

THE INTERMETROPOLITAN LOCATION AND GROWTH OF THE INSTITUTIONAL INVESTMENT ADVISORY INDUSTRY IN THE UNITED STATES, 1983-1996

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ABSTRACT: *The institutional investment advisory industry in the United States, the management of pension and endowment assets for a fee, has grown dramatically over the last 13 years—growth made possible by the tremendous increase in pension and endowment assets available for management and the new technologies in computing, telecommunication, and information processing embodied by the information economy. This paper focuses on the intermetropolitan spatial dynamics of the institutional investment advisory over the 1983-1996 study period. Regression analysis of asset growth and metropolitan area characteristics indicates that industry growth took place in metropolitan areas with growing populations, a relatively large number of corporate headquarters, and a relatively large number of plan sponsored funds. However, growth in assets did not necessarily take place in the largest metropolitan areas, or in the traditional centers with relatively high concentrations of financial services employment.*

INTRODUCTION

Castells (1989), Hepworth (1990) and others have argued convincingly that the emergence and dramatic growth of sophisticated information-intensive industries, like modern day investment advisory services—the management of securities portfolios for a fee—is a function of the shift to an "information economy." Today the term, "information economy" (and/or "information society"), is used by researchers to refer to an economy such as that of the United States in which a significant percentage of the work force is engaged in the gathering, manipulating, or distributing of information. Service industries, and information-intensive services in particular, are the rapidly growing sectors of local and national economies (Daniels, 1993). In recent years information technology (IT)—the integration of computing and telecommunications hardware and software—has become the principal force driving change in the financial services industry, particularly in the investment advisory industry, with improvements in

IT allowing increasing volumes of information to be collected, processed, and exchanged more reliably and at lower cost. The amount of resources devoted to IT by financial institutions has expanded dramatically, as has the influence of IT on product and process innovation (Gentle, 1993). Information technologies have created new tools for carrying out market research, for targeting marketing efforts, and for disseminating detailed information about customers needs and requirements. Information technologies have had a fundamental impact on how some firms customize their products to meet the needs of specific customers, and have lead many firms to change how they design the products they offer for sale, how they sell such products, and even how they organize themselves. Therefore, according to Hepworth (1990), the information economy represents a "new phase of economic development, wherein the production of information goods and services dominates wealth and job creation with computers and telecommunications providing the technological potential for product and process innovation (p. 7)."

Within the context of the information economy, where are these information-intensive industries -- the growth industries of the information economy -- locating and why? What are the spatial implications at the intermetropolitan level? The growing body of literature on producer services location provides the theoretical context and conceptual framework from which to study the institutional investment advisory industry in the United States.

Theoretical Issues: The Spatial Distribution of FIRE Sector Services

Overall, there is general agreement that the two important factors promoting the spatial concentration of Finance, Insurance, and Real Estate (FIRE) sector services (e.g., institutional investment management) in high order urban centers are: (1) opportunities for backward linkages (i.e., data base services, business and financial information services, computer and other technical services); and (2) opportunities for forward linkages (i.e., markets). Theoretically, concentration allows firms to maximize opportunities for both forward and backward linkages, and minimize the transaction costs associated with the production and delivery of financial services (Daniels, 1985; 1993).

Other studies (Daniels, 1985; 1993; Pred, 1977) emphasize the centrality of information and knowledge in the operation of many FIRE sector services. If information is central, then the location of producer services can be interpreted within the context of the demand for information, the way it circulates and who exchanges it. Because a central attribute of information is that it is "spatially biased" (Pred, 1977), proximity emerges as a key to the activity of obtaining information; that is, information will circulate through specific places and not others. One could, then, in principle, establish the differential accessibility to financial information offered by different types of locations (Daniels, 1985).

Geographers have long noted the close functional and geographic interplay between institutional head offices, like corporate headquarters, and producer services like the FIRE sector services (Wheeler, 1986; 1988; Pred, 1977). For example, Pred (1977), in his classic study of city systems, notes that corporate headquarters, especially of the largest

corporations, tend to seek out locations where agglomeration of other corporations and specialized producer services are large, i.e., they locate with centrality to local producer services in a kind of symbiotic relationship (Pred, 1977). Noyelle and Stanback (1984), in particular, have suggested a close link between FIRE sector services and corporate headquarters location, especially at the upper end of the metropolitan hierarchy. Several researchers (Sassen, 1991; Castells, 1989) suggest that this complex of corporate activities is analogous to the complex of manufacturing activities that characterizes a "new industrial space" (Scott, 1988) in terms of its tightly woven network of input-output linkages--forces that tend to reinforce the centralization of FIRE sector services.

