THE CITY AS A LAW AND ECONOMIC SUBJECT

By David Schleicher[*]

ABSTRACT:

Local government law scholarship has fallen behind the times. Over the past two decades, economists have developed a deep understanding of why mobile citizens and firms locate in cities. Their work argues that people are willing to pay the costs of living in cities in order to receive "agglomeration" benefits – the reduced transportation costs for goods, increased market depth, and intellectual spillovers available in cities. The benefits and costs of location decisions are determined by the identity of one's neighbors and the density of one's neighborhood. Economically-minded local government law scholars have ignored this burgeoning literature and instead virtually exclusively examine a separate set of reasons why people make location decisions, the public policies provided by local governments. As analyzed in the well-known Tiebout model, individuals "sort" themselves among local governments in a region, moving to the town with the local government that provides the set of public policies that fit their preferences.

The lack of interaction between these two literatures has had substantial costs. Economists and legal scholars alike have failed to see that there is an inverse relationship between the efficiency of agglomeration and sorting. Having many small local governments that independently choose local public policies is necessary for efficient sorting, but also affects the organization and density of people in metropolitan areas, creating movement away from the economically-optimal physical locations for individuals and firms. Thus, sorting reduces agglomerative efficiency. Similarly, the existence of agglomeration 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.

This paper argues that there is a conflict between agglomeration and sorting and that this conflict is central to understanding the efficiency of local government law. Further, it argues that central parts of American local government law – like Dillon's Rule in the Nineteenth Century – were efficient adaptations to the dominant agglomerative forces of the time, but that current legislative and judicial implementation of state constitutional "home rule" grants of power to local governments likely do too much to promote sorting and thereby excessively harm agglomerative efficiency.

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 ingenuously 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: local governments should be free to provide local public services in a relatively unrestricted way, as this will ensure that mobile citizens receive their desired package of public services.[5]

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

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[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 rise of the Tiebout Model in the economic study of local governments).

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

[3] 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 1, 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 (describing the efficiency of Tiebout sorting).

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 or business can pay reduced transportation costs for goods, capture information spillovers, and

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[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. FISCHEL, THE HOMEVOTER HYPOTHESIS: HOW HOME VALUES INFLUENCE LOCAL GOVERNMENT TAXATION, SCHOOL FINANCE, AND LAND USE POLICIES (2001)) (criticizing the Tiebout model and the related literature for failing to consider externalities of local policy decisions); 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 model for failing to consider distributional questions); 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 policy 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. Kruman 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 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).   See Section II for a full discussion of this scholarship.

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

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]

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[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 51-52 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 (20007) (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 190-194 and accompanying text. Clay Gillette 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 214. A few other recent 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, a crucial figure in agglomeration economics, but without placing her work in the general agglomeration literature); Lee Anne Fennell, *Properties of Concentration*, 73 U. CHI. L. REV. 1227, 1240-47 (2006) (discussing ideas like agglomeration –"associational surplus" or "gains from grouping" – without addressing the economic literature on the subject.)

[16] It should be noted that this paper is not addressing questions of political participation, interlocal equity, racial discrimination or environmental harm. This is not because these issues are unimportant or not a proper subject for legal analysis. Just the opposite

The paper makes two central claims:

First, any economic analysis of a local governmental law or policy account not only for its affect 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 laws – both structural decisions about what powers to allocate to local governments and individual local policies – affect individual location decisions and hence which people and businesses are near 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 not a sufficient tool for engaging the economic analysis of local government laws because it ignores the effects such laws have on the identity of which individuals and businesses are physically proximate.[20]

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is the case. Following Gerald Frug, *The City as a Legal Concept, 93* HARV. L. REV. *1059 (1980)*, the leading article in the field of local government law, these topics have been front and center in most of the literature on local government law. However, the centrality of these concerns has crowded out sustained discussion of the efficiency in local government law. Further, Frug's focus on the importance of law in determining the shape of urban development – a focus he shares with Tiebout – has lead to a widespread lack of focus on the degree to which cities, or agglomerations of people at any rate, are a relatively natural occurrence, at least wherever there are markets. *See* JANE JACOBS, THE ECONOMY OF CITIES 27-31 (1970) (claiming that cities are a necessary component of the development of market systems). This paper is an effort to bring a fuller understanding of efficiency into the discussion of local government law.

[17] These are "gains" relative to a situation in which individuals were spaced out equally across the country. *See* note 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.

[19] *See Our Localism, Part II*, *supra* note 6, at 403-405 (noting that local government scholars of all ideological and methodological stripes rely on the belief that local government law effects individual location decisions.)

[20] Rather than the Tiebout Model's focus on the degree of fit between policies and preferences in any given town, or an agglomeration measure that would look at total economy activity in a region (something like GDP), a measure which would takes both agglomeration and sorting into account is the overall value of property in a region. *See* Edward L. Glaeser, *The Future*

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.[21] Agglomeration gains – the benefits of reduced transportation costs, deep labor

markets and intellectual spillovers available in dense areas – give otherwise mobile residents a

reason not to move, even when governmental policies affect them in a negative way.[22] 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.[23] Thus, agglomeration undermines the degree to which individuals are matched with their

preferred set of policies. This explains why capitalization, the prediction of the Tiebout Model

that property values will directly incorporate changes in public policies, does not work well in

big cities where there are substantial agglomeration gains (and congestion costs).[24]

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

generates incentives for people to move away from where they would have located in the absence of governmental policies (or if public services were provided by a state or federal government). Where the government induces people to move from the first-best 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.[25] Moreover, as the economist Bruce Hamilton has shown, the Tiebout model can only produce a stable equilibrium if local governments use zoning laws to restrict property owners from subdividing their land into cheaper parcels.[26] As a result, a local government law regime that encourages sorting will cause development to be less dense and housing to be more expensive.[27] 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).[28] Tiebout Model-style sorting also reduces the diversity of residents in any given town, which may have a negative effect on information spillovers and hence innovation and growth.[29] Thus, sorting reduces the degree to which metropolitan regions are agglomeratively efficient.

Understanding this dynamic is a necessary component of assessing the economic effect of local government law. Internally, local governments will try to achieve some balance between

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[25] The actual loss is the difference between the value of the transactions between those who would have lived near one another and the transactions that occur after people move in response to the availability of different public policies.

[26] The reason for this is that residents on the cheaper subdivided parcels will still consume local services at the average rate, but will contribute fewer-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, *Capitalization of Intrajurisdictional Differences in Local Tax Prices*, 66 AMER. ECON. REV. 743, 748 (1976); Bruce W. Hamilton, *Zoning and Property Taxation in a System of Local Governments*, 12 URBAN STUDIES 205, 211 (1975). *See* notes151-152 and accompanying text for a discussion of Hamilton's work.

[27] 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). .

[28] For instance, many labor markets are entirely regional – people commute across great distances – and hence sorting will not do much to reduce the agglomerative efficiencies caused by labor market depth in a region. However, the spreading caused by sorting likely substantially reduces gains from informational spillovers, which are very local. *See* notes 172-179 and accompanying text.

[29] This effect relies on an assumption that diversity in preferences for local policies is correlated with diversity in forms of production. *See Growth in Cities*, *supra* note 9, at 1127.

the goals of meeting local policy preferences and maximizing the gains from having

agglomeratively-attractive neighbors. However, local governments 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

maximizing one or another of these sources of efficiency.

While this provides the framework for determining the overall economic costs and

benefits of any local government law regime, any such analysis will turn on exactly how the

policy interacts with specific forms of agglomeration and propensity to sort. As an example of

how local government laws can be analyzed, this paper will look at efficiency of the two central

policies in American local government law -- Dillon's Rule, the central rule of local government

law 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 resolved the ambiguity against

local governmental authority.[30] 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

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

under the Tiebout model.[31] The paper claims that, when enacted, Dillon's Rule also contributed to agglomerative efficiency, but that strong limits on local power likely no longer do so.

When Dillon's Rule was first proposed in the middle of the Nineteenth Century, transport costs for goods between cities were very high.[32] 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 or face the substantial costs of shipping items across the country. Manufacturers responded to this by clustering in cities that were transportation hubs, and the location decisions of these final goods manufacturers produced strong agglomeration effects among intermediate goods suppliers that wanted to supply end-product producers without high transport costs.[33] In other words, when Dillon's Rule was first enacted, reducing transportation costs for goods was the prime driver of urban agglomeration.[34]

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.[35] 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 did not affect the number of goods sought, just the location in which they were produced. Dillon's Rule promoted efficiency by removing from local governments the power to engage these policies without state approval, as states were less likely to engage in this type of internecine battle for agglomeration.

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[31] *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). Others justify Dillon's Rule by arguing that it is a rational response to political failures in cities. 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) (using public choice to argue in favor of Dillon's Rule).
[32] *See* Edward L. Glaeser and Janet Kohlhase, *Cities, Regions and The Decline of Transport Costs*, 83(1) REGIONAL SCIENCE 197, 198-99 (2004).
[33] *Id.* at 196-200.
[34] How firms behave when transportation costs are high but not infinite was given its classic treatment in THE SPATIAL ECONOMY, *supra* note 8, at 51-60. *See* notes 229-246 and accompanying text for a discussion of this work and it relation to 19th Century Amerca.
[35] *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.[36] As a result, manufacturing moved out of major urban areas and as urban economies increasingly focused on service industries. Forces other than the desire of producers to reduce transportation costs – like the specialization and insurance benefits of deep labor markets and information spillovers – became the strongest drivers of agglomeration.[37] These economic changes removed much of the incentive cities had to manipulate domestic trade or to subsidize industry, hence removing the reason why Dillon's Rule contributed to agglomerative efficiency.

However, in most places, Dillon's Rule has been supplanted by one form or another of "home rule," with state constitutions granting local governments power to make local policy.[38] How much actual power this change provided to local governments is a subject of much debate.[39] 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.[40] 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 those policies that limit the negative effect of Tiebout sorting on agglomerative

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[36] *See* Glaeser and Kohlhase, *supra* note 32, at 201.

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

[38] There are two major types of "home rule" regimes. One provides local governments with the exclusive ability to make policy in areas of purely local concern – so-called "imperio in imerium" home rule – 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. See RICHARD BRIFFAULT AND LAURIE REYNOLDS, STATE AND LOCAL GOVERNMENT LAW 268-69, 281-85 (6th Ed. 2001).

[39] *Id.*

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

efficiency and those public polices 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.

That said, the overall regime likely ends up doing too little to enhance agglomerative efficiency, as states often have incentives other than promoting agglomeration (for instance, by redistributing gains from growing regions to less economically active ones.) 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 Tiebout Model and agglomeration economics describe distinct and conflicting sources of efficiency gain. The fourth section will show how agglomeration and sorting conflict. The fifth section will analyze the Dillon's Rule and Home Rule regimes using the methodology proposed in this paper.

