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THE CITY AS A LAW AND ECONOMIC SUBJECT

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By David Schleicher*

ABSTRACT:

Local government law has fallen behind the times. Over the past two decades, economists have developed a deep understanding of “agglomeration economics,” or the study of how and why mobile citizens and firms locate in cities. Their work argues that people decide to move to cities because of the reduced transportation costs for goods, increased labor market depth, and intellectual spillovers cities provide – that is, individuals and firms locate in cities in order to get the benefits of being near one another. Economically-minded local government law scholars have ignored this burgeoning literature and instead have continued to examine exclusively a separate set of benefits people get from their location decisions, the gains from “sorting.” As analyzed in the well-known Tiebout model, individuals move between local governments in a region in order to receive public policies that fit their preferences.

This paper seeks to develop the framework for a modern law and economic method for analyzing local governmental law. Specifically, it claims that there is an inverse relationship between the gains from agglomeration and sorting. Having many small local governments, and enabling individuals to choose their local public policies by sorting among them, affects the organization and density of people in metropolitan areas, creating movement away from economically-optimal location decisions. Sorting thus reduces agglomerative efficiency. Similarly, the existence of agglomerative gains means that individuals are making location decisions for reasons other than matching their preferences for public policies. Agglomeration therefore causes a reduction in the efficiency of sorting.

States face a tradeoff between maximizing agglomerative and sorting efficiency in deciding how much power, and which responsibilities, to allocate to local governments. The need to balance these two conflicting sources of efficiency and changes in the nature of agglomerative gains over the last hundred years explains a great deal about the history of American local government law, current allocations of power between local governments and state legislatures, judicial decisions about local governmental power and the proper role for the federal government in policy areas, like housing and transportation, that are primarily regulated at the local level.

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I. INTRODUCTION: LOCAL GOVERNMENT LAW AND ECONOMIC ANALYSIS

The study of the relationship between local government law and economics has long had one central text: Charles Tiebout’s famous 1956 article, *A Pure Theory of Local Expenditures*.¹ Tiebout developed an ingeniously simple model that showed that, if local governments provide purely local public services and mobile individuals move to the local government that best fits their preferences for public policies, local public services will be provided at the efficient level.² The substantial body of scholarship that followed Tiebout’s original work has rendered the model more believable by incorporating factors like zoning, property taxation and local political incentives.³ Further, empirical work has shown that a main prediction of the Tiebout model – that the quality of local policies will be “capitalized” into housing prices – actually occurs, although this effect is stronger in rural areas and suburbs than in dense urban cities.⁴ The normative takeaway from the Tiebout model literature is clear: metropolitan regions should be divided into many local governments that are free to provide local public services in an unrestricted way, as this will ensure that mobile citizens receive their desired package of public services.⁵

¹ Charles M. Tiebout, *A Pure Theory of Local Expenditures*, 64 J. POL. ECON. 416 (1956). “The dominant law and economics model of local government, based on the work of Charles M. Tiebout, assumes that decentralization of power to local governments promotes the efficient delivery of public goods and services.” Richard Briffault, *The Rise of Sublocal Structures in Urban Governance*, 82 MINN. L. REV. 503, 503 (2002). See also William Fischel, *Footloose at Fifty* in THE TIEBOUT MODEL AT FIFTY: ESSAYS IN PUBLIC ECONOMICS IN HONOR OF WALLACE OATES 5-17 (William Fischel ed. 2006) (describing the history of the Tiebout model).

² Tiebout, *supra* note 1, at 419-424.

³ See Wallace Oates, *The Many Faces of the Tiebout Model* in THE TIEBOUT MODEL AT FIFTY, *supra* note 1, at 21-33 (summarizing the current state of Tiebout model scholarship); WILLIAM A. FISCHEL, THE HOMEVOTER HYPOTHESIS: HOW HOME VALUES INFLUENCE LOCAL GOVERNMENT TAXATION, SCHOOL FINANCE, AND LAND USE POLICIES 8 (2001) (developing a Tiebout consistent theory of local voting); Bruce W. Hamilton, *Zoning and Property Taxation in a System of Local Governments*, 12 URBAN STUDIES 205, 211 (1975) (developing a Tiebout theory consistent with local zoning and property tax powers).

⁴ Oates, *The Many Faces of the Tiebout Model*, *supra* note 3, at 21-33; Fischel, *Footloose at Fifty*, *supra* note 1, at 11 (“the Tiebout model tests best in the suburbs rather than in center cities”). It should be noted that the Tiebout model only predicts capitalization if new cities cannot be created easily. *Id.*

⁵ See Oates, *The Many Faces of the Tiebout Model*, *supra* note 3, at 41.

For decades, local government law scholars have alternatively used the Tiebout model to assess local government law proposals and criticized its use, with its detractors claiming it relies on untenable assumptions, ignores the value of political participation, and fails to consider the distribution of benefits among the citizenry.⁶ What these critics have failed to do, however, is offer a coherent alternative story about how to assess the economic costs and benefits of local government laws. Instead, they have either argued that efficiency should not be our primary concern in judging the normative attractiveness of a local governmental regime, or have poked holes in the Tiebout model without proposing an alternative metric.⁷

However, the Tiebout model is only a piece of the economic literature about cities. A massive body of work, often called “The New Economic Geography” or “agglomeration economics,” has developed in the last 20 years, which studies why people decide to locate in cities.⁸ This field – developed by an ideologically-mixed group of scholars, including David Romer, Edward Glaeser and Nobel Laureates Paul Krugman and Robert Lucas – starts with the basic claim that individuals and businesses make their location decisions on the basis of where other individuals and businesses decide to locate.⁹ By locating near specific others, an individual

⁶ *Id.* at 41 (“Many observers find themselves uncomfortable in a Tiebout world.”) *See also* Richard C. Schragger, *Consuming Government*, 101 Mich. L. Rev. 1824, 1834 (2003) (reviewing WILLIAM A. FISCHER, *THE HOMEVOTER HYPOTHESIS: HOW HOME VALUES INFLUENCE LOCAL GOVERNMENT TAXATION, SCHOOL FINANCE, AND LAND USE POLICIES* (2001)) (criticizing the Tiebout model for failing to consider externalities); Sheryl B. Cashin, *Localism, Self-Interest, and the Tyranny of the Favored Quarter: Addressing the Barriers to New Regionalism*, 88 GEO. L.J. 1985, 1991-2015 (2000) (criticizing Tiebout for failing to consider distribution); Richard Briffault, *Our Localism, Part II: Localism and Legal Theory*, 90 COLUM. L. REV. 346, 393 (1990) (discussing the successes of the Tiebout model but claiming it fails to properly deal with local externalities).

⁷ *See, e.g.*, GERALD FRUG, *CITY MAKING: BUILDING COMMUNITIES WITHOUT BUILDING WALLS* 168, 167-73 (1999) (critiquing Tiebout and the public goods literature generally for understanding city services as being like a consumption good for residents); Schragger, *Consuming Government*, *supra* note 6, at 1834.

⁸ *See* MASAHISA FUJITA, PAUL KRUGMAN, ANTHONY J. VENABLES, *THE SPATIAL ECONOMY: CITIES, REGIONS, AND INTERNATIONAL TRADE* 1-6 (1999) (hereinafter *SPATIAL ECONOMY*); EDWARD L. GLAESER, *CITIES, AGGLOMERATION AND SPATIAL EQUILIBRIUM* 1-12 (2008) (hereinafter *SPATIAL EQUILIBRIUM*).

⁹ “The economic approach to cities starts with the assumption that locations are chosen and that those choices are not entirely irrational.” *SPATIAL EQUILIBRIUM*, *supra* note 8, at 2. Krugman was awarded the Nobel in 2008 for “his analysis of trade patterns and location of economic activity.” The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2008, http://nobelprize.org/nobel_prizes/economics/laureates/2008/index.html. Lucas

or business can pay reduced transportation costs for goods, capture information spillovers, and participate in larger and more specialized labor and consumption markets.¹⁰ Cities develop because they provide these “agglomeration” gains – they provide residents with the advantages of big, diverse and productive markets and creative ferment – and they would develop regardless even if local governments provided identical local policies.¹¹ When people decide where to move, these agglomeration benefits are weighed against the costs of “congestion,” particularly the high price of property in dense areas.¹² As Lucas pointed out, “What can people be paying Manhattan or downtown Chicago rents for, if not for being near other people.”¹³

This discussion, so prominent among economists, largely has been ignored by legal scholars.¹⁴ Very recently, a few legal scholars have discussed aspects of the agglomeration literature, but none have examined the basic relationship between the predictions of the Tiebout model and the ideas of agglomeration economics.¹⁵ This article will provide the first

was awarded the Nobel for his work on rational expectations that preceded his classic work on economic growth and cities. The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel, 1995, http://nobelprize.org/nobel_prizes/economics/laureates/1995/index.html; Robert Lucas, *On the Mechanics of Economic Development*, 22 J. MONETARY ECON. 3, 39 (1988). See also Edward L. Glaeser, *Are Cities Dying?*, 12 J. ECON. PERSPECTIVES 139 (1998) (hereinafter *Are Cities Dying?*); Edward L. Glaeser, Hedi Kallal, Jose Scheinkman and Andrei Shleifer, *Growth in Cities*, 100 J. POL. ECON. 1126, 1127 (1992) (hereinafter *Growth in Cities*); Paul Romer, *Increasing Returns and Long Run Growth*, 94 J. POL. ECON. 1002, 1006 (1986).

¹⁰ See *Are Cities Dying?*, *supra* note 9, at 140-149 (providing a summary of the forces that generate agglomeration).

¹¹ *Id.* at 145; SPATIAL EQUILIBRIUM, *supra* note 8, at 5-9.

¹² See *Are Cities Dying?*, *supra* note 9, at 150-53.

¹³ Lucas, *supra* note 9, at 39.

¹⁴ See notes 44-45 and accompanying text for a discussion of why the local government law literature likely missed this important movement in the economics of cities.

¹⁵ See Richard Schragger, *Mobile Capital, Local Economic Regulation and the Democratic City*, 123 HARV. L. REV. (forthcoming 2010) (arguing that agglomeration economies should be leveraged by cities to regulate mobile capital in order to smooth costs of capital flight and to impose regulation impossible at the national level); Clayton P. Gillette, *Local Redistribution, Living Wage Ordinances and Judicial Intervention*, 101 NORTHWESTERN L. REV. 1057 (2007) (arguing that agglomeration economies make local redistribution possible, but that the efficiency of these policies will depend on the quality of local democracy). For a discussion of this work, see notes 177-180 and accompanying text. Clay Gillette also discussed some of the agglomeration literature in his two articles on interlocal bargains. See Clayton P. Gillette, *Regionalization and Interlocal Bargains*, 76 N.Y.U. L. REV. 190, 192-209 (2001); Clayton P. Gillette, *The Conditions of Interlocal Cooperation*, 21 J. L. & POLITICS 365 (2006). For a discussion of these articles, see note 196. A few other articles have discussed ideas related to the agglomeration economics literature without addressing it directly. See Richard Schragger, *Cities, Economic Development and the Free Trade Constitution*, 94 VA. L. REV. 1091, 1104-08 (2008) (discussing the work of Jane Jacobs); Lee Anne

comprehensive exploration the relationship between these two understandings of the efficiency effects of individual location decisions on local government law. That is, it will attempt to develop a modern understanding of the economics of local governmental law.¹⁶

The paper makes two central claims:

First, any economic analysis of a local governmental law or policy must account not only for its effect on how well local policies fit local preferences, but also how it changes where people and businesses locate in relation to one another. “Sorting” in the Tiebout model and agglomeration are two distinct sources of gains that derive from the same source: individuals and businesses making decisions about where to reside.¹⁷ In the Tiebout model, individuals move to get access to attractive local governmental policies, whereas in an agglomerative model, people and businesses move to get the benefit of being near neighbors who provide them with social, consumption and employment options or informational spillovers.¹⁸ Local government law – both structural decisions about what powers to allocate to local governments and individual local policies – affects individual location decisions and hence which people and businesses are near

Fennell, *Properties of Concentration*, 73 U. CHI. L. REV. 1227, 1240-47 (2006) (discussing “gains from grouping” without addressing agglomeration economics literature).

¹⁶ It should be noted that this paper is not addressing questions of political participation, inter-local equity, racial discrimination or environmental harm and how they interact or conflict with economic efficiency. This is not because these issues are unimportant – they clearly are. However, since Gerald Frug, *The City as a Legal Concept*, 93 HARV. L. REV. 1059 (1980), they have been front and center in most of the literature on local government law. The centrality of these concerns has crowded out sustained discussion of efficiency in local government law. Further, Frug’s (and Tiebout’s) focus on the importance of law to city development has lead to a widespread lack of attention to the implications of the fact that concentrated agglomerations of people are a relatively natural occurrence in a market economy. See JANE JACOBS, *THE ECONOMY OF CITIES* 27-31 (1970) (cities are a necessary component of the development of market systems). This paper addresses cities as a subject, and not merely as a “concept.”

¹⁷ These are “gains” relative to a situation in which individuals were equally spaced across the country. See notes 35-43.

¹⁸ Tiebout, *supra* note 1, at 418 (“Consumer-voters are fully mobile and will move to that community where their preference patterns” for local governmental services “are best satisfied.”); *Are Cities Dying?*, *supra* note 9, at 140-49.

one another, as well as how much the residents of a local government like its policies.¹⁹ As a result, local government laws impact the efficiency of both sorting and agglomeration. Unless preferences for neighbors and policies are identical, the Tiebout model is flawed because it ignores both the effect laws have on the identity of which individuals and businesses are physically proximate and the degree to which this proximity is factored into individual decision-making.

Second, agglomeration and sorting are not merely distinct, but often have an inverse relationship. Where there are gains from agglomeration, sorting will be less efficient. The existence of agglomeration gains means that people are making decisions about where to live for reasons other than moving to a place that has a local government with policies that matches their preferences.²⁰ Agglomeration gains give otherwise mobile residents a reason not to move, even when governmental policies affect them in a negative way. When people and businesses are unwilling to move from the combination of neighbors in their town or city, they are less able to discipline local governmental policies they dislike through the threat of exit. This is why, for instance, rich individuals continue to reside in New York City despite high local income taxes – they receive more benefits from their collection of neighbors than they lose from local policy.²¹ As such, wherever there are strong localized agglomeration gains, they will have a negative effect on the degree to which local political preferences match local policies.

Similarly, the existence of sorting undermines the gains from agglomeration. For there to be gains from sorting, people have to move in response to local governmental policies, which changes the geographic distribution of people in (and between) metropolitan areas. Sorting thus

¹⁹ See Briffault, *Our Localism, Part II*, *supra* note 6, at 403-405 (noting widespread agreement that local government law effects individual location decisions).

²⁰ See SPATIAL EQUILIBRIUM, *supra* note 8, at 5-9.

²¹ See note 170 and accompanying text.

generates incentives for people to move away from where they would have located if public services were provided by a state or federal government. Where the government induces people to move from the market-determined combination of people and places, it causes deadweight loss – the lost transactions between people who would have lived next to one another absent government intervention.²² Moreover, as the economist Bruce Hamilton has shown, the Tiebout model can only produce a stable equilibrium in a world with property taxes if local governments use zoning laws to restrict property owners from subdividing their land into cheaper parcels.²³ As a result, a local government law regime that encourages sorting will cause development to be less dense and housing to be more expensive.²⁴ This will have negative effect on all sources of agglomerative efficiency, which derive from interactions between physically proximate individuals and business (although it will have greater effect on some forms than on others).²⁵ Thus, sorting reduces the degree to which metropolitan regions are agglomeratively efficient.

Understanding this dynamic is a necessary component of assessing the economic effects of local government law. Internally, local governments try to achieve some balance between the goals of meeting local preferences for services and maximizing the gains from having agglomeratively-attractive neighbors. However, the many small local governments that are

²² This point needs qualification. Agglomeration generates externalities which are not captured necessarily in individual location decisions. Therefore, the market-determined location decisions are not necessarily first-best. However, sorting for public policies has nothing to do with the size or direction of these externalities, it is generating movement away from the market location but not in the direction of curing any defect with the market location. See note 153 and accompanying text. Further, as I argue in notes 188-191 and accompanying text, the movement generated by sorting will exacerbate rather than cure the externalities generated by agglomeration.

²³ The reason for this is that residents on the cheaper subdivided parcels will still consume local services at the average rate, but will contribute less-than-average tax revenue. In order to achieve the benefits of Tiebout sorting, local governments must pass restrictive zoning rules, like large minimum lot sizes or maximum height restrictions, in order to control the size of their population. Bruce W. Hamilton, *Zoning and Property Taxation in a System of Local Governments*, 12 URBAN STUDIES 205, 211 (1975).

²⁴ This effect can be dramatic. For instance, in the San Francisco region, nearly 50% of the cost of any given house is due to the restrictions on housing supply caused by zoning. Edward L. Glaeser, Joseph Gyourko and Raven Saks, *Why is Manhattan So Expensive? Regulation and the Rise of House Prices*, 48(2) J. L. & ECON. 331, 339 (2005).

