CROSS-BORDER LOCAL DEVELOPMENT POLICY: AN EXAMINATION OF SPACIAL PATTERNS

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Abstract

This paper explicitly focuses on the relationship between geography or location and the economic development practices and policies within a community. More specifically, spatial relationships among communities on the Canadian/US border are examined to determine if similar approaches to local economic development can be identified based on spatial patterns regardless of nation of origin. Based on survey and census data in a geographic information system analysis limited national, regional, and state/provincial patterns in policy use are evident depending on the particular economic development policy considered. The lack of consistent patterns, however, directs policy analysis in a local direction to focus primarily on local issues – local structure, local economy, local players, and the local civic culture.

The literature on why certain cities engage in particular types of economic development techniques tends to be fragmented and often contradictory. It rests primarily on data from US cities, has failed to offer robust explanations of policy practice, and has relied on a relatively stable and limited set of independent variables. These have commonly included political factors (residential or business input, professionalism of decision-makers, decision-making practices), economic/fiscal measures (tax base/rate, economic growth measures, median income of residents, property value), or structural variables (form of government, age of community, inter-city competition). While such research has provided insights into economic development policy processes and current practice, it fails, in a

International Journal of Economic Development
2, 3, 2000, pp. 440-472

collective sense, to provide a theoretically cohesive explanation of policy and policy outcomes. Research has pointed to several critical factors which appear to impact local economic development practices missing from much current analysis: resources devoted to the economic development enterprise; enabling legislation; professionalism of development officials; the extent of planning and evaluation, and *spatial patterns* among communities (Reese and Malmer, 1994; Ohren and Reese, 1996; Reese, 1997; Reese, 1998; Reese and Rosenfeld, 1999).

This paper explicitly focuses on this last factor; the relationship between geography or location and the economic development practices and policies within a community. More specifically, spatial relationships among communities on the Canadian/US border will be examined to determine if similar approaches to local economic development can be identified based on spatial patterns regardless of nation of origin. Recent research on cross-border cooperation among European countries and between the US and Canada suggests that boundaries are becoming less important and are being replaced by regional variations (Marks, 1993; Hooghe, 1996, among others). Using Geographic Information System (GIS) analysis along with traditional statistical analyses, the following questions are examined:

- Are spatial patterns evident in the types of economic development policies employed by cities along the Canadian/US border?
- Do proximate communities employ similar "packages" of development incentives?
- Is there more variation within or between nations in the types of policies employed or do policy approaches follow regional rather than national lines?

SPATIAL LOCATION AND ECONOMIC DEVELOPMENT

Geographic Location

To date, there has been a general lack of attention to geographic or spatial patterns in the adoption and use of local economic development policies. Work on the diffusion of local policy innovation from the 1970's provided insights into the spatial dispersion of local policy. However, these findings have generally not been included in more recent work on economic development policy (an exception would be Krmenec, 1989). Local

decisions to adopt particular new policies were found to be affected by neighborhood (emulation of policy in cities close by), hierarchy (diffusion from larger/older to smaller/newer cities), and central propagator (encouragement by state or federal policy) effects (see McVoy, 1940; Crain, 1966; Agnew et. al., 1978; Krmenec, 1989, for some examples in different time periods). Indeed, these spatial innovation patterns were found to occur in combination with each other and with other local conditions, creating a:

> threshold set of conditions defined in terms of a community's need for the innovation, its level of information, and where relevant, the existence of state enabling legislation. If these conditions are met, the time at which a particular community adopts appears to depend upon its need for the innovation and its political structure (Agnew et. al., 1978: 26).

More recent research focusing on location and economic development policy indicates that early adopters of industrial revenue bonds were large, urban, home-rule communities with a secondary neighborhood transmission pattern stimulated by information flows later in the diffusion process (Krmenec, 1989). Local "need" for IRB's indicated by employment, business establishments, and employment patterns appeared not to have as strong an effect on policy adoption as these spatial diffusion patterns. Thus, "space" appeared more important than any individual local characteristics in adopting this particular economic development policy.

Several recent studies of economic development have included limited analysis of spatial effects, although this has tended to be only tangential to the main foci of the analysis. And, partly as a result, findings appear to conflict regarding the importance of geography in "determining" local development policies. For example, research on the adoption of Type II policies found consistent spatial patterns when cities were examined by state. Such policies would include performance guarantees to ensure that the benefits accrue to a locality in return for public incentives or linkage programs or hiring requirements which attempt to direct benefits of economic development to particular groups of residents. Cities emphasizing Type II policies in Ohio and Indiana, for example, tended to be lower income, white communities. Illinois cities using Type II policies were more racially mixed, particularly white/Hispanic. High Type II cities in Pennsylvania, Michigan and New York evidence historic racial change

patterns from white to African American with increasing economic stress. Cities using Type II policies in Indiana and Ohio were more economically stable (Reese, 1998). When high Type II cities were plotted, many were "border" communities in that they were either close to a state line, a body of water dividing states, or Canada. Many were within close proximity to other cities of similar size or were suburbs of a central city or the central city in the region (Reese, 1998).

On the other hand, Clarke and Gaile failed to find significant spatial effects in local use of federal economic development programs based on trend surface analysis (1998). Such analysis controls for regional variation in policy use as well as for other variables of interest. They found no statistically significant regional trends in the use of market-based economic development policies, probably because the use of such incentives is widespread. Because this analysis focuses on regions, it is possible that intra-regional trends exist and may be identified through more city-specific GIS analysis.

National Trends

A number of studies have focused on both the similarities and differences among cities in Canada and the US, many examining economic development policies in particular (see Reese and Fasenfest, 1996 for a review of this literature). It was argued in early research that urban systems in the two nations were so inherently different as to be incomparable, primarily as a result of cultural factors (Goldberg and Mercer, 1986) but also due to variation in the role of the state, notions of collective rights, and systems of federalism (Feldman and Graham, 1981; Andrew, 1994; Smart, 1994). However, other researchers have pointed to many similarities in the environment of cities in the two countries which are particularly germane to economic development: manufacturing employment and population loss in central cities (Nathan and Adams, 1989; Randall 1994; Garber and Imbroscio, 1996, among others); economic stresses related to similar shifts to post-industrial economies (Davis and Murdie, 1994; Rothblatt, 1994); and, increasing inter-city conflicts over development and inter-governmental resources (Woodside, 1990; Rothblatt, 1994). In short;

> The character of metropolitan development and the institutional response to it in both countries appear to be converging. The trends we have observed do not

> represent the 'Americanization' of Canadian urban public policy or the 'Canadianization' of United States metropolitan planning, but rather the globalization of urban development and corresponding governmental adaptation (Rothblatt, 1994: 516).