Similarly, O'hUallachain (1989) notes that even though the demand for financial services has grown throughout the U.S. economy, the financial services sector remained concentrated in the four largest metropolitan areas -- New York, Chicago, Los Angeles, and San Francisco. Other empirical work by O'hUallachain and Reid (1991), however, did find some deconcentration of business and professional services consistent with the dispersal of corporate headquarters. Their study, using County Business Patterns data, indicates that, in absolute terms, most of the growth of business and professional service jobs in the period 1976-1986 occurred in the 39 largest MSAs. Despite this employment growth in the largest MSAs, deconcentration was evident from the decline in the share of jobs located in the four largest national centers--New York, Chicago, Los Angeles, San Francisco--and the growing share in small metropolitan and nonmetropolitan areas (O'hUallachain and Reid, 1991).

The majority of previous research utilizes employment data to examine producer services locational tendencies. However, employment data cannot be effectively disaggregated into individual industries (lack of useful SIC designations), and thus, employment is not a particularly useful measure of individual industry locational tendencies (i.e., the institutional investment advisory industry). These data are often at the establishment level (e.g., County Business Patterns and Employment and Earnings) and thus the organizational characteristics and operational functions of the firm as a whole are unknown. Future

studies need to take a more refined view of producer services, and FIRE sector services in particular. As Harrington (1995) has noted, ". . . individual researchers must gain substantial expertise in a particular industry (p. 94)." Individual industry sectors have their own commercial logic, business imperatives and locational patterns. For example, in the case of the institutional investment advisory industry in the United States, tax-exempt assets under management and number of firms are better industry specific indicators of industry concentration and locational tendencies over time than employment.

Theoretically, specialization and changes in organizational structures indicate that information-intensive producer services, like financial services should not be studied in aggregate, but rather that financial service industries should be examined separately and their individual mobility assessed. Although often studied in aggregate, applying the same analytical grid to information-intensive service activities as different as banking, insurance, and investment management has limitations, for it reduces the scope for identifying any industry differences vis-a-vis information technologies, data services, and telecommunications. In short, industry specific studies are needed to advance our understanding of producer services location.

The institutional investment management business--the management of pension and endowment assets for a fee--is an excellent example of an important (over \$4 trillion of assets under management in 1996) information intensive financial services industry that has grown dramatically over the last 13 years--growth made possible by the tremendous increase in pension and endowment assets available for management and the new technologies in computing, telecommunication, and information processing mentioned earlier.

DATA AND ANALYSIS

The data to map investment management firm locations, client locations, and assets under management were obtained from the Money Market Directory of Pension Funds and Their Investment Managers (Money Market Directory, 1983; 1987;

1990; 1993; 1996). Based on both SEC licensing information and individual firm surveys, the directory claims to provide a profile of every institutional investment management firm managing assets for a tax-exempt fund sponsor headquartered in the United States with over \$1 million in total assets. The assets under management include corporate, state and local government, and union plan sponsored employee benefit funds (all tax-exempt), as well as endowment and foundation funds (also tax-exempt). Additional secondary data were also obtained from Employment and Earnings (May, 1997), The State and Metropolitan Area Data Book (1998), and Fortune (July 15, 1997).

The thirteen-year period 1983 to 1996 was selected for study for two reasons: (1) the availability of Money Market Directory data, and (2) the counties included in the current Metropolitan Statistical Area (MSA) designation, as defined by the U.S. Bureau of the Census, remained the same from 1983 to 1996. The standard metropolitan statistical area (SMSA) designation was changed to the current MSA designation in June 1983 (State and Metropolitan Area Data Book, 1991).

Geographically, the headquarters of institutional investment advisory firms with tax-exempt assets under management in 1983 were located in 133 cities and towns across the nation. By 1996, the number of cities and towns with firms managing tax-exempt assets had grown to 314, located in 118 metropolitan areas (Figure 1). Figure 1 illustrates the growth of tax-exempt assets and the firms that manage these funds, by metropolitan area from 1983-96. Overall, tax-exempt assets grew from a total of \$221 billion under management by 532 firms in 1983, to over \$3,413 billion under management by 1,260 firms in 1996.

