Peer-Reviewed Article

© *Higher Education Politics & Economics*
Volume 12, Issue 1 (2026), pp. 69-91
ISSN: 2162-3104 (Print), 2166-3750 (Online)
doi: 10.32674/ty3mzc26
ojed.org/hepe

University Urban Development and Studentification: Evidence of Neighborhood Change Unique to Higher Education

Paul M. Garton
East Tennessee State University

ABSTRACT

Studentification is a process of neighborhood change characterized by the in-migration of postsecondary students. While studentification is generally conceptualized in the literature as an organic process tied to shifts toward mass higher education participation, I argue universities are not powerless actors in development. They have some degree of control over student residential patterns through university-led urban development initiatives, known as anchor institution initiatives. Utilizing US decennial census data from 1970 to 2010, I employ an inverse probability weighting difference-in-differences model to estimate the effect of anchor initiatives on rates of studentification. Results show a positive effect on studentification in neighborhoods targeted by an anchor initiative. I also find a positive relationship between studentification and rent prices.

Keywords: Studentification, anchor institution, student housing, university urban development, off-campus housing, student affordability

A growing body of literature conceptualizes higher education organizations as anchor institutions to analyze the relationship between higher education and local development (Ehlenz, 2019; Hodges & Dubb, 2012; Orphan & McClure, 2019). Anchor institutions are organizations that are anchored to a specific location due to mission or moving costs. Additionally, communities are anchored by these organizations as they provide a reliable source of employment and economic activity.

Two common types of anchor institutions are hospitals and universities. Due to their relative size and economic stability, universities and hospitals are often centered in urban and regional development strategies in cities across the globe (Addie, 2018; Bank et al, 2018; Porter, 2016; Wiewel & Perry, 2008). Universities, with their large populations of associated students, have unique effects on their surrounding neighborhoods and communities. One concept used to make sense of these effects is studentification, a process of neighborhood change in which the residential make-up is increasingly students, along with changes in neighborhood characteristics associated with the preferences of students and typical age groups (Moos et al., 2018; D. P. Smith & Holt, 2007). This study uses United States (US) decennial census data and the American Community Survey (ACS), standardized to 2010 census tracts, to estimate changes in studentification associated with intentional economic/community development projects launched by universities, referred to as anchor institution initiatives.

Universities act as anchor institutions simply through conducting daily business in service of their educational and research missions. The sheer number of employees receiving salaries to be spent at local businesses, students converging in specific locations, human capital gains for students, and productivity-enhancing discoveries and inventions by faculty are all ways universities contribute to the economic resiliency of communities without necessarily having stated or intended goals of economic development (Andersson et al., 2009; Arteaga, 2018; Kantor & Whalley, 2014). Many universities, however, intentionally design and implement projects for the explicit purpose of local development, called anchor institution initiatives. Anchor initiatives are projects targeted toward specific spatial areas with goals of economic or community development (Garton, 2021).

Anchor institutions and anchor initiatives are often lauded as powerful tools for purposes of building community wealth in presumably equitable ways (Hodges & Dubb, 2012; Saltmarsh et al., 2014), most recently shaping higher education campus reforms in South Africa to be less exclusive and more integrated into cities (Combrinck & Nortjé, 2021; Hendricks & Flaherty, 2018). Some new work, however, criticized universities in the US for participating in and accelerating gentrification processes (Baldwin, 2021; Taylor et al., 2018), a critique not limited to the US (Biswas et al., 2022; Jolivet et al., 2023). Numerous case studies of different anchor initiatives analyzed how intentional development strategies by universities fundamentally changed the targeted neighborhoods: the West Philadelphia Initiatives by the University of Pennsylvania (Etienne, 2012), the construction of the Auraria Higher Education Center in Denver (Page & Ross, 2016; Walker & East, 2018), and the construction of a new campus in Manhattanville by Columbia University (Gregory, 2013) are just a few examples of anchor initiatives that fed into larger gentrification processes. A quantitative study using census data found while physical construction by universities such as the Manhattanville campus did accelerate gentrification, other types of anchor initiatives actually slowed gentrification (Garton, 2023). This indicates the relationship between universities and neighborhood change is more complicated than a simple tale of development and displacement. Additional research is warranted to make sense of these initiatives so universities can

purposefully leverage their resources to equitably build community wealth in ways that democratize regional economies rather than displace current residents.

One concept originating in the United Kingdom (UK) that can help make sense of universities and local development is studentification. While gentrification refers to the in-migration of relatively wealthy residents and associated changes in neighborhood amenities (Marcuse, 2015), studentification is the in-migration of students. The rationale for anchor initiatives is often to reshape neighborhoods to attract potential students (Etienne, 2012; Morris et al., 2010; Taylor et al., 2018), so rather than attracting relatively wealthy residents and participating in what we might consider to be gentrification, university anchor initiatives may instead be attracting students who might not personally have much wealth. The neighborhood changes associated with studentification are different from those associated with gentrification, which can help explain the complicated relationship to anchor initiatives and gentrification found by Garton (2023). Using a difference-in-differences model to estimate the effects of anchor initiatives on studentification, I found rates of studentification do increase in neighborhoods that are targeted for development by a university. Additionally, increases in studentification are associated with an increase in rent prices, with implications for housing affordability for students in cities. These results speak to the need to situate analyses of postsecondary institutions within their geographic contexts, not only in terms of state systems and national policies but also spatially and at the municipal level (Budd, 2022). The article also will inform future research and practice in the massification of higher education (Marginson, 2016). As enrollments grow, understanding student residential patterns and the ways universities influence these patterns will be essential to creating sustainable neighborhoods.

LITERATURE REVIEW

There is a relatively vibrant literature in geography on the concept of studentification, primarily based in the UK (e.g. Kinton et al., 2018; D. P. Smith & Holt, 2007; D. P. Smith & Hubbard, 2014) and Canada (e.g. Jolivet et al., 2023; Revington, 2024; Revington & Wray, 2022). Studentification is a form of neighborhood change in which there is an influx of students looking for housing near their university (D. P. Smith & Holt, 2007). As higher education enrollment expanded, more students began searching for off-campus housing, fundamentally altering many neighborhoods in shifting, transitory ways. A current debate in the studentification literature centers around either conceptualizing enrollment growth and ensuing studentification processes as an almost organic, unavoidable process, or conceptualizing studentification as a series of policy and consumer choices by communities and actors. While this article provides evidence of the latter, there is a recognizable pattern to studentification, beginning with the transformation to a high participation system, in which substantial numbers of the 18-24 age cohort are enrolled in postsecondary education (Marginson, 2016).