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

Agglomeration economics begins with a simple question: Why are there cities?[41] Although this might seem like a silly question, it is actually quite a challenge for classical and 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

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

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land is always far cheaper outside cities than inside."[42] Models that include only these economic

forces – meaning there is an implicit assumption that economic activity is spread evenly

throughout the 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.[43] 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.[44] In this country, 220 million (out of 280 million)

Americans live in the four percent of the country that is urban.[45]

The existence of cities can only be explained through some idea of external effects – the

gains people and firms see from being located near one another that offset the increased cost of

land.[46] More than a hundred years ago, the leading classical economist of the second half of the

nineteenth century, Alfred Marshall, developed a theory of what these external effects might

be.[47] 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

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[42] Lucas, *supra* note *9,* at 38. Lucas makes clear that desires to be near shops do not do the trick of explaining urban development. "Of course, people like to live near shopping and shops need to be located near their customers, but circular considerations of this kind only explain shopping centers, not cities." *Id.*
[43] "It should not…be hard to convince economists that economic geography …is both an interesting and important subject. Yet until a few years ago, it was a subject mainstream economics largely neglected. Even now, introductory textbooks seem to describe a curiously disembodied economy, without cities or regions." SPATIAL ECONOMY, *supra* note 8, at 1-2. When the paper refers to the "gains" from agglomeration and sorting, it refers to improvements based on location decisions from the situation where all economic activity is spread evenly throughout the country.
[44] Ricky Burdett and Philipp Rode, *The Urban Age Project* in THE ENDLESS CITY 9 (Ricky Burdett and Deyan Sudjic Eds. 2008).
[45] SPATIAL EQUILIBRIUM, *supra* note 8, at 1.
[46] Lucas, *supra* note *9,* at 38
[47] ALFRED MARSHALL, PRINCIPLES OF ECONOMICS 267-77 (8th Ed. 1940).

specialization gains from large labor and consumption markets; and (3) information spillovers.[48]

This section, following much modern work in urban economics, is organized around Marshall's

three explanations.

One note on the intellectual history of agglomeration economics, though, is necessary.

After Marshall's magisterial treatment of the subject, which took up quite a large part of his

Principles of Economics, the leading economic text of the turn of the Twentieth Century, very

little was written on the subject.[49] 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.[50] There

are a variety of explanations for why there was such a long fallow period, but whatever the

reason, this is likely the reason why agglomeration economics has been ignored by local

government law scholars.[51] Just as local government law was taking off as a field in the 1970s,

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[48] *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.

[49] 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 tended to assume away the central question of why cities exist. One strand of thought that generated some research during the period was rooted in Johann Von Thunen's well-known model from the 1820s. Von Thunen developed a model showing that, an unplanned market for land will produce a situation in which the individual producers of different crops will end up settling in concentric circles around a central business district, with the most productive yield per acre located closest and the most land-intensive located further away. This occurs because rent includes the cost of transportation. In the 1960s, economists like William Alonso, Richard Muth and Edward Mills developed Von Thunen-style models that substituted types of commuters and producers for types of farmers. 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 assume away the central question of agglomeration economics, namely why there are cities and why people want to be located close to the central business district. They also fail to capture the continuous nature of agglomeration – they assume agglomeration only happens in the central business district. *See* note 198 *infra* discussing interaction between Alonso-style models and Tiebout.   It should also be noted that this paper does not address one major strand of the literature developed in this period, Victor Henderson's research linking city size to differences in industry type and the existence of city builders. *See* J. Vernon Henderson, *The Sizes and Types of Cities*, 64 AM. ECON. REV. 640 (1974); SPATIAL ECONOMY, *supra* note 8 18-22. Although interesting, this work treats cities as if they were just big central business districts, and hence is somewhat removed from the concerns addressed here.

[50] *See* SPATIAL ECONOMY, *supra* note 8, at 2-5.

[51] Paul Krugman has offered the most widely accepted theory. Any model seeking to determine where economic activity will locate requires 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 turn of the century were not up to solving problems like this, and, as a result, people simply moved on other problems 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 49, at 45-65.

urban economics was in a dead patch.[52] One of the only legal scholars to address this type of

scholarship, Robert Ellickson, devoted two pages of his classic article, S*uburban Growth*

Controls: An Economic and Legal Analysis, to some of the small amount of work generated

during the 1970s on agglomeration economics, before noting that "the evidence on the relative

costs and benefits of urban growth is still fragmentary."[53] However, by now, it has been more

than twenty years since economists returned to studying why cities exist. This paper is an effort

to bring that literature to bear on the problems of local government law and hence add to both

disciplines. However, before doing so, it is necessary to explain the current state of the field.

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.[54] If firms have to be at least a certain size to be

efficient and there are transport costs, firms will be attracted to areas that provide "forward and

backward linkages" to consumers and input suppliers.[55] (If there are no increasing returns to

firm size, every town would just start a firm in their town and avoid the transport costs.[56]) In the

presence of transportation costs, being physically proximate to input suppliers and customers

reduces a firm's production costs.[57]

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[52] 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).

[53] Ellickson, *Suburban Growth Control, supra* note 52 at 441-43. *See also* Robert Ellickson, *Alternatives to Zoning: Coventants, Nuisance Rules and Fines as Land Use Controls*, 40 U. CHICAGO L. REV. 681, 684 n.12 (1973) (noting that "beneficial externalities" deserved more attention from legal scholars).

[54] *See Geographic Concentration*, *supra* note 48, at 193 (describing the first of Marshall's three theories of agglomeration as "agglomeration saves transport costs by proximity to input suppliers or final consumers.)

[55] "Forward and backward linkages" are just modern terminology for Marshall's point. SPATIAL ECONOMY, *supra* note 8, at 4-5. If there are no increasing returns to scale at the firm level (or entry costs), the existence of any non-negative transport costs will result in everyone making everything in their own backyard. *Id.*

[56] *See Are Cities Dying?*, *supra* note 9, at 144; SPATIAL ECONOMY, *supra* note 8, at 4-6.

[57] *See* SPATIAL ECONOMY, *supra* note 8, at 5.

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.[58]

Paul Krugman, Masahira Fujita and Anthony Venables developed a way of thinking about this problem.[59] Using developments in scholarship in international trade, Krugman et al. 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.[60] Such models feature some increasing returns to firm size and, more importantly,

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[58] 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 was there is trade among developed countries trade in the same good – cars from the U.S. being sold in Germany and vice versa – which was not predicted by classic trade models. The key to the "new trade theory" was understanding that trade in cars between the U.S. and Germany is a species of monopolistic competition. Speaking very generally, the gains from this type of 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. This prompted research on the question of why there were gains from expanding the size of markets in the same good, it became pressing to know why some markets were bigger than others in the first place. 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). Defining utility curves in this way was a major step forward. Previous efforts to study monopolistic competition struggled because they tried to figure out the elasticity between each monopolistic competitive good, which forced simplifying the problem so that it only contained a few firms, which in turn raised the question why they weren't behaving strategically. By characterizing the utility function in this way, Dixit and Stiglitz made it possible to model how and when trade would occur in a monopolistically competitive market.   .
[59] 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 58, at 32-35.
[60] The Fujita, Krugman and Venables model is simply an extension of the Dixit-Stiglitz framework discussed in footnote 58. *See* SPATIAL ECONOMY, *supra* note 58, at 6 (noting its heavy dependence on Dixit-Stiglitz's work and noting that the book could entitled "Games You Can Play with CES Functions.")

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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 of prior entrants can charge down.[61]

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.[62] 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.[63] The same thing is true if transportation costs are zero, as it will not matter where they locate and would have no desire to drive up rent (or the cost of labor) by concentrating in one place.[64] 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.[65] 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.[66] 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.[67] 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

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[61] *Id.* at 45, 48-49, 50-52.
[62] This is the key piece of the model. Manufacturing firms locate near one another because they buy from each other. This is where the increasing returns "at the level of firm." *Id.* at 61. What follows is a very, very simplified version of the model.
[63] *Id.* at 67-68, 74.
[64] *Id.*
[65] *Id.* at 66-67, Figure 5.2.
[66] *Id.*
[67] *Id. at 52.*

can sell to their final goods to them without paying transport costs.[68] 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.[69] 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.[70] For a while, the historic clustering of firms will hold on, as they will continue to provide the benefits of increasing returns to market size.[71] 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.[72] 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.[73] 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 the de-clustering, because there will not be the cluster of firms creating the external benefit that there had been before the break point.[74]

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[68] *Id. at 67.*
[69] *Id.* at 49-50, 66-68.
[70] *Id*. at 69-76. The same is true in reverse as transport costs rise. *Id.* at 67, figure 5.3.
[71] *Id.* at 67-68.
[72] *Id*. at 69-75. Exactly when the manufacturing sector will uncluster is hard to determine. Solving these problems requires a lot of computing power, another reason why such models did not develop until the 1990s. *Id.* at 2-5.
[73] *Id.* at 34-41, 74-76.
[74] *Id.*

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 19th and 20th centuries, manufacturing spread throughout the world.[75] It also provides a compelling story for why there is such a high degree of urbanization in developing countries, as their domestic transportation costs for goods are far higher than they are in developed countries.[76] 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.[77] 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.[78] Because transport costs were high, it made sense for manufacturers to cluster where transport costs were lowest – the transport hubs.[79] Once agglomerations started forming, they created incentives for other firms to these cities as well.[80] The result was that transport hubs like Buffalo, on the Erie Canal, and Chicago, the center of the national rail network, became manufacturing centers.[81]

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

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[75] *Id.* at 239-60

[76] *See* Edward Soja and Miguel Kanai, *The Urbanization of the World* in THE ENDLESS CITY, *supra* note 44, at 54-55

[77] *Id.* at 227-36; Glaeser and Kohlhase, *supra* note 32, at 197-98.

[78] Glaeser and Kohlhase, *supra* note 32, at 198-200

[79] *Id*; SPATIAL EQUILIBIRUM, *supra* note 8, at 7-9

[80] Glaeser and Kohlhase, *supra* note 32, at 199-201; SPATIAL ECONOMY, *supra* note 8, at 236 ("[T]he main function of a hub in city location is catalyitic. 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 made the emergence of a new city necessary.")

[81] Glaeser and Kohlhase, *supra* note 32, at 197-199.

advantage was eliminating transport costs for manufactured goods, then cities would indeed cease to exist."[82] Further, major urban centers increasingly rely on industries like technology, management, financial services, consulting, publishing and entertainment and their exports are transported by email, phone or by flying out a few executives.[83] The cost of transporting goods cannot serve to explain the clustering of these industries. Other explanations are needed.

b. *LABOR MARKET POOLING AND OTHER MARKET SIZE EFFECTS*

The second "agglomeration economy" that Marshall discusses is the availability of deep labor markets with lots of potential workers in any given field.[84] The substance of Marshall's analysis, however, is not limited to labor markets; it also explains why thick consumption markets and social "markets," like the dating market, drive agglomeration. The agglomeration effects of deep markets are also related to transportation costs, but here the relevant cost is the cost of transporting people, not things. People are only part of markets where they can participate, and because traveling takes time, there are substantial opportunity costs related to commuting to a job, eating at a restaurant or dating someone in another region (and across a region).[85]

Marshall argued that deep labor markets provided two separate benefits – insurance and specialization.[86] Deep labor markets provide workers with benefits of risk pooling, or insurance against firm- or industry specific shocks.[87] 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

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[82] *Are Cities Dying?*, *supra* note 9, at 145. *See also Geographic Concentration*, *supra* note 48, at 94-98, (finding that labor market pooling variables explain industry locations decisions far better than input and out-put linkage variables); Glaeser and Kohlhase, *supra* note 32, at 203-05.