Indeed, recent research suggests that cities in the two nations not only share regional and economic characteristics but also share development ideologies, policies, and limited rational planning (Turner and Garber, 1994). While important systemic and cultural differences continue to exist, the globalization of economic production and competition, and the struggle to maintain local tax base and jobs have made economic development a preeminent activity for municipalities in both nations.

To respond to international economic forces and resulting local fiscal stress, cities in Canada practice a variety of economic development techniques similar to those well-documented in the US literature, including financial incentives or inducements (Lorimer, 1972; Whelan, 1989), creation of quasi-public redevelopment corporations (Leo and Fenton, 1990), and direct municipal investment (Artibise, 1988). Although important variations exist between provincial governments, many allow cities to compete for development fairly autonomously. In fact, one author suggested that the provincial government "leaves the local authorities subject to the conflicting influence of their private investors, developers, and industrialists etc., on the one hand and the public requiring expensive amenities on the other" (Bettison, Kenward, and Taylor 1975: 491). Indeed, in an account of development in Toronto, Stein (1972) painted a picture very familiar to U.S. urbanists of developers securing large local concessions and variances in land-use plans to obtain much desired development.

Overall, the specific mechanisms employed to foster economic development are generally similar for US and Canadian cities; public infrastructure investment and marketing activities predominate while financial and land mechanisms are less widely employed. In almost all cases the same economic development techniques predominate in both nations--the differences tend to be of scale not substance (Reese and Fasenfest, 1996).

Summary

In short, several conclusions can be drawn from the literature on national, regional, and spatial location and economic development policies:

- Local economic development policies in the US and Canada are becoming increasingly similar due to international economic forces.
- Within a general framework of similarity, policies may still differ along national lines due to differences in state/provincial enabling legislation and other historic and cultural forces.
- Spatial trends in economic development policy adoption have been found for industrial revenue bonds and Type II policies.
- Other research has failed to find regional variation in local use of federal economic development policies in the US.

Hypotheses

Based on the forgoing literature, two hypotheses, albeit speculative, are posed:

- While nation of location will have some modest effects on local economic development policies, regional patterns should predominate. In other words, the difference between regions should be increasingly more important while the differences between nations should be becoming less so.

- Visible spatial patterns of policy distribution should be present. Cities in closer proximity should use similar policies due to "neighborhood" diffusion despite regional or national "borders."

METHODOLOGY

The Survey

The analysis here is based on a survey sent, in the Spring of 1994, to the Chief Executive Officer (CEO) of all cities in Canada with a population over 10,000 and in all U.S. border (with Canada) state cities meeting the same population criteria. The CEO was asked to forward the survey to the individual responsible for economic development, or answer it themselves if appropriate. The population criteria were selected to provide greater diversity of cities, including smaller and/or suburban units, and a much needed balance to the many studies which have centered solely on large and/or central cities.

For this survey, 15 states were defined broadly as border states, including those which border Canada through a body of water.[1] The larger purpose of the research, hence the sample, is to examine local economic development cross-nationally and more specifically focus on policy transmission and competition issues across the border. The survey itself is an expansion of a similar survey distributed in the State of Michigan and the Province of Ontario in 1990. It was also designed so that portions would match surveys of U.S. cities and counties conducted by the International City/County Management Association.[2]

Surveys were sent to 305 Canadian and 682 U.S. cities and the response rate was 35% for Canadian and 52% for U.S. cities, well within normal response rates for mailed surveys.[3] The samples appear to be significantly different on several characteristics, including population, unemployment levels, per capita income, and percentage in poverty. Specifically, cities in the Canadian sample are significantly larger, have higher levels of unemployment, but also higher per capita income. U.S. cities have a significantly larger percentage of the population in poverty. These differences may not be a cause for concern in this research, however, since the subsequent analysis indicates that these variables have no significant relationship with the policy variables which serve as the focus of this study.[4]

The Indexes

Dependent Policy Indexes

The survey asked respondents to indicate the extent to which (on a five point scale) their city had employed 67 different economic development policies over the past five years. Factor analysis performed on the 67 techniques indicates that there are nine identifiable factors or categories of techniques (see Appendix A for factor results and Reese, 1998 for a more complete discussion of the analysis).[5] The *marketing factor* represents efforts to promote the city through brochures, trade shows, and special events and to develop foreign markets for local goods. The *loan factor* includes five types of loan activities from direct loans to start-up and small business loans. A *site preparation* factor includes most of the traditional land development activities; land acquisition, lot consolidation, relocation and clearing of structures, and sales, donation, and leasing of sites. The *infrastructure factor* represents efforts to use such improvements as streets, parking and pedestrian amenities, and recreation services as economic development strategies. Traditional *financial incentives* such as tax abatements, deferrals and credits, and enterprise zones form another factor. A *zoning factor* (manufacturing districts, growth management zoning, zoning variances) and a *regulatory factor* (sign, facade, and litter controls) are also present. *"Type II" economic development* policies including requirements to hire local workers, minority employment requirements, worker training requirements, performance guarantees, targeted employee wage subsidies, and requirements for the development of low income housing load on a separate factor. The final factor includes economic development activities defined by Eisinger (1988) as *demand-side* and include worker training programs, public-private research and development initiatives, business incubators, and sale/lease-back arrangements.