Studentification

Higher enrollments almost necessarily entail higher demand for housing near campuses as students tend to prefer to live close to their university (Revington et al., 2020). Students begin by moving into existing housing structures in nearby neighborhoods, typically standalone houses or duplexes, sharing the house with multiple roommates. Eventually, enough students will move into a neighborhood that private developers start to take notice, or universities will partner with developers to begin the new build phase of studentification. This phase is defined largely by new, large apartment complexes catering specifically to students, referred to in the literature as purpose-built student accommodations (PBSAs; Hubbard, 2009; Sage et al., 2013; D. P. Smith & Hubbard, 2014). With new PBSAs, the character of the neighborhood changes drastically. Most immediately, the PBSAs themselves construct exclusionary geographies, often literally with gated communities, but also implicitly by creating housing units preferable only to young age cohorts (Reynolds, 2020). The exclusionary geographies eventually extend beyond the PBSAs to the entire neighborhood as amenities shift to cater to the changing consumer base. Nightlife spots, coffee shops, and relatively cheap restaurants start to replace the existing establishments (van Liempt et al., 2015).

Although structural factors such as the nature of the housing supply and local development strategies are central to studentification, students themselves exercise agency in these processes. Students make value judgments and decisions about campus proximity, costs, and amenities, which collectively influence neighborhood change (Revington et al., 2020; Sage et al., 2013). These preferences drive demand for PBSAs, reinforcing market responses and university interventions. Studentification is thus conceptually aligned with other theories of neighborhood change in which structural, supply-side factors (Hackworth & N. Smith, 2001; N. Smith, 1998) are reproduced through individual, demand-side factors (Baum-Snow & Hartley, 2016; Hwang & Lin, 2016).

Neighborhoods that experienced studentification tend to have high rates of in-migration and out-migration, with newly enrolled students moving in and recently graduated students moving out (Duke-Williams, 2009). Though the residents change with high frequency, the neighborhood itself remains fairly stable. Part of why these neighborhoods remain so stable is because PBSAs are targeted so directly to students (Hubbard, 2009), often in direct partnership with universities (McClure et al., 2017) or as parts of larger development initiates spearheaded by universities (Etienne, 2012). Neighborhoods that are undergoing studentification or are already heavily populated by students deal with problems such as noise complaints and changes in traffic patterns, but also many of the same concerns of gentrification, namely changing neighborhood characteristics and the displacement of previous residents through price increases or changes in a sense of belonging to the neighborhood (Sage et al., 2013; D. Smith, 2008). Studentification, characterized largely by the transitory nature of students, is tightly connected to youthification, referring to the in-migration of relatively young residents (Moos et al., 2018). Measures of studentification should

therefore capture both transitory housing supply (i.e. rent as opposed to own) and the general age of college students (i.e., older than 18 but not too far along in a career).

Contextual differences between UK and US higher education systems shape the nature of studentification in each country. In the UK, tuition is capped, and each constituent country determines how loans meant for living costs will be distributed, with England in particular disbursing only minimal funds for living costs (Bolton & Lewis, 2025). Conversely, almost all students in the US are eligible for Federal loans that can be used to cover off-campus housing costs. PBSAs developed around each system in similar regulatory structures. The PBSAs were developed by profit-seeking, commercial enterprises, though often in concert with universities and as part of larger development strategies of local planning authorities (Hubbard, 2009; Sage et al., 2013).

Anchor Initiatives

The literature on studentification is both predominantly within the context of the UK but also generally conceptualizes studentification as a process that occurs independently of specific policies or initiatives launched by universities beyond generic pushes to increase enrollment. This article contributes to the literature by applying studentification to the US and also by specifically examining the effects of intentional development strategies by universities on studentification. These intentional strategies are anchor institution initiatives.

Garton (2021) described anchor initiatives in terms of the capital the university invested in the target neighborhood: financial, physical, intellectual, and human. Financial investments are cash payments, or the promise of cash payments, to specific projects or cash transfers. These could include official policies to give priority to local businesses for purchasing, giving housing vouchers or mortgage incentives to employees to live in certain areas, payments in lieu of taxes to local governments, or funding community development corporations (Etienne, 2012; Hodges & Dubb, 2012). Physical investments are expansions of the campus physical plant or partnerships to build new structures with explicit rationales of local development (Dalton et al., 2018). For example, the University of Helsinki intentionally integrated itself into the city and became a major player in real estate development in the latter half of the 20th century (Haila, 2008). These types of physical strategies can accelerate gentrification in the targeted neighborhoods, potentially displacing residents (Garton, 2023). Intellectual capital is the knowledge held by students and faculty, leveraged through means such as technology transfer, spin-off companies, or engaged research and consultation (Etzkowitz, 2014). Finally, human capital is comprised of partnerships between universities and local stakeholders to increase local human capital such as through medical partnerships, K12 schools, etc. (Doberneck et al., 2010). These final two types of investments are often used in conjunction with a financial or physical strategy (Garton, 2021). Universities are not passive actors in the studentification process but are active participants who shape the very spaces they occupy.

Conceptual Framework

The rationale for launching anchor initiatives are not always clear beyond statements about desires for local community and economic development. Several initiatives, however, have been identified as launching specifically due to concerns about recruiting students (Hodges & Dubb, 2012). University leaders were concerned about losing their prestige as students would not enroll in their schools. These types of rationales lead directly to decisions that are not in the best interest of local residents and communities (Baldwin, 2021). In these cases, universities are attempting to create neighborhoods amenable to attracting students and faculty, not necessarily creating sustainable communities with equitable growth.

There are several potential mechanisms through which anchor initiatives could accelerate studentification. The most direct link is through physical construction. Sometimes this includes PBSAs, as was the case with the Gateway – University District development in Columbus by the Campus Partners corporation affiliated with Ohio State University. Many times, however, the physical construction does not involve housing and is instead retail, mixed-use, or even academic space strategically located to shift the characteristics of the neighborhood. For example, Georgia State University leveraged campus construction for classroom space, office space, and a recreation center as part of Atlanta's larger downtown development plan. PBSAs, proximity to campus, or the overall aesthetics of a newly developed neighborhood may attract students to live in a specific area. Less direct links are through the financial, intellectual, and human capital initiatives that may change aesthetics or perceptions of a neighborhood to be more attractive to students though across a larger time span. Overall, the causal mechanism is the university initiative changes the neighborhood to be more attractive to students, then students begin to live in the neighborhood as they now see it as a viable and desirable option.

This article thus aims to test two tightly related propositions about studentification. First, studentification is at least in part engineered through policy decisions, not simply the organic process assumed in much of the literature. I provide evidence universities do have some influence over where students choose to live, complicating and deepening our understanding of studentification. Second, anchor initiatives are able to achieve their objectives of increasing the proportion of students living in a targeted neighborhood. I also provide evidence supporting this proposition. Following from the two propositions and concerns of gentrification, I also test whether studentification is associated with changes in rent prices.

METHODS

This study estimates the relationship at the census tract level of being targeted by an anchor institution initiative and rates of studentification. The data are decennial census data from 1970-2010, standardized to 2010 census tracts. Using a series of difference-in-differences models and propensity score matching, census tracts that are targeted by an anchor initiative are compared to census tracts in the same cities that were not targeted. This provides estimates that can help universities and

municipal leaders as they consider student housing and local development. As all data were publicly available and did not include engaging with human subjects, Institutional Review Board human subjects approval was not necessary. The following subsections detail the data sources, sampling procedures, and empirical strategy.