[83] *See* SPATIAL EQUILIBRIUM, *supra* note 8, at 7-9.

[84] MARSHALL, *supra* note 47, at 271-72.

[85] Glaeser and Kohlhase, *supra* note 32, at 208-210; Although the cost of traveling has fallen, the opportunity cost of time has increased, meaning that the effective cost of moving people between regions has not fallen at anything approaching the same rate as the cost of shipping goods (and may be secularly increasing). *Id.*

[86] MARSHALL, *supra* note 47, at 271-72; *Are Cities Dying?*, *supra* note 9, at 145-46

[87] *Id.*

participates means that the employees will have to bear the costs of moving in order to find suitable employment.[88] In contrast, if an employer in a big city goes belly-up, workers have far more options. This effect is particularly strong if workers are risk averse; a large labor market functions like unemployment insurance in this respect.[89]

Deep labor markets also permit increased specialization.[90] 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."[91] This has obvious efficiency implications – labor in metropolitan areas will be more specialized and hence more effective.[92] Further, in deep markets, labor can flow easily to more productive employers, increasing overall economic performance.[93] It also has dynamic effects; as urban workers develop new skills, they can switch to more suitable job more easily.[94] This benefits both workers, who are presumably paid more for doing their improved, specialized skill, and employers, who receive higher quality work.

The depth of local markets also matters outside of labor markets. Urban consumption markets feature a wider range of (and more specialized) products – from shopping to cultural

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[88] *Id.*

[89] *Are Cities Dying?*, *supra* note 9, at 146 (noting that "labor market pooling" is still a factor even if workers are not risk averse)

[90] There is substantial evidence that deep local labor markets do feature more specialization. *See* James Baumgardner, *The Division of Labor, Local Markets and Worker Organization*, 96 J. POL. ECON 509, 510 (1988) (showing more specialization in the medical industry in large cities).

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

[92] *Are Cities Dying?*, *supra* note 9, at 146 ("this force means that New York actors specialize in very particular roles, while in small towns actors are far more often generalists who play multiple parts (even in a single production.)")

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

[94] Daron Acemoglu developed a model that shows how reduced urban search costs lead to increased investment in human capital and hence growth. Daron Acemoglu, *A Microfoundation For Social Increasing Returns in Human Capital Accumulation*, 111 Q. J. ECON. 779 (1996). People in his model invest in human capital and then move to cities to reduce search costs for jobs (a type of labor market pooling). The existence of a human capital rich city inspires investments in physical capital from firms that want to attract productive workers, as they too face labor search costs and as a result firms in the city are more likely to be able to hire high human capital workers than firms in low human capital environments. (Acemoglu's model uses a random matching technology, but this merely changes the cost of finding high quality workers into a likelihood of finding high quality workers.) The existence of companies in the city seeking high quality workers creates an incentive for further investments in human capital, as it becomes cheaper (again, because of search costs) to locate an employer who properly values that human capital investment. And so on.

amenities - and make it more likely that a consumer can find a particular good.[95] Marshall noted

that this should have a stronger impact on markets for expensive or unique items, as people care

more about getting "insurance" for finding the best good when they are spending a lot of money

than they do when they are buying a staple.[96] This explains why, for instance, diamond

merchants often group together in the same city and even on the same street.[97]

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.[98] That is to say, deep dating markets feature easy matching, specialization and risk

pooling. Not surprisingly, young singles are substantially more likely to live close to city

centers.[99] As Clay Shirky pithily noted; "Anyone who's predicting the decline of big cities has

already met their spouse."[100] Although Marshall did not discuss dating markets, the logic is the

same as his arguments for why labor market depth generates 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

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[95] *See* BRENDAN O'FLAHERTY, CITY ECONOMICS 17-18 (2005)

[96] "[T]here is also the convenience of the customer to be considered. He will go to the nearest shop for a trifling purchase; but for an important purchase he will take the trouble of visiting any part of the town where he knows that there are specially good shops for his purpose. Consequently shops which deal in expensive and choice objects tend to congregate together; and those which supply ordinary domestic needs do not" MARSHALL, *supra* 47, at IV.X.13.

[97] 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.

[98] As novelist Keith Gessen put it, "*Dating*, builder of cities." KEITH GESSEN, ALL THE SAD YOUNG LITERARY MEN (2008) (emphasis in original).

[99] See RICHARD FLORIDA, WHO'S YOUR CITY 243 (2008) (citing research by Joe Cortright and Carol Coletta that young singles are 33% more likely to live within three miles of the city center). .

[100] As quoted by Tim Leberecht, Who's Your City?, Design Mind, Elektroniker, August 17, 2008 available at http://designmind.frogdesign.com/blog/whos-your-city.html. There is substantial evidence that the presence of other young singles is the most important factor in determining where young people move, more important than job prospects or cost of living. Florida, *supra* note 98, at 227-28.

industry-level co-agglomeration.[101] It also explains some substantial part of the increased

productivity and wages seen in cities, as workers are able to better match their skills to

employment, both statically and as skills grow.[102] 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…"[103] 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.[104] 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 suggestions of their own; and thus it becomes the source of further new ideas."[105]

Information spillovers, therefore, generate not just increases in wealth, but annual economic

growth.[106]

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

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[101] *See Geographic Concentration*, *supra* note 48, at 94-98.
[102] *See* Christopher H. Wheeler, *Cities and the growth of wages among young workers: Evidence from the NLSY*, 60(2) J. URBAN ECON. 162 (2005).
[103] MARSHALL, PRINCIPLES OF ECONOMICS, *supra* note 47, at 271
[104] The chapter in which Marshall's discussion of agglomeration economies appears has the subtitle"The Concentration of Specialized Industries in Particularly Localities." *Id.* at IV.X.7
[105] *Id.* at 271.
[106] *See* SPATIAL EQUILIBRIUM, *supra* note 8, at 149.

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, was

"exogenously" determined and grew at a constant rate.[107] 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 influenced wealth differences across countries 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.[108] By the 1980s it was relatively clear that there was no convergence in overall

wealth or in growth rates or even the types of mobile capital flow predicted by these models.[109]

Building on work by Kenneth Arrow, Paul Romer produced an important model

explaining why and how growth rates could diverge.[110] 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

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[107] 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 their models, see Lucas, *supra* note 9, at 7-14 (1988)
[108] *See* Lucas, *supra* note 9, at 17-18.
[109] "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.
[110] Romer, *supra* note 9, at 1006.

local knowledge and which had increasing returns to scale.[111] A firm's productive capacity – the ability to convert labor and capital into goods – 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.[112] Growth rates diverge across countries – they would depend on local research and can increase over time.[113] This was in essence a formalization of Marshall's claim -- the mysteries of trade were in the air and caused growth. Now, these intra-industry informational spillovers are now called "Marshall-Arrow-Romer" or MAR externalities.[114]

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).[115] However, the greater the degree of capture by inventors, the closer to the social optimum you get.[116] Monopoly or oligopoly control over production and the invention of ideas is likely to create increased growth. Thus, the model predicts that cities with one industry with only a few firms will grow quickly.[117]

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[111] 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, empirically, it turns out that this too is 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.

[112] Romer, *supra* note 9, at1004-07, 1032-33.

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

[114] *Growth in Cities*, *supra* note 9, at 1127.

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

[116] *Id.*

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

An alternative view of knowledge spillovers in cities was developed first by urban activist Jane Jacobs and then formalized and extended by Nobel Laureate Robert Lucas. Rather than focusing on spillovers among the same type of business, it looks to diversity as a source of growth. Jacobs' first book, *The Death and Life of Great American Cities,* did not address economic theory, but instead developed a critique of the urban planning of the 1950s and 60s, modernist architectural theory, and the policies of the then all-powerful public works and parks czar of New York, Robert Moses.[118] What these ideas had in common were their focus on the development of dedicated spaces for working and living and for the separation of urban residents from the perceived problems of urban life: crowded city streets, proximity to crime, "slums" and "blight."[119] Jacobs argued that this preference for order and organization actually caused the problems of cities, rather than solving them.[120] The mix of retail and residential uses on streets reduces crime by providing "eyes on the street" that deter criminals.[121] Further, what urban planners of the time described as "blight," was, in fact, is what generated their economic activity and their excitement, "an intricate sidewalk ballet" of different types of activities and uses that generated new businesses and cultural interest.[122]

This final insight led her to investigate more fully what caused economic development in cities. Her next book, *The Economy of Cities,* argued new economic ideas are usually the outgrowth of a combination of old activities.[123] In her famous example, the brasserie was not invented by the process of consumer research and heavy investments in research and

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[118] 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).
[119] *Id.* at 13-25, 435-39.
[120] JACOBS, THE DEATH AND LIFE, *supra* note 118, at 31-41, 145-177.
[121] *Id.* at 30-57.
[122] *Id.* at 145, 148 ("[B]ig cities are natural generators of diversity and prolific incubators of new enterprises and ideas of all kinds…Cities may fairly be called natural economic generators of diversity, and natural economic incubators of new enterprises.")
[123] JACOBS, THE ECONOMY OF CITIES, *supra* note 16, at 122

development; instead, it was invented by an urban dressmaker who wanted to her dresses to fit better, who was then able to find a business partner, capital, and varied suppliers nearby.[124] 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.[125] Diversity causes growth.

In a central chapter in the book, Jacobs compares two English cities, Birmingham and Manchester.[126] 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 considered a quintessentially modern city, the city of the future, for good and for 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.[127] What Jacobs took from this history 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. The conditions that promote development and the conditions that promote efficient production and distribution of already existing goods and services are not only different, in most ways they are diametrically opposed."[128]

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[124] *Id.* at 51-56. She used examples from antiquity as well. The development of new crops was likely the result of city traders getting seeds from provincial gatherers and planting them, before trading the successful new plants to rural areas. *Id.* at 27-31.
[125] *Id.* at 122.
[126] *Id.* at 86-99
[127] *Id.* at 89.
[128] *Id.* at 96

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.[129] Lucas argued that people have a choice between investing in human capital and physical capital.[130] Investing in human capital, like physical capital, increases the amount of production for any given amount of labor. 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.[131] The rate of human capital investment determines the rate of technological growth and hence the overall growth rate.[132] 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 of the equivalence of the return between types of capital, any given country will see consistent growth rates.

