Strategic Planning for Local Economic Development Policy in U. S. Municipal Governments

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ABSTRACT

Political and socioeconomic factors have been linked to innovations in government, but most evidence is based on the study of policy innovation rather than management innovation. Policy innovations studies can provide insights into what factors may influence management innovations in municipal governments and agencies. However, we argue that the study of public management innovations should also consider factors related to institutions, bureaucracy, networks, and regional competition as well as political and socioeconomic characteristics.

Some municipal governments have no formally planned economic development strategy despite their complex and competitive environment. This article investigates adoption of a strategic economic development plan as a municipal management innovation. A model of municipal management innovation is tested with data from ICMA surveys conducted in 1989 and 1999 using logistic regression and multinomial logistic regression analyses. The findings suggest management innovations are influenced by different factors than policy innovations. Institutions, bureaucratic networks, and regional competition are important factors in explaining management innovations and deserve greater attention in the literature. The analysis also confirms the time dimension is critical to management innovation. The motives for management innovation change over time as the innovation diffuses among local governments.
Strategic Planning for Local Economic Development Policy in U. S. Municipal Governments

Increased environmental uncertainty and complexity requires public organizations to manage strategically as never before. The environments of public organizations have become increasingly turbulent and more tightly interconnected. Even boundaries between the public and private sectors are becoming eroded. During the past two decades, governments have innovated new management tools such as strategic planning, privatization, and performance measurement to deal with complex governance and networks to provide their public services.

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Local governments in particular have been innovative in economic development policy management and strategic planning to respond to rapid change in their environment and complexity in their governance. In many policy areas, such as the broadly defined area of economic development, trends like fiscal decentralization and localization of policy responsibility mean that cities increasingly manage their affairs through mechanisms of collaboration and governance (Agranoff & McGuire 1998, 67). Economic development decision making operates in a complex and uncertain environment that requires municipal governments to act strategically to overcome information asymmetry and economic development isolation.

However, some municipal governments lack a formally defined economic development strategy despite the fact that such a plan might help them deal with their current complex and competitive environment. This research is interested in management innovations of local governments and has a specific concern about cities’
utilization of an economic development strategy. Three questions guide this research effort: First, what factors influence cities to employ an economic development strategy as a management innovation? Second, how do the factors that influence management innovation differ from those influencing policy innovation? Third, to what extent are the factors that influence late use of a management innovation different from the factors influencing early use?

This research will review the literatures of strategic management and planning, public management innovation, institutions, networking, and policy innovation diffusion, and advance hypotheses regarding the factors that influence city government adoptions of a form of economic development strategy. The hypotheses are tested using data from a 1999 Survey of Development Officials conducted by the International City Management Association (ICMA) and a pooled data set of cities responding to this survey and a similar one a decade earlier which is a 1989 ICMA dataset. Models are estimated using logistic regression and multinomial logistic regression techniques.

LOCAL ECONOMIC DEVELOPMENT POLICY

Local economic development policies constitute the primary activities that local governments can undertake to enhance economic growth in the community (Peterson 1981). For this reason, economic development policies have been a primary focus of policy makers, city administrators, economic development practitioners, and scholars of local governments (Streib and Poister 2002). Local economic development is becoming an important domestic policy area (Luke et al. 1988; Eisinger 1988). Development programs can strengthen and diversify the economies of local governments, enhance the
local tax base, and generate additional resources for welfare (Streib and Poister 2002; Peterson 1981). Nevertheless, unless they are provided in a calculated and strategic manner, development programs can drain resources with little or no economic gain. Feiock (2002) documents development policy failure in which incentives are a response to political demands rather than economic needs and the costs outweigh the benefits.

Various local entities have sought an appropriate planning and management focus to deal with development efficiently and effectively. Public management and network scholars argue that local governments tend to deliver economic development programs by complex governance and networks (Behn 2001; Agranoff & McGuire 1998). Blair (1998) argues that implementation of local economic development programs is a complex undertaking and public-private partnerships are often involved in program delivery. To deal with these complex entities, local governments need good planning and management, prior to implementation. Such planning is considered one of the most important determinants of program success (Denhardt 1995; Blair 1998).

STRATEGIC PLANNING FOR LOCAL ECONOMIC DEVELOPMENT POLICY

Strategic planning has been widely adopted among local governments to manage the complex entities and networks implementing local economic development policy. Berry and Wechsler (1995) assert that strategic planning has been successfully adopted among state government agencies to deal with policy formation and implementation. Eisinger (1988) argues that local governments tend to adopt strategic planning as an alternative to manage the devolved policy areas, such as an economic development policy. A recent Poister and Streib (2005) national survey of municipal governments’ use of strategic planning found some 44% of the respondents are using strategic planning citywide. The
linkage of economic development implementation and strategic planning appears to be working well in the practice of public administration (Blair 1998).