²⁵ See notes 163-171 and accompanying text.

necessary for optimal Tiebout sorting are not well-placed to achieve the socially-optimal balance, as their residents get all the benefits of having their preferred local policies but only capture a small part of the gains from agglomeration, most of which are felt regionally. As a result, allocations of power to and among local governments that maximize gains from Tiebout sorting are unlikely to produce regulation of economic activity at the local level that maximizes agglomeration. Although there are some local government laws that may enhance both sorting and agglomerative efficiency, the decision about where and to whom to allocate the power to decide local policies will often involve a trade-off between these sources of efficiency.

While this provides the framework for determining the overall economic costs and benefits of any local government law regime, determining the effects of a specific local governmental policy will turn on exactly how the policy interacts with specific forms of agglomeration and the propensity to sort. The paper will analyze the two central policies in the history of American local government law -- Dillon's Rule, which governed local governmental power for much of American history, and current "Home Rule" regimes.

Under Dillon's Rule, local governments only have those powers specifically granted to them by a state government, and where there is doubt about whether a state government has allocated power to a local government, courts were instructed to resolve the ambiguity against local governmental authority.²⁶ It has been noted that, when combined with the usual powers granted to local governments, Dillon's Rule is quite well-suited to producing efficient sorting under the Tiebout model.²⁷ The paper claims that, when enacted, Dillon's Rule contributed to

²⁶ J. DILLON, TREATIES ON THE LAW OF MUNICIPAL CORPORATIONS 101-102 (1872).

²⁷ See Roderick Hills, *Dissecting the State: The Use of Federal Law to Free State and Local Officials From State Legislatures' Control*, 97 MICH. L. REV. 1201, 1275(1999).

agglomerative efficiency as well, but that strong limits on local power likely no longer do so, leading to the conflict discussed in the paper.

When Dillon's Rule was first proposed in the middle of the nineteenth century, transport costs for goods between cities were very high.²⁸ As a result, the dominant economic force driving the location decisions of firms was the desire to reduce these costs – manufacturers had to locate near their suppliers and customers or face the substantial costs of shipping items across the country. Final goods manufacturers clustered in cities that were transportation hubs to reduce their costs, and this created strong incentives for intermediate goods suppliers to locate there as well, turning transportation hubs like Chicago and Buffalo into industrial powerhouses.²⁹ As such, when Dillon's Rule was first enacted, reducing transportation costs for goods was the prime driver of urban agglomeration.

This created incentives for cities to provide subsidies to railroads in hopes of becoming hubs, and also to subsidize local industry, as both would create increasing local returns.³⁰ Although these policies could create local agglomerative benefits if only one local government engaged in them, they did not produce net national economic gain, as they created inefficient subsidy competition, political manipulation of the railroad industry and overinvestment. Dillon's Rule promoted efficiency by removing from local governments the power to engage these policies without state approval, limiting this type of internecine battle for agglomeration.

²⁸ See Edward L. Glaeser and Janet Kohlhase, *Cities, Regions and The Decline of Transport Costs*, 83(1) REGIONAL SCIENCE 197, 198-99 (2004).

²⁹ *Id.* at 196-200.

³⁰ See Joan Williams, *The Constitutional Vulnerability of American Local Government: The Politics of City Status in American Law*, 1986 WIS. L. REV. 83, 91 (1986).

This same story helps explain why Dillon’s Rule became agglomeratively inefficient. In the second half of the twentieth century, transportation costs for goods fell dramatically.³¹ As a result, manufacturing moved out of major urban areas and forces other than the desire of producers to reduce transportation costs – like deep skilled-labor markets and information spillovers – became the strongest drivers of agglomeration.³² These economic changes removed much of the incentive cities had to manipulate domestic trade or to subsidize industry (and the likelihood that doing so would have substantial negative effects), hence removing the reason why Dillon’s Rule contributed to agglomerative efficiency.

As the agglomerative case for Dillon’s Rule ebbed, most states supplanted it with one form or another of “home rule,” state constitutional grants of power to local governments.³³ How much actual power this change provided to local governments is a subject of much debate. As David Barron has noted, the limits on local power set by states under home rule systems are not neutral – they do not just allocate a certain degree of power to local government, but instead permit specific types of local decision.³⁴ Contrary to Barron’s claims about *which* types of powers are allocated to local governments, however, the paper argues that the division of power between state governments and local governments in home rule regimes is best explained by the difference between sorting gains and agglomerative efficiency. As implemented by state legislatures and state courts, the powers home rule regimes allocate to local governments are largely intended to (and do) create sorting efficiencies. State legislatures retain control over

³¹ See Glaeser and Kohlhase, *supra* note 28, at 201.

³² *Are Cities Dying?*, *supra* note 9, at 145-47; SPATIAL EQUILIBRIUM, *supra* note 8, at 7-9.

³³ There are two major types of “home rule” regimes. “Imperio in imperium” home rule provides local governments with the exclusive ability to make policy in areas of purely local concern, while the other, “legislative” home rule provides local governments with more power to propose policies but grants state legislatures the ability to preempt local policies. Scholars question how different these formal distinctions are in practice. RICHARD BRIFFAULT AND LAURIE REYNOLDS, STATE AND LOCAL GOVERNMENT LAW 268-69, 281-85 (6th Ed. 2001).

³⁴ See David Barron, *Reclaiming Home Rule*, 116 HARV. L. REV. 2255, 2345-46 (2003).

those policies that limit the negative effect of Tiebout sorting on agglomerative efficiency and those public policies where the optimal provision would result in increased agglomerative efficiency. That is to say, one way to understand current local government law – both statutory and case law – is as a response to the need to balance the gains from agglomeration and sorting.

This overall regime, however, likely ends up doing too little to enhance agglomerative efficiency, as states cover more or less territory than regions and, as a result, often have incentives other than promoting regional agglomerative efficiency. This suggests that federal spending in areas primarily regulated by local governments, like housing and transportation, should be reformed in order to counter this tendency in state governmental systems.

The paper will be organized as follows. The second section will discuss the agglomeration economics scholarship. The third section will explain the paper's first major thesis: that the gains in the Tiebout model and agglomeration economics are distinct. The fourth section will show how agglomeration and sorting conflict. The fifth section will analyze Dillon's Rule and Home Rule.

II. THE CITY AS AN ECONOMIC SUBJECT: SOURCES OF AGGLOMERATION

Agglomeration economics begins with a simple question: Why are there cities?³⁵ Although this might seem like a silly question, it is actually quite a challenge for neo-classical economics. "If we postulate only the usual list of economic forces, cities should fly apart....A city is simply a collection of factors of production – capital, people and land – and land is always far cheaper outside cities than inside."³⁶ Models that include only these economic forces – meaning there is an implicit assumption that economic activity is spread evenly throughout the

³⁵ "The foremost question of urban economics is why cities exist. Almost everything else that urban economists do can be seen as part of answering this question." SPATIAL EQUILIBRIUM, *supra* note 8, at 1.

³⁶ Lucas, *supra* note 9, at 38.



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country -- are the workhorses of international trade and macroeconomic theory. Most economics textbooks did not mention the location of economic behavior inside a country, at least until the last ten or so years.³⁷ Although modeling always requires simplification, and obviously much can be done in international and macroeconomics without incorporating the domestic location of industry into models, the absence of any explanation of location in modern economics was a bit of a problem. Urbanization is a dramatic fact of both the American and world economies. Globally, while only 10% of the world's population lived in cities in 1990, 50% do today and 75% likely will by 2050.³⁸ In this country, 220 million (out of 280 million) Americans live in the four percent of the country that is urban or suburban.³⁹

The existence of cities can only be explained through some idea of external effects – gains people and firms see from being located near one another that offset the increased cost of land.⁴⁰ More than a hundred years ago, the leading economist of the second half of the nineteenth century, Alfred Marshall, developed a theory of what these external effects might be.⁴¹ He suggested three effects that created the increasing returns to city size that made the existence of cities possible: (1) reduced transportation costs for goods; (2) insurance and specialization gains from large labor and consumption markets; and (3) information spillovers.⁴² This section, following much modern work in urban economics, is organized around Marshall's three explanations.

³⁷ SPATIAL ECONOMY, *supra* note 8, at 1-2.

³⁸ Ricky Burdett and Philipp Rode, *The Urban Age Project* in THE ENDLESS CITY 9 (Ricky Burdett and Deyan Sudjic Eds. 2008).

³⁹ SPATIAL EQUILIBRIUM, *supra* note 8, at 1.

⁴⁰ Lucas, *supra* note 9, at 38.

⁴¹ ALFRED MARSHALL, PRINCIPLES OF ECONOMICS 267-77 (8th Ed. 1940).

⁴² *See id.* *See also* Guy Dumase, Glenn Ellison and Edward L. Glaeser, *Geographic Concentration as a Dynamic Process*, 84 REV. ECON. & STATISTICS 193, 193-97 (2002) (describing the three explanations for agglomeration in Marshall's work) (hereinafter *Geographic Concentration*); *Are Cities Dying?*, *supra* note 9, at 139-50.

One note on the intellectual history of agglomeration economics, though, is necessary. After Marshall's magisterial treatment of the subject, very little was written on the subject.⁴³ Although there was some work done in the field, for the most part the theoretical aspects of urban economics were left untouched until the late 1980s.⁴⁴ There are a variety of explanations for why there was such a long fallow period, but whatever the reason, this is likely why agglomeration economics has been ignored by local government law scholars.⁴⁵ Just as local government law was taking off as a field in the 1970s, urban economics was in a dead patch.⁴⁶ One of the only legal scholars to address this type of scholarship, Robert Ellickson, devoted two pages of his classic article, *Suburban Growth Controls: An Economic and Legal Analysis*, to some of the small amount of work generated during the 1970s on agglomeration economics,

⁴³ SPATIAL ECONOMY, *supra* note 8, at 2-5; PAUL KRUGMAN, DEVELOPMENT, GEOGRAPHY AND ECONOMIC THEORY 45-65, 79-85 (1997). Much of the research of this period assumed away the central question of why cities exist. Economists like William Alonso, Richard Muth and Edward Mills developed models that argued that residents and firms located in concentric circles around a central business district, building on Johann Von Thunen's insight that rents include the cost of transportation. SPATIAL ECONOMY, *supra* note 8, at 15-17; SPATIAL EQUILIBRIUM, *supra* note 8, at 11-14. Although these "monocentric city" models produced some interesting work, they simply assumed cities existed and went from there. They also fail to capture the continuous nature of agglomeration – they assume agglomeration only happens in the central business district. *See* note 185. Also during this period, Vernon Henderson did important research linking city size to differences in industry type. *See* J. Vernon Henderson, *The Sizes and Types of Cities*, 64 AM. ECON. REV. 640 (1974); SPATIAL ECONOMY, *supra* note 8, at 18-22. This work, though, treats cities as if they were just big central business districts, and hence is somewhat removed from the concerns addressed in this paper.

⁴⁴ *See* SPATIAL ECONOMY, *supra* note 8, at 2-5.

⁴⁵ Paul Krugman has offered the most widely accepted theory. Any model seeking to determine where economic activity will locate necessarily includes increasing returns to scale and will inevitably feature multiple equilibrium solutions. Where people and businesses locate today is heavily influenced by where people already are, and hence any set of variables – e.g. transport costs, level of technology – will generate a number of different distributions in space depending on where they were before and the effect they had in the past on location decisions. The mathematical and computational tools available at the turn of the century were not up to solving problems like this, and, as a result, economists addressed topics that could be solved with the tools they had. SPATIAL ECONOMY, *supra* note 8, at 2-5; KRUGMAN, DEVELOPMENT, GEOGRAPHY AND ECONOMIC THEORY, *supra* note 43, at 45-65.

⁴⁶ Many of the central texts of the modern local government law literature were written right on the cusp of the development of agglomeration economics. *See, e.g.*, Frug, *The City as a Legal Concept*, *supra* note 16, at 1057 (published in 1980); Robert C. Ellickson, *Suburban Growth Controls: An Economic and Legal Analysis*, 86 YALE L. J. 385, 429, 475-89 (1977).

before noting that “the evidence on the relative costs and benefits of urban growth is still fragmentary.”⁴⁷ As we will see below, the evidence is far more extensive today.

a. TRANSPORT COSTS FOR GOODS

Marshall’s first explanation for why cities exist is the simplest: packing economic activity into cities reduces transportation costs for goods.⁴⁸ If there are real costs associated with shipping goods and some degree of increasing returns to firm size, firms will be attracted to areas that provide “forward and backward linkages” to consumers and input suppliers.⁴⁹ That is, being physically proximate to input suppliers and customers can reduce a firm’s costs by reducing the cost of shipping goods.⁵⁰

This insight is perhaps the most intuitive explanation for why producers, and hence labor and residents, cluster in cities. It also explains why you see linkages between the types of firms in cities – e.g. auto parts suppliers and car companies both locating in Detroit. However, it was difficult for economists to figure out exactly how and when industry would cluster, because determining how transport costs affect location decisions necessarily implicates increasing returns to scale, at the level of firms and cities. And increasing returns are hard to model using neo-classical economic tools.⁵¹

⁴⁷ Ellickson, *Suburban Growth Control*, *supra* note 46, at 441-43. See also Robert Ellickson, *Alternatives to Zoning: Covenants, Nuisance Rules and Fines as Land Use Controls*, 40 U. CHI. L. REV. 681, 684 n.12 (1973) (noting that “beneficial externalities” deserved more attention from legal scholars).

⁴⁸ See *Geographic Concentration*, *supra* note 42, at 193.

⁴⁹ If there are no increasing returns to firm size, a person in every town would just start a local firm and avoid the transport costs. SPATIAL ECONOMY, *supra* note 8, at 4-5 “Forward and backward linkages” are just modern terminology for Marshall’s point. *Id.*

⁵⁰ See SPATIAL ECONOMY, *supra* note 8, at 5.

⁵¹ Work in international trade theory in the 1980s produced a methodology for coming to terms with the implications of increasing returns to market size. See Steven Brakman and Ben J. Heijdra, *Introduction in The MONOPOLISTIC COMPETITION REVOLUTION IN RETROSPECT* 1-41 (Brakman and Heijdra eds. 2004); Peter Neary, *Monopolistic Competition in International Trade*, in *id.* at 159-184. It did so in order to explain why there is trade among developed countries trade in the same good – cars from the U.S. being sold in Germany and vice versa. The key to the “new trade theory” was understanding this trade as a species of monopolistic competition. Speaking very

Paul Krugman, Masahira Fujita and Anthony Venables developed a way of thinking about this problem.⁵² Using developments in scholarship in international trade, they argued that the key to understanding the problem is thinking about location decisions in the context of models of “monopolistic competition,” or the situation in which firms sell distinct brands, and thus have some pricing power, but where competition drives long-term profits to zero.⁵³ Such models feature some increasing returns to firm size and, more importantly, increasing returns to the number of firms in the market. The reason for this is that more brands means more customer satisfaction, as the diffusion of choices results in each customer being happier with their choice, and also drives the cost prior entrants can charge down.⁵⁴

Krugman et al. imagine a situation with two countries or cities, and ask where mobile manufacturing firms that both sell intermediate goods to each other and to final goods to consumers will choose to locate.⁵⁵ They note that if transportation costs between the two places are infinitely high, manufacturing will divide evenly between the two countries, as there can be no trade.⁵⁶ The same thing is true if transportation costs are zero, as it will not matter where they

generally, the gains from trade came in terms of the increased variety of choices available to consumers in both countries. The existence of a bigger market with more brands made it more likely that each customer’s preferences were satiated – some Germans preferred Fords and some Americans preferred BMWs. The key formal innovation permitting this kind of research was the Dixit-Stiglitz equation. See Avinash K. Dixit and Joseph E. Stiglitz, *Monopolistic Competition and Optimum Product Diversity*, 67. AMER. ECON. REV. 297 (1977). Dixit and Stiglitz modeled an individual’s utility function in an oddly stylized way: people gain from the introduction of new varieties equally because their preferences are defined across all possible goods and having more choices leads to those preferences becoming closer to being satiated. (These are called constant elasticity of substitution equations for this reason). Although this utility function is a bit odd, it is necessary for making these models tractable.

⁵² For a discussion of how the problems of trade in a monopolistic competition model led to the “new economic geography,” see Brakman and Heijdra, *Introduction*, *supra* note 51, at 32-35.

⁵³ The Fujita, Krugman and Venables model is simply an extension of the Dixit-Stiglitz framework discussed in footnote 51. See SPATIAL ECONOMY, *supra* note 8, at 6.

⁵⁴ *Id.* at 45, 48-49, 50-52.

⁵⁵ *Id.* at 61.

⁵⁶ *Id.* at 67-68, 74.

locate and would have no desire to drive up rent (or the cost of labor) by concentrating in one place.⁵⁷ The question is what happens if transportation costs are real but not infinite.

Situations in which there are real but not infinite transportation costs, they argue, create a strong incentive for manufacturing firms to locate in the same country or city.⁵⁸ By co-locating, firms can capture the benefits of the increasing returns to the number of brands on their sales to each other without having to pay the cost of shipping between regions.⁵⁹ As a result, the effective cost of intermediate goods will be lower in the country they locate in, which will drive new firms to locate there as well.⁶⁰ New entrants will drive local costs down further, inspiring more new entrants (or existing firms from the other region) to move there and so on. Further, wages will rise in that market, meaning that the producers will be closer to richer consumers and can sell to their final goods to them without paying transport costs.⁶¹ Producers will only have to pay the transportation costs once – when they ship final goods to consumers in the country or city where the producers have not located.⁶² Auto parts and car companies, for instance, will locate in Detroit so that they can buy and sell from one another without paying shipping costs on anything but the sales of cars around the country.