A final dependent policy variable requires further discussion. Previous research has focused on cities using Type II policies because of their presumed greater effectiveness in ensuring and distributing benefits to the local community (Goetz, 1994; Elkins, 1995; Reese, 1998). While this research has identified interesting factors that appear to be related to Type II policies, it has failed to distinguish between cities using Type II policies because they are trying everything possible to induce economic

development (shooting at anything that flies) from those cities which have made a more rational decision to focus specifically on Type II polices. If Type II policy use is simply a function of doing everything, then such high use cities may not be good "models" of economic development. To differentiate between these two scenarios, a final "Focused Type II" index was created by dividing those high on the Type II index by the sum of those high on each of the other eight policy indexes. Thus, a score of 1.00 represents a complete focus on Type II (high on Type II, low on all other indexes) and .00 represents a lack of focus on Type II policies (high on all other indexes, low on Type II).

The GIS Database

Each city responding to the survey was geo-coded along with response data from the survey and basic census information.[6] Because of mapping requirements all data used in the GIS analysis had to be converted to categorical variables. For the economic development policy indexes this meant re-coding the f-scores which ranged from –2.75840 to 3.74082 into three categories. Low policy use includes f-scores under -.5, high policy use included f-scores over .5, and medium use contains all other scores. This system divided the cities in three roughly equal groups. The approach was problematic only for the index representing the extent to which cities evidence very focused Type II policy efforts as opposed to using all techniques in a scatter-shot effort. Because continuous scores on this variable ranged only from .00 (69% of the cities, representing no focus) to 1.00 (2% of the cities representing total focus), with an obvious concentration of cases in the lower scores, only two categories were created. Low focus included the 182 cities at .00 and high focus includes the rest.

ANALYSIS

Do Proximate Communities Use Similar Economic Development Policies?

This question is addressed by using descriptive GIS maps presenting the spatial patterns of economic development technique use for the ten economic development policy categories just identified. Because so many of the responding cities are in urban areas, viewing the entire US and Canada together results in an inability to distinguish data points; i.e., a number of the dots representing individual cities are on top of each other. Focusing on one region at a time separates the data points. For ease of

analysis two presentations are provided for each economic development policy index: western, and Great Lakes/central. For all maps except focused Type II policies, large red dots represent cities making high use of the economic development technique, medium blue dots represent medium use, and small green dots indicate low use of techniques in the index. (GIS maps are included in Appendix B, maps for other regions are available from the authors).

Marketing: The greater use of marketing activities by cities in Canada is quite apparent from the maps. In comparison to the spatial patterns in other maps, cities in the western US are also making relatively high use of marketing practices. It also appears that marketing is an urban phenomena; cities high on marketing are clustered in urbanized areas. This proximity suggests that marketing is competition-driven, which is logical. Many of the high marketing cities also lie along state or national borders. While partly the result of urbanization effects, it is also likely that cities across a border from each other use marketing to lure business, residential, and even tourist investment.

Financial: Compared to many of the techniques the numerous large red dots indicate that financial incentives are widely used. Several spatial patterns are also evident. First, red dots indicating high usage are sparse across Canada generally as well as in the Western US. Indeed, the highest usage appears to lie south of Michigan and Wisconsin, with Illinois and Ohio cities particularly high. And, while the large red dots are located in urbanized areas, it is important to remember that simple location of data points in urban areas represents response bias as much as anything. In relation to medium and low use cities, high financial incentive cities are located as much in urban areas as not. In other words there is a great deal of spatial dispersion to use of financial incentives. The only variation from this pattern appears in the west where fewer cities are using financial incentives. In this case those high on this index are relatively close together. Perhaps a greater policy transmission or competition effect exists where usage is not as common. Compared to marketing incentives, for example, the spatial dispersion of financial incentives is much greater.

Site Preparation: Spatial patterns suggest that site preparation is more common in Canadian than US cities. Indeed, high use appears more prevalent in the western US than in the east and more in western Canada than in the western US. Cities in Ohio and Indiana appear to rely less on site preparation activities while Michigan, Minnesota, and Ontario cities are relatively high. Thus, the pattern is almost opposite that of financial incentives where higher usage was toward the southern-most responding cities. Here there appears to be a northern trend for US cities and an Ontario focus for Canada.

Demand-Side: Two patterns stand out regarding the high use of the entrepreneurial demand-side policies; urbanization and border effects. Cities emphasizing demand-side policies are largely in urban areas and are hence grouped together. Further, and partially as a function of this, the high use cities also tend to lie on either national or state borders. National border effects are quite apparent on the Ontario/New York border and state/provincial border trends are visible in every case except Indiana. Reasonably high usage is visible across both the US and Canada, with little difference between eastern and western cities.

Loans: Spatial patterns for loans are very similar to those of financial incentives. High usage spreads out from urbanized areas with Canadian, and particularly, Ontario cities evidencing limited use. There appears to be no regional trends in the US, although cities using loans extensively appear to coalesce in urban areas in Michigan and Minnesota in particular while those in other states are more spread out.

Infrastructure Investment: Overall, fewer cities are emphasizing infrastructure investment than financial incentives, for example. Infrastructure investment appears to lie in a middle ground relative to other techniques in the extent of policy dispersion. High usage is more concentrated than financial incentives, for example, but more dispersed than marketing.

Zoning: Like site preparation, the spatial pattern of high use cities for zoning practices indicates greater emphasis in Canada, particularly in the Province of Ontario. Within the US there appears to be relatively greater use of zoning to either facilitate or regulate economic development in western cities. Again, like infrastructure investment and site preparation, use of zoning appears to occupy a middle area between being an urbanized phenomenon and being more diffused. While slightly more used in urban areas, many cities outside of urban areas are high users of zoning. As with marketing, however, cities using zoning techniques heavily are somewhat more likely to lie on either national (particularly between Ontario and New York) or state borders.

Appearance Regulations: The use of local ordinances to control the appearance of economic development appears higher in urbanized areas; the red dots indicating high use are much more grouped than dispersed for these practices, particularly among US cities. Greater use of appearance regulations is visible among Canadian cities, where dispersion is also more likely. Indeed, appearance regulations seem more prevalent in northern cities, with highest use along the northern Ohio and Illinois borders and north. This pattern is not apparent for Indiana cities, however. It is worth noting that cities high on many of the development practices in Indiana lie in the middle of the State, in a line running from north to south. Thus, Indiana is an exception to most of the border and urbanization patterns visible in other states and provinces.