Strategic planning has contributed to local economic development policy outcomes, and it plays an important role to provide criteria for evaluating and measuring program outputs and outcomes (Blair 1998). In the study of State Strategic Planning: Suggestions from the Oregon Experience, Kissler et al (1998) find that strategic planning has helped Oregon adjust to a major economic and social transformation. They argue that strategic planning was one factor that enabled Oregon to attract new businesses and new citizens who moved into the state with a good education and the disposable income to help the state’s economy. They suggest that local leaders should urge the public sector to use strategic planning to make better use of public funds for local economic growth.

In the study of Economic Development in Rural Communities: Can Strategic Planning Make a Difference?, Reed and Blair (1993) argue that strategic planning was an innovative management tool that allowed local governments to identify and prioritize plans necessary to improve delivery of services to citizens. They conclude that strategic approaches (e.g., TAKE CHARGE, START, and TOOL KIT) led many local governments to develop “how to” programs for conducting a planning process for economic development at the community level (Reed and Blair 1993, 89).

Extant research establishes that adoption of a formal economic development strategy is one management innovation to successfully deal with the complex entities and networks implementing economic development policies. Local governments have been concerned with using an economic development strategy to overcome unemployment and economic hardship, which makes them strategically operate economic development
policies. Unlike policy innovation studies, however, few management innovation studies have been undertaken to investigate and predict what factors influence state and local governments to apply a management innovation (One exception at the state level is Berry, 1994). This highlights the importance of identifying what factors are relevant for a theory of management innovation and investigating how management and policy innovations may differ.

THEORETICAL APPROACH FOR MANAGEMENT INNOVATION

Given that political and socioeconomic factors are linked to innovations in governments, it makes sense that policy innovation studies can provide knowledge of the factors likely to affect management innovations in municipal governments and agencies. For example, Berry and Berry (1990) found that both political and socioeconomic factors affected state adoptions of taxes and developed a political opportunity theory based on election concerns. Downs (1957) argues that voters tend to maximize their own utility and political party leaders try to maximize political profits (e.g., reelected in next election) by satisfying the voters. Also, the broader literature on innovation finds that innovations in governments are affected by economic conditions such as economic hardship or abundant fiscal resources (Cyert and March 1963; Levine 1980).

We argue that explanations of municipal management innovations should consider public management factors related to managerial and professional characteristics of bureaucracy as well as political and socioeconomic characteristics. Government
reforms and management innovations are considered to be the products of a bureaucracy whose leadership is willing to take risks and be persistent in pushing to change the organization (Shafritz and Russell 2005). Chackerian and Abcarian (1984, 22-30) argue that management innovations in public organizations result from a bureaucrat’s decision that is based on their professionalism and network.

**Management Innovations**

We draw on the extensive literatures on public management and policy to identify what factors may lead to management innovation as opposed to policy innovation. The dominant view on government innovation has been provided by the policy literature. Walker (1969, 881) defines “an innovation as a program that is new to the government adopting it.” The innovation studies from this literature seek to answer the question: Why does a government unit adopt a particular program or policy at a particular time. They have been conducted on a wide range of policy areas including: welfare (Gray 1973), juvenile corrections (Downs 1976), consumer affairs (Sigelman and Smith 1980), state lotteries (Berry and Berry 1990), morality policy (Mooney and Lee 1995), and school choice (Mintrom 2000).

The policy innovation literature has tended to focus on socioeconomic and political factors to explain government innovation (Mohr 1969). Mohr (1969, 114) argues that the probability of innovation is directly related to the availability of resources. Hansen (1983) argues that an economic hardship reduces the political risks to public officials of adopting a new program. Also, since politics is not a world of voluntary exchange as market (Moe 1991), public officials have considered political factors as an
important factor in government innovation. Tuft (1978; see also Kiewiet and McCubins 1985) argues that politicians have incentives to adopt new policies for reelection.

However, innovation studies have not adequately addressed the unique roles of institutions and bureaucracy in government innovation. During the 1980s, political science began to use the new institutionalism alternative to rational choice theory (March and Olsen 1984). Also, the public management literature argues that bureaucratic reforms result from bureaucratic values learned through education and training (Chackerian and Abcarian 1984; Berry, Brower and Flowers, 2000). Berry and Wechsler (1995) argue that management innovation in government is spread through professional association networks and they emphasize the professional networks of bureaucrats.

This study brings together these various literatures – management innovation, institution, bureaucracy, regional competition, policy innovation and diffusion, and network – to develop an integrated explanation for management innovation. Institutions provide incentives or constraints for municipal governments and agencies to apply management innovation. Bureaucratic structure and characteristics influence municipal bureaucrats’ behaviors regarding management innovation. Informed movers provide regional competition in communities whose public services are not competitive with nearby communities or whose public services are not responsive to changing tastes. Professionalism and professional networks diffuse professional norms and knowledge about how to improve the efficiency and effectiveness of municipal services with management innovation.

Local Political and Fiscal System Institutions
Institutions have played a central role in explanations of urban policy choice because institutions affect the behaviors of policy makers. Institutional arrangements are humanly devised constraints that shape human interaction and consequently provide incentives for political exchange (North 1990). Clingermayer and Feiock (2001, 3) argue that formal institutions are the core of local governance and that any understanding of how and why local governments do what they do must include some appreciation of the constraints and incentives derived from institutions. Institutions affect political and policy outcomes of local governments, often in predictable ways.