Data

The data are drawn from the decennial census from 1970 to 2010. Census tracts are redrawn every 10 years, so I use the Longitudinal Tract Database (LTDB; Logan et al., 2022). The LTDB standardizes census tracts across time to the 2010 boundaries, allowing for panel data analyses. Other datasets standardize census tracts, but the LTDB is more accurate for tracts that are experiencing high growth (Logan et al., 2016) and so is most appropriate for the question here about studentification. Most datasets that aim to standardize tracts assume the population is evenly distributed across the area, then adjust the reported parameters based on the proportion of land that changed tracts. The population distribution assumption can be weakened by accounting for water cover (Logan et al., 2016), only assuming the population is evenly distributed across land that is not covered by water. Logan et al. (2022) take one more step to weaken the assumption by also assuming the population is evenly distributed along roads. This final step results in slightly less accurate estimates overall but more accurate estimates in areas experiencing rapid growth (Logan et al., 2016) so is most appropriate for the research question here.

Using these data as the starting point, I identified the treatment group through a purposive sampling process, then I used a propensity score matching process to identify the control group. The treatment group (census tracts that were targeted by an anchor initiative) were identified through a multi-pronged sampling process. First, I cross-referenced universities part of the Coalition of Urban Serving Universities and the Coalition of Urban and Metropolitan Universities with universities that received the Carnegie community engagement classification or were named to the President's Higher Education Community Service Honor Roll. I then scanned these universities' websites for anchor initiatives. Second, I gathered anchor initiatives identified in the literature and participating in the Anchor Learning Network (Democracy Collaborative, 2018).

The initiatives were defined through three criteria. First, they are intentional. This means at least part of the rationale for the project(s) were explicitly for some form of place-based community or economic development. Second, they are targeted, meaning specific locations were selected to be a part of the initiative, and the initiative was limited to those locations. Finally, they are cohesive, in that there is an overarching strategy or plan guiding the initiative. I identified the census tracts that were targeted by these initiatives through official university statements related to the initiative and municipal planning documents. These identified tracts formed the treatment group. Examples of included anchor initiatives include Georgia State University's efforts to revitalize downtown Atlanta through real estate development, technology parks created by Clark University, and the West Philadelphia Initiatives

by the University of Pennsylvania. For a more in-depth description of the included anchor initiatives, see Garton (2021).

The control group is made up of census tracts in the same cities as the treatment tracts that were identified through a propensity score matching process to be similar to the treatment tracts along observed variables related to both treatment assignment and the dependent variable. This process begins with a logistic regression in which the dependent variable is treatment status, either treated or untreated. The independent variables are pre-treatment variables that make up the dependent variable (a studentification index) in the main analysis, a series of pre-treatment covariates related to both treatment status and studentification, and a measure of distance in miles from the tract to the nearest university with an anchor institution initiative. See Table 1 for a list of the predictor variables and descriptive statistics. Following the regression, the resulting predicted values form the propensity scores. Treatment tracts were matched to tracts within the same Core-Based Metropolitan Area with propensity scores within .25 standard deviations in terms of the total distribution. The final sample resulted in 44 different institutions with initiatives targeting a total of 294 treatment tracts. The propensity score matching procedure then identified 536 control tracts. The 830 included tracts were then observed across 5 points in time.

The dependent variable is an index measuring studentification. The decennial census does not directly measure whether residents are students. There are neighborhood characteristics of studentification identified in the literature review, however, that are measured, namely the transitory nature of student residents and youthification. The index is composed of four variables. The transitory nature of student residents is measured by the percentage of households that are occupied by the owner and the percentage of housing units in multi-unit. The next two variables measure the connection of studentification to youthification by measuring the general age distribution through the percentage of the population under the age of 18 and the percentage of the population over the age of 60. Note these variables, with the exception of the multi-unit structure variable, are negative constructions of studentification, i.e. high values indicate low studentification. The signs on these variables are thus reversed to allow for ease of interpretation. The variables are weighted through a principal component analysis procedure, extracting only a single factor. The loadings become the weights for each variable. The variables are then standardized around 0, then the age variables are weighted by .5 again to reflect they are measuring a single dimension that is equal to the transitory dimension of the studentification index. The resulting values are then added together to create the studentification index. Due to the standardization of the variables comprising the studentification index, the mean value of the studentification index was -.00. An index value of 0 is indicative of average studentification, negative values are below average, and positive values are above average.

Independent variables are an indicator of whether the census tract was targeted by an anchor initiative, year indicators, and covariates that might have affected treatment selection. These covariates are the natural logarithm of population density, natural logarithm of median rent, natural logarithm of median home value, proportion of the

population that identifies as white, proportion of the structures built 30 years ago, and proportion of the structures built less than 10 years ago.

Table 1: Descriptive Statistics

	n	*M*	*SD*
Anchor Initiative y/n	4,150	.35	.48
Studentification Index	4,143	-.00	.45
Proportion Owner Occupied Units	4,147	.37	.24
Proportion Multi-Family Homes	4,145	.56	.30
Proportion Population <18 Years Old	4,149	.24	.11
Proportion Population >60 Years Old	4,149	.17	.08
Log Population Density	4,149	9.19	1.09
Log Median Rent	4,135	5.60	.87
Log Median Home Value	4,064	10.92	1.19
Proportion White	4,149	.41	.35
Proportion Structures >30 Years Old	4,142	.70	.25
Proportion Structures <10 Years Old	4,142	.68	.15
Distance to Nearest Anchor University	4,150	3.62	3.04

Analytical Approach

Following the propensity score matching procedure, I use a series of difference-in-differences specifications to estimate the relationship between being targeted by an anchor initiative and rates of studentification. The treatment timing was heterogeneous, making two-way fixed effects difference-in-differences models unreliable as they may be comparing treated observations to observations that were never treated, not yet treated, or even already treated (Goodman-Bacon, 2021). I therefore present two difference-in-differences models. The first, and what I consider to be the main model, uses the Callaway and Sant'Anna (2021) inverse probability weighting model for difference-in-differences. The model is as follows:

$$Treatment\ Effect_{gt} = \left(\frac{G_g}{E[G_g]} - \frac{\frac{\hat{p}(X)C}{1-\hat{p}(X)}}{E\left[\frac{\hat{p}(X)C}{1-\hat{p}(X)}\right]} \right) \left(Studentification_t - Studentification_{g-1} \right)$$

where G is a binary indicator equal to 1 if the tract is in group g, or the year of treatment, $\hat{p}$ is the proportion of tracts that received treatment in the whole sample, X is a propensity score derived from a matrix of X variables, and C is a binary indicator equal to 1 if the tract is in the control group. The benefits of Callaway and Sant'Anna (2021) are twofold. First, the model provides treatment effects for each treatment period, plus an average treatment effect for the entire sample. Second, the model

allows for more control over the comparison group. I only compared the treatment tracts to tracts that had never been treated and would not be treated at any point in the panel. As a sensitivity check, I also present a more traditional two-way fixed effects model. This model is unable to specify which tracts to use as a comparison or provide treatment effects for specific periods, but the average treatment effects remain roughly the same as in the Callaway and Sant'Anna (2021) model, giving evidence the results are robust.

