than it gained rental units at other price points. The total number of Campus Core units priced $1,000 or higher more than tripled to 1,790. At the same time, the subarea only saw a net gain of 150 renter households. As a result, housing units with rents $1,000 or greater jumped to 24 percent of all Campus Core units. Despite this, Campus Core units made up 44 percent of Champaign-Urbana's total rental units costing $1,000 or more in 2010 — almost equivalent to its share in 2000.

The number of rental units priced $1,000 or higher continued to climb in 2018. That year, 2,418 — or 30 percent of the Campus Core's total rental units — cost at least $1,000 per month. These units continued to represent a significant share of Champaign-Urbana's total units costing $1,000 or more. In 2018, Campus Core was home to 32 percent of all units $1,000 or above

located throughout all six subareas. That said, this represents a smaller share of Champaign-Urbana's total units in that price range than in previous years.

Considering 2000, 2010, and 2018 together, this shows the Campus Core's share of units priced $1,000 or higher grew the fastest over the decade when the subarea made its smallest net gain in renter households. The subarea gained only 150 renter households from 2000 to 2010 but added 1,026 such households from 2010 to 2018. As discussed, vacancy was low in the Campus Core in 2000 and 2010. In 2010 and 2018, respectively, vacant units for rent only accounted for 5.1 and 5.5 percent of all rental units. This indicates that constraints in housing stock may have driven rents up in the Campus Core.

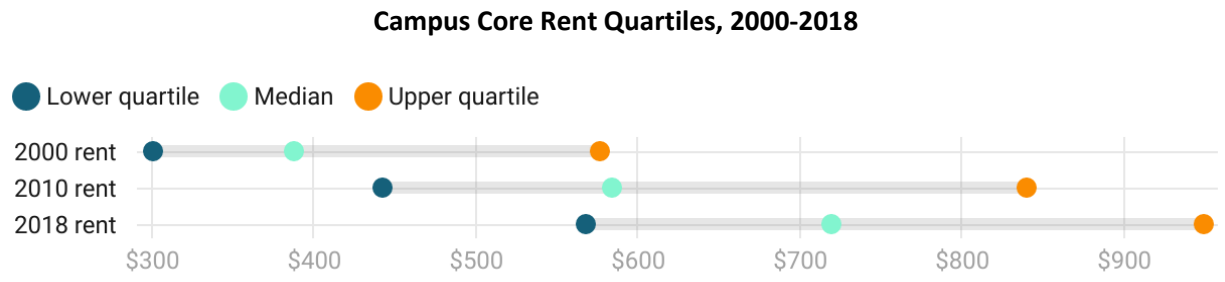
However, the Campus Core's share of Champaign-Urbana's rentals within Champaign County's most expensive rent quartile has remained constant. In 2000, 29 percent of Champaign-Urbana's least expensive units were in the Campus Core. By 2018, that number was 32 percent.

That said, in 2000 the Campus Core had the largest share of Champaign-Urbana's lowest cost rentals. That year, 38 percent of local units priced within the County's lower quartile were in the Campus Core. This fell steadily. In 2010, 29 percent were in the Campus Core — the most of any subarea but the West, which also had 29 percent. In 2018, only 22 percent were within the Campus Core, the second-largest share of any Champaign-Urbana subarea.

Rising Rents at All Price Points

For this analysis I also approximated rent quartiles for the Campus Core on its own, based on decennial census contract rent data for 2000 and American Community Survey 5-year estimates for 2006-2010 and 2014-2018. The number of Campus Core units within the countywide rent quartiles indicates growth in the number of high-cost units from 2000 to 2010, followed by a resurgence of moderate and lower rents in 2018. Figure 6.10 shows how the Campus Core's rent quartiles have shifted from 2000 to 2018.

Figure 6.10:



Data sources: 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

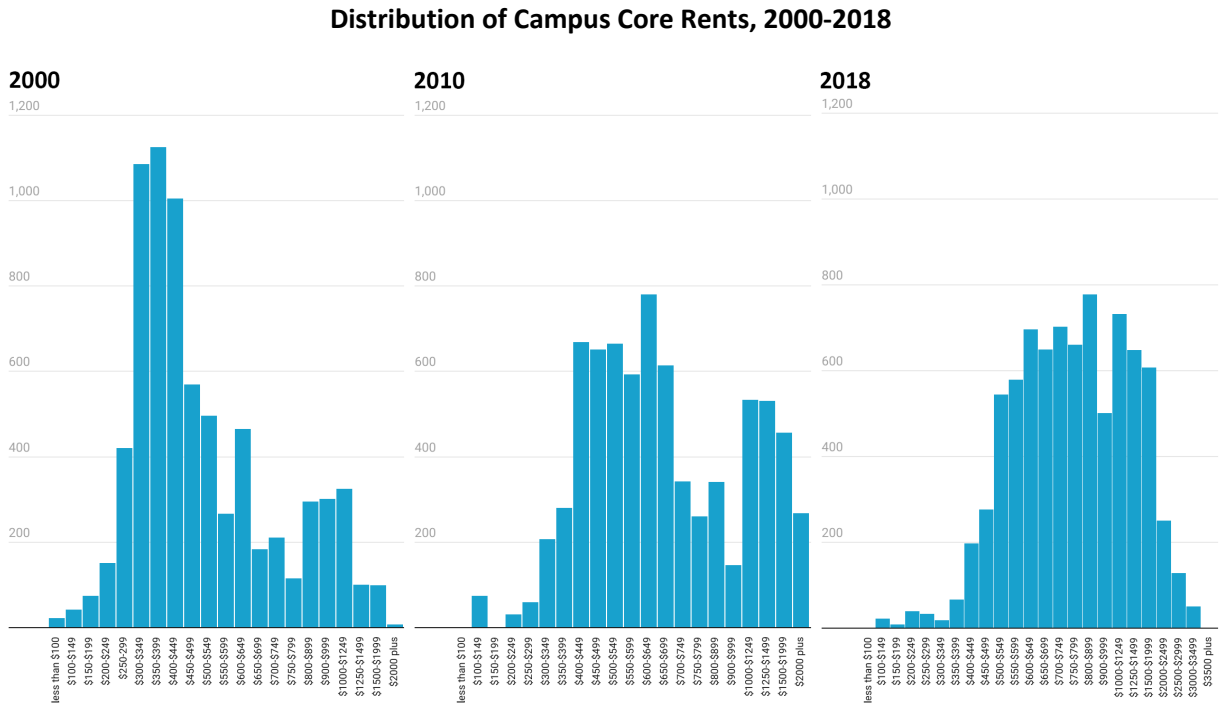
The Campus Core's lower quartile limit, median, and upper quartile rents for the Campus Core alone have all increased. For example, the lower limit of the top quartile in 2000 ($578) was nearly equal to the subarea's median rent of $585 in 2010. Then in 2018 the upper limit of the bottom quartile was only slightly lower at $569. Therefore, the Campus Core's most expensive rents in 2000 were similar in price to its cheapest rents in 2018.

In addition, the gap between the subarea's lowest and highest rents has grown. In 2000 the lowest quartile's upper limit was $276 cheaper than the top quartile's lower limit. This had grown to a $398 gap in 2010. By 2018, this gap had narrowed slightly to $381. This widening of the gap between the most and least expensive units followed by its contraction suggests the distribution of high and low-end rents could be stabilizing. This is occurring even as the amount of rent Campus Core residents pay continues to rise in absolute terms.

From 2000 to 2018, prices for the Campus Core's least expensive units experienced faster growth than those for the top rent quartile. The subarea's least expensive quartile of rents grew 88.4 percent more expensive over that period. Median rents grew slightly slower at 85.6 percent. In contrast, the most top quartile of rents was 64.4 percent more expensive than in 2000. Rents within all quartiles experienced the steepest increases between 2000 and 2010, with slower growth in the decade that followed.

Figure 6.11 shows the distribution of rents in the Campus Core in 2000, 2010, and 2018.

Figure 6.11:



Data sources: 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

The Campus Core's lowest rents cost less than $100 in 2000. That year, 22 households rented within this range, representing a tiny proportion of the subarea's rental units. On the more expensive end of the spectrum, seven households paid more than $2,000. The largest cluster of households (3,216) paid between $300 and $449 that year.

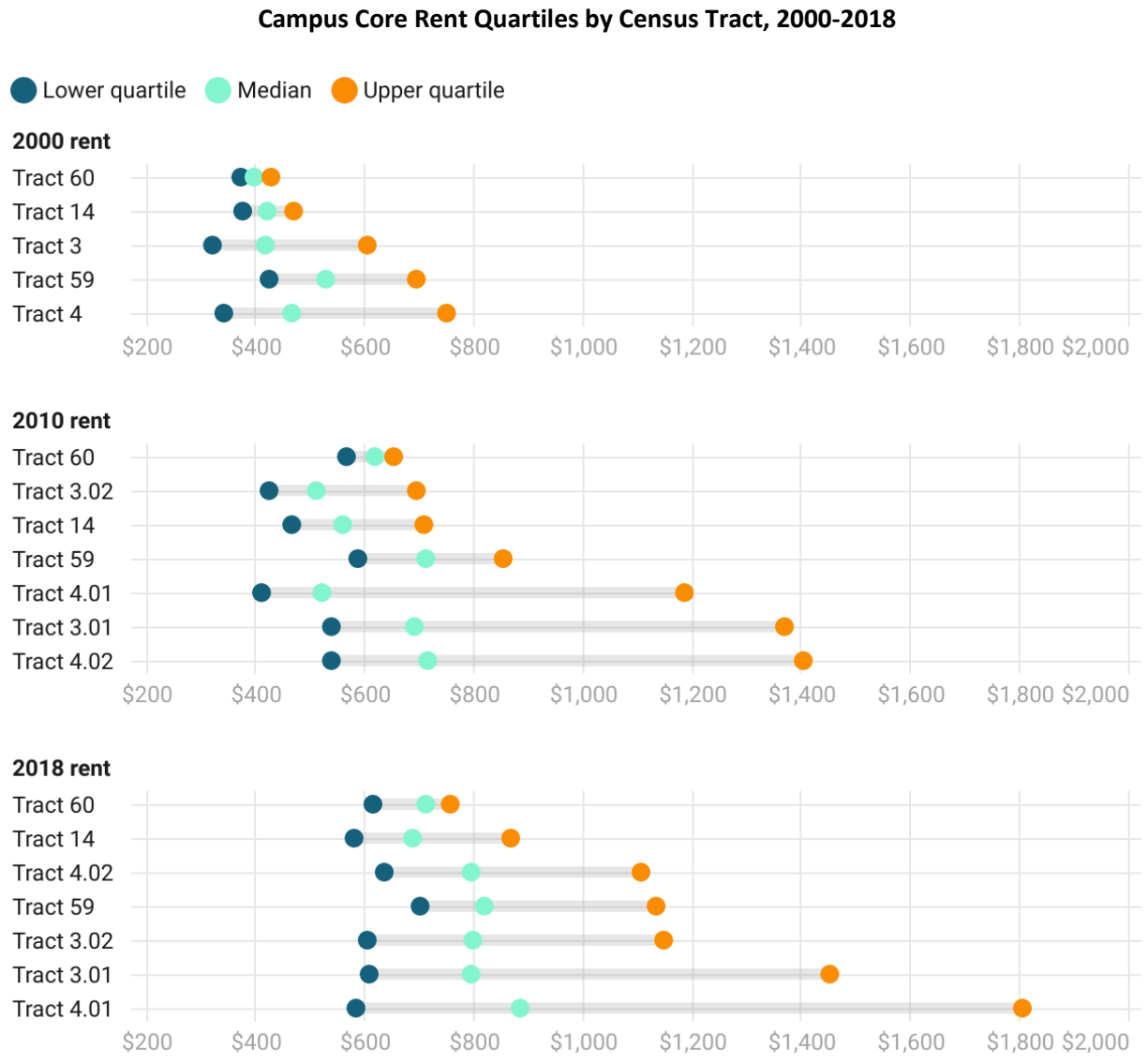
By 2010, no units in the Campus Core cost less than $100 monthly. However, 75 households paid between $100 and $149. The subarea saw a significant increase in the number of units priced $2,000 and above — 268 households paid rents in this range.

That year, the distribution of rents showed a bimodal distribution, with one cluster of rents in the $400 to $600 range and a second at the most expensive end of the housing market, above $1,000. This illustrates a new trend toward higher-cost rentals in the subarea. At the same time, rents were more evenly distributed overall than in 2000. No single $50 rent interval contained more than 669 housing units. In contrast, the $300 to $349, $350 to $399, and $400 to $449 ranges each contained more than 1,000 housing units in 2000. By 2018, rents in the Campus Core were more evenly spread than in previous years, although rents also skewed more toward high-price units.

Examining changes in rents at the census tract level reveals the most dramatic changes occurred among the Campus Core's most expensive rents. It also shows how rising student

demand for rental housing can disrupt housing costs at the neighborhood scale. Figure 6.12 shows rent quartiles for each Campus Core census tract for 2000, 2010, and 2018.

Figure 6.12:



Data sources: 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

Campustown and Midtown: A Housing Boom Holds Rents Steady

Champaign's Campustown and Midtown neighborhoods were the sites of significant student housing development over the past 15 years. Rents in Campustown rose sharply between 2000 and 2010, with the student population on the rise and vacancy low. Then the

neighborhood's housing boom took off. From 2010 to 2018, rents remained stable as vacancy rose. This suggests the influx of new student rentals shielded the neighborhood from rising rents.

In Midtown the story played out differently. Rents in the neighborhood were among the Campus Core's most affordable in 2010. But by 2018 the neighborhood's most expensive rental units experienced a price spike. Counterintuitively, this occurred as Midtown's vacancy rate climbed, becoming the Campus Core's second highest that year.

As discussed in chapter five, these near-campus neighborhoods have always been home to large numbers of college students. However, the recent boom in student housing development led to increased population density in census tracts 3.01 and 3.02, with increases in student population driving the rise in residents. By 2018, these two tracts together had among the highest population density of any area of Champaign-Urbana at about 32 people per acre. This was an increase from 2000 when tract 3 was home to 28 residents per acre.

In 2000, vacancy in Campustown and Midtown was low. Tract 3, which spanned the two neighborhoods, had 125 unleased units in 2000, accounting for 37.4 percent of the Campus Core's vacant units for rent. However, that tract's ample housing stock meant those empty units only represented 4 percent of total rentals.

The most dramatic rise in Campustown and Midtown's undergraduate student population occurred over the following decade. In 2000, census tract 3 had 4,913 student residents, most of whom were undergraduate students. By 2010, tract 3 split into two. That year, tracts 3.01 and 3.02 combined had 7,989 student residents, a 163 percent increase from 2000. The student population grew faster than the population at large, which rose by 40.1 percent.

A rise in undergraduate students, specifically, fueled this. Undergraduates not only vastly outnumbered other residents, but their numbers ticked up as the rest of the population declined. From 2000 to 2010, 3,302 undergraduates moved into tracts 3.01 and 3.02 combined, an 81.8 percent increase. Meanwhile, the tracts' graduate student population decreased by 25.7 percent, although this only represented a net loss of 226 people. The area's nonstudent population also fell by 647 people, a 56.6 percent decline.

Over that decade, Campustown and Midtown combined added 716 units of housing. Still, vacancy remained low. In 2010, tract 3.01 — the Campustown neighborhood — had a rental vacancy rate of 1.6 percent. To the north in Midtown, 310 of tract 3.02's 2,011 units were vacant, although of those only 90 were units up for rent, resulting in a rental vacancy rate of 4.6 percent. This suggests high rental demand for housing near the main quad.

As more students flowed in and vacancy remained low, the priciest rentals in Campustown and Midtown became more expensive. In 2000, tract 3 had the third-highest upper

quartile rents of the Campus Core's five census tracts. (It also had the least expensive lower quartile rents and the second cheapest median rent of the subarea's census tracts.) By 2018, tracts 3.01 and 3.02 had the Campus Core's second and third highest upper quartile rents, respectively.

Because rising numbers of undergraduate renters occurred in tandem with a growing number of higher-cost apartments, this suggests student housing demand accounts for rent trends in Campustown and Midtown. The sheer number of new student residents may have increased competition for housing from 2000 to 2010, which pushed up rents. Rents may have also responded to a growing proportion of new construction comprising the housing stock. New construction is expensive — to secure a return on investment, property owners may have leased at higher price points.

Changes in students' housing preferences may have tilted the market toward more expensive units as well. This could be due to students' desire for increased amenities. Other household-level changes could also explain this. While student growth occurred, tracts 3.01 and 3.02 also saw a slight decline in the number of renter households, indicating larger household sizes. This could be a result of student residents living with roommates. It could also indicate growing demand for rental units with a higher bedroom count. Because a four-bedroom apartment typically costs more than a two-bedroom unit, this could help explain the addition of rentals at higher price points.

Over the next decade, Campustown and Midtown saw a significant number of rental units enter the market. Tract 3.01 — the Campustown neighborhood — gained 433 units, the most in the Campus Core. All new units were rentals. To the north, Midtown added only 49 units. As this occurred, vacancy shot up. Tract 3.01 had 205 unleased rentals in 2018, resulting in a rental vacancy rate of 8.9 percent. Midtown had the subarea's second highest vacancy rate, as well as the highest absolute number of vacant units for rent. Tract 3.02 had 252 vacant units, putting its vacancy at 12.2 percent.

At the same time, the undergraduate population boom in Campustown and Midtown slowed. Tracts 3.01 and 3.02 combined saw a net decrease of 1,401 undergraduate residents, a 19.1 percent loss. However, graduate students and nonstudent numbers were on the upswing. Campustown and Midtown's nonstudent population increased by 835. It also gained 461 graduate student residents, a 70.7 percent increase. However, this did not offset the loss of undergraduate residents and the area saw a slight population decline.

Although the population of Campustown and Midtown declined, their total households grew by 773. All households within census tracts 3.01 and 3.02 rented in 2018. Because all

residents were renters, this means the changing mix of undergraduates, graduate students, and nonstudents all had an impact on the rental market.

Considered separately, Midtown and Campustown did not experience the same changes in student population from 2010 to 2018. Rents in these two neighborhoods also behaved differently over that period. These parallel differences suggest the composition of students plays a role in the cost of housing at the neighborhood scale.

Tract 3.01 spans the heart of Champaign's Campustown neighborhood and includes the main stretch of Green Street. This is the area of Champaign-Urbana that has experienced the most intense student housing development over the past decade. Recent high-rise developments in this tract include HERE (2016), 309 East Green (2011), and West Quad (2015).

By 2010, Campustown had the second priciest rentals in the Campus Core in 2010, with units in its upper rent quartile costing $1,371 and above. The gap between its most and least expensive rents had also widened. In 2000, $285 separated tract 3's most expensive rent quartile from its least expensive quartile. By 2010, that discrepancy was $830 for tract 3.01 — nearly three times as much. Rising top-end rents spurred this growing divide. Lower quartile rents increased by $218, but the upper quartile jumped by $783.

However, rent increases tempered over the next decade in tract 3.01. From 2010 to 2018 its most expensive rent quartile only increased in price by $82. This shows prices in Campustown rose fastest in the decade before the neighborhood's highest profile buildings coming online. This indicates the addition of high-rise, luxury developments did not push rents up over the next ten years. Furthermore, increases in tract 3.01's median and lower quartile rents have been modest. The median rent increased 14.8 percent after 2010 and the lower rent quartile grew by 12.8 percent.

Demographic changes in tract 3.01 suggest flagging demand for housing in Campustown from 2010 to 2018. While Campustown and Midtown saw a decline in population, and particularly students, Campustown's population on its own has been more stable. Tract 3.01 picked up a modest 251 student residents from 2010 to 2018, only 95 of whom were undergraduates. Its graduate population increased 43.3 percent, a net growth of 156 people. The largest jump occurred among nonstudents — 466 moved in, doubling that population. Overall, new nonstudent residents account for 65 percent of Campustown's absolute population growth.

In both years, all households in tract 3.01 rented. In addition, Campustown picked up 291 households between 2010 and 2018, an increase of 17 percent. This increase in households — all of whom were renters — does not appear to have strained the local housing market. Stable rents from 2010 to 2018 suggest a more stable balance between supply and demand in tract 3.01. New

housing construction likely provided the units needed to accommodate the rising number of renter households in Campustown.

The changing student population over the past decade could also be a factor affecting Campustown's rents. Tract 3.01's student residents made up 90 percent of its total population in 2010. By 2018, students represented about the same share of total residents — 88.5 percent of residents — a significant majority. The student submarket is still the driving market force in this neighborhood. That said, the middling increase in undergraduate residents, coupled with the rise of graduate students and nonstudents, indicates the movements of these submarkets may also be a factor in Campustown's stabilizing rents. If not enough new student renters exist to fill apartments built specifically as student housing, this could suggest an instance where a supply and demand imbalance has led to stabilizing rental costs.

To the north of Campustown is tract 3.02 which encompasses most of the Midtown neighborhood. Like Campustown, this area has seen its share of development over the past 15 years. This occurred as the City of Champaign made major investments in stormwater infrastructure, which removed Campustown and Midtown parcels from the flood zone. The City also strategically designed its Second Street detention basin to double as green space, allowing for stormwater improvements to double as placemaking investments.

In Midtown, the City used tax increment financing to incentivize two major developments, the Burnham 310 high rise and the twin Midtown Plaza apartment buildings overlooking the Second Street basin. The Burnham 310 development, completed in 2009, occupies the formerly vacant site of the shuttered Burnham Hospital. Nearby Midtown Plaza is on land that once contained a restaurant, a laundromat, a small office, one single-family home, a three-story apartment building, an auto body shop, and a liquor store (Champaign Government Television, 2016). That 104-unit development came online in 2018, meaning any impact the project had on local rents will not show up in this analysis.

As Campustown's student population has held steady, Midtown has hemorrhaged undergraduate residents. From 2010 to 2018, Midtown's student population dropped by 1,191, or 30.3 percent. This decline occurred as undergraduates left the area. In total, the undergraduate population of tract 3.01 fell by 1,496 people. The number of graduate students, on the other hand, doubled to 597.

Midtown's nonstudent population only included 44 people in 2010. Considering margins of error for American Community Survey estimates, this means the nonstudent population may have been even lower. But by 2018, 413 nonstudents lived there, representing 13.1 percent of the population. But increases in graduate students and nonstudents did not make up for the falling

undergraduate population. As a result, Midtown's total population fell by 20.7 percent from 2010 to 2018. These changes indicate that any increase in rents in Midtown is not due solely to a growing undergraduate population.

Changes in Midtown's rents have also followed a different trajectory than in Campustown. Tract 3.02 had the second least expensive upper rent quartile in the Campus Core in 2010 at $695. Its lower quartile and median rents were also the second least expensive in the subarea. The span between the tract's highest and lowest rents was $269, similar to the gap in tract 3 in 2000. This was among the narrowest in the Campus Core that year.

Midtown experienced its jump in rents a decade later than Campustown did. Between 2010 and 2018, upper quartile rents in tract 3.02 increased by $454. The tract's median and lower quartile rents grew as well, by $285 and $181, respectively. Therefore, the neighborhood's rent increases were greater than in Campustown at all price points. By 2018 tract 3.02 had the third most expensive high-end rents in the Campus Core, following tract 3.01. It also had the third-largest gap between its most and least expensive rents.

Why did rent increases occur in Midtown as the neighborhood's population fell between 2010 and 2018? Although tract 3.02 lost people, its total households increased by 482, or 41.1 percent over that period. All of Midtown's households were renters, meaning these additional households represent rising demand for rental housing. In total, 86.9 percent of Midtown's residents were students in 2018. Therefore, student rental demand was still a factor, even with fewer students. Reacting to this growth in housing demand alone, landlords may have chosen to raise rents.

Changes in renter preferences may also explain rising rental prices. More households with fewer people indicate Midtown residents had a decreased appetite for living with roommates by 2018. Those who may have chosen to share bedrooms to cut down costs before 2010 may have abandoned that practice. Some may have traded four-bedroom units for two- or three-bedroom options. Others may have chosen to live alone.

These final two options would not have been possible without a greater availability of smaller units. However, evidence exists that more apartments with fewer bedrooms came online near campus between 2010 and 2018. Changes to regulations in Midtown and Campustown paved the way for developers to build smaller apartments. Specifically, the City of Champaign enabled the construction of more one-bedroom units when it eliminated parking minimum requirements for its Multifamily University zoning district in 2015. This zoning district covers most of Midtown and Campustown.

Before this change, the City required developers to provide 0.5 parking spaces per bedroom, with a one parking space minimum per apartment. In 2010, the City granted a reduction of ten parking spaces to its residential parking requirement for Midtown with the creation of a new overlay district for the neighborhood. In 2013 the City chipped away at parking minimums once again, eliminating the one space per unit requirements for studios, efficiencies, and one-bedrooms. Finally, the City did away with parking minimums altogether in 2015.

Challenges meeting the City's parking requirements may have impeded developers' ability to provide smaller units before that change. A 2013 report to Champaign's Plan Commission warned that high parking quotas for one-bedroom units created a chilling effect on developers' willingness to construct such units in the city core. High land costs prevented parking from "paying its own way" there because one-bedroom units and two-bedroom units each required construction of one parking space, according to the report. A City review of building permits issued between 2006 and 2012 in the campus area showed new development included only six one-bedroom apartments out of around 350 total units. In contrast, building permits for projects elsewhere in the City showed a more even mix of unit types. Local developers who served on the City's University District Advisory Board confirmed that although demand for smaller units existed, they felt building them was not financially feasible because of this, according to minutes from meetings in 2006 and 2007, with one developer claiming parking regulations would cause small units to "disappear" over time.

Indeed, although four-bedroom units remained popular through around 2010, demand appears to have increased for one- and two-bedroom units. One developer tied this to recent demographic shifts among student renters, specifically an increase in wealthy international students willing to pay for single rooms in high-amenity buildings. City building permit data shows the area near Campus — including Campustown and Midtown — has added at least 400 one-bedroom units since 2016 (City of Champaign Department of Planning and Development, 2020).

However, an increase in one-bedroom units has not corresponded to falling rent prices in Midtown. This is counterintuitive because one-bedroom units typically command lower rents than larger units. Instead, the increased number of renter households implies rental demand is also on the rise in Midtown, which could push rents up.

According to interviews with local developers, changing land-use regulations translated to shifts in the existing housing stock. Longtime property owners in Champaign changed the strategies they deployed to remain popular with student renters. In the years since the City's elimination of parking minimums, some owners have chosen to reconfigure units within existing buildings to incorporate more amenities. Developers discussed student tenants' increasing

desire for shared amenities specifically, including communal study spaces and upscale recreation facilities.

Furthermore, representatives from one local company noted that as construction near campus picked up more locals began renovating existing units in a bid to keep pace with rising rents in newer buildings. Renovation was also held up as a viable strategy to stay competitive as construction costs rose. Although renovated units may not have commanded the prices that brand new high rises did, they still allowed landlords to raise rents above pre-renovation levels.

The changing built environment in Midtown may also explain population loss there, specifically among students. The site of the Second Street basin once contained several small-scale apartment buildings. In addition, the site of the 2019 Midtown Plaza development contained a three-story building. These all needed to be demolished to clear the way for those projects (Champaign County GIS Consortium, 2021; Champaign Government Television, 2016; Knight, 2016). The Housing Authority of Champaign County also decided to sell its Skelton Place (Zigterman, 2018). Residents of that public housing project moved out ahead of the building's redevelopment to student apartments in 2019. The loss of these older multifamily buildings likely represented a loss in rents at lower price points. However, if new developments — such as Midtown Plaza — are successful, the Midtown neighborhood may pick up population once again. What this means for future housing prices depends on population growth and demand for high-amenity, new-build apartments.

Between 2010 and 2018 other changes may have made Midtown a more attractive location for renters. For one, the City of Champaign designed the Second Street detention basin to double as a community amenity. The addition of this attractive water feature, surrounded by landscaping and walking paths, may have driven demand for rental housing nearby. Furthermore, new apartment buildings, such as the West Quad building (completed in 2015) and Burnham 310 (an earlier project, which opened in 2009), may have bumped up rents in the area. The Burnham 310 development also included a grocery store, a first for the area near campus. This may have also contributed to the desirability of the neighborhood.

The interplay of all of these factors makes determining the exact cause of growing rents in Midtown difficult to detangle. Student rental demand remains high in the neighborhood. Furthermore, interview evidence supports the idea that University of Illinois students are demanding more amenities and greater proximity to campus when they search for housing Still, the growing number of nonstudent residents in Midtown could also play a role. If this trend continues, examining the behavior of local rents in tandem with nonstudent growth could provide an answer about the influence of this group on the local housing market.

West of the Quad: A Wide Discrepancy in Rental Price Points Grows Wider

From 2000 on, the neighborhoods directly west of the University of Illinois' main quad had a relatively large discrepancy between the most and least expensive rents. Census tract 4 was sandwiched between the western border of the University of Illinois' main quad and the railroad tracks that partition the Campus Core from the In-Town subarea. In 2000, it had the subarea's largest gap between its lower and upper rent quartiles. In addition, tract 4's upper quartile rents were $750 and above in 2000 — the highest in the Campus Core. Prices in its lower rent quartile cost $343 and below — the second cheapest in the subarea. Considered together, that $407 difference between high-end and low-end rents was the Campus Core's greatest. Its vacancy rate was 2.2 percent that year.

The U.S. Census Bureau divided tract 4 into two for the 2010 decennial census. That year, tracts 4.01 and 4.02 combined had no unleased rental units. The neighborhoods also lost a handful of housing units. But by 2018 vacancy had risen west of the main quad. Tract 4.01 had the subarea's highest vacancy rate that year — 17.5 percent, representing 104 unleased units. To the west, tract 4.02 had 163 unleased rentals, putting vacancy at 10.2 percent.

Between 2010 and 2018 the student population directly west of campus remained stable. Undergraduate students have traditionally made up the bulk of the population there. In 2000, 2010, and 2018, students made up 97.2, 99.1, and 96 percent of residents, respectively. Most of these were undergraduates. In 2000, 88.9 percent of tract 4's residents were undergraduates, specifically. By 2010 that share grew to 92.9 percent in tracts 4.01 and 4.02 combined before falling slightly to 90.2 percent in 2018. While 685 graduate students lived in tract 4 in 2000, slightly more than 500 lived in tracts 4.01 and 4.02 combined in 2010 and 2018.[12] Graduate students in tracts 4.01 likely lived in Sherman Hall, a residence hall housing graduate students, as well as juniors and seniors. In total, 455 students lived in that hall in the 2020-2021 school year, according to University records (University of Illinois Housing Department, 2021).

In contrast, nonstudents have always represented an insignificant share of the population. The nonstudent population never rose above 5 percent of the population in any year in this study. At its lowest point in 2010, nonstudents made up less than 1 percent of total residents. By 2018, this had grown to 4 percent, representing 364 people. As a result, the movements of nonstudent residents are unlikely to be influential in this neighborhood's rental market.

By 2010, tracts 4.01 and 4.02 each continued to show a large spread between their lowest and highest rents. Tract 4.02 — located to the west along Neil Street and the railroad

[12] Of all census tracts in Champaign-Urbana, American Community Survey estimates for tract 4.01 come with particularly high margins of error. This may be due to the large share of residents living in group quarters in the census tract.

tracks — had the Campus Core's most expensive upper rent quartile. Rents in that quartile cost at least $1,406 that year. It also demonstrated an $866 difference between upper and lower quartile rents, the subarea's most pronounced. Furthermore, the tract had the subarea's highest median rent — $716.

That pattern did not hold over the next decade. By 2018, the gap between tract 4.02's most and least expensive rents had contracted. This occurred as its least expensive rent quartile increased in price by $98. At the same time, its upper quartile decreased by $302. The result was a $469 difference between the upper and lower rent quartiles, only the fourth largest among the Campus Core's seven census tracts.

Between 2010 and 2018 tract 4.02 went from the Campus Core neighborhood with the priciest upper rent quartile to the tract with the third lowest. Only tracts 60 and 14, with their relatively small undergraduate student renter populations, had more affordable high-end rents. The tract's median rent was also the third lowest in the subarea that year.

In contrast, by 2018 neighboring tract 4.01 showed the most dramatic discrepancy between its most and least expensive rents at $1,223. In Champaign-Urbana as a whole, only one census tract — 13.02 in the West subarea — had a more pronounced price gap between its highest- and lowest-cost units. In the Campus Core, the next largest gap between high-end and low-end rents was in Campustown, where the difference was $380.

This widening of the rift between expensive and more affordable units in tract 4.02 occurred primarily due to rising rents at the most expensive price points. Where upper quartiles rents were at least $1,186 in 2010, they rose to $1,808 in 2018, a 52.4 percent increase. Although lower quartile rents also increased, they did so at a slower rate. Tract 4.01 had the Campus Core's least expensive lower quartile in 2010 and the second least expensive in 2018.

Furthermore, the tract's median rent of $888 was the most expensive in the Campus Core in 2018. This represents a change from 2010, when tract 4.01 had the subarea's second lowest median rent at $522. Rents at all price points rose from 2010 to 2018 in tract 4.01, in contrast with neighboring tract 4.02.

Because tracts 4.01 and 4.02 have similar housing stock, the reasons for their diverging rent storylines could lie in their desirability to student renters. Tract 4.01's total population increased slightly between 2010 and 2018, picking up 126 new residents. This tract has among the highest population density of any in Champaign-Urbana at 79 residents per acre in 2018. As a result, this population growth only represents a 2.6 percent increase.

This small increase in total residents occurred due to an influx of nonstudents and undergraduate renters between 2010 and 2018. The area gained 104 undergraduate students but

also became less popular with graduate students. Over the decade, tract 4.01 lost 95 graduate student residents, a 36.4 decline from 2010. Because of this, the total number of students at all academic levels broke even. Some of this change in student population may have occurred in Sherman Hall or private certified dormitories, including the Newman Center.

Unlike the heart of Campustown and Midtown, this neighborhood has not experienced high-rise development. However, several new-build midrise student apartment buildings went up over that decade. These include 309 E John, a 16-unit building with two- and four-bedroom units. As of April 2021, the highest-cost apartments in that development advertised for between $1,600 and $3,520, depending on lease length and unit size (Campus Property Management 2021). Another development, 305 E Daniel, opened in 2017. This 50-bedroom development contains a mix of two-, three-, and four-bedroom units, which come fully furnished with 60-inch flat-screen televisions (New Chapter Properties, 2021). In 2016, The Academy, a 66-unit building, came online. According to the property manager's website, the building includes studio, one-bedroom, two-bedroom, and four-bedroom units. Those market for between $975 and $3,000, depending on unit size and layout (The Academy Campustown, 2021). This addition of high-cost, luxury units could explain the rise in rents in tract 4.01 between 2010 and 2018.

As in other student-heavy areas of the Campus Core, changes in household composition may have driven rising rents. As tract 4.01's population rose slightly, the neighborhood saw a 17.2 percent decline in its number of households. This indicates that household sizes in tract 4.01 have risen. Unless residents of the area are sharing bedrooms, this suggests these larger households are renting larger apartments, which often come at higher price points. All households in tract 4.01 rented in 2010 and 2018.

Compared to neighboring tract 4.02, 4.01 has fewer households. In 2010, tract 4.01 had half the households tract 4.02 did. By 2018, this discrepancy widened, and tract 4.01 had about a third as many households as its neighbor. All these households rented, meaning these neighborhoods had a higher share of renters than any other in the Campus Core.

Student renters' desire to live close to campus may have contributed to local landlords' ability to demand higher rents in tract 4.01. City planners and local developers alike pointed out the growing demand for housing proximate to campus. "It's kind of an arms race to the quad," one developer said. "Who can build the nicest and best building closest to the quad? And, in my opinion, that person wins." Tract 4.01, which butts up against the University's main quad, meets this criterion better than its neighbor, which is several blocks offset from campus.

While tract 4.01 picked up undergraduate renters, tract 4.02 lost them. From 2010 to 2018, the neighborhood saw a net loss of 136 undergraduate residents, a small decrease of 3.7

percent. In contrast, 73 graduate students moved in, representing a 25 percent increase in an area with few graduate-level residents. The area's nonstudent population grew by 166, increasing nearly five times. Together, this amounted to a net gain of 103 total residents. This represents about the same population growth that neighboring tract 4.01 experienced.

Unlike its neighbor, tract 4.02's household sizes did not increase. The absolute number of households in tract 4.02 grew faster than the total population did. Between 2010 and 2018, the tract gained 202 households, a 17.2 percent increase. All were renters.

These smaller household sizes could offer one explanation for comparatively lower rents in tract 4.02 than elsewhere along Green Street. Student renters in this neighborhood may be renting smaller units on their own, which may cost more per person but less per apartment.

Like other census tracts near campus, tract 4.02 experienced a student housing construction boom after 2010. More than 380 housing units came online from 2010 onward in new buildings. The largest of these developments included 75 Armory, a 72-unit building offering two-, three-, and four-bedroom units. The cost per apartment ranged from $1,610 to $2,720 as of April 2021. Another large development — 908 S First Street — included 68 units, ranging from studios to four-bedrooms. As of spring 2021, those marketed for between $900 and $2,796.

Rising vacancy and falling upper quartile rents suggest this increase in housing supply may have contributed to oversupply in tract 4.02, which is farther from the main quad than other undergraduate-majority Campus Core neighborhoods. Although new-build, high-amenity housing exists in the tract, other areas, such as tract 4.01 and tract 3.01 offer similar units nearer campus. In addition, the availability of bars, restaurants, and the County Market grocery store could make these other neighborhoods more attractive to students.

Lincoln-Busey Corridor: Rents Rise Less Dramatically in the Absence of New Student Rentals

Changes in rents in tract 59 illustrate what happens in a student-majority neighborhood when luxury student rentals come online in other student-majority areas. Unlike other near-campus census tracts, the housing stock in tract 59 has not changed much over the years. High-rise and bulky midrise buildings are not permitted in zoning for this neighborhood, unlike in Campustown and Midtown. Still, tract 59 is as convenient to the core of campus as Campustown and Midtown, making this difference in the built environment the major distinction between these neighborhoods.

Most of the housing in this tract lies in West Urbana in the block immediately adjacent to campus. This area is known as the Lincoln-Busey corridor because it sits between South Lincoln and South Busey Avenues. The corridor contains several smaller apartment buildings, as well as

single-family homes, many of which are divided into apartments. In addition to housing in the Lincoln-Busey corridor, the tract contains a handful of small, private-market apartment buildings on University land. On-campus properties also include a handful of sorority houses.

Like other tracts in the heart of campus, tract 59 is home to University of Illinois residence halls. These include Busey-Evans, the Illinois Street Residences, the Lincoln Avenue Residence Halls, and Allen Hall. Together, these buildings housed 2,125 students in the 2020-2021 school year (University of Illinois Housing Department, 2021). Because of this large concentration of undergraduate students living outside of the private rental housing market, examining how many residents are between the ages of 20 and 24 could provide a more precise look at student renter populations. This is because those living in the dorms are more likely to be younger, first-year students.

Although a significant share of tract 59's undergraduate residents lived in dormitories, many did not. In 2000 the tract was home to 5,124 undergraduates. By 2010 that number peaked at 6,337, and by 2018 the undergraduate population was 5,418. Assuming the capacity of the University's residence halls remained stable over the years, this means 58.5 percent of tract 59's population were undergraduates living off campus in 2000. Over the next decade that rose to 66.5 percent, followed by a decline to 60.8 percent in 2018. This means that undergraduate students not living in dorms made up slightly more than 50 percent of tract 59's total population over that time. This shows the strong influence of student renters on the local housing market.

However, in absolute terms, the number of students in tract 59 has fluctuated. From 2000 to 2010, tract 59 gained 1,323 student residents. Much of this growth was likely due to students living off campus since the population ages 20 to 24 also increased by 824 that decade. But from 2010 to 2018 the student population fell back to 2000 levels. In total, 1,017 student residents left the tract from 2010 on. Again, much of this change was likely due to outmigration of those living off-campus. The decline in the number of residents ages 20 to 24 was almost the same — 1,078 people. Because the nonstudent population was more stable, this means any corresponding changes in rents were likely due to the movement of students, not other residents.

In 2000, tract 59 was the Campus Core neighborhood with the lowest vacancy. Only 17 units went unleased. That year, it also had the highest median rent of any tract within the Campus Core. In addition, the tract also the second most expensive top rent quartile, as well as the third largest gap between its lowest and highest rents. It was one of the most expensive neighborhoods for those seeking housing near campus that year.

Between 2000 and 2010, tract 59 saw its share of housing units remain unchanged. Its rental vacancy rate was zero percent in 2010, on par with the neighborhoods west of the main

quad. Despite this, the neighborhood did not remain pricey compared to other tracts adjacent to campus. Rents did rise in tract 59 as more students moved in, but these increases were much more pronounced in other parts of the Campus Core.