Lucas, however, faced a problem. He needed an explanation for why human capital investments spread an externality throughout the economy. 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."[133] Lucas did not provide a formal explanation for how this type of innovation spread, but instead gave a suggestion. Instead, he argued that the best treatment of the external

[129] Lucas, *supra* note 9, at 17
[130] *Id.* at 27.
[131] *Id.* at 36
[132] *Id*. at 17-27
[133] *Id.* at 38.

effect of human capital was given by Jane Jacobs in *The Economy of Cities*.[134] The external

effect of investments in human capital is captured mostly 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."[135]

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.[136] Lucas's work was essential

for tying this idea to the existence of human capital. People develop ideas from across

industries, and interacting in an economically diverse community captures the effects of, and

helps develop, increased human capital.

The work of these scholars on urban growth has been the subject of extensively empirical

examination, most famously by Ed Gleaser, who has become the high priest of this empirically-

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.[137] Using industry data from cities, the paper

found that industries grew more quickly in diverse areas where it was not heavily represented,

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[134] *Id.* at 37.
[135] *Id.* at 39.
[136] *See, e.g.*, *Growth in Cities*, *supra* note 9, at 1162; Vernon Henderson, *Externalities and Industrial Development*, 1 CITYSCAPE 75 (1994).
[137] *Growth in Cities*, *supra* note 9, at 1126

and where there were many smaller firms. Jacobs' theory was confirmed by Glaeser's research, while the data was inconsistent with the MAR theory. Although other work has found that intra-industry spillovers can have strong effects, it has also confirmed that diversity is a powerful force for growth.[138] Scholarship on patents has both confirmed the existence of information spillovers and the effect diversity has on innovation. New patents cite other patents developed in the same metropolitan area at a far higher rate than would be generally expected, but that there is no more localization in intra-industry citations than in inter-industry citation.[139]

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.[140] 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 substantial wage growth. Further, urban-to-rural migrants saw negligible decreases in wages when they left. This is broadly consistent with the thesis 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. This is an important confirmation

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[138] *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); Gilles Duranton and Diego Puga, *Nursery Cities: Urban Diversity, Proess Innovation and the Life Cycle of Productions*, 91 AMER. ECON. REV. 1454 (2001) (developing a model where, in a system of cities, there is space for creative engines and factory towns, following Jacobs' concept of different types of cities.)

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

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

of the human capital/spillover theory of urban economic development, and other research has confirmed the findings in this now-cannonical work.[141]

The importance of human capital to urban economic growth was later confirmed by a finding that formal human capital (higher levels of schooling) is highly associated with the ability of cities to respond to economic crises.[142] Cities with a high percentage of college or above educated people saw faster growth (not just higher initial allocations of wealth) and were able to respond to a decline in manufacturing by moving into other industries, while cities with lower human capital levels did less well in responding to exogenous shocks.

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 increase in the center of the city.[143] 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 things – the added cost of rent, the traffic on the roads and things that might be better called negative agglomerations, or factors that see increasing returns to scale but have a negative effect, like crime.[144]

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[141]*See, e.g.*, Shihe Fu and Stephen Ross, *Wage Premia in Employment Clusters: Agglomeration Economies or Worker Hetereogenity?*, Univ. of Conn. Working Paper 2007-26R (2007), available at 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), available at 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).
[142] Edward L. Glaeser and Albert Saiz, *The Rise of the Skilled City*, 5 BROOKINGS-WHARTON PAPERS ON URBAN AFFAIRS 47 (2004).
[143] Marshall, *supra* note 47, at 272.
[144] *See Are Cities Dying*, *supra* note 9, at 150-55.

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.

III.   THE CITY AS A LEGAL SUBJECT: SORTING AND AGGLOMERATION ARE DISTINCT SOURCES OF GAIN DERIVING FROM INDIVIDUAL AND FIRM LOCATION DECISIONS

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, which has 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 economies are a distinct source of efficiency from the gains people receive from living in their favored local government. Both sorting gains under the Tiebout Model and agglomeration gains produce derive from same underlying activity: where people choose to move. Government policies will affect both what jurisdiction people live in, and therefore the benefits they receive from local governments, and who they live near, and hence the availability of agglomeration gains. As such, in order to assess the efficiency of a local government law policy – a decision to allocate a certain type of power to either the state government or a local government – it is necessary to examine its effects both on sorting and agglomeration.

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 suggests a thought

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experiment in which a large number of local governments were arrayed along a beachfront.[145] 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.[146] Further, he assumed that for every set of community services, there was an "optimal community size," in which the provision of those public goods 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 public services will be 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.[147] The gains in the model come from one source – people are happier about the level of public services provided to them by local governments. For all individuals to receive optimal amounts of public services, the people living in each community have to have the same preferences about local policy.

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

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[145] Tiebout, *supra* note 1, at 418.

[146] 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-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, which they surely are not, sorting can reduce agglomerative efficiency in ways that are similar to the ones I discuss in this paper. For an analysis of a situation somewhat like this, see Frank Flatters, Vernon Henderson and Peter Mieszkowski, *Public Goods, Efficiency and Regional Fiscal Equalization*, 3 J. PUB. ECON. 99 (1974).

[147] Tiebout, *supra* note 1, at 418.

service provisions, increases in the quality of public goods should increase housing values, ceteris paribus.[148] 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.[149] Further empirical studies show that capitalization does indeed occur, but the effect of capitalization is far stronger in suburban areas than it is in urban areas.[150]

Bruce Hamilton addressed another problem in the Tiebout framework. If property taxation is added to the Tiebout model but not zoning, there is no steady equilibrium.[151] The reason is that property-tax funded services give residents an incentive to subdivide any given piece of land into many smaller and cheaper parcels. Buyers of these smaller, cheaper parcels can consume public services in the community at the average level but pay less than average level of property taxes because the value of the house determines the amount collected by the tax but not the amount of resources used by a resident. There is no logical end to this "tax chasing," – in any given town, even if all residents want a certain level of services, they face a collective action problem in avoiding the subdivision of property. As a result, the model cannot reach 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 equilibrium in a Tiebout model, zoning or some other tool must be used to limit the population to

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[148] 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).
[149] Wallace E. Oates, *The Many Faces of the Tiebout Model*, *supra* note 3, at 25-27.
[150] See WILLIAM A. FISCHEL, THE HOMEVOTER HYPOTHESIS: HOW HOME VALUES INFLUENCE LOCAL GOVERNMENT TAXATION, SCHOOL FINANCE, AND LAND-USE POLICIES 3-5 (2001).
[151] Bruce W. Hamilton, *Zoning and Property Taxation in a System of Local Governments*, 12 URBAN STUDIES 205, 211 (1975)

ensure that the property tax per resident (which is based on the cost of each house) equals the average cost of services. Even when Hamilton reformed his model to permit some mix in the types of housing in each community, he still argued that these communities had to use zoning to limit the population inside their boundaries.[152]

Zoning also gives locals a tool to force developers internalize the negative effects new entrants have on housing values. William Fischel argued that the best way to understand the effect and efficiency of zoning is that it provides a community with a way to enforce something like a "collective property right."[153] If a new development caused housing values in a town to go down, individuals in the town acting alone could not organize to pay the developer not to build because of collective action problems. Changing the property right such that new developers need the permission of a zoning board to build gives towns a way to solve this collective action problem. Further, the Coase Theorem suggests that changing the property right will not change the optimal solution – developers will be worse off, but there should be the same amount of development as would have occurred if members of the town could organize.[154] This is a separate and very real gain from local control over zoning – it gives those closest to a new development the ability to force the developer to internalize its effect on their property values. It should be noted, though, that this does not force developers to internalize the effect they have, positive or negative, on properties in other towns.

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[152] Bruce W. Hamilton, *Capitalization of Intrajurisdictional Differences in Local Tax Prices*, 66 AMER. ECON. REV. 743, 748 (1976).
[153] WILLIAM FISCHEL, THE ECONOMICS OF ZONING LAWS: A PROPERTY RIGHTS APPROACH TO AMERICAN LAND USE CONTROLS xi, 125-49 (1985).
[154] *Id.* There may be limits on the ability to negotiate costlessly and cities will not always extract the right amount from developers. *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.)

Fischel also supplemented the so-called "supply-side" of the Tiebout model; he

developed a theory for how localities came up with public policies.[155] He noted that most

American households have extremely undiversified financial portfolios, and almost all of their

savings are locked up in one asset: their home.[156] Being involved in local government is how

they protect the value of that asset, particularly in the absence of insurance markets to protect

against decreases in property values.[157] Tiebout's "citizen-voters," are actually "home voters,"

according to Fischel and they overcome the lack of incentive voters have to care about politics

because they are worried about the variation in the value of their most important asset. This

means that small town local politics is 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.[158] This explains, for Fischel, why there is

almost complete capitalization of policies into home prices in the suburbs, but substantially less

in large cities.[159]

There is, of course, far more in the Tiebout literature than these contributions.[160]

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

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[155] *See* FISCHEL, HOMEVOTER HYPOTHESIS, *supra* note 150, at 1-10; Oates, *The Many Faces, supra* note 3, at 28 (referring to the provision of policies as the "supply side" of the Tiebout model).
[156] FISCHEL, HOMEVOTER HYPOTHESIS, *supra* note 150, at 4.
[157] *Id.* at 5-12. Fischel argues the development of such insurance markets would be a good way to convince communities to avoid NIMBY politics. *Id.* at 268-70.
[158] FISCHEL. HOMEVOTER HYPOTHESIS, *supra* 150, at at 14-16; 89-94.
[159] Fischel, *Footloose at Fifty, supra* note *3*, at 11; William Fischel, *Property Taxation and the Tiebout Model: Evidence for the Benefit View From Zoning and Voting*, 30(1) J. ECON. LIT. 171, 175 (1992) (noting that studies that find that zoning is not capitalized into housing values "draw their samples from large central cities."); William H. Hoyt, Leviathan, *Local Governmetn Expenditures and Capitalization*, 29 REG. SCI. AND URBAN ECON. 155, 157 (1999) ("In larger cities tax increases are not fully capitalized into property values.")
[160] For a discussion of the literature, see Oates, *The Many Faces of the Tiebout Model, supra* note 3, at 21-42.

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.[161] 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.

Government policies affect where people live, both where in the country and where in any individual metropolitan area.[162] 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.[163]

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[161] *See* SPATIAL EQUILIBRIUM, *supra* note 8, at 6-8; *Are Cities Dying?*, *supra* note 9, 143-49.
[162] 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).
[163] There is no strong empirical evidence on this question and the 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

This is a simple point, but it has a rather dramatic effect on the utility of the Tiebout Model. Tiebout explicitly assumed that "restrictions due to employment opportunities are not considered."[164] 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.[165] As a result, people do move to get things like information spillovers and access to consumption, social and certain very localized labor markets.[166] Thus, the basic assumption of the Tiebout Model, that people only or primarily move in order to receive public policies they prefer, is almost certainly false.[167] The Tiebout Model simply cannot provide us with much more than a tool to understand an aspect of the efficiency of local government laws. We need to understand agglomeration gains as well.

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 REDUCES THE GAINS FROM WITH SORTING AND VICE VERSA*

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 relationship is usually inverse. Where we see agglomeration, there will be fewer gains from

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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. However, it is an assumption and not a fact. Thanks to Bruce Kobayashi for pointing this out.