I estimate two specifications for each model, one with and one without covariates, again to serve as a robustness check for the difference-in-differences design. Standard errors are robust and clustered at the CBSA level. Along with the difference-in-differences specifications, I also test the relationship between the studentification index and median rent using a random effects model. I regress the natural logarithm of median rent on the index and the same set of covariates. This will provide evidence as to implications for studentification in terms of gentrification.

Limitations

There are several potential limitations to these analyses. First, the studentification index would be improved by including the proportion of residents in a tract that are enrolled in a postsecondary school. While this article is concerned with the neighborhood changes associated with studentification rather than the number of students themselves per se, the index in its current form could be capturing some other form of neighborhood change along with studentification. For example, residents between the ages of 18 and 60 who prefer multi-family, rental properties could also describe entry-level workers, some of whom may have postsecondary credentials but many of whom may be coming directly from high school, with or without a diploma. Similarly, the age band of 18 to 60 is large relative to the typical age cohort. Groups like young professionals, recent graduates not enrolled in school, or young families could fit within this band and might exhibit some preferences similar to students, potentially confounding the results. However, this is the smallest band available in the LTDB that allows for longitudinal analysis. Given the sample selection process as beginning with neighborhoods specifically targeted by universities for some form of development, however, and the implicit rationale of many anchor initiatives to attract students, the studentification explanation is far more likely. For the control tracts selected through the propensity score matching process, they may be experiencing some form of neighborhood change similar to but different from studentification. This still serves as an interesting and useful counterfactual though, as long as the pre-treatment trends are the same, which the χ^2 tests provide evidence they are.

Second, propensity score matching has been critiqued as only creating comparable samples in terms of observed characteristics (J. A. Smith & Todd, 2005). There are multiple unobserved characteristics likely influencing the neighborhoods selected for development. Universities might be investing in neighborhoods that are about to begin changing anyways. Relationships with city officials and planning agencies likely influence neighborhood selection. Historical events straining town-gown

relations might instigate anchor initiatives. While true, the matching process here reduced the bias resulting from the observed characteristics from 150% to 15%, and the difference-in-differences specification further controls for unobserved confounders. As universities do not select neighborhoods at random for anchor institution initiatives, nor should they, this approach at present is the most promising to produce an estimate for what is essentially a causal question. The matched neighborhoods in the same cities might also be experiencing spillover effects from nearby anchor initiatives. While this would result in biased estimates, the bias would be towards 0, meaning to the degree there is an observable effect, the true effect would be even larger. As a final point about matching, there are several observable neighborhood characteristics that were not included due to data limitations (e.g. proximity to any campus, public transportation availability, presence of amenities desirable or students, or crime rates). The difference-in-differences approach should implicitly control for some of these factors, though precision of the estimates will suffer.

Third, the data do not include the most recent estimates from the 2020 decennial census. This potentially limits generalizability as the financial and enrollment landscape of universities changes to become more concentrated and housing markets become more expensive. The data are limited to 2010 for two reasons. First, the 2020 census was conducted in the midst of the COVID-19 pandemic, when the vast majority of students were taking classes online, thus any attempt to estimate student residence in this period would be highly unreliable. Second, the data used for this study link the ACS to the decennial census. The ACS is conducted using 5-year estimates, with best practice for analysis being to center the 5 years around the time of interest. The most recent ACS data standardized in the LTDB at the time of this study were 2015-2019. Treating the 2015-2019 estimates as if they were collected concurrently with the 2020 decennial census would be inappropriate in the best circumstances, but with the addition of COVID-19, it becomes completely untenable. Future research should reexamine anchor initiatives and studentification with more recent data.

RESULTS

Following the propensity score matching procedure, there were a total of 830 tracts across 5 points in time in 75 cities (see Table 1 for descriptive statistics). To construct the studentification index, I started with the principal component analysis to weight the variables. The factor loadings are presented in Table 2. The signs on proportion owner occupied units and the age variables were reversed in the weightings as they are negative indicators of studentification. After weighting, the variables were standardized, then the age variables weighted by .5 again before adding them together to form the studentification index.

Table 2: Studentification Loadings

	Factor Loadings
Proportion Owner Occupied Units	.92
Proportion Multi-Family Homes	-.96
Proportion Population <18 years old	.55
Proportion Population >60 years old	.01

The inverse probability weighting specifications are presented in Table 3. The first set of treatment effects present the results with no covariates. The pre-trend test showed no statistically significant differences between the treatment and control trends prior to treatment, with $\chi^2(6)=10.69$, $p> .05$, meeting the core assumption of difference-in-differences. Each treatment effect shows the effect on studentification of anchor initiatives that were launched in the decade prior to the listed year. For example, the effect on studentification of anchor initiatives launched between 1970 and 1980 is -0.30. The overall average treatment effect on the treated (ATT) is listed at the bottom. This ATT is calculated as a weighted average of all of the disaggregated average treatment effects. In this first specification, the only treatment period with statistically significant results at the .05 level is 1990 to 2000, with an effect of an increase in the studentification index of 0.12. This drives a statistically significant overall ATT of 0.07. The second specification includes covariates. Again, pre-trend tests showed no statistically significant differences with $\chi^2(6)=7.32$, $p>.05$. While the treatment effects change somewhat in terms of magnitude, the statistical significance does not change. The average treatment effect for tracts targeted by an anchor initiative launching in 1990 to 2000 was again statistically significant, with an effect of 0.08, and the overall ATT of 0.05 was also statistically significant. To contextualize this, the mean studentification index in the control group increases by approximately .07 points per decade. The anchor institution initiatives are therefore accelerating the studentification trends in these neighborhoods by approximately a decade's worth of growth.