Type II: The spatial pattern for Type II policies is very similar to that for demand-side policies. Usage is quite concentrated in urbanized areas and on state/provincial or international borders. Cities in the eastern US appear more likely to use Type II policies than western cities. Usage patterns across Canada are quite high. Again, national border effects are most evident in the Ontario/New York region.

Focused Type II: The spatial patterns of highly focused use of Type II policies are very similar to that of demand-side policies, with border effects even more apparent. First, it is clear that far fewer cities are focusing on Type II policies to the exclusion of other techniques. In other words, more cities are high on Type II policies as a function of doing *everything* rather than focusing exclusively on redistributive or progressive policies. There are no apparent national differences nor regional patterns in focus on Type II policies. Again, with the exception of high focus cities in Indiana, the

overall spatial pattern of high focus cities is location on or near borders, particularly with other states in the US. They are not "paired" however; in other words, there does not tend to be another high focus city right across the state border. There is also no clear urban pattern as with demand-side techniques – the border effects are much stronger.

Are There Identifiable Patterns of National or Regional Policy Variation?

Cities were initially coded based on country of location and then a regional variable was created from the GIS data set. This admittedly rather rough procedure involved dividing cities into five different regions--west, west-central, central, Great Lakes, and eastern--by drawing boundaries around them within the GIS set. The map in Appendix C shows the regions and their constituent cities.

A brief profile of the characteristics of the different regions is useful at the outset and is organized by region. The characteristics (summarized in Table 1) noted are based on correlational analysis and are significantly related to region at the .05 level in all cases.

West: Cities in this region are significantly more likely to be in Canada, are larger, and tend to be more fiscally stressed with lower average incomes, high percentages in poverty and higher unemployment. However, the economic picture improved between 1980 and 1990; poverty and unemployment were significantly reduced and population increased. Structurally these cities are significantly more likely to have at-large city council elections and have higher levels of community or citizen input into the economic development decision-making processes.

West central: These cities are more likely to be located in the US, are part of a multi-tiered structural arrangement, and perceive less competition with regional neighbors for economic development. Their populations are significantly more white and 1990 unemployment is lower than cities in other regions. However, there was a significant increase in unemployment between 1980 and 1990. Despite this, officials indicated higher expectations for economic growth in the future.

Central: Cities in the central region also are more likely to be in the US and have generally stronger economies. There is significantly less residential need, lower percentages in poverty, and less unemployment. While percent

in poverty increased between 1980 and 1990, unemployment was reduced. Officials perceived greater past and future economic base growth than in cities in the other regions. Structurally, these cities are more unreformed, with ward elections and strong mayors.

Great Lakes: These cities have fewer distinctive attributes than those in other regions. They are more likely to be a core city in their region, had a significantly higher increase in poverty rates between 1980 and 1990, and are more likely to have a city manager form of government.

East: These cities are more likely to be Canadian and have significant amounts of economic stress. They have higher levels of residential need, higher unemployment, and experienced increased unemployment between 1980 and 1990. However, the income side of the picture is more positive, with significantly higher per capita incomes and a reduction in poverty from 1980 to 1990.

Both the country and regional variables were then correlated with economic development practices to determine whether there were simple bivariate associations and if regional or national variation was more prevalent (see Table 2). Overall, neither nation nor region is associated with many categories of development policies. Country is significantly correlated to financial, loan and marketing policies. Specifically, cities in the US are more likely to offer financial incentives and loan arrangements to foster economic development. Cities in Canada are more likely to emphasize marketing. Region is significantly related to financial, loan, site preparation, and infrastructure investment techniques, although not uniformly across regions. For example, cities in the west are significantly less likely to offer financial and loan incentives. Cities in the west central region are less likely to use financial incentives but more likely to engage in site preparation and infrastructure development. Finally, cities in the central region are significantly more likely to use financial and loan incentives. There are no significant correlations between the Great Lakes and east regions and economic development practices.

Because *region* and *nation* are significantly correlated, it is more instructive to look at the correlation between region and economic development policy while controlling for nation. When this is done fewer regional differences remain; west stays significantly related to loans, and west and west central remain correlated with financial incentives. Thus, it

appears that being in the west is important to the local economic development policies employed, but, overall, there are more national than regional trends.

SUMMARY AND CONCLUSIONS

It appears clear that a number of spatial patterns can be identified in the use of particular local economic development policies and that such patterns cross national borders. For example:

- Patterns of policy use appear to vary along an urbanized/dispersed continuum. Marketing, appearance regulations, demand-side policies, Type II, and focused Type II policies appear to be urban phenomena.
- Other policies have a more dispersed pattern, particularly loans and financial incentives.
- Cross-border (national) marketing is also apparent with cities across the border from each other exhibiting a similar marketing policy emphasis.
- For several types of policies, a "border-city" pattern appears, cities on state/provincial, national, or even water borders showing higher use; e.g., marketing, zoning, demand-side, Type II, and focused Type II policies. This pattern is particularly strong for focused Type II pollicies.
- There also appears to be some state-by-state patterns in policy use. The cities most likely to be using many policies in Indiana lie in the center of the state in a line from north to south. Cities in Illinois and Ohio are heavy users of financial incentives; Pennsylvania cities are relatively high on financial incentives. Cities in New York are relatively high on demand-side and Type II policies, particularly if they are near the Canadian border. Michigan cities are low on zoning policies while Washington cities are relatively high. And, Ohio cities are quite high on appearance regulations.

Regional patterns have also been identified. These include:

- Cities in the west of each country are more likely to emphasize marketing, zoning, and site preparation policies.
- By the same token, western cities are less likely to use financial and loan incentives.
- Cities in the west central region are more likely to emphasize site preparation and infrastructure development.

- Cities in the central regional are more likely to use financial and loan incentives.
- Location in the western part of both the US and Canada appears to most strongly effect economic development policies. And, western location is more important than nation for loans and financial incentives (negatively in both cases).

Finally, nation—US or Canada—appears important for several types of local economic development pollicies. Canadian cities are more likely to use marketing activities and less likely to use financial incentives and, US cities are more likely to use financial and loan incentives.