However, if transportation costs begin to fall, manufacturing firms will eventually stop co-locating, as the situation becomes more like the no transportation costs example.⁶³ For a while, the historic clustering of firms will hold on, as they will continue to provide the benefits

⁵⁷ *Id.*

⁵⁸ *Id.* at 66-67, Figure 5.2.

⁵⁹ *Id.*

⁶⁰ *Id.* at 52.

⁶¹ *Id.* at 67.

⁶² *Id.* at 49-50, 66-68.

⁶³ *Id.* at 69-76. The same is true in reverse as transport costs rise. *Id.* at 67, figure 5.3.

of increasing returns to market size.⁶⁴ This means that a historic cluster of manufacturing firms will survive even if transportation costs fall to the point where those firms never would have clustered in the first place.⁶⁵ However, if transport costs continue to fall, there will be some point where the gains from locating close to other entrants will evaporate. At that point, the manufacturing firms will move to being relatively evenly dispersed between the two countries.⁶⁶ This is one of the key insights of the model. Location decisions will feature “break points,” or moments when industry de-clusters and will not necessarily re-cluster even if the basic variables – transport costs, demand for manufactured goods – return to where they were before, because there will not be the cluster of firms creating an external benefit for new entrants that there had been before the break point.⁶⁷

One can spin many stories out of this model. For instance, Krugman et al. argue that it explains why, at the outset of industrialization, some countries became rich exporters of manufactured goods while others remained predominantly agricultural, but then, as transportation costs fell over the nineteenth and twentieth centuries, manufacturing spread throughout the world.⁶⁸ Similarly, that American manufacturing clustered in cities that served as transportation hubs in the nineteenth century, when transportation costs were high, fits this model exactly.⁶⁹ Getting the vast agricultural and natural resources produced in the heartland to the coasts for consumption and export required a national system of rail, road and water transport, which was built according to a hub and spoke system.⁷⁰ Because transport costs were high, it made sense for manufacturers to cluster where transport costs were lowest – the transport

⁶⁴ *Id.* at 67-68.

⁶⁵ *Id.* at 69-75.

⁶⁶ *Id.* at 34-41, 74-76.

⁶⁷ *Id.*

⁶⁸ *Id.* at 239-60

⁶⁹ *Id.* at 227-36; Glaeser and Kohlhase, *supra* note 28, at 197-98.

⁷⁰ *Id.*

hubs.⁷¹ Once agglomerations started forming, they created incentives for other firms to these cities as well.⁷² The result was that transport hubs like Buffalo, on the Erie Canal, and Chicago, the center of the national rail network, became manufacturing centers.⁷³

However, as transportation costs fall, this type of agglomeration ceases to be a force. In the American economy, this point likely has been reached. “While transport costs for goods continue to matter, they have become much less important... Today, the costs of urban location for most manufacturing industries are clearly much higher than the benefits. If cities' only advantage was eliminating transport costs for manufactured goods, then cities would indeed cease to exist.”⁷⁴ Further, major urban centers increasingly rely on industries like technology, management, finance, publishing and entertainment and their “exports” are often transported by email or phone.⁷⁵ The cost of shipping goods cannot serve to explain the clustering of these industries. Other explanations are needed.

b. MARKET DEPTH

Marshall also claimed that individuals and firms locate in cities in order to participate in deep labor markets with lots of potential workers in any given field.⁷⁶ The substance of Marshall’s analysis, however, is not limited to labor markets; it also explains why deep consumption markets and social “markets,” like the dating market, create agglomeration gains.

The key to understanding Marshall’s analysis is that these markets are regional, or even more local than that. This is because traveling between cities or regions takes time, and, as a

⁷¹ *Id.*; SPATIAL EQUILIBIRUM, *supra* note 8, at 7-9

⁷² Glaeser and Kohlhase, *supra* note 2828, at 199-201.

⁷³ *Id.* at 197-199.

⁷⁴ *Are Cities Dying?*, *supra* note 9, at 145. *See also Geographic Concentration*, *supra* note 4242, at 94-98 (labor market pooling variables explain industry location decisions better than input and out-put linkages).

⁷⁵ *See* SPATIAL EQUILIBRIUM, *supra* note 8, at 7-9.

⁷⁶ MARSHALL, *supra* note 41, at 271-72.

result, there are large opportunity costs that make it difficult to commute to a job, eat at a restaurant or date someone in another region (or across a region).⁷⁷ To participate, say, in a regional labor market, you have to live there, and if that market is attractive, it will spur migration to that region.

Marshall argued that the deep labor markets in large cities provide residents and firms with two separate benefits – insurance and specialization.⁷⁸ Deep labor markets provide workers with benefits of risk pooling, or insurance against firm- or industry specific shocks.⁷⁹ If there is only one factory in a town, its employees face a great deal of risk, as a downturn either for the firm or for the industry in which the firm participates means that the employees will have to bear the costs of moving in order to find suitable employment. In contrast, if an employer in a big city goes belly-up, its workers have more options. This effect is particularly important if, as is ordinarily assumed, workers are risk averse.⁸⁰

Deep local labor markets also permit increased specialization.⁸¹ In *The Wealth of Nations*, Adam Smith noted that cities provide workers with the ability to specialize, whereas “in the Highlands of Scotland, every farmer must be butcher, baker and brewer for his own family.”⁸² This specialization is highly efficient, as workers can focus on what they have comparative advantages in producing.⁸³ Further, deep markets reduce search costs, allowing laborers to find more easily the job in which they can be most productive, increasing overall

⁷⁷ Glaeser and Kohlhase, *supra* note 28, at 208-210. Although the cost of traveling has fallen, the opportunity cost of time increases along with economic growth, meaning that the effective cost of moving people is secularly increasing. *Id.*

⁷⁸ MARSHALL, *supra* note 41, at 271-72.

⁷⁹ *Are Cities Dying?*, *supra* note 9, at 145-46.

⁸⁰ *Cf. id.* at 146 (noting that labor market pooling is important even if workers are not risk averse).

⁸¹ See, e.g., James Baumgardner, *The Division of Labor, Local Markets and Worker Organization*, 96 J. POL. ECON 509, 510 (1988) (finding empirical evidence of increased specialization in deep labor markets).

⁸² ADAM SMITH, AN INQUIRY INTO THE NATURE AND CAUSES OF THE WEALTH OF NATIONS 8 (1776).

⁸³ *Are Cities Dying?*, *supra* note 9, at 146.

economic performance.⁸⁴ Labor market depth also has dynamic effects. As urban workers develop new skills, they can switch to suitable jobs easily, and this creates incentives for investments in human capital.⁸⁵ Market depth, and the resulting specialization, creates incentives for both firms, who want to access specialized labor, and residents, who want to participate in such deep markets, to locate in cities.

The depth of local markets also matters outside of labor markets. Urban consumption markets feature a wider range of products – from shopping to cultural amenities - and make it more likely that a consumer can find a particular good.⁸⁶ This drives people to shop and live in cities. Marshall noted that this should have a stronger impact on markets for expensive or unique items, as people care more about getting insurance and specialization when they are spending a lot of money.⁸⁷ This explains why, for instance, diamond merchants often group together in the same city and even on the same street.⁸⁸

Even social “markets” feature gains from pooling and specialization. Dating markets provide strong agglomeration effects. Single people have strong incentives to move a big city, as cities provide a wide variety of potential dates, people to fit all tastes and insurance that a single shock (a break-up, say) will not mean being entirely excluded from continued participation in dating.⁸⁹ In other words, deep dating markets feature low search costs, specialization and risk

⁸⁴ SPATIAL EQUILIBRIUM, *supra* note 8, at 141-42; Paul Krugman, *Increasing Returns and Economic Geography*, 99 J. POL. ECON. 483, 485 (1991).

⁸⁵ Cf. Daron Acemoglu, *A Microfoundation For Social Increasing Returns in Human Capital Accumulation*, 111 Q. J. ECON. 779 (1996). (developing a model in which the likelihood of finding quality workers or low search costs drives investments in physical capital in cities, and the likelihood of finding quality employers creates incentives for investments in human capital, which together create increasing returns to size for cities).

⁸⁶ See BRENDAN O’FLAHERTY, CITY ECONOMICS 17-18 (2005).

⁸⁷ MARSHALL, *supra* note 41, at 273.

⁸⁸ One block in New York City – 47th street between 5th Avenue and 6th Avenue – has 2600 diamond businesses. Lauren Weber, *The Diamond Game, Shedding Its Mystery*, N.Y. TIMES, April 8, 2001 at C1.

⁸⁹ As novelist Keith Gessen wrote, “*Dating*, builder of cities.” KEITH GESSEN, ALL THE SAD YOUNG LITERARY MEN (2008) (emphasis in original).

pooling. Not surprisingly, young singles are substantially more likely to live close to city centers.⁹⁰ As Clay Shirky pithily noted; “Anyone who's predicting the decline of big cities has already met their spouse.”⁹¹ Although Marshall did not discuss the gains from deep dating markets, they too generate agglomeration.

There is substantial empirical evidence that the desire to access deep labor markets provides much of the impetus for company location decisions, and hence explains a great deal of industry-level co-agglomeration.⁹² It also explains some of the higher wages seen in cities, as workers are able to better match their skills to employment, both statically and as skills grow.⁹³ Further, the advantages of deep markets explain the development of high-end retail in urban areas, the desire of young singles to move to urban areas and many other urbanizing forces.

c. INFORMATION SPILLOVERS

The final category of agglomeration economies is information spillovers. Marshall famously wrote that, in cities, “the mysteries of the trade become no mystery but are, as it were, in the air...”⁹⁴ He focused on the ability of a firms in an industry to learn from others in the same industry by adopting best practices and sharing in industry-specific knowledge.⁹⁵ In cities where a single industry concentrates, “[g]ood work is rightly appreciated, inventions and improvements in machinery, in processes and the general organization of the business have their merits promptly discussed: if one man starts a new idea, it is taken up by others and combined with

⁹⁰ See RICHARD FLORIDA, WHO’S YOUR CITY 243 (2008) (young singles 33% more likely to live near city center).

⁹¹ As quoted by Tim Leberecht, Elektroniker, <http://designmind.frogdesign.com/blog/whos-your-city.html> (August 17, 2008).

⁹² See *Geographic Concentration*, *supra* note 42, at 94-98.

⁹³ See Christopher H. Wheeler, *Cities and the Growth of Wages Among Young Workers: Evidence from the NLSY*, 60(2) J. URBAN ECON. 162 (2005).

⁹⁴ MARSHALL, *supra* note 41, at 271.

⁹⁵ The chapter on agglomeration economies appears has the subtitle “The Concentration of Specialized Industries in Particular Localities.” *Id.* at 267.

suggestions of their own; and thus it becomes the source of further new ideas.”⁹⁶ Information spillovers, therefore, generate not just increases in wealth, but annual economic growth.⁹⁷

Marshall thereby linked growth in the overall economy to the location decisions of individuals and firms. The spillovers he considered important were spillovers inside an industry, one manufacturer of cars learning from another. Nearly a hundred years later economists studying economic growth in the 1980s picked up this insight as explanation for why some rich areas – be they cities or countries – were able to grow at rates faster than poorer ones.

Neoclassical models of economic growth assumed that the state of technology, or the ability to turn capital and labor into goods, was easily copyable by any firm anywhere and grew at a constant exogenously-determined rate.⁹⁸ These models did quite a good job of explaining growth in the United States, which, factoring out business cycles, had rather constant growth rates. However, because the model assumed “technology” was a perfectly copyable set of ideas, the only factors that made countries different from one another was the amount of physical capital and labor. As a result, such models predicted that, as they developed capital (or as mobile capital flowed there, drawn by low labor costs), poor countries would see fast growth and eventually there would be “convergence” in growth rates from sub-Saharan Africa to the United States.⁹⁹ By the 1980s, it was relatively clear that there was no convergence in overall wealth or

⁹⁶ *Id.* at 271.

⁹⁷ See SPATIAL EQUILIBRIUM, *supra* note 8, at 149.

⁹⁸ Robert Solow and Edward Denison are generally credited with developing exogenous growth models. See Robert Solow, *Technical Change in an Aggregative Model of Economic Growth*, 6 INT’L ECON. REV. 18 (1957); EDWARD F. DENISON, *THE SOURCES OF ECONOMIC GROWTH IN THE UNITED STATES* (1962). For a critical discussion of these models, see Lucas, *supra* note 9, at 7-14.

⁹⁹ *Id.* at 17-18.

in growth rates, or even substantial capital flow to poor countries, as predicted by these models.¹⁰⁰

Building on work by Kenneth Arrow, Paul Romer produced an important model explaining why and how growth rates could diverge.¹⁰¹ His basic idea is that any given firm's ability to produce goods was not based on endlessly copyable ideas, but instead was a function of private research (which had a diminishing marginal return) and spillovers from the research of others, which were captured locally rather than internationally and developed into a stock of local knowledge which had increasing returns to scale.¹⁰² A firm's productive capacity – the ability to convert labor and capital into goods – thus depended on its own research, which a firm captured privately most but not all of, and the state of local knowledge. However, Romer argued that, as new ideas are added to old ideas, they get progressively better. This meant that a developed country could grow more quickly than a developing one because as it developed its stock of knowledge, there would be increasing returns.¹⁰³ Growth rates diverge across countries, as they depend on local levels of research over time.¹⁰⁴

¹⁰⁰ “The most important evidence against the Solow vision applied across countries was the failure of growth in many poor countries. With high return to scarce capital, the poor countries had every incentive to grow faster than rich ones....The poor shall inherit the growth. It didn't work out that way.” WILLIAM EASTERLY, *THE ELUSIVE QUESTION FOR GROWTH: ECONOMISTS' ADVENTURES AND MISADVENTURES IN THE TROPICS* 59 (2002). For a discussion of the use, and misuse, of the Solow model by development officials see *id.* at 48-84.

¹⁰¹ Romer, *Increasing Returns and Long Run Growth*, *supra* note 9, at 1006.

¹⁰² For some ideas, location might not matter. Romer's later work focused on patentable ideas that were the function of R&D, which should be equally available to all, at least after intellectual property runs out. Paul M. Romer, *Endogenous Political Change*, 98(5) J. POL. ECON. 571 (1990). However, this is also affected by location— people from a given location cite “home” patents far more often than others in their new innovations. See SPATIAL EQUILIBRIUM, *supra* note 8, at 149.

¹⁰³ Romer, *Increasing Returns and Long Run Growth*, *supra* note 9, at 1004-07, 1032-33.

¹⁰⁴ *Id.* at 1030-34. There is not exponential growth in the model because of the diminishing returns to research.

Romer's model was in essence a formalization of Marshall's claim -- the mysteries of trade were in the air in a place and caused growth. These intra-industry informational spillovers are now called "Marshall-Arrow-Romer" externalities.¹⁰⁵

Romer's model also had another claim. The inability of creators to keep all of the fruits of their ideas also means that, although there exists an optimal amount of investment in research, this social optimum is not reached through unregulated competition (knowledge spillovers are a positive externality).¹⁰⁶ However, the greater the degree of capture by inventors, the closer to the social optimum you get.¹⁰⁷ Monopoly or oligopoly control over production and the invention of ideas is likely to create increased growth. Thus, the model predicts that cities with only a few firms will grow quickly.¹⁰⁸

An alternative view of knowledge spillovers in cities was developed first by urban activist Jane Jacobs and extended by noted economist Robert Lucas. Rather than focusing on spillovers between firms in a single industry, it argues that diversity causes spillovers and growth. Jacobs' first book, *The Death and Life of Great American Cities*, did not address economic theory directly, but instead developed a critique of the urban planning of the 1950s, modernist architectural theory, and the policies of the then-all-powerful public works czar of New York, Robert Moses.¹⁰⁹ These ideas all focused on creating dedicated spaces for working and living, and on separating urban residents from the perceived problems of urban life: crowded

¹⁰⁵ *Growth in Cities*, *supra* note 9, at 1127.

¹⁰⁶ Romer, *Increasing Returns and Long Run Growth*, *supra* note 9, at 1020-25.

¹⁰⁷ *Id.*

¹⁰⁸ *Id.* at 1025; *Growth in Cities*, *supra* note 9, at 1127-29.

¹⁰⁹ JANE JACOBS, *THE DEATH AND LIFE OF GREAT AMERICAN CITIES* 4-11, 360 (1961). For a discussion of Moses's urban policy ideas, see ROBERT A. CARO, *THE POWER BROKER: ROBERT MOSES AND THE FALL OF NEW YORK* 91-112 (1974).

city streets, proximity to crime, “slums” and “blight.”¹¹⁰ Jacobs argued that this preference for order and organization actually caused the problems of cities, rather than solving them.¹¹¹ A mix of retail and residential uses on streets reduces crime by providing “eyes on the street” that deter criminals.¹¹² Further, what urban planners of the time described as “blight,” was exactly what generated their economic activity and their excitement, “an intricate sidewalk ballet” of different types of activities that generated new businesses and cultural ferment.¹¹³ “Cities may fairly be called natural economic generators of diversity, and natural economic incubators of new enterprises.”¹¹⁴

This final insight led her next book, *The Economy of Cities*, which argued that new ideas and businesses are usually the outgrowth of a combination of old activities.¹¹⁵ In her famous example, the brasserie was not invented by the process of consumer research and heavy investments in research and development; instead, it was invented by an urban dressmaker who wanted to her dresses to fit better and was then able to find a business partner, capital, and varied suppliers nearby.¹¹⁶ Cities are essential to this process of adding new work to old work – they are where activities collide and where new business ventures spring from old ones.¹¹⁷ Diversity causes growth.