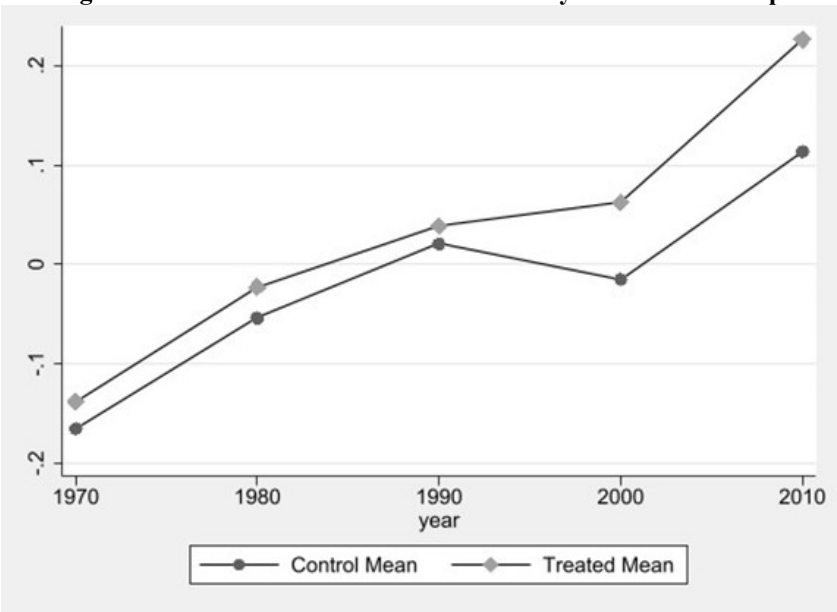
Figure 1 serves as a visual demonstration of this relationship. The Treated Mean line indicates the mean studentification value of all tracts that received treatment at some point in time, while the Control Mean line represents the mean for all non-treated tracts. The parallel trends in early decades are apparent before the major split between 1990 and 2000, coherent with the average treatment effects that found this decade to be the main driver of the positive results. This result makes intuitive sense given the context of anchor initiatives in the US and the overall economic contexts at the times of data collection. Most of the anchor initiatives included in this study were launched in the 90s, so large effects would be expected at this time. The divergence likely would have been even more pronounced in 2010, except the global recession of 2008 hit two sectors particularly hard in the US: housing and higher education. The fact the gap did not close at all over the course of the 2000s may indicate the longevity of studentification in neighborhoods.

Table 3: Studentification Inverse Probability Weighting Specification Coefficients

First Observation Period Following Treatment	Average Treatment Effects[1] (std err)	Average Treatment Effects[2] (std err)
1980	-.30*	-.23
	(.15)	(.16)
1990	.05	.02
	(.05)	(.05)
2000	.12***	.08***
	(.03)	(.03)
2010	.01	.02
	(.03)	(.03)
Overall ATT	.07***	.05**
	(.02)	(.02)

Notes: Coefficients[1] exclude all covariates. Coefficients[2] include the entire set of covariates. * $p \leq .1$, ** $p \leq .05$, *** $p \leq .01$

Figure 1: Trends in Mean Studentification by Treatment Group



The two-way fixed effects difference-in-differences specifications are presented in Table 4. The initial specification only included the difference-in-differences estimate and the unit and year fixed effects. The model as a whole was statistically significant with $F(5, 74)=24.05$, $p \leq .00$, and an adjusted $R^2=.14$. The coefficient of interest is the difference-in-differences estimate. The coefficient is .07, indicating being targeted by

an anchor institution initiatives tends to increase the studentification index by approximately .07 points, perfectly matching the inverse probability weighting model's overall ATT with no covariates. The second specification with the included covariates supports this same conclusion. The model is again statistically significant with $F(11, 74)=27.21$, $p \leq .00$, and the adjusted R^2 increased to .21. This is a statistically significant change in R^2 with a formal F test. While the model as a whole better captures the variance in the studentification index, the difference-in-difference estimate remains relatively stable. The coefficient changed by less than a hundredth of a point, and the robust standard error remained virtually identical. The stability of the estimates across all 4 of these specifications serve as evidence the difference-in-differences model is robust and is presenting reliable estimates of the effect on studentification in these cases.

Table 4: Studentification Two-way Fixed Effects Specification Coefficients

	Coefficients[1] (std err)	Coefficients[2] (std err)
Difference-in-Differences	.07** (.03)	.06** (.03)
1980	.11*** (.02)	.16*** (.05)
1990	.17*** (.03)	.30*** (.08)
2000	.15*** (.03)	.31*** (.11)
2010	.29*** (.05)	.50*** (.14)
Log Population Density	--	-.20*** (.04)
Log Median Rent	--	-.06 (.06)
Log Median Home Value	--	-.06* (.03)
Proportion White	--	-.08 (.07)
Proportion Structures >30 Years Old	--	.01 (.12)
Proportion Structures <10 Years Old	--	-.03 (.16)
Adjusted R^2	.14	.21

Notes: Coefficients[1] exclude all covariates but the difference-in-differences estimate and unit and year fixed effects. Coefficients[2] include the entire set of covariates. All standard errors are robust and clustered at the city-level.
* $p \leq .1$, ** $p \leq .05$, *** $p \leq .01$

The final analysis builds upon these results by regressing the natural logarithm of median rent on the studentification index and a similar set of covariates. I use a random effects model here because I am no longer differentiating between census tracts that are targeted by anchor initiatives or not. Rather, I am looking at the relationship between studentification and rent across time, regardless of university initiatives to direct growth. As I am now treating census tracts as a random sample rather than a comprehensive categorization, I use a random effects Generalized Least Squares model. There are also two changes to the covariates. First, I excluded median home value as this serves as a collider variable between studentification and rent prices. Rent and home value are connected in mechanical ways. As rents increase,

home values necessarily increase, and vice versa. Second, I included distance to the nearest university as a control. Distance is a constant across time, thus was inappropriate for the fixed effects models but can be included in the random effects model. The results are presented in Table 5. The outcome variable is a log variable to normalize the distribution, so interpretation is not immediately intuitive. After transforming the model to be more easily interpreted, an increase in the studentification index of one standard deviation is roughly associated with a 2.57% increase in median rent. Notably, distance to the nearest university is also positively associated with an increase in rent, with each additional mile closer to a university being associated with an increase in rent comparable to the increase associated with studentification.

Table 5: Log Median Rent and Studentification Random Effects Model

	Coefficient (std err)
Studentification Index	.05*** (.02)
Log Population Density	.02*** (.01)
Proportion White	.04* (.02)
Proportion Structures >30 Years Old	.19*** (.03)
Proportion Structures <10 Years Old	.44*** (.05)
Distance to Nearest University	.04*** (.00)

Note: * $p \leq .1$, ** $p \leq .05$, *** $p \leq .01$

DISCUSSION

Anchor Initiatives and Neighborhood Change

The first main result from the preceding analyses is there is evidence anchor institution initiatives have a positive effect on studentification of .05 - .07 points, meaning they increase studentification. With some back-of-the-envelope calculations, the studentification index increases by approximately .08 points per decade, with the control group mean increasing by .07 points per decade. Thus, assuming steady change, being targeted by an anchor institution initiative roughly doubles the rate of studentification the tract would see regardless. The estimates presented here can be interpreted to be causal, though with caution. The precise estimates are potentially biased by some unobserved confounder, but there is likely some positive effect of the anchor initiatives.

This lends credence to the argument universities are intentionally using anchor institution initiatives to reshape neighborhoods to attract students. Concerns about safety in surrounding neighborhoods were explicitly part of the rationale for launching anchor initiatives in New Haven, Cincinnati, and West Philadelphia (Hodges & Dubb, 2012), using "Conrad-esque rhetoric of the scary urban jungle" (Jackson, 2014, para. 21). The evidence here points to the potential success of these projects in reshaping these neighborhoods in ways that the universities saw fit. Rather than working with communities to develop local wealth, these initiatives may be driving out past residents with an in-migration of students. Baldwin (2021) also

makes this argument with case studies, looking more specifically at prestigious universities in cities and the changes forced upon surrounding neighborhoods by domineering universities.

