# MEASURING ECONOMIC GROWTH OF THE COMMUNITY OR SMALL AREA

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Shifts in jobs and movements of people in the 1960's show signs of equaling or exceeding those of the preceding decade. Significantly, important differences also are appearing in the local orientation of the changes to metropolitan and nonmetropolitan, high and low income, and economically viable and nonviable areas. But, as the situation now stands, it will be necessary to wait for the results of the 1970 Census of Population for full verification, and even later for the kind of data coverage that will furnish adequate annual inventories of the transitions affecting communities or small areas. 1/

In the paper just distributed, the first section lists the steps that we are taking to meet the urgent need in the interim for data for local planning and development purposes. Then, aided by the accompanying charts and map, a brief review is added on what our research and experimentation have shown to be some of the major shifts underway.

The third section points out certain factors that make this form of direct measurement preferable to determinations of multiplier effects in evaluating contributions of development activities to changing employment and other patterns. Because of the comparative recency of much of the literature on limitations of the latter approach, the succeeding section examines various shortcomings in considerable detail.

In refocusing attention on direct mensuration, a comparison of local growth measures with our system of national economic indicators is followed by an evaluation of six suggested yardsticks of small area dynamics or viability. Inasmuch as fairly extensive restructuring of basic statistics is called for, the next section deals with special as well as conventional quality controls.

The mobility of today's youth and the limited statistics presently at hand on their migration merit addition of a separate section on measures for tracing their movements from home to jobs, school or military service.

The final or concluding section sums up how data supplied by direct measurement -- including information on the community impacts of specific projects or programs -- would assist in appraisals of the potential as well as present roles of area development activities.

Frequent additions have been made throughout the paper to cite experiences with today's impact and development models, underscore

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1/ A county, metropolitan region, or other multicounty group. Excluded for present purposes are municipalities and other subcounty units for which secondary data generally are not currently published.

effects on area trends of the growing importance of the service industries, list advantages and weaknesses of individual growth indicators, and so on. With the reminder that these and other details are thus available to those interested, the few minutes remaining will be given over to highlights or main points of emphasis.

## Research and Experimentation in Progress

Turning back the calendar briefly, migration during World War II and the initial postwar period resulted in widespread depopulation of farming, mining and other communities whose economies were resource oriented or based on obsolescent manufacturing facilities. Beginning in the 1950's, a succession of Federal, State and local programs were introduced to aid these and other economically disadvantaged areas.

Interest was increasing in the jobs and incomes created by various programs. At the same time, the national upturn in economic activity was gaining sufficient momentum to point to both an extension of new employment into additional localities, and a revitalization of the economies of the depressed areas.

Reports on employment and earnings covered under the Old Age and Survivors Insurance and State Unemployment Compensation programs supplied the most satisfactory initial source of data for measuring the changes taking place in these and other communities. With additional time, preliminary measures could be expanded to include yardsticks of the shifts occuring in total employment and incomes, along with changes in population, consumer purchasing power, and money and credit supplies.

An Economic Research Service publication now in preparation will contain further details on changes in employment and earnings in private nonfarm industries in the recent as compared with the earlier postwar period. A follow-up statistical bulletin will list labor force, population and other items for mid-decade, together with changes from 1959-60 benchmarks. Data also have been arranged for either periodic updating or special release by regions or subregions.

## Changes Underway in the 1960's

The reduction shown by figure 1 in the metropolitan areas' share of annual increments in covered (OASI) employment in the 1962-64 period as compared with earlier years stemmed largely from the deceleration of former rates of expansion in many major growth centers. Also a factor was the initial sluggishness of the pickup in jobs in certain other metropolitan areas.

In the nonmetropolitan areas, gains were recorded not only in many communities with economic bases and populations of intermediate size,

but in a relatively large number of rural and semirural communities, notably in the South and West. As in their metropolitan counterparts, metropolitan areas appear to be holding and possibly adding to their proportion of the continued buildup of employment in the past two years.

EMPLOYMENT CHANGES IN RELATION TO SIZE OF LARGEST 1960 POPULATION CENTER IN COUNTY
UNITED STATES, BY SPECIFIED POSTWAR PERIODS
OASI COVERAGE FROM COUNTY BUSINESS PATTERNS REPORTS

| Largest 1960 Population Center | 1948-59 United States: 636,000 or 1.8 Percent Annually | | |
|---|---|---|---|
| | Number (to scale) | Rate | Share of Total |
| SMSA 1/ | | 1.8% | 76% |
| 25,000-49,999 | | 2.1% | 7% |
| 10,000-24,999 | | 1.7% | 7% |
| 5,000-9,999 | | 1.8% | 5% |
| 2,500-4,999 | | 1.7% | 3% |
| Under 2,500 | | 2.2% | 2% |