In a central chapter in the book, Jacobs compares two English cities, Birmingham and Manchester.¹¹⁸ In the 1840s, Manchester was the fastest growing city in the world as a function of the immense and extremely efficient textile mills that dominated its local economy, and was

¹¹⁰ JACOBS, *THE DEATH AND LIFE OF GREAT AMERICAN CITIES*, *supra* note 109, at 13-25, 435-39.

¹¹¹ *Id.* at 31-41, 145-177.

¹¹² *Id.* at 30-57.

¹¹³ *Id.* at 145, 148.

¹¹⁴ *Id.*

¹¹⁵ JACOBS, *THE ECONOMY OF CITIES*, *supra* note 16, at 122.

¹¹⁶ *Id.* at 51-56.

¹¹⁷ *Id.* at 122.

¹¹⁸ *Id.* at 86-99

considered the city of the future, for good or ill. Birmingham was considered a city of the past in which no industry dominated and household trades provided most of the economy. Despite active intervention in the economy by the British government to aid “efficient” cities like Manchester, Birmingham puttered along and continued to grow while Manchester stagnated.¹¹⁹ What Jacobs took from this is that the growth of cities like Birmingham was a direct result of the inefficiencies of their industry, as their numerous small firms in diverse industries provided many opportunities for innovation. “Is it not possible for the economy of a city to be highly efficient, and for the city also to excel at the development of new goods and services? No, it seems not.”¹²⁰

Lucas tied this argument to work done on the development of “human capital,” or education or skills, by economists like Gary Becker and Theodore Schultz, and thus generated another way out of the convergence trap.¹²¹ Lucas argued that people have a choice between investing in human capital and physical capital.¹²² Investing in human capital, like physical capital, increases the amount of production for any given amount of labor (but does so at a diminishing rate). However, in Lucas’s model, investing in human capital has an externality that is not captured by private actors; smarter people develop ideas that can be used by others.¹²³ The rate of human capital investment determines the rate of technological growth and hence the overall growth rate.¹²⁴ This provides another way out of the convergence hypothesis. Technology in any given country will depend on the level of human capital development in that country – something that is not transferrable across borders – but, because the private rate of

¹¹⁹ *Id.* at 89.

¹²⁰ *Id.* at 96.

¹²¹ Lucas, *supra* note 9, at 17.

¹²² *Id.* at 27.

¹²³ *Id.* at 36.

¹²⁴ *Id.* at 17-27.

return on human capital must equal the return on physical capital, any given country will see consistent growth rates.

Lucas needed an explanation for why human capital investments were an externality. That is, if someone gets an education, why are there returns for someone else? Lucas argued market participants developed ideas that were copied and used for new ideas and that this was the essence of creativity in a competitive economy. “New York City’s garment district, financial district, diamond district, advertising district and many more are as much intellectual centers as is Columbia or New York University.”¹²⁵ Lucas did not provide a formal explanation for how this type of innovation spread, but instead stated that the best treatment of the external effect of human capital was given by Jane Jacobs in *The Economy of Cities*.¹²⁶ The spillovers from human capital are captured by people who interact with the inventors. This explains why rents are so much higher in cities – people are paying to be “near other people” from whom they can learn.¹²⁷

Jacobs’s theory was thus given prominence as an explanation for how whole economies, and not just cities, grow. The key to growth in this understanding is diversity among types of production. The spillovers across industries, or rather, the ways in which ideas travel among diverse urban residents, have thus been called Jacobs externalities.¹²⁸ As Lucas argued, these spillovers help urban residents develop human capital.

The work of these scholars on urban growth has been the subject of extensively empirical examination, most famously by Ed Glaeser, who has become the high priest of this empirically-

¹²⁵ *Id.* at 38.

¹²⁶ *Id.* at 37.

¹²⁷ *Id.* at 39.

¹²⁸ See, e.g., *Growth in Cities*, *supra* note 9, at 1162; Vernon Henderson, *Externalities and Industrial Development*, 1 CITYSCAPE 75 (1994).

driven side of agglomeration economics. In the paper *Growth in Cities*, Glaeser and several other economists tested three theories of urban growth: the Marshall-Arrow-Romer theory that concentrating a single industry with few firms in a city will produce fast growth; Michael Porter's related theory that a concentrated industry will produce growth, but that having many firms will produce competition and hence more idea generation, and finally Jacobs' idea that urban diversity produces the information spillovers.¹²⁹ Using industry data from cities, the paper found that industries grew more quickly in diverse areas where it was not heavily represented, and where there were many smaller firms. Jacobs' theory was thus confirmed by Glaeser's research, while the data was inconsistent with the Marshall-Arrow-Romer theory. Although other work has found that intra-industry spillovers can have strong effects, it has also shown that diversity is a powerful force for growth.¹³⁰ Scholarship on patents has revealed the effect of both kinds of spillovers. New patents cite other patents developed in the same metropolitan area at a far higher rate than would be generally expected, both intra-industry and inter-industry.¹³¹

Glaeser also tested Lucas's claim that informational spillovers in cities promote faster development of human capital. Using a data set that tracked individual incomes across time and location, Glaeser and David Mare were able to show that the well-known fact that urban workers are paid more than rural employees is likely a result of faster human capital growth in cities.¹³² They showed that individuals who moved to a big city did not see an immediate increase in their wage level – at first, wages stayed constant – but that migrants, like other city residents, had

¹²⁹ *Growth in Cities*, *supra* note 9, at 1126.

¹³⁰ See, e.g., Vernon Henderson, *Marshall's Scale Economies*, 53 J. URBAN ECON. 1 (2003) (finding intra-industry spillover effects); Mario Forni and Sergio Paba, *Spillovers and the Growth of Local Industries*, 50(2) J. INDUST. ECON. 151 (2002) (finding both intra- and inter-industry spillover effects).

¹³¹ See Adam B. Jaffe, Manuel Trajtenberg and Rebecca Henderson, *Geographic Localization of Knowledge Spillovers as Evidenced by Patent Citations*, 108 Q. J. ECON. 577, 577 (1993).

¹³² Edward L. Glaeser and David Mare, *Cities and Skills*, 19(2) J. LABOR ECON. 316, 316-19 (2001). There is roughly a 33% urban wage premium. *Id.*

substantial wage growth. Further, urban-to-rural migrants saw negligible decreases in wages when they left. This is an important confirmation of the idea that living in an urban area generates human capital development. People become more productive by moving to a city, and retain that productivity even if they leave, and this is reflected in wages.¹³³

Information spillovers – both MAR spillovers inside one industry and Jacobs spillovers between industries -- explain why cities develop, and why they grow.

d. CONGESTION, OR WHY CITIES DO NOT EXPAND FOREVER

If there are gains from locating near one another, there must be a contrary force keeping things apart – otherwise, all population would locate in one place. Marshall noted that rents are higher in the center of a city.¹³⁴ Economists working in Marshall’s tradition use a catch-all term for the forces that are the opposite of agglomeration – congestion. This category includes a few different costs caused by density like the added cost of rent, traffic on the roads and things that might be better called negative agglomerations, factors that have increasing returns to scale but a negative effect, like crime.¹³⁵

Little needs to be said about these forces, as they flow from basic microeconomic assumptions. If demand for property goes up, prices will go up, and the increased prices will limit the extent to which the good – property in the city – is consumed.

¹³³*Id.* See also Shihe Fu and Stephen Ross, *Wage Premia in Employment Clusters: Agglomeration Economies or Worker Heterogeneity?*, Univ. of Conn. Working Paper 2007-26R (2007), <http://ideas.repec.org/p/uct/uconnp/2007-26.html>; Daniel F. Heuermann, *Human Capital Externalities in Western Germany*, Institute of Labour Law and Industrial Relations in the European Community Discussion Papers 2008-01 (2008), <http://ideas.repec.org/p/iaa/wpaper/200801.html> (finding evidence of MAR externalities among highly skilled workers and Jacobs externalities among less skilled employees).

¹³⁴ Marshall, *supra* note 41, at 272.

¹³⁵ See *Are Cities Dying?*, *supra* note 9, at 150-55.

III. THE CITY AS A LAW AND ECONOMIC SUBJECT: SORTING AND AGGLOMERATION ARE DISTINCT

The previous section explained the development and claims of the economics of agglomeration. Although it has become an enormous research project inside economics departments, agglomeration economics has not made its way, for the most part, into discussions of the economics of local government law. Instead, legal scholars have focused exclusively on the efficiency of sorting for government benefits, as explained by the Tiebout model.

This section will present the first, and simpler, thesis of the paper, that agglomeration gains are distinct from the gains people receive from living in their favored local government, and that both must be taken into account when assessing the efficiency of local governmental policies. The Tiebout model is flawed because it fails to capture how agglomeration gains matter in individual location decisions.

Although the Tiebout model will be familiar to most readers, it is worth laying out the model and more modern extensions of the model to highlight those aspects that interact with the agglomeration literature. Tiebout's original paper is extremely simple. It begins with a thought experiment in which a large number of local governments were arrayed along a beachfront.¹³⁶ Tiebout made certain simplifying assumptions about the "consumer-voters" that populated his beach area; they can move costlessly from community to community, will move to that community which provides the public services they most prefer, are fully informed about the range of policies undertaken by localities and are unconstrained by job opportunities.¹³⁷ Further,

¹³⁶ Tiebout, *supra* note 1, at 418.

¹³⁷ It is important to note that these are "public services" and not "public goods." As Truman Bewley has noted, the Tiebout model does not work if the goods provided by local government are public goods in the proper sense of being non-rival and non-excludable. Rather, they must be "public services" in the sense that the cost of providing the services must be proportional to the number of people benefiting from them. If local governments provided non-

he assumed there was an “optimal community size,” in which the provision of those public services could be provided at the lowest average cost, and that communities below the optimum size for their preferred set of public policies will try to attract new residents (and that communities that are too big will try to do the opposite.) With these assumptions, he was able to argue that local public services are provided at the optimal level for residents: any consumer-voter who is unhappy will move to another city and as long as there are no costs associated with moving and there are many places to move, each offering different options in terms of the amount and type of public services offered.¹³⁸ The gains in the model come from one source – people are happier about the level of public services provided to them by local governments.

Later developments fleshed out the model and rendered it testable and more believable. Wallace Oates noted that, if households shopped for their optimal baskets of tax and public service provisions, increases in the quality of public goods should increase housing values, *ceteris paribus*.¹³⁹ Oates’s work generated a substantial amount of work on this issue of “capitalization,” or the degree to which the quality of local public policies are incorporated in housing values. The result of this literature is that capitalization should be expected if there are limits on the creation of new governments, which seems to be the case.¹⁴⁰ Further empirical

rival public goods that were non-excludable at the local level, all people would want to live in the same locality. The provision of public goods at the local level would create a trade-off between sorting and the optimal scale of the service. Truman Bewley, *A Critique of Tiebout’s Theory of Local Public Expenditures*, 49 *ECONOMETRICA* 713 (1981). See also *SPATIAL EQUILIBRIA*, *supra* note 8, at 205-208. Even if local services were pure public goods, sorting can reduce agglomerative efficiency in ways that are similar to the ones I discuss in this paper. See Frank Flatters, Vernon Henderson and Peter Mieszkowski, *Public Goods, Efficiency and Regional Fiscal Equalization*, 3 *J. PUB. ECON.* 99 (1974).

¹³⁸ Tiebout, *supra* note 1, at 418.

¹³⁹ Wallace E. Oates, *The Effects of Property Taxes and Local Public Spending on Property Values: An Empirical Study of Tax Capitalization and the Tiebout Hypothesis*, 77 *J. POL. ECON.* 957 (1969).

¹⁴⁰ Oates, *The Many Faces of the Tiebout Model*, *supra* note 3, at 25-27.

studies show that capitalization does indeed occur, but the effect of capitalization is stronger in suburban areas than it is in urban areas.¹⁴¹

Bruce Hamilton addressed another problem in the Tiebout framework. If local government services are funded by property taxation, the Tiebout model has no steady equilibrium.¹⁴² This is because property-tax funded public services give the residents of a local government an incentive to subdivide their property into smaller and cheaper parcels because buyers of these parcels can consume local governmental services at the average level (e.g. they send their kids to school) but pay less than average level of taxes (because property taxes are a function of property values.) If the services are attractive – i.e. the town is a high tax/high service town – this will provide every homeowner with the ability to increase his property value by subdividing, because buyers will pay a premium to get access to services in excess of their property taxes. Even if every resident of a town would prefer high taxes and high benefits, they will face a collective action problem; each resident would be better off by subdividing even if everyone in town would be better off if no one did so. As a result, towns are unable to fit their policies to local preferences because doing creates incentives to subdivide and there is no steady equilibrium. Hamilton noted that this problem could be solved if towns used zoning laws to mandate a minimum level of housing consumption – by requiring a minimum lot size, say -- which would bar owners from subdividing their property. Thus, in order for there to be

¹⁴¹ See WILLIAM A. FISCHER, THE HOMEVOTER HYPOTHESIS: HOW HOME VALUES INFLUENCE LOCAL GOVERNMENT TAXATION, SCHOOL FINANCE, AND LAND-USE POLICIES 3-5 (2001); Fischer, *Footloose at Fifty*, *supra* note 3, at 11; William Fischer, *Property Taxation and the Tiebout Model: Evidence for the Benefit View From Zoning and Voting*, 30(1) J. ECON. LIT. 171, 175 (1992); William H. Hoyt, Leviathan, *Local Government Expenditures and Capitalization*, 29 REG. SCI. AND URBAN ECON. 155, 157 (1999).

¹⁴² Hamilton, *Zoning and Property Taxation*, *supra* note 23, at 211.

equilibrium in a Tiebout model, zoning or some other tool must be used to limit each town's population to ensure that the property tax per resident equals the average cost of services.¹⁴³

William Fischel also noted that zoning provides a local government with a way to enforce something like a “collective property right” on behalf of residents.¹⁴⁴ Absent zoning, if a new development causes housing values in a town to go down by more than the value of the project, individuals in the town acting alone could not organize to pay the developer not to build even though it would be optimal to do so – they would face high transaction cost and collective action problems. Unless a new project fits within pre-approved guidelines, zoning ordinances require developers to get permission from a town's zoning board in order to build.¹⁴⁵ The resulting negotiations gives towns a way to force developers to pay for the effect their projects have on the property values of existing properties.¹⁴⁶ Because it reduces transaction costs, allocating the property right to the town, rather than to the developer, is efficient. It should be noted, though, zoning does not force developers to internalize the effect they have, positive or negative, on properties in other towns.

Fischel also supplemented the so-called “supply-side” of the model by developing a Tiebout-consistent theory for how localities came up with public policies.¹⁴⁷ He noted that most American households have extremely undiversified financial portfolios, and almost all of their

¹⁴³ Even when Hamilton reformed his model to permit some mix in the types of housing in each community, he still argued that communities had to use zoning to limit their population for the model to achieve equilibrium. Bruce W. Hamilton, *Capitalization of Intra-jurisdictional Differences in Local Tax Prices*, 66 AM. ECON. REV. 743, 748 (1976).

¹⁴⁴ WILLIAM FISCHEL, *THE ECONOMICS OF ZONING LAWS: A PROPERTY RIGHTS APPROACH TO AMERICAN LAND USE CONTROLS* xi, 125-49 (1985).

¹⁴⁵ *Id.*

¹⁴⁶ For Coasean reasons, changing the property right should not change the amount of development. *Id.* But see Edward L. Glaeser and Bryce Ward, *The Causes and Consequences of Land Use Regulation: Evidence From Greater Boston*, 65 J. URBAN. ECON. 265, 267 (2009) (towns in the Boston region zone more restrictively than would achieve maximize property values).

¹⁴⁷ See FISCHEL, *HOMEVOTER HYPOTHESIS*, *supra* note 141, at 1-10; Oates, *The Many Faces*, *supra* note 3, at 28 (referring to this as the “supply side” of the Tiebout model).

savings are locked up in one asset: their home.¹⁴⁸ Being involved in local government is how they protect the value of that asset.¹⁴⁹ Tiebout's "citizen-voters," are actually "home voters," according to Fischel, concerned exclusively with the value of their home. This means that in small towns, where each voter is more likely to make a difference and where the policies are particularly crucial to housing values, local elections are likely to produce representative policies designed to maximize the value of the homes of existing property owners. Bigger cities do not have similar political dynamics, as voters become more distant from local officials, and developers, rather than home owners, are the largest political players.¹⁵⁰

There is, of course, far more in the Tiebout literature than these contributions. However, this brief review should be enough to see a few aspects of how the model interacts with the economics of agglomeration. It is clear that what creates gains (in comparison to a world in which people are spread evenly) in both models are the location decisions of individuals and firms. By locating near specific other people, agglomeration gains – and congestion costs – are created. By locating in a particular political subdivision in the Tiebout model, residents gain access to public policies that fit their preferences and some degree of protection against the costs to their property values imposed by new entrants into their town.