[164] Tiebout, *supra* note 1, at 418.

[165] Glaeser, *Nonmarket Interactions*, *supra* note 20, at 106.

[166] *See* notes 171-179 and accompanying text.

[167] *See* Tiebout, *supra* note 1, at 418.

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.[168] 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 than less dense ones (and also higher congestion costs).[169] This is why capitalization works better in less dense areas than in dense ones.[170] Public 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.)

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[168] *See Are Cities Dying?*, *supra* note 9, at 145-49.
[169] "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.
[170] *See* note 159.

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.[171] And hence all will interfere will 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.[172] These effects are likely to be highly local, as who you grab lunch with is almost entirely dependent on who is nearby.[173] As such, industries and individuals in highly creative industries have extremely high incentives to co-locate.[174] 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 City was raising taxes and cutting services and still going bankrupt, industries like finance, book and magazine publishing and law firms did not move.[175] To the extent that city economies have

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[171] See Are Cities Dying?, supra note 9, at 140.
[172] See Glaeser, Nonmarket Interactions, supra note 20, at 103 ("The effect of …proximity on nonmarket transactions is large.")
[173] 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
[174] See Glaeser, Nonmarket Interactions, supra note 20, at 107
[175] "It is the producer services that cluster in the largest places and seem to have had the least tendency towards dispersal…. Even though New York City lost over 100,000 manufacturing jobs between 1977 and 1984, it gained 192,000 jobs in business services and finance….Banking, law, advertising, and accounting found in the largest centers (primarily Manhattan), dominate on a national and international scale." JOHN R. LOGAN AND HARVEY MOLOTCH, URBAN FORTUNES 262 (1987).

become more dependent on these industries, the degree to which the threat of exits limits city policy has likely decreased.[176]

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, poorer citizens are likely to be unable to move outside of a central business district and still access deep labor markets.[177] 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.[178]

Finally, those who put a very high value on social interactions and cultural amenities are likely to be very sticky populations. The very rich have a strong desire for density, as do young singles.[179] 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, issues presumably of some import to young singles.[180] This is difficult to square with the Tiebout Model – under its assumptions, it is hard to imagine anyone rich living in New York City. The reason they do is that they value the large number of social interactions and cultural events more than they disfavor local taxes. Similarly, young singles care far more about the possibilities and excitement of urban life than they do about a negative policy atmosphere. That cities provide

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[176] *See* SPATIAL EQUILIBRIUM, *supra* note _, at 8 (noting increase in the degree to which urban centers rely on idea industries/)
[177] *See* SPATIAL EQUILIBRIUM, *supra* note 8, at 172-74.
[178] Sudhir Venkatesh's work makes this clear. He shows that urban ghettoes provide residents with community insurance schemes – informal food, shelter and child care networks, opportunities for informal employment – that are likely not available outside of dense areas. SUDHUR VENKATESH, OFF THE BOOKS: THE UNDERGROUND ECONOMY OF THE URBAN POOR 47-57 (2008). The social capital discussed in Venkatesh's book are agglomeration gains.
[179] Glaeser, *Nonmarket Interactions*, *supra* note 20, at 106; FLORIDA, WHO'S YOUR CITY, *supra* note 99, at 243.
[180] 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.

social and consumption benefits in abundance means that sorting is less efficient – people are not living in local governments that offer attractive policies.

Further, sorting will work less well in big cities than in small ones. This fits the empirical finding that the degree to which public policies are capitalized into house prices is lower in urban areas than in suburban ones.[181] It is possible to imagine a situation in which governments were equally small throughout big cities and small towns. 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, which is more than double what William Fischel has argued is the absolute maximum size a locality can be and still be governed by Tiebout Model principles.[182] If there were such micro-governments, agglomeration effects would not interfere with sorting unless they were extremely local. However, absent this 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.

Empirical evidence backs this claim up. 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.[183] First, they report pure polling data – according to the Annual Housing Survey, only 5% of moves are primarily motivated by public policy concerns.[184] This

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[181] *See* note 159.

[182] *See* Upper East Side Megasite (citing the 2000 Census), available at http://www.uppereast.com/upeassiddem.html, HOMEVOTER HYPOTHESIS, *supra* note 150, at 87-90. 100,000 is just a rough estimate for Fischel; given the problems of collective action in voting, I think this number is likely much too high.

[183] Paul W. Rhode and Koleman S. Strumpf, *Assessing the Importance of Tiebout Sorting: Local Heterogenity from 1885 to 1990*, 93(5) AM. ECON. REV. 1648, 1649-1652 (2003).

[184] *Id.* at 1649.

fits with the above discussion --- their data shows social and employment factors drive most decisions to move.[185]

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 hetereogenity in local policy options.[186] 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.[187] However, the evidence shows that his 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 heterogeneity.[188] That is, local governments have over time become more similar. Further, cities with higher commuting costs feature higher cross-municipality hetereogenity than cities with low commuting costs, which again is contrary to the predictions of the Tiebout model.[189]

The Rhode and Strumpf 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. Further, their results suggest these forces are becoming more important. Where location and employment are not as closely tied, people move to capture social and intellectual benefits, and do so despite the availability of Tiebout-style sorting. Finally, reductions in heterogeneity caused by agglomeration harms

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[185] *Id.*
[186] *Id.*
[187] *Id*. at 1651-54.
[188] *Id.* at 1164-67
[189] *Id.* at 1661-64

sorting efficiency -- if towns are less different from one another, someone who wants to move to a politically distinct town will have fewer choices.

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.[190] This, he claims, can lead to benign or malign effects depending on the quality of local democracy.[191] Courts should take local political incentives into account when deciding whether a local redistributive policy goes beyond local powers.[192] 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 and "exploit" capital that becomes fixed in a locality.[193] 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-and-bust nature of capital flows and flight and to achieve regulatory ends that may be politically impossible at the national level.[194]

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. These arguments are important, but are only aspects of the broader relationship between agglomeration and sorting. The presence of agglomeration limits the degree to which either residents or businesses are likely to move in response to a change in local

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[190] Gillette, *Local Redistribution*, *supra* note 15, at 4-6, 27-32./
[191] *Id.* at 32-35
[192] *Id.* at 41-48.
[193] Schragger, *Mobile Capital*, *supra* note 15, at 9-15.
[194] *Id.* at 36-38, 48-53.

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, and that the study of agglomeration can tell us when this will occur. The next

section will discuss the converse effect, how sorting effects agglomeration.

ii)   *Sorting Reduces Agglomerative Efficiency*

Just as agglomeration reduces the efficiency of sorting, sorting likely reduces

agglomerative efficiency. There are three reasons this is so: (i) sorting forces changes in location

and density, (ii) reduces diversity and (iii) provides differential benefits to dense and less dense

areas.

The first and most important effect is based on movement and density. Tiebout sorting,

by its very nature, 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 state in a

location-neutral way, people would decide where to live in a way that maximized agglomeration

economies minus congestion costs.[195] 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.[196] 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 limit their population in order to stop subdivisions of property that would impair their ability to set an average level of public services.[197] Given relatively fixed jurisdictional boundaries, this means regions have to spread out.

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[195] *See Are Cities Dying?*, *supra* note 9, at 150 ("The largest cities do eventually stall in attracting populations. At some point, the benefits of agglomeration are overwhelmed by the costs of congestion.")

[196] Truman Bewley argues that, to reach an optimal amount match between preferences and policies in the Tiebout model, there must be an equal number of governments and preferences. Truman Bewley, *A Critique of Tiebout*, *supra* note 146, at 717 . Bewley's criticism is almost certainly too absolutist – there can be gains from sorting without achieving Tiebout's stated goal of developing a market mechanism for perfectly valuing public goods.   *See* Oates, *The Many Faces of the Tiebout Model*, *supra* note 3, at 30-31. William Fischel's response summed this point up simply: "The Tiebout Model Works Okay." THE HOMEVOTER HYPOTHESIS, *supra* note 150, at 70. However, this has an implication – the number of different local governments will affect the extent and quality of sorting.

[197] *See* notes151-152 and accompanying text.

This artificial spreading reduces all types of agglomerative efficiency.[198] Spreading will cause transportation costs inside a metropolitan region to go up, reducing the agglomeration caused by forward and backward linkages among suppliers. As people spread out in space, the degree to which they are part of the same labor, consumption and social markets goes down. And spreading will reduce information spillovers, which are based on frequency and degree of interactions -- who people go to dinner with, what they see on a daily basis etc. -- and spreading will reduce that degree of contact.[199] 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.[200] However, it is certain that local-government-services based spreading will have a negative effect on agglomerative efficiency.

This effect is national as well as local. To the extent that zoning causes region-wide housing prices to rise, it forces people to move from the region. In the United States, there is heavier zoning in the most productive regions of the country – particularly coastal regions like

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[198] In a little-discussed chapter of his classic work, THE ECONOMICS OF ZONING, William Fischel noted similar costs. WILLIAM FISCHEL, THE ECONOMICS OF ZONING 252-265 (1990). *See also* Eric Hanushek and Kuzey Yilmaz, *The Complementarity of Tiebout and Alonso*, 16 (2) J. HOUSING ECON. 243 (2007). Using an early agglomeration model that assumes agglomeration happens only in the central business district (CBD), Fischel argues 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. He also notes that this reduces agglomerative efficiency. *Id.* at 269. While this paper largely agrees with Fischel's analysis, his use of a CBD-centric models come with two major costs. The first is that 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, despite the costs to agglomeration. 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.
[199] This spreading may also reduce some congestion costs, but it is does not reduce the major form of congestion – increased rents. Restrictive zoning increases the value of housing relative to the value of land. A community that imposes a two acre minimum lot size restriction on new construction will render the value of an existing house on a one acre plot roughly equal to a house on a two acre lot – the effective price of the second acre will have reduced to nearly zero. Edward Glaeser, Joseph Gyourko and Raven Saks have shown that in the most heavily zoned metropolitan areas, more than 50% of the value of houses is due to this "zoning tax." Glaeser, Gyourko and Saks, *supra* note 27, at 339. The result of zoning is thus spreading in space, but no reduction in average housing values.
[200] *See* notes 171-174 and accompanying text.