City governments favor a specific policy strategy based on their institutional characteristics. The nature of a city’s institutions encourages particular kinds of behavior and encourages particular kinds of people to participate in local politics (Clingermayer and Feiock 2001). A community’s decision to pursue a specific policy strategy is influenced by political institutions of the city, such as nonpartisan vs. at-large elections, mayoral powers, and the professional role of city managers.

Not all cities have been equally diligent in seeking the benefits of economic development strategy. This may be due to different incentives that result from the internal and external constraints imposed by local government institutions. Mintzberg (1994) argues that politics is subjective, parochial, and inconsistent, and it threatens strategic planning which should be implemented objectively and comprehensively. He also argues that strategic planning depends on the system of authority – more centralized hierarchy can block necessary strategic change. By creating incentives or disincentives for local officials to engage in these activities, local political institutions make utilization of strategic management more or less likely. In particular, the low power incentive of
council manager government for political benefit has been linked to strategic approaches to development (Feiock, Jeong, and Kim, 2003).

A local government may promote strategic planning to overcome constraints from its fiscal institutions. An 1999 ICMA survey reports 17.8% of 731 U.S. cities do not have sales tax. This constraint results in lower expenditure levels due to limits on the available tax base (Peterson 1981). Local governments without the sales tax might seek alternatives to overcome fiscal constraints and one alternative might be to use an economic development strategy. Thus, the hardship of fiscal institution may encourage local officials to use strategic planning which strategically captures fiscal benefits from economic development policies.

**Professional Networks**

Public management traditions have focused on various network structures related with public management performance. Provan and Milward (1995) demonstrate how centralized network structures produce better performances for the system’s mental health clients than systems with more diffuse network structures. Agranoff and McGuire (1998) argue that dense networking in local economic development departments is positively related to the adoption of economic development policy which might increase economic growth.

Berry et al (2004) note that network research in the public management tradition considers important performance questions, such as how particular characteristics of public management networks affect relationships with management outcomes and policy
innovation. But, research has rarely studied whether or not entrepreneurial bureaucrats exist to advocate management innovation through their professional networks.

Professional networks influence bureaucratic entrepreneurs to advocate and diffuse management innovations. Schneider, Teske, and Mintrom (1995) assert that a network consists of a group of actors who share an interest by their internal and external contacts with one another. Based on their definition, this research defines that a professional network consists of a group of professional bureaucrats who share an interest in some management area and who are linked by their internal and external contacts with one another. DiMaggio and Powell (1983) argue that the professional networks make organizations diffuse new models rapidly because they diffuse normative rules about organizational and professional behavior. Interactions among members of professional management communities are vital for ensuring the diffusion of management innovations among municipal governments and agencies.

**Regional Competition**

Unlike the federal government, local governments experience regional competition to provide public goods and voters have the ability to move to another area which more closely matches their preferences. Tiebout (1956) argues that the citizens may pick a community which best satisfies their preference patterns for public goods. Various local governments have their own unique revenue and expenditure patterns and the citizens move to a community whose local government best satisfies his set of preferences (Tiebout 1956).
In a local market for public goods, if administrators perceive a demand for better public services, they have incentives to seek out and use management innovations to satisfy that demand. Movers make self-interested choices about where to live and many locational choices are affected by the information movers gather about local public services and taxes (Schneider, Teske, and Mintrom 1995). Informed movers provide regional competition in communities whose public services are not competitive with nearby communities or whose public services are not responsive to changing tastes. According to Peterson (1981), one of the most effective ways to attract such informed movers is by offering an efficient way to provide public services important to them. Thus, under regional competition among municipal levels, municipal bureaucrats tend to adopt management innovations to satisfy their residents and attract informed movers by providing better public services.

**Late Users**

Current policy innovation and diffusion studies generally show that once innovations have occurred, diffusion factors such as competitive environments and learning processes among neighboring legislators and political networks of policy entrepreneurs (Berry and Berry 1990; Mintrom 2000) may have more impact on the innovation’s adoption than internal factors to the jurisdiction. Time is an element in the diffusion process and factors may impact jurisdictions differently depending on whether they are early or late adopters. Rogers (1995) argues that the innovation and diffusion studies tend to ignore the time dimension. DiMaggio and Powell (1983) assert that innovation and diffusion can occur through a process that makes organizations more similar as late innovations of
diffusion result from competition in organizational fields as opposed to early innovations more influenced by the internal needs of an organization.

Zucker and Tolbert’s (1981) work on the adoption of civil-service reform in the United States illustrates this process. They found that “early adoption of civil-service reforms was related to internal governmental needs, and strongly predicted by such city characteristics as the size of immigrant population, political reform movements, socioeconomic composition, and city size (Zucker and Tolbert 1981; DiMaggio and Powell 1983, 149).” “Later adoption, however, is not predicted by city characteristics, but is related to institutional definitions of the legitimate structural form for municipal administration” (Zucker and Tolbert 1981; DiMaggio and Powell 1983, 149).

