Income sorting and policy induced gentrification:

Evidence from large-scale urban renewal projects in the Netherlands

Niels M. Kuiper

Real Estate Centre, Department of Economic Geography, Faculty of Spatial Sciences,

University of Groningen

PO Box 800, 9700 AV, Groningen, The Netherlands

n.m.kuiper@rug.nl

Extended abstract

Income segregation within urban areas has increased in many countries. As a result of income sorting, low-income households mostly live in low-amenity neighborhoods, segregated from high-income households that live in high-amenity neighborhoods (Rosenthal & Ross, 2015). These low-amenity neighborhoods are often characterized by lower levels of historic and natural amenities (Brueckner et al., 1999), a lower quality of public service provision (Epple & Romer, 1991; Ross & Yinger, 1999), fewer stores and restaurants (Waldfogel, 2008; Schuetz et al., 2012), higher crime rates (Cullen & Levitt, 1999; O'Sullivan, 2005) and higher levels of pollution (Banzhaf & Walsh, 2008). In part, the lower quality of the amenities in low-income neighborhoods is endogenously determined by the absence of positive income externalities (Rosenthal & Ross, 2015). Income mixing within neighborhoods might therefore increase the quality of the amenities that low-income households can access (Rosenthal & Ross, 2015). For this reason, a wide variety of place-based housing market policies exist that aim to induce gentrification in low-income neighborhoods.

In Europe, many countries use large-scale urban renewal programs to induce gentrification in low-income neighborhoods. These programs mostly improve the quality of the housing stock by renovations or demolition of the existing stock and the development of new housing units (Koster & Van Ommeren, 2019). By upgrading the housing stock, a low-income neighborhood is hypothesized to become more attractive for higher-income households, which might result in the gentrification of the

targeted area (Brueckner & Rosenthal, 2009). In this paper, I empirically examine the impacts of large-scale urban renewal projects in the Netherlands on the socioeconomic composition of the targeted neighborhoods. I also examine potential spillover effects of these renewal projects on consumption amenities in the targeted neighborhoods.

To identify large-scale urban renewal projects in the Netherlands, I use parcel level registry data from 2013 up to 2020 and a novel methodology to detect clusters of residential development over space and time. I start by identifying every development cluster in which at least 50 housing units were both demolished and constructed. From these clusters, I select those clusters that constitute urban renewal projects. The identified renewal projects are all initiated by local governments or social housing corporations and aim to induce gentrification within the wider neighborhood by upgrading the housing stock. Often, these renewal projects also entail investments in infrastructure and public space in the area. Using this approach, I am able to identify every urban renewal projects in the Netherlands between 2013-2020 in which at least 50 housing units were both demolished and constructed. In total, 212 renewal projects within 183 neighborhoods are included in the analyses of this paper.

The identified urban renewal projects are located in neighborhoods where, prior to the renewal, the average income is considerably lower than in the average Dutch urban neighborhood. Similarly, these neighborhoods are characterized by a higher than average share of low income households, a higher share of immigrants (and more specifically non-western immigrants), and a housing market with low property values and a high share of social housing. These observations are in line with the fact that renewal projects target neighborhoods with a low socioeconomic status. It also shows that the targeted neighborhoods are distinctly different from the average Dutch urban neighborhood. To address this, I use a difference-in-difference approach combined with propensity score matching to estimate the causal impacts of these renewal projects at the neighborhood level.

Preliminary findings suggest that the renewal projects change the socioeconomic composition of the neighborhoods in which they are located. Average income in the targeted neighborhoods increases, as well as the percentage of high-income households. Simultaneously, the percentage of low-income households seems to decrease. The total number of residents and households in the targeted neighborhoods does not seem to change as a result of the renewal. This could indicate that low-income

residents are displaced from the targeted neighborhoods. This final observation is a concern that is often raised by residents of the buildings that are removed as part of the renewal project.

In further analyses, I will examine the impact of the renewal projects on neighborhood amenities, with a specific focus on consumption amenities such as stores and restaurants. Based on previous studies (e.g. Waldfogel, 2008; Schuetz et al., 2012), I hypothesize that the new socioeconomic composition of the targeted neighborhoods will impact the number and type of stores and restaurants that are located in these neighborhood. I will examine this hypothesis using a similar difference-in-difference approach as before, combined with highly granular establishment level labor market data.

Finally, I will examine two potential sources of heterogeneity in the observed effects of the renewal projects. First, I will examine whether larger renewal projects will be more (or less) successful in changing the socioeconomic composition of the targeted neighborhood when compared to smaller renewal projects. It makes sense to think that larger projects will be more successful than smaller projects, as more housing units in the neighborhood will be upgraded. Second, I will examine whether the impact of the renewal projects differs depending on the initial socioeconomic status of the neighborhood in which the renewal took place. Arguably, neighborhoods with a lower initial socioeconomic status might still not be able to become attractive for more affluent residents after the housing stock has been upgraded.

This paper contributes to the growing literature on the evaluation of place-based policies. So far, these studies have mostly focused on evaluating place-based labor market policies (e.g. Neumark & Kolko, 2010; Busso et al., 2013). I add to a limited number of empirical studies that evaluate the impact of place-based housing market policies. My main contribution is to estimate the causal effects of large-scale urban renewal programs on gentrification and potential spillover effects on consumption amenities, where previous studies have mostly focused on spillover effects on property markets. I also contribute by examining the universe of large-scale urban renewal projects in the Netherlands between 2013-2020 in which at least 50 housing units were both demolished and constructed. So far, empirical studies have mostly focused on renewal projects in a single city (e.g. Schwartz et al., 2006; Rossi-Hansberg et al, 2010; Ahlfeldt et al., 2017) or on renewal projects within a single program (e.g. Koster & Van Ommeren, 2019).

This paper also contributes to empirical studies that examine the impact of gentrification on amenities within neighborhoods. Different studies have found that gentrification is a self-reinforcing process due to endogenous amenities (e.g. Guerrieri et al., 2013). This makes it challenging to empirically identify the impact of income mixing on amenities in neighborhoods, as they can be both the cause and result of gentrification. In this paper, I observe policy induced gentrification through large-scale urban renewal programs. These programs target a single amenity, housing quality, to induce income mixing in low-income neighborhoods. As such, I can follow a quasi-experimental research approach to identify the causal impact of gentrification on amenities in neighborhoods.

The insights from this paper help to inform public debate on whether urban renewal programs are an efficient way to induce gentrification and whether this impacts the amenities in the targeted neighborhoods. Having insights into effective policies to induce gentrification is of societal relevance because it can increase the quality of amenities low income households can access. Reducing income segregation within urban areas can also be beneficial as it might lead to a reduction of income inequality in the long run. Data suggests that children from low-income parents show less upward mobility in urban areas than their rural peers (Glaeser, 2020). It is hypothesized that the limited upward mobility of children from low-income households is the result of income segregation within urban areas (Glaeser, 2020). The insights from this paper can therefore serve as input for discussions on how to reduce income segregation as a tool to reduce income inequality.

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