The principal clients of the institutional investment advisory are the plan sponsored exempt funds of corporations, state and local governments, unions, and non-profit institutions such as endowments and foundations. Over the last decade, the assets held by these institutions have grown enormously. In 1990, institutions owned more than one-fifth of the financial assets in the United States, with a total value in excess of \$6.5 trillion (O'Barr and Conley, 1992). Pension funds, in particular, have been the fastest growing institutions.

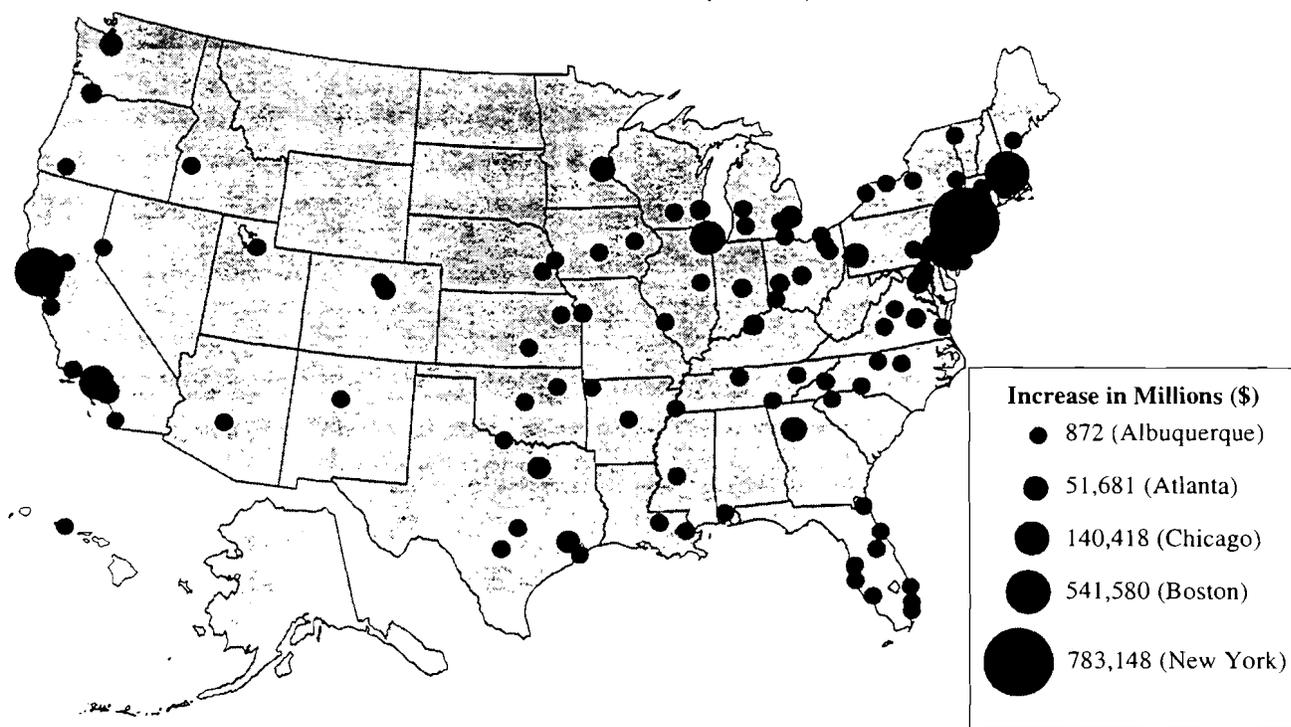


Figure 1: Increase in tax-exempt assets under management by Metropolitan Statistical Area, 1983-96. *Source: Money Market Directory, 1983: 1996.*

They controlled \$3.5 trillion worth of assets in 1996, up from \$17.6 million in 1950 and only \$891 million as recently as 1983 (Money Management Directory, 1996).

Overall, the spatial organization of the investment advisory industry's client base is similar to that of corporate headquarters. This is not surprising, given that (1) plan sponsored corporate funds represent nearly 50 percent of total tax-exempt assets in 1996 (down from 55 percent in 1983), and (2) these corporate funds are often headquartered in the same city (and building) as the corporation itself. However, the growing importance of government funds as a percentage of total tax-exempt fund assets--government funds represented 35 percent of the total in 1996, up from 12 percent in 1983--has further dispersed the assets available to investment managers because the largest of these funds, the state employee retirement funds of the most populous states, are typically headquartered in the state's capital, often outside a state's traditional financial center(s) (e.g., Sacramento, CA; Albany, NY; Austin, TX, etc.).