0    200    400    600    800    1,000
Thous.

| Largest 1960 Population Center | 1959-62 United States: 544,000 or 1.3 Percent Annually | | |
|---|---|---|---|
| SMSA 1/ | | 1.4% | 80% |
| 25,000-49,999 | | 1.4% | 7% |
| 10,000-24,999 | | 1.1% | 7% |
| 5,000-9,999 | | 1.0% | 4% |
| 2,500-4,999 | | 0.6% | 1% |
| Under 2,500 | | 0.8% | 1% |

0    200    400    600    800    1,000
Thous.

| Largest 1960 Population Center | 1962-64 United States: 1,180,000 or 2.7 Percent Annually | | |
|---|---|---|---|
| SMSA 1/ | | 2.4% | 67% |
| 25,000-49,999 | | 3.7% | 9% |
| 10,000-24,999 | | 3.5% | 10% |
| 5,000-9,999 | | 3.5% | 6% |
| 2,500-4,999 | | 4.2% | 4% |
| Under 2,500 | | 7.0% | 4% |

0    200    400    600    800    1,000
Thous.

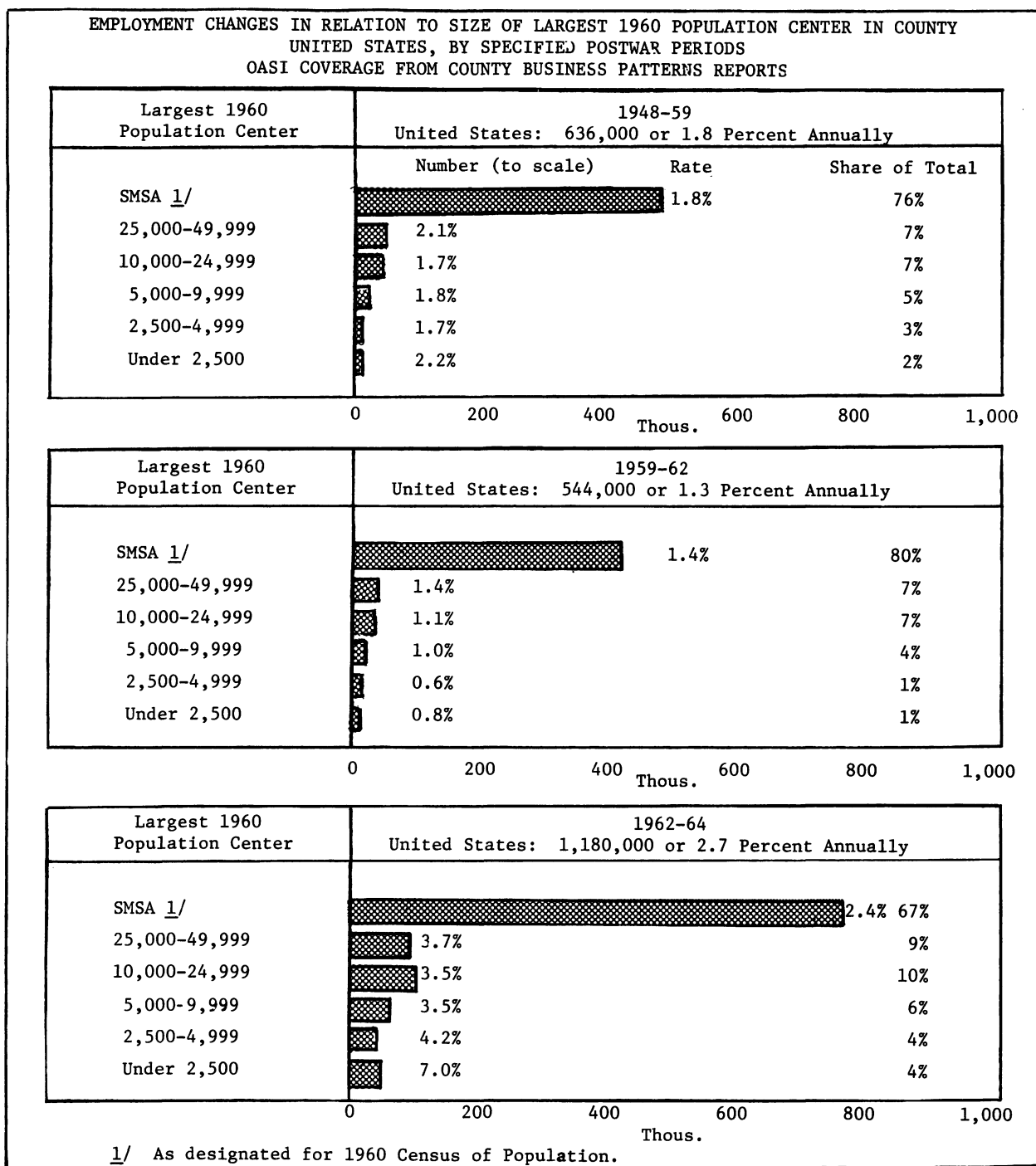1/ As designated for 1960 Census of Population.