Although they have the same source, the gains in each model are different in kind. Agglomeration gains come from the existence of other people in close proximity and are not dependent on governmental action. People would locate near one another even if all government services were provided at the national level.¹⁵¹ This location decision might not be absolutely optimal, as agglomeration gains imply externalities. However, it does imply the best location

¹⁴⁸ FISCHEL, HOMEVOTER HYPOTHESIS, *supra* note 141, at 4.

¹⁴⁹ *Id.* at 5-12.

¹⁵⁰ *Id.* at 14-16; 89-94.

¹⁵¹ See SPATIAL EQUILIBRIUM, *supra* note 8, at 6-8; *Are Cities Dying?*, *supra* note 9, 143-49.

decisions absent some cure for these externalities.¹⁵² Sorting gains come from governmental action, both in terms of services provided and by demanding payment for the external effects of new development in the same political subdivision.¹⁵³

Government policies affect where people live, both where in the country and where in any individual metropolitan area.¹⁵⁴ To the extent that policies affect where people live, and importantly, which people live near which others, it is important to analyze how these policies affect both the efficiency of agglomeration and the efficiency of sorting. However, although both are rooted in individual location decisions, there is no reason to assume that the government policies that would permit efficient sorting will also result in the efficient location of people in terms of agglomeration. Unless there is a strong degree of correlation between people preferences for public policies and their preferences for neighbors, there is no way that a local government law system could maximize both, as people and business can only locate in one place and near one group of people.¹⁵⁵

¹⁵² For individuals, this is likely not a problem, although it can be for large firms who make fixed investments. For individuals who are relatively frequently deciding whether to move (even if they do not), location decisions can be seen as having something like a reflexive equilibrium. Each entrant is not counting their own agglomeration-producing externalities, but is considering those of others, and the effects are likely worked out in equilibrium as long as the transaction costs of moving are low enough. The market result will approach efficiency. For firms that make fixed investments, there can be substantial external effects that are not counted in their location decisions. For these actors, the market will not necessarily produce efficient location decisions. *See* Teresa Garcia-Milà and Therese J. McGuire, *Tax Incentives and the City*, 2002 BROOKINGS-WHARTON PAPERS ON URBAN AFFAIRS 95, 103, (2002). However, as I argue in notes 183-185 and accompanying text, Tiebout model-style policies exacerbate rather than cure this problem.

¹⁵³ This presumes that local policies take the form prescribed in the Tiebout model – generally applicable public services. To the extent that localities can use local tax funds to subsidize the entry of firms or individuals that will create location-specific externalities, it would complicate the analysis somewhat. *See id.* at 103 (claiming that local tax incentives for agglomeration-producing industries could be both locally and globally efficient but that practice makes it seem that this is unlikely).

¹⁵⁴ This is axiomatic in the Tiebout model. *See* Tiebout, *supra* note 1, at 419. The effect across regions – particularly when local governments engage in heavy zoning to raise local housing prices – can be extremely large. *See* Edward L. Glaeser, *Houston, New York Has a Problem*, 18 CITY JOURNAL 72 (2008).

¹⁵⁵ This paper works from an assumption that there is not a strong degree of correlation between preferences for policies and neighbors. I can think of no reason not to make this assumption – that there is at the very least a wedge between these two tastes is apparent to anyone who has ever seen someone struggle with leaving a big urban city for a suburb for the public schools. This has some empirical support. Jonathan Levine notes that developers, who

This is a simple point, but it has a rather dramatic effect on the Tiebout model. Tiebout explicitly assumed that “restrictions due to employment opportunities are not considered.”¹⁵⁶ Were it the case that all privately available economic gains, were equally available to all people who lived in a region, this assumption would not be particularly problematic. Some agglomeration economies work that way – as Tiebout suggested, many labor markets are regional and hence do not limit decisions about which town to live in – but others do not.¹⁵⁷ People do move to get things like information spillovers and access to consumption, social and certain very localized labor markets. Thus, the basic assumption of the Tiebout model, that people move exclusively in order to receive public policies they prefer, is almost certainly false.¹⁵⁸ That is, the Tiebout model is not flawed because it misunderstands local governments; it is flawed because it incorrectly specifies individual utility functions.

In order to understand the effects of local governmental policies, we need to understand their effects on both sorting and agglomeration. Further, as the next section argues, we need to understand how agglomeration and Tiebout model style sorting interact.

IV. THE CITY AS A LAW AND ECONOMIC SUBJECT: AGGLOMERATION AND SORTING CONFLICT

The previous section showed that agglomeration economies and sorting provide two distinct types of gains that occur as a result of individual and firm-level location decisions. This section turns to the interaction between sorting and agglomeration. My claim is that the

presumably know consumer preferences relatively well, find that zoning is the major limit on building dense buildings like townhouses and apartments, indicating that regulation does not merely replicate tastes. JONATHAN LEVINE, ZONED OUT: REGULATION, MARKETS AND CHOICES IN TRANSPORTATION IN METROPOLITAN LAND 125-32 (2006).

¹⁵⁶ Tiebout, *supra* note 1, at 418.

¹⁵⁷ See Edward L. Glaeser, *The Future of Urban Research: Nonmarket Interactions*, 2000 BROOKINGS-WHARTON PAPERS ON URBAN AFFAIRS 101, 106 (2000).

¹⁵⁸ See Tiebout, *supra* note 1, at 418.

relationship is usually inverse. Where we see agglomeration, there will be fewer gains from sorting, particularly if governments are sized in a way that fits the natural or efficient scope for providing public services. More importantly, in metropolitan areas where there is sorting, agglomerative efficiency will be harmed.

i) Agglomeration Reduces the Efficiency of Sorting

To the extent that people make their location decision for reasons other than local policy choices, it throws a wrench into the operation of Tiebout sorting. Agglomeration models explain why people would locate near one another for reasons other than public policy – to capture reduced transportation costs, information spillovers and market size effects.¹⁵⁹ The attraction of other people creates a stickiness in individual location decisions that limits the degree to which housing prices will be sensitive to local policy changes. This means that agglomeration is interfering with Tiebout sorting; the existence of agglomeration gains reduces the degree to which people sort between local governments on the basis of their policy preferences.

Further, not all areas feature the same gains from agglomeration. Dense areas, which feature more interaction between individuals, will likely feature stronger gains from agglomeration for their residents than less dense ones (and also higher congestion costs).¹⁶⁰ This is why capitalization works better in smaller cities than it does in dense urban areas.¹⁶¹ Public

¹⁵⁹ See *Are Cities Dying?*, *supra* note 9, at 145-49.

¹⁶⁰ “Conceptually, a city is just a dense agglomeration of people and firms. All of the benefits of cities come ultimately from reduced transport costs for goods, people and ideas.” *Are Cities Dying?*, *supra* note 9, at 140.

¹⁶¹ See note 141. This depends on the relatively safe assumption that dense areas will also have bigger local governments (by population). However, it is possible to imagine a situation in which governments were equally small throughout big cities and small towns. If there were such micro-governments, agglomeration effects would not interfere with sorting unless they were extremely local. However, in the very densest areas, this would mean a new government every few blocks perhaps – more than 230,000 people live on the Upper East Side of Manhattan, more than double what William Fischel thought was the absolute maximum size a locality can be and still be governed by Tiebout model principles. See *Upper East Side Megasite* (citing the 2000 Census), available at <http://www.uppereast.com/upeassiddem.html>, HOMEVOTER HYPOTHESIS, *supra* note 141, at 87-90. Absent this

policy variables like the quality of schools or tax rates will be the biggest factor in someone's decision to pick one suburb over another but will only be one factor among many in a decision about whether to move from a big city to the suburbs (which, at least substantially, will be driven by the cost of housing and the attraction of downtown amenities.)

While all three of the classic sources of agglomeration – reduced transport costs for goods, the advantages of deep markets, and intellectual spillovers – have broad regional effects, their effects decrease as distance between people and firms increases.¹⁶² And hence all will interfere with sorting between localities in the same metropolitan area to some degree. That said, several types of agglomerative gains are particularly local in effect and will hence have a particularly strong impact on the efficiency of sorting.

The first is intellectual spillovers. We are not exactly sure where spillovers come from, but it is likely that information is traded through personal contact with others – who people go to lunch with, who they overhear on the street, which meetings or conferences they attend.¹⁶³ These effects are likely to be highly local, as who you grab lunch with is almost entirely dependent on who is nearby.¹⁶⁴ As such, industries and individuals in highly creative industries have extremely high incentives to co-locate.¹⁶⁵ If ideas are the lifeblood of an industry, it would take extremely bad governmental policies to make a company or employee in that industry move from the center of ideas. This is why “idea” industries are willing to locate in areas that do not provide particularly hospitable policy atmospheres. For instance, in the 1970s, when New York

type of extreme balkanization in dense areas – which would have a substantial effect on the efficient scope of production of public services – agglomeration effects that keep people in dense areas hinder Tiebout sorting.

¹⁶² See *Are Cities Dying?*, *supra* note 9, at 140.

¹⁶³ See Glaeser, *Nonmarket Interactions*, *supra* note 157 at 103 (“The effect of ...proximity on nonmarket transactions is large.”).

¹⁶⁴ Cf. “Artistic movements are often highly localized; they usually thrive because of the speedy exchange of new ideas along city street.” SPATIAL EQUILIBRIUM, *supra* note 8, at 1.

¹⁶⁵ See Glaeser, *Nonmarket Interactions*, *supra* note 157, at 107.

City was raising taxes and cutting services and still going bankrupt, industries like finance, book and magazine publishing and law firms did not move.¹⁶⁶ To the extent that city economies have become more dependent on these industries, the degree to which the threat of exits limits city policy has likely decreased.

Another area where agglomeration economies are likely to create extremely sticky populations, even in the face of bad public policies, is among the poor. The poor have less access to transportation and, as such, are less able to move outside of a central business district and still access deep labor markets.¹⁶⁷ Further, the poor, by definition, have fewer resources than others and are hence more dependent on the deep reservoirs of social capital available in dense areas than other groups are.¹⁶⁸

Finally, those who put a very high value on social interactions and cultural amenities are likely to be very sticky populations. For instance, the very rich have a strong desire for density, as do young singles.¹⁶⁹ This is despite policy atmospheres that are not necessarily hospitable. Large cities tend to spend far more on redistributive programs than smaller ones and New York City, for instance, has a progressive income tax and places heavy restrictions on bars and dancing, an issue of some import to young singles.¹⁷⁰ The reason the rich stay in cities is that they value the large number of social interactions and cultural events more than they disfavor local taxes. Similarly, young singles care more about where other young singles locate than they

¹⁶⁶ See JOHN R. LOGAN AND HARVEY MOLOTCH, *URBAN FORTUNES* 262 (1987).

¹⁶⁷ *Id.* at 172-74.

¹⁶⁸ See SUDHUR VENKATESH, *OFF THE BOOKS: THE UNDERGROUND ECONOMY OF THE URBAN POOR* 47-57 (2008) (urban ghettos provide residents with informal food, shelter and child care networks and opportunities for informal employment.)

¹⁶⁹ Glaeser, *Nonmarket Interactions*, *supra* note 157 **Error! Bookmark not defined.**, at 106; FLORIDA, WHO'S YOUR CITY, *supra* note 90, at 243.

¹⁷⁰ Gillette, *Local Redistributions, Living Wage Ordinances and Judicial Intervention*, *supra* note 15, at 1061, 1061 n.14, n. 19; Jennifer Steinhauer, *After 77 Years, Cabaret Laws Face Rewrite*, N.Y. TIMES, June 24, 2003 at B5.

do about a negative policy atmosphere.¹⁷¹ These preferences limit sorting. Under the Tiebout model, it is hard to imagine anyone rich living in New York City.

For these groups particularly, but also generally, the existence of agglomeration benefits reduces the degree to which sorting for public policies occurs. Having many independent local governments will produce fewer benefits in a region with lots of agglomeration gains, and this will be crucially important for determining when and what powers to grant to local governments.

Empirical evidence backs up the claims in this section. Paul Rhode and Koleman Strumpf have challenged the idea that Tiebout sorting can explain a substantial amount of either inter-regional or intra-regional movement.¹⁷² First, they report pure polling data – according to the Annual Housing Survey, only 5% of moves are primarily motivated by public policy concerns.¹⁷³ Instead, social and employment factors drive most decisions to move.

Second, they present a challenge to the Tiebout model from its own logic. Under the Tiebout model, increases in mobility – decreases in transport costs – should increase heterogeneity in local policy options.¹⁷⁴ This is straight forward; the more cities any one citizen can reach, the more options they will have. Where individuals can choose among a greater number of local governments, there should be greater variation among city policies. However, the evidence shows that this does not occur. Using municipality-based data from the Boston MSA and nation-wide data at the county level, Rhode and Strumpf show that the fall in transportation times across the twentieth century is associated with *decreases* in local school tax

¹⁷¹ See FLORIDA, *supra* note 90, at 227-28.

¹⁷² Paul W. Rhode and Koleman S. Strumpf, *Assessing the Importance of Tiebout Sorting: Local Heterogeneity from 1885 to 1990*, 93 AM. ECON. REV. 1648, 1649-1652 (2003).

¹⁷³ *Id.* at 1649.

¹⁷⁴ *Id.*

heterogeneity.¹⁷⁵ That is, local governments have over time become more similar. Further, cities with higher commuting costs feature higher cross-municipality heterogeneity than cities with low commuting costs, which again is contrary to the predictions of the Tiebout model.¹⁷⁶

These results show the importance of agglomeration economies. If increased mobility is not associated with sorting, it means that the attractions of other people – agglomeration economies – are causing people to move (or not to move) despite an increased ability to commute to work from a greater set of towns. Agglomeration reduces the degree to which people sort for public policies.

Two scholars – Clayton Gillette and Richard Schragger – have recently based arguments about the effects of exit on local policy on a discussion of agglomeration economies. Gillette argues that local efforts at redistribution are far more frequent than would be predicted under the Tiebout model, and the reason for this is agglomeration.¹⁷⁷ This, he claims, can lead to benign or malign effects depending on the quality of local democracy.¹⁷⁸ Courts should take local political incentives into account when deciding whether a local redistributive policy goes beyond local powers. Schragger claims localities have a desire to attract mobile capital but also a desire to tax capital once it becomes fixed; as a result, local regulation often tends towards excessive “giveaways” to mobile capital but then “exploits” capital that becomes fixed in a locality.¹⁷⁹ He argues that localities should take advantage of the stickiness imposed by agglomeration economies to impose restrictions on entry by capital because this will help them limit the boom-

¹⁷⁵ *Id.* at 1164-67.

¹⁷⁶ *Id.* at 1661-64.

¹⁷⁷ Gillette, *Local Redistribution*, *supra* note 15, at 4-6, 27-32.

¹⁷⁸ *Id.* at 32-35.

¹⁷⁹ Schragger, *Mobile Capital*, *supra* note 15, at 9-15.

and-bust nature of capital flows and flight and to achieve regulatory ends that may be politically impossible at the national level.¹⁸⁰

While they aim at different normative questions, their analysis is similar in one respect – they both argue that the degree to which exit limits local economic regulation is affected by agglomeration gains. However, this effect is not specific to any single type of local policy. The presence of agglomeration limits the degree to which either residents or businesses are likely to move in response to a change in local policy, no matter what type of policy is changed. The same dynamic they discuss with respect to redistributive policies or regulation of industry will apply to any provision of public services. Where there is agglomeration, sorting will impose less of a restriction. For an individual or firm with strong economic reasons to stay in a city based on the identity of their neighbors, the mere fact that garbage collection has gotten worse or crime has gone up may not be enough of a reason to leave, even if some other government is offering services that person or firm prefers. What limits the degree of movement is how much they need to be located near their neighbors.

Further, studying the effect of agglomeration on exit (and entry) can take us beyond simply stating that agglomeration limits sorting. By looking at the types of agglomeration, we can understand *how* and *when* agglomeration is likely to affect sorting.

This section should have made clear that the existence of agglomeration can reduce the gains from sorting. The next section will discuss the converse effect, how sorting effects agglomeration.

ii) Sorting Reduces Agglomerative Efficiency

¹⁸⁰ *Id.* at 36-38, 48-53.

Just as agglomeration reduces the efficiency of sorting, sorting likely reduces agglomerative efficiency. This is because sorting forces changes in location and density and provides differential benefits to dense and less dense areas.

By its very nature, Tiebout sorting requires people to move in order to get their preferred set of local public policies. Were what we now consider to be local public services provided by the federal government in a location-neutral way, people would decide where to live in a way that maximized agglomeration economies to them minus congestion costs.¹⁸¹ Movement away from that point can generate costs, specifically all the transactions and other interactions that would have occurred had individuals and businesses located in their ideal location (the amount of the cost will equal the difference between the value of the transactions undertaken in each location). As Tiebout sorting will cause people to move away from their pre-governmental optimal location decision, it will reduce agglomerative efficiency. Of course, no individual will move to get public policies that are worth less to her than the value of the agglomeration she is giving up. However, as the location of one person or firm affects others, the harm to agglomeration caused by sorting can either reduce or completely eliminate (or even make negative) the gains from sorting.

Further, Tiebout sorting does not just cause random movement – it causes reduced density. For Tiebout sorting to produce gains, there have to be a lot of localities.¹⁸² Otherwise, it is likely that in any given locality, there will be a lot of dissatisfaction with government policies. Bruce Hamilton’s work shows that these localities have to take up a lot of space, as they have to

¹⁸¹ See *Are Cities Dying?*, *supra* note 9, at 150.