In this respect, the diffusion models need to investigate how different mechanisms and motivations are related to the early and late management innovations. DiMaggio and Powell (1983, 148-149) argue that “organizations may try to change constantly, but, after a certain point in the structuration of an organization field, the aggregate effect of individual change is to lessen the extent of diversity within the field”. They define this process of homogenization as isomorphism. Isomorphism can result because “non-optimal forms” are selected out of a population of organizations or because “strategies rational for individual organizations may not be rational if adopted by large numbers (Hannan and Freeman 1977; DiMaggio and Powell 1983, 148-149).” In other words, late management innovation might be primarily driven by peer pressure and competition in the regional field.

EXPLANATIONS FOR CITIES’ UTILIZATION OF ECONOMIC DEVELOPMENT STRATEGY
**City Resources**

A city’s fiscal health will explain the probability of using an economic development strategy. Berry (1994) found that fiscal health affects the likelihood of the federal agency adopting strategic planning. The strategic management literature on “cutback management” (Levine 1980; Rubin 1985, 1990) finds that agency managers are likely to use policy and management strategies in times of fiscal stress (Levine 1980). During fiscal hardship periods, a city might adopt economic development strategy to enhance the economic position of a community in its competition with others, to strengthen the local economy, enhance the local tax base, and generate additional resources (Peterson 1981). This reasoning leads to the prediction that cities in weak fiscal condition will be more likely than cities in strong fiscal condition to use an economic development strategy.

However, the broader literature on innovation (Cyert and March 1963; Baldridge and Burnham 1975; Bingham 1976; Rogers 1983) generally finds that organizations with abundant or slack resources are more likely than agencies in cash-strapped conditions to be innovators. Indeed, innovations often take extra staff and resources to develop and implement, which requires slack resources (Cyert and March 1963). This suggests the hypothesis that cities with strong fiscal health are more likely than cities with weak fiscal health to use an economic development strategy. Because support exists for both theoretical perspectives, the hypothesis that agency fiscal health is related to the probability of economic development strategy utilization will be tested with no prediction about the direction of the relationship.

**H1** The economic condition of local government affects the likelihood of a city using a strategic economic development plan.
Institutional Fiscal Constraints

In addition to city resources, fiscal institutions are one of the major forces that influence a local government to utilize an economic development strategy. One of the most important fiscal institutions in local governments is whether or not a local government uses the sales tax and how much sales tax cities collect per capita. We expect that communities operating under institutional constraints will be more likely to adopt a formal development strategy.

H2 The use of local sales tax reduces the likelihood of a city using a strategic economic development plan.

Governance/Political Institution

Recent work has linked forms of local government to innovation and change in land use and development policies though its effect on the incentives of managers and elected officials (Feiock 2004; Feiock, Jeong, and Kim 2003). While the political credit claiming incentives under mayor council government may lead elected officials to pursue development, they may eschew strategic approaches in favor of ad hoc incentives and bargaining with business interests (Feiock, Steinacker, and Andrew 2004). Managers in council manager communities may also have strong professional incentives to pursue economic development. Successful economic development programs have been linked to career success and the movement of city managers to more prestigious positions (Stein 1993; Feiock, Clingermayer, and Stream 2003). Managers may adopt a more strategic approach to growth promotion and embrace strategic development planning. The appeal of strategic plans is enhanced by the professional administration and planning training of managers and the professions’ emphasis on norms of efficiency (Clingermayer and
Feiock 2001). This suggests that communities with council manager government systems will be more likely to use an economic development strategy than communities with mayor-council government systems.

**H3** The council manager form of government increases the likelihood of a city using a strategic economic development plan.

**Business Orientation**

A city’s orientation to its business community and economic development is likely to influence its probability of using a strategic approach to economic development. Strategic planning as a management technique originated in the private sector (Bryson and Roering 1996). Over 77% of state agency managers (Berry 1994, 324) said that “emulating good business practice” was an important objective when their agencies adopted strategic planning. Those cities in which private business is more active in promoting economic development policy than any other sectors are likely to be more knowledgeable about economic development strategy as a management plan.

**H4a** Cities in which private business is more active in promoting economic development policy than non-profit and private-public organizations are more likely to use an economic development strategy.

**H4b** Cities with private company contributions on marketing efforts are more likely to use a strategic economic development plan.

**Information Technology Capacity**

The utilization of information technology may increase management innovation to strengthen government potential to make service delivery more efficiently and effectively. Information technology has been used to improve organizational performance and agency effectiveness. Rainey and Steinbauer (1999) argue that
technology utilization relates to agency effectiveness because it builds the internal
capacity of an agency. Fountain (2001, 5-20) argues that information technology can be
used to increase efficiency by changing organizations and institutions and developing the
“virtual agency.” She also suggests the ways in which new information and
communication technologies will reinvent government and provides a framework for
considering organizational potential to make service delivery more responsive and less
costly. This research suggests that cities that use information technology as part of its
economic development strategy will be more likely to also use strategic planning for city
economic development.