New York, Boston and San Francisco – than in Sunbelt cities like Houston, which has no zoning, or Phoenix.[201] This promotes fit between policies and preferences in coastal regions, but also drives population away from the most productive regions and towards less heavily zoned regions.[202] "[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."[203]

Sorting also affects local diversity, which influences agglomeration. The whole point of the Tiebout sorting is that it reduces diversity in terms of preferences for public policy. This is what the gains from sorting are – people group together with people of similar preferences and get the policies they like.   One of the major generators of growth, under agglomerative theories, is diversity. According to Jane Jacobs, Robert Lucas and Ed Glaeser, diversity of types of output, and diversity of people, is the source of urban innovation.[204] These are different types of meanings of term diversity, though. One is diversity among preferences for public policies, and the other is for types of output or ideas. However, it is likely that there is at least some degree of correlation between them.[205] There is some direct empirical evidence that local political preferences and industry type are correlated.[206] Also, types of output and preferences for public policy likely correlate with demographic variables – income, age, race, gender etc. Sorting by policy preferences reduces diversity of these demographic variables, which in turn likely reduces

[201] Jon Gertner, *Home Economics*, N.Y.TIMES MAG. , March 5, 2006 at 94; Glaeser, *Houston, New York Has a Problem*, *supra* note 162, at 72 .
[202] Glaeser*, Houston, New York Has a Problem*, *supra* note 162, at 72.
[203] *Id.*
[204] *See* notes118-137and accompanying text
[205] Dora L. Costa and Matthew E. Kahn, *Civic Engagement and Community Heterogeneity: An Economist's Perspective Civic Engagement and Community Heterogeneity: An Economist's Perspective*, 1 PERSPECTIVES ON POLITICS 103 (2003) (discussing community diversity as a factor in both growth and community political cohesion);
[206] For instance, a study of Chicago lawyers showed that "political preference, religious affiliation and law practice characteristics tended to be coterminous." John P. Heinz, Edward O. Laumann, Robert L. Nelson and Paul S. Schnorr, *The Constituencies of Elite Urban Lawyers*, 31 L. & SOC. REV. 441, 444, 451 (1997).

diversity in types of output. The result is that sorting likely reduces the degree to which different types of people interact, and thereby reduces the type of diversity that contributes to local economic growth.

Finally, sorting has a differential impact across a region. 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 value agglomeration – be they firms that get gains 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. This is true for a number of reasons. First, there are only a few big dense cities in any given metropolitan area, while there are many local governments in outlying areas. Hence those desiring a high-cost-per-square-foot/high-density-of-other-people living situation have fewer choices among local governments and end up with a worse fit between their policy preferences and the local government they live in. Second, many of the gains from agglomeration are specific to one area. For instance, most hedge funds locate in Greenwich, Connecticut, and locating in another prosperous suburb of New York City – say Scarsdale, NY – would not provide the same benefits, and therefore hedge funds cannot chose their preferred public policies and still get the gains from agglomeration.[207] Third, the stickiness created by agglomeration reduces the degree to which policies are sensitive to preferences, and dense areas feature more agglomeration (and congestion).[208] As a result, having many small

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[207] *See* Michael S. Schmidt, *A Trader's Train to Wall Street, Conn.*, N.Y. TIMES, August 4, 2006 at C1 (noting that hedge funds centered in Connecticut).

[208] Fischel's point about the differential quality of local elections makes this more stark. *See* notes 155-158and accompanying text. In smaller towns (which are, on average, less dense), local politics will likely produce strongly efficient Tiebout-style policies. In big cities, there is less reason to believe this is true. That will increase the degree to which sorting produces differential outcomes and hence reduces agglomerative efficiency. Fischel's interest group story about the inefficiencies of big city elections likely understates the case somewhat. He argues that big cities become like states in their lack of resistance to interest group politics as a result of their size. However, states provide voters tools for responding to their size – namely, political party heuristics that provide voters with relevant information. Many big cities have non-partisan elections, leaving voters substantially uninformed. Further, even where there are partisan elections, there are strong reasons to believe that the national parties that contest local elections do not provide local votes with much information about the stances of their candidates

governments providing differentiated local services makes living away from dense areas more attractive relative to living in dense areas. 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 means that the benefits gained from sorting come with a cost in agglomerative efficiency.

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. The interaction between local taxation and differences in wealth between towns can create an added, but separate, bias away from the naturally occurring distribution and density of people. 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.[209] 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 up (and supply down, by means of exclusionary zoning, regulation and preservation of landmarks) and driving out the poor.[210] Regardless of which way it cuts, the fact of local taxes, and the incentives this creates for the wealthy to co-locate, will produce additional movement away from the naturally occurring density and distribution of people.

on local issues. For a full discussion of this issue, 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).

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

[210] For a discussion of whether such a "demographic inversion" is currently occurring, see Alan Ehrenhalt, *Trading Places: The Democratic Inversion of the American City*, THE NEW REPUBLIC, August 13, 2008 at 84.

It should be made clear that I am not claiming that local governments will not take agglomerative efficiency into account at all when making policy. They surely do. Instead, I am claiming that sorting harms agglomerative efficiency and that the full costs of sorting are not factored in, in whole or even in large part, by local governments. The benefits of individual location decisions on the level of economic activity – all of their new transactions -- accrue across a metropolitan area. Further, the residents of any individual government benefit from policies promoting agglomeration elsewhere, inducing free riding. 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 are not purely local, but in fact generate externalities felt by other communities.[211] However, these arguments are usually not clear about the form of the harm – it is sometimes removing local tax base and other times refusing to accept locally unwanted land uses. The argument here focuses on the basic type of economic harm caused by local externalities – the degree to which a system that creates happiness with local policies (sorting gains) reduces the overall economic productivity of a region (agglomeration gains). A system that permits and encourages sorting will reduce agglomerative efficiency regardless of which policies people prefer and town enact – it is the fact that people have different preferences for policies and for their neighbors that is the driver of the conflict between sorting and agglomeration.[212] If the availability of differing public policies causes people to move away from the best set of neighbors for them in a region, then the overall level of economic activity in the region will fall. A town's existence and decision to offer a different set of policies causes harm

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[211] *See*, *e.g.*, Schragger, *Consuming Government*, *supra* note 6, at 1831; Richard Briffault, *Localism and Regionalism*, 48 BUFFALO L. REV. 1, 18 (2000).
[212] As noted in several places, this is an assumption, not a verified fact, but one that seems likely to be true. *See* note 163.

to agglomeration because it causes people to move there, and the externality it creates is that a town has no incentive to properly balance the benefits it creates for its residents with the harm generating different policy options creates for overall regional economic performance.

Further, focusing on the conflict between sorting and agglomeration gives us insight into when and why any town's policies (and any system of local government law) affect overall regional productivity. Looking at different explanations for agglomerative efficiency – transportation costs for goods, market depth, spillovers – allows us to see the mechanism by which any town's policy will affect the broader metropolitan economy. As we will see in Section V(b), understanding the underlying reason we are seeing agglomeration is necessary for determining whether efforts by local governments are promoting or harming the region or nation's overall welfare.

Finally, 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. The problem arises from the fact that small 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.

The lesson is clear: sorting reduces agglomerative efficiency, just as agglomeration reduces sorting efficiency.

V. The City as a Law and Economic Subject Applied: Dillon's Rule, Home Rule and the Law and Economic Approach as a "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.[213] This tradeoff is easiest to see in the debate over whether to form regional governments. Doing so 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.[214]

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[213] 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 (and vice versa) but as the number of local governments and their ability to make decisions without respect to regional issues increases, the effect grows larger. Some changes – like Dillon's Rule, as discussed below, may improve both factors, and can be thought of as a shift-out of the production possibilities frontier. Thanks to Bob Ellickson for suggesting this idea. Ellickson has suggested that a similar tradeoff exists between "bonding" social capital and "bridging" social capital, which has a strong connection to the idea in this paper that by limiting diversity, Tiebout Model-style sorting increases the attractiveness of local governmental policy but does so at the cost of reducing the innovations caused by productive diversity. *See* Robert C. Ellickson, *The Puzzle of Optimal Social Composition of Neighborhoods* in THE TIEBOUT MODEL AT FIFTY, *supra* note 3, at 204.

[214] 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 _, 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. This, and not some underlying conflict, is why we see so few interlocal agreements. "My underlying claim…is that the most significant obstacels 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 create a particularly difficult case for interlocal contract.

First, as discussed by Fujita, Krugman and Venables, 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.

These problems are less fundamental than the problems of inter-local agreements over the types of agglomeration that affect growth. These agglomeration economies – MAR spillovers in one industry and Jacobs' spillovers between industries – are premised on the make-up of individual communities and regions. On the other hand, the very nature of gains from sorting is that they provide gains from location based on grouping together people with similar policy preferences. The only way a local government could agree to make policies that effect agglomerative growth would be to abandon its ability to choose its residents.

The debate over regionalism is both important and exhaustive.[215] Rather than address it, 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. Rather than the simple calculations of the Tiebout Model, this analytical framework makes assessing the efficiency of local government law decisions complex and contingent.

This section will attempt to take the theory developed above to the specific content of local government law. It will analyze two of the central issues in local government law – the normative status first of Dillon's Rule and then of current Home Rule grants of power. First, it will argue that, contrary to previous formulations, Dillon's Rule is neither all good nor all bad. Rather, when enacted, Dillon's Rule contributed to both agglomerative and Tieboutian efficiency but, with changes in the economy, the agglomeration-based case for the rule vanished (although the Tieboutian case remains). Second, it will assess current "Home Rule" grants of power. It will argue that the division between what is done at the state and local levels in most states largely tracks the divide discussed in this paper, with states granting local governments the power to create policies that will generate sorting while the states retain the power to limit sorting in favor of agglomerative efficiency. As states may have incentives to do something other than maximize the agglomerative efficiency of any region, there may be room for the federal government to improve state policy by tying federal aid to failures in balancing agglomerative and sorting efficiency.

That is, a local government that agreed to promote agglomerative growth would be giving up its ability as an entity to provide benefits to its citizens. It is hard to imagine local governmental signing on to such policies.

[215] For reviews of this debate, *see* Gillette, *Interlocal Bargains*, *supra* note 15, at 188-192; Sheryl B. Cashin, *Localism, Self-Interest, and the Tyranny of the Favored Quarter, supra* note 6, at 1991-2015; Briffault, *Our Localism II*, *supra* note 6 at 425, 451-53.

a. THE "TWO TALES OF THE CITY" IN THE LOCAL GOVERNMENT LAW LITERATURE: 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.[216]

Under Dillon's Rule, local governments could only act in those areas where the state government had delegated them power and gave state courts the ability to police exercises of local power . "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."[217] Through a series of decisions in state courts and the United States Supreme Court in the late nineteenth and early twentieth centuries, Dillon's Rule became the default rule governing city power throughout the country.   When combined with the specific allocations of power to localities, the establishment of the rule meant that courts enforced a regime of "city powerlessness."[218]

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[216]J. DILLON, *supra* note 30, at 101-102.
[217] *Our Localism*, *Part II, supra* note 6,at 8.
[218] Frug, *supra* note 16*,* at 1057.

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.[219] It is the confluence between his work as a railroad attorney and his scholarship 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."[220]

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.[221] 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. . ."[222]

Much of modern local government law literature has aimed its sights directly at Dillon's Rule. Gerald Frug, perhaps the most influential modern local government law scholar, attacked it as the fullest expression of a classically Liberal, anti-democratic, anti-localist view of the State. Frug argued that the elite backers of Dillon's Rule in the States sought to disempower city governments because they were intermediate actors, neither wholly private nor wholly State, and this undermined the liberal market order. Further, they backed limits on city power because of

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[219] *See* Williams*, supra* note 35, *at* 91.

[220] 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)

[221] Williams, *supra* note 35*, at* 92-95.

