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CHANGE AND STABILITY IN REGIONAL SCIENCE: ACCORDING TO MCRSA MEMBERS

Robert Kirk

Introduction

In 1994 the Mid-Continent Regional Science Association celebrated its 25th anniversary. In the same year the Regional Science Association celebrated its 40th anniversary. An anniversary is an opportunity to look at the past for evidence of change and stability. With respect to regional science at the national level, this has been done in a series of articles in a variety of journals. For example, an entire issue of *International Regional Science Review* (17, no. 3, 1995) is devoted to such a review.

Isserman ends his lead article in this issue with three suggestions for regional science (Isserman, p. 289):

- Seek cross-departmental linkages on campus and design programs of study focusing on societal problems and policy issues;
- Make a renewed effort to identify and strengthen the field intellectually;
- Strive to do research defined by real problems of real regions.

He elaborates on this last point:

Avoid estrangement from reality. Do not let theories and methods define and restrict research activities. Get closer to problems and problem solvers. Put the region into regional science. Stress relevance, not elegance.

Whither the MCRSA?

What do members of the Mid-Continent Regional Science Association (MCRSA) have to say about change and stability in regional science? One way to answer this question is to report the results of a questionnaire sent to 50 persons attending recent MCRSA meetings. The questionnaire asks about changes they have made in their syllabi or changes in their perceptions of regional science over time. (See Appendix A.) The questionnaire provides a list of topics typically considered in a regional science course with a development focus (Riefler,

1995). The questionnaire asks the respondent to indicate if the topic has

1. Become more important;
2. Not changed in importance;
3. Become less important;
4. Never been considered important; or
5. No opinion.

The respondent is given an opportunity to differentiate his/her response by level of course (undergraduate or graduate). The number of respondents is 24 (48 percent). Because some responded at both the graduate and undergraduate levels—as they were invited to do—there are 34 responses in total, 14 graduate and 20 undergraduate. The only personal identification requested is years of professional activity in regional science: less than 10 years (recent entrants), 10 to 20 years (midlers), and more than 20 years (founders). There are seven in each category. (Three did not reveal their professional age.)

Measurement of Change

The percent distribution of responses is computed for each topic. A change in importance will appear in the percentages for response #1 (more important) and #3 (less important). Stability, on the other hand, shows in the percentage for response #2 (no change in importance). See Appendices B and C for the percent distributions by level of course. Table 1 lists the three most frequently selected topics in each of the responses—more important, less important, and no change—#1, #3, and #2, respectively, for graduate and undergraduate levels.

The top two topics exhibiting change are the same for both graduate and undergraduate. Similarly, the top two exhibiting no change are the same. If the determinants of potential output are considered as supply-oriented and the determinants of actual output as demand-oriented, then the basic organizing concepts of supply and demand continue to play a central role in regional science.

The increased attention given to the computer is probably not unique to regional science. The critical question is: Is increased attention to the computer greater in regional science than in other social science disciplines? One only can speculate. The spatial analysis of behavior, however, is enhanced by graphics and data-analytic computer software; this probably has made computer use particularly attractive to economists, geographers, agricultural economists, and planners who form the majority of the membership of regional science associations.

Table 1—Measures of Change and Stability: Ranking of Top Three Topics by Level of Course

Topic	Percentage	Number
Graduate (14 respondents)		
Response #1—More important		
1. Computer-based data analysis by student	79	11
2. State/local government incentives	62	8 of 13
3. Forecasting models	57	8
Response #3—Less important		
1. Historical patterns of industrial location	43	6
2. Regional policy goals	43	6
3. History of governmental response	43	6
Response #2—No change in importance		
1. Determinants of potential output	79	11
2. Determinants of actual output	71	10
3. Data sources—who, where, when, how good?	64	9
Undergraduate (20 respondents)		
Response #1—More important		
1. Computer-based data analysis by student	80	16
2. State/local government incentives	75	15
3. Interregional commodity movements	55	11
Response #3—Less important		
1. Historical patterns in industrial location	45	9
2. Regional policy goals	39	7 of 18
3. History of governmental response	37	7 of 19
Response #2—No change in importance		
1. Determinants of potential output	70	14
2. Determinants of actual output	60	12
3. Delineation of a region	60	12