In contrast to neighborhoods such as Campustown, Midtown, and west of campus, rents in tract 59 also did not skyrocket at the top end of the price scale. Lower quartile and median rents grew at a slightly faster rate than upper quartile rents between 2000 and 2010. The most expensive rents only rose 22.8 percent while the least expensive grew by 37.4 percent and the median by 34.8 percent between 2000 and 2010. In dollar amounts, increases at all price points were similar. The tract's median rent cost $184 more, with lower and upper quartile rents increasing by $160 and $159, respectively.

What insulated rents in tract 59 from the upheaval seen in other tracts adjacent to the core of campus? First, although the number of students increased in tract 59 from 2000 to 2010, the total household count fell by 106, an 8.7 percent decline. Because outmigration was not an issue — the tract gained population, specifically among residents ages 20 to 24 — this could have occurred due to increasing household sizes. This suggests student renters in tract 59 may have chosen to take on more roommates. Tract 59's inventory of single-family rental homes may have enabled more intense sharing of space. Increasing population density supports this — in 2000, the neighborhood was home to 18 people per acre, which rose to 22 people per acre in 2010. Therefore, an increase in students did not translate to more competition for the same number of rental units.

The housing stock in tract 59 also remained mostly unchanged from 2000 to 2010. The neighborhood was not adding high-rise buildings. Instead, the same low-rise apartment buildings and single-family homes dominated the rental market. No luxury housing came online in tract 59. The modest increase in rents was not a response to developers recouping building costs or the appeal of luxury amenities. Instead, any price increases likely occurred due to changing conditions in the wider Champaign-Urbana rental market. Other facts, such as rising operating costs or property taxes, may have also played a role.

Tract 59 only added a few units of housing between 2010 and 2018. Still, vacancy rose to 9.4 percent that year, hinting at lagging demand for housing. The neighborhood only experienced a 23.6 percent growth in undergraduate residents over that period. Although the neighborhood remained popular with students, other near-campus tracts were even more sought after among student renters.

From 2010 to 2018, rent increased in tract 59's slowed, with one exception. Lower quartile rents climbed by 19.4 percent — eighteen percentage points slower than the previous decade's

growth rate. Growth in median rents slowed to 15.1 percent. However, upper quartile rents began to increase at a faster rate than they had from 2000 to 2010. The most expensive units increased in price by 32.5 percent between 2010 and 2018.

This represents an echo of what occurred in other Campus Core tracts the decade prior, when upper quartile rents shot up. From 2000 to 2010, only two tracts — 3.02 and 59 — saw their upper quartile rents grow by less than 50 percent. However, from 2010 to 2018, only Midtown's upper quartile rose at a faster rate than in tract 59.

Counterintuitively, this acceleration in the rent increases for the upper quartile occurred as student renters moved out of the neighborhood. The reasons these students left tract 59 are unclear. One possibility is that as luxury units came online in Campustown, tract 59's rentals could not compete with the level of amenities offered there. In addition, students may have lost their appetite for living with roommates. Although tract 59 lost student residents, it did not experience a decline in renter households. This indicates students' household sizes decreased. Unlike in other areas of town where new, one-bedroom apartments facilitated renters' desire to live alone, tract 59's housing stock remained the same. This could indicate students in the tract had previously doubled up in bedrooms or that other apartments had empty bedrooms in 2018 that were occupied in 2010.

Either way, these theories assume student renters had more buying power in 2018 than they did in 2010. Both options — leaving tract 59 for luxury high rises or choosing to split the rent among fewer people — mean higher monthly housing costs.

Another possibility is that some student outmigration occurred in reaction to rent changes at the median and lower quartile price points. In 2000, 2010, and 2018 tract 59 had the most expensive lower rent quartile of any Campus Core tract. Its median rent was the second priciest in 2010 and 2018. Therefore, Campustown, Midtown, and the neighborhoods directly west of campus were more affordable for students looking for a deal. Tract 59's cheapest rents were nearly $100 more expensive than in Campustown and Midtown in 2018.

As student preferences swung toward dense, urban neighborhoods these savings may have been particularly attractive. Although students renting cheaper apartments in these areas may not have gained access to swimming pools, bowling alleys, and rooftop decks, they could still achieve proximity to Campustown bars and restaurants. Other public amenities, such as the new County Market grocery store or the Second Street basin, may have also been draws.

Changes to the built environment in other student-heavy areas may have had other implications for landlords and renters in tract 59. Examining rent increases across both decades shows rents in tract 59 avoided the volatility seen in Midtown and Campustown as luxury

apartment buildings opened. This is especially true for the neighborhood's highest-cost rentals. Tract 59's most expensive rents have risen more slowly than most other areas of the Campus Core from 2000 to 2018. Its growth rate of 63 percent was the second slowest, after tract 4.02 (47.6 percent). In absolute dollars, upper quartile rents increased by $437 over that period. In comparison, tract 60's increased by only $329 and tract 4.01's most expensive rents cost a staggering $1,058 more in 2018 than in 2000. This underscores how changes to the housing stock in some student neighborhoods can limit the ability of other areas to command high rents.

Orchard Downs: University Apartments Immune to Volatility in Campus Core Housing Prices

Rents in tract 60 have also shown less volatility than elsewhere in the Campus Core. Although rents have gone up across all rent quartiles, these increases have been smaller and more regular. This is most likely because the University is the sole landlord for most of the neighborhood's tenants. Orchard Downs includes one- and two-bedroom apartments, so no larger, more expensive units exist. A set number of floorplans exist in Orchard Downs, so the housing stock in tract 60 is less varied than elsewhere. In 2018, the cheapest unit at Orchard Downs was $580. The most expensive rent in the complex was $960 — the rate for University staff renting a remodeled, furnished two-bedroom unit. Furthermore, the University Housing department is different than a private-market landlord, in that its mission is solely to house students during their studies. Private-market landlords elsewhere may be more motivated by profits, or by ensuring a return on investment following development or renovation.

The University of Illinois' Florida Avenue and Pennsylvania Avenue residence halls are also located within tract 60. In fall 2020, 2,259 undergraduate students lived in dormitories there. In 2000, 2010, and 2018 respectively (University of Illinois Housing Department, 2016), 1,806, 2,624, and 2,325 undergraduate students lived in tract 60. Therefore, most undergraduate residents lived on-campus, rather than renting housing on the private market. The tract's number of residents ages 20 to 24 supports this conclusion. Only 423, 814, and 550 residents of tract 60 fell within this age range in 2000, 2010, and 2018, respectively. In addition, some of these residents could also live in the University's residence halls. Both residence halls in tract 60 accept upper-division students. Others may live in the handful of fraternities in the neighborhood.

In addition, many of these young residents could be graduate students. Tract 60 is also home to the University's Orchard Downs apartment complex, which leases predominantly to graduate students and their families. The tract had 452, 496, 516 graduate student residents in 2000, 2010, and 2018, respectively.

Tract 60's share of nonstudent residents has fallen since 2000, when nonstudents were 32.1 percent of the population. By 2018, nonstudents represented only 19.3 percent of all residents. This occurred as tract 60 saw a net loss of 444 nonstudent residents between 2000 and 2010. Nonstudents that remain could be family members of graduate students living at Orchard Downs.

At least 97 percent of tract 60's households rented in 2000, 2010, and 2018. Unlike in other areas of the Campus Core, the tract's absolute number of renter households has remained relatively stable.

Tract 60 has remained both the Campus Core tract with the lowest upper quartile rents and the tract with the smallest spread between its most and least expensive rents quartiles in all years. In 2000, only $55 separated the top and bottom rent quartiles. By 2018, that had grown to a gap of $142.

Still, rents increased at similar rates across rent quartiles. From 2000 to 2018, the most expensive rents grew by 76.5 percent, the median rent by 78 percent, and the lowest rent quartile by 64.5 percent. The greatest increase for all price points occurred between 2000 and 2010, when rental costs went up between 52 and 55 percent in tract 60.

Tract 60 consistently had the cheapest upper rent quartile of any Campus Core census tract. However, the tract's lower quartile and median rents show more variability across years when considered against other areas of the Campus Core. Tract 60's median rent, for example, was the lowest in 2000, the fourth most expensive in 2010, and the second least expensive in 2018.

Taken together, this shows that the low number of undergraduate and nonstudent renters, as well as relative stability in the number of renters in tract 60, has insulated the neighborhood from upheavals in rents seen elsewhere. Rents have remained predictable and relatively affordable, even as tract 60's rental vacancy rate has fluctuated. Still, the housing stock in tract 60 is unique. The predominant landlord is the University of Illinois and apartments in the tract specifically exist to house graduate students. Therefore, this tract is not a strong example of what happens in a truly private rental market when large numbers of students are present.

Village of Savoy: Relative Stability in Rents as Students Move Away

Census tract 14 is unique within the Campus Core because it was once a majority-student neighborhood but it has since transitioned. Although the area has become less popular with student renters, the tract has gained rental units. Vacancy has also remained low — in 2010 and

2018, respectively, the rental vacancy rate was 3.6 and 3.4 percent. This shows steady demand for rental housing in the tract.

In 2000, 76.4 percent of the tract's residents were students and 72.2 percent were undergraduates specifically. Many — but not all — of these undergraduates likely lived in residence halls. Although tract 14 was home to 3,453 undergraduates, the area had 1,118 residents ages 20 to 24. If these residents were undergraduate students, they also would have been free to seek housing off campus.

Like tract 60, tract 14 consists largely of University-owned land. Housing there includes undergraduate dormitories, including the University's Ikenberry Commons North and South. This makes using decennial census and American Community Survey counts of undergraduate students unreliable for parsing student rental demand because any students living in dormitories would not be renting housing on the private market in tract 14.

According to the University Housing website, 3,877 undergraduates lived in the residence halls comprising the Ikenberry complex as of fall 2020. This count includes the population of Wassaja Hall, which opened in 2016, and Bousfield Hall, which opened in 2013. Together, those residence halls house about 1,000 students. All residence halls in the Ikenberry complex cater to undergraduate students, but a handful include rooms for upper-division students or sophomores specifically (University of Illinois Department of Housing, 2021). These students may be 20-years-old or older. Because of this, examining the number of undergraduates in tract 14 against the number of residents ages 20 to 24 could paint a more accurate picture of how student movements have affected rents there. However, the presence of upper-division undergraduates complicates this. In addition to dormitories, the tract houses Ashton Woods complex, the University's other apartment complex serving graduate students and their families.

The southern end of tract 14 includes subdivisions in the Village of Savoy, home to low-rise apartment buildings and single-family homes. These subdivisions date to the 1990s and early 2000s and include The Place at 117, marketed toward University of Illinois students (Cardinal Group Management, 2021).

By 2010 tract 14's population was predominantly students, but the share declined to 62.2 percent. Of those, 57.9 percent were undergraduates and only 4.3 percent were graduate students. This lower percentage of students occurred due to a rise in the nonstudent population, which increased by 1,760 over the decade. The number of students also grew, but at a slower rate. An additional 1,106 student residents — 977 undergraduates and 129 graduates — moved in between 2000 and 2010. At the same time, the area's population of individuals ages 20 to 24 decreased by 141. Therefore, any growth in undergraduates may have occurred due to larger

numbers of freshmen in tract 14. These freshmen would have lived in dormitories due to the University's 30 credit hour rule.

By 2018, tract 14 was majority nonstudent for the first time. Only 49.2 percent of the population were students. From 2010 to 2018, the undergraduate population, specifically, fell by 1,565 people. The count of residents ages 20 to 24 plateaued, however, losing only 71 people. This indicates much of this loss occurred among freshmen who lived on campus, not those renting housing on the private market. The total undergraduate population of tract 14 that year was 2,865, less than the current-day capacity of the University's Ikenberry complex of residence halls. This shows the undergraduate student submarket was negligible in tract 14 by 2018.

On the other hand, the nonstudent population rose by 547 between 2010 and 2018, representing an 18.9 percent increase. The rate of growth was slower than it was over the prior decade. In addition, the tract's small graduate student population has nearly doubled. Four hundred and sixty-four graduate students lived in tract 14 in 2018. And although the tract's total households doubled between 2000 and 2010, they still increased by 25 percent from 2010 to 2018. Of the 335 added households from 2010 to 2018, 238 were renter households.

In 2010, 480 renter households lived in tract 14. By 2018 this increased to 930. However, the share of total households that rented has fallen as students become a smaller share of the population. In total, 55.3 percent of tract 14's households rented in 2018, down from 71.2 in 2000. These changes occurred as developers filled in single-family subdivisions in Savoy.

In many ways, tract 14 acts as a foil to Campus Core neighborhoods such as tracts 3.01, 3.02, 4.01, and 4.02 that have remained dominated by students, and even seen growth in the student population.

Rents have risen in tract 14 over the past 20 years, but not as dramatically as in other Campus Core census tracts. In addition, the tract's most and least expensive rents are closer in price than in most other subareas. This is true even as the difference between its high- and low-end rents have increased, as it has elsewhere. Like other areas of the Campus Core, rents for tract 14 have also risen faster at the more expensive end of the market. Rentals in the tract's top rent quartile have doubled in price from 2000 to 2018. In contrast, the tract's median rent only jumped by $269, a 63.7 percent increase. Lower quartile rents increased by 54.4 percent, or $295.

However, compared to other Campus Core tracts, these increases are modest. This is especially true when comparing the tract's most expensive rents to those elsewhere. From 2000 to 2018, tract 14's most expensive rent quartile increased by $398, slightly more than increases in tracts 60 and 4.02. Still, this was a far cry from tract 4.01's increase of $1,058.

In 2018, $938 separated tract 14's upper rent quartile from that of tract 4.01, the most expensive in the Campus Core. Tract 14 had the second lowest upper rent quartile, the least expensive bottom quartile, and the lowest median rent of any tract in the subarea in 2018. Tract 14 also had a small gap between its most and least expensive rents, respectively. In 2000, 2010, and 2018 alike, only tract 60 had a smaller price difference between its upper and lower quartiles.

Taken together, this shows that without rising student demand for rental housing tract 14 has been shielded from disruptions in rents experienced elsewhere in the Campus Core. This has occurred even as the tract's rental vacancy rate remained low. Specifically, the tract has not seen the inflation in its most expensive rental prices that areas with stable student populations have. Rents remain relatively affordable in tract 14 even as other near-campus tracts have grown pricier.

Near North: An Influx of Students Leads to Unstable Rents

Housing Supply

Between 2000 and 2010 the Near North nearly doubled its total housing units. although the Near North is less renter-centric than the Campus Core to the south, rental units drove this increase. As in the Campus Core, vacancy also rose over the past decade. Table 6.4 breaks down the Near North's housing units by tenure and vacancy status in 2000, 2010, and 2018.

Table 6.4:

Near North Housing Units by Tenure and Vacancy, 2000-2018

	Total housing units	Owner-occupied units	Renter-occupied housing	Total vacant units	Vacant, for rent
2000	2,142	782	1,074	286	127
2010	2,772	701	1,602	469	244
2018	3,970	768	2,549	653	462
Percent change:	**85.3%**	**-1.8%**	**137.3%**	**128.3%**	**263.8%**

Data sources: 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

From 2000 to 2018, the Near North lost a handful of owner-occupied units as the subarea transitioned from being the subarea with the second highest homeownership rate to having Champaign-Urbana's second lowest. The same was not true for renter-occupied units. Between 2000 and 2018 the Near North added 1,475 units of renter-occupied housing. Only the West gained more.

In 2010 the Near North had a significantly higher vacancy rate than the neighboring Campus Core. That year, 12.7 percent of rental units were vacant and for rent. By 2018 this had risen further to 15.2 percent of the subarea's rental housing was vacant. This demonstrates that the rental market in the Near North was never as hot as that in the Campus Core.

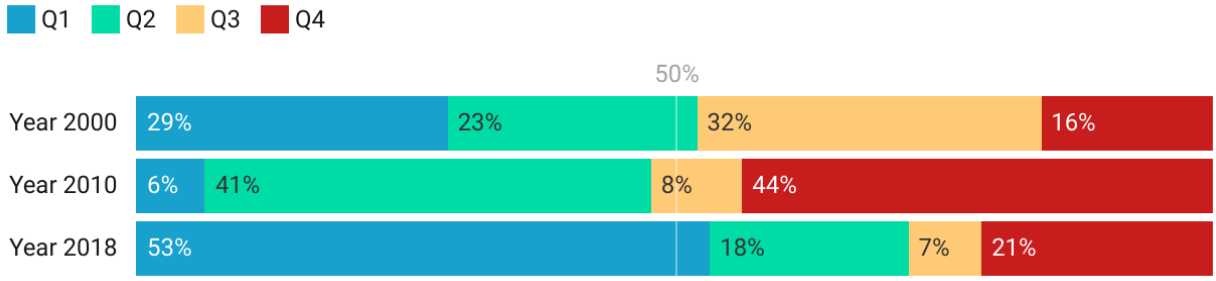
Volatile Rents, With Prices Moderating Following the Campus Core Building Boom

In the Near North, rents fluctuated dramatically between 2000 and 2010, followed by further volatility from 2010 to 2018. The subarea's rents increased in price during the first decade of this analysis. At the same time, what was once a narrow disparity between the lowest-cost and most expensive rental units stretched into the Champaign-Urbana's widest rent gap. But from 2010 to 2018 the Near North saw rents trend downward. In addition, the rift between high-end and low-end rents also lessened.

In 2000, before the Near North experienced its surge in student population, the subarea's rents were evenly divided above and below Champaign County's median rent of $455, with 48 percent of units renting above the countywide median and 52 percent below. In 2010, the even split between above-median and below-median rents mostly held. Figure 6.13 shows the percentage of rental units that fell within Champaign County's rent quartiles in 2000, 2010, and 2018.

Figure 6.13:

Percentage of Near North Rental Units Within Champaign County Rent Quartiles, 2000-2018



Data sources: 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

Although 48 percent of Near North's rental units cost less than Champaign County's median rent of $723 in 2018, the subarea saw its proportion of high-end rents bulk up. Forty-four percent of units in the Near North rented for more than $947, the lower limit to the county's upper rent quartile. At the same time, the subarea's share of the most affordable units bottomed out. Only 6 percent of all renter households paid less than $569, the cutoff to Champaign

County's lower rent quartile. Therefore, 661 Near North units were among the county's most expensive, while only 96 were among its least expensive. Over a decade, the subarea's units within Champaign County's upper rent quartile nearly quadrupled while the number in the lower quartile decreased by 68 percent. This concentration of high-cost rental housing coupled with a dearth of low-end units demonstrates volatility in the subarea's rental market.

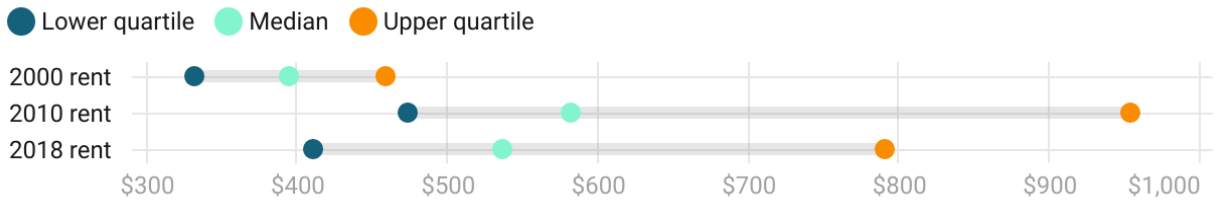
By 2018 the subarea became one of Champaign County's most affordable for renters, as 71 percent of units rented below the County's median rent of $723. A slight majority of renter households — 53 percent — paid rents within Champaign County's lower rent quartile, meaning their units cost less than $473 monthly.

The Near North picked up 1,197 rental units within the county's most affordable rent quartile from 2010 to 2018. At the other end of the spectrum, it saw an absolute decrease of 139 units within Champaign County's most expensive rent quartile. However, from 2000 to 2018 the share of Near North units within that quartile only dropped 5 percentage points. This change also occurred as the county's lower quartile, median, and upper quartile rents increased by $204, $340, and $358, respectively.

Rising rents countywide do not fully explain this new shift toward affordability. Examining lower quartile, median, and upper quartile rents within the Near North subarea on its own shows rents from 2010 to 2018 have moderated, and not just in comparison to prices countywide. Figure 6.14 shows how Near North's rent quartiles have shifted from 2000 to 2018.

Figure 6.14:

Near North Rent Quartiles, 2000-2018



Data sources: 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

In 2000, the Near North had the narrowest gap between its lower quartile and upper quartile rents of any subarea in Champaign-Urbana. Only $127 separated rents in the top quartile from those in the bottom. The subarea's median rent of $388 was the third lowest of any subarea, behind In-Town and the Campus Core. Furthermore, its upper quartile limit of $460 was Champaign-Urbana's lowest except for the In-Town area, which was $1 lower.

2010 represented a departure from all of this. That year, the Near North's $481 discrepancy between its upper quartile and lower quartile rents represented Champaign-Urbana's largest. The subarea's 2010 lower quartile limit was slightly above its 2000 median. Most dramatically, the lower cutoff to its upper rent quartile more than doubled, spiking by $495. This represents the largest jump in high-end rents of any subarea in any year of this analysis.

This spike in rental costs occurred ahead of major student housing construction in the Campus Core. With vacancy low in that subarea, students seeking high-amenity housing may have found their options limited near campus. This overflow demand for student housing may have allowed Near North landlords to raise rents.

While the Near North's lower, median, and upper quartile rents were similar to Champaign County's in 2000, this changed in 2010. That year the Near North's lower quartile limit and median rent were also about the same as Champaign County's. However, the subarea's upper quartile cutoff of $955 was $168 higher than the county at large. It was also the highest upper quartile limit for any subarea in any year of this analysis. This demonstrates how growth among the Near North's most expensive apartments drove the widening gap between its highest and lowest cost units — something that happened at a rate greater than the rest of the county.

By 2018 the Near North's rents had moderated. Rents within each of the subarea's quartiles fell, with the highest rents declining the most. While the Near North's median and lower quartiles dropped $46 and $62 respectively, its upper quartile limit fell $164, or 172 percent from 2010 to 2018. Aside from the Near North, no other Champaign-Urbana subarea experienced falling rents at any price point, either from 2000 to 2010 or from 2010 to 2018. The Near North's declining rents represent an exception to the consistently rising cost of rental housing in other parts of town.

Conditions in the Campus Core may have contributed to falling rents in the Near North. An abundance of new rentals near campus may have tempered demand for the Near North's student rentals. In response, landlords may have sensed student renters' unwillingness to pay premium rents for units far from campus.

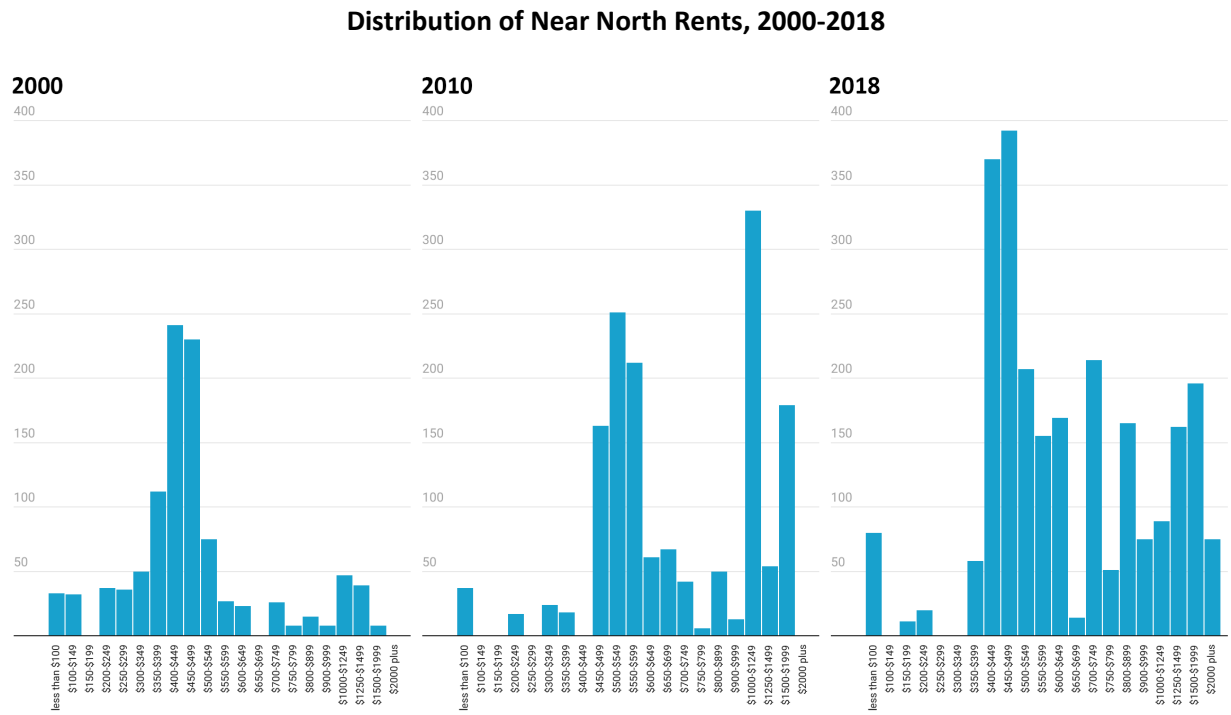
Rents in the Near North were still significantly higher in 2018 than in 2000 across low-, moderate-, and high-cost units, however. The subarea's lower quartile rents increased 23.4 percent over that time, while the median grew slightly faster, at 35.6 percent. The upper limit rose faster still, by $331, or 72 percent.

And compared to Champaign-Urbana's other subareas, the Near North subarea still showed a large rift between its most affordable and most expensive rents. The subarea had second largest disparity between its most expensive and least expensive rents in 2018. The

subarea with the greatest rift was the Campus Core. This suggests the presence of student apartments is associated with a wide range of rental prices, at least in Champaign-Urbana.

How rents are distributed across price points illustrates the underlying causes of Near North's rent fluctuations from 2000 to 2018. Figure 6.15 shows the distribution of Near North's rents in 2000, 2010, and 2018.

Figure 6.15:



Data sources: 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

A large spike in the number of units priced between $1,000 to $1,249, as well as in the $1,500 to $1,999 range, pushed the Near North's upper quartile rents higher between 2000 and 2010. While the subarea only had 47 rental units that cost $1,000 to $1,249 in 2000, it gained 283 more by 2010. A smaller but still significant increase occurred among rentals priced between $1,500 to $1,999. In 2010, only 8 units rented within this price range. By 2010, that rose to 179 units.

Eight years later, the number of units in the $1,000 to $1,249 range had fallen to 89 — still more than in 2000, but far from the 330 in 2010. However, the Near North gained 17 units in the $1,500 to $1,999 range. The number of total units renting for $1,000 or more shot up from 2000 to 2018 as well. Only 94 units cost more than $1,000 in 2000, but 563 did in 2010. By 2018 that number declined slightly to 522.

The major driver of the Near North's lowered median and upper quartile rents between 2010 and 2018 was not due to a substantial decline in the number of high-cost units. Instead, this occurred due to a large influx in more moderately priced ones. This specifically occurred in the $400 to $499 price range. In 2010, the Near North had 163 apartments with rents between $400 to $499. This increased in 2018 to 762 units, driving the subarea's median rents down. Rents within this range fell within Champaign County's least expensive rent quartile.

The changes to rents in the Near North occurred primarily due to housing conditions along North Lincoln Avenue in Urbana, about two miles from the University of Illinois' main quad. This is the location of several suburban-style student apartment complexes marketed toward students, built mostly in the early 2000s. These include ONE Illinois North, ONE Illinois South, the Atrium, Lincoln Place Apartments, The Retreat, and Capstone Quarters.

In-Town: Student Outmigration with Sustained Demand for Rental Housing

Housing Supply

Compared to skyrocketing housing construction in the Campus Core and Near North, In-Town's housing stock has remained more stable. The subarea added 463 units of housing from 2000 to 2018. Table 6.5 provides an overview of tenure and vacancy among In-Town's total housing units from 2000 to 2018.

Table 6.5:

In-Town Housing Units by Tenure and Vacancy, 2000-2018

	Total housing units	Owner-occupied units	Renter-occupied housing	Total vacant units	Vacant, for rent
2000	4,465	1,461	2,735	269	166
2010	4,600	1,390	2,803	407	217
2018	4,928	1,390	3,100	438	207
Percent change:	**10.4%**	**-4.9%**	**13.3%**	**62.8%**	**24.7%**

Data sources: 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

Between 2000 and 2018 In-Town gained 365 units of renter-occupied housing. Only the Northeast and Southeast added fewer renter-occupied over that period. Most of those units entered the market over the past decade — the subarea's renter-occupied units only increased by 2.5 percent from 2000 to 2010. This puts In-Town on par with the Campus Core and the Southeast, two other subareas that saw slow growth in renter-occupied housing before 2010.

However, between 2010 and 2018 an additional 297 renter-occupied units came online, representing 10.6 percent growth. This meant In-Town filled new rental units at a faster pace than the Campus Core. Still, only the Northeast, with its loss of renter-occupied housing, saw slower growth in renter-occupied units that decade.

Considering occupied and vacant units for rent together, In-Town gained 406 rental properties from 2000 to 2018, an increase of 14 percent. The number of unleased units, specifically, grew by 24.7 percent over that period.

In 2000 and 2010 In-Town's rental vacancy rate was higher than in the tight, student-centric market in the Campus Core. In 2010, In-Town's rental vacancy rate was 7.1 percent. However, by 2018, In-Town had Champaign-Urbana's lowest rental vacancy rate at 6.1 percent. That said, In-Town's total count of vacant units increased by 169 from 2000 to 2018, but many of those units were unoccupied but not available for rent.

The owner market in In-Town remained even tighter than the subarea's rental market. The subarea's total number of owner-occupied units remained unchanged between 2010 and 2018. While 29 and 28 units were available for sale in 2000 and 2010, respectively, no units were on the market in 2018. This occurred as the subarea lost a handful of homeowner-occupied units between 2000 and 2018.

Relative Affordability Compared with Student Neighborhoods

Like in most other subareas, In-Town's rents at the low, median, and high end of the spectrum have risen steadily. However, In-Town's rents have been consistently slightly lower than Champaign County's rents for all three decades in this analysis. In addition, the subarea has not experienced a dramatic hollowing out of its share of the county's cheapest rental units. It has increased its number of high-cost units, but well more than half of its apartments are affordable compared to Champaign County's median rent.

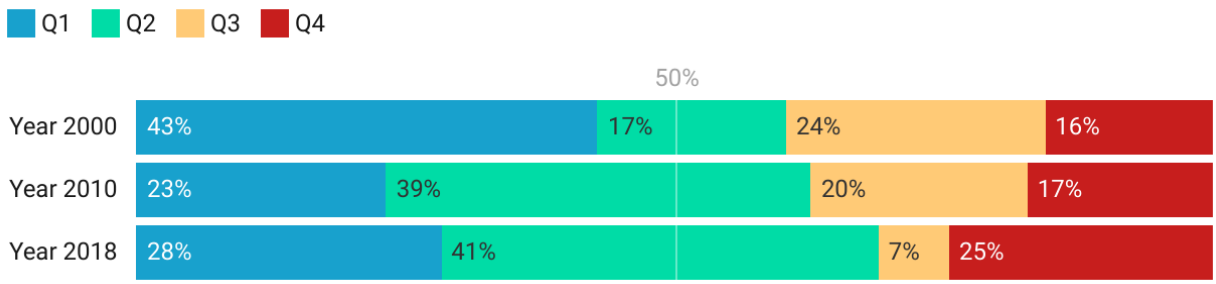
The In-Town subarea, despite its location adjacent to the Campus Core, has seen only a 5.8 percent increase in its student population from 2000 to 2018, making its student population stable compared with other areas of Champaign-Urbana. This small rise in students is due entirely to a net gain in graduate student residents — 342 more graduate students lived in In-Town in 2018 than in 2000. This suggests graduate students are a key submarket within In-Town's housing market. In contrast, the subarea experienced a net loss of 221 undergraduate residents during the same period. Because of this, an influx of undergraduate renters is not a probable explanation for changes in the cost of rental housing.

Although the University of Illinois' rising undergraduate enrollment has not driven demand for housing in In-Town, the subarea has still experienced sustained interest in rental housing. Between 2000 and 2010, the subarea experienced moderate gains in its share of renter households, gaining 365. That represents a 13.3 percent increase, slightly faster than growth in the Campus Core. However, the Near North, West, and Northeast subareas all outpace In-Town's growth in renter households. The subarea has always been popular with renters — 64.9 percent of households rented in 2000, the second highest proportion of any subarea. By 2018, this had risen to 29 percent. That year, both the Campus Core and Near North had a higher percentage of renters compared to homeowners.

As In-Town's renter-occupied housing increased, the subarea experienced a loss of units at the lowest price points and an increase in high-cost units. Still, the subarea had a greater percentage of units costing less than the area average. Figure 6.16 shows the percentage of In-Town rental units within each county quartile in 2000, 2010, and 2018.

Figure 6.16:

Percentage of In-Town Rental Units Within Champaign County Rent Quartiles, 2000-2018



Data sources: 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

The In-Town subarea has seen an increasing percentage of rental units priced below Champaign County's median rent from 2000 to 2018. This may be due to prices in In-Town rising more slowly than the county overall. Sixty percent of In-Town rents were lower than Champaign County's median of $455 in 2000. This ticked up by two more percentage points in 2010. By 2018, 69 percent of rental units cost less than $723, the county's median rent for that year.

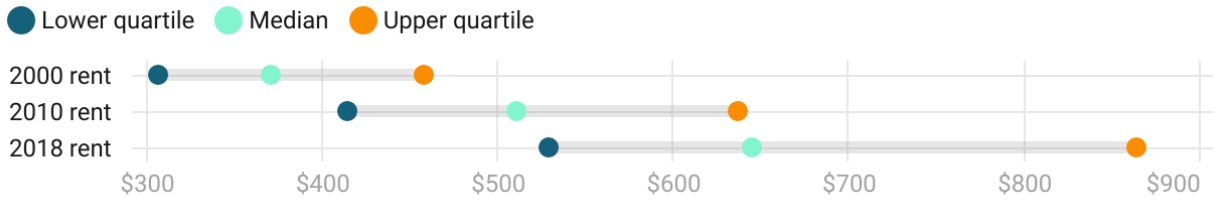
However, as the proportion of units renting below the median grew, this was not because of growth in units in the county's most affordable rent quartile. From 2000 to 2018 In-Town's share of units within Champaign County's lowest quartile dropped 15 percentage points, from 43 percent to 28 percent. At the same time, the subarea has seen a slight uptick in the percentage of units falling within Champaign County's most expensive quartile of rents. By 2018, 25 percent

of In-Town units rented within that quartile — a higher percentage than all other subareas except the Campus Core and the West. Those subareas were also the only two with higher percentages of rents within the county's least expensive rent quartile.

Rents at all price points have risen in In-Town from 2000 to 2018. Still, the subarea's lower quartile, median, and upper quartile rents have consistently been slightly less expensive than those for Champaign County at large. Figure 6.17 shows how In Town rent quartiles have changed from 2000 to 2018.

Figure 6.17:

In-Town Rent Quartiles, 2000-2018



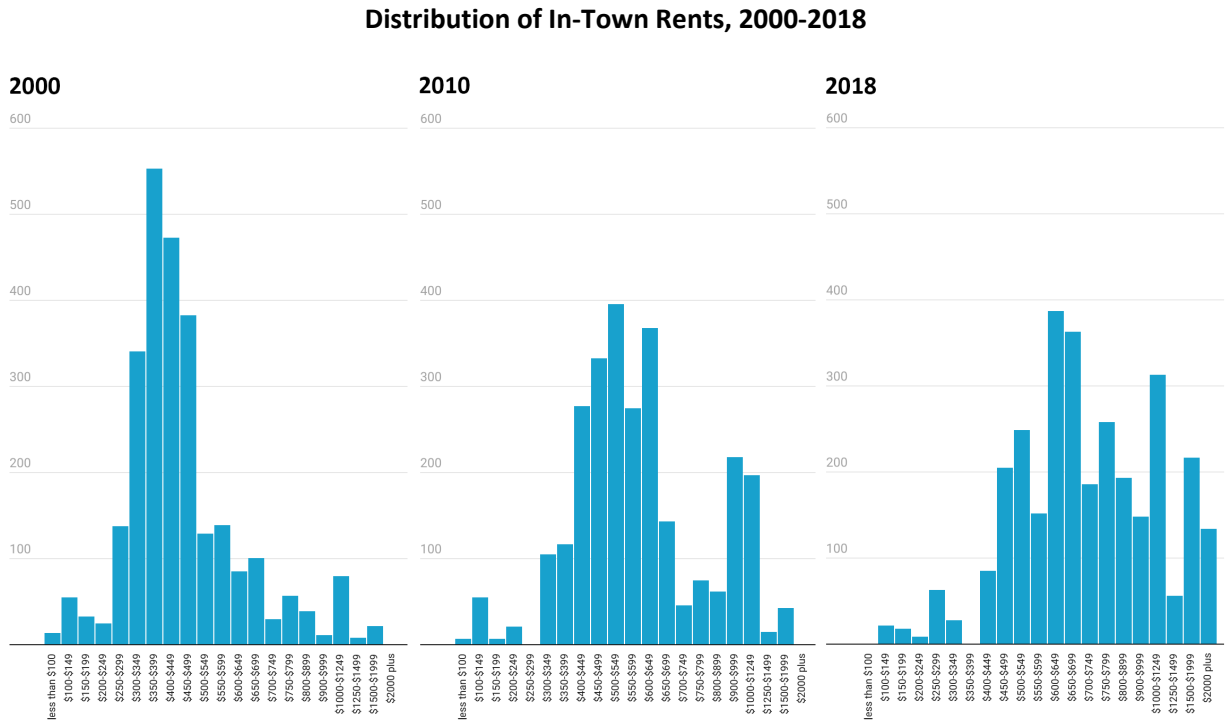
Data sources: 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

In 2000, In-Town's median rent was $84 less than Champaign County's. By 2010, its median was still $88 higher. However, the subarea's most and least expensive rents each cost less than the countywide median. That year, In-Town's upper quartile was $149 lower, and its lower quartile was $58 lower. By 2018, In-Town's rents remained affordable compared to Champaign County at all price points. The subarea's median, lower quartile, and upper quartile rents cost $78, $39, and $82 less than the county.

Rents rose fastest at the higher end of the price scale. The tract's upper rent quartile rose by $406 from 2000 to 2018, an 88.5 percent increase. This rise in upper quartile rents was the main factor driving the widening disparity between In-Town's lowest- and highest-cost rents. In 2000, $152 separated In-Town's least expensive rent quartile from its most expensive one. By 2018, that gap more than doubled to $335. This is the second largest jump in the disparity between high and low rents of any subarea in Champaign Urbana. Only the Near North saw a larger absolute increase in the difference between its upper and lower rent quartiles from 2000 to 2018. In addition, only the relatively student-centric Campus Core and Near North had greater discrepancies between their least and most expensive rentals.

The distribution of rents in In-Town shows how the cost of units has spread to include rentals at more price points. Figure 6.18 shows the distribution of the In-Town subarea's rents in 2000, 2010, and 2018.

Figure 6.18:



Data sources: 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

In 2000, In-Town's rental units were clustered in the $300 to $499 price range. In total, 1,750 of the subarea's 2,735 renter-occupied units rented in that range. However, in the decades that followed the cost of rent began to skew slightly more expensive. In 2010, more than half of In-Town's rentals cost between $300 and $649. However, a second cluster of rents also cropped up between $900 to $1,249. In total, 415 units fell within this price range. By 2018, 92.2 percent of In-Town's rentals cost more than $450.

Rents grew fastest in the area of In-Town that gained popularity with students over the decades, comprised of the census tract located just west of the University of Illinois' athletic campus and south of Champaign's downtown. For more on tract-level trends outside the Campus Core, see Appendix D.

Southeast: A Housing Crunch for Student Renters

Housing Supply

The Southeast was the only subarea in Champaign-Urbana to experience a decrease in renter-occupied units between 2000 and 2018. Over that period, the subarea lost 221 such units. At the same time, it gained 1,378 total units of housing — more than In-Town and the Northeast,

but fewer than the Near North, Campus Core, and West. Table 6.6 shows the Southeast's total housing units broken down by tenure and occupancy status between 2000 and 2018.

