DISCUSSION

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As chairman of the Social Science Research Council's Committee on Areas for Social and Economic Statistics, I have been in close touch with the study which underlies Brian Berry's paper. The SSRC Committee was appointed in November 1964 and terminated in September 1967 upon completion and review of Berry's study. The Committee's final report was summarized in the December 1967 issue of Social Science Research Council ITEMS. 1/

As I agree with Berry's recommendations, which were also adopted by the SSRC Committee, I will simply add some comments of my own on the background and potential uses of the functional economic area concept.

To the best of my knowledge I originated the functional economic area concept in a March 1961 paper entitled "The Concept of Community Development." I developed the concept further in a series of invited papers during 1962-64. Their titles suggest some of the practical concerns to which I was addressing myself: "The Study of Interactions Between Agriculture and the Non-Farm Economy: Local, Regional and National" (February 1962); "Delineating the Area" (January 1962); "The Major Problem of Rural Society" (December 1962); "On the Current Lack of Policy Orientation in Regional Accounting" (December 1962); "Economic Models for Area Development Research" (May 1963); and "Integrating National and Regional Models for Economic Stabilization and Growth" (March 1964).

These early papers stated a number of propositions about functional economic areas:

1. An FEA is a home-to-work commuting field;
2. An FEA is a relatively self-contained labor market in a short-run, economic stabilization context;
3. In FEA's with populations of less than half a million or thereabouts, the "regional" shopping area tends to coincide with the commuting field.
4. Because of its relative closure (self-containment) with respect to the home-to-work commuting trip and to most resident-oriented retail and service activities, the FEA should be an ideal unit for regional social accounts;
5. An FEA can be approximated reasonably well by a cluster of contiguous whole counties;
6. In contrast with most individual counties, an FEA lends itself to area development planning by virtue of its larger population base, wider array of leadership and professional talent, and relative closure as a commuting and retail trade area (so that most of the benefits from programs initiated in the FEA will accrue to its own present and future residents and taxpayers);
7. FEA's approximated by clusters of contiguous whole counties could evidently be delineated for all but the most sparsely populated regions in the United States; hence,
8. FEA delineations could be used to disaggregate national economic and social statistical magnitudes into a set of areas each of which would have desirable properties with respect to social accounting, employment stabilization policies, economic development planning, and the provision of a wide array of public services.

In October 1964, I formulated the functional economic area concept in a more rigorous way. Many policy-oriented people had found the concept appealing on a pragmatic basis. My October 1964 formulation made it more appealing to location theorists, regional scientists and quantitative geographers. At first glance, some action-oriented people are startled by the compass orientation of the squares in Figures 1 and 2, but their confidence returns when they recognize (1) that the areas can still be represented rather well by clusters of whole counties and (2) that the orientation of the squares reflects an "ideal" rectangular road grid with properties which are approximated only crudely by any real road system.

The significance of the rotated squares in Figures 1 and 2 is as follows:

1. Iowa, like some other Midwestern states, has an almost complete grid of "section roads" one mile apart and oriented either east-west or north-south. Each mile of road forms one side of two adjacent square miles of land; a complete grid would contain two miles of road for every square mile of area. Iowa approaches perfection in this respect; the area of the state is about 56,000 square miles and the Iowa Highway Commission presides over approximately 112,000 miles of open-country roads! There are relatively few diagonal roads in Iowa.
2. If we start at the center of a rotated square, we can reach any of its four corners by traveling 50 miles over an actual road. If we want to reach some point on (say) the northwest side of a square we must also travel 50 miles--for example, 40 miles west and 10 miles north or 25 miles west and 25 miles north. Hence, given the rectangular road grid, each square is the locus of points 50 highway miles from the center of the square.
3. If we can travel at an average speed of 50 miles an hour over every segment of the road grid, the boundary of a square is also the locus of all points from which the commuting time to the center of the square is 60 minutes.
4. Few people are willing to commute more than 60 minutes each way for long periods.

Thus, a 60-minute perimeter may serve as a reasonable first approximation to a commuting field. The area of each square in Figures 1 and 2 is 5,000 square miles, equivalent to 8 or 9 counties of the sizes usually found in the Midwest.