What can be said about the specific hypotheses posed earlier? First, country matters somewhat in the economic development policies pursued by local governments. However, it "matters" for only three policy areas; marketing, financial incentives, and loan arrangements. As found in previous research, location in Canada or the US effects only a few economic development policies; local policies in the two countries or overwhelmingly similar (Reese and Fasenfest, 1996). Second, regional variation does not appear to replace national variation in economic development policy use. The only exception to this would be cities in the western portion of both nations where region does appear to matter more than nation. This confirms arguments by Clarke (forthcoming) that the "Cascadia" region is developing an identity which crosses national borders. Third, visible spatial patterns appear to be present, although this has not been tested in any statistical sense. Some local economic development policies appear to be "urban" phenomena; marketing, appearance regulations, and demand-side policies, for example. Other policies appear to be dispersed along national or state/provincial borders; i.e., demand-side policies, Type II policies, and zoning policies. Finally, individual state/province patterns are also in evidence suggesting that enabling legislation or perhaps culture or history also "matter" in the techniques employed by localities.

Policy Implications

So, what are the policy implications of these limited findings? It appears that local economic development policy remains a largely decentralized phenomena in North America, set by local officials in response to their own needs and wishes. There appears to be no strong clear

pattern of economic development policies varying by nation. Rather, the spatial analysis identifies urban, cross-border, and state unique policy patterns, all of which point in a decentralized direction.

In many policy arenas, the United States and Canada have shared a history during the last half of the twentieth century of policy centralization amidst a variety of political pressures for decentralization or devolution. Central governments certainly have the ability to create a bag of tricks for local economic development policy-makers. Through grants-in-aid, regulations, or mandates, they have entered into many previously local policy arenas such as highways, public transit, welfare and environment and become dominant players. But in this arena of economic development, there does not appear to be such a pattern. Apparently, the pressures for centralization have not been dominant. While local interests have used their leverage nationally in many policy arenas, the data suggest that this has not been the case for economic development. Alternately, however, is the hypothesis that national economic development policy in the U. S. and Canada is identical, thus explaining the lack of substantial country variance. It seems more reasonable to conclude, however, that economic development remains primarily a local and state policy. This pattern directs policy analysis in a local direction to focus primarily on local issues – local structure, local economy, local players, and the local civic culture. The spatial data are not as scientifically pure as would be desirable, but they do highlight a pattern that should inform and direct future work.

Implications for Future Research

A number of interesting questions are raised by this analysis. First, while a great deal of literature has looked at policy flows across national borders, little research has examined the policy effects of a city being located near a state or provincial border. What is it about border locations that appears to effect development policies? Indeed, the apparent border pattern in the case of focused Type II policies is particularly interesting. Urban versus diffused patterns are present for different techniques. While it makes sense that cities in urban areas would use marketing efforts to compete with each other, what is it about demand-side, appearance regulations, and focused Type II policies that prompt increased use in urbanized areas? A hierarchical diffusion pattern may account for the pattern in demand-side policies since a good deal of information is required by local governments. But, the pattern for appearance regulations and

focused Type II efforts is not as clear. Similarly, why are usage patterns for loans and financial incentives more dispersed? Is it simply because they have become so widely used they are expected. Or are some other forces at work?

State/Provincial enabling legislation also appears important, as noted in previous research (Reese and Malmer, 1994; Reese, 1997[a]). It is quite possible that some of the variation in policy use by state/province can be accounted for by such supra-level legislation or incentives. In addition, other characteristics of states/provinces may be important and should be examined more carefully. For example, previous research has indicated that cities using Type II policies in Indiana do not seem to fit the typical mold; they have fewer minority residents and relatively lower residential need (Reese, 1998). Indeed, in the spatial analysis, Indiana cities did not conform to border and urban patterns. Obviously something different is going on in this state. Ohio cities were relatively high on financial incentives but lower on loans. This may be the result of enabling legislation which limited loans until the early 1990s (Clarke and Gaile, 1998).

The relatively high use of demand-side policies in New York, particularly among cities close to the Ontario border, is likely explained by international investment flows. But, this supposition needs further research. For example, research has indicated that Canadian foreign investment tends to be directed to areas that are in close proximity, are familiar, and already have large Canadian investments – in other words, in areas such as New York (Harrington et. al., 1986). Given this trend in investment it would make sense that cities in the western part of New York are engaging in economic development practices which focus on attracting foreign investment and foreign marketing and which are included in the demand-side index.

Previous research on Wisconsin cities indicated that use of marketing, financial incentives, and zoning was particularly high (Green, 1995). Such a pattern was partially evidenced here. While Wisconsin cities did not seem to put relatively higher emphasis on marketing they were quite high on loans and regulations to control the appearance of development. Finally, cities in Canada, and in Ontario in particular, are much less likely to use financial incentives and loans. In the latter case it is clearly the result of Provincial legislation prohibiting such incentives (Reese, 1992; 1992[a]). Further, since states such as Washington, Idaho, and Maine prohibit local

property tax abatement, it is not surprising that use of techniques in the financial index is low in those states (Reese and Malmer, 1994).

Finally, the GIS analysis employed here on an exploratory basis provides a rather simplistic picture of what such analysis might be able to say about local policy use. Further analysis should include both bivariate mapping to spatially explore correlations between independent variables and policy use patterns and statistical analysis available within GIS packages.

NOTES

1) States included in the sample were: Idaho, Illinois, Indiana, Maine, Michigan, Minnesota, Montana, New Hampshire, New York, North Dakota, Ohio, Pennsylvania, Vermont, Washington, and Wisconsin. The decision to use cities in only those U.S. states along the Canadian border was based on several factors besides cost. First, since one of the long term goals of this project is to address policy transmission and competition issues, the choice of "border cities" reflected an assumption that policy emulation was most likely due to location proximity, or a result of natural markets on both sides of the border. Second, the number of U.S. border cities provided a more comparable sample frame in relation to the much smaller number of cities throughout Canada meeting the size criteria.