Anchor initiatives are thus part of longstanding racialized geographies of urban development. Universities often target neighborhoods historically framed as blighted (Ilano, 2020), and perceptions of blight are based in legacies of racism and disinvestment in urban planning (Herscher, 2020). Redevelopment can alter land use, increase exposure to displacement pressures, and reproduce inequities under the guise of revitalization. Universities have been critiqued elsewhere for functioning as colonial institutions, consolidating resources and prestige built on historical exploitation and present marginalization (Stein, 2020). Engaging these perspectives underscores anchor initiatives are not value neutral. They operate within racialized and colonial logics that shape urban space and university-community relations.

This is not an argument that studentification is inherently undesirable. The current place-based model of postsecondary education across most of the world requires student housing in neighborhoods off-campus. These neighborhoods come with their own characteristics, economic contributions, and feelings of affinity among students, other residents, and alumni (Sage et al., 2013; Wiewel & Perry, 2008). Studentification becomes more problematic when universities are intentionally directing studentification toward neighborhoods that have been historically marginalized and exploited through so-called urban renewal or urban revitalization initiatives (Goode & Schneider, 1994) to benefit their own recruiting strategies for the sake of tuition dollars and prestige. In this way, anchor institution initiatives can be conceptualized as participating in the centuries-long project of reproducing informal residential segregation in US cities.

Student Housing Affordability

The second main result is the positive relationship between studentification and log median rent in the random effects model. After transforming the studentification index scale for ease of interpretation, moving one standard deviation up the distribution is associated with a 2.57% increase in median rent. This increase may appear modest, but the increase is above and beyond any increases associated with consumer price index inflation and any additional increases in the housing markets. As demand rises for housing relatively near college campuses, students begin to pay higher costs.

Nearly 10% of college students in the US are either homeless or at risk of homelessness, and nearly 45% of college students experience some form of housing insecurity (Broton, 2020). The association between studentification and rent could explain part of this steep housing insecurity. Particularly in cities where space is at a premium, housing near campus becomes valuable for students who do not have an easy form of transportation to campus or for students who want a more residential, walkable lifestyle. Neighborhoods experiencing studentification then become especially attractive as they are designed specifically for students. As demand increases for these neighborhoods, rent increases accordingly.

While this article does not have the data to make this claim, the credit line available through student loans in the US could also be a factor in the higher rents associated with studentification. Whereas loans for rent payments are not standard, student loans can be used for housing costs with a relatively high cap. Private developers can then charge above what would otherwise be market rates. Universities set the estimates for off-campus room and board that is used to set the loan caps for their students. Setting the estimate too low could cause students to be housing insecure, but setting it too high can result in massive debt and inflated housing prices. Housing affordability for students as well as non-student residents should be a factor universities consider when engaging with surrounding communities.

Implications

There are several implications for research and practice following from this study. In terms of research, more work should apply the concept of studentification to examine neighborhood change in college towns and university districts. Qualitative case studies already offer rich contributions to our understanding of student residential patterns off-campus, but more should explicitly consider the role of direct university intervention in planning and development. This would deepen conceptualizations of town-gown relations and further inform engaged universities to ensure their work is equitable and mutually beneficial as opposed to exploitative and domineering. Quantitatively, studies of studentification that directly measure what proportion of residents are students would enhance the precision. These would likely need to be original surveys on a relatively small scale given the complexities of identifying which houses have residents who are enrolled.

Globally, as higher education participation expands rapidly across Africa and Asia (UNESCO Institute for Statistics, 2024), students will need places to live. Concurrently, the vast majority of urban growth over the next century is predicted to occur within these same regions (UN Human Settlements Programme, 2022). Scholars of higher education and urban studies should collaborate to more fully understand how off-campus housing shapes neighborhoods and in turn how neighborhoods where students reside shape academic outcomes. The relationship between rent and studentification in the US also warrants further study, both on its own terms and to the degree it applies in other policy settings. The Bennet hypothesis claims Federal student loans are passed through students to universities in the form of higher tuition. A similar hypothesis could be tested that Federal student loans are passed through to private housing developers in the form of higher rents. National higher education systems with similar loans available to be used to pay for private housing should also be analyzed to test whether these payments are increasing market price for students.

In terms of practice, universities must be cautious and strategic in their use of anchor initiatives to develop neighborhoods near campus. Studentification may be a concern in vulnerable neighborhoods with low-income residents. Rather than imposing development plans, universities should work with marginalized communities and local community organizers to make plans to provide affordable housing and safe

experiences for students. This offers an interesting problem for universities, particularly universities in dense cities. Students require affordable housing and should be protected from exploitative housing developers, but it must be offered in such a way that protects other vulnerable communities as well. One example is the College Housing Assistance Program by Tacoma Community College and the Tacoma Housing Authority (Goldrick-Rab et al., 2021). This program uses Federal money from the Department of Housing and Urban Development (HUD) to offer vouchers to homeless students. These types of programs could be scaled through HUD or implemented at a state or municipal level to provide a source of housing funds with more control over rent prices than are offered by Federal student loans.

Another potential way forward is currently being pioneered by South Africa's Department of Higher Education and Training (DHET) in collaboration with the Department of Public Works and Infrastructure. First, DHET developed an accreditation process for private housing based on safety and affordability. Accreditation status is incorporated in the loan disbursement formula to encourage students to live either in university-owned or accredited housing (National Student Financial Aid Scheme, 2024). Second, DHET is spearheading a massive building project to add 300,000 beds through new and expanded housing units at universities and technical schools across South Africa in a decade (Development Bank of South Africa, 2024). Such large-scale projects also allow planning agencies to partner with universities to coordinate new builds and student movement in a way that maximizes environmental sustainability. Ensuring that students are either within walking distance of campus or have clear lines of accessible transportation, that buildings are meeting environmental sustainability standards, and that the footprint of expanding enrollment will have minimal impact on natural habitats becomes more plausible with coordinated development. The contexts of studentification may be highly local, but the policy implications exist at the national and the municipal level.

There are also grassroots approaches to housing insecurity that could be adopted by students. Housing cooperatives offer a more affordable and secure option than renting. There are multiple models, though generally members of the cooperative pay a down payment to gain partial ownership of the building in which they live, then a smaller monthly or annual fee for property maintenance (Bangs, 2018). Such a model is not exceptionally new to higher education as it is similar to the model used by Greek life organizations with houses. Rather than paying dues to a national organization to live in a privately owned home, students would buy into a cooperative and build some degree of equity. Universities could provide technical assistance to students looking to form or join cooperatives, much as they provide assistance to Greek organizations.

Studentification is not necessarily a process to be avoided. As long as postsecondary education remains place-based and students remain mobile, there must be housing available near campus, and there will be demand for amenities tailored to students. When universities intentionally target specific neighborhoods for development based on heavily racialized perceptions of danger and blight, however, studentification can become a tool for exploitation and domination. Additionally, private developers can exploit student needs by charging exorbitant rents. Universities have levers they can

pull to direct development, so these levers should be pulled in conjunction with local communities.