Professional Age

Responses to selected topics are examined on the basis of professional age—less than 10 years (recent entrants), 10 to 20 years (midlers), and more than 20 (founders). Because of the small number of respondents in each age category (seven), one must be careful about drawing any conclusions. For two topics (computer-based data analysis

by student and forecasting models), however, there appears to be a difference in practice and/or perception based on professional age. Four of seven founders gave a "1" to both topics. Only three of 14 recent entrants and midlers gave a "1" to both, while five gave a "1" to computer-based data analysis and a "3" to forecasting models. Because respondents are not asked to give reasons for their responses, one only can speculate on these differences. One needs to know what types of computer-based data analyses by students are done. To what extent do these analyses involve forecasting models?

The increase in the importance of state and local government incentives to influence location is exhibited across each professional age group, although two of the founders did give it a less important response. The widespread strength of this response calls for further discussion. It will be interpreted historically in the context of the policy issue: people prosperity versus place prosperity.

Place Prosperity—A Proxy for People Prosperity

Whitman argues that the issue is not people versus place prosperity, but whether place prosperity is a good proxy for people prosperity (Whitman, 1972). Barr and Leven argue that place gives us utility in ways that are independent of the kinds of goods and services we consume (Barr and Leven, 1972). Bolton considers place in the context of a household production model à la Nobel-winner Gary Becker (Bolton, 1992). For Bolton

The sense of place is a final consumer good—households simply enjoy being where there is a strong sense of place—but it is also an input into household production of a whole range of other consumer goods, including a sense of security, education, recreation, cultural services and socializing with friends (Bolton, p. 198).

Hansen reviews regional policies to reduce economic disparities and concludes that because of conceptual and measurement problems, policies focused on specific disadvantaged groups may be more effective than regional policies (Hansen, 1995).

Place has become something that is marketed. Kotler, Haider, and Rein tell us in *Marketing Places* how places can market themselves, how to design the place's image, and how to distribute the place's image and messages (Kotler, Haider, and Rein, 1993).

The State and Local Government Role

MCRSA members indicate in the questionnaire that we are giving more attention to state and local, not federal, government incentives. This focus is considered in the context of changing intergovernmental relationships.

Rivlin says that in the 1960s it was alleged that states were "incompetent and unresponsive to national goals, such as delivering service to the poor" (Rivlin, p. 10). Therefore, advocates for the poor sought assistance from the federal government. Advocates insisted that federal aid to the states be limited to categorical grants and urged direct aid to cities.

Edel suggests that the substitution of place for people began during the 1960s with the federal government's poverty programs (Edel, 1980). Poverty was defined by urban poverty areas or depressed rural districts. Initially, there was no doubt among policymakers that by focusing on places the benefits would filter to increased individual well-being.

By the late 1970s, however, the balance in intergovernmental relationships was beginning to shift toward state and local governments. Greater flexibility was needed to respond more effectively to differences in local situations. There was increasing dissatisfaction with federal programs.

During this time states and local governments were increasing their capabilities to deal with these issues. In the 1970s and 1980s rapidly changing technology and the globalization of the economy forced local and state governments to respond as unemployment rose and firms closed. In the first half of the 1980s the U.S. dollar appreciated in value which raised the price of U.S. exports (Little, 1989). As a consequence, export-dependent industries, such as the machine tool industry in Rockford, IL experienced high rates of unemployment.

Are State and Local Incentives Zero-Sum Games?

Whitman rejects incentives that attempt to attract spending from other regions because of their zero-sum nature. Instead, she argues for regional policies that impact factor supplies. For her, the key word is "additivity" in terms of the extent to which regional increases in income, employment, and the growth rate can be expected to contribute to national increases in these same aggregates by increasing either the volume of productive resources or the efficiency with which they are utilized (Whitman, 1972).

Eisinger's views are consistent with Whitman's, with his focus on entrepreneurial strategies that have long-term implications (Eisinger, 1988). An example is the establishment of a public-private consortium to develop agricultural applications of new biotech research.

