



# The taxation of land value as the means towards optimal urban development and the extirpation of excessive economic inequality



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## ABSTRACT

Generally, subsidies increase the supply of goods beyond optimal amounts, and generate deadweight losses. The urban fringes receive implicit land-rent subsidies from the governmental provision of public works and civic services paid for mostly by taxing properties, goods, and income, rather than only the land values generated by these public goods. The provision of utilities such as water is also skewed towards subsidizing the fringes. The taxation of most of the land rent or land value, combined with the elimination of other taxes, especially on improvements, would prevent such subsidies and allow development markets to generate an optimal urban development. Urban sprawl, defined as the use of land relative to optimal use, would gradually become eliminated with the elimination of both horizontal land subsidies and the taxation of vertical development. Land value taxation would also prevent distortive land speculation and, combined with a reduction of taxes on wages or goods paid from wages, would remove a major source of economic inequality while improving productivity.

## 1. Introduction: hidden pathologies behind a non-optimal urban development

How should cities develop? This is an important and timely issue. We are now experiencing a period of major urbanization. According to United Nations projections, by 2050 more than the 66% of the world population will live in cities (United Nations, 2014). Urban growth will occur mainly in developing countries, but developed economies also will experience it, even if slowly (McKinsey Global Institute, 2016). The way cities develop has a major social and economic impact. The task here is to find the most appropriate instruments to embrace an optimal urban development.<sup>1</sup>

The starting point is to analyse the hidden pathologies (often unnoticed in the literature) behind a non-optimal urban development. However, before examining them, it is necessary to briefly define “optimal urban development”. The concept is synonymous with efficient urban development. Since most economists consider ultimate output as human satisfaction (i.e. utility), efficiency in this context means maximizing human satisfactions for the available resources (Gaffney, 1964).

The question then is: how is urban development made most

efficient?

One answer, given by Mason Gaffney (1964, pp. 177–178), is that urban development “is efficient when it maximizes the ease of contact among individuals, giving people, in their character of both consumer and producer, the widest choice among alternative contacts with the least difficulty”. An urban development can thus be considered efficient only if it fosters and favours such interaction among people. This interaction is fundamental, as it allows individuals to transmit knowledge, exchange products, and create a finer division of labour, three important preconditions of economic growth.

Maximizing benefits for a given cost is the counterpart of minimizing costs for a given benefit. Therefore, urban development can also be considered efficient when it minimizes the costs of providing public services relative to the desired outcome. Such reduction can be achieved by exploiting benefits derived from both economies of scale – which result from new customers – and economies of density, which result from spatial proximity of customers (Gaffney, 1964). This latter point is crucial as, to reduce costs, it is not sufficient to find new customers, but also to find them within a given perimeter.

Given this understanding of optimal urban development, its contrary – suboptimal or non-optimal urban development – fails to

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<sup>1</sup> One can argue that it is impossible to precisely achieve optimal urban development, since optimization is an unavailable policy option in a world with imperfect knowledge and positive transaction costs. However, if these barriers are the main constraints towards an optimal urban development, we should adopt a fiscal system and other policies that minimize these. As is argued below, the knowledge and transaction costs needed for land value taxation are much lesser than those for taxes on income, goods, and transactions. One could argue that freedom (an absence of arbitrary constraints, costs, and subsidies) enables individuals to optimize their plans, and that is the best we can do in this imperfect world.

maximize the ease of contact among individuals, minimize the costs of facilities, and generate optimal economies of scale and density.

A clear example and effect of suboptimal urban development is urban sprawl.<sup>2</sup>

Urban sprawl can be understood as an excessive urbanization of the countryside surrounding a city relative to that which would occur in a pure market economy (Foldvary, 2010). Symptoms of sprawl includes the prevalence of low-density residential housing, single-use zoning, and a congested reliance on the private automobile for transportation.

Urban sprawl as suboptimal urban development has the following four major effects, due to fiscal interventions (taxation, subsidy, mandates, and restrictions).

First, fiscal effects impede individual contacts, spreading out individuals onto a large area, stretching out the distances among them. The more space there is, the costlier it becomes for people to interact – and the benefits which follow are thwarted (Farber and Xiao, 2013).

Second, urban sprawl increases both private and public costs. Residents who live in suburban areas have to spend a higher proportion of their income on transportation in order to reach the city centre (Brueckner, 2000). Public administrations, instead, have to spend much more money in order to provide local public services: major investments are required to extend the highway network, the public transportation and water, electricity and sewer lines.

Third, urban sprawl has an effect on congestion. As urban areas spread out, commuting becomes more time-consuming, residents are forced to drive everywhere, spending more time in their cars and trucks, and traffic congestion occurs over a larger area (Brueckner, 2000).

Fourth, urban sprawl increases the costs of agricultural products. It pushes agricultural production towards more marginal fields, increasing the distance – therefore transportation costs – between producer and consumer, and producer and packing house (Gaffney, 1964).