Figure 1

initial responses to the national upturn were mixed in such previously hard-hit coal mining and similar communities as those in Appalachia.

Information for full calendar year 1965 and in certain instances for first quarter 1966 are just beginning to become available. From the statistics presently at hand, however, the non-

## Weighing Immediate Alternatives

In meeting requirements for local data, one approach would be to expand the number of jobs added by a specific program or facility by a factor that would account for the extra employment opportunities thus created. The other alternative would be to simply measure the aggregate

changes taking place over the period, somewhat as we are doing, and then allocate the part attributable to particular activities.

As declines elsewhere in area economics frequently offset and even exceed gains from new sources of employment, sufficent data would have to be made available so the additions imputed by the multiplier process could be reconciled with the shifts actually occuring.

Because industrial mix as well as small size make many area economics especially subject to seasonal, cyclical and episodic forces, adjustments for trend analysis and projection purposes are as essential for local as for national data and probably more so. With area transitions also generally paralleling overall increases, gains in employment and incomes in the service sector not only have eclipsed additions to jobs in manufacturing and other
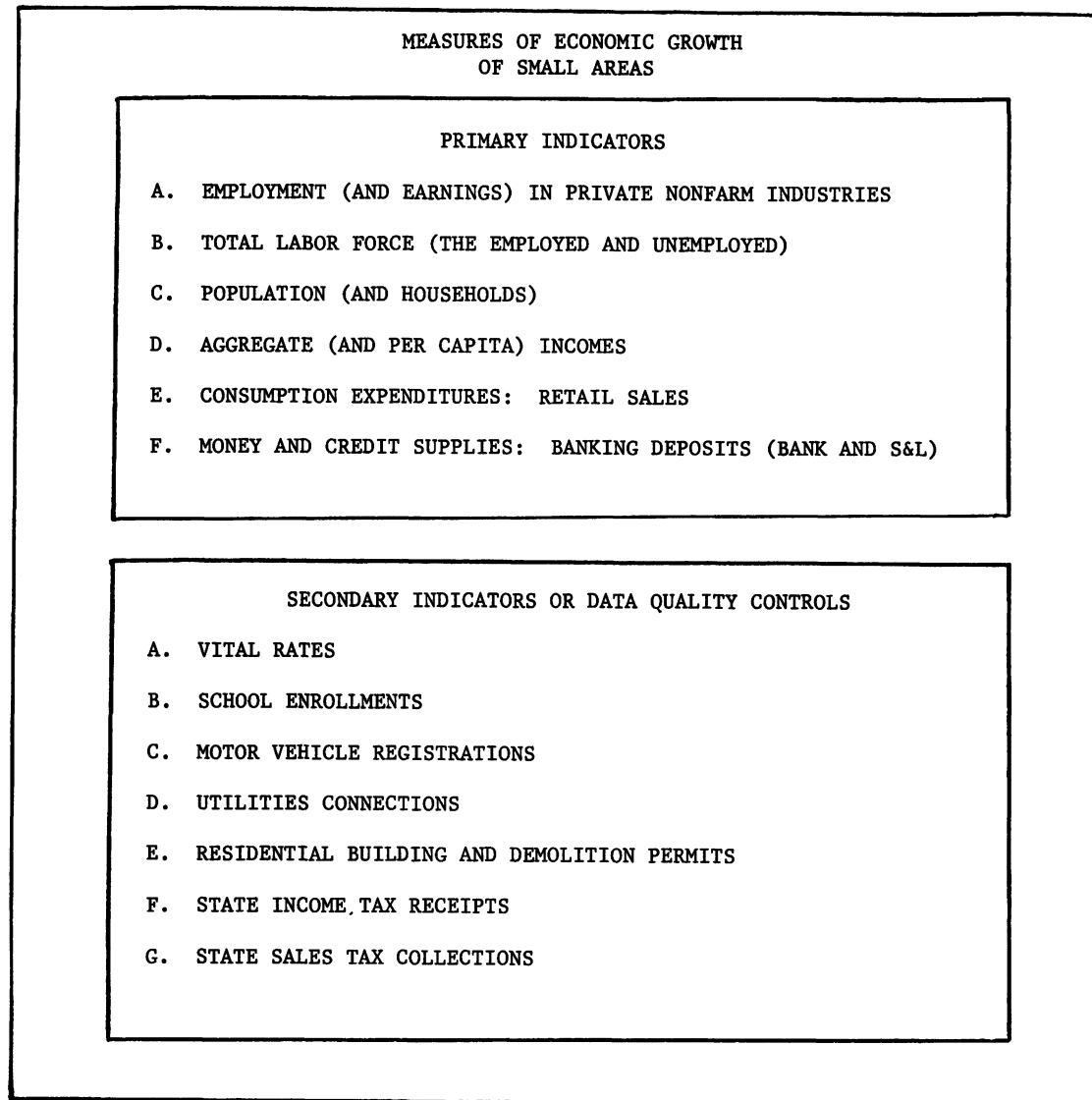
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**MEASURES OF ECONOMIC GROWTH
OF SMALL AREAS**