¹⁸² Truman Bewley argues that, to reach an optimal match between preferences and policies in the Tiebout model, there must be an equal number of governments and preferences. Bewley, *supra* note 137, at 717. However, even if this condition is not met, there can be gains from sorting, and the Tiebout model can do explanatory work. See Oates, *The Many Faces of the Tiebout Model*, *supra* note 3, at 30-31. As William Fischel put it: “The Tiebout Model Works Okay.” THE HOMEVOTER HYPOTHESIS, *supra* note 141, at 70.

limit their population in order to stop subdivisions of property that would impair their ability to set an average level of public services.¹⁸³ Given relatively fixed jurisdictional boundaries, this means regions have to spread out.

To the extent that the location decisions of individuals is suboptimal even in the absence of local governments, it is because individuals fail to take into account their individual effect on the agglomeration gains available to others.¹⁸⁴ That is, individuals will underrate the gains from density. The spreading caused by zoning will exacerbate this problem by systematically-reducing density beyond the market-driven set of individual location decisions.

Further, the spreading caused by zoning in a region reduces all types of agglomerative efficiency.¹⁸⁵ As people spread out in space, the degree to which they are part of the same labor, consumption and social markets goes down. Spreading causes transportation costs inside a metropolitan region to go up, limiting the gains from forward and backward linkages. And spreading reduces information spillovers because it has a negative effect on the number of

¹⁸³ See notes 142-143 and accompanying text.

¹⁸⁴ The market for property likely produces relatively efficient results for individuals (absent local governmental distortions) but not necessarily for large firms making long-term investment decisions. See note 152152.

¹⁸⁵ In a little-discussed chapter of his classic work, *THE ECONOMICS OF ZONING*, William Fischel noted similar costs. FISCHEL, *THE ECONOMICS OF ZONING*, *supra* note 144, at 252-265. See also Eric Hanushek and Kuzey Yilmaz, *The Complementarity of Tiebout and Alonso*, 16 (2) *J. HOUSING ECON.* 243 (2007). Using a model that assumes agglomeration happens only in the central business district (CBD), Fischel argued that low density suburban development can cause metropolitan areas to either spread out or to become excessively congested, as people forced out of near-in suburbs either flock to the city or to the exurbs. However, he notes that there are limits on moving to the city, particularly the quality of the housing stock and, as such he says that “my working hypothesis is that the deleterious effects of large-lot suburban zoning are excessive amounts of suburbanization.” *Id.* at 264. This reduces agglomerative efficiency. *Id.* at 269. While this paper largely agrees with Fischel’s analysis, his use of a CBD-centric model is problematic. First, it ignores the costs of spreading in the suburbs themselves. Even if each suburb maximizes its own property value using zoning, it does not pay attention to the costs on its neighbors, and artificially low densities in neighboring suburbs generate lost agglomeration efficiencies. Second, the central city (or cities) in a region faces similar pressures as the suburbs. Although central cities are somewhat more willing to sacrifice sorting gains in return for agglomeration gains, they too make substantial efforts to use zoning to restrict entry to juice local housing prices. This does not suggest that Fischel is incorrect (just the opposite, in fact), but rather that the CBD agglomeration model on which his model rested is too limited. Agglomeration and Tiebout sorting are continuous variables and must be treated as such.

interactions people have.¹⁸⁶ This is not to say that all of these effects will be the same: it is relatively safe to assume that, given current transport costs, the effect of spreading on industry co-location is very small, whereas the effect on information spillovers, which are premised on personal contact with neighbors, is likely large.¹⁸⁷ However, it is certain that extensive zoning has a negative effect on agglomerative efficiency.

This effect is national as well as local. In the United States, there is heavier zoning in the most productive regions of the country – particularly coastal areas like Boston and San Francisco – than in Sunbelt cities like Houston or Phoenix.¹⁸⁸ This substantially increases the cost of housing in these coastal regions, and thereby drives population away from the most productive regions and towards less heavily-zoned regions. Ed Glaeser notes: “[I]t’s a bad thing for the country that so much growth is heading to Houston and Sunbelt sister cities Dallas and Atlanta. These places aren’t as economically vibrant or as nourishing of human capital as New York or Silicon Valley. When Americans move from New York to Houston, the national economy simply becomes less productive.”¹⁸⁹

Sorting also reduces density and hence agglomeration gains by providing relatively high benefits to rural and suburban areas. What the discussion in section III(b)(i) should make clear is that the gains from sorting will not be available equally to the entire citizenry. Those people who

¹⁸⁶ This spreading may also reduce some congestion costs, but it does not reduce the major form of congestion – increased rents. While reducing density, restrictive zoning does not permit more housing to be built, increasing the cost of housing. Edward Glaeser, Joseph Gyourko and Raven Saks have shown that in the most heavily zoned metropolitan areas, more than 50% of the value of housing is due to the “zoning tax,” or the effect zoning has on restricting housing supplies. Glaeser, Gyourko and Saks, *supra* note 24, at 339.

¹⁸⁷ See notes 162-165 and accompanying text. The effect on information spillovers will be particularly dramatic if Ed Glaeser and Jane Jacobs are right that diversity is a major source of spillovers. Tiebout sorting reduces diversity in policy preferences in any given community, and to the extent that this diversity is correlated with the type of diversity in the agglomeration literature (diversity of types of output), sorting will reduce information spillovers.

¹⁸⁸ Jon Gertner, *Home Economics*, N.Y. TIMES MAG., March 5, 2006 at 94; Glaeser, *Houston, New York Has a Problem*, *supra* note 154, at 72.

¹⁸⁹ *Id.*

value density – be they firms that gain from locating close to other suppliers or people who like downtown amenities – do not receive the same type of gains from sorting as people who do not. There are only few big dense cities in any given metropolitan area, meaning those desiring a high-cost-per-square-foot/high-density-of-other-people living situation have fewer choices among local governments. Also, the stickiness created by agglomeration reduces the degree to which policies are sensitive to preferences, and dense areas feature more agglomeration (and congestion).¹⁹⁰ When living away from centers of agglomeration, residents get to pick what mix of public services they receive, which makes them more attractive relative to dense areas, where that choice is not available. This reduces overall density.

It should be noted that this effect is separate from any effect having to do with how rich the people who live in any of these political subdivisions are. It is often assumed that the negative effect for cities generated by restrictive zoning and local financing of schools comes from the fact that they provide to the wealthy the opportunity to receive premium public services by grouping together in small suburbs, thereby avoiding sharing resources with poorer residents.¹⁹¹ This often is the case, but there is no reason to think that this bias is necessarily aimed toward providing benefits to far flung parts of a metropolitan area. It is not hard to imagine a story that is the exact opposite of the usual “rich flee the city to avoid redistributing their taxes to the poor in the city” story, with rich citizens flocking to the city and driving prices

¹⁹⁰The differential quality of local elections makes this problem bigger. See notes 147-150 and accompanying text. As William Fischel argues, in smaller towns, “home-voters” control local governments and the result is efficient Tiebout-style policies. In big cities, voters are more removed from local decision-making and hence policies do not necessarily maximize property values. The benefits of sorting in rural and suburban areas, in which governments are smaller, are greater relative to the benefits it provides big cities. This difference is compounded by the lack of political party competition at the local level, which denies big city voters the tool – a useful party heuristic – voters rely in elections in other large jurisdictions (e.g. federal, state) to partially overcome their lack of information about politics. See David Schleicher, *Why Is There No Partisan Competition in City Council Elections? The Role of Election Law*, 23 J. L. & POL. 419, 430-54 (2007).

¹⁹¹ See Nicole Stelle Garnett, *Suburbs as Exit: Suburbs as Entrance*, 106 MICH. L. REV. 277, 278 (2007) (discussing academic understanding of suburbs).

up (and supply down, by means of exclusionary zoning, regulation and preservation of landmarks) and driving out the poor.¹⁹² Regardless of which way it cuts, the incentives that local taxation creates for the wealthy to co-locate will produce additional movement away from the naturally-occurring density and distribution of people.

It should be made clear that I am not claiming that local governments do not take agglomerative efficiency into account at all when making policy. They surely do. Instead, I am claiming that sorting between local governments for packages of public services harms agglomerative efficiency and that the full costs of sorting on agglomerative efficiency are not factored in, in whole or even in large part, by local governments. The benefits from agglomeration accrue across local governmental boundaries, as, for instance, people learn from others in a neighboring town, but all the benefits of sorting are felt inside a local government. This means that individual towns are unlikely to set their policies to maximize the combined efficiency of sorting and agglomeration.

The effects discussed in this section are thus closely related to the argument the Tiebout model is flawed because local policies generate externalities felt by other communities.¹⁹³ However, these arguments generally point to distributional externalities – things like reducing another city’s tax base or refusing to accept locally unwanted land uses – which are important but are not related directly to overall efficiency.¹⁹⁴ The section explains the core economic harm not factored in to local decisions, namely the degree to which a system that creates happiness with local policies (sorting gains) reduces the overall economic productivity of a region

¹⁹² For a discussion of whether this is currently occurring, see Alan Ehrenhalt, *Trading Places: The Demographic Inversion of the American City*, THE NEW REPUBLIC, August 13, 2008 at 84.

¹⁹³ See, e.g., Schragger, *Consuming Government*, *supra* note 6, at 1831; Richard Briffault, *Localism and Regionalism*, 48 BUFFALO L. REV. 1, 18 (2000).

¹⁹⁴ See, e.g., Schragger, *Consuming Government*, *supra* note 6, at 1836-42.

(agglomeration gains). A system that permits and encourages sorting will reduce agglomerative efficiency regardless of which policies prefer (and cities enact.) That people have different preferences for policies and for their neighbors is the driver of the conflict between sorting and agglomeration. The externalities of local policies are generated by the fact that no city has the proper incentive to balance the benefits it creates for its residents with the harm generating different policy options creates to the optimal location decisions for firms and individuals across a region.

Also, describing the problem as a conflict between agglomeration and sorting ties the external effects of local policy to the internal questions facing a city. Cities have to make trade-offs between promoting a perfect allocation of government services to tastes for services and agglomerative effects – e.g. does it make sense to raise commercial property taxes to fund schools if that would result in popular restaurants and cafes that residents like moving out of town. However, local governments are unlikely to make an optimal balance between agglomeration and sorting, as their residents get all the benefits if they match services to preferences but they only get a portion of the benefits from regional agglomeration.

As this section has shown, having a system of local governments which people can sort themselves among based on preferences about local policies reduces the overall agglomerative efficiency of a region, and individual cities will not internalize the costs that providing locally-preferred policies has on a region's overall economic activity.

V. APPLYING A LAW AND ECONOMIC APPROACH TO THE CITY: DILLON’S RULE,
HOME RULE AND THE “THIRD TALE OF THE CITY”

As the existence of agglomeration reduces the gains from sorting, and sorting reduces the gains from agglomeration, it is not surprising that it is difficult to allocate power to local authorities in a way that maximizes both. Decisions about how much, and which, power to give to local governments will have differential effects on agglomerative and sorting efficiency, and the efficiency of these effects will affect each other.¹⁹⁵ This tradeoff is easiest to see in the debate over whether to form regional governments. Having regional governments would allow policy to be made at the level at which agglomerations are felt fully – the regional economy – but would reduce or eliminate Tiebout sorting gains.¹⁹⁶

¹⁹⁵ One way to think about this tradeoff is as a production possibilities frontier, where initial gains in sorting (say, going from one local government in a region to two) come at a small cost in agglomeration but as the number of local governments and their ability to make decisions without respect to regional issues increases, the effect grows larger. Bob Ellickson has suggested that a similar tradeoff exists between “bonding” social capital and “bridging” social capital in urban areas. See Robert C. Ellickson, *The Puzzle of Optimal Social Composition of Neighborhoods* in *THE TIEBOUT MODEL AT FIFTY*, *supra* note 3, at 204.

¹⁹⁶ This claim requires one coda. Clay Gillette, in two brilliant articles, advanced an argument that the gains from sorting and the gains from regionalism could be balanced if localities could easily contract with one another. See Gillette, *Interlocal Bargains*, *supra* note 15, at 192-209; Gillette, *Interlocal Cooperation*, *supra* note 15, at 365-371. He argues that the interdependence of regional economies gives suburbs some incentives to agree to contract with cities to provide regional services, and their status as repeat players can solve any prisoner’s dilemma or free rider problems. Gillette, *Interlocal Bargains*, *supra* note 15, at 240-250. Instead, the problem is high contracting costs – localities cannot monitor each other’s behavior and courts are loath to interfere with local budgetary decisions, making enforcing contracts difficult. *Id.* at 257-60. My underlying claim... is that the most significant obstacles to cooperation lie in high contracting costs rather than in myopia or an absence of altruism.” Gillette, *Interlocal Cooperation*, *supra* note 15, at 367. Were cities able to easily contract, the conflict between agglomeration and sorting would be reduced substantially.

However, agglomeration-promoting policies present a particularly difficult case for interlocal contract. Agglomerative growth creates unstable equilibria. The same underlying conditions – transport costs, natural advantages -- can lead to very different distributions of economic activity based on historical conditions. See *SPATIAL ECONOMY*, *supra* note 8, at 67-76. This means that it will be very hard to tell if city that is party to a interlocal contract is acting in good faith. If a city agrees to promote development in certain ways in return for suburban grants, the suburb will not be able to tell if the city is shirking or not because there is no necessary one-to-one relationship between underlying variables (e.g. the quality of service) and development.

The debate over regionalism is both important and extensive.¹⁹⁷ Rather than address it directly, this section will attempt to show how understanding the relationship between agglomeration and sorting can and should change our understanding of every debate in local government law. Specifically, it will analyze two of the central issues in local government law – Dillon’s Rule, the traditional American rule governing local governmental power, and current “Home Rule” regimes.

a. THE “TWO TALES OF THE CITY”: CURRENT UNDERSTANDINGS OF DILLON’S RULE

Among local government law’s doctrines, perhaps the most central and one of the most controversial is Dillon’s Rule. Formulated by John Dillon in his Commentaries on the Law of Municipal Corporations, Dillon’s Rule provides:

A municipal corporation possesses and can exercise only the following powers: (1) those granted in express words; (2) those essential to the accomplishment of the declared objects and purposes of the corporation – not simply convenient, but indispensable. Any fair, reasonable, substantial doubt concerning the existence of power is resolved by courts against the corporation and the power is denied.¹⁹⁸

Under Dillon’s Rule, local governments had sharply circumscribed powers. “Dillon’s Rule operates as a standard of delegation, a canon of construction and a rule of limited power. It reflects the view of local governments as agents of the state by requiring that all local powers be traced back to a specific delegation: whenever it is uncertain whether a locality possesses a particular power, a court should assume that the locality *lacks* that power.”¹⁹⁹ Through a series of decisions in nineteenth and early twentieth centuries, Dillon’s Rule became the default rule

¹⁹⁷ For reviews of this debate, see Gillette, *Interlocal Bargains*, *supra* note 15, at 188-192; Cashin, *supra* note 6, at 1991-2015; Briffault, *Our Localism II*, *supra* note 6 at 425, 451-53.

¹⁹⁸ DILLON, *supra* note 26, at 101-102.

¹⁹⁹ Briffault, *Our Localism, Part II*, *supra* note 6, at 8.

governing city power throughout the country.²⁰⁰ When combined with the specific allocations of power to localities, the establishment of the rule meant that courts enforced a regime of “city powerlessness.”²⁰¹

In addition to being a judge and a scholar, Dillon was a corporate lawyer, serving as counsel to Union Pacific Railroad, Western Union and famed industrialist Jay Gould.²⁰² It is his work as a railroad attorney that provided the raw material for Dillon’s Rule. Railroads were the largest industry in the United States just before and after the Civil War, and their growth required a great deal of capital investment. Entrepreneurs frequently went into business with localities. The reasons for these subsidies were clear: “[L]ocal commercial interests and municipal leaders ... hoped to increase business activity and divert trade from rival cities.”²⁰³

Unsurprisingly, many of these railroad ventures went bust. This round of defaults led some cities to attempt to revoke the bonds and others facing enormous tax burdens.²⁰⁴ Dillon formulated his rule in direct response to the efforts of cities to manipulate the transportation system. “It has, unfortunately, become quite too common with us to confer upon our [municipal] corporations extraordinary powers, such as the authority to aid in the construction of railways, or other undertakings, which are better left to private capital. . . .”²⁰⁵

Much modern local government law scholarship has aimed its sights directly at Dillon’s Rule. Gerald Frug famously attacked Dillon’s Rule as the fullest expression of a classically

²⁰⁰ See BRIFFAULT AND REYNOLDS, *supra* note 33, at 266-67.

²⁰¹ Frug, *supra* note 16, at 1057.

²⁰² See Williams, *supra* note 30, at 91.

²⁰³ James W. Ely, Jr., “The railroad system has burst through State limits:” *Railroads and Interstate Commerce, 1830-1920*, 55 ARK. L. REV. 933, 934 (2003)

²⁰⁴ Williams, *supra* note 30, at 92-95.

²⁰⁵ DILLON, *supra* note 26, at 118.