**H5** City use of on-line computer services for economic development efforts
increases the likelihood of using a strategic economic development plan.

**Professional Networks**

Professionals in city government affect the management innovation diffusion among city
governments through their professional networks. There has been a large increase in the
number of professionals, particularly managers and specialized staff of public
organizations (DiMaggio and Powell 1983). Instead of being responsible only for
guaranteeing continuity, professional public managers become major innovators in
changing what public organizations do and how they do it (Moore 1995).

We hypothesize that a city’s probability of using economic development strategy
increases if the number of professional staff and manager on economic development
activities increase. This is also consistent with ‘normative isomorphism’ of DiMaggio
and Powell’s (1983, 152-153) mechanisms of institutional isomorphism change. They
argue that the professionalism is important because of the growth and elaboration of
professional networks that span organizations and across which new models diffuse rapidly. “Professionals exhibit much similarity to their professional counterparts in other organizations” (DiMaggio and Powell 1983, 152-153). Thus, cities are more likely to have a formal economic development strategy as the number of professional staff in economic development activities increases.

**H6** The number of professional staffs for economic development activities increases the likelihood of using a strategic economic development plan.

**Regional Competition**

Management innovation by nearby municipal cities can provide important information about new management’s effects. The geographic diffusion of information may arise in management innovations because ‘decision makers and citizens more easily analogize to cities and agencies nearby than cities far away’ (Mooney and Lee 1995, 605). We assume that a city in a region that has higher number of nearby cities having an economic development strategy is more likely to use an economic development strategy.

**H7** A city with many nearby cities having an economic development strategy has a greater likelihood of using a strategic economic development plan.

**Late Users**

As time passes, city governments try to use an economic development strategy because they have been affected by peer pressure and competition from nearby cities. The impact of regional competition becomes greater in cities’ late use of economic development strategy because the regional competition combines with the peer pressure and both factors influence adoptions in the late adoption period of innovations. This research
claims that late strategy users are more likely to be affected by a diffusion factor, such as regional competition.

**H8** Regional competition has a greater influence on use of a strategic economic development plan late in the diffusion process than early in the diffusion process.

**Control Variables**

City government participation and size in developing economic development affects the utilization of economic development strategy. Whether or not a city has a separate department primarily responsible for development might be related with the utilization of economic development strategy. Population size or population change over time should affect the probability of using an economic development strategy.

**METHODOLOGY AND DATA**

Since the observed dependent variable is dichotomous, the multivariate model is appropriately specified as a logit equation, and estimated using maximum likelihood techniques. The objective is to explain a rate, which is defined as the probability that a unit will have an economic development strategy. The observed dependent variable is dichotomous: whether a unit has a strategy (yes=1, no=0) in 1999. The multivariate model is represented in the following logit equation:

\[
\text{logit} \ (\text{STRATEGY}_i) = b_0 \pm b_1 \text{ECONOMIC}_i \pm b_2 \text{PERCAPITA}_i \ - b_3 \text{SALES}_i + \\
b_4 \text{FORM}_i + b_5 \text{BUSINESS}_i + b_6 \text{PRIVATEFUND}_i + b_7 \text{IT}_i + \\
b_8 \text{NETWORK}_i + b_9 \text{REGCOMP}_i \pm b_{10} \text{CITY}_i \pm b_{11} \text{POPi} + e \ldots \ldots (1)
\]
The data for this analysis are derived from ICMA which conducted a mail survey on economic development in a large number of American cities for 1999 and U.S. Census finance data for 1997. The units of analysis are U.S. city governments and the sample size is 731 cities. The dependent variable is whether or not a city government has an economic development strategy. The underlying dependent variable, STRATEGYi, is the probability of city i using an economic development strategy in 1999. The observed dependent variable is based on the 1999 ICMA survey and is dichotomous, equaling 1 if city i uses an economic development strategy in 1999 and 0 otherwise.

The independent variables, to be defined below, are the factors discussed in the text that are hypothesized to influence the probability of cities using an economic development strategy. ECONOMIC is based on 1990 U. S. Census finance data and denotes the condition of the local government’s economy. It is measured by the difference of total revenue and total expenditure divided by total revenue. PERCAPITA is based on 1990 U. S. Census finance data and denotes the per capita tax of local government. Competing predictions of both a negative and a positive coefficient for ECONOMIC’s and PERCAPITA’s coefficients, b1 and b2, are presented in the text.

SALES is based on U.S. Census Finance Data and ICMA 1999 data, and denotes whether or not a local government has a sales tax. It is a dichotomous variable equaling 1 if a city has a sales tax in 1999 and 0 otherwise. Its coefficient, b3, has a negative prediction. FORM denotes the form of city government and is dichotomous, equaling 1 if a city has the council manager system and 0 if it has the mayor council system. The coefficient (b4) is predicted to be positive.
BUSINESS denotes the business orientation of city government and represents whether or not private business is the group most active in promoting economic development. It is a dummy variable set at 1 for private business and 0 for all other sectors. The coefficient (b5) should be positive. PRIVATEFUND denotes whether or not private companies contribute funds to their local government’s marketing efforts. It is a dummy variable set at 1 for yes and 0 for no. The coefficient (b6) is assumed to be positive.