2) The previous use and analysis of survey questions and responses, particularly those relating to economic development practices, and pre-test interviews with local officials, provide confidence that the terms and language employed have the same meaning in both countries (see Reese, 1992; Reese, 1992a; Reese, 1993; Reese, 1997[a]). Responses from Quebec may be problematic. Cover letters were in French, however, the survey itself was in English. Only 18 of the 102 cities over 10,000 population responded; a rate of 18%. Thus, the Canadian sample is questionable in its representation of the population of cities in this Province.

3) The lower response rate for Canadian cities raises the possibility that the findings will be less representative of all Canadian cities, however. There was some difference in population size between responding cities in Canada and the U.S. Canadian cities tended to be somewhat larger; median population for the Canadian sample was 28,275, while the median population of U.S. cities was 19,478. Median population of cities

responding to the survey seems fairly representative of those not responding. Median population size for non-responding cities in Canada was 19,883 and for U.S. cities was 22,884.

4) Which officials answered the survey also differed somewhat between the two nations. In U.S. cities, surveys were completed by economic development officials (32%), city managers (27%), mayors (17%), planning officials (14%), or other city officials (10%). In Canadian cities, respondents were most likely to be the economic development director (54%), the city manager (23%), planning officials (11%), other officials (9%), or mayors (2%).

5) While an initial exploratory analysis was run on all of the techniques at once, the findings reported here are the results of factor analyses run on those techniques which would theoretically be expected to factor together based on previous research (Boeckelman, 1991; Green and Fleischmann, 1991; Hanson and Berkman, 1991; Fleischmann et. al., 1992; Reese, 1993[a]; Reese, 1998). Factor analysis using principle-components analysis and varimax rotation was run on the indicated survey questions. The questions loading on the factors identified were combined into single variable indexes. Indexes were created based on f-score values to standardize units of measurement. A factor loading of .5 was the cutoff point in all cases. No questions loaded on more than one factor. Individual factor analyses were run for cities in the U.S. and Canada to verify that the same concepts were present. The same factors emerged in most cases. For variables such as "residential need" more census variables were available for US cities, for example. The full factor analysis is available from the authors upon request. It should be noted that not all of the 67 techniques are included in the factors.

6) Data from the more recent census comparable to the survey from Canada (1991) and the US (1990) were used for the following variables; populations, race, average income, percent in poverty, and unemployment. Racial characteristics were available from the US census only.

Acknowledgements

An earlier version of this paper was presented at the 1999 Annual Meeting of the American Political Science Association. Special thanks are due to Elizabeth Monczyk and Carryn Maslowski for research assistance, to the

Center for Urban Studies, Wayne State University, and the Institute for Community and Regional Development, Eastern Michigan University for GIS assistance, and to Joe Ohren for helpful comments. This research has been supported by grants from the Canadian Embassy, Washington, DC.

TABLE 1: Average 1990 Regional Attributes

Region	Population #	Percent in Poverty	Unemployment Rate	Percent White	Population Increase	Income $
West	82,839	14	8	88	7,576	12,424
West Central	36,472	10	5	95	3,976	15,265
Central	39,252	10	5	91	1,146	14,664
Great Lakes	53,830	11	7	90	8	14,346
East	43,667	13	9	94	2,742	13,145

TABLE 2: National and Regional Correlations

Policies	Nation	West	West Central	Central	Great Lakes	East
Marketing	.295*	-.010	.000	-.018	-.039	.092
Financial	-.330*	-.185*	-.140*	.208*	.056	-.014
Loans	-.445*	-.179*	.104	.121*	.007	-.070
Site Preparation	-0.81	-.106	.141*	.038	-.030	-.056
Infrastructure	-.002	-.004	.140*	.042	-.061	-.096
Appearance Regulations	-.033	-.032	.001	.031	.059	-.038
Zoning	.073	-.052	.016	.063	-.031	.059
Demand-side	-.070	-.050	-.015	.028	.073	.005
Type II	.037	-.095	.015	-.017	.068	.000
Focused Type II	.099	.034	-.028	-.073	-.010	.063

* Significant at the .05 level

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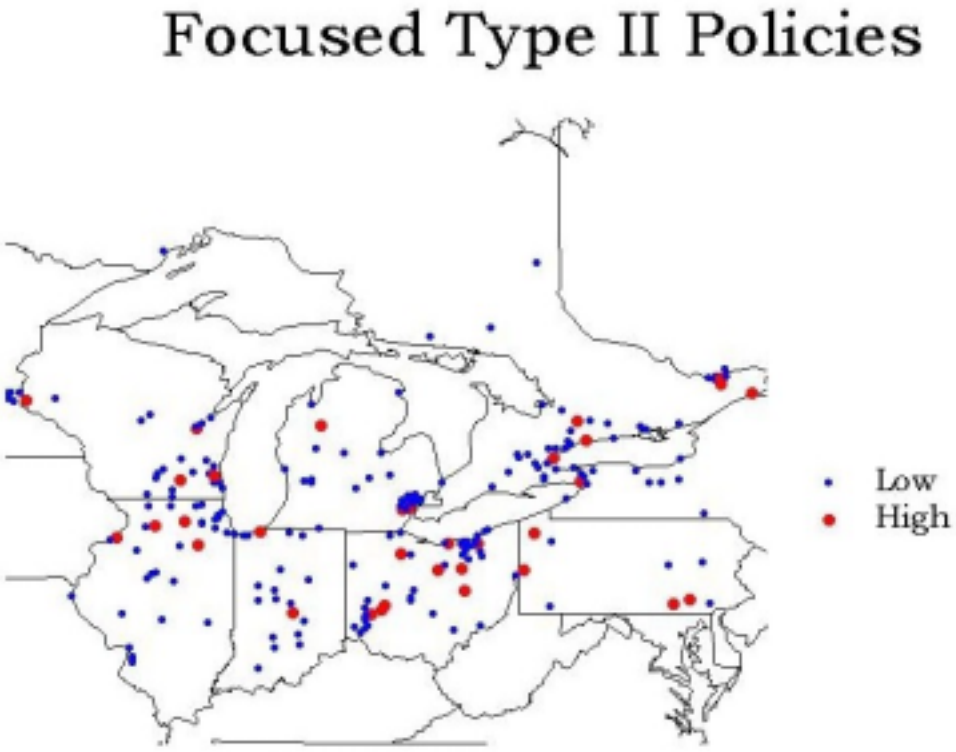
APPENDIX A
Factor Analysis
Economic Development Techniques