Metropolitan Area Characteristics and Firm Location: The Model

Having described the locational tendencies of investment advisory firms and their clients, an ordinary least squares (OLS) model is constructed to determine which metropolitan area characteristics influence the location and growth of the investment advisory industry during the thirteen-year period from 1983-1996. Hypothesized relationships are reviewed and OLS model results discussed for each independent variable.

The relationship examined is of the following form:

$$Y_i = f(X_1, \dots, X_n) + e$$

where Y_i is the absolute total growth in tax-exempt assets under management for firms located in a metropolitan area i between 1983 and 1996. X 's are metropolitan area characteristics and factors drawn from previous studies on producer services location. Given the continuous nature of the dependent variable, an OLS regression model is appropriate (Gujarati, 1988).

The objective of the OLS regression analysis is to determine the metropolitan area characteristics associated with location and growth of the tax-exempt assets under management by investment advisory firms aggregated at the metropolitan area level. Overall, five independent variables were selected from previous studies of producer services location. Table 1 lists the independent variables used in the model, their means, standard deviations, and expected signs of estimated coefficients. The rationale for selection and the hypothesized relationships are discussed below under separate headings for each of the independent variables.

1. Percent Growth of Population, 1983-1996. Beyers (1992), O'hUallachain (1992), Satterthwaite (1992), McDonald (1992), and others have found a close association between growth of population and growth of producer services employment at the metropolitan scale. The variable selected for this analysis indicates the degree to which the metropolitan area grew (percentage growth) during the thirteen-year period being studied. Theoretically, growth in population indicates a healthy business environment, and thus, should be associated with the growth in total tax-exempt assets under management. The coefficient of this variable is expected to be positive.

2. Total Metropolitan Area Employment, 1996. Beyers (1992) and O'hUallachain (1992) also found a close association between total metropolitan area employment and the growth of producer services employment at the metropolitan scale. However, because total population and total employment are highly correlated, only one of the two can be included in the OLS model so as to avoid problems with collinearity (Gujarati, 1988). Thus, total metropolitan area employment in 1996 was selected (over total population) as a measure of metropolitan area economic size. Selecting the population growth variable (see above) avoids the problem of collinearity because all metropolitan areas, large and small, grew at different percentage rates from 1983 to 1996. The percentage growth of population is not highly correlated with total population or total employment. Theoretically, large metropolitan areas should experience relatively high growth in total tax-exempt assets under management by investment

advisory firms located in the metropolitan area. The coefficient on this variable is expected to be positive.

3. FIRE Employment as a Percentage of Total Employment, 1996. Beyers (1992), O'hUallachain (1992), and others have used various employment specialization variables to explain the location and growth of producer services employment at the metropolitan scale. FIRE employment as a percentage of total employment (1996), therefore, was selected as a measure of financial services employment specialization. FIRE employment as a percentage of total employment (1996) is not highly correlated with total employment in 1996. A high percentage of FIRE sector employment as a percentage of total employment, indicates a concentration of financial service activities--theoretically agglomeration that should attract other financial service activities like investment management (i.e., bring about growth in total tax-exempt assets under management). The coefficient on this variable is expected to be positive.

4. Value (\$) of Total Tax-Exempt Fund Assets, 1996. In addition to population and employment, a number of previous studies (e.g., Beyers, 1992; O'hUallachain, 1992) have also used various market size variables (e.g., total firm sales) to explain the location and growth of producer services employment at the metropolitan scale. Similarly, the value (\$) of total tax-exempt fund assets in the metropolitan area in 1996 was selected as an industry specific market size measure for this analysis. Theoretically, investment advisory firms are pulled to markets, where their access to clients is maximized. Given that plan sponsored funds represent the clients of investment advisory firms, the value of total tax-exempt fund assets is a proxy for market potential. A relatively high value of tax-exempt fund assets therefore, should be positively associated with growth in total tax-exempt assets under management. The coefficient on this variable is expected to be positive.

5. Number of Fortune 500 and Service 500 Headquarters, 1996. Like FIRE sector service employment, this variable is another measure of the quaternary service activities of a metropolitan area. As indicated earlier, geographers have long noted the close functional and geographic relationship between

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Table 1: Independent Variables: Description, Mean or Percent, Standard Deviation, and Expected Sign of Coefficient: OLS Model.