Liberal, anti-democratic, anti-localist view of the State.²⁰⁶ Frug argued that the elite backers of Dillon's Rule sought to disempower city governments because they were intermediate actors, neither wholly private nor wholly State, and thus undermined a liberal market order. Further, elites backed limits on city power because of their discomfort with the ethnic political machines that led cities.²⁰⁷ To Frug, Dillon's Rule is a limit on true democratic governance, and thereby, on individual fulfillment.²⁰⁸

In contrast, the Tiebout model provides support for Dillon's Rule. One of the model's crucial assumptions is that cities will only provide purely local public services. If local public services have external effects, the Tiebout model breaks down. Dillon's Rule limits localities to those powers assigned to them by the state. States likely will only assign to localities those powers that are local in effect, preserving the efficiency of Tiebout sorting. Rick Hills summarizes the argument clearly:

The vast majority of municipalities govern relatively small territorial jurisdictions and therefore have both the capacity and incentive to impose external costs on nonresidents immediately outside their sharply circumscribed boundaries.... [I]t makes sense to require some larger jurisdiction - say, the state legislature - to monitor municipal actions and ensure that they are not efforts to exploit nonresidents or internal minorities. Dillon's rule and analogous doctrines serve such a purpose: they require state legislatures to review each category of municipal action and expressly authorize it.²⁰⁹

Dillon's Rule, on its own, of course, does not limit local power to purely local public services.²¹⁰

However, as Hills notes that "there will tend to be a high correlation between those activities that

²⁰⁶ Frug, *The City as a Legal Concept*, *supra* note 16, at 1109-1120.

²⁰⁷ *Id.*

²⁰⁸ *Id.* at 1129. FRUG, CITY MAKING, *supra* note 7, at 45-49.

²⁰⁹ Hills, *supra* note 2727, at 1275.

²¹⁰ See Clayton Gillette, *In Partial Praise of Dillon's Rule, or Can Public Choice Theory Justify Local Government Law*, 67 CHI-KENT. L. REV. 959, 971-973 (1991) (arguing that Dillon's Rule only can be justified as a limits on the one-sided lobbying common at the local level).

municipalities have clearest authority to perform based on state statute and tradition, and those activities that are least likely to impose external costs.”²¹¹

Richard Briffault has argued that the Tiebout model and Frug provide “two tales of the city,” with respect to the question of whether cities, in fact, have power and whether their exercise of the powers they do have is normatively good.²¹² These two tales provide us with two very different conceptions of the normative status of Dillon’s Rule. They do have one thing in common, though. Under both understandings, the utility of Dillon’s Rule is ahistorical – it is either bad, and has always been bad, or it is good and always been good. The next section will provide a third tale of the city, one that examines the benefits of Dillon’s Rule when it was first enacted and looks at how changes in the American economy over the past 150 years changed the effects of the rule.

b. APPLYING A LAW AND ECONOMIC APPROACH TO THE CITY: A THIRD TALE ABOUT DILLON’S RULE

Approaching Dillon’s Rule from the perspective of agglomerative efficiency provides a different, historically contingent view of the benefits and costs of Dillon’s Rule. This is a story about transportation costs. Shipping goods across the country in the late nineteenth and early twentieth century was extremely expensive and, as a result, railroad and shipping hubs became manufacturing hubs to reduce transport costs on intermediate goods. This gave local governments enormous incentives both to subsidize railroads in their jurisdiction, and thereby distort the railroad network, and to subsidize industry, which could artificially generate

²¹¹ Hills, *supra* note 16, at 1275 n.224.

²¹² Briffault, *Our Localism, Part II*, *supra* note 6, at 393.

agglomeration at the cost of development elsewhere in the economy. Dillon's Rule served to check these impulses and hence provided gains for the overall economy.

The basic logic of the case for Dillon's Rule in the economy of the late nineteenth century is built around the Fujita, Krugman and Venables model, which is based on the first of Marshall's three explanations for agglomeration, the desire of companies to be near their suppliers and customers in the face of high transportation costs.

Let's go back to the model, which examines where mobile manufacturing firms decide to locate. In the model, there are two regions and it is costly to ship manufactured goods between the regions.²¹³ If these transport costs are real but not infinite, a manufacturing firm that locates in one region will create increasing returns, as the new entrant will provide that region with a new variety/lower cost of the manufactured good, and other manufacturing firms will want to located in that region to take advantage of new varieties and lower costs for manufactured goods (which they use as inputs).²¹⁴ Moving to the region with more manufacturing firms will also give any new entrant access to richer consumers – the people who work for the manufacturing firms.²¹⁵ As transportation costs fall, though, there is less incentive to agglomerate – the gain from locating near other suppliers is less.²¹⁶ The manufacturing sector will reduce its concentration, but exactly when that will occur is unclear, as the history of development provides lots of gains (there are a lot of suppliers already there, so companies are loath to leave even if the

²¹³ SPATIAL ECONOMY, *supra* note 8, at 66-79

²¹⁴ *Id.* at 67.

²¹⁵ *Id.*

²¹⁶ *Id.*

cost of being further from them has fallen).²¹⁷ At some point, though, the manufacturing sector will hit a “break point” and will uncluster.²¹⁸

As such, it is important to look at the state of transportation costs during the Dillon’s Rule period, and today. It is hard to overstate the changes in transportation costs and communication in the United States in the past century. The historical record shows very clearly that transport costs at the end of the nineteenth and beginning of the twentieth century were high as a percentage of the cost of producing goods overall and much, much higher than they would be forty or fifty years later. This fact explains much of the development of American cities. Ed Glaeser and Janet Kohlhase documented the change in transportation costs from the turn of the century to today and its effect on city form and noted the following facts:²¹⁹

- The cost of transporting goods was 9% of US GDP the first year records were kept, in 1929, as opposed to 2.3% today, exclusive of shipping costs internal to firms.
- In 1900, the twenty largest cities in America were all on waterways to permit easy shipping.
- The cost, in real dollars, of transporting a ton of goods one mile in 1890 was 18.5 cents, as opposed to 2.3 cents today.

These facts are only illustrative – one could cite an endless number of statistics showing that the real costs of transporting goods fell dramatically over the course of the twentieth century and particularly during the second half of the century.²²⁰ The keys to this story have been the rise of the combustion engine, the jet airplane and the shipping container, which made sea, rail and road

²¹⁷ *Id.* at 68, 70-72.

²¹⁸ *Id.*

²¹⁹ Glaeser and Kohlhase, *supra* note 28, at 128.

²²⁰ For another excellent summary of the decrease in transportation costs, see Rhode and Strumpf, *supra* note 172172, at 1665-67.

transportation interoperable and far more efficient.²²¹ Further, these facts largely do not capture another massive change in transportation costs, the rise of communications technology, from the telephone to the internet, which have rendered inter-city communication effectively costless.²²²

One area where transportation costs have remained high is in moving human beings.²²³ Naturally, this too has become more efficient, but, as opposed to the shipping costs of goods domestically, which are now small enough to be ignored in most economic models, the cost of moving people is still very high. The reason for this is not only that people do not fit into shipping containers particularly well; most of the economic cost of transporting people does not come from the direct costs of operating planes or cars, but from the opportunity costs of people's time.²²⁴ We are not producing much economic activity when we sit in traffic or in airport lounges. As people get more productive over time, in economic terms, inter-city travel (and commuting inside a region) by people becomes more costly.

The fall in the cost of transporting goods, particularly when combined with the still-high costs of transporting people, has had dramatic effects on the form and content of city economies. Indeed, in 1870, there was an 87% correlation between the percentage of citizens in a state living in cities and the percentage employed in manufacturing.²²⁵ Even as late as 1950, seven of the eight largest cities in the country had a larger share of their residents employed in manufacturing than the national average.²²⁶ Today, the opposite is true. Manufacturers now increasingly locate in less dense areas, and most big cities have less manufacturing employment than the national

²²¹ See *Id.* at 4; MARC LEVINSON, *THE BOX: HOW THE SHIPPING CONTAINER MADE THE WORLD SMALLER AND THE WORLD ECONOMY BIGGER* 1-15 (2006).

²²² See Rhode and Strumpf, *supra* note 172172, at 1667.

²²³ Glaeser and Kohlhase, *supra* note 28, at 128-129.

²²⁴ *Id.*

²²⁵ *Are Cities Dying?*, *supra* note 9, at 144.

²²⁶ Glaeser and Kohlhase, *supra* note 28, at 138-39.

average.²²⁷ As falling transportation costs for goods harmed big city manufacturing, service and high-tech industries became strong agglomerating forces in metropolitan areas. This change determined which cities have been economically successful. Glaeser and Giacomo Ponzetto summarized this effect in the title of their paper, “Did the Death of Distance Hurt Detroit and Help New York?”²²⁸ In the second half of the twentieth century, almost all large American cities lost population, but those cities with high human capital like San Francisco, Boston and New York rebounded after the 1970s and grew substantially, while manufacturing and domestic transportation hubs like Cleveland and Detroit have continued to suffer.²²⁹ The decrease in transportation costs for goods hurt manufacturing cities, but helped cities with lots of innovators, who can disseminate their ideas more quickly and thus affect a larger share of the economy. Further, the things that drive agglomeration in cities like New York, Boston and San Francisco provide – deep skilled labor markets, knowledge spillovers, consumption and cultural opportunities – are protected by the high opportunity cost of transporting people, as firms and individuals need to locate in these cities to access these gains. Sociologist Saskia Sassen describes a similar trend happening globally with an added wrinkle. The added complexity of supply chains generated by globalization has led to a greater deal of centralization in information processing, with cities that have advantages in high-level service industries due to historical factors, like London, New York, and Tokyo, receiving most of the gains and becoming, in her formulation, “Global Cities.”²³⁰

²²⁷ *Are Cities Dying?*, *supra* note 9, at 145; Glaeser and Kohlhase, *supra* note 28, at 138-39.

²²⁸ Edward L. Glaeser and Giacomo A.M. Ponzetto, *Did the Death of Distance Hurt Detroit and Help New York?*, NBER Working Paper No. 13710 (December 2007).

²²⁹ *Id.* at 3-4.

²³⁰ SASKIA SASSEN, *THE GLOBAL CITY* xix-xxi (2d Ed. 2001).

This simplified history of the American economy fits the Fujita, Krugman and Venables model. Manufacturing first clustered in the face of high transportation costs then unclustered, leaving cities that relied on manufacturing, like Cleveland and Detroit, high and dry.²³¹

This story has implications for the efficiency of Dillon's Rule. Under the Fujita, Krugman and Venables model, cities have strong incentives to manipulate transportation costs. Their model does not feature a government, but if it did, it is clear that, in their simple two-region model, the government of the region in which manufacturing is located has an incentive to increase transport costs if it can, as long as it does not risk increasing to the point where trade is impossible. Each government further has an incentive to subsidize industry, as manufacturing interests create increasing returns, even where it would be inefficient if both regions did so.

Of course, in the 1860s and 1870s, cities were not directly increasing the cost of transportation. In fact, cities were subsidizing railroads, which were essential to *reducing* transport costs. However, the story still fits. If you move to a multi-region version of the Krugman et al. model, it becomes clear that there will be multiple manufacturing centers.²³² Firms will locate where outbound transport costs are the lowest – they still want to sell their final goods to all locations.²³³ Attracting these firms will cause agglomeration, as other firms will move to where the first firms locate. Because transport costs are still high, these hubs will be centers of manufacturing agglomeration, even if the hub falls out of use.²³⁴ Thus, cities had an incentive to subsidize the construction of railroads, as it would have created increasing local returns.

²³¹ Glaeser and Kohlhase, *supra* note 28, at 138-39.

²³² SPATIAL ECONOMY, *supra* note 8, at 151-79.

²³³ *Id.* at 227-36.

²³⁴ “The hub provides some continuing advantages to a city, but the main thing it does is provide the city's site with an advantage over other sites during that critical period when the economy's growth has made the emergence of a new city necessary.” *Id.* at 236.

Local governments in the nineteenth century thus had strong incentive to compete to subsidize railroads.²³⁵ Collectively, these subsidies were likely inefficient even if it made sense for each town, as it would result in overinvestment.²³⁶ Further, to the extent that only one stretch of rail could economically successfully exist in a region, shaping the route according to which cities were willing to subsidize it also would be inefficient, as it would be responsive not to economic conditions but rather to political interests. The rail system, which was the largest industry in the U.S. and the method of shipping almost all goods, would be bent out of shape by city subsidies.

The use of local money to subsidize railroads led to waste and distorted transportation lines. This imposed costs on the entire economic system. Limiting the ability of cities to do so would increase overall economic efficiency. Dillon's Rule did this by removing from cities the default power to do whatever they wanted, and, as states were more likely to care about broader economic concerns, states were less likely to approve of city investments in railroads.

This explanation fits Dillon's own reasoning. There is no indication that he was concerned with promoting inter-city policy competition or gains from sorting; he was no Tieboutian. However, he was worried about the interference of cities with the nation's most important industry – railroads.

This alone, though, does not explain the scope of Dillon's Rule. Surely, Dillon could have devised a rule that that stopped cities from subsidizing railroads without dramatically limiting other forms of city power. However, the transport costs story also explains the broad

²³⁵ "Cities had visions of metropolitan greatness, and they indulged in numerous ill-considered enterprises. They competed with each other for railroad transportation and subscribed freely for railroad stocks" E. Blythe Stason, *State Administrative Supervision of Municipal Indebtedness*, 30 MICH. L. REV. 833, 837 (1932).

²³⁶ See Williams, *supra* note 30, at 93 (cities in 1850s were forced to repudiate bonds because of railroad failures, leading to financial system pandemic).

ambit of Dillon’s Rule. Although funding railroads was the most dramatic way to grow a city at the expense of other places, it was not the only way. In a high transportation costs situation, there are substantial increasing returns to city size – each new manufacturing entrants increases local variety and reduces local costs, inspiring new entrants.²³⁷ Thus, cities have an incentive to subsidize businesses or develop their own public businesses in order to generate city size, which in turn would generate agglomeration. The resulting subsidy competition would reduce national efficiency, as this tax and subsidy competition would move industry, not create growth.²³⁸

Dillon himself was clearly concerned not only with the power of cities to invest in railroads, but also their ability to invest or subsidize other types of companies as well. “There is no implied power in a municipal corporation to take stock in a manufacturing company located in or near the corporation, or to aid or engage in other enterprises, essentially private.”²³⁹

Dillon’s Rule certainly did not end tax competition or infrastructure enhancements to subsidize new entrants, but by limiting the powers of cities to directly invest in companies or to provide more direct kinds of subsidies, Dillon’s Rule served to limit inefficient competition to lure industry.²⁴⁰ By limiting public policies to those approved by the state legislature, it also limited other more indirect forms of subsidy. States were unlikely to give local governments the power to make investments that would only harm other areas of the same state.

Thus, Dillon’s Rule limited the ability of local governments to reduce the efficiency of industry and transportation through subsidy competition. It is also relatively clear that, in our new, low transportation costs world, Dillon’s Rule, where it is still applied, no longer contributes

²³⁷ See notes 212-217 and accompanying text.

²³⁸ This might not be true if local subsidies are targeted at industries that would provide unique benefits to that city (as opposed to where they would have located otherwise). See Garcia-Milà and McGuire, *supra* note 22, at 103. There is no evidence that the industrial policies of the period were tied to local advantages.

²³⁹ DILLON, TREATISE ON LOCAL GOVERNMENT, *supra* note 26, at 227.

²⁴⁰ It has not, of course, ended such activities. See Schragger, *Free Trade Constitution*, *supra* note 15, at 1134-45.

to efficiency in the same way. Dillon’s Rule still promotes sorting efficiency, but its role in promoting agglomerative efficiency has likely passed.

c. APPLYING A LAW AND ECONOMIC APPROACH TO THE CITY: THE THIRD TALE AND HOME RULE

The economy for which Dillon’s Rule was designed is no more. Then again, neither is Dillon’s Rule, at least in its original incarnation. Nearly as soon as Dillon’s Rule became established, a movement for “home rule,” began, with Missouri granting home rule to St. Louis in 1875 and California granting home rule to San Francisco in 1879.²⁴¹ This original form of home rule – often referred to as “imperium in imperio” home rule – consisted of a state constitutional grant of power to cities to initiate laws governing local affairs and provided cities with a sphere of immunity from state legislation. However, the determination of what was “local,” and hence what home rule cities could do was in the hands of state courts, which often interpreted the concept narrowly. The 1950s and 60s (roughly contemporaneous with the beginning of the end of the transport-cost-driven urban agglomeration of manufacturing) saw the rise of “legislative home rule.”²⁴² Under this concept, home rule cities were free to make policy in any area where the state legislature did not bar or pre-empt them from acting.

All but two states now have some form of home rule for at least some cities, and thirty seven states have some type of home rule for some of their counties.²⁴³ However, home rule differs in form from state to state and inside states, with many states dividing cities between “home rule” cities and others, which are governed by Dillon’s Rule or some variant.²⁴⁴ Further, categories like ‘imperio’ or legislative home rule tend to bleed into one another, with judicial

²⁴¹ BRIFFAULT AND REYNOLDS, *supra* note 33, at 281-85.

²⁴² *Id.*

²⁴³ Barron, *supra* note 34, at 2345-46.