Table 6.6:

Southeast Housing Units by Tenure and Vacancy, 2000-2018

	Total housing units	Owner-occupied units	Renter-occupied housing	Total vacant units	Vacant, for rent
2000	11,848	5,438	5,887	523	300
2010	13,508	5,939	6,036	1,533	654
2018	13,226	5,911	5,666	1,649	726
Percent change:	**11.6%**	**8.7%**	**-3.8%**	**215.3%**	**142.0%**

Data sources: 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

As the subarea has lost renter-occupied units, it has gained owner-occupied housing. However, its share of vacant units has risen faster. The Southeast's share of vacant units more than tripled between 2000 and 2018, as the subarea added 1,126 vacant units. By 2018, only the West had more vacant units. In the Southeast, the majority were not unleased rentals. In 2000, 57.4 percent of vacant units were for rent. However, this dropped until 2018, when only 44 percent of vacant units were available for rent. Still, the subarea gained 426 vacant rentals between 2000 and 2018. That was more than any subarea other than the Campus Core.

As the number of vacant units ticked up, so did the subarea's rental vacancy rate. Of renter-occupied and vacant units for rent combined, only 4.8 percent were vacant for rent in 2000. By 2010, 9.8 percent of rental units were unoccupied and available for rent. The rental market grew even softer by 2018, when 11.6 percent of rental units were vacant for rent. Only the Near North had higher rental vacancy that year.

Rising Affordability as Student Rental Demand Remains Stable

Although rents in the Southeast have increased consistently across each of the subarea's rent quartiles, it is increasingly affordable compared to Champaign County as a whole. Considering the subarea's relatively stable demographics from 2000 to 2018, these changes are likely due to factors in Champaign-Urbana's rental market at large.

Compared with other Champaign-Urbana subareas, the Southeast is a unique example of a subarea with a significant but stable student population. The subarea's student population has remained constant over time, both in terms of the absolute number of student residents as well

as their share of the total population. Between 2000 and 2018 the subarea's student population only grew by 14 students. Due to margins of error in American Community Survey estimates, this change is negligible. Students were 23.4 percent of Southeast's total population. By 2018, this had fallen slightly to 22.1. Therefore, the student population in the Southeast was among Champaign-Urbana's most stable.

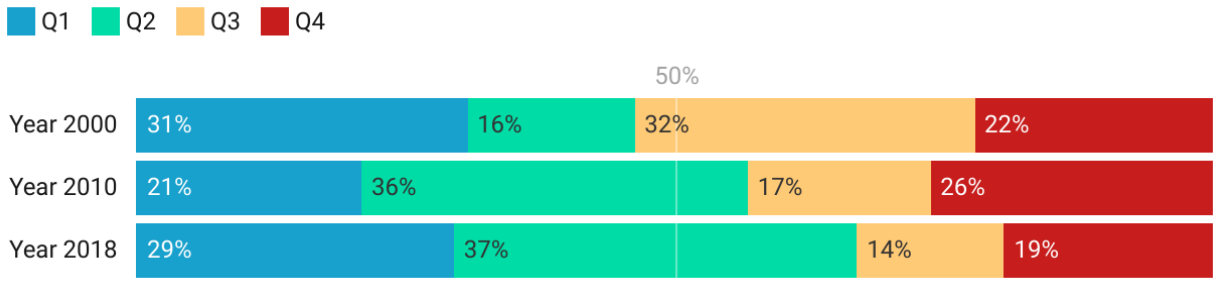
Where the subarea has gained population, this has occurred among the nonstudent population, which grew by 8 percent from 2000 to 2019. Overall, the Southeast had 1,536 more residents in 2018 than it did in 2000, a 6.2 percent increase. However, this population increase has not occurred due to an increase in renters. The subarea lost 221 renter households from 2000 to 2018, representing a 3.8 decline. To counter this, the subarea gained 252 total households over the same period, meaning increasing numbers of owner households acted as a counterweight to the declining number of renter households.

Because of the subarea's relative stability, changes in rents in the Southeast are not due to large population shifts among students and nonstudents. Any shift in the cost of rentals is also not due to growing demand for rental housing within the subarea. The Southeast had the third highest number of rentals in all three study years, after the West and Campus Core.

Compared to Champaign County as a whole, the Southeast's rents have become more affordable over the past 20 years. More than half of the Southeast's rental units had rents above Champaign County's median of $455 in 2000. However, in 2010 and 2018 more than half of rentals cost less than the countywide median. Figure 6.19 shows the percentage of rental units in the Southeast within each Champaign County rent quartile in 2000, 2010, and 2018.

Figure 6.19:

Percentage of Southeast Rental Units Within Champaign County Rent Quartiles, 2000-2018



Data sources: 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

Two-thirds of the Southeast's rental units cost less than the Champaign median in 2018, representing a 19-percentage point increase from 2000. Growth in the number of units within the

County's second rent quartile has driven this trend. The Southeast picked up more than 1,000 units priced within the second quartile from 2000 to 2018. At the same time, the share of units within the third quartile — those above Champaign County's median but below its most expensive quartile — has shrunk steadily. That quartile lost 1,114 units between 2000 and 2018, a decrease of 61.7 percent.

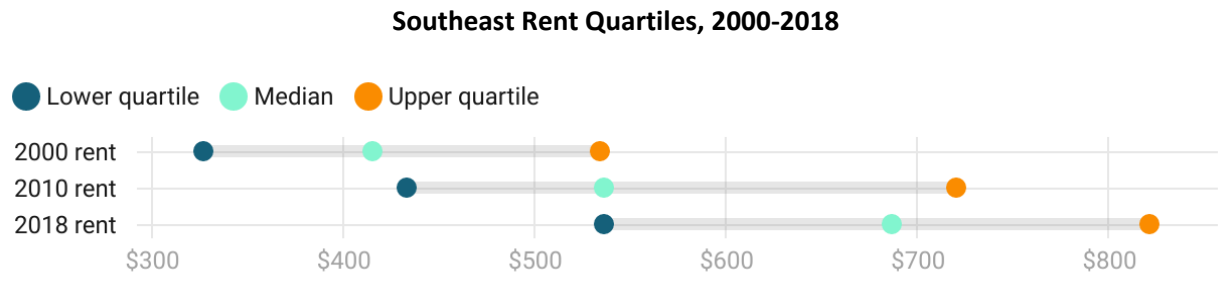
This leakage of units from the third quartile to the second represents the most significant change for rents in the Southeast compared to Champaign County as a whole. Taken together, the share of rentals within the two rent quartiles directly above and below the countywide mean has remained stable. In 2000, 48 percent of Southeast's rental units were within the middle two quartiles. That grew to 53 percent in 2010 and then inched down to 51 percent in 2018.

As for the share of units within the most and least expensive units, the Southeast lost units within the bottom rent quartile and gained them within the top from 2000 to 2010. This upheaval in the Southeast's share of the highest and lowest rents was short-lived, however. The subarea's share of units within these quartiles stabilized. By 2018, the Southeast had similar percentages of upper and lower quartile rents compared to 2000.

Between 2000 and 2010, the Southeast experienced a 34.1 percent decline in the number of units within the lowest rent quartile. At the same time, the upper quartile saw a 14.9 percent increase. Between 2010 and 2018, the Subarea experienced a 29 percent increase in its share of least expensive units. It also saw a 32.6 percent decrease in its most expensive rentals. This resulted in the share of units within the least expensive rent quartile falling ten percentage points from 2000 to 2010, but then rose again by eight percentage points. Those within the most expensive rents rose by four percentage points between 2000 and 2010 before falling seven points the following decade. The Southeast gained a modest 266 units within the cheapest quartile from 2000 to 2018. At the same time, it lost about the same number of units — 286 — from the county's top rent quartile.

Increases in rents countywide are not solely responsible for bumping the Southeast's housing units into lower rent quartiles. The subarea itself has also experienced steady increases in its rents. Figure 6.20 shows rent quartiles for units within the Southeast have shifted from 2000 to 2018.

Figure 6.20:



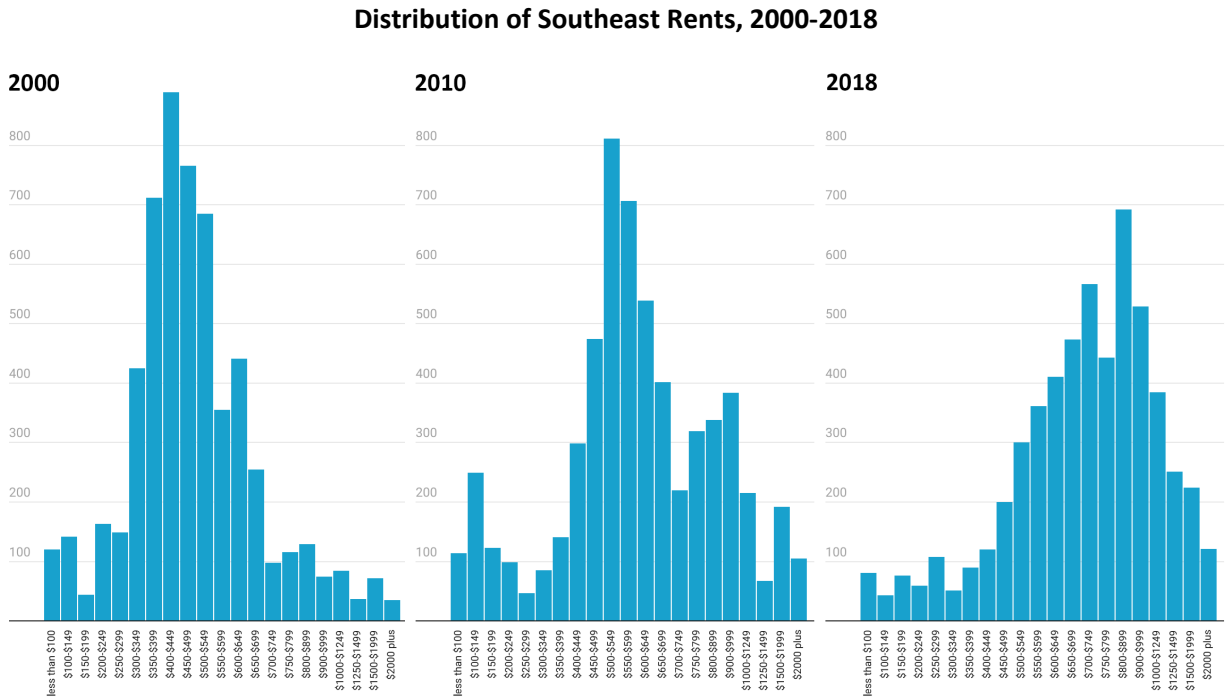
Data sources: 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

The Southeast's rent quartiles have mostly increased in cost at similar rates to each other. For example, the upper limit to the subarea's lower rent quartile in 2010 rose to the level of its median in 2000. This happened again in 2018 – the lower quartile for that year is nearly equal to the median for the decade prior. At the same time, the Southeast's 2010 median rent was equal to the lower limit of its upper rent quartile from 2000.

From 2000 to 2018, the Southeast's median rent increased at a faster rate than its lower or upper rent quartiles. The median grew 65.1 percent. The lower quartile only increased slightly slower, at 63.7 percent and the upper quartile grew the slowest, by 53.6 percent. However, the most expensive rent quartile saw the greatest dollar amount increase. The highest rents in the Southeast were $287 more expensive in 2018 than in 2000. The median rent was $271 more and lower quartile prices grew by $209. The largest increases for all rent quartiles occurred between 2000 and 2010, with rent increases slowing from 2010 to 2018. Because of this, the Southeast's price difference between lower quartile and upper quartile rents did not dramatically increase like it did in the Campus Core and Near North.

Figure 6.21 shows the distribution of rents in the Southeast for 2000, 2010, and 2018.

Figure 6.21:



Data sources: 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

In 2000, rents in the Southeast clustered between $300 and $649. That year, more than 4,500 of the Southeast's 5,887 renter-occupied units were priced in that range. The most units — 889 — cost between $400 and $449. However, 120 units cost less than $100, and 35 cost more than $2,000 that year, indicating a wide spread in rental costs.

Over the next decade, most units rented for between $400 and $699, slightly more expensive than in 2000. In 2010, 811 units cost between $500 and $549, the most of any $50 range. But the subarea added both low- and high-cost units. That year, 579 units went for $1,000 or more a month, up from 228 the decade before. On the other end of the affordability scale, 585 units cost less than $250.

By 2018 rents in the Southeast skewed toward higher prices. The most common rent asked was between $800 and $899 that year — 692 paid rents in that range. That year, 981 units cost at least $1,000. Only 259 units cost less than $250.

The Southeast neighborhoods most popular with students have typically had relatively low levels of rental vacancies. Those neighborhoods with the highest concentrations of students were also the subarea's most expensive. In addition, neighborhoods popular experienced a widening rift between upper- and lower-quartile rent prices between 2000 and 2018. For a more

detailed analysis of neighborhood-level rent trends in the Southeast and other subareas, see Appendix D.

Northeast: Falling Student Population and Stagnant Rents

Housing Supply

The Northeast, along with the In-Town subarea, added new housing units at the slowest rate of any subarea in Champaign Urbana between 2000 and 2018. Most of the growth in housing units occurred among rental units, with the subarea's number of owner-occupied units remaining relatively stable. Table 6.7 details the Northeast's total housing units by tenure and vacancy status in 2000, 2010, and 2018.

Table 6.7:

Northeast Housing Units by Tenure and Vacancy, 2000-2018

	Total housing units	Owner-occupied units	Renter-occupied housing	Total vacant units	Vacant, for rent
2000	3,733	1,880	1,372	481	231
2010	3,853	1,955	1,396	502	191
2018	4,120	1,912	1,897	311	161
Percent change:	**10.4%**	**1.7%**	**38.3%**	**-35.3%**	**-30.3%**

Data sources: 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

The Northeast is the only subarea that has seen its total number of vacant housing units fall between 2000 and 2018. In addition, the subarea's vacant units for rent have also decreased by nearly a third.

The Northeast gained 525 renter-occupied units from 2000 to 2018. This is an even greater gain than the subarea's 387 increase in total housing units. Considering the subarea's falling share of vacant units, this suggests some renters are moving into previously unoccupied units. It also could indicate that some owner-occupied units converted to rentals. Although the subarea gained 75 owner-occupied units between 2000 and 2010, it lost a handful over the next decade. This occurred as the subarea gained 204 vacant homes for sale between 2010 and 2018.

Even as the subarea has gained rental housing over the decades, its vacancy rate has declined. In 2010, the Northeast's rental vacancy rate was 11.7 percent. This declined to 7.8

percent by 2018, slightly lower than Champaign County's rental vacancy rate of 9.8 percent. This indicates a relatively healthy rental market in the Northeast.

Rents

The Northeast is the subarea that added the largest percentage of housing units below Champaign County's median rent from 2000 to 2018. Compared to the county, rents in the subarea are generally less expensive. Compared to other subareas, the Northeast also had the second smallest percentage of students compared to its total population in 2000 and 2010. Only the West was home to a smaller share of student residents. By 2018, students made up 8.3 percent of the subarea's total population, the lowest of any subarea.

The Northeast has experienced a 15.8 percent decrease in its student population from 2000 to 2018. In absolute terms, the subarea lost 121 student residents. This loss occurred among the subarea's graduate student population, which decreased by 157 people over that period.

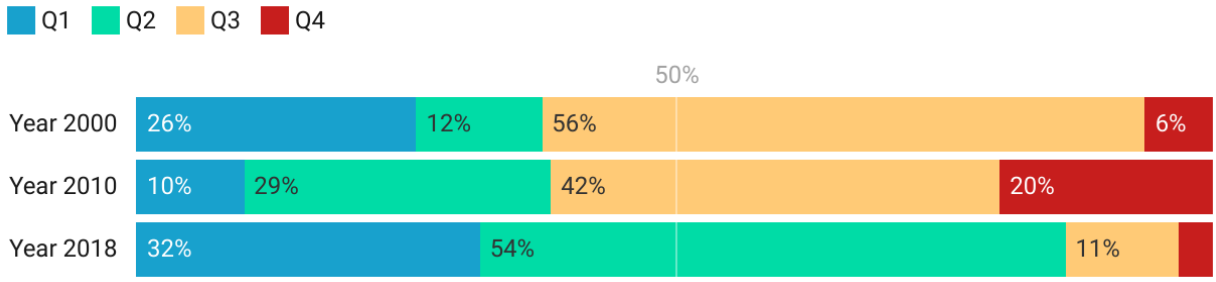
However, the subarea has also experienced growth in its overall population, gaining 726 people from 2000 to 2018, a 10.3 percent increase. This explains the subarea's declining percentage of students. Nearly 11 percent of the Northeast's residents were students in 2000, but by 2018 that had fallen to just over 8 percent.

As the Northeast gained population, it also gained renter households. In absolute terms, the subarea added 525 renter households between 2000 and 2018, a 38.3 percent increase. This growth accounts for the majority of new households of any tenure in the Northeast. The subarea picked up 557 households overall, meaning 94.3 percent of new households rented their homes. Nearly half of households in the subarea rented in 2018. This makes the Northeast the subarea with the third lowest percentage of renter households, after the West and Southeast.

Compared to Champaign County overall, the Northeast has experienced the most dramatic increase in lower-cost rental housing of any subarea. Figure 6.22 shows the percentage of rental units in the Northeast within Champaign County's rent quartiles in 2000, 2010, and 2018.

Figure 6.22:

Percentage of Northeast Rental Units Within Champaign County Rent Quartiles, 2000-2018



Data sources: 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

In both 2000 and 2010, 62 percent of the Northeast's rental units cost more than Champaign County's median rent. However, by 2018 a large majority — 86 percent — of the subarea's rentals cost less than the countywide median. This is the largest proportion of any subarea in Champaign-Urbana.

In 2000, the Near North was home to only 3.9 percent of Champaign-Urbana rentals within the county's bottom rent quartile. However, by 2018 this jumped to 16 percent. Other subareas, such as the West, Campus Core, and Southeast, still had larger shares of the lowest-cost units. However, these subareas also had larger populations and greater numbers of renter households than the Near North.

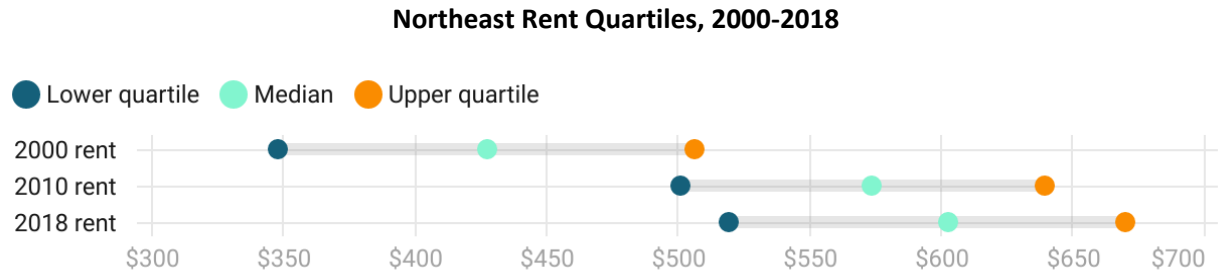
Only 3 percent of the Northeast's rentals fell within Champaign County's most expensive rent quartile in 2018. This made the Northeast the subarea with the smallest percentage of units within the upper quartile. Because of the Northeast's small number of rental units, this meant 59 units were more expensive than $947, the county's upper quartile limit that year. The Northeast's share of the county's highest-priced rental housing has always been low. At 6 percent of rentals in 2000, the Northeast had the smallest percentage of high-cost rents of any subarea. By 2010, this grew to 20 percent of the subarea's rental units. However, only the In-Town subarea had a smaller percentage of top quartile rents.

The Northeast's proportion of low-cost rental housing has fluctuated as affordability has risen. About a quarter of the subarea's rentals were within Champaign County's least expensive rent quartile in 2000. That shrank by 16 percentage points by 2010, when housing units in that quartile accounted for a smaller share than each of the three other quartiles. But by 2018 nearly a third of the Northeast's rentals had rents within the county's least expensive rent quartile. Of all Champaign-Urbana subareas, only the Near North had a higher percentage of the county's cheapest units. Because of the Northeast's small number of renter households, this was not true

in absolute terms. The Northeast had 602 units within Champaign County's least expensive rent quartile in 2018, but this was a smaller count than any other subarea.

The Northeast had lower rents than Champaign County as a whole in 2000, 2010, and 2018. Figure 6.23 shows changes in the Northeast's rent quartiles from 2000 to 2018.

Figure 6.23:



Data sources: 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

Rents in the Northeast have remained more affordable than in Champaign County generally. The Northeast's lower quartile, median, and upper quartiles rents were all less expensive than those same values for the county in 2000. The discrepancy was highest for the subarea's most expensive rentals — the Northeast's upper rent quartile was $82 less than Champaign County's that year.

By 2010, the subarea's median and upper quartile rents were each lower than Champaign County's, with upper quartile costs $147 less. The lower rent quartile was slightly more expensive than Champaign County's that year. However, by 2018 the lower quartile was $49 less. The median and upper quartile rents for the Northeast were even more affordable compared to the county. The median was $120 cheaper, and the upper quartile rent cost $277 less.

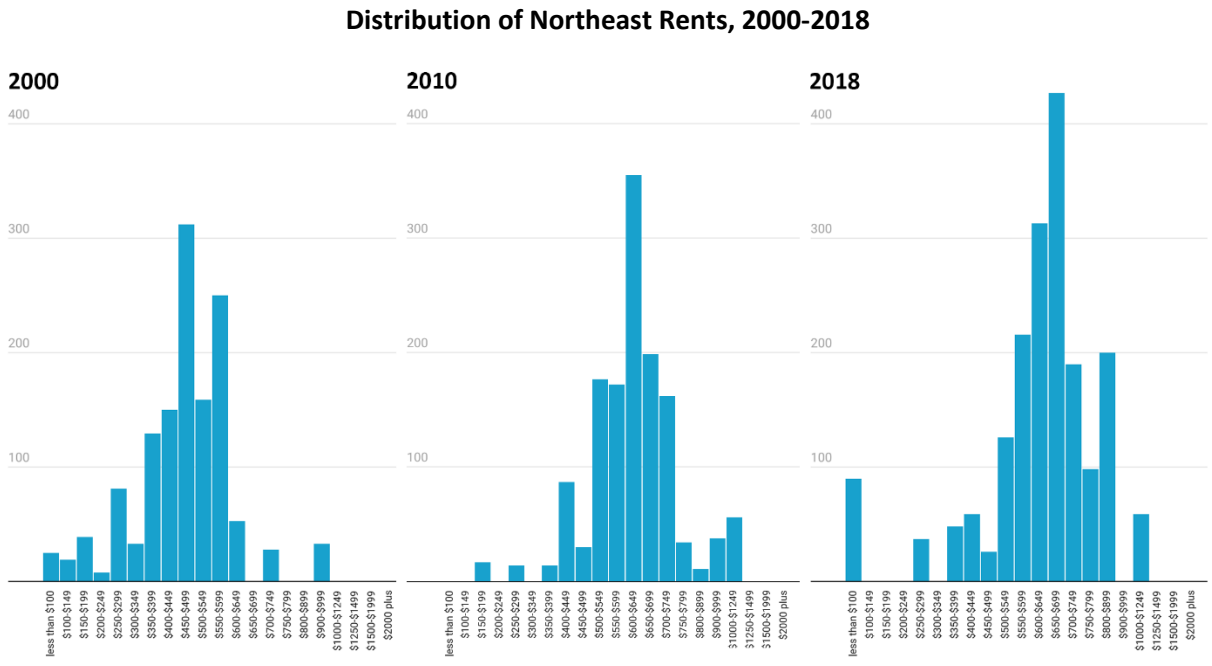
The Northeast's largest increase in rents at all price points occurred between 2000 and 2010. The subarea's lower limit to its most expensive rent quartile in 2000 was about the same as the upper limit to its least expensive rent quartile in 2010. Between 2000 and 2018 rent prices for its lower quartile and median each increased by about $150, while its upper rent quartile grew by about $130.

But over the next decade rents in the Northeast remained flat. The Northeast was the only subarea within Champaign-Urbana for which this was the case. All other subareas saw upper quartile rents increase by about $88, but for the Northeast this increase was only $30. Median rents tended to grow as well, in most cases by more than $120. The two exceptions were the Northeast, where the median rent rose $29, and the Near North, which saw its median rent decrease slightly.

Except for neighboring Near North, no subarea in Champaign-Urbana had a lower median rent than the Northeast in 2018. In addition, the Near North was the only subarea with a less expensive lower rent quartile than the Northeast. The subarea's upper quartile cutoff was also lower than any other subarea that year. This represents a shift from 2000 and 2010, when the Northeast's lower quartile, median, and upper quartile rents were each priced higher than at least three other subareas.

Over the decades the Northeast's rents have crept up. However, increases in rents have been modest and the subarea also picked up a handful of very low rents by 2018. Figure 6.24 shows the distribution of the Northeast subarea's rents in 2000, 2010, and 2018.

Figure 6.24:



Data sources: 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

The distribution of rents went from a slightly left-skewed distribution to an even distribution, and then to a slightly right-skewed distribution with several low outliers. In 2000, about three-quarters of rentals in the subarea cost between $350 and $500. That year, no units in the Northeast rented for $1,000 or more. The most expensive rentals cost between $900 and $999. Only 61 units — about 4.6 percent of all rental housing in the subarea — rented for more than $650.

By 2010, 78 percent of rentals in the Northeast cost between $500 and $749. Fifty-six units pushed past the $1,000 price point that year. However, no unit cost more than $1,249.

About the same number of units — 59 — cost at least $1,000 in 2018. At the same time, 83.1 percent of the area's rents were between $500 and $899. For the second consecutive decade, no Northeast unit cost more than $1,249. The subarea also gained 90 rentals that cost less than $100. In the decade prior, the cheapest rents cost between $150 and $199, with only 17 rental units within that price range.

The West

Housing Supply

The West added the most units of housing of any subarea in Champaign-Urbana between 2000 and 2018. Furthermore, the subarea also saw the highest increases in owner-occupied and renter-occupied units. However, from 2000 to 2018 the West also more than doubled its vacant housing units. Table 6.8 shows how the West's housing units break down across owner-occupied, renter-occupied, and vacant units in 2000, 2010, and 2018.

Table 6.8:

West Housing Units by Tenure and Vacancy, 2000-2018

	Total housing units	Owner-occupied units	Renter-occupied housing	Total vacant units	Vacant, for rent
2000	22,440	14,194	7,226	1,020	441
2010	25,913	15,460	8,704	1,749	726
2018	29,441	16,161	11,001	2,279	738
Percent change:	**31.2%**	**13.9%**	**52.2%**	**123.4%**	**67.3%**

Data sources: 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

The West added about 3,500 units of housing from 2000 to 2010 and then again between 2010 and 2018. Growth in the number of owner-occupied housing has slowed in the past decade. While the West gained 1,266 units of owner-occupied housing between 2000 and 2010, an 8.9 percent increase, it only added 701 over the next decade. Because of West's large number of owner-occupied units, that came to only 4.5 percent growth from 2010 to 2018.

The subarea added nearly twice as many renter-occupied as owner-occupied units between 2000 and 2018. Over that period, the West gained 3,775 units of renter-occupied housing. In addition, the subarea added rental units at a faster rate from 2010 to 2018 compared to the decade prior. From 2000 to 2010, the West's total renter-occupied units rose by 1,478, a

20.5 percent increase. From 2010 to 2018 the subarea gained an additional 2,297 units, representing a growth of 26.3 percent.

Although the West has more vacant units of housing than any other subarea, compared to its larger overall housing stock vacancy rates are still relatively low. However, vacancy has risen. In 2018, 7.7 percent of all housing units were vacant. In 2000, 4.5 percent of all units were vacant.

In 2000, 5.8 percent of rental units sat unleased.[13] As a result, the West had higher levels of rental vacancies than the Campus Core and Southeast, was about even with In-Town, and had a higher vacancy rate than the Northeast and Near North.

The subarea's percentage of vacant units for rent compared to all rentals increased to 7.5 percent in 2010. However, this was the lowest vacancy of any Champaign-Urbana subarea that year. This indicates that rental demand in the West was relatively strong. By 2018, 6.2 percent of the subarea's total rental units were vacant but available for rent. Only the In-Town subarea had a comparable rental vacancy rate that year. All other subareas had a higher percentage of rental units that went unleased. Therefore, demand for rental housing is strong in the West, despite the subarea's relatively high absolute number of vacant units.

Steadily Increasing Rents with Few Student Renters

Like other areas of Champaign-Urbana, rents have increased at all price points in the West. However, students do not appear to be an influential submarket in this subarea. Over the past two decades student renters have remained a minority in the West. In 2000, 9.4 percent of its residents were students. By 2010 this had risen slightly to 10.1 percent before falling to 8.4 percent in 2018. In absolute terms the West gained about 598 students between 2000 and 2018, 414 of whom were undergraduates. However, these may not be University of Illinois students — the West is home to Parkland Community College, which awards associate degrees.

The subarea's large overall population growth has far outstripped the increase in students. The West experienced the most dramatic population increase of any subarea in Champaign-Urbana, picking up 13,360 residents between 2000 and 2018. Because the subarea is also the most populous, this represents a 26.8 percent increase. Only the Near North, with its smaller total population, grew faster. The West gained 5,741 households from 1000 to 2018. Of

[13] American Community Survey estimates for 2006-2010 and 2014-2018 provide a more granular breakdown of vacancy than the 2000 decennial census. Vacancy rates for American Community Survey years (2010 and 2018) take the count of vacant units for rent compared to the total number of occupied rental units, vacant units for rent, and rented but unoccupied units. Vacancy rates for 2000 consist of vacant units for rent divided by occupied rental units and vacant units for rent combined. The 2000 decennial census included a count of units that were rented or sold, but not occupied. However, the U.S. Census Bureau did not disaggregate these units by tenure. Based on the small number of rented or sold, not occupied units, the discrepancy should be insignificant.

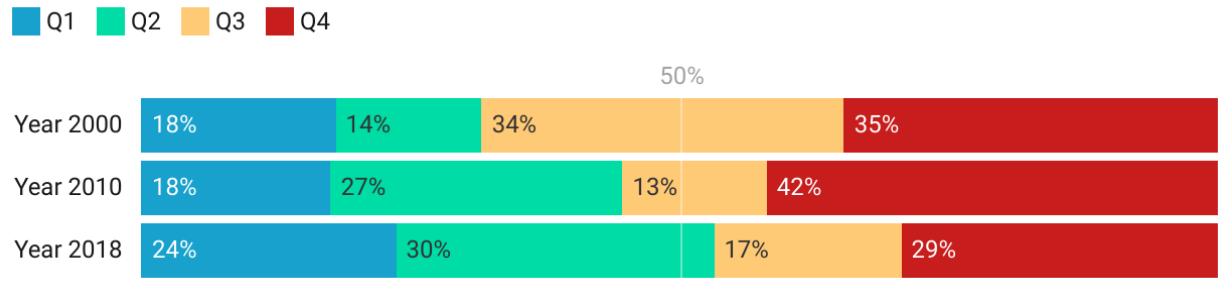
those, 65.7 were renter households. Its renter households alone grew by 52.2 percent, representing an addition of 3,775 households. Still, the subarea had the smallest percentage of renter households in Champaign-Urbana in 2018.

Taken together, this shows demand for rental housing in the West has increased, although student renters are not driving this trend. As a result, the West is a good representation of a strong rental market not driven by student housing. The area is a stronghold of the nonstudent submarket instead.

Rents in the West show some differences from those in more student-heavy areas of Champaign-Urbana. Figure 6.25 shows the percentage of the West subarea's rental units that fell within Champaign County's rent quartiles in 2000, 2010, and 2018.

Figure 6.25:

Percentage of West Rental Units Within Champaign County Rent Quartiles, 2000-2018



Data sources: 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

The West's share of units costing more than the countywide median has steadily fallen from 2000 to 2018. In 2000 — when renter households made up about a third of the subarea's total households, a large — a large majority of rental units cost more than the countywide median. That year, 69 percent of rentals in the West cost more than Champaign County's median rent of $455. By 2010 that share fell to 55 percent. By 2018, the number of rental units in the top two rent quartiles dipped below half for the first time at 43 percent.

This stands in contrast to the Campus Core and Near North — areas popular with students. Those subareas both saw their shares of rents above the county median jump up from 2000 to 2010, before dropping down again from 2010 to 2018. The other three Champaign-Urbana subareas each saw their shares of housing in the top two rent quartiles decrease from 2000 to 2018, although the rates at which this happened were different than in the West. Overall, the West's total units priced above Champaign County's median rent fell by 245 units, or 5.1

percent. This shows that additional units in the lowest two rent quartiles drove the decline in the most expensive units, rather than a significant drop in the number of high-price rentals.

Compared with other subareas, the West has also accumulated units within the county's least expensive rent quartile. In 2000, the subarea was home to 16 percent of Champaign-Urbana's units priced within the County's lower rent quartile. But by 2010, this had grown to 29 percent. By 2018, 28 percent of Champaign-Urbana's lower quartile units were in the West. This has occurred as the Campus Core, Near North, and Southeast's share of Champaign-Urbana's lowest cost units fell between 2000 and 2010.

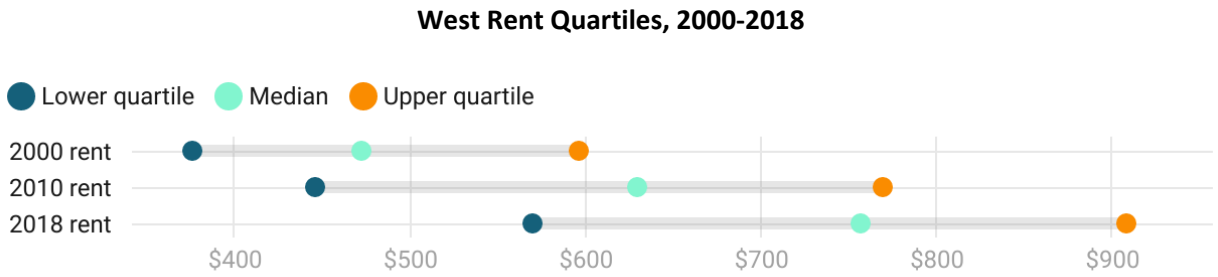
At the same time, the West retained a large proportion of rental units in the most expensive quartile compared to other subareas. Compared to other subareas the West's absolute share of Champaign-Urbana's units in the county's upper rent quartile has remained constant, falling between 38 and 39 percent. In relative terms, the West also had the highest proportion of units within the top quartile compared to its total housing stock every year except 2010. That year the Near North was the only subarea with a greater percentage of its units within the most expensive quartile. Forty-four percent of Near North's fell within that quartile compared to 42 percent in the West.

This could be partially due to the housing stock in the West. Although the subarea includes apartment complexes constructed on Champaign-Urbana's fringe, the West also includes a large share of detached, single-family homes on larger lots. These homes may rent for higher prices than apartments in multifamily buildings.

In addition, many apartment complexes built on the fringe of Champaign came online from 2010 on. These include Hunters Pond, Nantucket Cove, The Legends Apartments, Windsor West, and others. Typically, units within these complexes also rent for more than Champaign County's median. One-bedroom apartments at Hunters Pond, for example, cost $840 and more as of April 2021 (Hunters Pond Apartment Homes, 2021). In 2018, this would have placed these units above the median rents of $723. Two-bedroom units at Nantucket Cove start at $1,069, within 2018's most expensive rent quartile. At Windsor West, the least expensive one-bedroom unit costs $1,080 (Windsor West, 2021). But older complexes command smaller rents. For example, a one-bedroom at Westgate apartments cost $590 or more in April 2021, which would put this complex's units in the cheapest rent quartile in 2018 (Westgate, 2021). That complex has existed since the 1970s (City of Champaign Department of Planning, 2020; Champaign County GIS Consortium, 2021).

Within the subarea, rents have risen steadily. The subarea has seen its lower, median, and upper quartile rents climb from 2000 to 2018. Figure 6.26 shows how the West's rent quartiles have shifted over that period.

Figure 6.26:



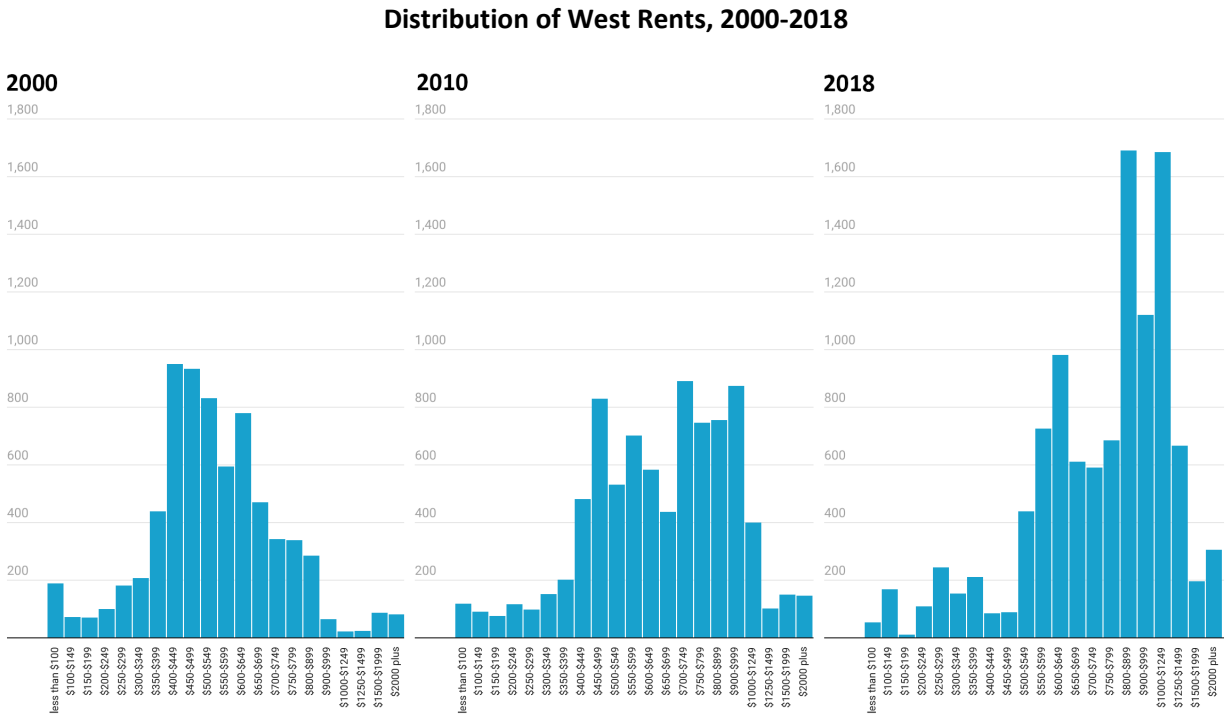
Data sources: 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

The West's median rent grew faster than Champaign County's median from 2000 to 2018, but prices rose more slowly in the subarea's most and least expensive rent quartiles. Although Champaign County's median rent rose 58.9 percent over that period, the West's median rose slightly faster at 60 percent. The lower limit to the county's upper rent quartile increased 60.8 percent countywide between 2000 and 2018. For the West, that increase was 52.3 percent. The West's least expensive rents grew at a similar pace, increasing 51.5 percent. This increase was slightly slower than in Champaign County as a whole. The County's lower rent quartile cutoff grew by 56.4 percent in comparison.

The gap between the West's most and least expensive rents also grew. In 2000, its upper rent quartile was more expensive than its lower rent quartile by $220. Over the next decade, the subarea's highest rents outpriced its lowest by $323. By 2018, the gap was slightly larger — $338 separated the upper rent quartile from the lower rent quartile. From 2000 to 2018, the difference between the West's highest and lowest rents had expanded by 53.6 percent. In 2018, only the Campus Core, Near North, and In-Town subareas had larger disparities between their top and bottom quartile rents. These areas also had higher percentages of student residents than the West, as well as higher shares of renter households.

Between 2000 and 2018 the West has accumulated increasing numbers of rental units costing at least $800. However, the subarea continues to offer units at a variety of price points, likely because of its large housing stock. Figure 6.27 shows the distribution of the West's rents in 2000, 2010, and 2018.

Figure 6.27:



Data sources: 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

Rents in 2000 were relatively normally distributed. That year, the West had more than 4,000 units priced between $400 and $699 that year, representing just under half of its total renter-occupied units. However, between 2000 and 2010 the West began to accumulate higher-cost units. In 2000, the West only had 215 rental units priced at or above $1,000. But by 2018 the subarea saw a large spike in higher-priced rentals. That year, 2,856 units cost at least $1,000. More than half of the subarea's rentals cost above $800.

CONCLUSION

The analysis in this chapter examines how the student renter submarket has affected rents throughout Champaign-Urbana's six subareas between 2000 and 2018. The previous chapter offered evidence that Champaign's housing boom has enabled student renters to cluster in neighborhoods near campus, although students are increasingly pushing into the Near North neighborhood. Trends in rents in these subareas demonstrate that new student rentals can disrupt rents in neighborhoods with high concentrations of student residents.