IT denotes the usage of information technology for economic development activities. In 1999, ICMA asked respondents whether or not a local government has on-line computer services (access to government services and information through computer and modem) implemented as part of its economic development efforts. It is a dummy variable set at 1 for yes and 0 for no. The hypothesis assumes that the coefficient (b7) is positive.

NETWORK represents the extent to which a city government has employed professionals on economic development activities. It is measured by the number of professional staff working solely or primarily on economic development activities divided by total number of population (to standardize population size). The Hypothesis assumes that the coefficient (b8) is positive.

REGCOMP represents the extent which a city had nearby cities that used an economic development strategy. It is measured by the number of economic development strategy users divided by the total number of cities in the same state. The hypothesis expects that the coefficient (b9) is positive.
CITY represents whether or not a city has participated in implementing economic development policy, it is a dummy variable set at 1 for yes and 0 for no, and CITY’s coefficient is b10. POP represents total number of population divided by 1000 and its coefficient is b11.

In order to test the late user hypothesis, this research applies multinomial analysis because of polytomous dependent variables – never users, abandoners, early users, and late users. The data for this analysis are derived from ICMA which conducted a mail survey on economic development in a large number of American cities for 1989 and 1999. The units of analysis are U.S. city governments and the sample size is 221 cities. There are four types of cities using an economy development strategy between 1989 and 1999 (STRATEGYUSER); 1) never users – cities have never used an economic development strategy; 2) abandoners – cities used to use an economic development strategy in 1989, but they have abolished it in 1999; 3) early users – cities have used an economic development strategy from 1989 and still use it; and 4) late users – cities did not use an economic development strategy, but they are using it in 1999.

For polytomous dependent variables, the logistic regression model may be calculated as a special case of the multinomial logit model (Agresti 1990; Aldrich and Nelson 1984; DeMaris 1992; Knoke and Burke 1980; Menard 2002). This compares indicator contrasts for independent variables in the logistic regression model for dichotomous variables. For dependent variables with some number of categories M, this requires the calculation of M-1 equations, one for each category relative to the reference category, to describe the relationship between the dependent variable and the independent variables (Menard 2002, 91-92).
This research will have a multinomial analysis with a reference group which is a category of never users (see Equation 2). It will investigate how indicators of independent variables are compared according to the reference group. In particular, this study will focus on comparing the indicators of regional competition between early and late users.

\[
\text{logit (STRATEGYUSER}_i) = b_0 \pm b_1 \text{ECONOMIC}_i + b_2 \text{FORM}_i + b_3 \text{BUSINESS}_i + b_4 \text{IT}_i + b_5 \text{NETWORK}_i + b_6 \text{COMPETITION}_i \pm b_7 \text{PO}_i \pm b_8 \text{DEP}_i + e \ldots (2)
\]

The data for this analysis are derived from 1989 and 1999 ICMA data sets and U.S. Census finance data for 1990. The independent variables are defined below. ECONOMIC denotes the condition of the community’s economy during the last five years. It is an ordinal variable and it has six scales (significant decline-more than 10%, modest decline-less than 10%, economic base is stable-no real growth or decline, slow growth-less than 10%, moderate growth-10-25%, and rapid expansion-more than 25%). Its coefficient, b1, has competing predictions. DEP represents whether or not a city has a separate economic development department in 1989, and its coefficient is b8.

COMPETITION represents the extent which a city had regional competition in using an economic development strategy. It is measured by the mean score of cities in the same census division for total policies adopted and each strategy in 1989. POP represents the number of population change from 1985 to 1990. FORM, BUSINESS, IT, and NETWORK are based on the 1989 ICMA data, and they are measured in same manners as those variables in the previous logit model.
FINDINGS

The Utilization of Economic Development Strategy

Appendix 1 presents the decriptives of dependent and independent variables. Among 731 cities, 59.5 of them use an economic development strategy (Table 1). Table 1 presents logit maximum likelihood estimates for cities’ utilization of economic development strategy in 1999. Since the use of R-square has received little attention in the literature on logistic regression analysis (Agresti 1990; Menard 2002, 26), the Likelihood-Ratio (LR) chi-square tend to be a major parameter to test the goodness of fit for the logistic regression analysis. The LR chi-square is 176.28, which is significant at less than .001 and overall, the support for the model is quite strong.

All independent variables except city resources are statistically significance at less than the .10 level. The city resources have a negative relationship with the city’s propensity to use an economic development strategy, although it does not have statistic support, suggesting that cities which lack resources are not more likely to use economic development plans. As we expected, the fiscal institution has a negative and statistically significant relationship. This result suggests that cities with economic hardship and constraint are more likely to use an economic development strategy to overcome the fiscal disadvantage.