Description	Mean	Standard Deviation	Expected Sign
Percent Growth of Metropolitan Area Population, 1983-1996	7.53	6.32	+
Total Metropolitan Area Employment, 1996	616.06	692.15	+
FIRE Employment as Percentage of Total Employment, 1996	6.06	9.53	+
Total Tax-Exempt Fund Assets (\$), 1996	19693	19909	+
Number of Fortune 500 & Service 500 Headquarters, 1996	8.68	2.79	+

Table 2: OLS Regression Model of Growth in Tax-Exempt Assets Under Management at the Metropolitan Level, 1983-1996.

Variable Name	Model
Intercept	4618.6 (4.291)a***
Percent Growth of Metropolitan Area Population, 1983-1996	369.879 (1.762)*
Total Metropolitan Area Employment, 1996	-100.886 (-11.037)***
FIRE Employment as Percentage of Total Employment, 1996	294.8 0.148
Total Tax-Exempt Fund Assets (\$), 1996	0.2707 (2.260)**
Number of Fortune 500 & Service 500 Headquarters, 1996	10.697 (2.247)**
n	118
Adjusted R-Squared	0.72
F-value	86.78***

a: t-values Significance Levels: *** = .01; ** = .05; * = .10.

corporate headquarters and FIRE sector services (Wheeler, 1988; 1986; Pred, 1977). Previous studies indicate that FIRE sector service activities, like investment management, should increase where the number of corporate headquarters is relatively high. Therefore, a relatively high number of Fortune 500

and Service 500 headquarters should be positively associated with the growth of tax-exempt assets under management by firms located in the metropolitan area. The coefficient on this variable is expected to be positive.

Results: Metropolitan Area Characteristics and Firm Location

The five independent variables selected from previous studies of producer services location are used to determine the metropolitan area characteristics associated with location and growth of investment advisory firms aggregated at the metropolitan area level. All the variables were hypothesized to be positively related to the dependent variable, the growth in tax-exempt assets under management for firms located in the metropolitan area over the 1983 to 1996 period. Table 2 presents the results of the OLS regression analysis of investment advisory firm location and growth in assets under management from 1983 to 1996. The adjusted R-squared (coefficient of determination) implies that 72 percent of the variance of the dependent variable was explained by the OLS model. This implies that the independent variables, taken together, are strongly correlated with growth in assets under management from 1983 to 1996 at the metropolitan scale. The correlation matrix for the OLS model, indicates little correlation (none > 0.7) among the independent variables, and collinearity diagnostic tests (SAS procedure) further suggests no problem associated with multicollinearity.

Overall, four of the five regression coefficients had signs as expected (Table 1), except for total metropolitan area employment (1996). The results for each of the five variables is discussed below.

The first variable examined is Percentage Growth of Metropolitan Area Population, 1983-1996. The positive coefficient on this variable (statistically significant at the 0.10 level) indicates that growth of investment advisory industry tax-exempt assets under management is taking place in metropolitan centers that are experiencing population growth.

The second variable examined is Total Metropolitan Area Employment, 1996. According to the hierarchical paradigm, the largest metropolitan areas should experience the greatest growth in the number of investment advisory firms and their total tax-exempt assets under management, and therefore, the coefficient on this variable was expected to be positive. The model results, however, indicate that the relationship is negative (statistically significant at the 0.01 level)-- disproportionate growth in total tax-exempt assets is more likely to take place in

metropolitan areas with relatively lower total employment, rather than higher. While this finding does not support the hierarchical paradigm, it does suggest that growth in assets under management is taking place outside of the largest metropolitan areas as measured by population.

The third variable examined is FIRE Employment as a Percentage of Total Employment, 1996. A high percentage of FIRE sector employment as a percentage of total employment indicates a concentration of producer service activities-- agglomeration that should attract other producer service activities (e.g., Daniels, 1993; Pred, 1977) like investment management, and thus bring about growth in total tax-exempt assets under management. The model results indicate that the relationship is positive, but that result is not statistically significant at the 0.10 level. Like total metropolitan area employment, therefore, this finding does not support the hierarchical paradigm.

The fourth variable examined is Total Tax-Exempt Fund Assets (\$), 1996. Given that plan sponsored funds represent the clients of investment advisory firms, the value of total tax-exempt fund assets serves as a proxy for market potential. The positive coefficient on this variable (statistically significant at the 0.05 level) indicates that growth of investment advisory industry tax-exempt assets under management is likely to take place in metropolitan centers that have a relatively high amount of plan sponsored tax-exempt fund assets. In other words, growth in assets under management is correlated with growth in fund assets--assets that are theoretically available for management by the investment advisory industry.