In both the Campus Core and Near North, student renters are associated with a large discrepancy between the neighborhood's highest and lowest prices. As developers build student housing, these new rentals represent an influx of high-cost units, which pushes prices in the

upper rent quartile up. This could be because new, luxury student apartments with a slate of amenities command high rents. A rising number of out-of-state and international students from affluent backgrounds may be able to afford offerings that were unattainable to past University of Illinois cohorts. In addition, rising household sizes could indicate students are pooling their resources to access the location, unit types, and set of amenities they desire. Larger apartments shared by roommates could also command higher costs.

This analysis also demonstrates the supply of purpose-built student housing affects prices in studentified neighborhoods. Rents jumped in the Campus Core and Near North between 2000 and 2010, when vacancy near campus was low. However, rents moderated over the next decade as developers flooded the market with new student apartments.

Changes in rents over time also support students' preference for housing convenient to campus. As more units came online in the neighborhoods near the quad, prices dropped in the Near North. This indicates that landlords there could ask for higher rents before 2018, when housing in the Campus Core was scarce. However, once enough units came online near campus, the Near North's suburban-style student apartments could not command the prices they once did. Still, rents continued to show a large spread between the cost of the subarea's least- and most-expensive units.

At the same time, new student rentals do not appear to influence affordability outside of student-heavy areas. Supply and demand dynamics appear constrained to studentified neighborhoods. While vacancy has risen near campus, this has not lowered rents in the West, In-Town, or Southeast neighborhoods. Rents in those areas have risen steadily, even as rising prices have slowed in the Campus Core (and rents have fallen in the Near North). This supports the conclusion that nonstudent residents of Champaign-Urbana consider housing near campus a poor fit, and do not contribute to housing demand there. However, for areas like the Near North that are actively studentifying, an influx of students does disrupt rents. This suggests local planners should track the flows of students into new areas because student rentals could come with fluctuations in housing costs for nonstudents living nearby.

CHAPTER 7: GROUND TRUTHING WITH INTERVIEW RESULTS

INTRODUCTION

As discussed in chapter five, the local student population has remained contained near campus, even as thousands of new student residents arrived to attend the University of Illinois. Housing development in Champaign's Campustown and Midtown facilitated this — added housing units came online when and where student renters needed them. As this has occurred, the Near North has also picked up a sizable student population, showing that not all boundaries to Champaign-Urbana's student enclave are equally hermetic.

The findings in chapter six show that Champaign-Urbana neighborhoods with high concentrations of student renters (and ample luxury student apartments) experience a widening of the price disparity between the most expensive and least expensive rentals. This occurs mainly due to added rental stock at the upper end of the price scale. In contrast, neighborhoods with majority nonstudent populations have a smaller range of price points for their rentals.

Many of the conclusions in chapters five and six are borne out by interviews with local planners, developers, City Council members, and University staff. They reinforce the patterns shown in the quantitative data laid out in this thesis. Moreover, they reinforce how local policies, developer choices, neighborhood activism, and student preferences have interacted to shape the location of student housing in Champaign-Urbana. In this chapter I lay out major themes from these interviews and explore how locals' understanding of the student rental submarket supports and explains the quantitative findings from the preceding chapters of this thesis.

QUALITATIVE FINDINGS

Despite a Growing Student Body, The Boundaries of Champaign-Urbana's Student Enclave Have (Mostly) Held Up

The analysis in chapter six of this thesis shows that Champaign-Urbana's student population has remained mostly contained near campus. Although the Near North has experienced an influx of student renters, suburban-style student apartments along North Lincoln Avenue in Urbana drew them there. Despite the growth in student population illustrated in chapter four, students have successfully found housing near campus, rather than spread into bordering subareas such as In-Town and the Southeast.

Champaign-Urbana's student enclave has physical boundaries that set it apart from nonstudent neighborhoods. First, the raised Illinois Central Railroad tracks bound the student neighborhood to the west. University Avenue, a five-lane arterial street, segregates Campustown

and Midtown from residential neighborhoods to the north. To the south and west, the university campus itself acts as a border. Figure 7.1 shows these boundaries.

Figure 7.1:

Edges to Champaign-Urbana's Student Enclave

Base map source: Champaign County GIS Consortium

Local developers consider student housing development beyond these edges a risky bet, based on their read of student demand. In interviews, developers consistently stated they struggle more to fill apartments farther from campus. They also claimed units closer to the main quad command higher rents.

Locals overwhelmingly cite undergraduate students' desire to live in the dense, urban environment. The presumption is that, if students were able, they would overwhelmingly choose housing within a short walk to class. Developers have responded to this perceived demand. "It's kind of an arms race to the quad," one developer said. "Who can build the nicest and best building closest to the quad? And, in my opinion, that person wins." According to another, "it's a matter of a couple blocks, that can really make a difference" for the viability of a project. Locals contend that even as the student population has grown, preference for near-campus living has intensified.

Demographic data back this up. Within the Campus Core, neighborhoods closest to campus have remained most popular with student renters. Students are slightly more likely to live

in Campustown and Midtown than in the past. Conversely, they are now less likely to live farther out in census tract 14, which includes neighborhoods in the Village of Savoy. Population density near campus rose as new student residents flocked to Campustown, Midtown, and the neighborhoods directly west of the University of Illinois' main quad. Low vacancy rates in the neighborhood prior to 2010 may have prevented interested student renters from accessing housing there. Once construction picked up, more students could attain housing within their desired submarket. But even after the housing boom (and the rising vacancy that came with it) rents remained high in 2018. This shows developers correctly assumed students would pay high prices for the opportunity to live within walking distance of class.

Of course, some students do live outside of the Campus Core in Champaign-Urbana's larger urban dormitory. Undergraduate student populations within the Campus Core and in all subareas combined have each grown at similar rates. In 2018, the Campus Core had 24,771 undergraduate residents, 3,066 more than in 2000. The rest of Champaign-Urbana had 9,519, up 1,130 from 2000.

Champaign-Urbana's student residents have asserted their desire to live near campus even when they moved to other subareas. In the In-Town subarea, students have increasingly chosen to live in Census Tract 5, located closer to the south of campus, rather than in downtown Champaign. In the Southeast, most student residents selected housing in tracts 58 and 111, Urbana's closest to campus. This has occurred even as vacancy has risen in Urbana neighborhoods farther from campus. Rents have also typically been cheaper in the subarea's other census tracts. In addition, students have generally rejected the Northeast and West subareas, which are farthest from campus. In the West, specifically, students have become more dispersed throughout the subarea's neighborhoods. This indicates that when proximity is not attainable, students as a group are less consistent about their housing preferences.

The popularity of suburban-style student apartments in the Near North demonstrates that proximity to campus is not the only driver of demand. A mile and a half from the main quad, the Near North's student population continued to grow, even as Campustown bulked up its housing supply. This growth began prior to 2010, suggesting students were seeking acceptable alternatives to Campustown, which had low vacancy at the time, as well as much higher upper quartile rents.

However, student demand for housing in the Near North has not abated. This indicates a significant subset of student renters determined the Near North's rentals were suitable substitutes for units closer to campus. That said, graduate students — whose preferences may be slightly different than undergraduates — represent a larger share of the student population in the

Near North than closer to campus. Furthermore, growing vacancy and falling rents in the subarea in 2018 suggest that the Near North is losing its competitive edge. Landlords there may be struggling to compete with the glut of supply that came online in the Campus Core over the last decade. Student renters have demonstrated their preferences, of which proximity to the quad remains key.

Taken together, this illustrates that the traditional edges bounding Champaign-Urbana's student enclave are intact. Although all subareas gained rental units, a large majority of student residents continue to choose housing in the neighborhoods adjacent to campus. The housing boom near campus allowed the Campus Core to absorb more than 3,000 additional student renters from 2000 on. Without this increase in housing availability, more students may have sought rentals elsewhere in Champaign-Urbana. This could have pushed Champaign-Urbana's studentification frontier into new, nonstudent neighborhoods. However, the additional supply met student demand and students responded by staying put. This demonstrates how matching housing supply to demand in a submarket may shield nonstudent areas from large influxes of student renters.

Planning Decisions Played a Role in Concentrating the Student Renter Submarket Near Campus

Low rental vacancy near campus from 2000 until 2010 suggests the near-campus neighborhoods preferred by University of Illinois students would not have the capacity to house the rising student population. However, as shown in chapter five, the Campus Core did absorb large numbers of additional enrollees. Not only that, but the Campus Core's vacancy rate was higher in 2018 than in decades prior. This occurred even though student spillover into other subareas was minimal. Planning decisions helped bring enough housing online to absorb thousands of student newcomers to Champaign-Urbana.

The housing boom that enabled near-campus neighborhoods to accommodate thousands of new University of Illinois students did not happen without intervention from planners. As discussed in chapter six, densification of Champaign's student housing stock occurred in response to land use decisions over several decades.

First, the City gradually eased parking minimum requirements from the 1990s on. This occurred in response to feedback from local developers, who claimed high parking minimums were out of line with demand for parking in the campus area. They also cited the ways parking provision was limiting the amount of housing they could build, especially on small lots.

Similarly, requirements for open space near campus represented a constraint to housing development. The City also gradually chipped away at open space minimums over the years.

Eventually, the City rezoned the near-campus neighborhoods, dropping parking requirements altogether and moving away from restrictive floor-area-ratio requirements for open space. One local developer compared the decision to drop parking and open space restriction to “throwing a five-gallon tank of gasoline on fire,” opening up development potential considerably.

However, even before rezoning occurred in 2015, planning staff regularly worked with developers to sidestep parking and open space minimums through liberal use of its planned development process. Rezoning simply codified the already relaxed regulatory environment. This explains why Campustown’s building boom predates the official rezoning.

In addition, public investments in stormwater infrastructure expanded development potential near campus. The flood-prone Boneyard Creek, which flows through Campustown and Midtown, placed many parcels in the flood zone. As a result, FEMA identified much of Campustown as at-risk of flooding. The resulting flood insurance requirements limited investors’ appetite for financing development near campus. Following construction of the Healey Street retention basin, followed by the Second Street basin, frequent flooding became a condition of the past. In 2013, FEMA revised its Flood Insurance Rate for the area, reducing the at-risk area significantly.

Placemaking also readied Campustown for development. In addition to designing the Second Street basin to act as public park space, the City invested in streetscaping. Other factors, such as the use of tax increment financing to ready Midtown for development, also played a role. In addition to mitigating flood risk through drainage improvements along the Boneyard Creek, the City also courted developers willing to build in Midtown. This resulted in the Burnham 310 building, which caters to students, as well as the Midtown Plaza development, which houses students alongside others.

Some Borders to Champaign-Urbana’s Student Enclave Are Leakier Than Others

Although the Campus Core absorbed much of the growing student population, the findings in chapter five demonstrate that other neighborhoods are home to student renters as well. This is especially true in the Near North, which went from majority-nonstudent to majority student between 1990 and 2018.

All subareas except the Northeast have experienced at least modest increases in their absolute student populations. This demonstrates that while Champaign-Urbana’s student enclave has remained segregated, some leakage of student renters into the wider housing market has occurred.

The Southeast and In-Town subareas illustrate the solidity of the eastern and western edges of Champaign-Urbana’s student enclave. Compared with the Campus Core and Near

North, which gained thousands of new student residents from 2000 on, gains in student population in the Southeast and In-Town subareas were modest. This remained true even as rents in the Campus Core and Near North outstripped those in the Southeast and In-Town. In addition, student renters continued to prefer living in the Campus Core and Near North even as vacancy rose in the Southeast. Rather than push into these nonstudent subareas, Champaign-Urbana's students chose to self-segregate.

Land use decisions likely bolstered the boundaries of Champaign-Urbana's student enclave. Restrictions to density and design in the Southeast and In-Town subareas may be one factor that contains student rentals to the north and directly west of campus.

West Urbana: Neighborhood Character and Local Opposition to Student Housing

Despite the subarea's relative proximity to the University of Illinois campus, the analysis in chapter five demonstrates that students did not flocked to the Southeast as their numbers grew. As explained in chapter six, the Southeast added far fewer rental units than the Campus Core. This may have tempered the subarea's ability to accommodate student renters.

As student housing development pressure built in Campustown, the City of Urbana strategized ways to shield neighborhoods in the Southeast from studentification. In the decades before high-rise development came to Campustown, Urbana's residents voiced their concerns about student housing locating in their neighborhoods. Planners cited residents' concerns about development creep and responded to them. In 1990, the City published its Downtown to Campus Plan, which prioritized preserving neighborhood character near campus. The introduction to that plan captures residents' fears.

> *The neighborhood located between Downtown Urbana and the University of Illinois has experienced many changes in recent years. These changes have resulted from many factors including the University's expansion, the construction of nearly forty apartment buildings during the 1980's and the continuing growth of Downtown Urbana. These changes have led to growing concern that the neighborhood's many single-family homes, historic characteristics and unique appearance are being lost.*

The City continued to push back against development pressure in the decades that followed. Urbana's 2005 Comprehensive plan identified the neighborhoods directly east of the University of Illinois campus at risk of multifamily development pressure (City of Urbana Department of Community Development Services, 2005). Located within the Campus Core, the Lincoln-Busey Overlay District encompasses the block directly east of campus. In 2009, the City of Urbana adopted specific guidelines for that area, which contains a mixture of multifamily housing, fraternity houses, and single-family homes. To the east of the Lincoln-Busey corridor is a

historic, single-family neighborhood represented by the West Urbana Neighborhood Association (WUNA). This neighborhood lies within the Southeast subarea. The Lincoln-Busey design standards include recommendations for lot coverage, building aesthetics, and building scale. By imposing these criteria for development in the Lincoln-Busey corridor, planners hoped to "aid in the transition from the University to the West Urbana Neighborhood" (City of Urbana Department of Community Development Services, 2009).

The analysis in chapter five demonstrates that Urbana's strategy worked. The student population in tract 58, which includes the bulk of WUNA's territory, has not skyrocketed like in Campustown. At the same time, West Urbana's rental housing stock has not increased. In interviews, local student housing developers consistently stated they are leery about building in Urbana due to restrictive design standards there.

One planner working for the City of Champaign says Urbana's strategy stands in contrast to what occurred in Champaign in the 1970s and 1980s. "Champaign gave up on that long ago," he said. "In the campus area, there are no areas where there is conflict like that, simply because, I guess, you know, the City chose at the time — it was like, this is all multifamily and have at it."

Champaign's In-Town Neighborhoods: Zoning as a Boundary to Student Housing

Another example where land use regulations have constrained the multifamily housing market is evident in Champaign's in-town zoning districts, located in established areas primarily west of downtown. In this study, those districts are represented by the In-Town designation. As shown in chapter five, student populations appear to be pushing into the Near North subarea as property owners make student apartments available there. However, the western border of the Campus Core — traditionally defined by the Illinois Central Railroad tracks — has held up.

Champaign's in-town zoning districts represent how resident voices have successfully limited multifamily housing development in the past. The City of Champaign adopted these districts in the 1980s with the stated goal of "preserving the character of the neighborhood." When the City created these zoning districts, a main objective was placing limits on multifamily development (Knight, 2018). According to the City, regulations for In-Town are meant to "ensure buildings are appropriately sized, that new multifamily is designed to be attractive and built to last," among other goals. In comments one planner made at a 2016 Zoning Board of Appeals meeting, creation of in-town districts was a direct response to residents' concerns about teardowns and conversions of single-family homes to multifamily (City of Champaign Zoning Board of Appeals, 2016). In addition, the City intended the in-town districts would address the

issue of developers squeezing apartment buildings onto standard-sized city lots. The zoning code for these districts includes limitations to building size, as well as certain design standards.

One planner characterized the in-town neighborhoods as an area where more NIMBY attitudes persist, despite the neighborhood's relatively diverse housing stock, which includes subdivided houses and small apartment buildings interspersed among single-family homes. "That is where we encounter the opposition to multi-family housing that we don't encounter in Campustown or downtown, even though the in-town neighborhoods both have a regulatory past. Over the majority of that neighborhood's existence multifamily development was permitted. And then, there is still a lot of multifamily of various scales and sizes and even purpose-builtedness integrated into that neighborhood. There is still a fair opposition toward multifamily."

One City Council member echoed this, stating that the in-town neighborhoods do contain a mix of housing, but implied that existing multifamily housing (and specifically subdivided single-family homes) may be more palatable because of its relative invisibility among similar single-family homes that are not subdivided.

Still, that same planner conjectured that resident opposition to multifamily housing in the in-town districts likely "represent a minority of public feeling but represent a majority of noise." When the City discussed rezoning the in-town districts, NIMBY attitudes did not prevail, at least for the moment. "This zoning process did not turn into a referendum on whether we should further downzone that neighborhood, which I think was a positive because if our Council had gone in that direction, that neighborhood — in-town, when in-town was instituted in the late 80s it was a downzoning, and this would have been a further downzoning."

The Latitude Project: Students Penetrate University Avenue

However, changes in the Near North suggest that University Avenue is a weaker boundary that pioneering student housing developers are willing to cross. The local student enclave may resemble a box, but an open one. This has allowed Champaign-Urbana's studentification to roll north into formerly nonstudent neighborhoods.

Although students' preference for Campus Core living may reflect demand for housing near the quad, the Near North's student apartments are farther from campus than options in either In-Town or the Near North. What unites the Campus Core and the Near North is purpose-built student housing development in both. Like all subareas in Champaign-Urbana, In-Town and the Southeast have rental housing on offer. However, their apartments are not marketed to students exclusively. In addition, they have not added rental units in the volume in more student-

heavy subareas. This indicates student rentals in Champaign-Urbana represent a distinct submarket — students do not consider other rental housing substitutable.

In the Campus Core, investments in drainage improvements and reduced parking and open space minimums opened the areas near campus to development. Champaign's planners signaled a willingness to allow density and height increases in an area where locals were unlikely to object.

The City of Urbana also sought to contain students in an area immune to locals' objections. The City permitted large-scale multifamily development along North Lincoln Avenue. These apartment complexes came online in the late 1990s and early 2000s, preceding the boom in high-rise student housing in the Campus Core. Allowing for student housing development in this part of the city — along with nearby hotel construction and industrial uses — has shielded West Urbana's single-family neighborhoods from densification. Therefore, the increase in student renters in the Near North primarily occurred in census tract 53 from 1990 on. Developers continue to show interest in the area, although to a lesser degree than in the Campus Core. Most recently, two developments — The Retreat and Campus Circle — opened their doors over the past two years.

Segregating purpose-built student apartments along North Lincoln Avenue mirrors strategies used by planners in the U.K. and Canada, who encouraged the construction of purpose-built student accommodations on brownfield sites. As a result, this contained students — often seen as a nuisance population — away from longtime residents (Sage, et al., 2012; Revington, 2021).

However, new influxes of student into Near North neighborhoods could result in friction between established residents and developers. In recent years new developments have popped up on the north side of University Avenues adjacent to the Campus Core. This has the potential to place more student renters across the border that has traditionally bounded the Campustown neighborhood. In addition, it also means more students could live in closer proximity to the Near North's nonstudent residents.

But developers are beginning to eye the Near North's census tract 2 as an attractive location for large-scale student housing complexes, at least along the north side of University Avenue. The Latitude development — a massive, 519-bedroom apartment complex completed in 2016 — offers a recent example of building tension between student-oriented development and long-term residents. The development represented a departure from what one in-towner called the "arms race to the quad" — the trend of developing as close to campus as possible in response to perceived student demand.

Figure 7.2:

Photograph of Latitude, A Student Apartment Complex in the Near North

Latitude. Photo credit: Caitlin Hillyard, 2020

As discussed, University Avenue — as a major arterial street — serves as a natural edge to Champaign's urban dormitory. Many planners and developers identified the street as a delineating boundary indicating where student-oriented development would no longer be fruitful, based on their understanding of student renter demand for housing near campus. Located on the north side of the street in Champaign, the Latitude development represents student creep into a formerly non-student neighborhood.

The residential neighborhoods immediately north of University Avenue are historically Black and lower-income than other neighborhoods near student-dense areas of the city. One planner discussed the implications of this. "For residents of the neighborhood north of University Avenue, there is a desire, you know, for investment in their neighborhood, but not investment that is exclusively university-oriented or, you know, that results in displacement, you know, of existing residents for, you know, campus-oriented things," he said.

One City Council member summed up long-term residents' underlying fears as anxiety over possible displacement.

> *I think that it becomes even more distinct when it tends to be between a lower economic portion of our community and student population. I mean, oftentimes that's what happens with development in our community. You often see this bump-up of — and I think that's what, maybe, probably, the piece that's often times missing in people's understanding of why people get contentious about the development — is there's this bump-up of affordability of housing and what's being created for students and the perceived elimination of affordable options and the creation of something that's special that is not for the population that's being displaced. I think that's where we fall short as a council and as a city and probably as a university, too, to kind of create a better overlap or a better understanding or better process so that people aren't feeling bumped out, but if they are being bumped out that we are creating an opportunity that exists for everyone.*

Another Council member was blunter when describing her reaction to the development, saying, "I wasn't on Council when that happened, but I'd have to probably say because the neighborhood that is across the street from University is primarily historically Black and that Latitude development is a huge slap in the face to the Black community."

She also said the project also may have had symbolic implications for the neighborhood. "Just being a community member at that time I probably would have had a big problem with that. I mean, campus takes up enough of our resources as it is and I wouldn't — you know, I don't think anybody would support that. And that Latitude building is a border. It keeps you from seeing the plight that's behind it," she said.

The developer's original proposal called for three six-story buildings and one five-story building — two along University Avenue and two set behind on a quieter street. Before development, the site was home to two blocks of used car lots, a handful of single-family homes, a surface parking lot, and several vacant properties (Kiser, 2013).

But because of its scope, the Latitude project required special approvals since the planned project did not comply with zoning standards for the area at the time. This was common for developments near campus — the City commonly granted exceptions to parking and open space minimums through its planned development process. In this situation, that process opened a window for an organized community response. The City called several neighborhood meetings where neighbors voiced their concerns. Ultimately, the developer scaled down his proposal to two buildings along University Avenue (Ditman, 2014).

City planners in Champaign cite the Latitude outcome as a success. "I know when final approval was granted by City Council, there were members of the neighborhood who came and spoke in favor of it," one planner said. "Speaking in favor of the process, one of them referred to

the developer as ‘my friend Chase,’ which I think, you don’t always see that when a big developer is negotiating you know with a neighborhood.”

When examining how closely the Latitude case might act as a precedent for others, the neighborhood’s well-established tradition of advocacy must be recognized. Champaign County Health Care Consumers group — which has also coordinated activism against environmental justice threats to the neighborhood — also led the call to arms for negotiations on the Latitude development (Kiser, 2013). What is unclear is whether other neighborhoods in North Champaign would have the same success opposing student-oriented development, especially if they lack the same community organizing tradition.

Another proposed development in the Near North area — the Union Gardens project proposed for a long-vacant parcel of land straddling Champaign and Urbana — represented a second possible incursion into a non-student area. “We were surprised they wanted to do student housing up here,” one planner said of the developer. “So, this is fairly a good distance from campus — you know, over a mile. And this neighborhood has been historically African American. So, we haven’t seen student housing, kind of, this far out from campus in this manner.”

That said, this same planner noted that the City was likely to allow the market to determine the fate of the development. “We didn’t have anything that prevented student housing at this location. We just kind of thought it was a bad idea. But I wouldn’t be surprised if, over time, it transitions from a student housing product to a community rate, you know, just a community member product,” he said.

In the case of the Union Gardens proposal, the development is currently stalled in the wake of the COVID-19 pandemic. Still, this reliance on market signals to guide student housing development underscores the importance of tracking where students are likely to live over time. Local planners have relied on their assumptions about where student housing will be fruitful for developers. As a result, they anticipated interest in Campustown (and West Urbana), but the push north may have caught them by surprise. As a result, the In-Town neighborhoods and West Urbana had zoning restrictions in place specifically to downscale multifamily development. Defensive land use regulations in the Near North may be weaker because of a lack neighborhood opposition to development through local history.

Planners and city officials may have historically relied on physical boundaries — such as University Avenue — to curb the flow of students into census tract 2. However, student housing development happened there anyway. This demonstrates that if land use regulations do not act as a barrier to development, developers’ understanding of market demand will determine where

to break ground on new apartment complexes. In these cases, community opposition is the last line of defense against projects that may harm existing residents.

Some Student Renters Will Substitute Housing Farther from Campus for Purpose-Built Accommodations Near Campus

As shown in chapter five, the Campus Core has mostly absorbed Champaign-Urbana's growing student renter population. However, a subset of students has shown a willingness to substitute housing in other subareas rather than live near campus. Several possible explanations exist for student spread.

In the case of growth in the Near North, competition for housing in Campustown may have initially forced students farther out. Developers in that neighborhood met this demand with purpose-built student apartments offering a slate of amenities — swimming pools, tennis courts, ample green space and parking. When these buildings opened in the late 1990s and early 2000s, the housing market was tight near campus. This may have painted the Near North as the most appealing alternative to near-campus living. Once Campustown gained the rental units needed to accommodate student demand, the Near North's relative affordability may have continued to attract thrifty student renters.

Another explanation lies in the subarea's large foreign-born population. Studentification studies have demonstrated that international students often self-segregate away from their domestic peers (Nakazawa, 2017). The Near North may have offered international students an enclave of their own.

In addition, growth in student populations in the Near North and Southeast include significant shares of graduate student renters. The graduate student population represents a fuzzy area of rental demand, at least according to locals. An influx of graduate student residents can indicate a neighborhood is transitioning away from the student submarket. Other locals consider graduate students a separate submarket altogether.

"Some of the places that previously may have been rented by students aren't necessarily rented by students anymore," one local developer, who specializes in housing outside the Campus Core said. "They're rented by, you know, working folks in the community. Some are still rented by students. Some are rented by grad students. We see much more of that by some of the older, grad school population renting those." Locals perceive graduate students as more amenable than undergrads to living outside the urban core and less likely to cluster geographically in general.

The spatial distribution of graduate students throughout Champaign-Urbana supports this. Compared with undergraduates, graduate student residents are much more dispersed

throughout the metro area. In absolute terms, the largest concentrations of graduate students live in the Campus Core and Near North. While 72 percent of undergraduates lived in the Campus Core in 2018, only 29 percent of graduate students did. Graduate students are nearly as likely to live in the Southeast and West neighborhoods.

According to locals, graduate students' age and lifestyle sets them apart. Compared with undergraduate renters, graduate students come without negative behaviors associated with undergraduates. One local landlord, who says his company serves mainly nonstudent and graduate student renters, said undergraduates represent a risk. "We're looking for people who want to coexist in neighborhoods quietly and really enjoy each one another without being destructive," he said. "And so, undergrads just are not of interest to us at all." Another stated that the nonstudent tenants they house would prefer not to live next door to "anyone that had an ID card" because of quality-of-life concerns about undergraduate student behavior.

However, one developer said she sees graduate student demand growing in the Campus Core. "I think that a lot of grad students used to live in these off-campus apartments and I think that the amenities closer in are pulling some of them back," she said. This underscores the chameleonlike nature of graduate student renters, who may find housing suitable in a variety of contexts.

As with undergraduate students, enrollment trends suggest University of Illinois graduate students are more affluent than in the past. In 1980 a minority — 36.2 percent — of graduate students enrolled from outside Illinois. By 2018, nonresident students accounted for 74.5 percent of graduate enrollment. Like their undergraduate counterparts, these students face higher tuition charges than in-state enrollees do. High international student enrollment at the graduate level also suggests some foreign graduate students may wish to cluster with peers from their home countries.

Taken together, diffuse interest in Champaign-Urbana's wider urban dormitory does not undermine the existence of a student renter submarket. Niche groups of — such as graduate students and enrollees from abroad — may have divergent housing tastes from other student renters. Finally, if certain students are testing the bounds of the Campus Core for affordability reasons this does not indicate they consider housing far from campus a perfect substitute.

Nonstudent Demand Remains Low Near Campus (But Is Increasing)

Chapter five of this thesis also shows that nonstudent renters may be on the rise in the Campus Core, including in the Campustown and Midtown areas near the University's main quad. While locals agree that students spurn housing outside the Campus Core, they also acknowledge

the inverse. Champaign-Urbana's nonstudents reject housing options in Champaign's near-campus neighborhoods.

Housing units within a submarket can act as substitutes for one another but are not good substitutes for units in other submarkets (Hwang, 2005; Galster, 1996; Jones, et a., 2005). This is because of the interplay between supply and demand in a submarket. One submarket offers a bundle of characteristics — such as location, amenities, types of units, and unit condition — that matches demand among a certain type of housing consumer. Whether Champaign-Urbana's student housing represents a submarket depends on substitutability.

For the most part, nonstudents in Champaign-Urbana do not consider housing near campus to be a substitute for units elsewhere in the metro area. The Campus Core's population remains dominated by students. Students represented about same proportion of Campus Core residents in 2018 as they did in 1990.

Locals consistently delineate Champaign's near-campus neighborhoods as separate from the wider community. "I think there is an indifference more than anything else to what happened in Campustown, because it's isolated," one planner said. "Those things have combined to create a political milieu where multifamily development isn't an outright dirty word like it is in some communities." This statement, and similar ones made by locals, shows major narrative surrounding Campustown is that the neighborhood doesn't "belong" to nonstudents. As one local bluntly said, "Nobody that's going to be a long-term resident — most people don't consider living in that Campustown area." Instead, City staff, elected officials, and University staff alike say the neighborhood homes in on the needs of students through its housing stock and amenities.

As the analysis in chapter four shows, student renters have spread throughout Champaign-Urbana. Conversely, nonstudent renters have not penetrated the student-focused Campus Core, with some exceptions. This suggests that purpose-built student apartments — such as the high-rise developments in Campustown — are poor substitutes for rental housing in other areas of Champaign-Urbana.

Midtown Plaza: Where Students and Nonstudents Mix

Some nonstudent pioneers appear willing to test Champaign-Urbana's studentification frontier. One development in the Campus Core's Midtown neighborhood offers an example of the type of "vertical studentification" that Garmendia, et al. (2012) describe, where students and nonstudents live together in a large apartment building near the urban core.

City planners and developers alike agreed that Midtown Plaza held appeal for student renters as well as others. The building is home to renters at a variety of life stages — students,

retirees and empty nesters, young professionals, and professors. The building's location plays a role in fostering this mix. Midtown Plaza sits alongside Champaign's Second Street basin, central to campus as well as Champaign's downtown.

Locals have hailed Midtown Plaza as a success, mainly because it attracted a diverse tenant population. "I think from a City standpoint, we would like to see more housing in the campus area that's not necessarily student housing," one planner said. Another local hinted that supply issues could be hindering nonstudent demand for housing in Midtown, a problem that projects like Midtown Plaza could fix.

> *If the demand for students is so high in the campus area, you know, any apartment you build is going to be taken by a student and there's no supply left over for, kind of, people that are out of school, urban professionals or people that work downtown. So I would advocate for, you know, more supply in the campus area.*

This was not the first time Champaign's planning staff hoped to build opportunities for nonstudent resident to move to Midtown. Prior to the Great Recession, planners courted condo and townhome development at the nearby vacant Burnham Hospital property (City of Champaign Department of Planning and Development, 2005). Because of the financial downturn, those plans fell through, according to local planners. Today the site is home to Burnham 310, a high-rise student apartment building.

The Midtown Plaza development did not occur without planning intervention. Instead, the City of Champaign took an active role promoting development along the basin. First, instead of developing a traditional drainage basin, the City invested in landscaping and walking paths. This allowed needed stormwater infrastructure to double as a community amenity. In addition to this placemaking scheme, the City also used tax increment financing to incentivize development on the site.

However, the opportunity to live in a mixed population building does not come cheap for tenants. One planner opined that rents in the building typically topped $1,000 for a one-bedroom unit. "The City really wanted to spark some development in the Midtown area," he said. "but to spark some investment and redevelopment in Midtown, we offered incentive for a housing development that is very nice and very high quality but also extremely expensive. So, you know, I think about that."

Figure 7.3:

Photograph of Midtown Plaza, an Apartment Complex in the Campus Core

Midtown Plaza, located along the Second Street detention basin in Midtown. Photo credit: Caitlin Hillyard, 2020

Some Evidence of Nonstudent Displacement

While Midtown Plaza offers an example of a building with potential to draw the nonstudent submarket closer to campus, it is not the first instance of nonstudents living near the quad. One City Council member reflected on "bungalow-type" houses in the neighborhoods to the west of campus. Those, she said, have been replaced by student apartments. In addition, one city planner said the Campustown neighborhood had been home to single-family homes as late as the 1980s. Although the circumstances of individual families' decision to depart Campustown are not clear, this provides evidence that displacement is part of the history of Champaign's student enclave.

According to that same planner, the City made the decision in the 1970s and 1980s to "let go" of single-family homes near campus and turn the area over to students. He contrasts Champaign's tactics to those in neighboring Urbana, where City staff and leaders chose to

preserve similar neighborhoods. This demonstrates the role of planners in defining the spatial boundaries of the student housing submarket.

More recently, the Champaign County Housing Authority decided to sell Skelton Place, a public housing complex for seniors located near the Second Street basin in Midtown. The Housing Authority relocated the residents to the north side of Champaign in 2018 and a private developer took ownership of the site, renovating it into student apartments (Zigterman, 2018). One Champaign City Council member said although the move resulted in better quality housing for Skelton Place's residents, the City facilitated displacement through development of the basin as community green space.

> We're displacing people, again, who are of a lower economic status from what's deemed a highly desirable area now, when it once wasn't a highly desirable area. And now it is because, you know, we as the City have created this beautiful park-like setting there. And so, you know, it's this whole process of, we did that, in a way. We kind of created that in a way. We created that opportunity.

This shows that zoning is not the only way of signaling the bounds of a submarket. Other activities, such as placemaking and development incentives, also communicated the City's willingness to turn over portions of Campustown and Midtown to a specific population.

New Student Rentals (Only) Disrupt Rents Behind the Studentification Frontier

The influx of purpose-built student apartments in the Campus Core brought with it large numbers of high-cost apartments, as demonstrated in chapter six of this thesis. Not only have rents risen on average in this student-heavy neighborhood, but the gap between the most and least expensive rentals has widened. These changes corresponded to a spike in the number of new rental units coming online.

However, students do not have to comprise the majority of the population to affect rents. To the north of the Campus Core, the Near North experienced disruption to rents as new student residents moved in. This included ballooning housing costs, as well as a jump in high-cost units that pulled the subarea's upper rent quartile up.

This accumulation of high-cost units could reflect several changes. First, rising numbers of students from affluent backgrounds could mean more purchasing power on the student market. In addition, the commodification of student lifestyles could lead student renters to demand more amenities, which come with higher costs. Student renters may also be uniquely willing and able to pool their resources to rent bigger, pricier units.

Champaign-Urbana locals are quick to point out evidence of rising student wealth. Local landlords tell stories of students — often from abroad — who purchase Ferraris, Porsches, and Lamborghinis. One local developer discussed a shift in surnames on her tenant rolls, indicating

higher concentrations of international students. A representative of the University of Illinois' Housing Department confirmed that many (but not all) international students are wealthy. This affluence, she said, manifests on the housing market as students rent two-bedroom units alone or hunt down housing opportunities that offer extravagant amenities.

The primary way locals mark increased student buying power is through shifting demand on the near-campus housing market. Although students have consistently concentrated in the neighborhoods adjacent to campus, the nature of student demand has evolved. In many ways, the student housing experience in Champaign-Urbana has become increasingly commodified. This reflects the link between commodification and studentification seen elsewhere (Smith and Hubbard, 2014; Kinton, et. al, 2018). As one local said, "the concept of what an amenity is changing. You know, maybe back in the in the old days, you know, like, a coin-op laundry was an amenity or a parking space in a dingy garage was an amenity. Nowadays the bar is considerably higher. Those aren't amenities, those are expectations."

Considering this, the housing boom in Campustown did not simply add the needed number of units. New apartment options also came calibrated to changing student demand for quality and amenities. "I think the demand was there for something like the high-rises to happen, the larger buildings to happen, because students were wanting a certain quality of housing," one Champaign City Council member said.

New buildings near the University of Illinois campus offer rooftop decks, swimming pools, bowling alleys, and other shared social spaces. Within the apartments themselves, student renters get flat screen televisions, in-unit laundry, and private bathrooms.

Even older housing stock near campus has transitioned to meet changes in students' expectations. Local landlords discussed a new trend of renovating units to remain competitive in the face of new-build options. One local developer described the tactics of a competitor: "his typical approach is to buy the old 70s building right next to the new, shiny toys and put new bathrooms and kitchens in them and then rent them for $500 a month less than the expensive one right next door."

New or renovated, higher-priced units have implications for the affordability of housing near campus. For individual students, rents in a renovated building may represent savings, especially compared to prices in a new building. However, the overall cost for a renovated unit is higher than an unrenovated one, especially when developers add bedrooms. Therefore, renovations could be one factor pushing rents up in the Campus Core. Renovations also offer an example of local landlords exploiting a feature of student renters — their ability to pool their resources to increase their buying power.

Increased enrollment, rising tuition, and growing numbers of international and out-of-state students at the University of Illinois mirror conditions at large, state universities across the U.S. In addition, the commodification of student lifestyles and increased financialization of student housing occur not only in the U.S., but in other countries as well (Revington & August, 2020). Therefore, other college towns may also be subject to rent trends seen in Champaign-Urbana.

The Near North's Rolling Studentification Frontier Comes with High-Cost New Rentals

The porous boundary between the Campus Core and Near North could offer a living example of how new student rentals disrupt rents at the neighborhood scale. In the past three decades, the Near North has weathered an influx of purpose-built student apartments in the east along North Lincoln Avenue. However, as of 2018 more students are choosing to live just across University Avenue to the west of the subarea. In the coming years the number of student renters there may continue to rise. Several student-focused developments have popped up along University Avenue's northern border, just across the boundary to the Campus Core subarea. These include the Latitude complex, completed in 2016, as well as the Campus Circle development, which opened in fall 2020 on the Urbana side of census tract 2.

Located on the north side of University Avenue in Urbana, the Campus Circle represents a high-cost option aimed specifically at affluent international students. The building's website includes messaging specifically catered to students from abroad. "Moving to a new place can be stressful, especially if you're moving from another country," one webpage reads. The apartment complex's Facebook page also features video tours in Mandarin. In its coverage of Chicago-based developer Blue Vista's resilience during the COVID-19 pandemic, Real Estate news site REJournals described Campus Circle as "heavily reliant" on international student renters. The high-amenity building features units with private bathrooms and Blue Vista Managing Principal Jason Schwartz claimed in the story that his company is reluctant to sign leases to those looking to "double up" and share bedrooms (Baker, 2021). As of April 2021, rents for available units in that building ranged from $909 to $1,015 per bedroom (in a two-bedroom or four-bedroom unit with private bathroom, respectively). This places Campus Circle units well above the tract's 2018 upper quartile limit of $840.

This new wave of development indicates the Near North could be the site of further demographic changes in the future, as developers target University of Illinois student renters with high buying power, and especially international students. In turn, the rolling studentification frontier could bring rising rents to the Near North's southwestern neighborhoods. Future student

population growth in tract 2 could also act as a counterweight to the perception that students are constrained to Champaign's Campustown area.

Oversupply of Student Rentals Does Not Lower Prices in Other Submarkets

The tidal wave of new student rental construction in the Campus Core suggests the student rental market is now overbuilt (or at least it is no longer underbuilt). Although vacancy in the Campus Core was low until 2010, by 2018 the number of empty rentals spiked. Locals have warned about an oversupply of student housing. According to one local developer, demand and supply were balanced around 2015 and 2016. However, supply may now be outpacing demand. "We're having to work much, much harder to fill our units than we've ever had to in the past," that developer said. Fifteen years ago, building owners could count on rent increases of about 2 to 3 percent annually, according to the developer. Today, she claims rents are flat, with increases of no more than 1 percent each year. Other developers noted downward pressure on rents as well. However, planners with the City point out that local developers have long warned city staff about impending market saturation, possibly due to territoriality as out-of-towners cut into the local scene.

Still, several developers offered evidence of an overbuilt market. Representatives at one local company noted that, following the recession, buildings would be leased for the following fall by October. Now, they say, they work to lease apartments through July. They also noted an increase in signing incentives to renters, including Visa gift cards and months of free rent. Others saw an increase in roommate matching services. In addition, locals pointed out that rising vacancy may lurk undetected as owners enter the fall semester without filling all bedrooms in a multibedroom unit. City planners themselves point out another possible trend — the developer of The Dean, slated to open in fall 2020, is marketing units with shared bedrooms at a lower per-person rate.

Local developers and owners warned that out-of-town developers' reliance on inaccurate market demand projections, including their misconceptions about growing university enrollment, may be to blame. Market data, local developers say, may obscure risk in a way that continues to encourage new development. One owner predicted an impending crash, which he pegged to out-of-towners misreading the local market.