REFERENCES

Addie, J. -P. (2018). Urban(izing) university strategic planning: An analysis of London and New York City. *Urban Affairs Review, 55*(6), 1612-1645. https://doi.org/10.1177/1078087417753080

Andersson, R. Quigley, J. M., & Wilhelmsson, M. (2009). Urbanization, productivity, and innovation: Evidence from investment in higher education. *Journal of Urban Economics, 66*, 2-15. doi: 10.1016/j.jue.2009.02.004.

Arteaga, C. (2018). The effect of human capital on earnings: Evidence from a reform at Colombia's top university. *Journal of Public Economics,157*, 212-225.

Baldwin, D. L. (2021). *In the shadow of the ivory tower: How universities are plundering our cities.* Bold Type Books.

Bangs, C. (2018). A union for all: Collective associations outside the workplace. *Georgetown Journal on Poverty Law and Policy, 26*(1), 47-164.

Bank, L. J., Cloete, N. & van Schalkwyk, F. (Eds.). (2018). *Anchored in place: Rethinking higher education and development in South Africa*. African Minds.

Baum-Snow, N., & Hartley, D. (2016). Causes and consequences of central neighborhood change, 1970–2010. University of Toronto.

Biswas, A., Koner, S., & Singh, J. (2022). The pattern of gentrification in a knowledge economy: The case of Bengaluru, India. In P. Banerji & A. Jana (Eds.), *Advances in urban design and engineering: Perspectives from India,* (73-103). Springer Singapore.

Bolton, P., & Lewis, J. (2025). *Higher education finances and funding in England.* House of Commons Library. https://researchbriefings.files.parliament.uk/documents/CBP-10037/CBP-10037.pdf

Broton, K. M. (2020). A review of estimates of housing insecurity and homelessness among students in U.S. higher education. *Journal of Social Distress and Homelessness, 29*(1), 25-38.

Budd, R. (2022). Going local: The time and place of higher education institutions. *Higher Education, 84*, 225-234. https://doi.org/10.1007/s10734-021-00763-y

Callaway, B., & Sant'Anna, P. H. C. (2021). Difference-in-differences with multiple time periods. *Journal of Econometrics, 225*(2), 200-230. https://doi.org/10.1016/j.jeconom.2020.12.001

Combrinck, C., & Nortjé, T.-L. (2021). Activating the edge: The university campus as anchor institution. *Development Southern Africa*, *38*(3), 353-370. https://doi.org/10.1080/0376835X.2020.1760083

Dalton, L. C., Hajrasouliha, A. H. & Riggs, W. W. (2018). State of the art in planning for college and university campuses: Site planning and beyond. *Journal of the American Planning Association, 84*(2), 145-161. https://doi.org/10.1080/01944363.2018.1435300

Democracy Collaborative. (2018). Anchor dashboard learning cohort. https://anchors.democracycollaborative.org/higher-education-anchor-mission-initiative.html

Development Bank of South Africa. (2024). *Student housing infrastructure programme (SHIP)*. DBSA. https://www.dbsa.org/projects/student-housing-infrastructure-programme-ship

Doberneck, D. M., Glass, C. R., & Schweitzer, J. H. (2010). From rhetoric to reality: A typology of publicly engaged scholarship. *Journal of Higher Education Outreach and Engagement, 14*(4), 5-35.

Duke-Williams, O. (2009). The geographies of student migration in the UK. *Environment and Planning A, 41*, 1826-1848. doi: 10.1068/a4198.

Ehlenz, M. M. (2019). Gown, town, and neighborhood change: An examination of urban neighborhoods with university revitalization efforts. *Journal of Planning Education and Research, 39*(3), 285-299. doi: 10.1177/0739456X17739111.

Etienne, H. F. (2012). *Pushing back the gates: Neighborhood perspectives on university-driven revitalization in West Philadelphia*. Temple University Press.

Etzkowitz, H. (2014). The second academic revolution: The rise of the entrepreneurial university and impetuses to firm foundation. In T. J. Allen & R. P. O'Shea (Eds.), *Building technology transfer within research universities: An entrepreneurial approach* (pp. 12-32). Cambridge University Press.

Garton, P. (2021). Types of anchor institution initiatives: An overview of university urban development literature. *Metropolitan Universities, 32*(2), 85-105. https://doi.org/10.18060/25242

Garton, P. M. (2023). Universities and gentrification: The effects of anchor institution initiatives on rates of neighborhood change. *Research in Higher Education, 64,* 987-1010. https://doi.org/10.1007/s11162-023-09733-y

Goldrick-Rab, S., Baker-Smith, C., Clark, K., Dahl, S., Brescia, S., & Williams, T. (2021). *A first look at impacts of the college housing assistance program at Tacoma Community College.* The Hope Center for College, Community, and Justice.

Goode, J. G., & Schneider, J. A. (1994). *Reshaping ethnic and racial relations in Philadelphia: Immigrants in a divided city*. Temple University Press.

Goodman-Bacon, A. (2021). Difference-in-differences with variation in treatment timing. *Journal of Econometrics, 225*(2), 254-277. https://doi.org/10.1016/j.jeconom.2021.03.014

Gregory, S. (2013). The radiant university: Space, urban development, and the public good. *City & Society, 25*(1), 47-69. doi: 10.1111/ciso.12011.

Hackworth, J., & Smith, N. (2001). The changing state of gentrification. *Tijdschrift Voor Economische En Sociale Geografie, 92*(4), 464–477. https://doi.org/10.1111/1467-9663.00172

Haila, A. (2008). The University of Helsinki as a developer. In W. Wiewel & D.C. Perry (Eds.), *Global universities and urban development: Case studies and analysis* (pp. 27-39). Routledge.

Hendricks, D., & Flaherty, J. (2018). Integrating the edges: University of Pretoria's neighbourhood anchor strategy. *Development Southern Africa*, *35*(5), 689–700. https://doi.org/10.1080/0376835X.2018.1433024

Herscher, A. (2020). The urbanism of racial capitalism: Toward a history of "blight." *Comparative Studies of South Asia, Africa and the Middle East, 40*(1), 57-65. https://muse.jhu.edu/article/755620

Hodges, R. A., & Dubb, S. (2012). *The road half traveled: University engagement at a crossroads*. Michigan State University Press.

Hubbard, P. (2009). Geographies of studentification and purpose-built student accommodation: Leading separate lives? *Environment and Planning A, 41*, 1903-1923. doi: 10.1068/a4149.

Hwang, J., & Lin, J. (2016). What have we learned about the causes of recent gentrification? Cityscape, 18(3), 9-26.

Ilano, L. A. M. (2020). *Urban universities on contested terrain: Racial academic capitalism, gentrification, and the politics of expansion* (ProQuest ID: Ilano_ucla_0031D_19181) [Doctoral dissertation, University of California, Los Angeles]. eScholarship.

Jackson, L. M. (2014, December 15). The hypocrisy of revitalization: Universities in Black communities. *The Atlantic*. https://www.theatlantic.com/education/archive/2014/12/no-its-not-gentrification-its-something-else/383645/.