Over time, economists and urban planners have investigated the causes at the basis of urban sprawl. Most of them believe that urban sprawl is a simple matter of population growth and efficient location decision. On the one hand, as population expands, cities must grow spatially to accommodate more people (Mieszkowsky and Mills, 1993). On the other, as people become richer over time, they demand more living space and buy detached houses with garages in front and wide side yards, space between houses (Gordon and Richardson, 1997).

However, such positing of population growth and efficient location decision as the main causes of urban sprawl are misleading. There are three other hidden pathologies which strongly affect urban sprawl and, therefore, a suboptimal urban development: land use zoning and containment policies, horizontal subsidies, and land speculation.

### 1.1. Land use zoning and containment policies

Fischel (1985, p. 21) defines land use zoning as “the division of a community into districts or zones in which certain land-use activities are prohibited and others are permitted”.

Zoning regulates the particular use of land, the land use intensity, the building heights, and the level of population density. During the 20th century, most of urban planners were strongly opposed to high urban density. As Moroni states Moroni (2016, p. 2), “this was largely due to the fact that at the beginning of the 1900s many large cities found themselves with boroughs that suffered from urban blight. These boroughs were characterised by three features: large numbers of persons per acre; large numbers of dwellings per acre; the overcrowding of

<sup>2</sup> It is important to note the meaning of urban sprawl as defined here, i.e. the use of land relative to optimal use. In a pure market economy, urban sprawl can be an efficient location decision. One could prefer to live far from the city centre and pay higher transportation costs and have more available space at a lower price. As we will see, individual preferences are today skewed by imposed costs and subsidized benefits due to land use zoning and containment policies, horizontal subsidies and land speculation.

dwellings (with too many people per room)”.

Due to such concerns, 20th-century urban planners harnessed land use zoning as main planning tool and sought to reduce urban density (Moroni, 2016). They applied rigid mono-functional zoning, imposed a low density development – consisting in single-family house on large lots – and restricted the number of people allowed to live in a residence. In other words: they promoted urban sprawl.

Later, recognizing the negative effects of sprawl, urban planners sought to limit urban land use. In order to achieve such a goal, they implemented urban containment policies, mainly by introducing urban growth boundaries such as exclusive agricultural zones around cities, to reduce urban expansion (Guldammn and Woo, 2014).<sup>3</sup> However, such policies worsened urban sprawl, as they caused an artificially increased scarcity of land within cities, forcing developers to leapfrog over boundaries, and build even further out (Gaffney, 1993).

### 1.2. Horizontal subsidies

The second hidden pathology behind urban sprawl is horizontal subsidies. Nowadays, the streets, freeways, water and sewer pipes, lighting, security, fire service, parks, schools, and other goods and services are provided at the expense of the taxpayers of the entire city or county (or province), often with the aid of higher levels of governments, so that these are subsidies which the users of suburban land consider free. Not having to pay its cost increases the usage and demand for these goods (Foldvary, 2010).

In many developed economies (such as U.S., Italy, Germany, U.K., France, etc.), when a new residential area is developed, the cost of public services and infrastructures is mostly paid through the property tax (Bird and Slack, 2002).<sup>4</sup>

Typically, as development moves from urban centers, where enterprise is intense, and from which utilities such as water are distributed, the marginal-costs of infrastructure (e.g. pipes) and utilities, increase. But real estate owners do not typically pay the full distribution costs. Property taxes do not cover the marginal cost of infrastructures. Since the average cost of the infrastructure and utilities is lower than the marginal cost, and property taxes typically cover only the average costs, homeowners with equally assessed values pay the same tax regardless of whether the house is located in newly developed areas or in already developed ones. As a result, developers bid at prices for undeveloped land that are higher than they would be if the owners did not obtain this implicit subsidy. This leads to converting excessive rural land into urban use. The result is a government failure, because developers and homebuyers do not bear the full cost of converting the open space into land available for urban use. Thus, people living in high density, already developed areas subsidize residents living in low density, suburban areas (Geshkov, 2010).

Moreover, the property tax, when applied to buildings, penalizes vertical development while creating artificial incentives for horizontal development. A property tax as a percentage of the property value acts like an increase in the mortgage interest rate, which is the major cost of a building (Gaffney, 1999). The building tax is the second biggest cost, annually recurring for fifty to one hundred years or even longer. The main effect of such tax is to increase the overall cost of a building. This implies, first, that the quality of a building is reduced (as marginal

<sup>3</sup> The most famous example of a containment policy is the London Metropolitan Green Belt. It was first proposed by the Greater London Regional Planning Committee in 1935 for controlling urban sprawl. It was conceived as a ring of countryside where urbanization was forbidden and agriculture maintained. The overall aim was to prevent urban sprawl by keeping land permanently green and undeveloped (Van Roosmalen, 1998). However, as time went by, London Green Belt has not stopped growth: it has just pushed it further out into rural areas not subjected to preservation (Manns, 2014). Moreover, it has caused a severe housing crisis in London, restricting housing supply and forcing up land and real estate prices (Hilber, 2015; Edwards, 2016).

<sup>4</sup> Here, property tax is intended as a tax which affects mainly improvements on land such as buildings.

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