Filtering describes the process by which rental units more affordable as they age and newer housing, which can command higher prices, comes online (Rosenthal, 2014). Champaign planners, city council members, and developers disagree about whether the (over)supply of student rentals facilitates filtering in the local market.

Many locals claimed that filtering is indeed occurring — at least among housing geared toward students. Affordability was one benefit planners consistently cited when discussing the Campustown housing boom. “Housings cost for students is, like, astronomical,” one planner said. “And, you know, if you had a little bit of an overbuild then builders would have to drop their price to be competitive.” One City Council member agreed that landlords had to lower the prices of older, outdated apartments — unless they were willing to renovate to be more expensive. “New development, I think, also makes other things shiny and new and cheaper,” she said.

Landlord operating near campus confirm they have slowed annual rent increases to remain competitive. “You know, 15 years ago, rent increases were pretty steady. You probably could count on 2 to 3 percent a year,” one local said. “I think, now, some buildings we can do 1 percent — maybe one and a half — but in many locations are going to be flat and that’s going to be the nature of the beast for an extended period of time.”

This suggests flooding the market with new student rentals may result in increased affordability for students. This may have played a role in containing Champaign-Urbana’s student population near campus — without access to affordable units, more students may have searched for deals in neighborhoods farther out. And although this analysis shows luxury student rentals flooded the Campus Core with high-cost units, the wide discrepancy between upper and lower quartile rents demonstrates that lower-cost housing remained. Rent increases also slowed at all price points between 2010 and 2018, when a surge of new developments came online. Therefore, filtering is occurring in the Campus Core and Near North, where students congregate.

In addition, filtering within the student enclave could curb studentification elsewhere. In effect, filtering due to new student housing development further segregates the student rental submarket. One Champaign City Council member summed up this potential impact of oversupply near campus.

> *I remember…our planning staff talking about, like, how the city was developing and how Campustown was also developing and the need for more beds and space on campus and housing on campus, obviously, is a concern, because…the less housing on campus, the more they spill into neighborhoods…For me, you know, students coming into the little bit of the housing pool we have for people who may be low-income or have little resources, and then maybe a student might eat that resource up because it’s cheap rent. For me, that was my reason why I was okay with [encouraging development in Campustown], because I know that some students are fighting for the same kind of housing that our low-income residents are.*

However, as students have largely remained within the Campus Core, housing prices have steadily risen in the West, In-Town, and Southeast subareas, where students make up a minority of the population. Prices in the Northeast have risen more slowly, but the limited flows of

nonstudent residents into the Campus Core and Near North counter the possibility that the Northeast is competitive with these neighborhoods.

Submarkets research shows that local housing market experts, such as real estate agents, identify submarkets with comparable accuracy to statistical methods (Keskin and Watkins, 2017). In the case of Champaign-Urbana, locals recognize student housing demand as separate from the rest of the market. As a result, some assert that low nonstudent demand for near-campus rentals means cross-market filtering does not occur. “This market is so targeted towards the student occupant that, really, I don’t think, even if the pricing was equivalent, somebody who wants to live, you know, on the west side of Champaign or the north side…they’re not interested in living in this little, micro-environment that is the University of Illinois student housing market,” one developer said.

Still, the student submarkets could be affecting market-wide rents, even if filtering is not a factor. One planner stipulated that the student submarket actually raises prices outside the Campus Core, because the same local landlords operate near campus, as well as in other subareas.

> *We almost have a monopoly of landlords and so they just set a price. And then the people who are not them say, you know, well, I looked in the paper…to see what other people are charging for rent and seems to be the going rate and that’s what I’m going to charge too, I mean, whether it’s really worth it or not. So I think certainly having the student rental market here raises, probably, rents in general.*

That said, one City Council member asserted some locals take advantage of filtering in Campustown. She said she knows “tons of people” living near campus “because of the cheap housing” available there, although she conceded that having students as neighbors was a negative tradeoff of doing so.

CONCLUSION

Local planners, housing developers, and City Council members underscored many of the findings from the quantitative analysis in this thesis. Locals recognized the distinctness of the student rental submarket, epitomized by students’ preference for living proximate to campus. They also discussed nonstudents’ traditional distaste for living near campus, along with a growing number of pioneering nonstudents willing to give housing in the Campus Core a chance. While those interviewed offered a wide range of perspectives on the student submarket’s effect on rents across Champaign-Urbana, they agreed that planning decisions opened up development potential near campus. This enabled the local student enclave to absorb the growing number of enrollees (with some vacancy to spare). Major themes from interview

evidence highlight how the interplay of local policies, developer choices, neighborhood activism, and student preferences shaped the location of student housing in Champaign-Urbana, with implications for nearby residential areas that otherwise may have faced studentification.

CHAPTER 8: TAKEAWAYS FOR PRACTICE AND CONCLUSION

INTRODUCTION

The findings in this thesis underscore how the interplay of university enrollment policies, land use decisions, developer activity, and changing student preferences determine the spatial distribution of student renters, as well as the affordability of rental housing in Champaign-Urbana.

This thesis expands on existing studentification research by examining the student rental submarket in a college town typified by enrollment trends seen at many large, public universities in the U.S. Rather than focus on the social and cultural impacts of student populations, as many studentification studies do, I directly tie new student rentals to housing costs by examining rents across a college town. The findings here also contribute to submarkets research by considering the behavior of the niche student submarket, which existing research has overlooked.

Because Champaign-Urbana's growing student population remained spatially clustered near campus, conditions in the local housing market demonstrate what happens when housing supply accommodates demand in the student rental submarket. By allowing students to concentrate near campus, nonstudent neighborhoods remained shielded from rising rents associated with new student rentals. Within the student enclave, Champaign's student housing boom did come with higher rents. Still, unlocked development potential near campus may have prevented rents from rising even higher. This single case study provides lessons for planners in college towns facing rising enrollment and associated concerns about rent levels.

This chapter reviews major findings from the three research questions in this thesis. I then discuss takeaways for planning practitioners in college towns. Finally, I give an overview of this study's limitations, as well as opportunities for future research into the student rental submarket.

SUMMARY OF FINDINGS

Research Question 1: University Enrollment Trends Suggest Rising Student Buying Power in the Local Housing Market

The first research question in this thesis examines changes to the University of Illinois student body over time. First, I demonstrate that growing enrollment at the undergraduate and graduate levels alike infused the local housing market with more students needing apartments. Second, I show that a spike in out-of-state and international enrollment has implications for local housing demand. This is because students from outside Illinois have elected to pay large sums for a college education, suggesting their relative affluence. In turn, this rise in student wealth represents greater buying power in the local market. As a result, Champaign-Urbana's student

renters are increasingly able to demand high-amenity housing near campus, which comes at higher price points.

Research Question 2: Champaign-Urbana's Students Still Concentrate Near Campus, Despite Their Growing Numbers

The second research question in this thesis examines the spatial distribution of Champaign-Urbana's student renters from 1990 on. I find that student renters have remained mostly contained in neighborhoods near campus. Changes in housing supply enabled this. As the skyline grew taller in Champaign's Campustown, new student rentals represented a jolt to the local housing market. Student renters, who have demonstrated a strong preference for living next door to the University of Illinois campus, suddenly had access to an array of housing options. This influx of housing came at a fortuitous moment — University enrollment increased by thousands of students, representing excess demand in a formerly tight market. Ultimately, the housing boom contained the local student rental submarket, preventing a wave of studentification into residential neighborhoods beyond the reach of campus.

Land Use Decisions Shielded the Wider Housing Market from Student Incursion

The near-campus neighborhoods' ability to absorb new student rental demand occurred due to decisions made by planners decades before. In the City of Champaign, planners eased regulatory burdens on multifamily development. This included lowering and removing requirements for parking and open space provision near campus, first through the liberal use of planned developments and then through zoning changes. In addition, significant investments in stormwater infrastructure opened up development potential where flooding previously prevented it. Ultimately, land use decisions helped keep the student rental submarket distinct. Students, despite their growing numbers, buying power, and appetite for high-end amenities, remain unlikely to live alongside nonstudent locals. This underscores planners' role in defining rental submarkets. It also empowers them to consider land use as a tool to contain studentification in college towns.

Research Question 3: New Student Rentals Disrupt Rents Within the Student Enclave, But Not in Nonstudent Neighborhoods

The third research question in this thesis considers the impact of student rentals on rents at the neighborhood scale. I demonstrate that new student rentals did disrupt rents within neighborhoods where students concentrate. Initially, luxury student housing construction resulted in a flood of units renting at high price points. This resulted in a wide range of price points for students seeking apartments near campus. New construction also calibrated supply

and demand in the student market. As more rentals came online and vacancy in a once-tight market rose, the rate of price increases moderated. This demonstrates another benefit of catalyzing student housing production through land use decisions – rising costs for student renters.

That said, because Champaign-Urbana's student rental submarket is so contained, rising vacancy near campus has little impact on rent levels in the wider housing market. One key subfinding in this study is that nonstudent tenants do not consider housing in the local student enclave to be an acceptable substitute for what they can find elsewhere in town. But not all boundaries to the student ghetto are airtight. Student housing developers have shown willingness to construct housing further north into nonstudent residential areas. Champaign-Urbana's studentification frontier is on the move. Because of this, some areas could experience disruptions in housing costs.

Champaign-Urbana is a single case study of the effects of student rentals on a local housing market. However, the changes in the student enrollment that drove the local rental market reflect larger U.S. trends. This suggests lessons learned in Champaign-Urbana could apply in other college towns.

Because land use decisions can contain students by locating housing where it best meets demand, this could shield locals from the effects of studentification. In addition, residents in the path of student development may need tools to give them agency. Further research should consider how to hold down rents in studentifying areas, as well as how to best offer existing residents a toolkit to push back when luxury student housing development looms.

TAKEAWAYS FOR PRACTITIONERS

Because planning decisions shape the local housing market's ability to meet student rental demand, the findings in this thesis offer several lessons for practitioners in college towns. Champaign-Urbana

Planners' Decisions Can Influence Housing Supply in Specific Submarkets

The City of Urbana's approach to land use resulted in a different pattern of student settlement. The bulk of Urbana's purpose-built student apartments are located along North Lincoln Avenue about a mile and a half from the heart of campus. Urbana decided to preserve the single-family neighborhood most convenient for housing. The parcels on North Lincoln offered Urbana the opportunity to cash in on student housing demand without transforming a neighborhood central to the community's identity.

Because of the housing glut in Campustown and Midtown, the suburban-style apartment complexes acted as a substitute for housing stock in Campustown, Midtown, and the Champaign neighborhoods directly west of campus. These apartments became absorbed into the local student renter submarket.

However, suburban-style student apartments may not be a perfect substitute for the type of housing found closer to campus. These apartments may have simply represented a second-best option for student renters. As high-rise options in Campustown came online, vacancy rose in Urbana's census tract 53. This indicates that students still preferred housing closer to campus — amenities aside, Urbana's suburban-style complexes could not meet students' spatial specifications. Champaign-Urbana's student submarket, like submarkets seen elsewhere, is spatially defined (Galster, 1996; Jones, et. al, 2005).

Still, census tract 53 has not experienced a rise in nonstudent residents since high rise apartments came online in Campustown. This indicates the student apartments on North Lincoln have not transitioned to another submarket.

Flooding the Market with Student Rentals Won't Lower Rents for Everyone

Several local planners lower rents as one benefit of Champaign's housing boom. They claimed lower housing costs occurred due to filtering, as older units became less desirable than newer units. In addition, they asserted that housing oversupply near campus represented a boon to renters. One planner described prices dropping within one of Champaign's high-rise student buildings over the past few years. He said units there once cost more than $1,000 per bed, but now go for less than $700.

Rising rents are a concern for student renters — the cost of on-campus housing has increased at U.S. universities, too. And student loan debt has skyrocketed as students struggle to pay for the costs associated with a college education. Lowering housing costs for student renters has clear societal benefits.

However, planners should take care not to conflate tempered rents in student enclaves with lowered rents elsewhere in the housing market. The market forces of supply and demand do not translate well across housing submarkets. Therefore, adding rentals for a niche is not a panacea for lowering rents market-wide.

For a college town like Champaign, adding density in the student enclave is an easier sell than elsewhere in town, where residents may hold NIMBY attitudes toward multifamily housing. However, the relative ease of multifamily construction near campus and student rentals' inability to lower market-wide housing costs are symptoms of the same phenomenon. Submarkets appeal to different populations with unique demand. Residents in one housing submarket will not

typically choose housing in another. Therefore, flooding the local market with student rentals is unlikely to lower rents for nonstudents.

Of course, rising housing costs are not the only adverse consequence of studentification. Noise, rowdy behavior, and property upkeep are other concerns associated with students (Sage, et. al 2012). In addition, concerns about the changing built environment drive conversations surrounding student rentals — a worry on full display in opposition to the Latitude project. This analysis does not prove that displacement has occurred in the Near North, but studentification has resulted in displacement in other contexts (Revington, 2018; Hubbard, 2009), and even within Champaign-Urbana.

Residents of neighborhoods like the Near North deserve the same say over the fate of their neighborhood as those in the Southeast or In-Town subareas. One Champaign planner said the City heard Near North residents' concerns about the Latitude project. "I think one of the messages that came out of that process, both explicitly and implicitly, was that, sort of, the properties on the north side of University Avenue…University Avenue will continue to basically sort of be a border that, you know, we're not going to go be actively promoting student-oriented development north of there. We certainly didn't rezone it — and don't plan to rezone it," he said.

Still, if student rentals do arrive in areas like the Near North, residents also need tools that allow them to control housing costs in their neighborhoods. Zoning is not the only mechanism to ensure local control. Community ownership of land, such as a land trust, is another option. However, identifying the way forward is beyond the scope of this project. Planners should work with neighborhood groups in studentifying areas to build a toolkit suited to the needs of the community.

Porous Boundaries to Student Enclaves Matter

The Cities of Champaign and Urbana have each made zoning changes in response to residents' concerns about studentification. For Champaign, this manifested as standards for multifamily development in the In-Town neighborhoods. In Urbana, planners implemented zoning with similar goals in the Lincoln-Busey corridor, as well as in other parts of West Urbana. This shows that planners know the benefits of limiting development and have the tools to contain apartments in certain parts of town.

However, not all boundaries to Champaign-Urbana's student enclave are equally robust. This analysis shows studentification is occurring in the Near North subarea. In past years, this occurred as developers sought to offer students an alternative to Campustown. The City of Urbana facilitated this, allowing large apartment complexes in an area of town far from neighborhood opposition. However, in recent years developers have renewed interest in building

north of University Avenue. New developments, such as Latitude and Campus Circle, aim to draw students farther from the main quad.

As demonstrated, new student rentals disrupt rents. For one, they flood the market with high-price luxury units. Second, an oversupply of student rentals does not result in lower rent levels for housing stock aimed at nonstudents. Therefore, the trajectory of the studentification frontier could have negative implications for residents of established neighborhoods in its path.

Town-Gown Coordination Could Calibrate Supply and Demand in Student Enclaves

In interviews, Champaign's planners and City Council members often mentioned poor communication between University of Illinois officials and the City on matters related to land use. Although the University and Cities of Champaign and Urbana have coordinated on drainage and placemaking efforts, tensions exist on parking and housing issues. On the other hand, UIUC representatives stated that Champaign city staff do not always reach out on regulatory issues that could affect the University.

However, the history of student housing in Champaign-Urbana demonstrates the University's reliance on the private rental market to house its students. The University's agreement with private certified housing providers is one example. Another is the fact that dormitory capacity at the University cannot accommodate student housing demand or the sheer number of enrolled undergraduates. About 70 percent of undergraduate students live off-campus. Therefore, the University has a stake in the private student rental market.

One representative of the University's housing department expressed several concerns about private rentals. First, she cited rising rents as an issue for students. For every wealthy, international student, she said, another, less well-off student was just scraping by to afford the cost of attendance. Food insecurity is rising among university students (Kathi, et al., 2020). In addition, student loan debt has steadily risen over the years. Second, she discussed student success, stating that those living on campus have access to resources to help them succeed in the classroom.

Local planners and housing developers have a reciprocal stake in the University's enrollment policies. An increase in enrollment at the undergraduate and graduate levels, as well as growing numbers of nonresident students, have altered the local housing market. The City of Champaign spurred development near campus through stormwater management and relaxed land use regulations. Expansion of housing options was the result. However, planners likely did not solve flooding along the Boneyard Creek with University enrollment trends in mind.

Calibration of housing supply and demand within a college town does not have to be a happy accident. University administrations project enrollment. They develop specific strategies

about what students to recruit, how many to admit, and how much to invest in on-campus housing options. As a result, local planners and developers could benefit from increased coordination with university leadership. The City of Waterloo's Town and Gown Committee is one example of coordination between university interests, local residents, and planners (Revington, 2018).

LIMITATIONS AND NEXT STEPS

Many of the limitations of this study are inherent to any single case study. Without further research in other, similar housing markets, how replicable these results is uncertain. Next steps include benchmarking the findings in Champaign-Urbana against other college towns (and other geographic contexts with large concentrations of students. In addition, further research should consider the usefulness of the Student Rental Index, as well as the effect of changing apartment sizes and configurations on local rent trends.

Comparing Local Findings to Other U.S. College Towns

This thesis is a case study of Champaign-Urbana's housing market. Enrollment at the University of Illinois tracks with higher education trends elsewhere in the U.S. In addition, post-recession market conditions and the financialization of student housing are national phenomena. That said, Champaign-Urbana's student housing market may behave differently than in other college towns. Local context matters. In Champaign, planning decisions to relax land-use regulations near campus, as well as public investments in infrastructure and placemaking, may have enabled development to an extent not possible in other college towns. Zoning and resident opposition to development in West Urbana and Champaign's In-Town neighborhoods also represent constraints to studentification that other college towns might not have.

To determine the scalability of the findings in this thesis, more work is needed to benchmark conditions in Champaign to those elsewhere. Future research could examine rent quartiles in other college towns, particularly in neighborhoods with high and low concentrations of student renters. Further research could also consider how student housing in larger metropolitan areas affects rents at the neighborhood scale. This could reveal the degree to which student rentals in college towns differ from those in cities or suburban contexts.

Usefulness of the Student Rental Index

The analysis in this thesis tracked the geographic distribution of student renters in two ways. First, I developed a Student Rental Index. The index offers one way to pinpoint student neighborhoods, by triangulating several variables associated with student renters: college enrollment, age, household type, tenure, and vehicle ownership. Second, I simply examined the

concentration of individuals enrolled in school at the college level. To augment this second method, I also accounted for the spatial distribution of foreign-born individuals, because of the large number of international students attending the University of Illinois.

Both methods yielded similar results — the Student Rental Index showed students concentrated in the Campus Core, as well as the growing popularity of student housing in the Near North. Examining the share of the population enrolled in college revealed the same thing.

However, Student Rental Index values rose for all subareas between 1990 and 2018, at least slightly. This occurred even as the percentage of students in areas such as In-Town and the Southeast remained stable. As discussed in chapter five, this likely occurred because residents who resembled student renters moved in. The rising popularity of a car-free lifestyle, growing numbers of young adult residents, and an increase in renting over homeownership provide explanations. This suggests limitations to the precision of the Student Rental Index.

The Index may have been more useful if the University of Illinois' residence halls were more dispersed throughout the urbanized area. Instead, all residence halls and University-owned apartments are located within the Campus Core. Furthermore, future inquiries into areas home to commuter schools — where many students may live with family members — could benefit from an index that includes nonfamily households. The specific conditions in Champaign-Urbana's student rental market made disaggregating on-campus and commuter students unnecessary. Other markets may benefit from the crosstabulation the Student Rental Index provides.

Any future research that relies on an index to measure the spatial distribution of student renters should calibrate variable choice based on local conditions. For example, qualitative interview evidence suggested Champaign-Urbana's student renters are unlikely to own vehicles. This might not be the case in other college towns where students drive to class. Therefore, including vehicle ownership would be a poor choice for those college towns. Other demographic measures might be more useful in those contexts.

Apartment Size and Bedroom Count

This analysis does not account for varying apartment sizes or configurations. But these distinctions within the local housing market play a role in the rents local units command. Four-bedroom apartments, logically, would cost more than one-bedroom units. Similarly, apartments with greater square footage may command higher rents than smaller options.

This thesis considered the cost of rent per housing unit across Champaign-Urbana's six subareas. Future research should consider changes in the cost of rent per square foot or bedroom in the local market. This should reveal the degree to which rising rents occurred because the market picked up more large units. Disentangling the relative cost of small

apartments from larger ones should enable a more nuanced look at rents in the wake of luxury student housing development.

In interviews, locals asserted that renovations have resulted in reconfigured units, as well as other upgrades of existing housing stock. This may have resulted in an increased bedroom count in many buildings. Because many local landlords rent by the bedroom, student renters may disregard the cost per unit when deciding where to live. As a result, examining per-bedroom rent may better encapsulate rent levels within the student rental market.

In addition, Champaign's decision to ease parking minimum requirements made constructing studio and one-bedroom apartments more attractive. City data show developers have responded by adding one-bedroom apartments near campus where they were uncommon before (Knight, 2017). Comparing the cost of one-bedroom units before and after the Campustown housing boom would show whether this influx of smaller units lowered rents or whether costs went up despite supply increases.

CONCLUSION

The findings in this thesis underscore the interplay between higher education policies at the institutional level, student buying power and housing preferences, developer activity, and local regulatory decisions. These elements work together to determine how disruptive the student rental submarket is within the wider housing market.

Before the University of Illinois expanded its student body, student renters clustered near campus. If enrollment had remained unchanged, the Campus Core's existing housing stock would have most likely accommodated the area's student renters. In this counterfactual, developers may have overlooked Champaign-Urbana. Fewer students — and smaller numbers of international and out-of-state students with money to spend — would translate to steady demand for housing. The type of luxury, high-rise buildings that now dot Champaign's skyline may have lacked the renters to justify their construction.

For this counterfactual to play out, national higher education trends would have needed to skip over the University of Illinois. Enrollment rose as the University sought out new students willing and able to pay tuition — something unnecessary in a context where state appropriations for higher education remain adequate.

Of course, University of Illinois enrollment *did* rise — by the thousands. Had the City of Champaign not eased parking and open space requirements, or if it had neglected stormwater infrastructure investments to curb flood risk, developers likely would not have built apartments near campus. This would have constrained housing supply within the local student rental submarket. Housing costs would have been a likely casualty. Although rents have gone up in the

Campus Core even following Champaign's student housing boom, prices may have skyrocketed further without ample student apartments to accommodate the growing student population. Student renters unable to find housing within the student enclave would have infiltrated other residential areas, resulting in a rolling studentification frontier. Competition among students and nonstudents may have pushed rents up market-wide.

Decisions by municipal leaders and planning staff prevented this scenario from playing out. As discussed in chapter five, student renters remained clustered in the Campus Core. Where some students moved to the Near North, developers attracted them with purpose-built student apartments along North Lincoln Avenue — a "good enough" option that acted as a pressure release valve ahead of the housing boom near campus.

The analysis in chapter six shows that new student rentals disrupted rents within the Campus Core and Near North. But because boundaries to the student enclave mostly held up, this shielded other residential areas from rising rents. The local student rental submarket has remained distinct.

Did Champaign-Urbana's planners and elected officials foresee the tidal wave of enrollment when they unlocked development potential near the main quad? Probably not. Still, the story of Champaign-Urbana's student rental submarket offers lessons for planners in other college towns. First, University enrollment strategy matters in markets with a large student renter population. Accurately projecting enrollment can help planners pave the way for adequate student housing supply. Second, land use decisions can steer student housing development to the neighborhoods where it is needed most. Regulatory choices, such as zoning, and neighborhood opposition can also protect nonstudent neighborhoods — like In-Town and the Southeast — from student incursion. Taken together, this gives practitioners agency over rent levels in college towns.

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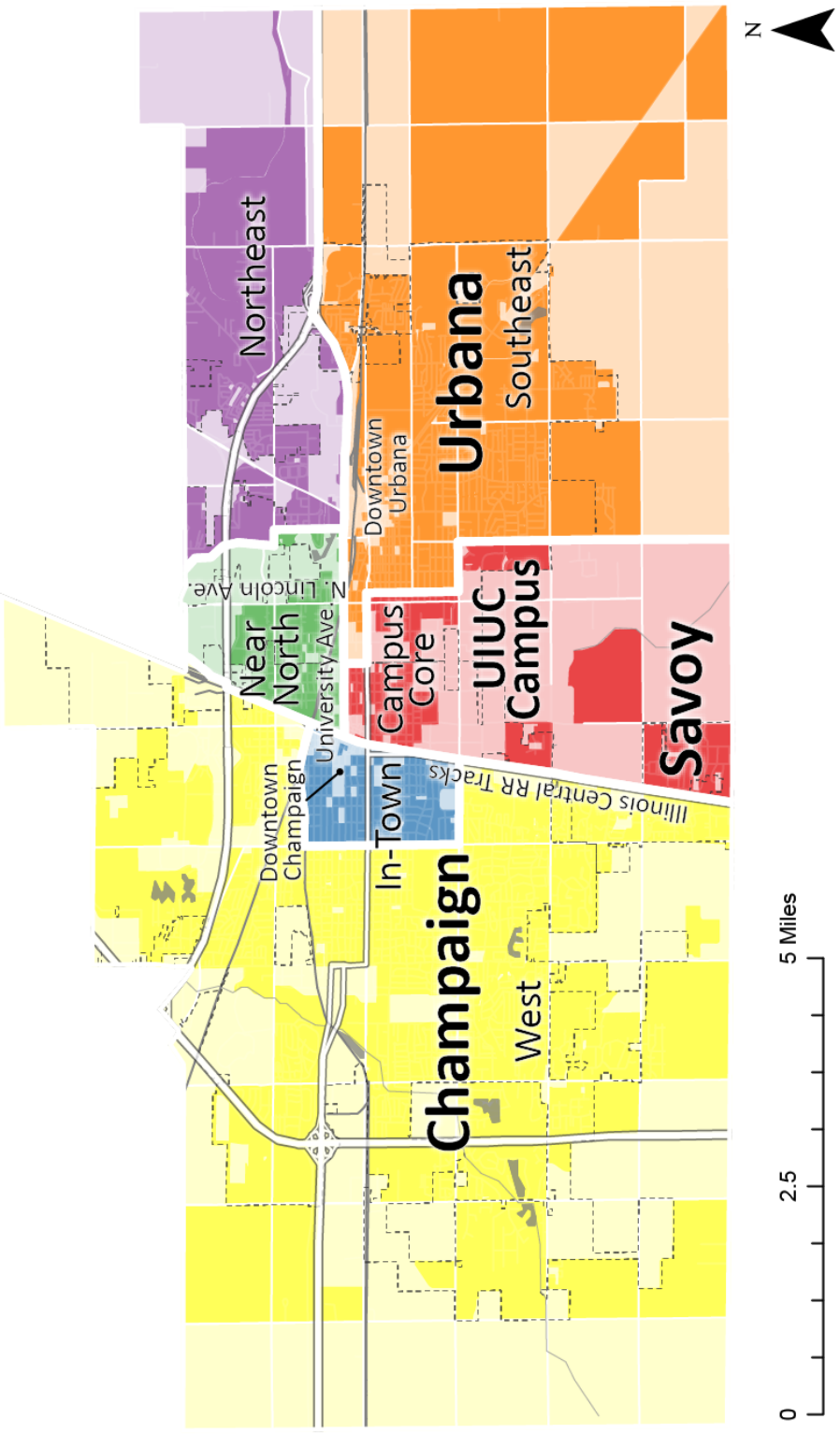
APPENDIX A: DETAILED SUBAREA MAP

Figure A.1: **Detailed Map of Champaign-Urbana's Subareas**



APPENDIX B: CENSUS TRACTS WITHIN EACH SUBAREA

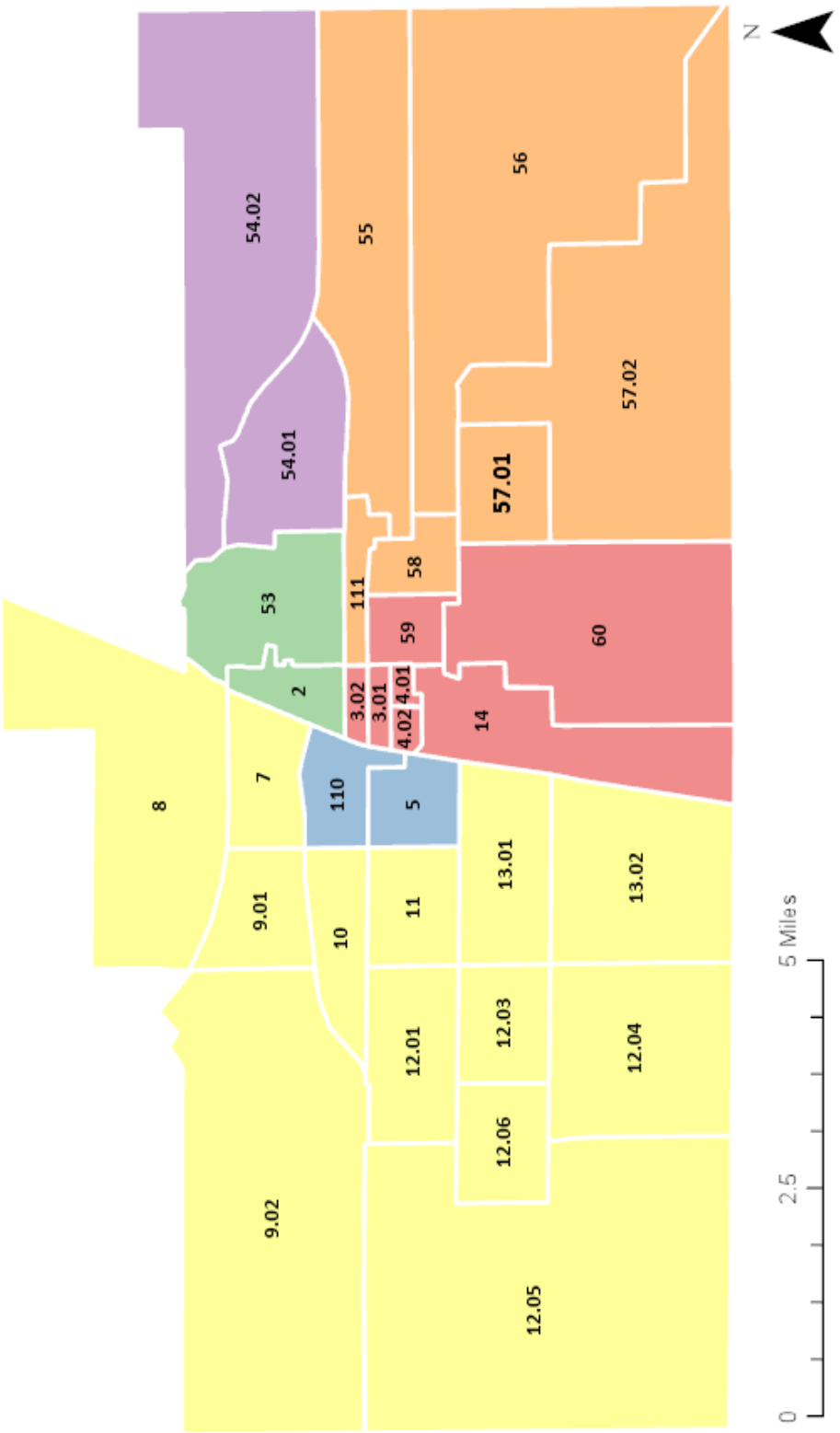


Figure B.1

Table B.1

Census Tracts Within Each Subarea, 1990

Census Tract	Subarea
Tract 3	Campus Core
Tract 4	Campus Core
Tract 14	Campus Core
Tract 59	Campus Core
Tract 60	Campus Core
Tract 1	In-Town
Tract 55	In-Town
Tract 6	In-Town
Tract 2	Near North
Tract 53	Near North
Tract 54	Northeast
Tract 51	Southeast
Tract 52	Southeast
Tract 55	Southeast
Tract 56	Southeast
Tract 57	Southeast
Tract 58	Southeast
Tract 8	West
Tract 7	West
Tract 9	West
Tract 10	West
Tract 11	West
Tract 12.01	West
Tract 13	West

Table B.2:

Census Tracts Within Each Subarea, 2000

Census Tract	Subarea
Tract 3	Campus Core
Tract 4	Campus Core
Tract 14	Campus Core
Tract 59	Campus Core
Tract 60	Campus Core
Tract 1	In-Town
Tract 5	In-Town
Tract 6	In-Town
Tract 2	Near North
Tract 53	Near North
Tract 54	Northeast
Tract 51	Southeast
Tract 52	Southeast
Tract 55	Southeast
Tract 56	Southeast
Tract 57	Southeast
Tract 58	Southeast
Tract 8	West
Tract 7	West
Tract 9.01	West
Tract 9.02	West
Tract 10	West
Tract 11	West
Tract 12.01	West
Tract 12.03	West
Tract 12.04	West
Tract 13.01	West
Tract 13.02	West

Table B.3:

Census Tracts Within Each Subarea, 2010 and 2018

Census Tract	Subarea
Tract 3.01	Campus Core
Tract 3.02	Campus Core
Tract 4.01	Campus Core
Tract 4.02	Campus Core
Tract 14	Campus Core
Tract 59	Campus Core
Tract 60	Campus Core
Tract 5	In-Town
Tract 110	In-Town
Tract 2	Near North
Tract 53	Near North
Tract 54.01	Northeast
Tract 54.02	Northeast
Tract 55	Southeast
Tract 56	Southeast
Tract 57.01	Southeast
Tract 58	Southeast
Tract 111	Southeast
Tract 8	West
Tract 7	West
Tract 9.01	West
Tract 9.02	West
Tract 10	West
Tract 11	West
Tract 12.01	West
Tract 12.03	West
Tract 12.04	West
Tract 13.01	West
Tract 13.02	West

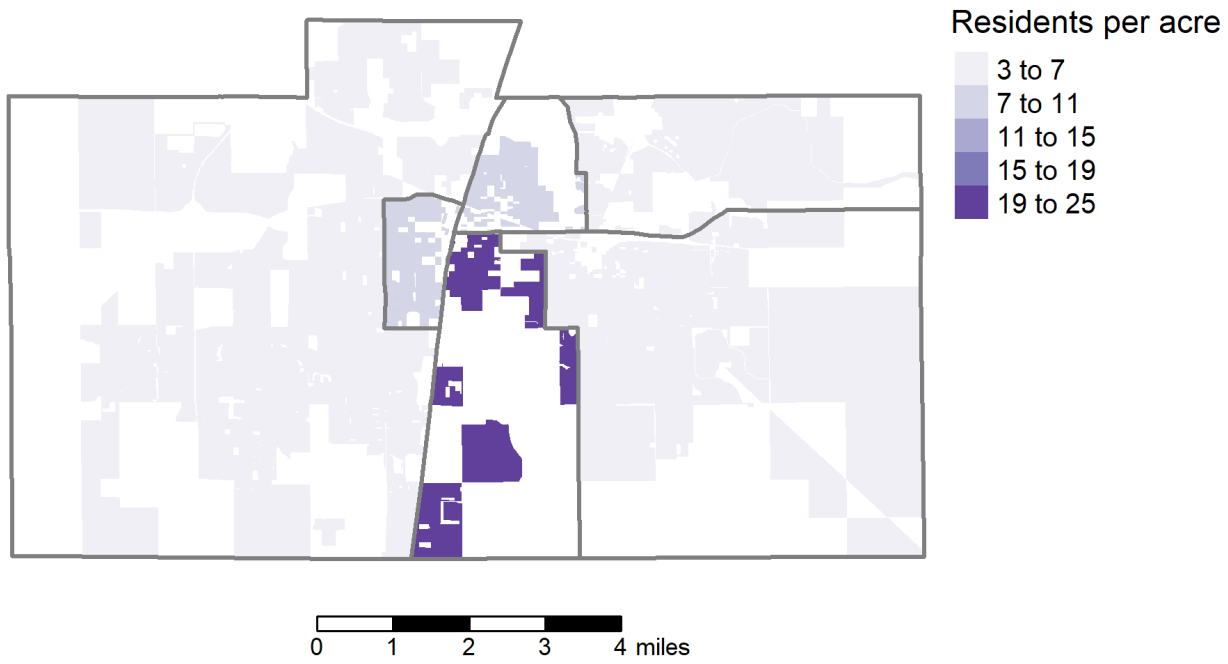
APPENDIX C: SUPPLEMENTAL MAPS

POPULATION DENSITY

The following maps show the number of households per acre of populated land in Champaign-Urbana's six subareas. For a more detailed map of Champaign-Urbana, including the bounds of each subarea, see Appendix A.

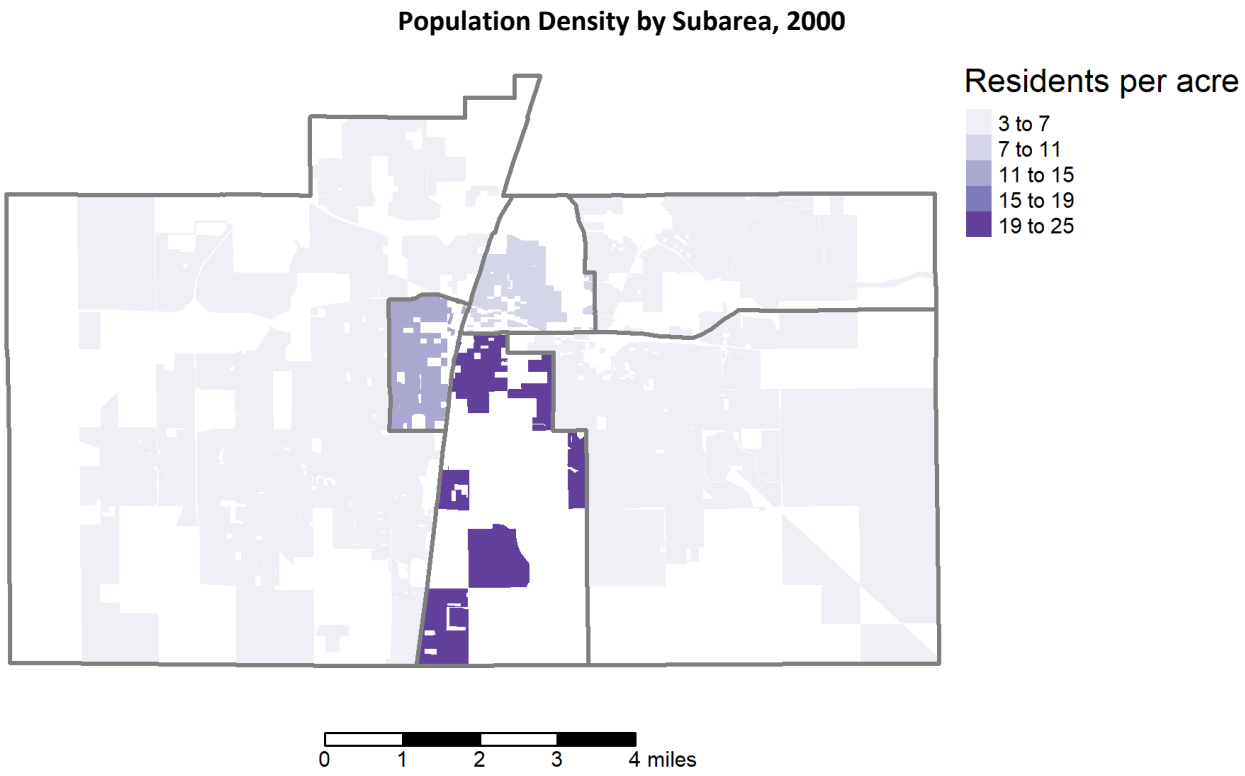
Figure C.1:

Population Density by Subarea, 1990



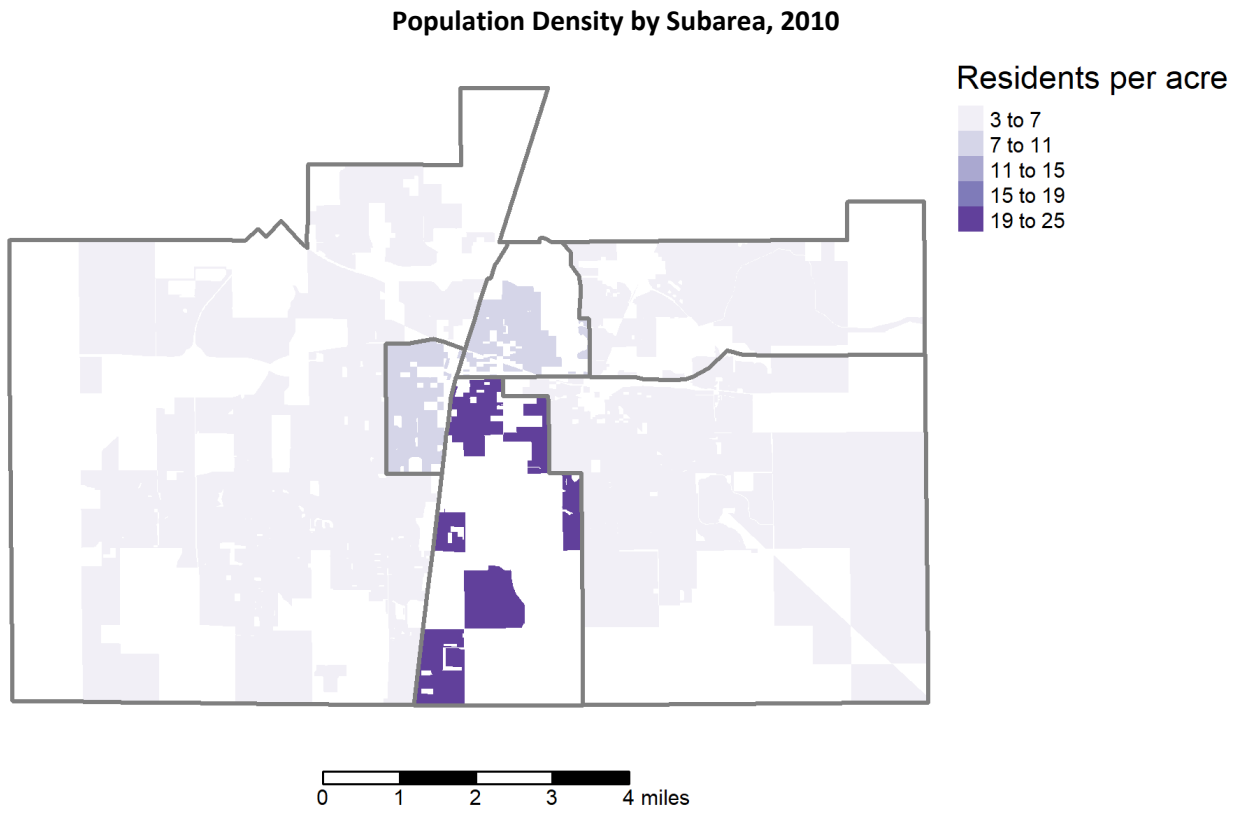
Data sources: 1990 decennial census 100% data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; U.S. Census Bureau Tiger/Line shapefiles for 2010.