The Number of Fortune 500 and Service 500 Headquarters, 1996, like FIRE sector service employment, is a proxy for the level of quaternary sector service activities located in a metropolitan area. Theoretically, corporate headquarters should attract FIRE sector activities (Wheeler, 1988; 1986; Pred, 1977) like investment advisory services. The positive coefficient on this variable (statistically significant at the 0.05 level) indicates that growth of investment advisory industry tax-exempt assets under management is positively related to the number of corporate headquarters. Given that quaternary sector concentrations are dispersing (Sui and Wheeler,

1993; Wheeler, 1988), this finding supports the dispersal hypothesis.

Overall, the findings indicate that a significant percentage of the growth in tax-exempt assets under management is taking place in metropolitan areas with growing populations, and a relatively high number of corporate headquarters and plan sponsored funds. However, this growth is not taking place in the largest metropolitan areas (measured by total employment), or those with relatively high concentrations of FIRE sector employment.

SUMMARY AND CONCLUSIONS

The objective of this study was to examine the spatial dynamics of the institutional investment management industry in the United States from 1983 to 1996, focusing on the locational tendencies of institutional investment management firms at the intermetropolitan level. The growing body of literature on producer services location provided the theoretical context from which to study this "information intensive" producer services industry.

The investment management industry experienced tremendous growth over the thirteen-year study period, growing from 532 firms with \$221 billion tax-exempt assets under management in 1983 to 1,260 firms with over \$3.4 trillion under management in 1996.

Regression analysis of asset growth and metropolitan area characteristics indicates that a significant percentage of the growth in tax-exempt assets under management is taking place in metropolitan areas with growing populations, a relatively large number of corporate headquarters, and a relatively large number of plan sponsored funds. However, growth in assets was not necessarily taking place in the largest metropolitan areas (measured by employment), or in the traditional centers with relatively high concentrations of FIRE sector employment. These findings at the intermetropolitan scale, using data aggregated at the MSA level, are similar to those found in previous studies of the industry at the intrametropolitan scale and for an earlier study period (Bodenman, 1998).

The major findings of this study, as outlined above, suggest that the hierarchical paradigm is a powerful, but not exhaustive, principle of spatial organization. In short, it is unable to provide a satisfactory explanation for the growth of specialized, information-intensive producer services outside of the largest metropolitan areas as measured by population. Given the inability of the hierarchical paradigm to provide an adequate explanation, other factors must be accounted for if the locational tendencies of specialized, information-intensive producer services, like investment management, are to be satisfactorily explained.

To obtain a more robust theory of urban systems, one that provides an adequate explanation for the so-called visible "anomalies," and therefore a more robust theory of the changes within urban systems, two other closely related principles of spatial behavior-- agglomeration economies and urbanization economies--need to be reconsidered. The analysis findings suggest that agglomeration economies can now be realized in both small centers and large centers, not necessarily in terms of spatial proximity, but rather as a result of improved accessibility and interaction between centers, particularly the increased accessibility of information made possible by improvements and innovation in transportation and telecommunications. This increased accessibility and interaction can produce dynamic economies of urbanization, both among the smaller centers and between the small and large centers. The outcome is a situation in which, within a regional context, conditions exist that allow some urban functions to be accomplished in a more decentralized way. Localities that already have reached minimum thresholds of urbanization are, of course, at an advantage. In short, the agglomeration diseconomies of large urban centers are avoided by spatial dispersion, while transaction costs are kept low through stable interaction. This allows firms a greater degree of locational freedom, and encourages them to locate so as to exploit any potential local advantages.

The evidence also suggests that there may be a relationship between the life cycle of a firm and its ties to a particular MSA location. For example, during the early years of a firm's operation, the benefits of clustering within a traditional financial center may be important to the firm. Lack of an

established client base necessitates the development of complex relationships with professionals on both the buy and sell side that may be location specific. However, as a firm becomes larger and more established, locational ties to a traditional financial center, including proximity to advanced services, may become weaker. Similarly, tax law changes and the ongoing reform of the mutual funds market in the United States and abroad may have an impact on firm organizational characteristics and locational ties to the traditional financial centers. Additional research is needed, therefore, to investigate this life cycle phenomenon and its implications for the geography of the investment advisory industry at the intermetropolitan scale.

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