The political institution, business orientation, information technology, professional network, and regional competition all have positive and statistically significant relationships with city’s use of economic development strategy. Also, the city
participation and size have a positive and statistically significant relationship. These results suggest that the internal needs and constraints of political institutions, network, and city characteristics as well as external regional competition influence cities to use an economic development strategy.

Unlike the linear regression, the logistic regression has a non-linear relationship between a dependent variable and the independent variables, but it provides a strong prediction for which municipal governments will use the economic development strategy management innovation by 1999. The change in \( P(Y=1) \) is not a linear function of the independent variables and the slope of the curve varies in terms of the value of independent variables (Menard 2002). Since this research emphasizes the probability of city’s management innovation with various institution and network variables, the logistic regression will predict the change in a city’s \( P(Y=1) \) with a one-unit change in the independent variables.

\[
\text{Logit (probability of city’s using an economic development strategy)} = -4.7 – 0.17\text{ECONOMIC} - 0.34\text{PERTAX} - 0.38\text{SALES} + 0.39\text{FORM} + 0.65\text{PRIVATE} + 0.67\text{PRIVFUND} + 0.60\text{IT} + 4.70\text{NETWORK} + 4.82\text{REGCOMP} + 1.24\text{CITY} + 0.004\text{POP} \]

According to Equation (3), for a city (B) with moderate levels of independent variables, the city will have a 62% probability \( \left[ e^{0.52} / (1 + e^{0.52}) \right] \) to utilize an economic development strategy. For a mayor-council city (A) with sales tax, but no private business participation, no private business fund, no professional network, no city
participation in economic development, while other variables are moderate, the city will have a 14% probability \[
\left( e^{-1.796} / (1 + e^{-1.796}) \right) \] to utilize an economic development strategy. In contrast, for a council-manager city (C) without sales tax, but with private business participation, private business fund, maximum level of professional network, city participation in economic development, while other variables are moderate, the city will have a 99% probability \[
\left( e^{5.62} / (1 + e^{5.62}) \right) \] to utilize an economic development strategy (see Figure 1).

**Late Users**

Appendix 2 and 3 presents the frequencies of dependent and independent variables. Among 221 cities, 67 (or 30%) are “nonusers”, 52 (or 23%) are “early users”, 38 (or 17%) are “abandoners”, and 64 (or 29%) are “late users” (see Appendix 2). Table 2 presents multinomial logistic maximum likelihood estimates for cities’ utilization of economic development strategy 1989 through 1999 while a reference group is nonusers. The LR chi square is statistically significant at less than .01 and overall, the support for the model is quite strong. We will predict what probability early users and late users with different levels of regional competition have in using an economic development strategy, compared with nonusers.

\[
\text{Logit (probability of being early users versus nonusers) = -3.96} - \\
.31 \text{ECONOMIC} + 2.96 \text{FORM} + .42 \text{BUSINESS} + 1.47 \text{IT} + \\
12.20 \text{NETWORK} + .01 \text{COMPETITION} + .0004 \text{POP} + 1.77 \text{DEP}. \text{...... (4)}
\]
According to Equation (4) of early users vs. nonusers, for a hypothetical city (B) with moderate levels of regional competition and other independent variables, the city will have a 36.9% probability \[ e^{-0.537} / (1 + e^{-0.537}) \] to have an economic development strategy. For a hypothetical city (A) with minimum level of regional competition and moderate levels of others, the city will have a 35.7% probability \[ e^{-0.589} / (1 + e^{-0.589}) \] to use an economic development strategy. For a hypothetical city (C) with maximum level of regional competition and moderate levels of others, the city will have a 37.5% \[ e^{-0.513} / (1 + e^{-0.513}) \] probability to utilize an economic development strategy.

Logit (probability of being late users versus nonusers) = -4.75 – .04ECONOMIC + .97FORM + .39BUSINESS - .71IT + 4.3NETWORK + .21COMPETITION + .00003POP + .67DEP…………………………. (5)

According to Equation (5) of late users, for a hypothetical city (B) with moderate levels of regional competition and other independent variables, the city will have a 50.6% \[ e^{0.025} / (1 + e^{0.025}) \] probability to have an economic development strategy. For a hypothetical city (A) with minimum level of regional competition and moderate levels of others, the city will have a 25.5% probability \[ e^{-1.072} / (1 + e^{-1.072}) \] to use an economic development strategy. For a hypothetical city (C) with maximum level of regional competition and moderate levels of others, the city will have a 63.4% probability \[ e^{0.548} / (1 + e^{0.548}) \] to utilize an economic development strategy.

Clearly from the results in Equation 4 and 5, the level of regional competition that the city faces has a larger impact on the likelihood of a late user using an economic
development plan than on the likelihood of an early user. According to Figure 2, we visually confirm that regional competition has more impact on the economic development strategy usage of late users than on early users. While a hypothetical early user with a maximum level of regional competition has 1.8% more probability to use an economic development strategy than a hypothetical early user with its minimum level, a hypothetical late user with its maximum level has 37.9% more probability to use an economic development strategy than one with its minimum level.