Figure C.2:



Data sources: 2000 decennial census 100% data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; U.S. Census Bureau Tiger/Line shapefiles for 2010.

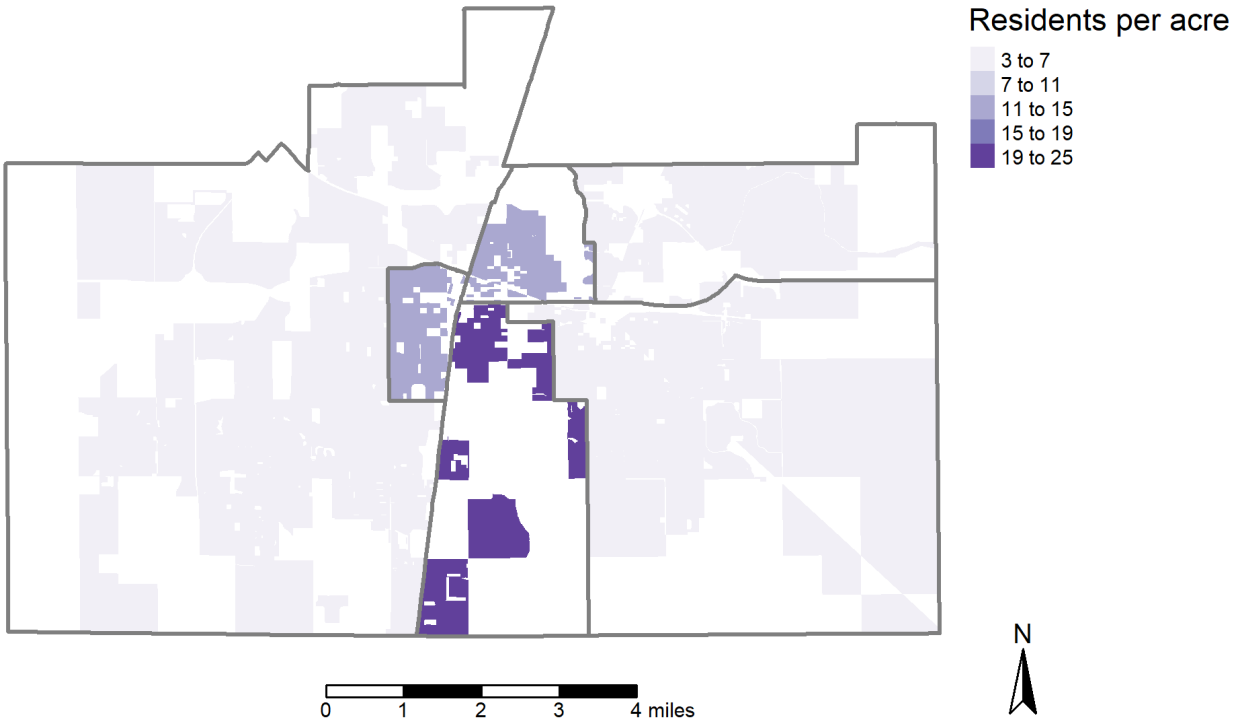
Figure C.3:



Data sources: 2006-2010 American Community Survey 5-year estimates; U.S. Census Bureau Tiger/Line shapefiles for 2010.

Figure C.4:

Population Density by Subarea, 2018

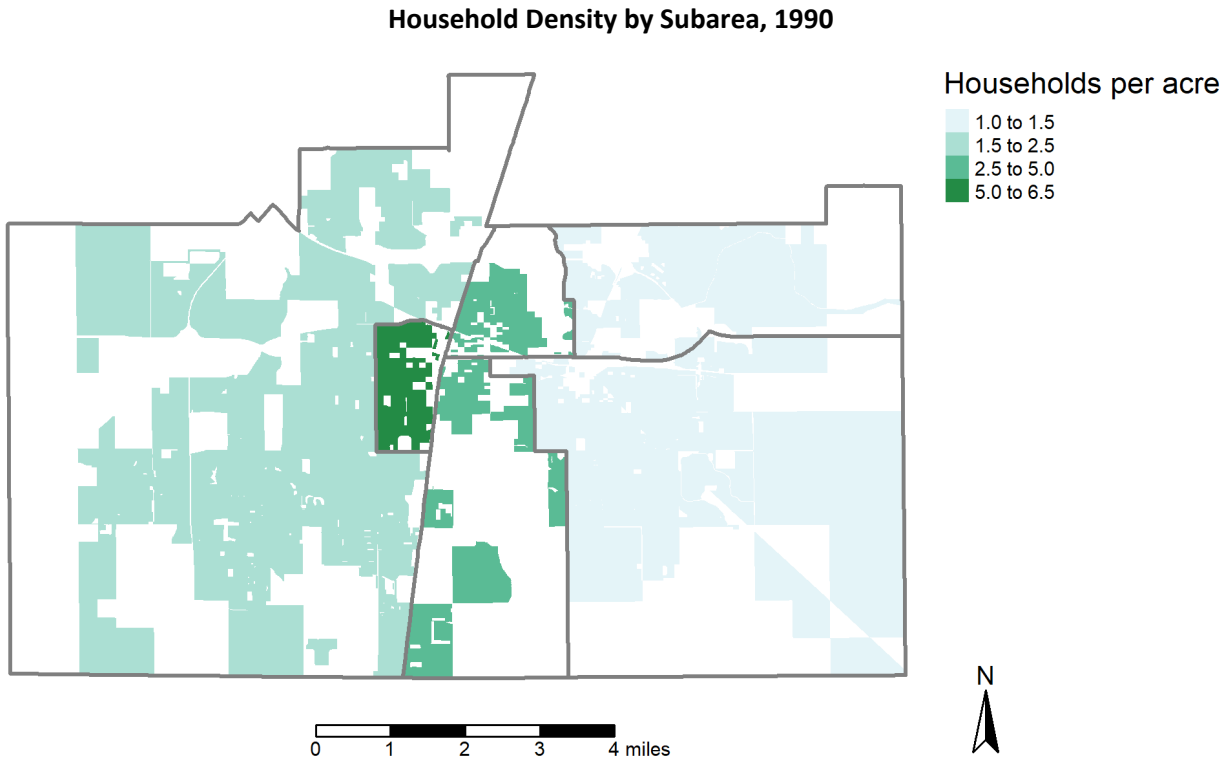


Data sources: 2014-2018 American Community Survey 5-year estimates; U.S. Census Bureau Tiger/Line shapefiles for 2010.

HOUSEHOLD DENSITY

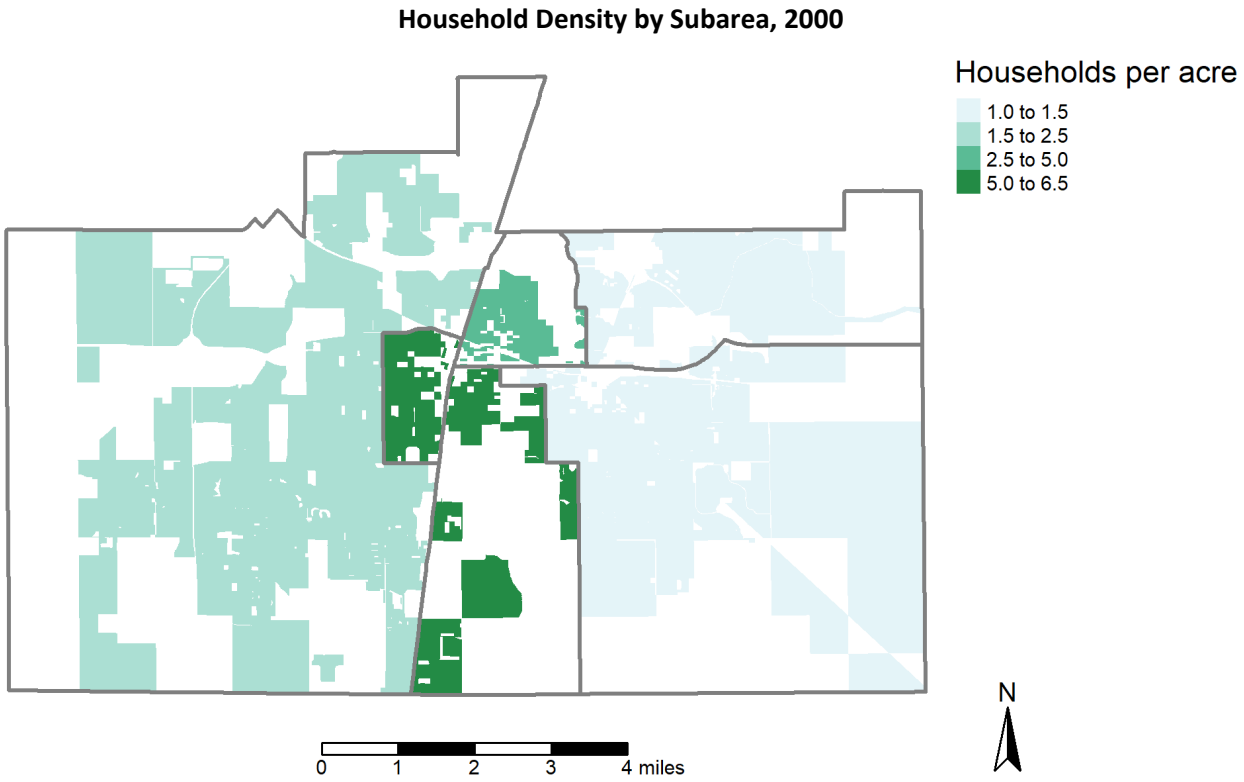
The following maps show the number of households per acre of populated land in Champaign-Urbana's six subareas. For a more detailed map of Champaign-Urbana, including the bounds of each subarea, see Appendix A.

Figure C.5:



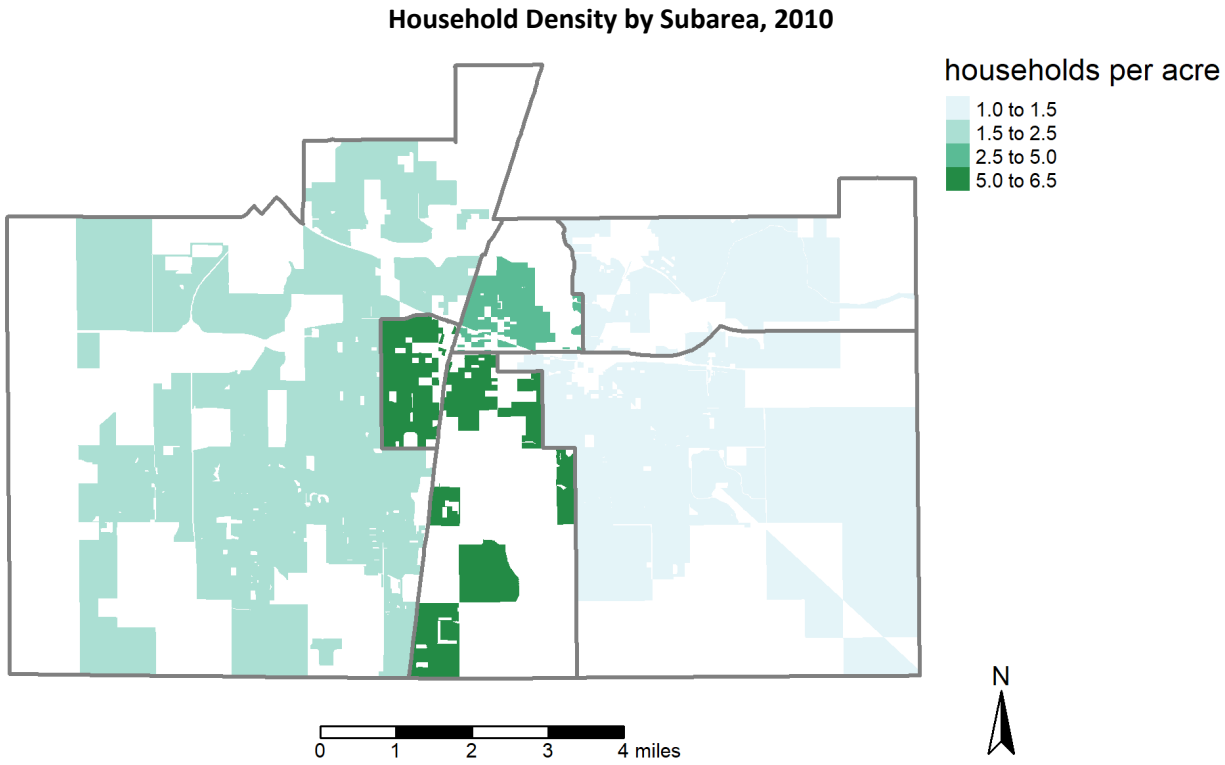
Data sources: 1990 decennial census 100% data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; U.S. Census Bureau Tiger/Line shapefiles for 2010.

Figure C.6:



Data sources: 2000 decennial census 100% data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; U.S. Census Bureau Tiger/Line shapefiles for 2010.

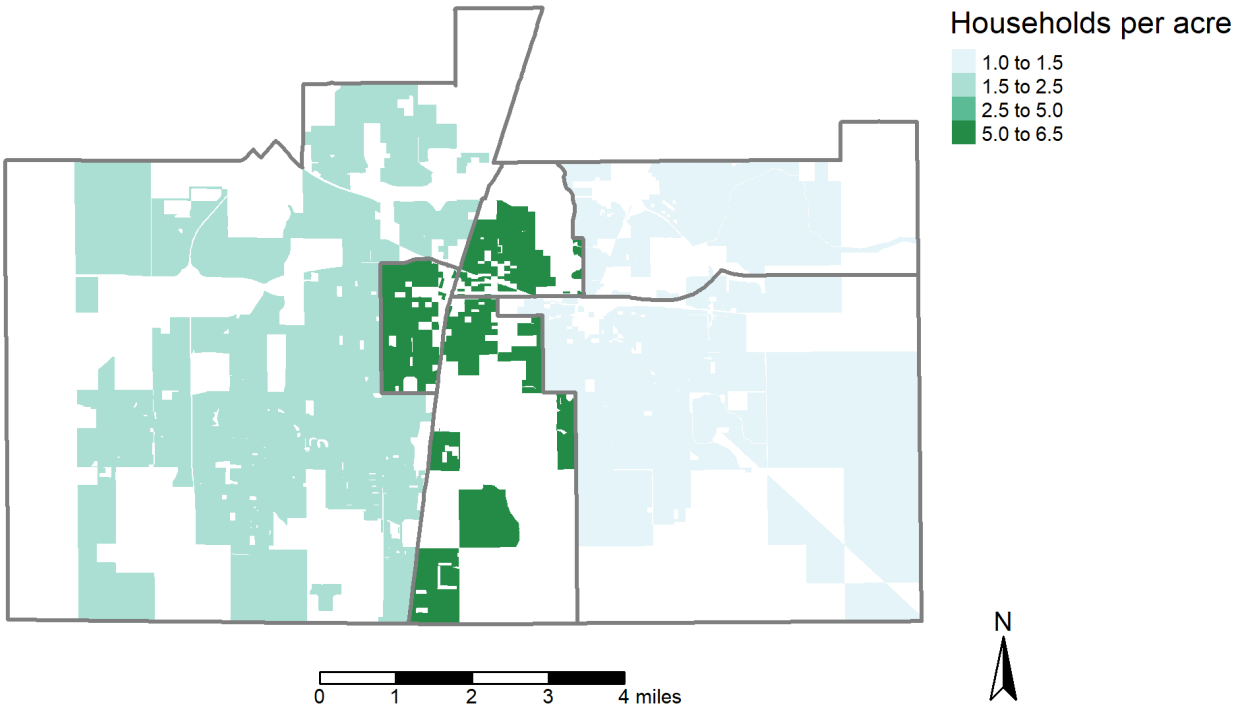
Figure C.7:



Data sources: 2006-2010 American Community Survey 5-year estimates; U.S. Census Bureau Tiger/Line shapefiles for 2010.

Figure C.8:

Household Density by Subarea, 2018:



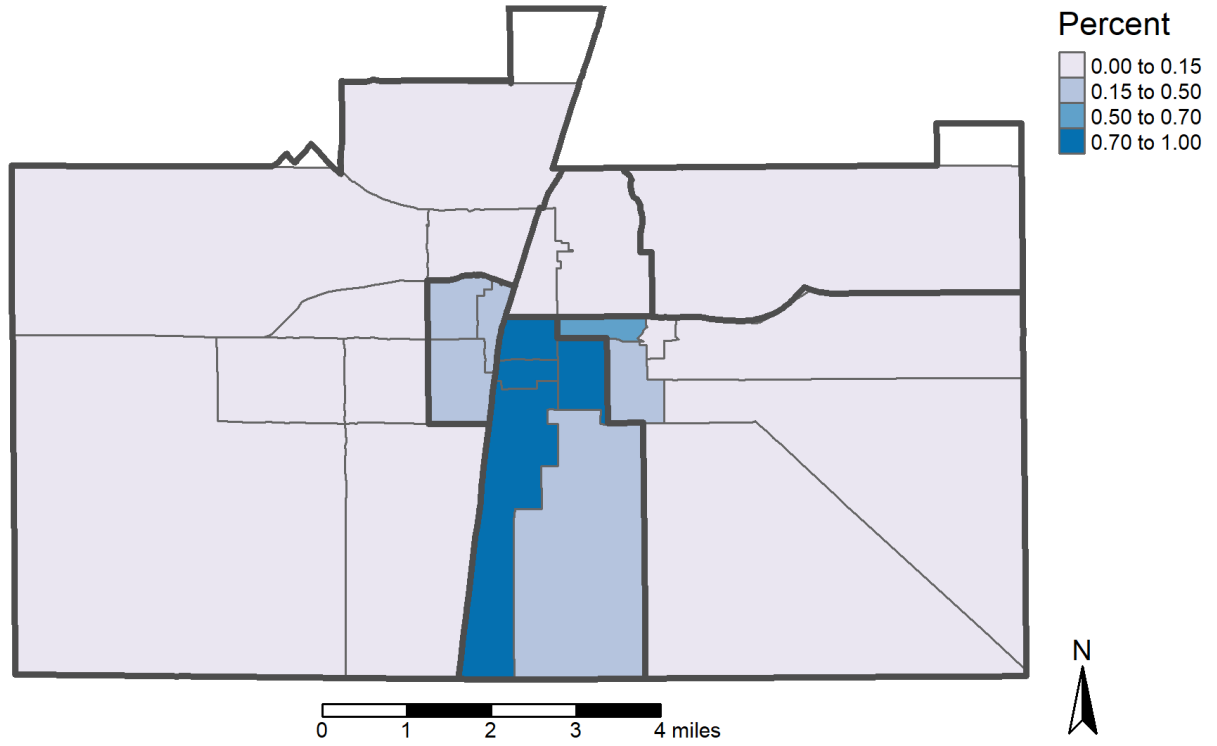
Data sources: 2014-2018 American Community Survey 5-year estimates; U.S. Census Bureau Tiger/Line shapefiles for 2010.

PERCENT STUDENT POPULATION

The following maps show the percentage of the population made up by students enrolled in school at the undergraduate and graduate levels combined at the census tract-level. The maps also show the boundaries for each of Champaign-Urbana's six subareas. Percent student population is one of the variables used in the Student Renal Index, described in more detail in chapter three. For a more detailed map of Champaign-Urbana, including the bounds of each subarea, see Appendix A.

Figure C.9:

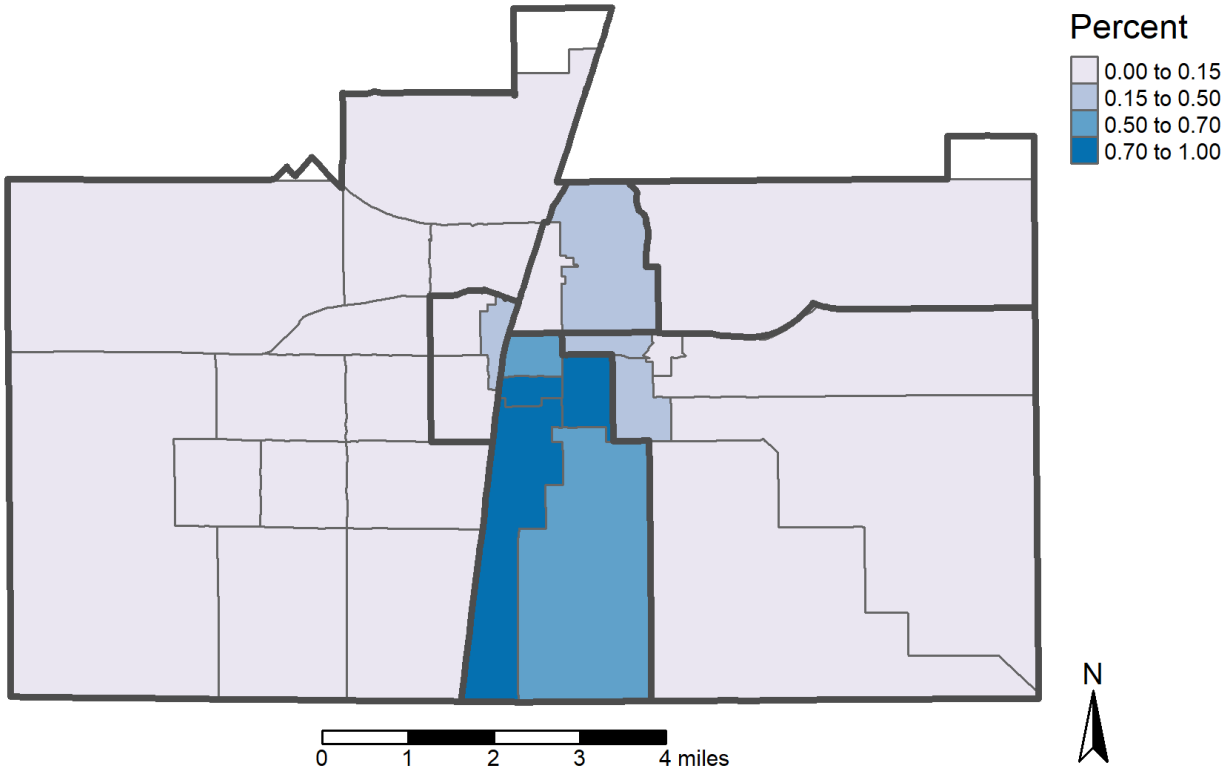
Percent Student Population by Subarea, 1990



Data sources: 1990 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; U.S. Census Bureau Tiger/Line shapefiles for 2010.

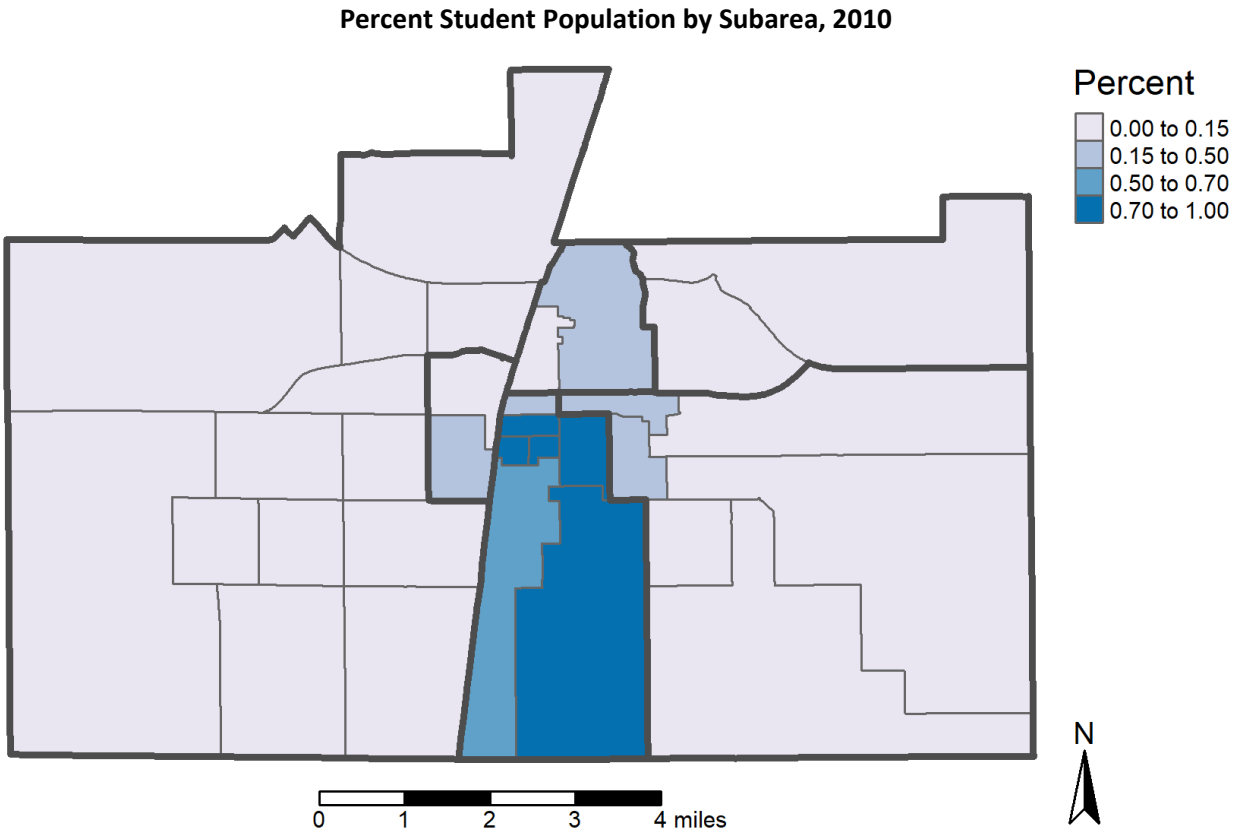
Figure C.10:

Percent Student Population by Subarea, 2000



Data sources: 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; U.S. Census Bureau Tiger/Line shapefiles for 2010.

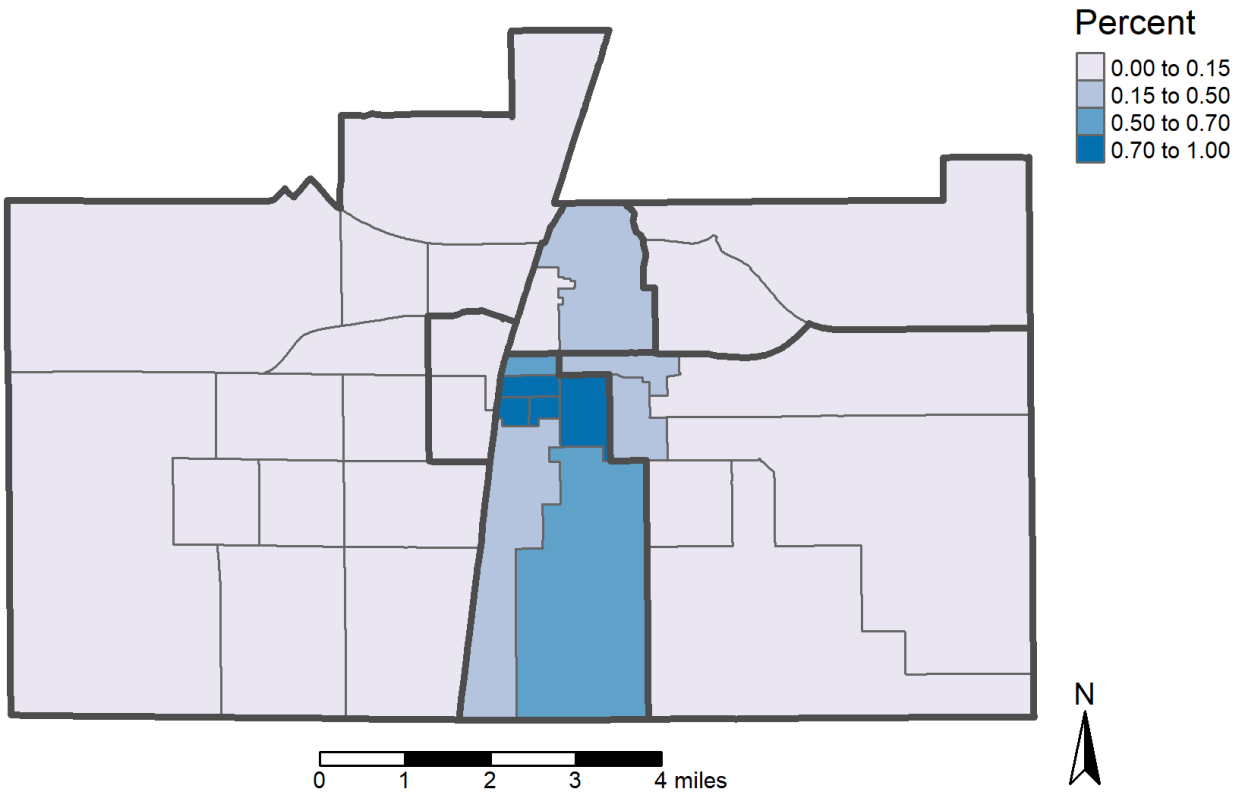
Figure C.11:



Data sources: 2006-2010 American Community Survey 5-year estimates; U.S. Census Bureau Tiger/Line shapefiles for 2010.

Figure C.12:

Percent Student Population by Subarea, 2018:



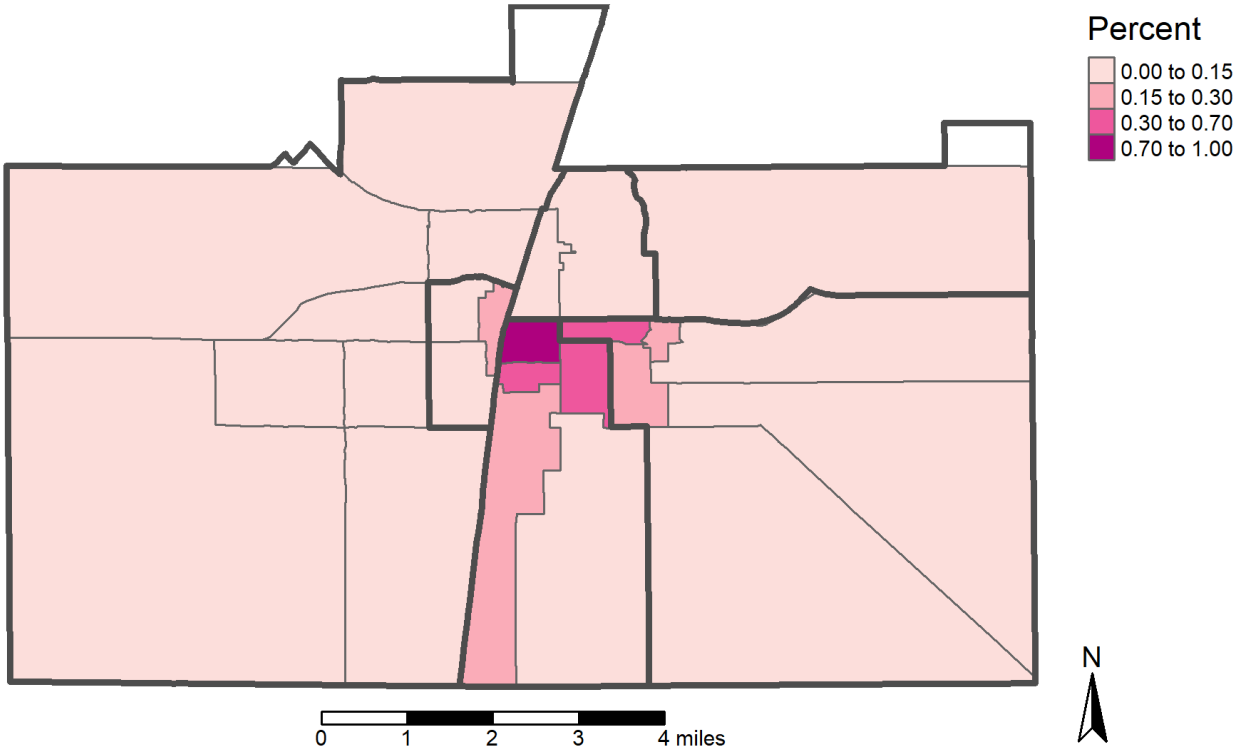
Data sources: 2014-2018 American Community Survey 5-year estimates; U.S. Census Bureau Tiger/Line shapefiles for 2010.

PERCENT OF POPULATION AGE 20 TO 24

The following maps show the percentage of the population made up by individuals between the ages of 20 and 24 at the census tract-level. The maps also show the boundaries for each of Champaign-Urbana's six subareas. This is one of the variables used in the Student Renal Index, described in more detail in chapter three. For a more detailed map of Champaign-Urbana, including the bounds of each subarea, see Appendix A.

Figure C13:

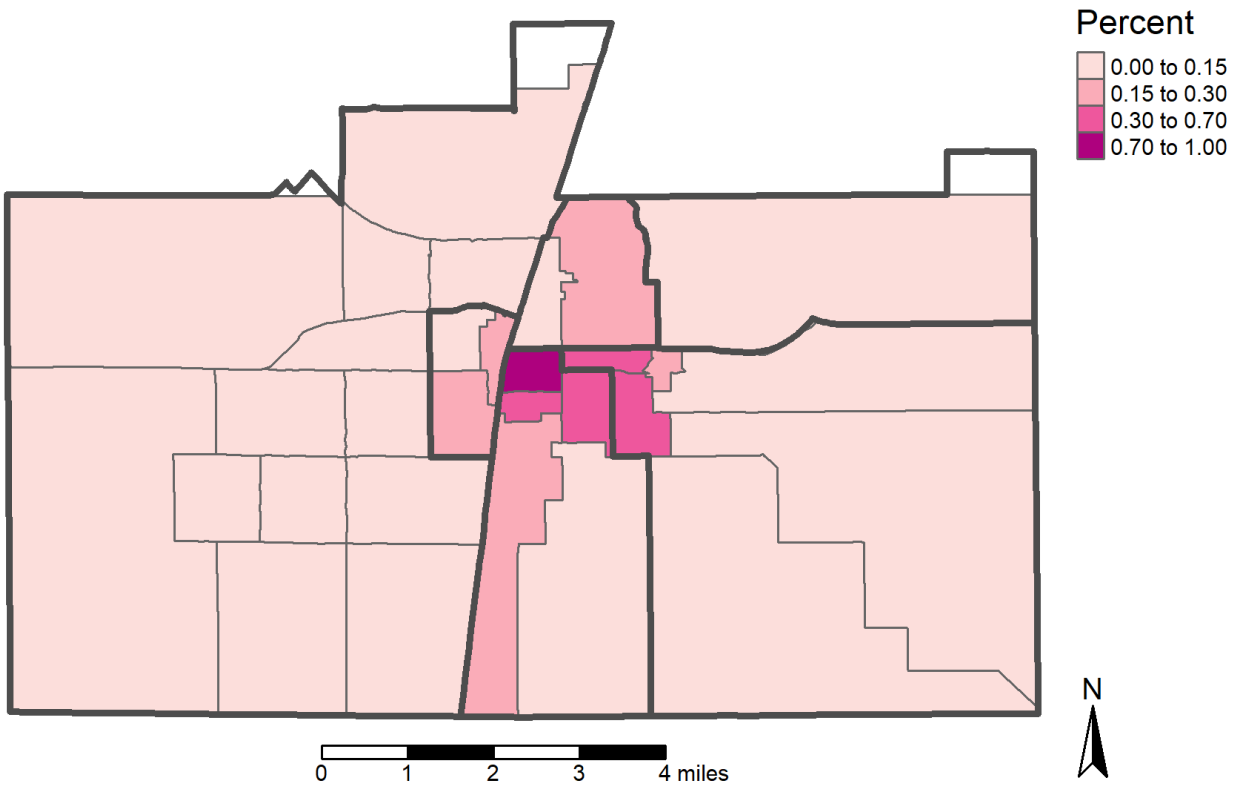
Percent of Population Age 20-24 by Subarea, 1990



Data sources: 1990 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; U.S. Census Bureau Tiger/Line shapefiles for 2010.

Figure C.14:

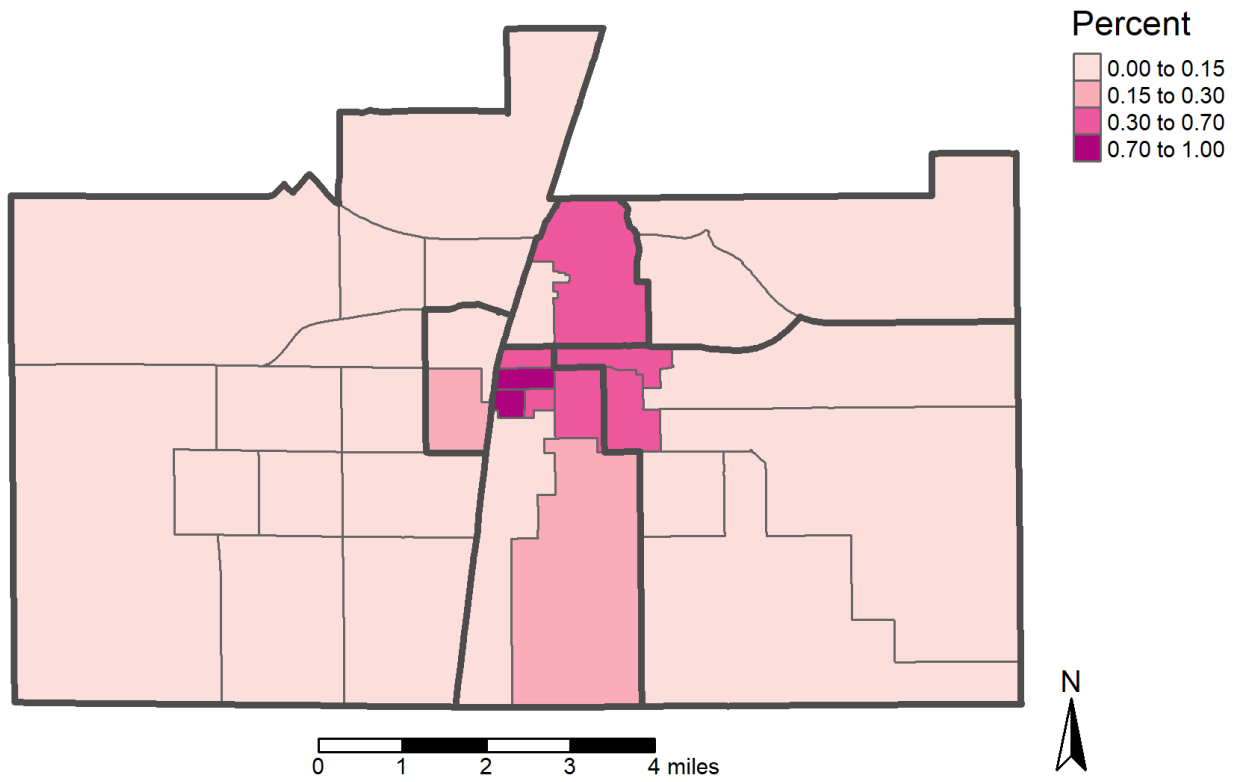
Percent of Population Age 20-24 by Subarea, 2000



Data sources: 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; U.S. Census Bureau Tiger/Line shapefiles for 2010.