Jolivet, V., Reiser, C., Baumann, Y., Gonzalès, R. (2023). Before displacement: Studentification, campus-led gentrification and rental market transformation in a multiethnic neighborhood (Parc-Extension, Montréal). *Urban Geography, 44*(5), 983-1002. https://doi.org/10.1080/02723638.2022.2073150

Kantor, S., & Whalley, A. (2014). Knowledge spillovers from research universities: Evidence from endowment value shocks. *Review of Economics and Statistics, 96*(1), 171-188.

Kinton, C., Smith, D. P., Harrison, J., & Culora, A. (2018). New frontiers of studentification: The commodification of student housing as a driver of urban change. *The Geographical Journal, 184*, 242-254. doi: 10.1111/geoj.12263

Logan, J. R., Stults, B. J., & Xu, Z. (2016). Validating population estimates for harmonized census tract data, 2000 – 2010. *Annals of the American Association of Geographers, 106*(5), 1013-1029. doi: 10.1080/24694452.2016.1187060.

Logan, J. R., Xu, Z., & Stults, B. J. (2022). *Longitudinal tract database* [data file]. https://s4.ad.brown.edu/Projects/Diversity/Researcher/Bridging.htm

Marcuse, P. (2015). Gentrification, social justice and personal ethics. *International Journal of Urban and Regional Research, 39*(6), 1263-1269. doi: 10.1111/1468-2427.12319.

Marginson, S. (2016). The worldwide trend to high participation higher education: Dynamics of social stratification in inclusive systems. *Higher Education, 72*, 413-434. https://doi.org/10.1007/s10734-016-0016-x

McClure, K. R., Ryder, A. J., & DeVita, J. M. (2017). Public-private partnerships in college student housing: Lessons from three institutions. *The Journal of College and University Student Housing, 43*(2), 72-93.

Moos, M., Revington, N., Wilkin, T., & Andrey, J. (2019). The knowledge economy city: Gentrification, studentification and youthification, and their connections to universities. *Urban Studies, 56*(6), 1075-1092.

Morris, K., Jones, A., & Wright, J. (2010). *Anchoring growth: The role of 'anchor institutions' in the regeneration of UK cities*. The Work Foundation.

National Student Financial Aid Scheme. (2024). *NSFAS eligibility criteria and conditions for financial aid: Policy standard*. National Student Financial Aid Scheme. https://www.nsfas.org.za/content/policies.html

Orphan, C. M., & McClure, K. R. (2019). An anchor for the region: Examining a regional comprehensive university's efforts to serve its rural, Appalachian community. *Journal of Research in Rural Education, 35*(9), 1-19. https://doi.org/10.26209/jrre3509

Page, B., & Ross, E. (2016). Legacies of a contested campus: Urban renewal, community resistance, and the origins of gentrification in Denver. *Urban Geography, 38*(9), 1293-1328. doi: 10.1080/02723638.

Porter, M. E. (2016). Inner-city economic development: Learnings from 20 years of research and practice. *Economic Development Quarterly, 30*(2), 105-116. doi: 10.1177/0891242416642320.

Revington, N. (2024). Studentification as a gendered urban process: Student geographies of housing in Waterloo, Canada. *Social & Cultural Geography, 25*(1), 9-28. https://doi.org/10.1080/14649365.2022.2115536

Revington, N., Moos, M., Henry, J., & Haider, R. (2020). The urban dormitory: Planning, studentification, and the construction of an off-campus student housing market. *International Planning Studies, 25*(2), 189-205. doi: 10.1080/13563475.2018.1552565.

Revington, N., & Wray, A. J. D. (2024). Land-use planning approaches to near-campus neighborhoods and student housing development patterns in Ontario, Canada. *Housing Policy Debate, 34*(5), 668-694. https://doi.org/10.1080/10511482.2022.2093939

Reynolds, A. (2020). Geographies of purpose built student accommodation: Exclusivity, precarity and (im)mobility." *Geography Compass, 14*(11), 1-18. doi: 10.1111/gec3.12543.

Saltmarsh, J., O'Meara, K., Sandmann, L., Giles, D., Cowdery, K., Liang, J., & Buglione, S. (2014). *Becoming a steward of place: Lessons from AASCU Carnegie Community Engagement applications*. American Association of State Colleges and Universities.

Sage, J., Smith, D., & Hubbard, P. (2013). New-build studentification: A panacea for balanced communities? *Urban Studies, 50*(13), 2623-2641. doi: 10.1177/0042098013477694.

Smith, N. (1998). Gentrification. In W. Van Vliet (Ed.), The encyclopedia of housing (pp. 198-199). SAGE Publications Inc.

Smith, D. (2008). The politics of studentification and '(un)balanced' urban populations: Lessons for gentrification and sustainable communities? *Urban Studies, 45*(12), 2541-2564. doi: 10.1177/0042098008097108.

Smith, D. P., & Holt, L. (2007). Studentification and 'apprentice' gentrifiers within British provincial towns and cities: Extending the meaning of gentrification. *Environment and Planning A, 39*, 142-161. doi: 10.1068/a38476.

Smith, D. P. & Hubbard. P. (2014). The segregation of educated youth and dynamic geographies of studentification. *AREA, 46*(1), 92-100. doi: 10.1111/aera.12054.

Smith, J. A., & Todd, P. E. (2005). Does matching overcome LaLonde's critique of nonexperimental estimators? *Journal of Econometrics, 125*(1-2), 305-353. doi: 10.1016/j.jeconom.2004.04.011.

Stein, S. (2020). A colonial history of the higher education present: Rethinking land-grant institutions through processes of accumulation and relations of conquest. *Critical Studies in Education, 61*(2), 212-228. https://doi.org/10.1080/17508487.2017.1409646

Taylor, H. L., Luter, D. G., & Miller, C. (2018). The university, neighborhood revitalization, and civic engagement: Toward civic engagement 3.0. *Societies, 8*, 106-126. doi: 10.3390/soc8040106.

UN Human Settlements Programme. (2022). *World cities report 2022: Envisaging the future of cities.* https://unhabitat.org/wcr/

UNESCO Institute for Statistics. (2024). *UIS.Stat* [dataset]. United Nations Educational, Scientific and Cultural Organization. https://data.uis.unesco.org/Index.aspx

van Liempt, I., van Aalst, I. & Schwanen, T. (2015). Introduction: Geographies of the urban night. *Urban Studies, 52*(3), 407-421. doi: 10.1177/0042098014552933.

Walker, L. A., & East, J. F. (2018). The roles of foundations and universities in redevelopment planning. *Metropolitan Universities, 29*(2), 33-56. doi: 10.18060/22342.

Wiewel, W., & Perry, D. C. (Eds.). (2008). *Global universities and urban development: Case studies and analysis*. Routledge.

Paul Garton, PhD, is an Assistant Professor of Educational Leadership and Policy Analysis at East Tennessee State University. Email: gartonp@etsu.edu