This result suggests that the impact of regional competition becomes greater in city’s use of an economic development strategy as time passes and the late users are primarily driven by peer pressure and competition in the regional field. Isomorphism can result because non-optimal forms are selected out of a population of organizations or because organizational decision makers learn appropriate responses and adjust their behavior accordingly (Hannan and Freeman 1977; DiMaggio and Powell 1983). Late management innovation is primarily driven by peer pressure and competition in the regional field.

**IMPLICATIONS FOR THE STUDY OF MANAGEMENT INNOVATION**

Internal and external forces are included in our explanation of the adoption of management innovation in local government and both play a role in the use of strategic economic development plans in Florida cities. Internal determinants are important but the specific factors are somewhat different than the usual factors in policy innovation studies. City resources did not have a significant effect but business orientation,
information technology capacity, and professional management networks each increased the likelihood that this management innovation would be employed by local government.

In addition, the external determinant, regional competition, had a substantial influence on the use of this management innovation. The impact of regional competition among local governments is consistent with the proposition that municipal bureaucrats compete with each other to keep their residents and attract informed movers. In a region consisting of many local markets for public good, bureaucrats perceive a demand for better public services and seem to use this management innovation to gain a competitive advantage in satisfying that demand.

Finally this research finds that the late users of economic development strategic plans are primarily influenced by competition, legitimacy, business influence, and peer pressure in their neighborhood region. As time goes on and the number of users increases, political competition, administrative legitimacy, and peer pressure from neighborhood cities force a municipal government to adopt this management innovation, although the management innovation seems to be a non-optimal form for the municipal government. Further studies need an evaluation study of a management innovation that asks early and late users how differently they benefit from using an economic development strategy.

An important implication of this research is our finding that management innovations have been affected by different additional factors from policy innovation factors. This suggests that institutions and bureaucrats’ networks may be important major factors to explain management innovations and deserve greater attention than they are given in the existing literature. Also, accounting for the time dimension is important to
explain (and understand) the process and motivation of management innovators. Our findings suggest that the relative importance of internal versus external determinants of innovation will be different depending on the state of the diffusion process.
APPENDICES

Appendix 1. Descriptives of dependent and independent variables in the logit analysis

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. deviation</th>
</tr>
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<td>1</td>
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<td>.49121</td>
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<td>.26493</td>
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<td>.49848</td>
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<td>Private company fund (1999)</td>
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<td>.42867</td>
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Appendix 2. Frequency of economic development strategy users in 1989 and 1999

<table>
<thead>
<tr>
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<th>Percent</th>
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<th>Cumulative Percent</th>
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<tr>
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<td>early users</td>
<td>52</td>
<td>23.4</td>
<td>53.8</td>
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<tr>
<td></td>
<td>abandoner</td>
<td>38</td>
<td>17.1</td>
<td>71.0</td>
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<td></td>
<td>late users</td>
<td>64</td>
<td>28.8</td>
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<tr>
<td></td>
<td>Total</td>
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<td></td>
<td>Total</td>
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Nonusers: 0
Early users: 1
Abandoners: 2
Late users: 3
Appendix 3. Descriptives of dependent and independent variables in the multinomial logit analysis

<table>
<thead>
<tr>
<th>Variable</th>
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<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. deviation</th>
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<td>3</td>
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<td>abandoners=2, late users=3</td>
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<td></td>
<td></td>
</tr>
<tr>
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<td>3</td>
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<td>: six ordinal scales</td>
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<td>Professional network (1989)</td>
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<td>.04611</td>
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<td>: # of professional staff/population</td>
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<td>19.85</td>
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<td>: mean score of cities in the same census division for total policies adopted and each strategy</td>
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<td>: population change 1989 through 1999</td>
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References


## TABLES

### Table 1. Logit maximum likelihood estimates for cities’ utilization of economic development strategy in 1999

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<tr>
<th>City’s utilization of economic development strategy</th>
<th>Coefficient</th>
<th>S.E.</th>
<th>t</th>
<th>Sig.</th>
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<td><strong>City Resources</strong></td>
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Number of observations: 731  
Chi square: 159.23  
Pseudo R square: .1614

### Table 2. Multinomial logistic maximum likelihood estimates for cities’ utilization of economic development strategy 1989 through 1999

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<th>City’s utilization of economic development strategy</th>
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<th>S.E.</th>
<th>t</th>
<th>Sig.</th>
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2 (abandoner)                                      
**City Resources**                                 
Local government’s economic base                   | -.1449533   | .1953035 | -0.74  | 0.458 |
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<th>Category</th>
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<th>p-value</th>
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3 (late users)

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<th>Coefficient 2</th>
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(Reference group is nonusers)
FIGURES

Figure 1. Hypothetical cities

![Hypothetical Cities with Different Independent Variables](image)

Figure 2. The probability of hypothetical cities with different levels of regional competition to use an economic development strategy

![Hypothetical Users](image)