Figure C.15:

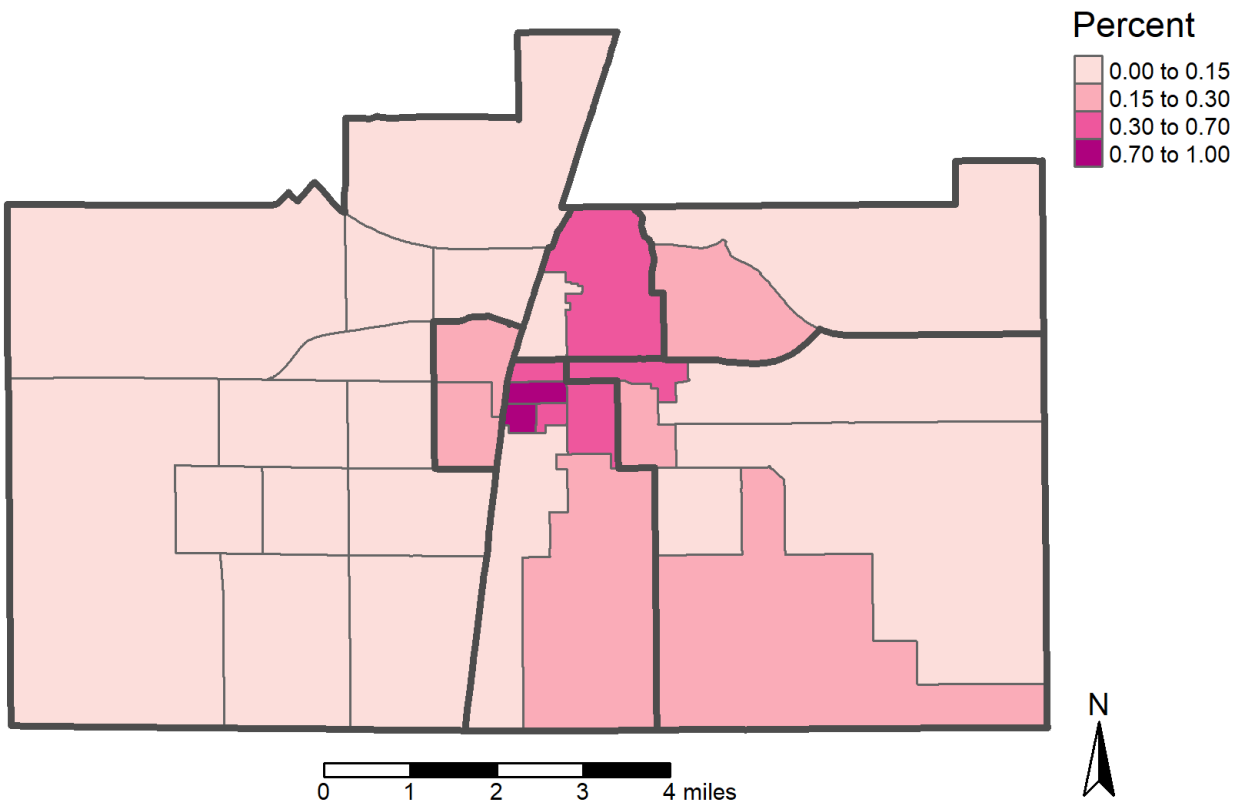
Percent of Population Age 20-24 by Subarea, 2010



Data sources: 2006-2010 American Community Survey 5-year estimates; U.S. Census Bureau Tiger/Line shapefiles for 2010.

Figure C.16:

Percent of Population Age 20-24 by Subarea, 2018:

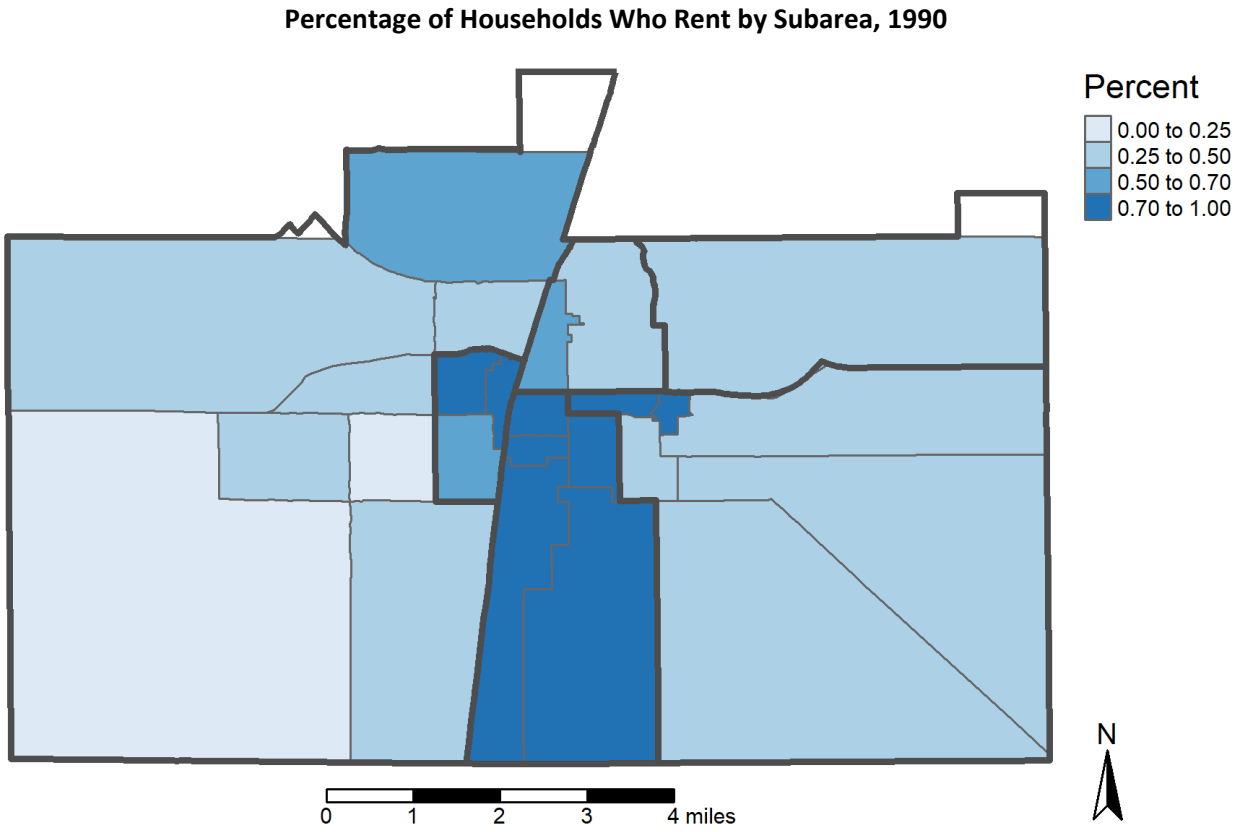


Data sources: 2014-2018 American Community Survey 5-year estimates; U.S. Census Bureau Tiger/Line shapefiles for 2010.

PERCENT RENTER HOUSEHOLDS

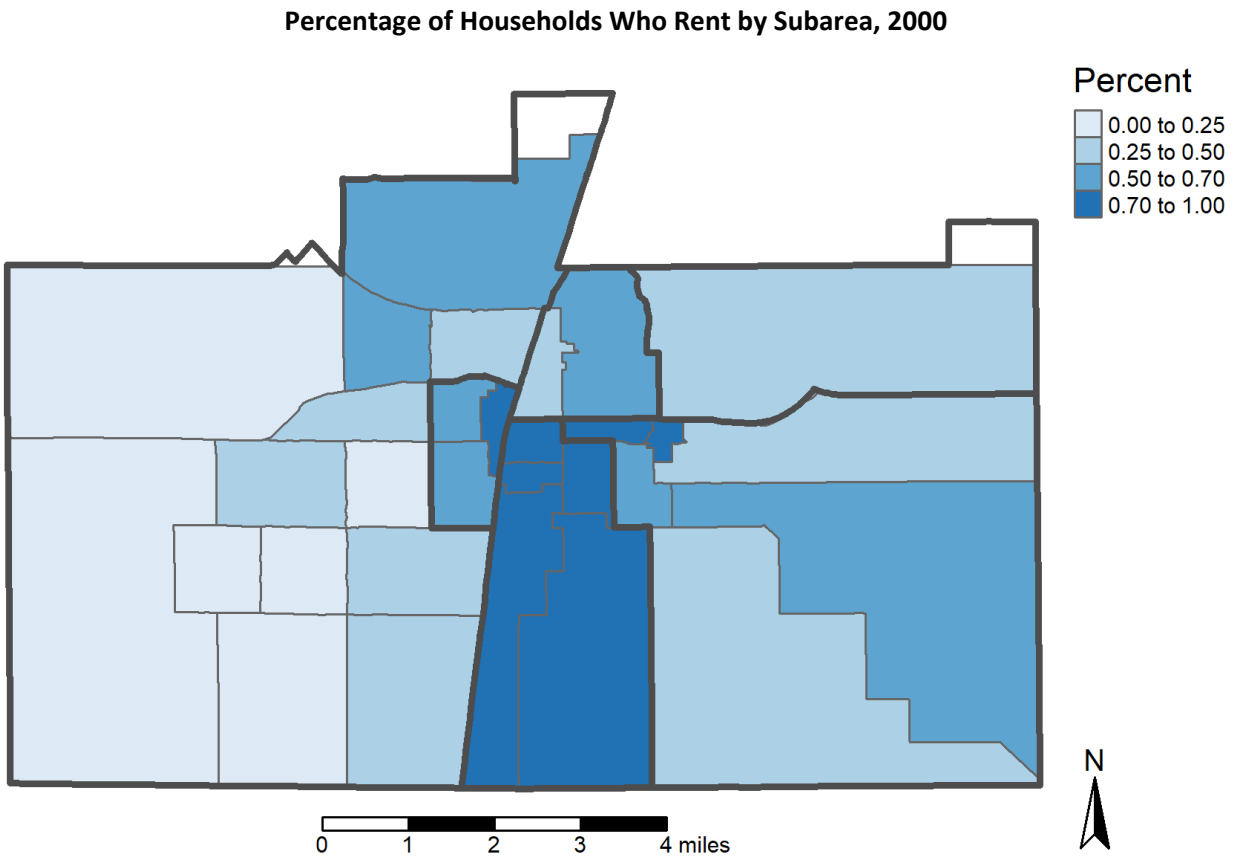
The following maps show the percentage of the all households who rent their homes (rather than own) at the census tract-level. The maps also show the boundaries for each of Champaign-Urbana's six subareas. This is one of the variables used in the Student Renal Index, described in more detail in chapter three. For a more detailed map of Champaign-Urbana, including the bounds of each subarea, see Appendix A.

Figure C17:



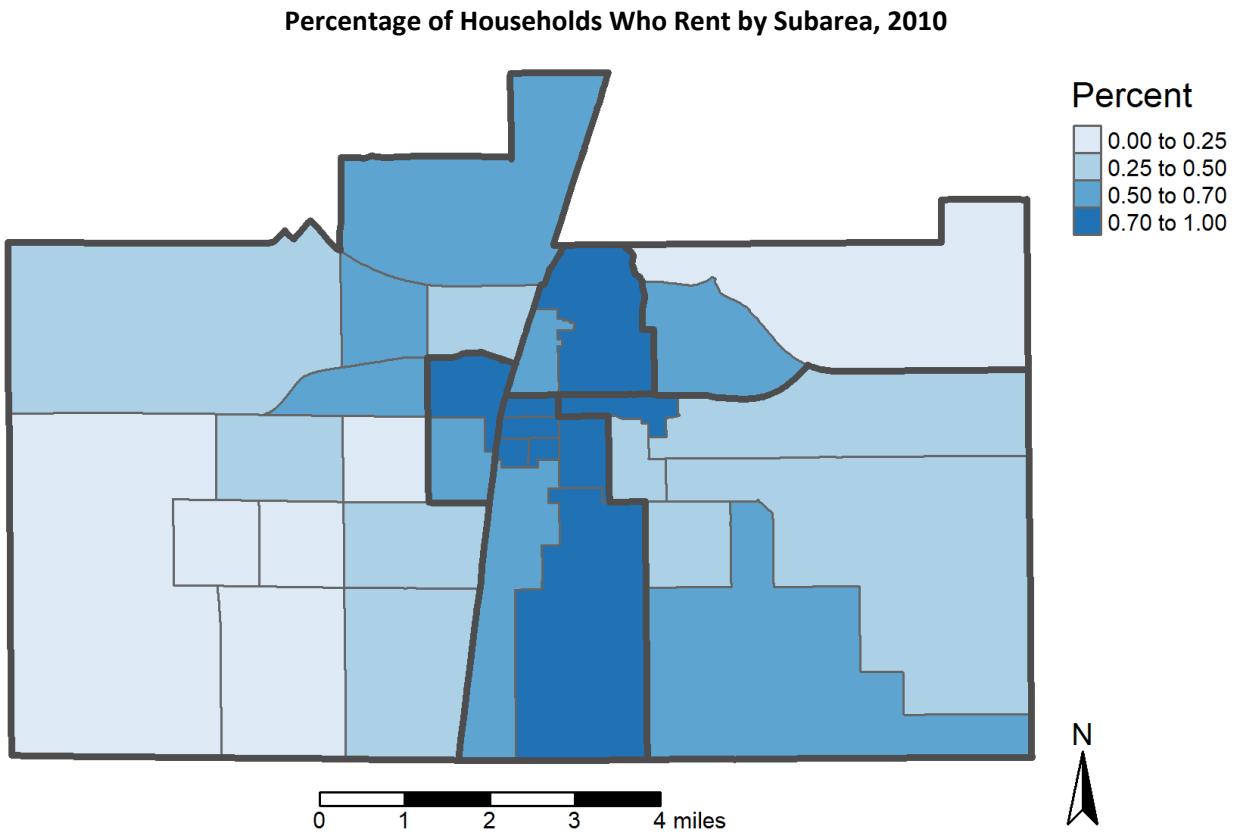
Data sources: 1990 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; U.S. Census Bureau Tiger/Line shapefiles for 2010.

Figure C.18:



Data sources: 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; U.S. Census Bureau Tiger/Line shapefiles for 2010.

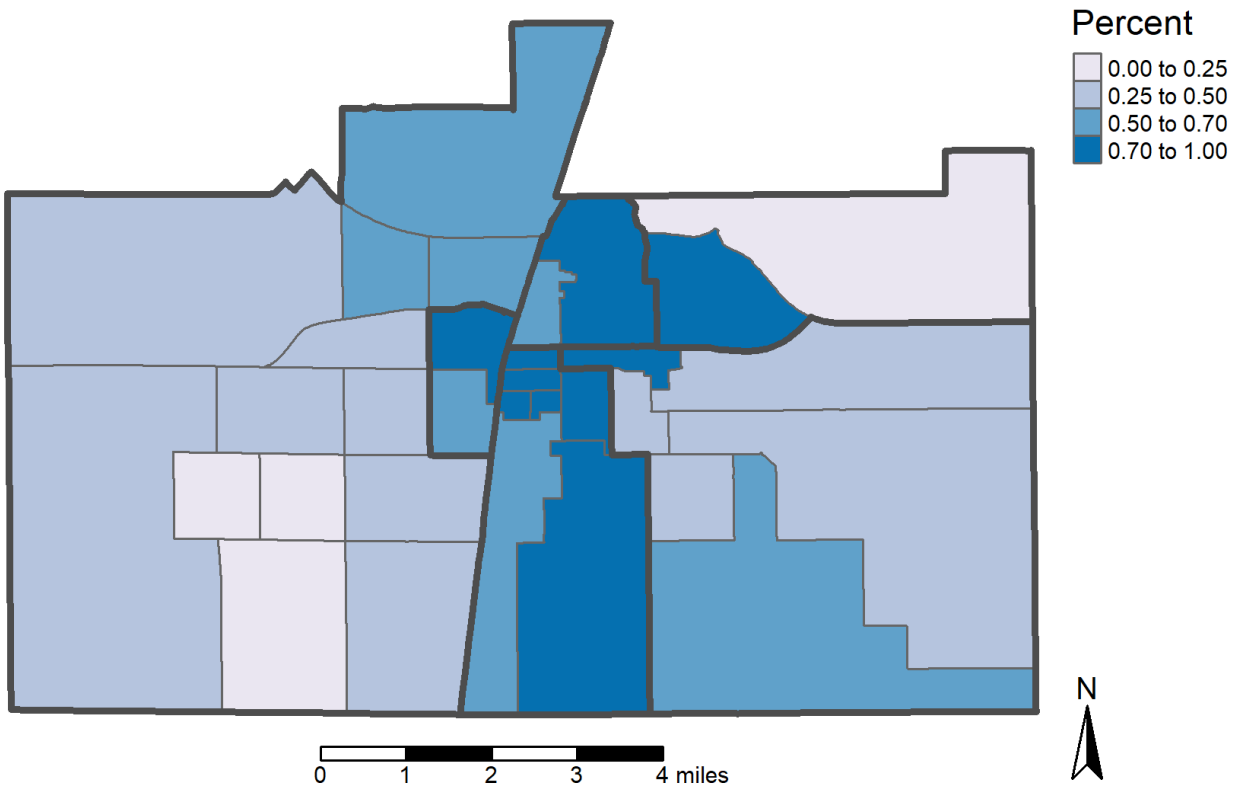
Figure C.19:



Data sources: 2006-2010 American Community Survey 5-year estimates; U.S. Census Bureau Tiger/Line shapefiles for 2010.

Figure C.20:

Percentage of Households Who Rent by Subarea, 2018



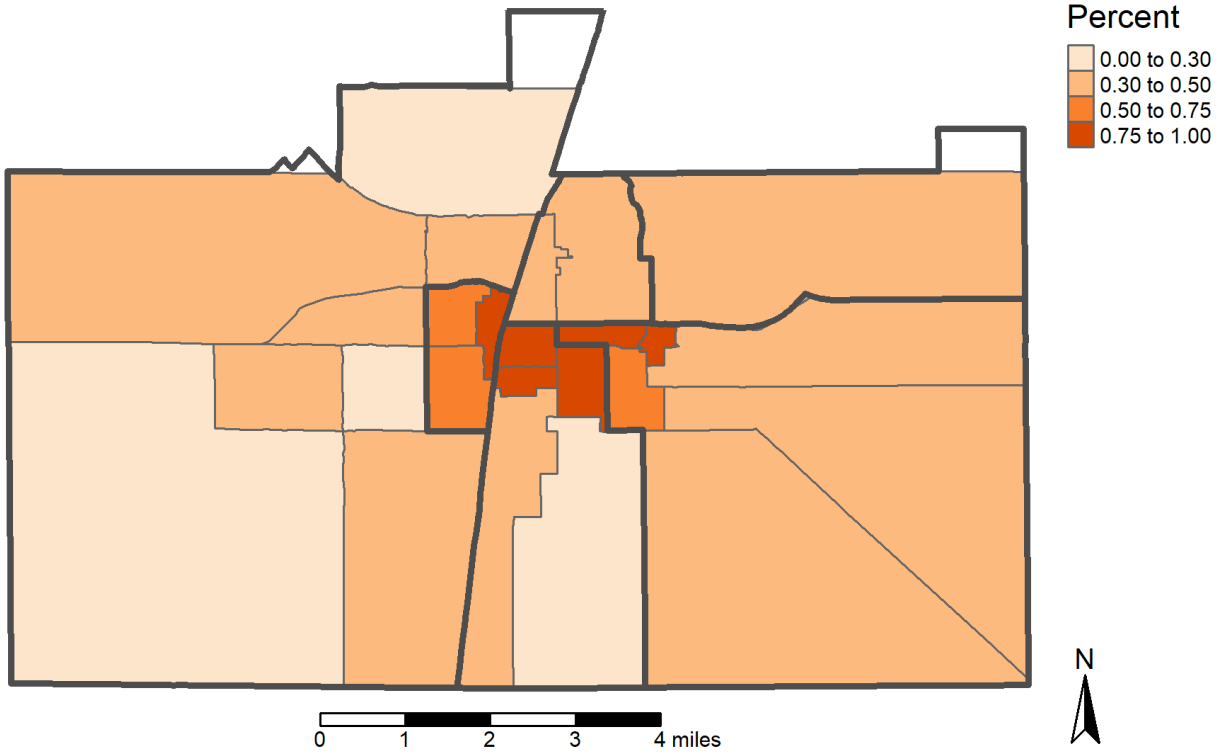
Data sources: 2014-2018 American Community Survey 5-year estimates; U.S. Census Bureau Tiger/Line shapefiles for 2010.

PERCENT NONFAMILY HOUSEHOLDS

The following maps show the percentage of the all households that are nonfamily households at the census tract-level. The maps also show the boundaries for each of Champaign-Urbana's six subareas. This is one of the variables used in the Student Renal Index, described in more detail in chapter three. For a more detailed map of Champaign-Urbana, including the bounds of each subarea, see Appendix A.

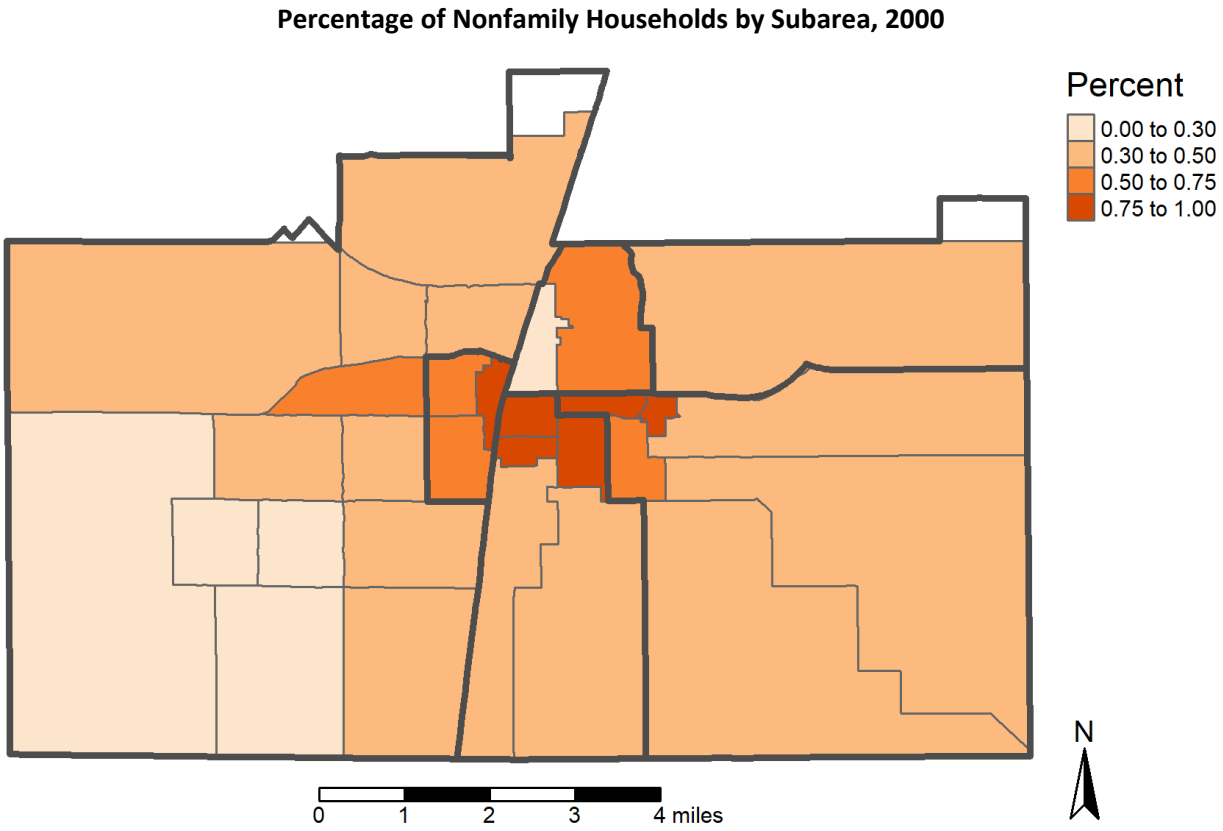
Figure C21:

Percentage of Nonfamily Households by Subarea, 1990



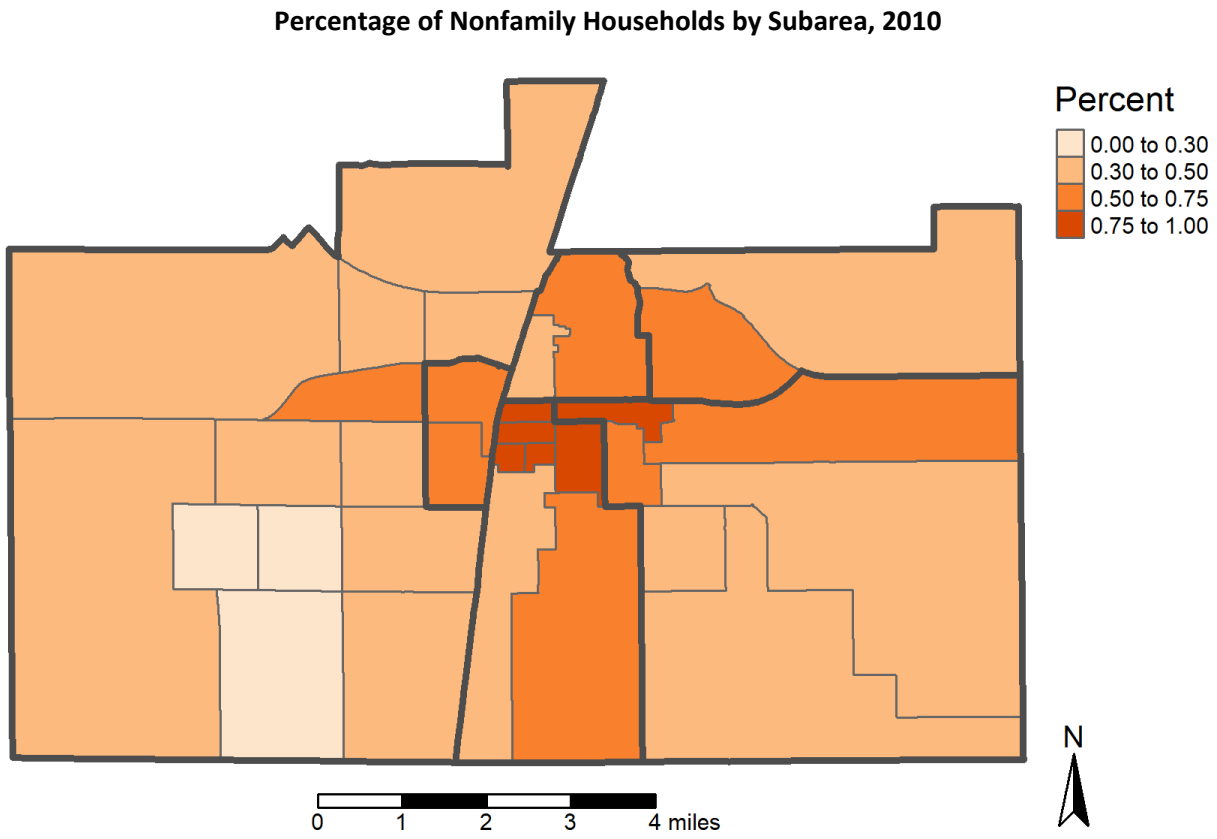
Data sources: 1990 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; U.S. Census Bureau Tiger/Line shapefiles for 2010.

Figure C.22:



Data sources: 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; U.S. Census Bureau Tiger/Line shapefiles for 2010.

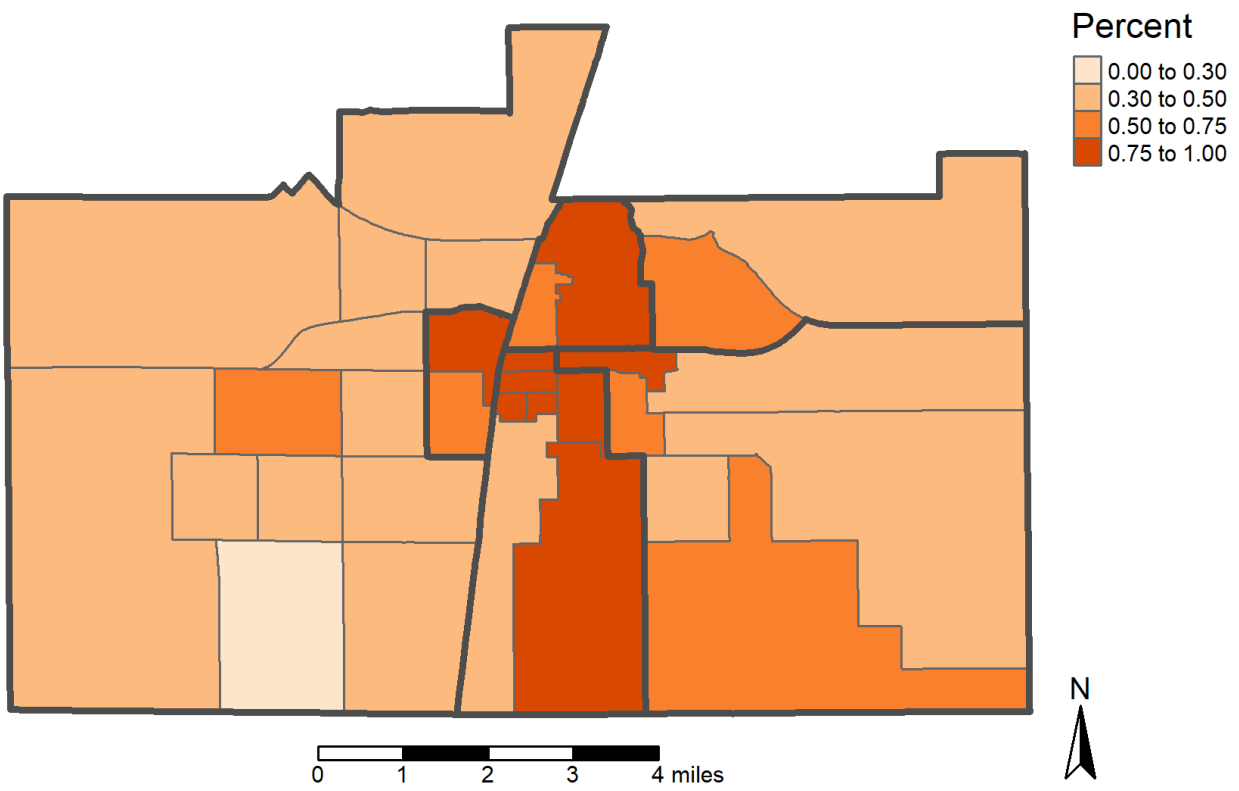
Figure C.23:



Data sources: 2006-2010 American Community Survey 5-year estimates; U.S. Census Bureau Tiger/Line shapefiles for 2010.

Figure C.24:

Percentage of Nonfamily Households by Subarea, 2018



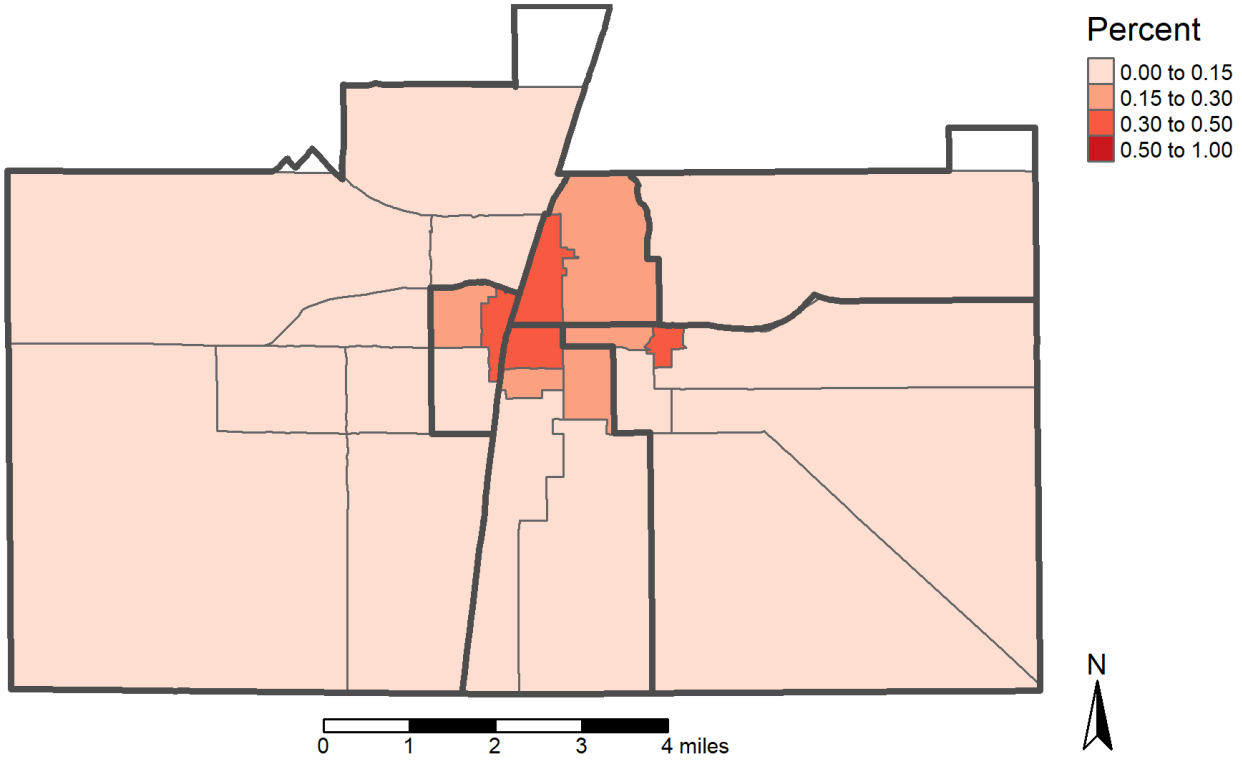
Data sources: 2014-2018 American Community Survey 5-year estimates; U.S. Census Bureau Tiger/Line shapefiles for 2010.

PERCENT HOUSEHOLDS WITH NO VEHICLE

The following maps show the percentage of the all households who do not have a vehicle available at the census tract-level. The maps also show the boundaries for each of Champaign-Urbana's six subareas. This is one of the variables used in the Student Renal Index, described in more detail in chapter three.

Figure C25:

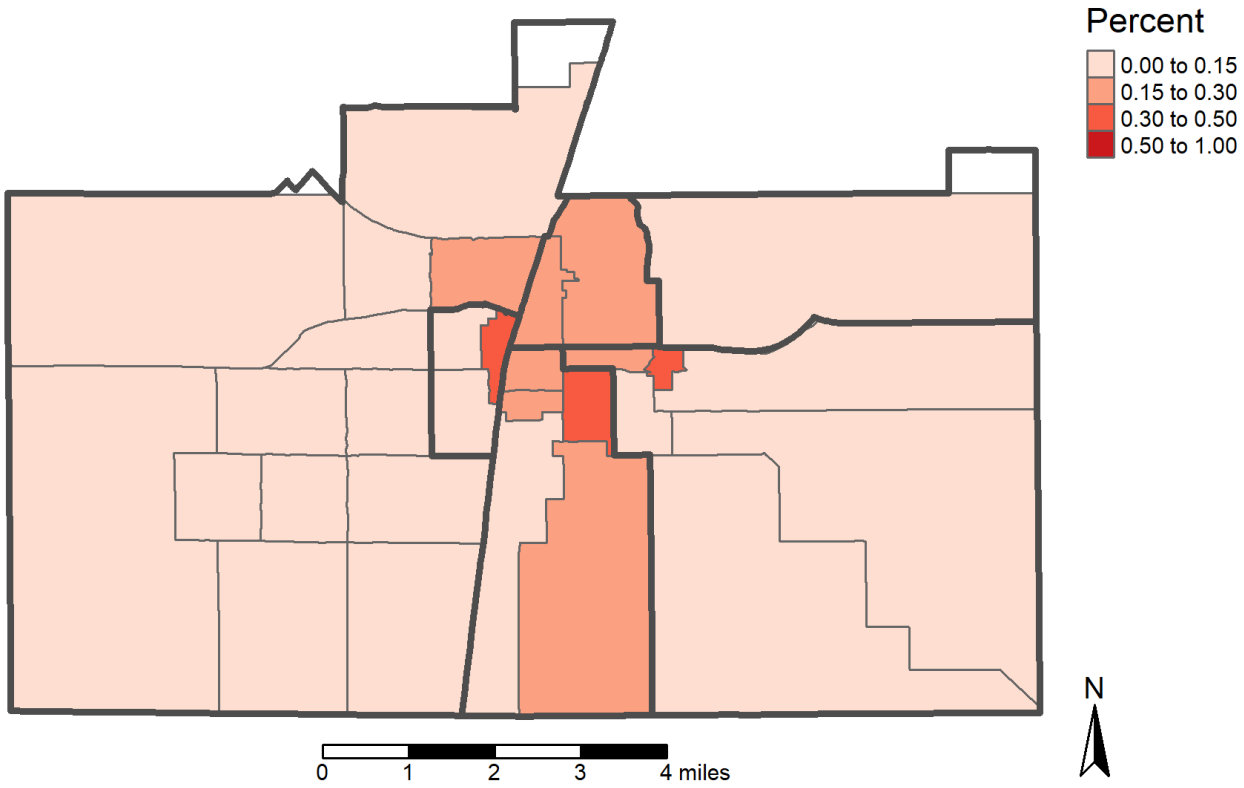
Percentage of Households With No Vehicle by Subarea, 1990



Data sources: 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; U.S. Census Bureau Tiger/Line shapefiles for 2010.