Bartik argues against the zero-sum game argument, suggesting there are national benefits from state/local incentives, but admits that "the argument rests more on logic than on the weight of the empirical evidence" (Bartik, p. 118). His positive-sum game argument is based on state/local incentives being focused on reducing unemployment in areas where the unemployment rate is above average because the ben-

efits (difference between wage paid and reservation wage) of an additional job are greater than the costs arising from increased unemployment in areas where the unemployment rate is below average.

Bartik reviews the effects of state and local economic growth on unemployment, housing prices, real wages, income distribution, and economic efficiency. McQuire, in a review of Bartik, states that we should not overstate the effects of state and local fiscal policies on economic development (McQuire, 1992). She suggests that a more realistic title for Bartik's book, *Who Benefits From State and Local Economic Growth Policies*, would be *Who Benefits From State and Local Economic Growth?*

Rickman's simulation results support the more cautious position on the effects of state/local incentives (Rickman, 1992). He analyzes the impacts of business assistance programs using a regional computable general equilibrium model. He finds that the impacts arising from the neoclassical assumptions are less positive for value-added and regional income than Keynesian assumptions. This finding is consistent with other research on capital incentives (Krmeneč, 1990).

Why Have Incentives Become So Pervasive?

Wolkoff uses a game-theoretic approach (Wolkoff, 1989). He asks if the decision to offer the firm a subsidy is consistent with economic maximizing behavior. His answer is yes, and he analyzes the situation as an asymmetric information-signaling game. The firm asks for the subsidy, and the governmental unit either can make the award or not. Asymmetric information favors the firm in the bargaining process because the firm knows under what subsidy situations it will stay or leave the community, while the government does not. Unless the governmental official knows with certainty under what conditions the firm will stay or leave, the official offers the subsidy to avoid the chance of losing the firm. Elder and Lind also emphasize the informational asymmetry between the firm and the government official (Elder and Lind, 1987).

What are some of the ways that government officials deal with the uncertain environment of incentives? Spindler and Forrester identify three methods:

- When one state introduces a new incentive, other states follow the example;
- Each governmental unit offers the entire range of incentives rather than those tailored to specific needs; and
- Officials have an incentive to offer the symbols of economic development (Spindler and Forrester, 1993).

Whither the MCRSA Revisited?

What will be the changes when the MCRSA has its next anniversary celebration? It is difficult to speculate. I think the research interests of

the membership of the MCRSA represent a balance of theory, methods, and policy. As Isserman writes in his review of regional science, "In the three dimensions of theory, methods, and policy, regional science is probably closest to agricultural economics, a community in which only a small portion of regional scientists resides (Isserman, p. 266).

The MCRSA has benefited by a significant proportion of its founders as well as its current members having been trained at and/or are currently employed at institutions where the land-grant tradition is important. This tradition always has emphasized the close relationship between theory, methods, and policy. In a more fiscally constrained future of higher education, the public and the state legislators will be asking, "What have you done for us recently?" The results of the questionnaire suggest that members of the MCRSA are moving in the right direction to respond positively and creatively to this question.

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Appendix A—Instructions to Respondents

A list of topics that might be included in a regional science course (economics, geography, or planning) is given below. Please indicate by a number, #1 to #5, your perception of the direction of change over the past 25 years. Because the founders will have a longer perspective than those who have recently joined us, please indicate how long you have been involved in regional science: less than 10 years ____, 10 to 20 years ____, more than 20 years ____.

Response options:

1. Become more important;
2. Not changed in importance;
3. Become less important;
4. Never been considered important; or
5. No opinion.

Remember: We have only a 15 week semester! Therefore, we are faced with trade-offs—if we list some #1s, we'll have some #3s too. If you wish, you may differentiate your responses by level of course (undergraduate and graduate).