[222] DILLON, *supra* note 30, at 118. This is usually read as making clear that Dillon opposed government intervention in the economy and there is little reason to doubt that he did oppose most such intervention. That, however, does not tell us much about why Dillon thought it was necessary to limit city power, as opposed to, say, the power of states.

their discomfort with the ethnic political machines that led cities.[223]   To Frug, Dillon's Rule stands as a limit on decentralizing power and hence on true democratic governance. "Instead, our refusal [to grant true political power to cities] is a political choice, a choice for organizing our social life by means of technical hierarchy rather than democratic control."[224]

In contrast, the Tiebout model provides support for Dillon's Rule. One of the crucial assumptions of the model is that cities will only provide purely local public services. To the extent public services have external effects, the assumptions about the competitive equilibrium of the Tiebout model breaks down. Dillon's Rule serves to limit localities to those powers assigned to them by the state.   States likely will only assign to localities those powers that are local in effect.   Rick Hills summarizes the arguments 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.… Given these well-known dangers of spillover costs, it 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.[225]

Dillon's Rule, on its own, of course, does not limit local power to purely local public services, but it does limit the extension of local powers into new areas, which should prove to reduce the amount that local governments affect one another.[226] Hills notes that "there will tend to be a high

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[223] Frug, *The City as a Legal Concept*, *supra* note 16, at 1109-1120; FRUG, CITY MAKING, *supra* note 7, at 45-49.

[224] Frug, *The City as a Legal Concept*, *supra* note 16, at 1129.

[225] Hills, *supra* note 31, *at* 1275.

[226] Clay Gillette argues that this justification is problematic, as there is no logical link between the powers the state legislature grants localities and their external effect. Further, state legislature might produce logrolling between localities seeking to harm other localities. Gillette, *In Partial Praise of Dillon's Rule, supra* note 16, at 971-973.   However, as he notes, state constitutional bars on "special legislation," or laws that affect only one city limit this to a degree. *Id.* at 971 n.46. His argument in favor of Dillon's Rule is that it provides a check on one-sided lobbying inside cities. Local governments are particularly liable to domination by single interests, and by limiting novel policy choices, Dillon's Rule limits the degree to which these one-sided lobbying efforts will be successful. *Id.* at 974-985. Richard Briffault critiques this understanding by arguing that, for small cities, one-sided lobbying is unlikely to be successful (for reasons similar to those offered by William Fischel, see notes155-156

correlation between those activities that municipalities have clearest authority to perform based on state statute and tradition, and those activities that are least likely to impose external costs."[227]

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.[228] 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 THE LAW AND ECONOMIC APPROACH TO 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: transporting goods in the late nineteenth and early twentieth century was extremely expensive and, as a result, transportation 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 agglomeration at the cost of development

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and accompanying text), and big cities are presumably much like states in their politics. Further, he argues there is little fit between new policy areas and the results of one-sided lobbying. Richard Briffault, *Home Rule, Majority Rule, and Dillon's Rule*, 67 CHI-KENT L. REV. 1011 (1991). Gillette's response is that "one-sided" lobbying can be majoritarian, and his worry is equally aimed at majorities running roughshod over minorities. Gillette, *In Partial Praise of Dillon's Rule*, *supra* note 16, at 1013 n.4. The story told here does not rely at all on a theory of how local governmental policies are produced, except that they are presumed to be concerned with the economic success of their own jurisdiction.

[227] Hills, *Dissecting the State*, *supra* note 16,, at 1275 n.224.
[228] Briffault, *Our Localism, Part II*, *supra* note 6, at 393.

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 firms shipping between the regions have face transportation costs.[229] 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).[230] 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.[231] As transportation costs fall, though, there is less incentive to agglomerate – the gain from locating near other suppliers is less.[232] 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

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[229] SPATIAL ECONOMY, *supra* note 8, at 66-79
[230] *Id.* at 67.
[231] *Id.*
[232] *Id.*

loath to leave even if the cost of being further from them has fallen).[233] At some point, though, the manufacturing sector will hit a "break point" and will uncluster.[234]

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:[235]

- The cost of transportating 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 development of large cities like Midwestern and northeastern cities like Chicago, Buffalo, Cleveland, St. Louis and Detroit were tied to their status as transportation hubs moving goods from the heartland to the coasts.

- 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.

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[233] *Id.* at 68, 70-72.
[234] *Id.*
[235] Glaeser and Kohlhase, *supra* note 32, at 128.

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.[236] The keys to this story have been the rise of the combustion engine and the jet airplane and innovations like the shipping container.[237] 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.[238]

One area where transportation costs have remained high is in moving human beings – a very large part of the U.S. economy is devoted to transporting individuals from their homes to work inside regions and to air travel between regions.[239] 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; rather it is because most of the economic cost of transporting people comes from the opportunity costs of people's time.[240] We are not producing much economic activity when we sit in traffic or in airport lounges. As a result, in economic terms, inter-city travel by people is very 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

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[236] For another excellent summary of the decrease in transportation costs, see Rhode and Strumpf,, *supra* note 183, at 1665-67.
[237] See *Id.* at 4; MARC LEVINSON, THE BOX: HOW THE SHIPPING CONTAINER MADE THE WORLD SMALLER AND THE WORLD ECONOMY BIGGER (2006). Technological advances --- like the shipping container – are a major factor in transportation costs, meaning that, even if oil prices increase, these effects will stick.
[238] *See* Rhode and Strumpf, *The Importance of Tiebout Sorting*, *supra* note 183, at 1667.
[239] Glaeser and Kohlhase *supra* note 32, at 128-129
[240] *Id.*

in cities and the percentage employed in manufacturing.[241] 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.[242] Today, the opposite is true. Manufacturers now increasingly locate

in less dense areas, and most big cities have less manufacturing employment than the national

average.[243] 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?"[244] 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.[245] 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 can effect a larger share of the economy.

Sociologist Saskia Sassen describes a similar trend happening globally with an added wrinkle –

the added complexity of supply chains generated by globablization 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 famous formulation, "Global Cities."[246]

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[241] *Are Cities Dying?*, *supra* note 9, at 144
[242] Glaeser and Kohlhase, *supra* note 32, at 138-39
[243] *Are Cities Dying?*, *supra* note 9, at 145; Glaeser and Kohlhase, *supra* note 32, at 138-39.
[244] Edward L. Glaeser and Ciacomo A.M. Ponzetto, *Did the Death of Distance Hurt Detroit and Help New York?*,NBER Working Paper No. 13710 (December 2007).
[245] *Id.* at 3-4.
[246] 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, living off the after-effects of their surfeit of built capital.[247]

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.[248] Firms will locate where outbound transport costs are the lowest – they still want to sell their final goods to all locations.[249] 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.[250] Thus, cities had an

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[247] Glaeser and Kohlhase, *supra* note 32, at 138-39.
[248] SPATIAL ECONOMY, *supra* note 8, at 151-79.
[249] *Id.* at 227-36
[250] "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."
SPATIAL ECONOMY, *supra* note 8, at 236.

incentive to subsidize the construction of railroads, as it would have created increasing local returns.

Local governments in the nineteenth century thus had strong incentive to compete to subsidize railroads.[251] Collectively, these subsidies were likely inefficient even if it made sense for each town, as it would result in overinvestment.[252] 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 bur 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 to distorted transportation lines.

This would impose 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.[253]

This explanation fits Dillon's own reasoning.[254] There is no indication that he was concerned with promoting inter-city policy competition or gains from sorting; he was no

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[251] "Following the Civil War municipalities were drawn into a whirlpool of inflation. 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)

[252] They certainly lead to ruin, with many cities forced to repudiate bonds issued on behalf of railroads, which caused a major disruption in the American financial systems in the 1850s. *See* Williams, *supra* note 35, at 93.

[253] One can tell a similar story about the decision of the federal government to take railroad regulation out of the hands of states. In fact, federal regulation of railroads, designed to counter protectionism in state regulation of inter-state rail, drove much of revolution in the use of Congressional power under the commerce power to regulate inter-state commerce. "Before the advent of railroading, Congress had made little sustained effort to exercise its constitutional authority to affirmatively regulate commerce among the states." Ely, Jr*., supra* note 220, at 965.

[254] It should be noted that I am not suggesting that the demise of Dillon's Rule was solely a response to these changes in transportation costs. Many factors played a role, although it surely was a factor in changing the returns to a Dillon's Rule regime.

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 supported a rule that was limited to stopping cities from engaging in diverting intercity transport without dramatically limiting other forms of city power. However, the transport costs story also explains the broad 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.[255] 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.

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."[256] 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

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[255] *See* notes 229-234 and accompanying text

[256] DILLON, TREATISE ON LOCAL GOVERNMENT, *supra* note 30, at 227.

industry.[257] 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 to efficiency in the same way. Dillon's Rule still promotes sorting efficiency, but it is role in promoting agglomerative efficiency has likely passed.

c. **THE THIRD TALE OF THE CITY IN THE MODERN ERA: APPLYING THE LAW AND ECONOMIC APPROACH TO HOME RULE REGIMES**

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. The regime that followed Dillon's Rule – home rule, in all of its different incarnations – can be analyzed using the tools of this paper. In practice, home rule powers and state reservations of power track the division between agglomeration and sorting. Local governments are given power to promote sorting, but state governments retain the power to limit sorting in the name of furthering agglomeration. There are reasons to believe states are not well-placed to balance the forces of agglomeration and sorting, as they have interests in geographic redistribution and often do not contain the entirety of a metropolitan area. As a result, where federal monies are spent in areas that are primarily the subject of local regulation and control, federal spending should be structured to take into consideration this anti-agglomerative bias in state policy.

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[257] It has not, of course, ended such activities. *See* Schragger, *Free Trade Constitution*, *supra* note 15, at 1134-45 (discussing local efforts to stimulate industry and their treatment at the Supreme Court).

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.[258] 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." 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.[259] 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.[260] Further, categories like 'imperio' or legislative home rule tend to bleed into one another, with judicial 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.[261]

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. ""[Home rule] has not successfully created an area of local autonomy protected from state control….[S]tate control of cities has not

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[258] BRIFFAULT AND REYNOLDS, *supra* note 38, at 281-85.
[259] Barron, *Reclaiming Home Rule*, *supra* note 40, at 2345-46.
[260] BRIFFAULT AND REYNOLDS, *supra* note 38, at 284-85.
[261] *Id.*

been affected significantly by state constitutional protection for home rule."[262] 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."[263] However,

he argues that this enhanced local power exacerbated the problems of inter-local externalities and

inequity.

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.[264]

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."[265]

Barron is right, and importantly 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 home rule does and does not do raises some serious questions. His

central claim is 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."[266] The two ideas on either side

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[262] *Frug*, *supra* note _, at 1109.
[263] Richard Briffault, *Our Localism, Part I*, 90 COLUM. L. REV. 1,15 (1990)
[264] *Reclaiming Home Rule*, *supra* note , at 2345.
[265] *Id.*
[266] Barron, *Reclaiming Home Rule*, *supra* note 40, at 2345-46 (quoting LOGAN AND MOLOTCH, *supra* note 175, at 1.) The
distinction between "use values" and "exchange values" is problematic when the evidence on the degree to which amenities are

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 uses a Marxian framework to claim that

cities 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.[267] 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. 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.[268] 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.[269]

However, it is unclear that state law regularly does force cities into this either/or choice.

