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Research Paper

The fiscal trade-off: Sprawl, the conversion of land, and wage decline in California's metropolitan regions

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ABSTRACT

Suburban jurisdictions are disproportionately likely to convert their land to land uses that maximize revenue generation. Yet, the jurisdictions that convert land to more fiscally lucrative uses are likely to experience gains in low-wage retail jobs – possibly contributing to poor upward mobility. This study offers a new perspective on both the factors behind and effects of the conversion of land use to sales taxable uses, via a unique dataset that identifies land use changes on 1.2 million parcels in California (from tax assessor data) from 2007 to 2013. After linking to data on compactness, municipal tax structure, and economic characteristics, the study examines first how various urban form and fiscal factors shape conversion (controlling for economic and demographic variables), and then how conversion to more fiscally lucrative uses (along with urban form and fiscal factors) affect net job quality, specifically wages, over time. Not only does fiscal structure, particularly municipal dependence on sales tax revenue, lead to the conversion of land to fiscally lucrative uses, controlling for other factors, it also contributes to wage decline. The more compact the urban fabric, the less likely is land use conversion, yet the greater the wage decline. The findings of this study suggest that land use conversion may thwart broader economic development goals.

1. Introduction

Urbanization processes continually reshape how land is used. In metropolitan areas with valuable land in the urban core, property owners, often with the encouragement of city officials, may convert land to a use considered higher and better, i.e., more lucrative. One use that offers relatively high returns is retail, which generates not just revenues for business owners, but fiscal returns for governments in the form of sales taxes. Conversion to retail does not occur uniformly across metros: Suburban jurisdictions often disproportionately depend on sales tax revenue, suggesting an association between retail land use conversion and sprawl (Chapple, 2016; Wassmer, 2002). On the other hand, parcels that convert to commercial use more generally tend to cluster and be located close to the core (Fragkias & Geoghegan, 2010; Landis & Zhang, 1998).

Conversion of land use can facilitate the location and expansion of businesses with high sales tax yields. However, many of these businesses, particularly in the retail sector, tend to pay relatively low wages. This begs the question – as urbanization leads to land use changes, are jurisdictions sacrificing local job quality? The conversion of land to sales tax-generating uses in particular may have opportunity costs by crowding out other uses. This may improve job accessibility for residents in the laborshed, but essentially entraps them in low-wage, dead-end jobs (Hanson & Pratt, 1995). It may also explain the challenges sprawling areas experience in fostering the upward mobility of their residents (Ewing, Hamidi, Grace, & Wei, 2016).

To study these relationships, this study links a unique dataset of the conversion of land use in California from 2007 to 2013 to data on urban form (the compactness index from Ewing & Hamidi, 2014), businesses (from the National Establishment Time Series, or NETS data), and wages (from the Quarterly Census of Employment and Wages). Using multivariate regression, the analysis first develops an understanding of the factors behind land use conversion, particularly municipal dependence on the sales tax. Then, the article turns to the role of fiscal structure and urban form in explaining wage declines at the neighborhood level.

The next section reviews the literature on the conversion of land use and its connections to fiscal motives, sprawl and job quality. After an overview of methods and data assembled for this study, the article turns next to a description of the extent and nature of the conversion of land to fiscally lucrative uses in the state of California. The following section explores and models the relationship between conversion, sprawl, and job quality. A final section concludes by offering policy implications.

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2. Linking the conversion of land use, sprawl, and job quality

2.1. Understanding the conversion of land use

Most studies of the conversion of land have focused on the transformation of agricultural or vacant parcels to residential use, with the aim of understanding and predicting metropolitan development, particularly the process of sprawl (e.g., Carrion-Flores & Irwin, 2004; Irwin & Bockstael, 2007). Research on conversion to commercial use typically combines commercial office and retail into a single category, and focuses on the conversion from vacant to commercial. Several factors consistently shape conversion: distance to the nearest central business district, freeway access, population growth, lot size, land costs, adjacent uses, local density, and land use policies (Fragkias & Geoghegan, 2010; Landis & Zhang, 1998; Liu, Yue, & Fan, 2011). However, the direction of the impact varies, even within the same metropolitan area: for instance Landis and Zhang (1998) find that job growth and highway access have a positive effect in some Bay Area counties but negative in others.

The conversion of land to commercial, or more specifically, retail use may be an indicator of the "fiscalization of land use," when local governments make local land use decisions in order to maximize revenue generation through both the attraction of tax-generating uses and the reduction of government service costs. Were fiscalization rampant, states might be seeing increases in property and sales tax revenue. Yet, over time dependence on sales and property tax has actually been declining. The share of local revenues garnered from property tax has decreased nationally from 25.6% in 1972 to 16.6% in 2005, compensated by increases in personal income tax and fees for services, among other sources (Rueben & Rosenberg, 2008). More recently, throughout the US, states are experiencing a slow decline in sales tax revenue per capita, due in part to a shift in economic activity from the consumption of goods to services (Coleman, 2015).