²⁴⁴ BRIFFAULT AND REYNOLDS, *supra* note 33, at 284-85.

attitude towards local power and the power of cities in state legislatures often proving more important than the state constitutional system in determining how much power is available to local governments.²⁴⁵

As might be expected, this variety of rules also generates a variety of opinions. Gerald Frug claims that home rule did little to empower localities. “[S]tate control of cities has not been affected significantly by state constitutional protection for home rule.”²⁴⁶ Richard Briffault argues that, in fact, cities were granted substantial autonomy under home rule and exercise that power to engage in all sorts of regulation, public ownership of utilities and other acts simply inconsistent with Frug’s claim of city powerlessness. “Certainly, whatever the technically limited status of local units and their formal subservience to the state, local governments have wielded substantial lawmaking power and undertaken important public initiatives.”²⁴⁷ However, he argues that this enhanced local power exacerbated the problems of inter-local externalities.

Recently, David Barron provided a new take on the meaning of home rule that has provided much of the impetus for the re-examination of home rule in recent legal scholarship.²⁴⁸ He argues that home rule has not proved to be a neutral device that provides power for local governments, but rather is a way of shaping the way local governments can and cannot use power. “Current law is for this reason best understood as itself producing (or perhaps reflecting) a substantive idea of local power, rather than protecting local legal autonomy as such.”²⁴⁹

Barron is right to focus not on the extent of power granted to cities, but instead on what powers are given to cities and how that shapes local policy. However, his description of what

²⁴⁵ *Id.*

²⁴⁶ Frug, *supra* note 16, at 1109.

²⁴⁷ Richard Briffault, *Our Localism, Part I*, 90 COLUM. L. REV. 1, 15 (1990)

²⁴⁸ Barron, *supra* note 34, at 2345.

²⁴⁹ *Id.*

home rule does and does not do is questionable. He claims that “[c]urrent law produces a vision of local power that privileges the right of a local government either to promote private development that favors ‘exchange values’ over ‘use values’ or to prevent development that undermines exclusivity.”²⁵⁰ However, the ideas on either side of the “or” in that sentence are very, very different. The clause before the “or” refers to claims by sociologists John Logan and Harvey Molotch that cities are “growth machines” that excessively promote monetizable things like property development or “exchange values” at the cost of destroying non-market “use” values like open space that are in the interests of residents.²⁵¹ The clause after the “or” argues that towns excessively limit development by promoting open space and big housing lots, which renders them more valuable to their residents but excludes others. It seems odd that state law would permit two diametrically opposed types of local policy and nothing else. Barron recognizes this conflict, but claims that home rule provides local governments with an either/or choice for local governments that precludes many options that would promote social values that he would prefer, like using inclusionary zoning and anti-discrimination law to reduce exclusionary development without encouraging runaway urban growth.²⁵² Barron notes that he is unsure whether these policies will work at achieving his ideal of mixed-use communities, but argues that state law makes finding out impossible.²⁵³

²⁵⁰ *Id.* at 2345-46 (quoting LOGAN AND MOLOTCH, *supra* note 166, at 1.) The distinction between “use values” and “exchange values” is problematic when capitalization is taken into account. “Use values,” like nice nearby open spaces, end up showing up in housing values, as anything current residents value will likely be valued by others who would be willing to pay for it as well, and become “exchange values.”

²⁵¹ See LOGAN AND MOLOTCH, *supra* note 166, at 6-10. The terminology, of course, is taken from Marx. KARL MARX, A CONTRIBUTION TO THE CRITIQUE OF POLITICAL ECONOMY 19-20 (1859).

²⁵² Barron, *supra* note 34, at 2345-46. As Barron notes, this is only true for some states – some states, of course, permit the very things he thinks they should.

²⁵³ *Id.* Barron never quite explains exactly why mixed-use communities are superior to, say, dense urban areas or woody suburbs. He states that sprawl is bad, but does not provide a definition of sprawl, or explain what factors should be used to determine whether land use is too spread out or too dense (or a way to figure out whether communities are sufficiently diverse.) Without a metric, it is difficult to assess his claim that state law is normatively unattractive.

However, it is unclear that state law regularly forces cities into this either/or choice. Cities engage in all sorts of regulations that interfere with both urban expansion or sprawling development, from using zoning to keep big box retailers or chain stores out of cities to forcing developers to negotiate with local groups to create community benefits agreements.²⁵⁴ More importantly, cities regularly use their ordinary zoning and regulatory powers to balance the gains and costs of density in different ways, resulting in cities of a range of densities and diversity.²⁵⁵ Finally, Barron's dichotomy simply does not address some of the most important local powers, like primary education or policing.

A clearer theory of what is and what is not included in the home rule power springs out of the different sources of efficiency discussed in this paper. States generally give local governments power over an issue if having different policies in each town will promote the ability of mobile citizens to choose their preferred package of policies. That is, local governments are given powers in order to promote sorting efficiency. State governments generally reserve for themselves both the ability to limit the harm of sorting on agglomerative efficiency and to provide and locate public goods which will substantially affect agglomerative efficiency. This division does not explain all the divisions between state and local power – no parsimonious explanation could – but it largely seems correct, at least as a first approximation.

This division of power can be seen in a number of areas. Consider transportation policy. For instance, in New York state, home rule cities have the power to regulate traffic, parking and

²⁵⁴ See Kathleen Codey, *Note and Comment: Convenience and Lower Prices, But at What Cost? Watching Closely as Discount Superstores Creep into Manhattan?*, 13 J.L. & POL'Y 249 (2005) (limits on big box stores); Sheila Foster and Brian Glick, *Integrative Lawyering: Navigating the Political Economy of Urban Redevelopment*, 95 CALIF. L. REV. 1999 (2007) (community benefits agreements).

²⁵⁵ Glaeser and Gyourko have calculated a figure to what percentage of housing costs are attributable to zoning and other regulatory costs. The Chicago region, for instance, imposes a “zoning tax” or the increased cost of building a house over construction and land costs, equal to roughly 5% of the average value of a home. The San Francisco region imposes a zoning tax of 53%. *Why Is Manhattan So Expensive?*, *supra* note 24, at 49. The result is that Chicago has cheaper, denser housing.

to repair roads, but cannot regulate their streets in ways that are biased against outsiders or charge tolls without the state authorization.²⁵⁶ That is, policies that are aimed at promoting the relative quality of the roads is a local function, but policies meant to promote the ease of travel between cities or to reduce congestion through charging fees is a state function.²⁵⁷ Or housing. Cities generally have the power to engage in zoning, which as discussed above is necessary for effective sorting, but the state retains for itself the power to restrain excessive zoning restrictions in the name of agglomerative efficiency.²⁵⁸

This is a positive claim. However, if it is correct, there is an important normative implication. If state governments are responsible for ensuring a proper balance between sorting gains and agglomerative efficiency, there are strong reasons to believe that they will not do so efficiently. States are not coextensive with regions – they include many regions and many regions cross state lines – and hence do not make policy with the sole goal of maximizing regional development. Further, state governments are often quite concerned with redistributing money from rich regions to poorer ones that are well represented in the state legislature. As George Washington Plunkitt, the famous bard of New York’s Tammany Hall political machine, explained New York State’s relationship with New York City: “New York City is pie for the hayseeds.”²⁵⁹

²⁵⁶ N.Y. Const. art. IX, 2; *N.Y. State Pub. Emples. Fed’n, AFL-CIO v. Albany*, 72 N.Y.2d 96 (1988). See also GERALD E. FRUG AND DAVID J. BARRON, *CITY BOUND* x-xi (2008).

²⁵⁷ *Id.*

²⁵⁸ This power is often used to limit the ability of local governments to exclude affordable housing. See, e.g., MASS GEN. LAWS ch. 40B (law setting up alternative zoning review structure for developers seeking to introduce affordable housing into areas that otherwise lack it); CONN. GEN. STAT. 8-30g (1999) (establishing review process whereby developers of affordable housing have the right to develop unless a state court determines that town’s interest in barring them is sufficient). These policies are likely agglomeration-promoting as they do not require inclusionary zoning, but rather provide developers with an alternative, more liberal zoning regime if they plan to build low income housing.

²⁵⁹ W. RIORDAN, *PLUNKITT OF TAMMANY HALL: A SERIES OF VERY PLAIN TALKS ON VERY PRACTICAL POLITICS* 29 (1994).

Education policy reveals the division of power between states and local governments. Providing elementary and secondary education is one of the most central local governmental responsibilities, and local governments – either school boards, general purpose local governments or some combination – have a great deal of discretion over funding levels and the content of elementary and secondary education policy.²⁶⁰ Although states and the federal government provide substantial aid, primary and secondary education in this country is primarily governed at the local level.²⁶¹ This provides gains from sorting and competition. It is clear that, when people move, they take into account the quality of schools and property tax rates and these factors are thus capitalized into housing prices.²⁶² Schools, and the taxes people have to pay to provide them, are the major reason why people sort among local governments.²⁶³

Schools also provide a clear example of how sorting harms agglomeration. The parents of school-age children face strong incentives to move to better school districts, particularly given the large disparities in local educational performance. Where this occurs, it means that parents are moving from their otherwise-preferred location and this produces a loss – the difference between the value of the transactions they would have made in the preferred location and the transaction they make in their new location. States retain the power to limit the gains from local sorting by taxing local school districts and redistributing that money, reducing the benefits from living in a high benefit locality. On average, states provide roughly 47.1% of school funding.²⁶⁴ Whether this is sufficient to balance the gains from sorting and the gains from agglomeration is, at best, difficult to determine.

²⁶⁰ See Aaron Jay Sigler, *The Last Wave: The Rise of the Contingent School District*, 84 N.C.L. REV. 857, 863-90 (2006).

²⁶¹ BARRY BLUESTONE, MARY HUFF STEVENSON, RUSSELL WILLIAMS, *THE URBAN EXPERIENCE: ECONOMICS, SOCIOLOGY AND PUBLIC POLICY* 248 (2008).

²⁶² See HOMEVOTER HYPOTHESIS, *supra* note 141, at 46, 154-55.

²⁶³ *Id.*

²⁶⁴ See BLUESTONE ET AL, *supra* note 261, at 249.

On the other hand, primary and secondary education does not directly effect agglomeration. Contrast this with higher education. Robert Inman and Andrew Haughwout have shown conclusively that having a large university in a central city or a suburb of a major city provides economic gains and increases property values throughout a region.²⁶⁵ These are gains from agglomeration. Universities help create a deep local labor market.²⁶⁶ Also, the ideas that spring from universities can be developed into businesses if there is a fertile urban capital and product market. The creation and growth of Silicon Valley has been credited to the combination of top research universities like Stanford and the University of California-Berkeley and the financial resources of the San Francisco region.²⁶⁷

However, higher education policy is entirely controlled by states. This makes sense: funding a major university is outside of the abilities of any one locality. That said, there are costs related to state control of higher education (as opposed to control by, say, a regional government.) For the reasons discussed above, it is unlikely that state governments will adequately take into account agglomerative gains making their university funding and location decisions. Looking at current state practice, this certainly seems to be the case. A government seeking to maximize agglomeration gains would locate universities in big cities – that is where the value of their spillovers would be felt most dramatically. However, of 75 state flagship universities (some states have more than one), only 15 are located in the largest metropolitan area in the state.²⁶⁸

²⁶⁵ See Andrew F. Haughwout & Robert P. Inman, *How Should Suburbs Help Their Central Cities?*, Fed. Res. Bank of N.Y. Staff Rep. No. 186 (May 2004), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=596521.

²⁶⁶ See BLUESTONE ET AL, *THE URBAN EXPERIENCE*, *supra* note 261261, at 493-94.

²⁶⁷ See MANUEL CASTELLS, *THE RISE OF THE NETWORK SOCIETY* 243 (1996).

²⁶⁸ Compare USA Today, 2006 College Tuition and Fees Survey, available at http://www.usatoday.com/news/education/2006-08-30-tuition-survey_x.htm, with U.S. Census Bureau, Metropolitan and Micropolitan Statistical Areas, available at <http://www.census.gov/population/www/metroareas/metroarea.html>.

One can tell very similar stories about any number of other policy areas.²⁶⁹ The distinction I propose also can help explain doctrinal questions, like why courts are more willing to grant local governments power to regulate non-market behavior than interventions in broader markets. For instance, the Illinois Supreme Court held in *Kalodimos v. Village of Morton Grove* that a local law barring possession of handguns did not exceed the town’s home rule power against a challenge that claimed that permitting such laws would create a patchwork of inconsistent local regulations.²⁷⁰ Four years later, the same court held in *People ex re. Bernardi v. Highland Park* that a locality’s decision to hire a public works contractor who paid less than a prevailing wage when state law required such wages went beyond the bounds of the locality’s home rule powers because a contrary ruling “would put at risk all of the State’s labor laws and invite increasingly localized definition of workers’ rights.”²⁷¹ Under Barron’s understanding of home rule powers, neither of these decisions makes sense – in *Kalodimos*, the court upheld local power to promote a “use value” while in *Bernardi*, it struck down a local effort to promote market forces. However, if one considers home rule a protection of powers over which sorting is likely or possible, then this distinction makes sense. People can move to places where their substantive interests in gun possession (or the lack thereof) are protected but local labor laws would interfere with the proper functioning of regional economic markets, one of the essential sources of agglomeration.

More importantly, a proper understanding of the normative underpinnings of modern home rule regimes provides a way to understand and analyze federal spending in areas that are

This slightly understates the number of urban flagship universities, as it fails to include flagship universities like the University of California-Berkeley, which is the second-largest MSA in the state (but the 12th largest nationally).

²⁶⁹ The one major exception is mass transportation, in which 27 major American regions have regionally-funded governing bodies. Cashin, *supra* note 6, at 2036-41. Even these entities are often governed by boards selected by state officials. *Id.* at 2030.

²⁷⁰ 470 N.E.2d 266 (Ill. 1984).

²⁷¹ 520 N.E.2d 316 (Ill. 1988).

primarily regulated by local governments, like housing policy and transportation. There is not space enough to discuss the entirety of federal policy in these areas, but it will suffice to say that the federal government spends vast sums of money promoting home ownership and building roads.²⁷² In these areas, states likely do a poor job balancing the gains from agglomeration and sorting for the reasons discussed above, but federal spending often makes things worse. For instance, the largest federal intervention in housing markets is the home mortgage interest tax deduction, which benefits home owners based on the value of their mortgage and their income level.²⁷³ This provides outsized benefits to towns that maintain high average housing values and have residents with high incomes, as low-income, low mortgage-size home owners get less of a benefit from the tax deduction (particularly those who do not itemize).²⁷⁴ That is, the localities that benefit most from the home mortgage deduction are those high price areas that use their zoning powers extensively.²⁷⁵

There have been a number of proposals to change the way the federal government reinforces harmful state policies. For instance, Congress has given the Department of Transportation the authorization to approve pilot projects in connection with state and local governments that provide for congestion pricing of roads.²⁷⁶ As discussed above, although Tiebout sorting creates gains, it also drives a spreading out of the metropolitan area. Congestion pricing – charging motorists tolls when they drive on crowded highways for the cost they impose on drivers behind them – is a policy intended to force residents to internalize some of the cost

²⁷² See BLUESTONE ET AL, *supra* note 261261, at 348-66, 433-35.

²⁷³ EDWARD L. GLAESER AND JOSEPH GYOURKO, *RETHINKING FEDERAL HOUSING POLICY: HOW TO MAKE HOUSING PLENTIFUL AND AFFORDABLE* 85-95, 150-51 (AEI Press 2008).

²⁷⁴ *Id.*

²⁷⁵ See *id.* at 85, 150 (listing high benefit from the mortgage deduction regions and high price/low housing supply counties).

²⁷⁶ See Jonathan Remy Nash, *Economic Efficiency Versus Public Choice: The Case of Property Rights in Road Traffic Management*, 49 B.C. L. REV. 673, 717-726 (2008).

generated by that spreading.²⁷⁷ It is a pro-agglomerative policy that is difficult to pass under current state law regimes. Using federal incentives in this way counteracts the pro-sorting bias of state local government law policy.

An even more attractive possibility is directly tying federal aid to local decisions to forgo policies that promote sorting but harm agglomeration. Ed Glaeser and Joe Gyourko argue that the home mortgage interest tax deduction should be capped at \$300,000 rather than the ordinary cap of \$1,000,000 in counties that have high housing prices and zoning policies that substantially restrict the supply of housing.²⁷⁸ The money pulled back from this reform should be given in block grants to localities in these counties on the basis of how many new housing units they allow developers to build.²⁷⁹ This would create incentives for local governments to permit more building, limiting the degree to which restricting new development provides a higher tax base.

These proposals are wise. To the extent the federal government is involved in housing and transportation policy, it should use its influence to counteract the anti-agglomerative bias of state policy.

VI. CONCLUSION: LAW, ECONOMICS AND THE CITY

This article is not intended to represent a comprehensive model of the effects of agglomeration economies and Tiebout sorting on local government law. It is a beginning, not an end. Hopefully, though, it will point the way forward on how to understand the interaction between competition between localities and broader questions of regional economic development. Local government law has ignored developments in economics for far too long, to the detriment of legal and economic scholarship and national public policy. We need a new law

²⁷⁷ See BLUESTONE ET AL., *supra* note 261261, at 355-58.

²⁷⁸ RETHINKING FEDERAL HOUSING POLICY, *supra* note 273273, at 126-129.

²⁷⁹ *Id.*

and economics understanding of local government law and this paper is an effort to begin to provide it.