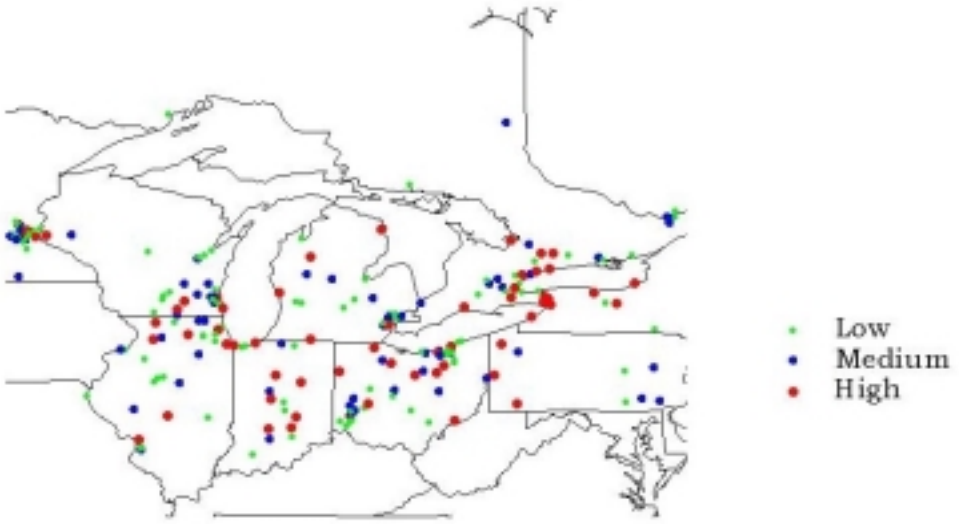
Factor	**Loadings**
Marketing Activities	
liaison committees	.60
brochures	.71
solicit foreign business	.77
visits to firms	.82
trade shows	.77
develop export markets	.75
promote specific sites	.67
special events	.74
Loans	
direct loans	.85
small business loans	.89
loan guarantees	.76
start-up loans	.83
community development loans	.81
Site Development	
lot consolidation	.68
land expropriation	.67
land purchase	.74
business relocation	.69
sale of land	.73
donation of land	.69
lease land	.63
site development	.72

Infrastructure Investment	
improve/expand parking	.70
improve/expand streets	.70
improve pedestrian amenities	.81
beautification improvements	.84
improve/expand recreation services	.73
community improvement areas	.65
Financial Incentives	
tax abatements	.71
tax deferments	.71
employment/investment tax credits	.79
enterprise zones	.78
in-kind service provision	.68
Zoning Policies	
protected manufacturing districts	.74
growth management zoning	.84
zoning variance provisions	.71
Appearance Regulations	
sign control regulations	.80
facade control regulations	.84
anti-litter regulations/programs	.74
Type II Policies	
local employment requirements	.76
minority employment requirements	.80
worker training requirements	.81
performance guarantees	.51
targeted employee wage subsidies	.58
low income housing requirements	.62
Demand-side Policies	
underwrite employee training/retraining	.69
public/private research and development	.73
business incubators	.71
sale lease-back arrangements	.68

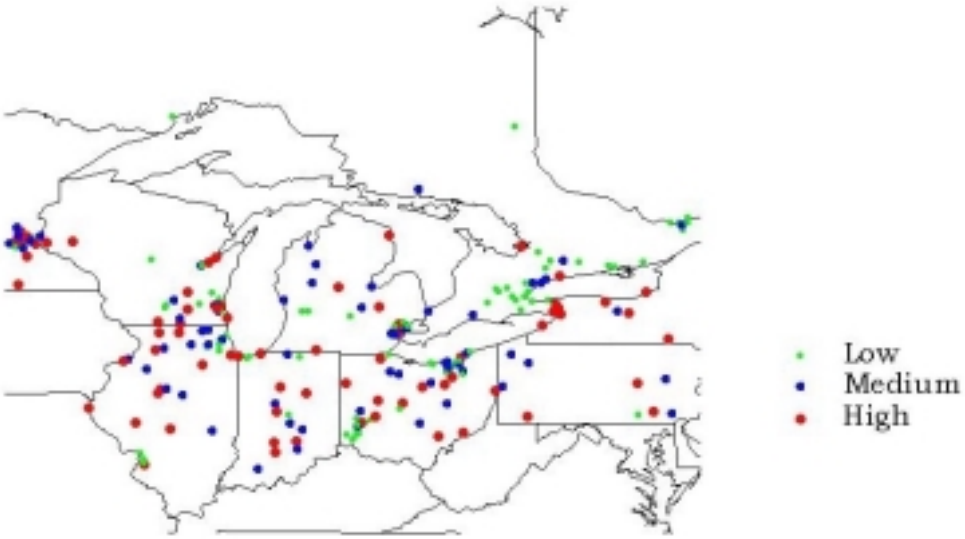
Appendix B.