Insert a number (1 to 5)

Under-

grad Grad

- | | | |
|-------|-------|---------------------------------------------------------------------------------------------------------------------|
| _____ | _____ | 1. Delineation of a region |
| _____ | _____ | 2. Location theory and practice |
| _____ | _____ | a. Historical patterns in industrial location |
| _____ | _____ | b. Location of individual producer |
| _____ | _____ | c. Market size, hierarchy/central places |
| _____ | _____ | d. State & local government incentives to influence location |
| _____ | _____ | 3. Regional economic growth |
| _____ | _____ | a. Long-term historical patterns |
| _____ | _____ | b. Determinants of potential output: supply (resource endowment—land, labor, capital, entrepreneurship, technology) |
| _____ | _____ | c. Determinants of actual output: demand (business cycles, export base, local income) |
| _____ | _____ | d. Interregional factor movements (labor, capital, technology) |
| _____ | _____ | e. Interregional commodity movements (goods and services, role of transportation and communications) |
| _____ | _____ | f. Regional growth differentials and convergence |

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- _____ 4. Regional growth policy
- _____ a. Goals
- _____ b. History of governmental response
(for example, Economic Development Administration)
- _____ c. Government (fed, state, or local) program evaluation
- _____ 1. Input-output analysis
- _____ 2. Cost-benefit analysis
- _____ 3. _____ Other methods of program
assessment, please specify
- _____ 5. Methods of regional analysis
- _____ a. Data sources, who, where, when, how good?
- _____ b. Review and interpretation of empirical work
- _____ c. Computer-based data analysis by student
- _____ d. Forecasting models
(structural models, time-series analysis, indicators)
- _____ 6. Other topics (you write in)
- _____ a. _____
- _____ b. _____

Appendix B—Distribution of Graduate Responses (n = 14)

Response options:

1. Become more important;
2. Not changed in importance;
3. Become less important;
4. Never been considered important; or
5. No opinion.

Topic	Percent Distribution				
	1	2	3	4	5
Delineation of region	14	50	28	7	0
Location theory and practice					
Historical patterns of industrial location	0	57	43	0	0
Location of individual producer	14	50	21	0	14
Market size, hierarchy of central places	14	64	21	0	0
State and local government incentives to influence location	62	15	15	0	8
Regional economic growth					
Long-term historical patterns	0	43	36	14	7
Determinants of potential output: supply resource endowment-labor, land, capital	21	79	0	0	0
Determinants of actual output: demand business cycles, export base, local inc.	21	71	7	0	0
Interregional factor movements labor, capital, technology	43	43	14	0	0
Interregional commodity movements goods and services, role of transportation and communications	43	43	14	0	0
Regional growth differentials and convergence	36	43	21	0	0
Regional growth policy					
Goals	29	29	43	0	0
History of governmental response (EDA)	0	29	43	14	14
Government program evaluation					
Input/output analysis	29	36	29	0	7
Cost/benefit analysis	29	50	14	0	7
Methods of regional analysis					
Data sources—who, where, when, how good	29	64	7	0	0
Review and interpretation of empirical work	43	57	0	0	0
Computer-based data analysis by student	79	14	0	0	7
Forecasting models (Structural, time-series, indicators)	57	14	7	14	7

Appendix C—Distribution of Undergrad Responses (n = 20)

Response options:

1. Become more important;
2. Not changed in importance;
3. Become less important;
4. Never been considered important; or
5. No opinion.

Percent Distribution

Topic

Delineation of region

Location theory and practice	10	60	5	15	10
Historical patterns of industrial location	10	45	45	0	0
Location of individual producer	15	55	25	0	5
Market size, hierarchy of central places	16	53	31	0	0
State and local government incentives to influence location	75	20	5	0	0

Regional economic growth

Long-term historical patterns	10	47	26	16	0
Determinants of potential output: supply resource endowment-labor, land, capital	20	70	5	5	0
Determinants of actual output: demand business cycles, export base, local inc.	15	60	20	5	0
Interregional factor movements labor, capital, technology	30	50	10	10	0
Interregional commodity movements goods and services, role of transportation and communications	55	15	25	5	0
Regional growth differentials and convergence	15	55	30	0	0

Regional growth policy

Goals	17	44	39	0	0
History of governmental response (EDA)	10	26	37	21	6
Government program evaluation	23	41	23	0	12
Input/output analysis	17	44	33	0	6
Cost/benefit analysis					

Methods of regional analysis

Data sources—who, where, when, how good	37	53	5	5	0
Review and interpretation of empirical work	26	58	5	5	5
Computer-based data analysis by student	80	5	5	0	10
Forecasting models (Structural, time-series, indicators)	42	21	16	10	10