In today's session, we are mainly concerned with functional economic areas as alternatives to SMSA's. Figure 1 indicates that an FEA system can readily incorporate the existing system of SMSA's. The shaded areas in Figure 1 are the seven 1960 SMSA's which were wholly or partly in Iowa. In each case, a 50-mile commuting radius around the central city of the SMSA completely encloses the SMSA itself. As both SMSA's and FEA's are made up of whole counties, continuity with 1960 and earlier data could be achieved for either type of area.

Seven of the squares in Figure 2 are identical with those in Figure 1. In addition, Figure 2 shows 50-mile squares around several smaller cities in Iowa (and around some cities in adjoining states). The smaller FEA central cities in Iowa include Fort Dodge, Mason City, Ottumwa, Burlington and Spencer. Collectively, the 50-mile squares in Figure 2 include about 80 percent of the area and 90 percent of the population of Iowa. We should remember also that these squares are only first approximations to the actual commuting fields.

To achieve completeness in a national system of social and economic data, counties in the gaps between commuting fields could be allocated to one FEA or another on the basis of retail trade patterns or highway travel times. Alternatively, the policy implications of the larger gaps could be highlighted by showing them as separate interstitial areas. Figure 2 shows that there is <u>room</u> for an FEA centering on Taylor County in southwest Iowa. However, Taylor County is nearly 100 highway miles from either Des Moines or Omaha-Council Bluffs. This is too far for long-term commuting. The obvious alternative is out-migration, and indeed, between 1950 and 1960, the number of young men in Taylor County aged 25 to 34 decreased by 41 percent! Presumably, most of them moved into the commuting fields of FEA central cities in Iowa and elsewhere.

<u>Some potential uses of functional economic area delineations</u>. - The relative closure of FEA's as commuting fields makes them ideal units for a national system of regional social accounts. A national system of FEA's could also be used to appraise the regional impacts of Federal economic policies and programs. For example, short-run employment targets could be established for each FEA and backed up by facilities in each FEA for vocational education, training and retraining. A national employment service regionalized on an FEA basis could also promote mobility to actual jobs (rather than merely prospective ones) in other FEA's with tighter labor markets and stronger growth trends.

Consideration might reasonably be given also to stimulating the growth of some FEA's from their current populations of 100,000 or 150,000 to figures of 250,000 or more. The contiguously built-up area of the central city might include only 100,000 or so people, but the whole multicounty area might be designed and zoned as an urban-regional entity with a central city, satellite towns, and open-country components.

Some functions often carried on at present by individual counties or towns might be better handled on a multicounty FEA basis. The following functions might be considered in this light:

School districts including public junior colleges and four-year colleges; centers for vocational education, training and retraining; university extension and adult education programs; police and fire protection; public health services; social welfare services; the maintenance and construction of local or "secondary" streets and roads, as distinct from those connecting major population centers and maintained by state highway commissions; regional zoning; and public library services.

Functional economic areas have a strong affinity with Economic Development Districts, which are clusters of counties centered on a city of 20,000 population or more considered to be an actual or potential growth center. FEA's also have considerable affinity with ZIP code or mail delivery service areas.

In Iowa, the FEA concept has been applied by the Iowa State University Extension Service to extricate itself from the traditional pattern of 99 separate county administrative units. Its field operations have, since 1966, been reorganized on the basis of 12 multicounty areas, following FEA outlines so far as possible. (A state agency must, of course, serve residents of the gaps between commuting fields; also, when a central city lies on a state boundary, the state administrative area can include only one-half of the commuting field.)

Also in Iowa, 16 area vocational-technical school districts have been organized, following FEA outlines with minor modifications. The governor of Iowa has recommended that the field operations of state agencies be organized on the basis of 16 multicounty areas, again following FEA outlines quite closely apart from problems posed by state boundaries and gaps between commuting fields.

The spatial organization of the United States economy as indicated in Brian Berry's studies and my own leaves no room for the

traditional rural-urban dichotomy. What we see today is a new synthesis of rural and urban society, predominantly urban in tone. As an economic and cultural entity, the city has surrounded the country and rural poverty is largely concentrated in the interstices between urban commuting fields.