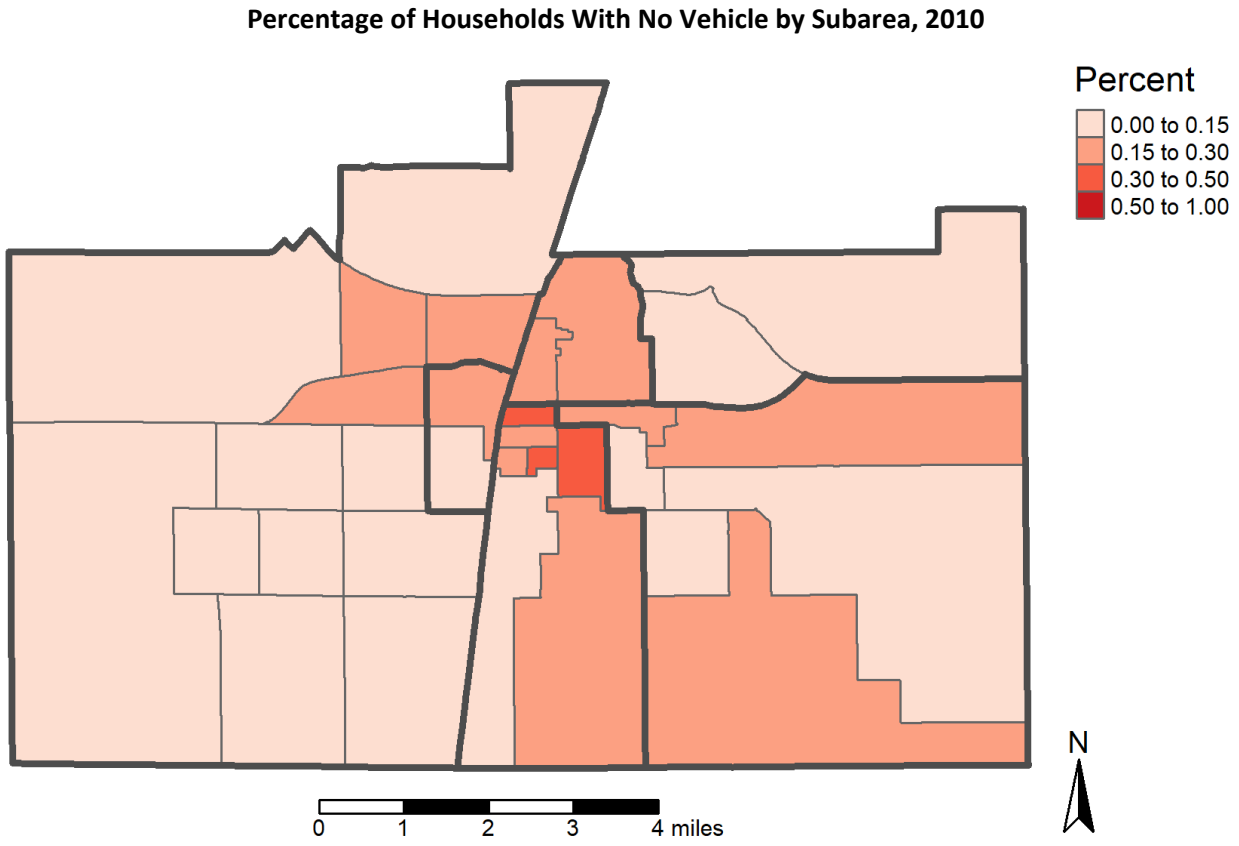
Figure C.26:

Percentage of Households With No Vehicle by Subarea, 2000



Data sources: 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; U.S. Census Bureau Tiger/Line shapefiles for 2010,

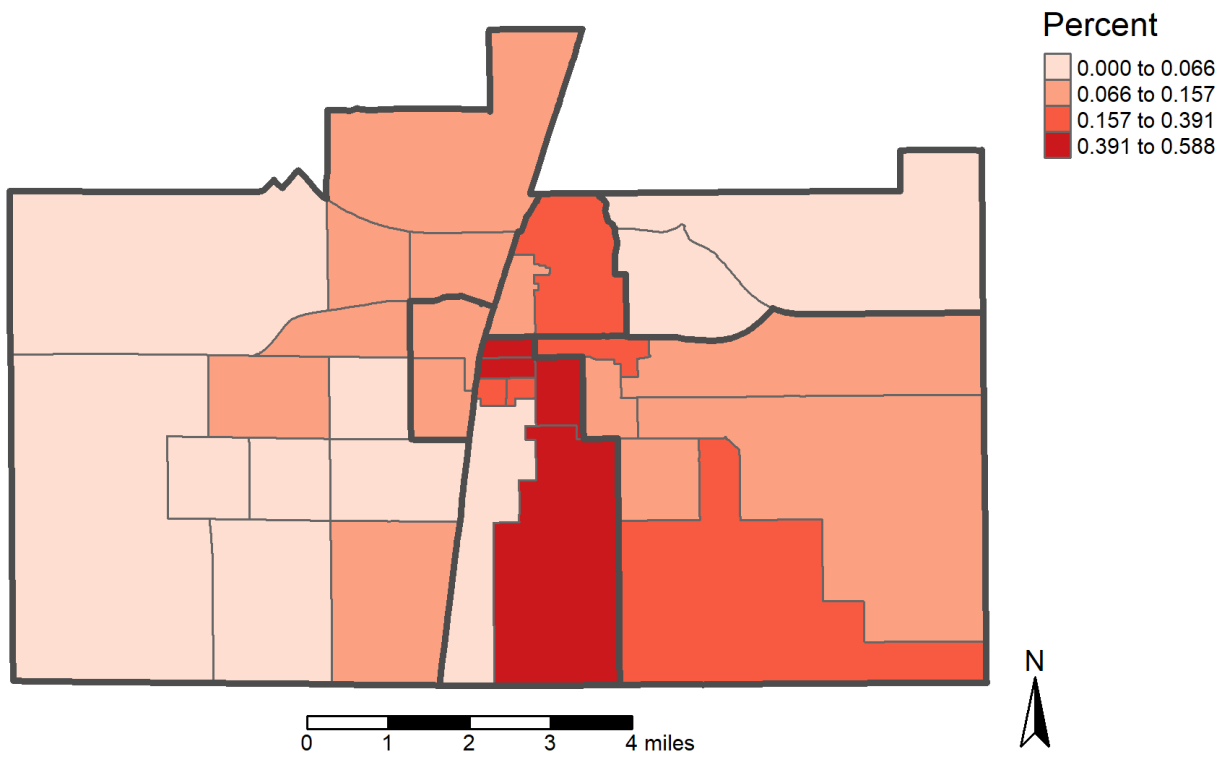
Figure C.27:



Data sources: 2006-2010 American Community Survey 5-year estimates; Census Bureau Tiger/Line shapefiles for 2010.

Figure C.28:

Percentage of Households With No Vehicle by Subarea, 2018



Data sources: 2014-2018 American Community Survey 5-year estimates; U.S. Census Bureau Tiger/Line shapefiles for 2010.

APPENDIX D: TRACT-LEVEL RENT ANALYSIS

INTRODUCTION

In this appendix, I describe census tract-level changes in occupancy, vacancy, and rents in the Near North, In-Town, Southeast, and West in more detail. Although chapter six of this thesis provides an analysis of housing costs at the subarea scale, each subarea contains neighborhoods with varying concentrations of student residents. Examining rents at this scale provides a more nuanced view of the influence of the student rental submarket where students do not comprise a majority of the population. However, because margins of error are higher at the tract level, the analysis presented in this appendix is less precise than the subarea-level results detailed in chapter six.

RESULTS

Near North

The Near North contains two census tracts. Tract 2 is located north of the Campus Core across University Avenue. The tract is home to historically Black communities, including the Fifth and Hill neighborhood. Despite its proximity to the Campus Core, tract 2's nonstudent population has historically far outnumbered its student population.

As students moved into the Near North they have congregated in tract 53, to the west of tract 2. Tract 53 is home to suburban-style student apartments along North Lincoln Avenue in Urbana, about two miles from the University of Illinois quad. These complexes, built mostly in the early 2000s, include ONE Illinois North, ONE Illinois South, the Atrium, Lincoln Place Apartments, The Retreat, and Capstone Quarters. This is where student residents are most likely to live — the remainder of the tract includes single-family neighborhoods, industrial uses, and parks.

Both Near North census tracts have added rental housing units over the decades. Census tract 53 saw its most dramatic increase in rental housing from 2000 to 2010. That decade the tract added 561 rental units, a 62.8 percent increase. Over the next ten years, rental housing construction continued. The tract added 1,722 rental units from 2010 to 2018, a 54.2 percent increase.

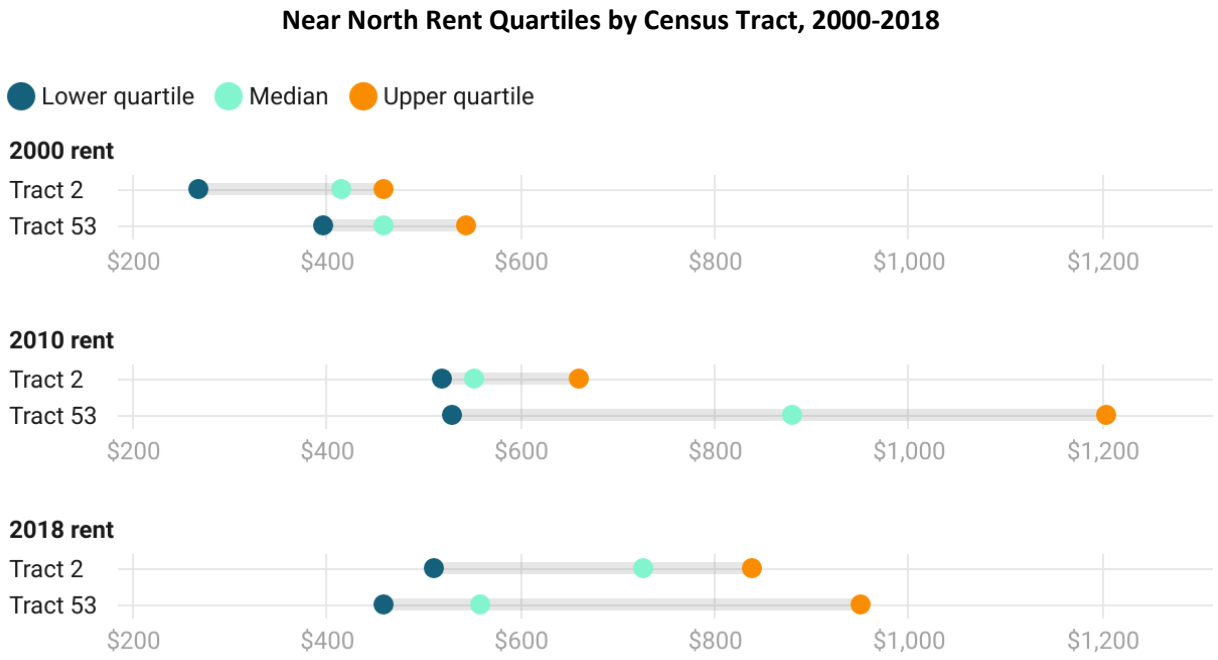
However, vacancy was never low in tract 53. In 2000, 110 units remained vacant and for rent. By 2010, the tract's rental vacancy rate was 14.3 percent and the absolute number of vacant units for rent had doubled to 220. The rental vacancy rate fell to 11.9 percent in 2018, even as the tract added rental units. This indicates demand had begun to catch up with supply as more students moved in. That year, 275 units were vacant and for rent, only slightly more than in 2010.

In tract 2, construction of rental housing has occurred at a slower rate. While tract 53 saw a 256 percent increase in its rental housing from 2000 to 2018, tract 2's rental stock increased by 392 units, a 127 percent increase. Most of this housing came online over the past decade, making new units in the neighborhood a more recent phenomenon than in tract 53. From 2000 to 2010, tract 2 only added 59 total housing units, but between 2010 and 2018 it added 329.

As census tract 2 experienced a wave of housing development, vacancy rose. In 2010 — before the housing boom in the Campus Core — census tract 2 had a rental vacancy rate of 6.1 percent. This was significantly lower than the vacancy rate in the eastern portion of the Near North. As housing went up near Campus, vacancy spiked in tract 2 to 25.8 percent.

Fluctuations in the cost of rental housing in census tract 53 have driven the volatility of rents in the Near North from 2000. This has occurred as student renters flocked to the tract in tandem with rising enrollment at the University of Illinois. Chapters five and six of this thesis discuss subarea-level trends in more detail. Chapter four examines enrollment trends. Figure E.1 breaks down rent quartiles for both of Near North's census tracts in 2000, 2010, and 2018.

Figure D.1:



Data sources: 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

In 2000, undergraduate residents made up 27.9 percent of tract 53's population. Undergraduate and graduate students combined made up a larger share — 37.2 percent of that

tract's population. This stands in contrast with neighboring tract 2, which was only 4.3 percent students.

By 2010, students at the undergraduate and graduate levels combined made up half of tract 53's total population. Undergraduate residents represented a higher share of the tract 53's population, representing 38.4 percent of residents. This uptick in student population from 2000 came with a significant jump in the price of rent among all rent quartiles, as well as a ballooning gap between the tract's highest and lowest cost rents.

Meanwhile, the Near North's other census tract — tract 2 — did not experience the same widening discrepancy between rents in its least expensive quartile compared to its most expensive quartile. In 2010, the tract's gap between the highest and lowest rent quartiles was among the narrowest in Champaign-Urbana. The cost of rents at the lower end of the price scale did increase by $251, or 93.3 percent, in tract 2. However, median rents only rose by $137 from the decade prior. Rents in the upper quartile rose at a moderate rate, increasing by $202.

An influx of student renters was not responsible for these rising rents. Unlike tract 53, tract 2 saw a decrease in its share of student residents from 2000 to 2010. Only 30 undergraduates — representing 1.6 percent of the total population — lived in tract 2 in 2010. That represents a net loss of 46 students. Tract 2's small share of student residents in 2010 makes it the Champaign-Urbana tract with the smallest percentage of students in any of the three years in this analysis.

In 2018, graduate and undergraduate students together represented a narrow majority of tract 53 residents at 52.7 percent of the total population. Although the majority — 1,792 — of these student residents were undergraduate, the tract became more popular with graduate students as well. In total, 1,177 tract 53 residents were graduate students in 2018. However, while the rising numbers of student renters from 2000 to 2010 came with a huge increase in median and upper-quartile rents, student growth from 2010 to 2018 did not exacerbate this. Instead, the lower limit to the most expensive rent quartile dropped $255, from $1,206 to $951. The median fell even more sharply — from $881 to $560. The smallest decrease occurred among the least expensive rents. The upper limit of the lower rent quartile dropped from $530 to $459.

This could be due to high-rise student apartments coming online from 2010 on in the Campus Core. While Near North's suburban-style options for students include amenities such as tennis courts, large swimming pools, ample parking, and free shuttle service to campus, they may have struggled to compete with Campustown's rooftop decks, shared study spaces, bowling alleys, and convenient proximity to the quad. City staff and developers point to the waning

popularity of student apartments on the fringes of town and cite contemporary students' preferences for dense, urban living.

Still, the student population of Near North's census tract 53 grew 54 percent from 2010 to 2018. At the same time, the Campus Core's saw a net loss of more than 5,000 students, or a 17.5 percent decline. What's more, a shrinking undergraduate student population drove much of this population loss. This counteracts the narrative that demand for the Near North's particular style of student housing is going out of vogue.

While the number of student renters in tract 53 continued to rise, neighboring tract 2 saw its own climbing student population. In 2010, about 11 percent of tract 2's residents were students in 2018. Although a small share of the population, this represents a 9.4 percentage point increase in student population since 2010. Most student residents were undergraduates, who made up 10 percent of the tract's total population on their own. Only 15 of the tract's student residents were enrolled at the graduate level. By 2018, the discrepancy between tract 2's highest and lowest rents rose. The upper quartile cutoff increased by $178, or 26.9 percent (the median rent increased by about the same amount). At the same time, the lower quartile limit remained virtually unchanged.

In-Town

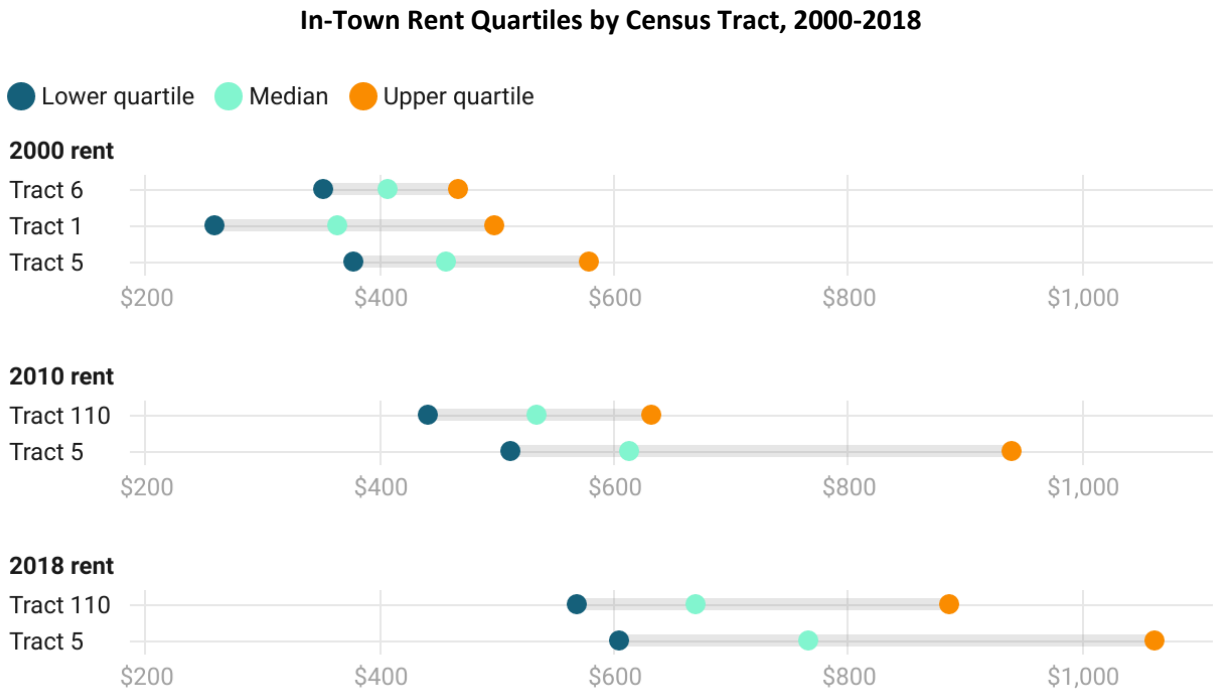
Champaign's central business district, as well as the neighborhood immediately adjacent to it, have traditionally had a larger share of In-Town's rental housing. In 2000, tracts 1 and 6 represented this area of In-Town. By 2010, these tracts combined to form tract 110. In 2000, 2010, and 2018 about 60 percent of the subarea's renter-occupied housing were located there. That part of the subarea gained the most units of rental housing between 2010 and 2018, picking up 212 renter-occupied units and vacant units for rent combined, an 11.6 percent increase. In 2010, the vacancy rate was 7.1 percent in tract 110. By 2018, this inched up to 9.2 percent.

Tract 5, to the south of the subarea, only gained 89 units of renter-occupied or vacant units for rent between 2000 and 2018 (and 117 new units of housing overall). That neighborhood's rental vacancy was also low. Although the vacancy rate was 7.2 percent in 2010, this plummeted to only 1.1 percent by 2018.

Taken together, this shows a greater availability of housing in and around downtown Champaign. In the portion of In-Town to the south, fewer rental units existed and fewer were vacant. As a result, individuals wishing to rent in that neighborhood would face greater difficulty finding housing. Tract 5 is also the In-Town neighborhood that has gained popularity with undergraduate student residents over time. In contrast, undergraduates have increasingly rejected housing options in downtown Champaign and its surrounding neighborhoods.

Rents have risen in both of In-Town's census tracts. Figure E.2 shows rent quartiles for each In-Town census tract for 2000, 2010, and 2018.

Figure D.2:



Data sources: 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

Rents grew fastest in the area of In-Town that has gained popularity with students over the decades. Census tract 5 is located just west of the University of Illinois' athletic campus and south of Champaign's downtown. It is separated from the University by raised railroad tracks, as well as Neil Street, a major north-south artery flanked by commercial development. Its housing stock consists mainly of smaller, single-family homes, with a smattering of low-rise apartment buildings. Tract 5 saw a net increase of 277 student renters from 2000 to 2018, with most of that growth occurring after 2010. In total, 25.7 percent of the tract's population consisted of students in 2000. By 2018, that had risen to 31.4 percent.

By 2018, the tract's student population was evenly split among undergraduates and graduates. That ratio has fluctuated over the years — graduate students outnumbered undergraduates in 2000 and undergraduates outnumbered graduates in 2010.

Tract 5's overall population has remained stable from 2000 to 2018. In addition, the number of households in tract 5 has only risen by 123. Therefore, the area has not seen a substantial rise in demand for rental housing. Still, the cost of rent in tract 5 has risen.

Tract 5's upper rent quartile increased by $483 between 2000 and 2018. Growth among the most expensive rents outpaced price increases for lower-cost units. The tract's median and lower quartile rents went up by $309 and $227, respectively. This resulted in a widening gap between low- and high-cost rentals in tract 5. In 2000, $202 separated tract 5's upper and lower rent quartiles. By 2018, that expanded to $458.

The most dramatic price increases occurred between 2000 and 2010. Over that decade, tract 5 experienced a slight loss in its number of renter-occupied units, which decreased from 1,131 to 1,106. At the same time, the tract's vacancy rate rose by about 3 percentage points. Therefore, market demand alone does not explain price increases in tract 5.

Population growth also does not explain these price increases. The subarea lost a handful of residents and households between 2000 and 2010. However, the subarea gained 199 residents between the ages of 20 and 24. It also gained 143 undergraduate student residents. This suggests student renters may have played a role in price increases in tract 5 over that decade.

To the north, in Champaign's central business district and surrounding neighborhoods, rents also increased. The housing in these neighborhoods is a mix of older, single-family homes, small apartment buildings, and a smattering of larger apartment buildings located within Champaign's downtown. As with other subareas near Champaign-Urbana's urban cores, such as the Southeast and Campus Core, many older, single-family homes are divided into apartments. Of course, others are home to single households. In 2000, census tracts 6 and 1 comprised this area, but by 2010 those tracts had merged to form tract 111. This occurred as the neighborhood lost 348 undergraduate student residents. Meanwhile, the tract's total population remained stable. In 2000, undergraduates made up 13.4 percent of the tract's total residents. But by 2018 this shrunk to 4.7 percent.

As students left the neighborhood, the number of renter households increased by 15 percent from 2000 to 2018. This indicates market demand for housing rose, just not among student renters. Rents rose in the area between 2000 and 2010, just not as dramatically as in tract 5. Over the next decade, tract 111's rents climbed even higher and the difference between lower quartile and upper quartile rents expanded. Like in tract 5, this occurred as increases in the most expensive rents outstripped rising rents for lower-priced units. Between 2010 and 2018 the tract's upper quartile rent grew by $254 while its median and lower quartile increased by $135 and $128, respectively.

This occurred as the subarea continued to gain renter households but lose students. However, tract 111 remained more affordable than neighboring tract 5 at all price points. Its

discrepancy between its least and most expensive rents was also narrower. This shows that certain rent trends, including rising rent costs, especially for high-price units, are not unique to neighborhoods with growing student populations. However, rising numbers of student renters may exacerbate these changes.

Southeast

The Southeast neighborhoods most popular with students have typically had relatively low levels of rental vacancy. Most of the Southeast's student residents live in tracts 58 and 111. Tract 58 lies two blocks from Campus in West Urbana. Tract 111 sits to the north of tract 58 and stretches from the east edge of the University's engineering campus to downtown Urbana.

In 2010, student-centric neighborhoods represented the tightest rental markets in the Southeast. The rental vacancy rate was 3.4 percent in tract 58. Tract 111 had a rental vacancy rate of 5.4 percent. Only one other tract — tract 55 — had lower vacancy. That tract had no vacant units for rent in 2010.

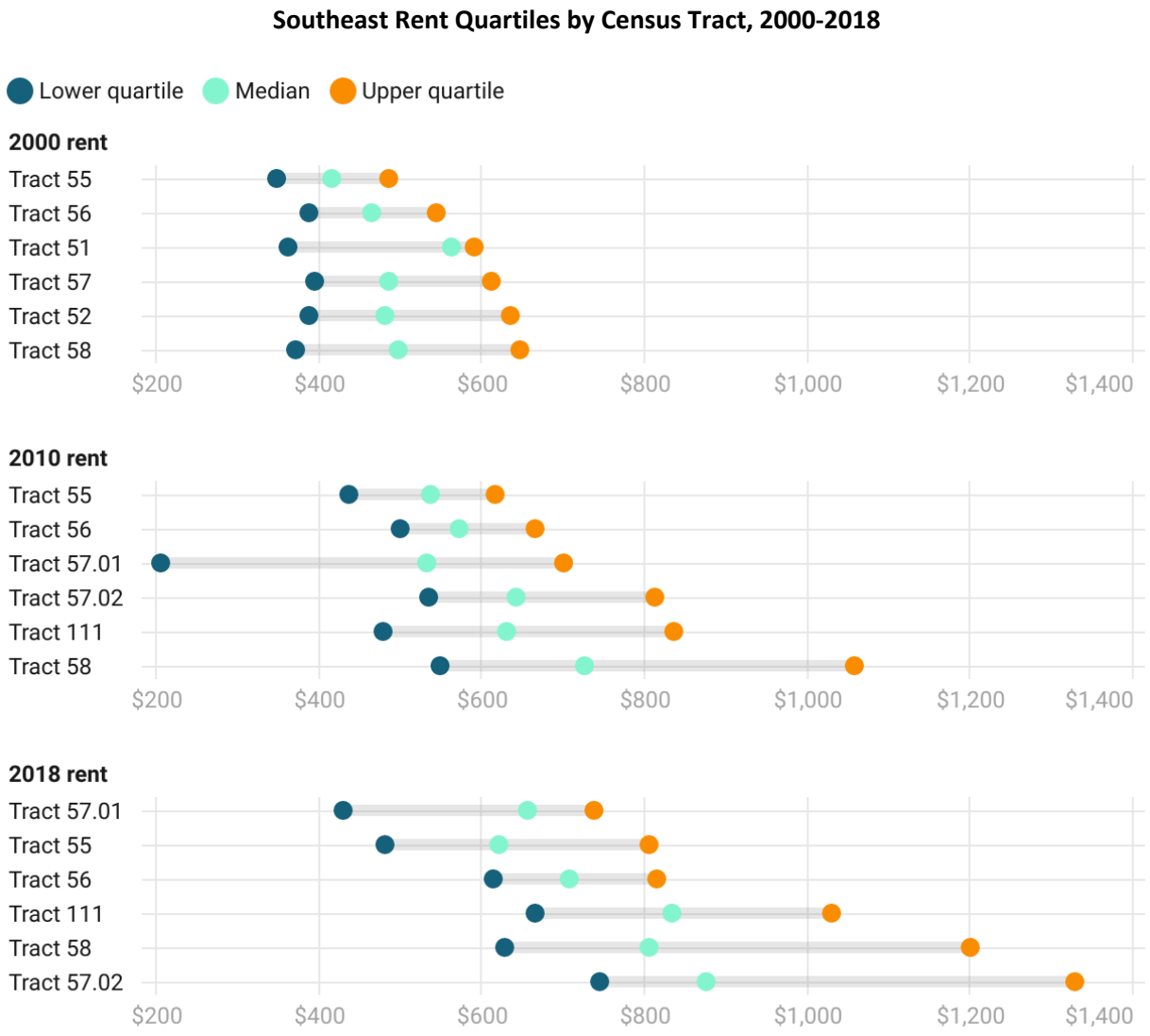
By 2018 vacancy had increased in these neighborhoods. In tract 58, the vacancy rate was 8.1 percent, representing 70 unleased units. In tract 111, the rental vacancy rate rose to 10 percent. Still, only one other tract — tract 57.02 — had a smaller rental vacancy rate that year (2.7 percent). This relatively low vacancy suggests the Southeast neighborhoods most attractive to students were nearly leased up in 2000 and 2018.

Both neighborhoods also lost rental units from 2000 to 2018. While tract 58's total housing units have remained steady from 2000 to 2018, the neighborhood has steadily lost renter-occupied units. Between 2000 and 2018, total renter-occupied units declined by 157. Increasing numbers of vacant units for rent do not fully explain this. Considering renter-occupied units and vacant units for rent combined, tract 58 still lost 112 rentals, an 11.9 percent decline.

To the north, tract 111 lost 146 units of housing overall between 2000 and 2018. Its rental housing stock decreased at a faster rate. Over that period tract 111 lost 246 renter-occupied units, a 19.2 percent decline. Considering both occupied and vacant rentals, the neighborhood lost 156 rental units overall, an 11.9 percent decrease. Together, tracts 58 and 111 lost 268 units of rental housing between 2000 and 2018. All other Southeast tracts combined saw a slight increase in occupied and vacant rentals.

The Southeast neighborhoods with the highest concentrations of students were also the subarea's most expensive. In addition, those areas experienced a widening rift between upper- and lower- quartile rent prices. Figure E.3 shows rent quartiles for each census tract in the Southeast for 2000, 2010, and 2018.

Figure D.3:



Data sources: 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

Tracts 58 and 111 (tracts 51 and 52 in 2000) represent the Southeast neighborhoods with the highest concentrations of student residents across the decades. Demand for rental housing in tracts 52 and 58 was already high in 2000. That year, those tracts had the subarea's most expensive upper quartile rents. Tract 58 also had the highest median rent aside from tract 51, which had only 42 renter-occupied units.

In 2010, when University of Illinois enrollment was increasing fastest, rents in the Southeast's most student-centric neighborhoods began to climb. That year, tract 58 had the highest lower quartile, median, and upper quartile rents in the Southeast. Furthermore, it had the second largest gap between its upper and lower rent quartile. This large disparity between high

and low rents was due to rapidly increasing rents at the most expensive price points. The tract's upper quartile rent jumped by $410 between 2000 and 2010, more than any other Southeast tract.

Rents continued to rise from 2010 to 2018 in tract 53, but at a slower rate. Over that decade, the tract's upper quartile increased by $143. Its median and lower quartile rents each went up by $79, making rents relatively stable compared to the decade prior.

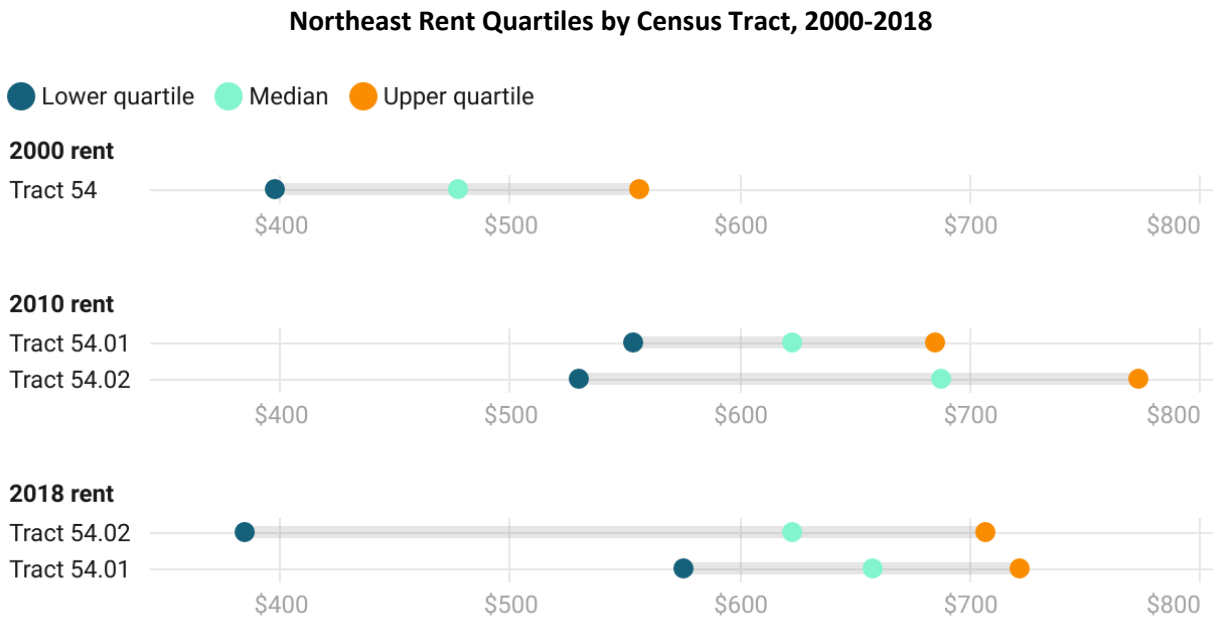
This was the decade where the most rental housing units came online near campus. However, the housing boom did not reach tract 53. Between 2010 to 2018 the neighborhood lost 118 renter-occupied units. At the same time, its vacant units increased insignificantly, from 25 to 31. This shows that as more students arrived in the Campus Core, they were less able to find housing in tract 53. Therefore, they lived elsewhere. Tract 53's student population dipped slightly over the decade.

The same story played out in tract 111, which stretches from downtown Urbana to the northeastern edge of campus. This tract, which has also housed a significant portion of the Southeast's students, also saw its high-end rents increase. Tracts 51 and 52 had upper quartile rents of $593 and $636, respectively in 2000. By 2018, tract 111's upper quartile was $1,030 the Subarea's third highest after tract 58. Tract 11 also lost students between 2000 and 2018. Over that decade 105 left, most of whom were undergraduate students. Like tract 58, tract 111 lost renter-occupied units as well.

Northeast

Examining rents at the census tract level reveals volatility among the Northeast's neighborhoods. Figure E.4 shows rent quartile limits for each census tract in the Northeast in 2000, 2010, and 2018.

Figure D.4:



Data sources: 1990 and 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

Tract 54.01 includes subdivisions with small, detached, single-family homes, as well as mobile home communities. The tract contains a significant amount of open space, including agricultural land. Unlike tract 54.01, most of tract 54.02 is unincorporated land in Champaign County.

Tract 54.01, to the west, had more than ten times the renter-occupied units as tract 54.02 located on the far northeastern edge of Urbana. By 2018, tract 54.01 had 1,657 renter-occupied units, while 54.02 only had 240.

In 2010, the rental vacancy rate was 12.9 percent in tract 54.01. To the east, tract 54.02 had no unleased rentals. Over the next decade the rental vacancy rate climbed to 27.9 percent in tract 54.02 but fell to 3.9 percent in tract 54.01.

Both Northeast tracts experienced a decline in student population between 2010 and 2018. Tract 54.02 experienced this trend more acutely. It lost 155 student residents between 2010 and 2018, a 64.9 percent loss. Neighboring tract 54.01 lost 66 total students, only a 10.6 percent decrease over the same period. In addition, students were more likely to live in tract 54.01. In 2000 and 2018, respectively, that tract's student residents made up 14.9 and 13 percent of the population.

Tract 54.01 gained 114 undergraduate students from 2010 to 2018. To the east, tract 54.02 lost 156. However, tract 54.01 saw 180 graduate student renters leave the area over that decade. Tract 54.02's graduate student population remained unchanged. As this occurred, rents in tract 54.01 remained largely unchanged. That area also grew more populous and attracted 363 new renter households from 2010 on. This suggests tract 54.01 had greater stability in housing prices and more sustained housing demand than neighboring tract 54.02.

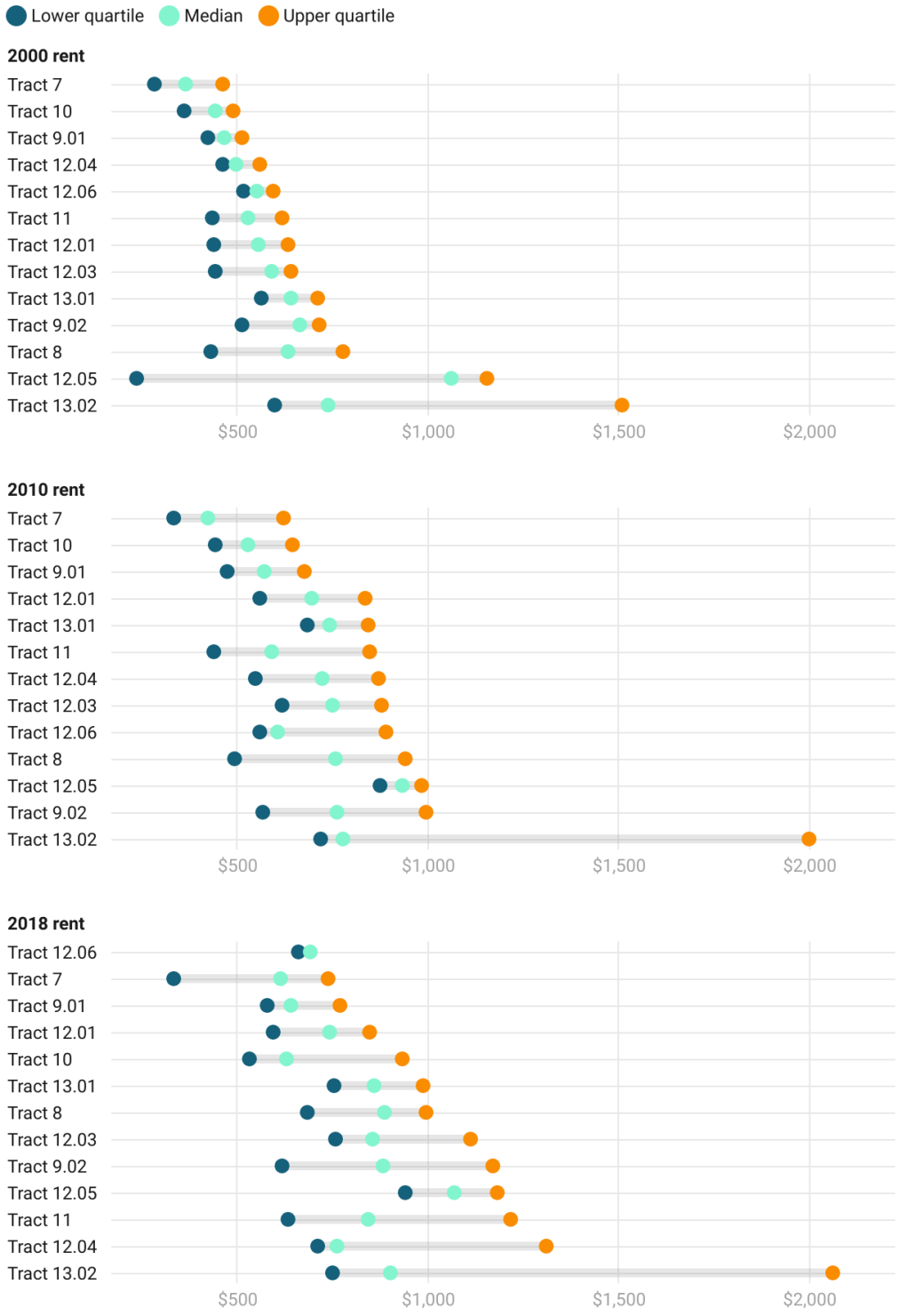
However, as student renters left tract 54.02, rents fell. While tract 54.02's most median and upper quartile rents only decreased slightly from 2010 to 2018, its least expensive quartile declined by $145. This resulted in a large gap between the tract's least and most expensive rents in 2018. Before that, tract 54.02 had a smaller disparity between its highest and lowest rents compared to neighboring tract 54.01.

However, because of that tract's low student population (7.8 percent of its total population and only 2.4 in 2018), other factors may be to blame. That said, demand for rental housing in tract 54.02 did not fall — the neighborhood gained population and renter households between 2010 and 2018.

West

Rents varied widely across the West's census tracts. Figure E.5 shows rent quartiles for each of the West's census tracts in 2000, 2010, and 2018.

Figure D.5:



Data sources: 1990 and 2000 decennial census sample-based data retrieved from IPUMS NHGIS, University of Minnesota, www.nhgis.org; 2006-2010 American Community Survey 5-year estimates; 2014-2018 American Community Survey 5-year estimates.

However, the percentage of students living within the West's census tracts does not appear related to rents. In 2000, tracts 9.01, 12.01, and 10 had the West's largest shares of student residents, both in absolute terms and as a percentage of the total population. Tract 9.01 had among the cheapest median and upper quartile rents this year. It also had the second narrowest spread between its upper and lower quartile rents — $89. Tract 12.01 had relatively moderate rents compared to other tracts in the West. Just west of the In-Town neighborhoods, tract 10 was the second least expensive tract in the West in terms of its lower quartile, median, and upper quartile rents. The difference between its highest and lowest rent quartiles was $194.

Tracts with small shares of students shared no obvious patterns for rents. Just north of Champaign's downtown, tract 7 was home to only 124 students (3.6 of the population). It was also the least expensive tract in the West in 2000. Tract 12.06, with 95 students (4.9 percent of all residents) was the tract with the least price difference between its upper and lower rent quartiles. It was more moderately priced. Tract 12.05, with 104 students (5.5 percent of the population) had the West's least expensive lower rent quartile and its second most expensive upper quartile.

By 2010, tracts 12.05, 8, and 13.02 the highest percentage of student residents in the West. The upper quartile rents for each of these tracts were in the top four for the subarea. Tract 13.02 outpriced all other tracts, and also demonstrated a large difference ($1,280) between its least and most expensive rent quartiles.

That year, tracts 7, 12.03, and 12.06 each had the fewest student residents in the West. Tract 7 had the least expensive lower quartile, median, and upper quartile rents in the subarea. Tracts 12.03 and 12.06 fell midway between the West's highest- and lowest-cost neighborhoods.

In 2018 student residents were more evenly dispersed across the subarea. No tract had a student population above 10.9 percent of the population that year. The tracts most popular with students were tracts 8, 9.01, 7, and 12.01 that year — students made up at least 9 percent of residents in each. Tracts 9.01, 7, and 12.01 were among the West's most affordable that year. This suggests housing prices may have been a factor driving students to the neighborhood. On the other hand, tract 8 had a relatively low upper rent quartile, although its median and lower quartiles were pricey compared to other areas of the West. Tracts 12.06, 12.04, and 13.01 had the West's lowest concentrations of student residents in 2018. These tracts had very different rent quartiles, indicating a factor other than housing costs contributed to their relative unpopularity with student renters.

CONCLUSION

This appendix described census-tract level trends in vacancy, as well as rents, for the Near North, In-Town, Southeast, and West subareas from 2000 to 2018. Specifically, I highlight

rent trends in neighborhoods relatively popular with student renters. Except for the Near North, students are the minority in the subareas discussed here. However, the presence of student renters at the neighborhood scale could still affect rental costs. In addition, I demonstrate that neighborhoods popular with students are often those proximate to campus, and those with rental housing offerings. The analysis here comes with one caveat — high margins of error for census data at the tract level make estimates here less precise than for each subarea as a whole.