Because of Proposition 13′s cap on property tax assessment, California has experienced much slower growth in property tax revenues than have other states (Gamage, 2009); since its jurisdictions have had to scramble for new revenues, California offers a unique lens into land conversion and fiscal strategies. Proposition 13′s property tax limits have shifted the focus of the fiscalization strategy from property to sales tax. Local jurisdictions have little incentive in boosting property values long-term, because they get so little property tax revenue back from the state (Wassmer, 2002).

The State of California collects the locally levied sales tax, which ranges from 7.5 to 10% depending on the city, and returns 1% to the municipality—the "situs rule", also known as the Bradley-Burns law. Thus, for the average California city, sales tax revenue makes up a relatively small share (8%) of the total revenues, and just one-fourth of the tax revenues. The value of the 1% is primarily that it is not dedicated to specific purposes but can be used at the city's discretion (Lewis, 2001a).

The dependence on sales tax revenue may impact urbanization processes. The desire to improve city finances may lead cities to rezone land for retail or other taxable uses, to respond more favorably to development proposals that will bring in new tax revenues, and/or to dole out incentives in order to attract fiscally remunerative land uses. In some cases, incentives exacerbate urban sprawl, by subsidizing business moves from older urban sites to greenfields (LeRoy, Hinkley, & Tallman, 2000). However, since local retail is a residentiary sector that is generally not growing, it will likely not impact economic growth at the aggregate (regional) level, but rather just redistribute retailers among municipalities (Wassmer, 2002).

That cities embrace the fiscalization of land use is common wisdom among planners, yet there are just two studies that attempt to analyze it, both focusing on California (Lewis, 2001a; Wassmer, 2002). Neither study looks at the actual conversion of land, instead measuring fiscalization indirectly via either the city intent to attract retail or the relationship between sales tax revenue and retail activity. The following sections explore their findings in more detail, looking specifically at how they relate first to sprawl and then to job quality.

2.2. The fiscalization of land use and sprawl

Municipalities seem to embrace the fiscalization of land use. Given a variety of land use choices, surveyed California city managers say they prefer retail, followed by office, mixed use, and light industrial, with multi-family residential and heavy industrial at the end of the list (Lewis, 2001a). If local governments follow up on their preferences—a hypothesis not tested in his study—then they may overzone for retail and underzone for residential and industrial uses, or target more incentives to retail uses (Lewis & Barbour, 1999; Lewis, 2001a).

There has been little scholarly attention paid to the role of urban form—specifically, compact development—in fiscalization. Yet, there is likely a close relationship between fiscalization and sprawl. For instance, an extensive literature establishes the cost of sprawl (Burchell, Downs, McCann, & Mukherji, 2005; Carruthers & Ulfarsson, 2008; Frumkin, 2002; Lambert, Srinivasan, & Katirai, 2012). These costs—new infrastructure, extra maintenance and services such as emergency response, environmental impacts, health impacts, fuel costs, and opportunity costs—likely place stress on municipal finances, which then could result in more fiscalization of land use.

However, studies do establish that cities and suburbs (a possible proxy for sprawl) differ. The above-mentioned city manager survey found that, when asked about their preferences for development, city managers in suburban municipalities tend to rank retail land use higher than do those in central cities (Lewis, 2001b). Similarly, reliance on sales tax revenue has a significant and positive influence on suburban (non-central-city) retail activity, although urban growth boundaries can reduce this retail sprawl over time (Wassmer, 2002). Because of their increase in retail, suburbs gain business taxes and franchise or license fees as well (ibid.). A more recent study showed that the reliance of California jurisdictions on sales taxes has remained relatively constant over the past decade – but is much more concentrated in suburban neighborhood types: sales taxes comprise 2–5% of the budget in cities like San Francisco or Los Angeles, but 12–14% in the suburbs (Chapple, 2016).

Thus, in sum, though there is minimal evidence, reliance on sales tax seems to increase retail activity in the suburbs, quite possibly because jurisdictions are making land use decisions on a fiscal basis. Suburbs in particular are attracted to the sales tax generation potential of big box retail and auto malls, and may accommodate demands for large, highway-accessible lots, often on the urban fringe—i.e., sprawl. But it should be noted that much of this academic debate over the development effects of taxation took place from the 1980s through the early 2000s, and there has been very little research since.

Yet, questions remain. First, recent years have seen both rising income inequality and the mid-2000s subprime crisis (or Great Recession), which have created fiscal stresses on both local governments and individual households. At a time of declining wages, does the conversion of local land use to retail contribute to the losses? Second, research to date has only examined fiscalization of land use in city versus suburb when it may be the compactness (or lack thereof) of the local urban form itself that is shaping conversion patterns. Thus, this article contributes an analysis of the relationship between sprawl, land use conversion, and job quality.

2.3. Linking land use conversion and urban form to job quality

There is little research on the relationship between land use conversion, urban form, and local labor markets. In general, models of wage dynamics rarely analyze patterns below the regional level, considered the geography at which labor markets function. Thus, a rich literature on the rise of low-wage labor markets (see, for example,