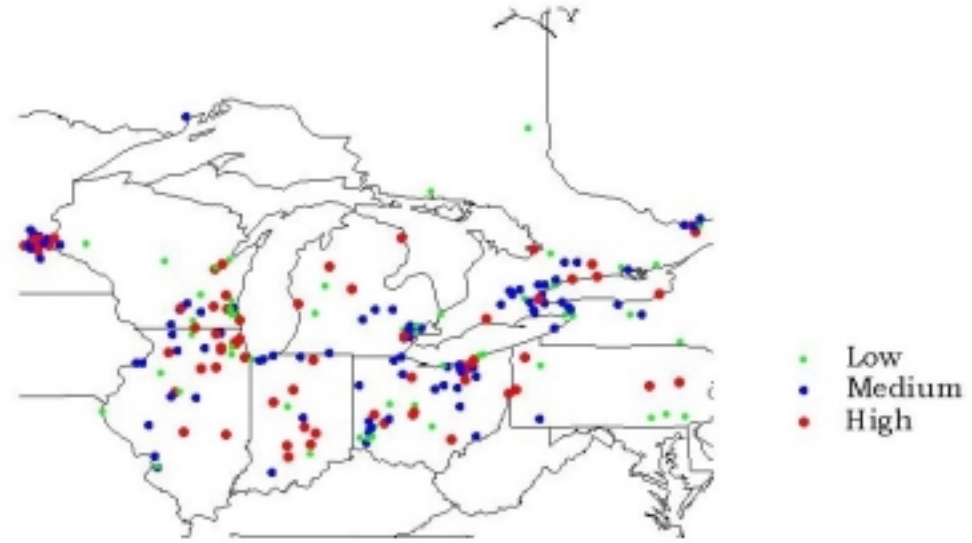
Demand-side Policies



Loan Policies



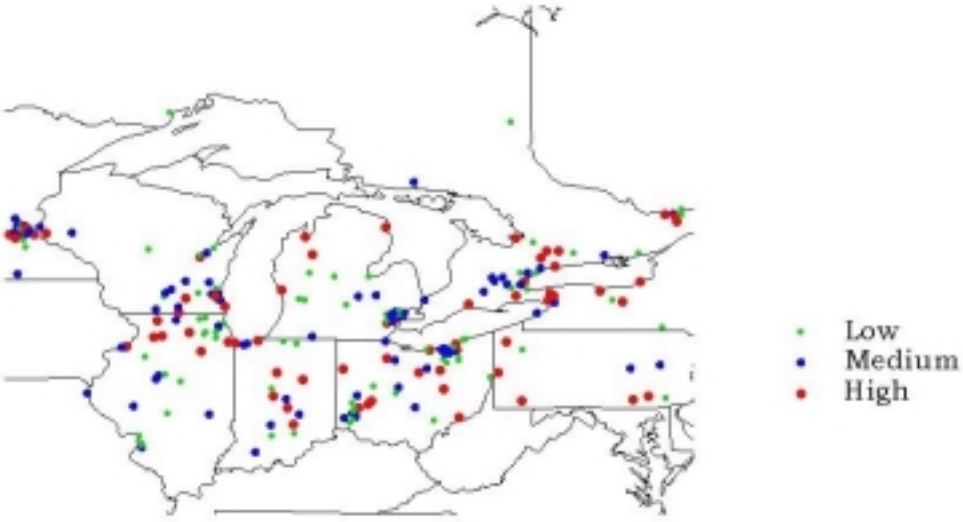

Financial Policies
Low
Medium
High


Infrastructure Investment
Low
Medium
High

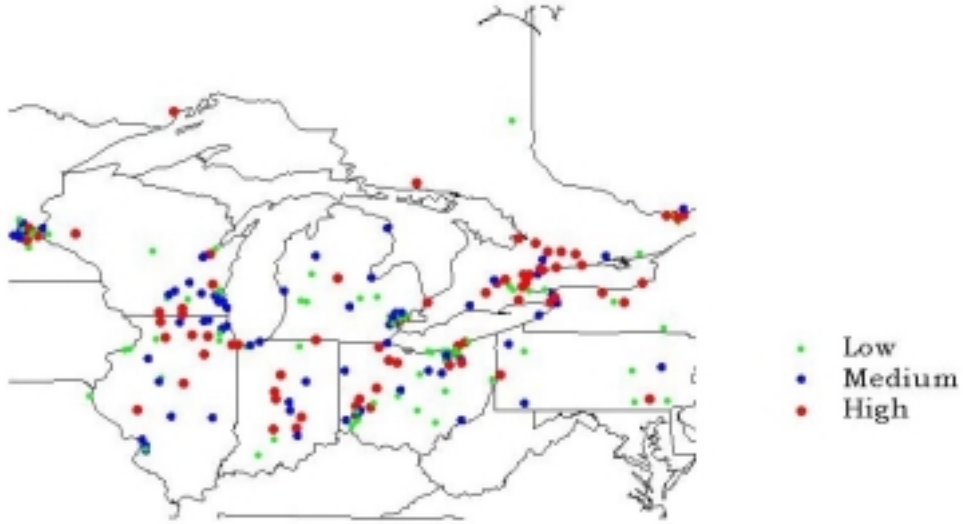

Zoning Policies
Low
Medium
High

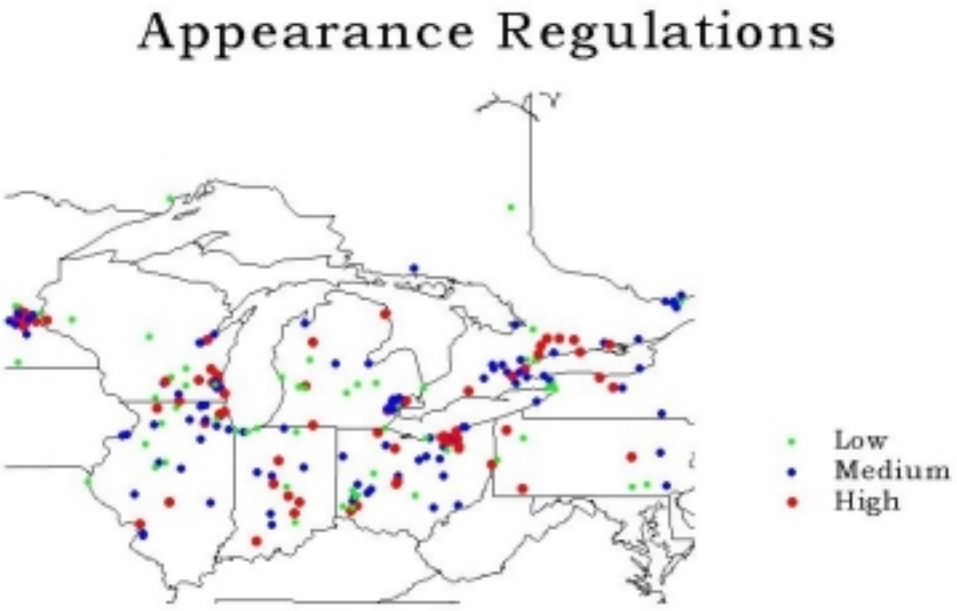

Site Preparation
Low
Medium
High

Type II Policies



Marketing Policies




Appearance Regulations
Low
Medium
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