A national system of social and economic data based upon functional economic areas can greatly clarify public perception of the structure of our society and facilitate the solution of many problems which are erroneously dichotomized into urban and rural segments and agency jurisdictions. A major impediment to sound economic and social policy is our institutionalized belief that a rural society exists, and can be manipulated successfully, apart from the society as a whole.

1/ Karl A. Fox, "Functional Economic Areas and Consolidated Urban Regions of the United States," Social Science Research Council ITEMS, Vol. 21, No. 4, December 1967, pp. 45-49.

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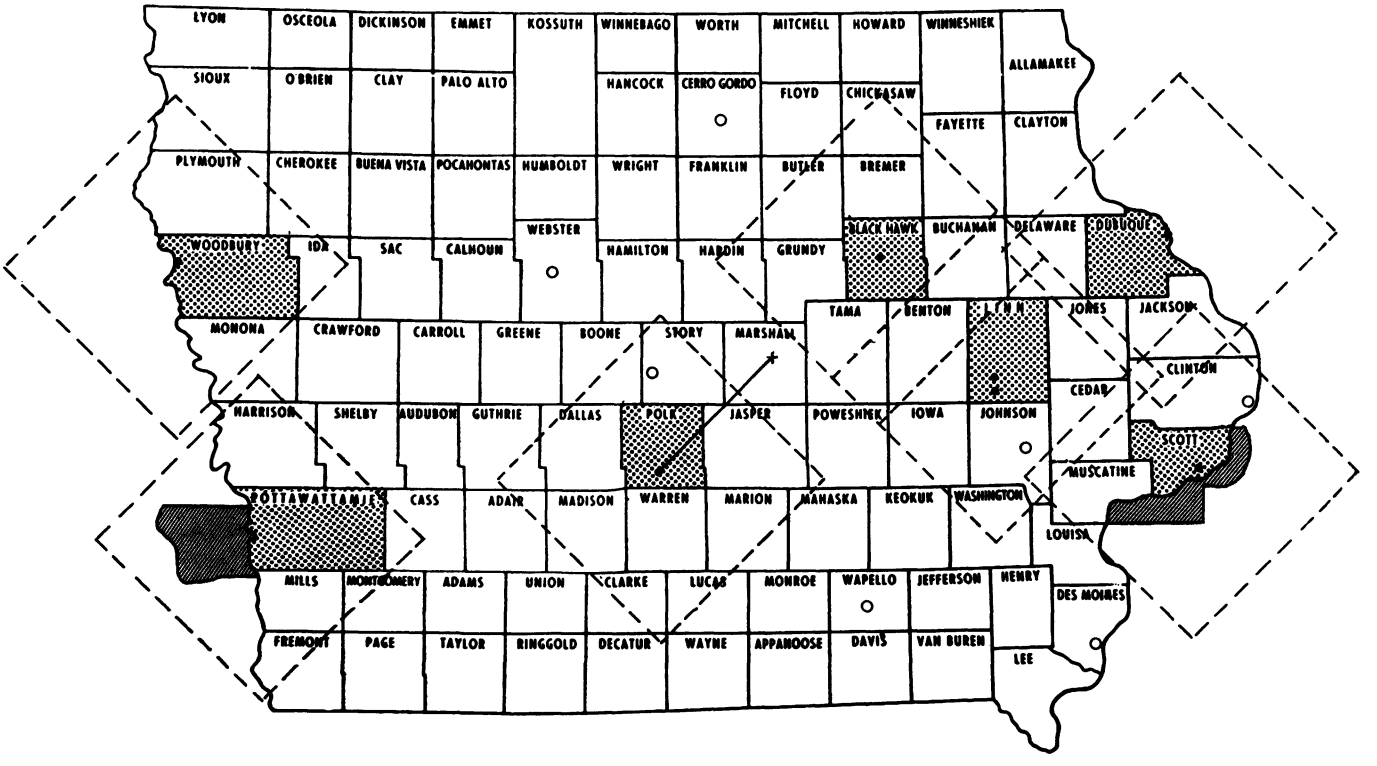
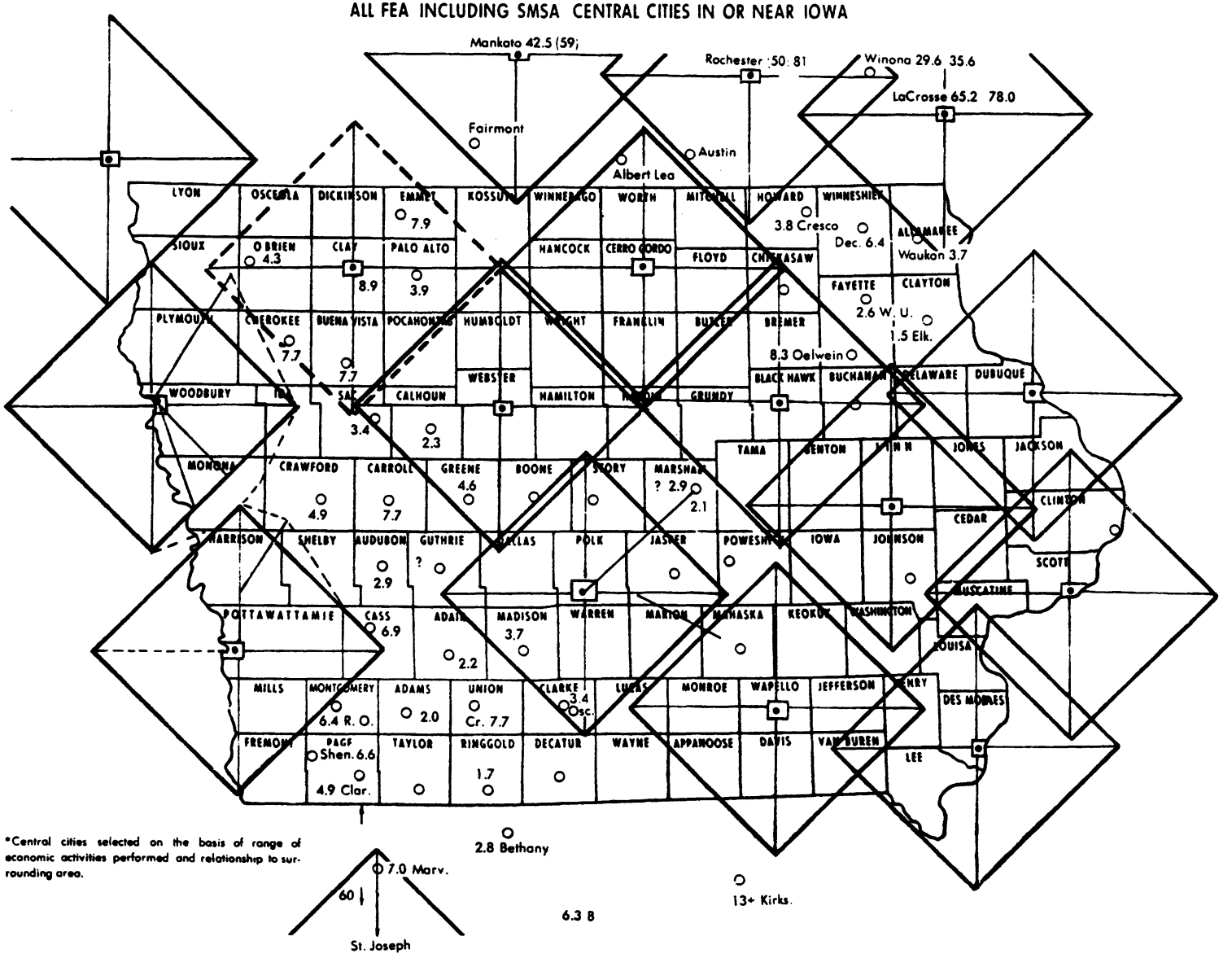
FIGURE 1. 50-MILE COMMUTING DISTANCES FROM THE CENTRAL BUSINESS DISTRICTS OF IOWA SMSA CENTRAL CITIES*



*Central cities of 50,000 people or more in 1960. Each shaded county or pair of shaded contiguous counties are SMSA's.

FIGURE 2. 50-MILE COMMUTING DISTANCES FROM THE CENTRAL BUSINESS DISTRICTS OF ALL FEA INCLUDING SMSA CENTRAL CITIES IN OR NEAR IOWA



*Central cities selected on the basis of range of economic activities performed and relationship to surrounding area.