While some states prevent the local regulatory concepts Barron favors, others do not. He points

to several states that have laws that bar home rule cities from engaging in inclusionary zoning

and or passing anti-discrimination laws, but others, as he acknowledges, do have these powers.

Further, cities engage in all sorts of regulations that interfere with either excessive urban growth

or sprawling development, from using zoning to keep big box retailers or chain stores out of

cities to forcing big-city developers to negotiate with local groups to create community benefits

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capitalized into housing prices 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."

[267] Logan and Molotch, *supra* note 175, at 6-10.

[268] Barron, *Reclaiming Home Rule*, *supra* note 40, at 2345-46.

[269] *Id.* Barron never quite explains what normative principles animate his argument. He argues that sprawl is bad, and that policies that do not promote sprawl might be good, but he does not explain along what metric he is evaluating the relative attractiveness of different states of the world (or even provide a definition of sprawl). It is difficult, therefore, to figure out what to make of his normative claim that the current state law regime is substantially flawed.

agreements.[270]   More importantly, cities regularly use their ordinary zoning powers to balance

the gains and costs of density, and do so in a range of ways with radically different results.[271]

Finally, it is unclear how some of the most important local powers – primary education, policing

– fit into his understanding of what local governments can and cannot do.

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 the 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 generally 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

to repair roads, but cannot regulate their streets in ways that are biased against outsiders or

charge tolls without the state authorization.[272] That is, policies that are aimed at promoting the

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[270] *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) (describing various local laws barring big-box superstores development); Sheila Foster and Brian Glick, *Integrative Lawyering: Navigating the Political Economy of Urban Redevelopment*, 95 CALIF. L. REV. 1999 (2007) (describing how New York City forced developers to agree on community benefits agreements with community groups).
[271] 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 27, at 49.   The result is that Chicago has cheaper, denser housing.
[272] 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).

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.[273] 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.[274]

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. As political entities, state governments are often quite concerned with balancing growth across a state, and taking economic gains from efficient regions are redistributing them to other parts of the state. 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."[275] Also, regions often contain more than one state – for example, the New York MSA includes parts of Connecticut and New Jersey while the Washington DC MSA stretches across the District, Maryland and Virginia – and state governments have no interest in increasing property values in other states.   State governmental policy is unlike to promote an optimal trade-off between agglomerative efficiency and the gains from sorting in any given region.

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[273] *Id.*

[274] 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); CAL. GOV'T CODE 65589.5(d), (h)(2), 65589.6 (West Supp. 1994) (permitting state judicial review of local zoning decisions that bar the development of affordable housing). 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.

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

Education policy reveals this clearly. Providing elementary and secondary education is one of the, if not 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.[276] Although states and the federal government provide substantial aid, primary and secondary education in this country is primarily governed at the local level.[277] 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.[278] Schools – and the taxes people have to pay to provide them – are the major reason why people sort among local governments.[279]

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. This reduces some of the gain the parents themselves from moving to the locality with their preferred public schools – the loss is 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. Further, it changes the payoffs for those who would lived near them or who now live near them – local restaurants, people who would have received information spillovers etc.

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[276] *See* Aaron Jay Sigler, *The Last Wave: The Rise of the Contingent School District*, 84 N.C.L. REV. 857. 863-90 (2006).
[277] BARRY BLUESTONE, MARY HUFF STEVENSON, RUSSELL WILLIAMS, THE URBAN EXPERIENCE: ECONOMICS, SOCIOLOGY AND PUBLIC POLICY 248 (2008)
[278] *See* HOMEVOTER HYPOTHESIS, *supra* note 150, at 46, 154-55.
[279] *Id.*

On the other hand, local control of schools does not provide any gain from 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.[280] These are gains from agglomeration. Universities help create a deep local labor market.[281] Also, the ideas that spring from universities can be developed into businesses if there is a fertile urban capital and product market.[282] 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.[283]

However, higher education policy is entirely controlled by states. This makes sense: funding a major university is outside of the abilities of any one given 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. Of 75 state flagship universities (some states have more than one), only 15 are located in the largest MSA in the state.[284] To be

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[280] *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.

[281] *See* BLUESTONE ET AL, THE URBAN EXPERIENCE, *supra* note 277, at 493-94.

[282] *See* Brett M. Frischmann & Mark A. Lemley, *Spillovers*, 107 COLUM. L. REV. 257, 270-71 (2007).

[283] *See* MANUEL CASTELLS, THE RISE OF THE NETWORK SOCIETY 243 (1996). There is a joke that to create the next Sillicon Valley what needs to be done is "Take one part great university, add two parts sunshine, and three parts venture capital: shake vigorously." FLORIDA, WHO'S YOUR CITY?, *supra* note 99, at 207.

[284] Compare USAToday, 2006 College Tuition and Fees Survey (available at http://www.usatoday.com/news/education/2006-08-30-tuition-survey_x.htm, last visited October 11, 2008) with U.S. Census Bureau, Metropolitan and Micropolitan Statistical Areas (available at http://www.census.gov/population/www/metroareas/metroarea.html, last visited October 11, 2008). This understates the number of truly urban flagship universities somewhat, as it fails to include flagship universities like the University of California-Berkeley, which is the second-largest MSA in the state (and 12th largest in the country).

fair, usually the decision of where to locate a flagship state university was made long ago, and it would be costly to move it to a large city. However, decisions about which schools to fund, and how much, are made every year. The differences in funding between flagship state universities and big city state universities are often dramatic.[285] And mere calculations of state aid fail to capture the real difference, as universities in large MSAs likely have higher expenses for real estate and labor, and there is greater access to federal funding at bigger flagship universities.

One can tell very similar stories about any number of other policy areas.[286] 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 the permitting such laws would create a patchwork of inconsistent local regulations.[287] 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."[288] 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,

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[285] For instance, in Illinois, between 2003 and 2006, the University of Illinois-Chicago received a total state grant of over $780 M. The University of Illinois-Urbana-Champaign, which is surrounded by virtually nothing, received a total grant of over $1B. All data acquired from National Center for Education Statistics. IPEDS database. http://nces.ed.gov/ipeds.

[286] The one major exception is mass transportation, in which 27 major American regions have regionally-funded transport governing bodies. Sheryll D. Cashin, *Localism, Self-Interest, and the Tyranny of the Favored Quarter: Addressing the Barriers to New Regionalism*, 88 Geo. L.J. 1985, 2036-41 (2000). Even these entities are often partially or entirely state run. Members of the board of New York's Metropolitan Transporation Authority are recommended by local elected officials, but are appointed by the Governor. The Board of the Atlanta's region's Greater Regional Transportation Authority is entirely selected by the Governor. *Id.* at 2030.

[287] 470 N.E.2d 266 (Ill. 1984).

[288] 520 N.E.2d 316 (Ill. 1988).

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 gains.[289]

More importantly, it provides a way to understand and analyze federal spending in areas that are primarily regulated by local governments, like housing policy and transportation.

There is not space enough to discuss the entirety of federal policy in the areas of housing and transportation. However, it will suffice to say that the federal government spends vast sums of money promoting home ownership and building roads, areas in which the primary regulators are local governments.[290] In these areas, states likely do a poor job balancing the gains from agglomeration and sorting. Federal spending likely makes things worse in this regard. 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.[291] Looking at this policy geographically, it is clear that 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).[292] That is, the localities that benefit most from the home mortgage deduction are those high price areas that use their zoning powers extensively.[293]

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[289] This is not to suggest that either of these decisions is actually wealth-maximizing – probably both are not – but rather to suggest that they fit with a view that gives localities the ability to decide issues over which sorting is possible, but leaves to states the ability to limit that in the name of regional efficiency.

[290] *See* BLUESTONE ET AL, *supra* note 277, at 348-66, 433-35.

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

[292] *Id.*

[293] Compare list of high price/low housing supply counties in *id.* at 150 with list of high benefit regions at *id.* at 85.

There have been a number of proposals to change the way the federal government reinforces harmful state policies and funding patterns. For instance, the last three successive transportation acts have given the Department of Transportation the authorization to approve pilot projects in connection with state and local governments that provide for congestion or value pricing of roads.[294] As discussed above, although Tiebout sorting creates gains, it also drives a spreading out of the metropolitan area. Congestion pricing – charging motorists for the cost they impose on drivers behind them – is a policy intended to force residents to internalize some of the cost generated by that spreading.[295] It is a pro-agglomerative policy that is difficult to pass under current state law regimes, because localities do not have the power to impose it themselves and states have misaligned incentives. 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, by far the largest federal expenditure on housing, 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.[296] The money pulled back from this reform, they argue, 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.[297] This would create incentives for local governments to permit more building, limiting the degree

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[294] Intermodal Surface Transportation Efficiency Act, Pub. L. No. 102-240, § 1024(a), 105 Stat. 1914, 1955 (1991); Transportation Equity Act for the 21st Century, Pub. L. No. 105-178, § 1203(f), (1998); Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users, Pub. L. No. 109-59, 119 Stat. 1144 (2005). For a discussion of these provisions, 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).

[295] *See* BLUESTONE ET AL, THE URBAN EXPERIENCE, *supra* note 277, at 355-58.

[296] RETHINKING FEDERAL HOUSING POLICY, *supra* note 291, at 126-129.

[297] *Id.*

to which restricting new development provides a higher tax base. It would thus counteract the pro-sorting bias inherent in state policies and would promote agglomerative efficiency.

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 in these areas.

VI.   CONCLUSION: TOWARDS A MODERN LAW AND ECONOMIC UNDERSTANDING OF

        LOCAL GOVERNMENT LAW

This article is not intended to represent a comprehensive treatment of the effects of agglomeration economies on local government law. It is a beginning, not an end. Hopefully, however, it has established a few points that I hope will point the way to future research. First, the gains from agglomerative efficiency and the gains from Tiebout sorting are separate, in the sense that they both provide utility to people based on their location decisions. Second, they conflict. Increased agglomerative efficiency means a reduction in the gains from sorting, and increased gains from sorting means decreased agglomerative efficiency. Third, the allocation of powers to local governments presents similar problems – the allocations that maximize gains from sorting will not promote the production of public services in an agglomeratively efficient way, and vice versa.

Legal scholarship has largely grown accustomed to analyzing local government law as an area in which efficiency concerns square off with concerns about fairness or environmental quality. That debate is interesting and worthwhile, but it should not be the whole of our discussions about local government law. This paper is an effort to bring to the fore of legal scholarship the idea that metropolitan areas are productive engines of the economy and that the

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disputes in local government law are directly related to how powerful these engines are. The failure of local government law to address the modern economics of city development has harmed both fields. There is a serious need for the development of a contemporary and sophisticated law and economics understanding of local government law and this paper is an effort to provide it.