**PRIMARY INDICATORS**

A. EMPLOYMENT (AND EARNINGS) IN PRIVATE NONFARM INDUSTRIES

B. TOTAL LABOR FORCE (THE EMPLOYED AND UNEMPLOYED)

C. POPULATION (AND HOUSEHOLDS)

D. AGGREGATE (AND PER CAPITA) INCOMES

E. CONSUMPTION EXPENDITURES: RETAIL SALES

F. MONEY AND CREDIT SUPPLIES: BANKING DEPOSITS (BANK AND S&L)

**SECONDARY INDICATORS OR DATA QUALITY CONTROLS**

A. VITAL RATES

B. SCHOOL ENROLLMENTS

C. MOTOR VEHICLE REGISTRATIONS

D. UTILITIES CONNECTIONS

E. RESIDENTIAL BUILDING AND DEMOLITION PERMITS

F. STATE INCOME.TAX RECEIPTS

G. STATE SALES TAX COLLECTIONS

Figure 2

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Also necessary would be enough data on commuting patterns to work and shopping centers so the share actually going to the immediate community could be ascertained.

### Determinations of Multiplier Effects

Costs alone would fairly conclusively rule out the application to 3,000-odd counties of a multiplier approach that would minimize limitations of the sort mentioned. But, even for single-area projects, meeting these and other, more serious qualifications would necessitate major modifications of existing models.

goods-producing industries in many localities, but have been accompanied by sharp reductions in others. Together with the impact of general rather than specific increases in incomes, the added effect of the velocity of spending and respending actions in catalyzing area growth suggests that a restatement of the basic multiplier formula may also be required.

### Direct Measurement

Measures of economic growth at small area levels serve the same broad purpose as our system of national economic indicators in pin-

pointing changes in economic conditions. The difference is in scope, a reflection both of the comparatively limited local data available, and of what can be made to suffice -- against the tremendous backdrop of information at hand on movements in the economy at large -- in interpreting happenings locally.

The listing in figure 2 is restricted to the six sets of primary growth indicators that have proven particularly useful for yardstick purposes and that would involve no more than fairly inexpensive reprocessing of basic statistics. Included for expansion purposes are measures of earnings as well as employment for wages and salaries in private nonfarm industries, households as well as population, etc.

In choosing data on covered employment and earnings for the initial set of low-cost but reasonably reliable measures of local growth sought, one advantage recognized was the need for only minor modifications of published statistics. Another important consideration was the traditional role of shifts in the private nonfarm sector -- to which the data applied -- as bell-wethers of economic change at local as well as regional and national levels.

larly collected materials. As a result, estimates are more reliable than a high percentage of prevailing population projections, some illustrations of which are shown by table 1.

Changes in earnings and income furnish a better index of area viability than shifts in labor force or population inasmuch as increments in wages or income receipts as well as in the number of earners or recipients are included. Adjustments should be introduced to compensate for cost-of-living increases. Also helpful would be conversions to per capita values for purposes of relating local transitions to those at regional and national levels.

By including transfer payments and other nonwork receipts, shifts in income ordinarily would give a more complete picture of area viability than changes in earnings alone. But sharpness of comparisons can be seriously blurred by the intervention of more or less arbitrary deductions for certain taxes, or additions for such nonmoney items as value of food produced and consumed on farms, and rental value of farm and owner-occupied nonfarm dwellings. Adding still further to the advisability of restricting coverage to money income is the necessity for

Table 1.--Changes in population as determined from estimates by different methods, Ohio statewide and selected counties, 1960-65

| Unit | Amount | | | | | Rate | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1950-60 | 1950-65 | | | | 1950-60 | 1950-65 | | | |
| | | Method | | | | | Method | | | |
| | | One | Two | Three | Four | | One | Two | Three | Four |
| | Thous. | Thous. | Thous. | Thous. | Thous. | Pct. | Pct. | Pct. | Pct. | Pct. |
| State: | | | | | | | | | | |
| Four methods ---: | 2/ | 1676.2 | 1614.4 | 1250.4 | 1365.8 | 2/ | 17.4 | 16.7 | 12.9 | 14.1 |
| Bureau Census --: | 1759.8 | 1074.0 | 1074.0 | 1074.0 | 1074.0 | 22.1 | 11.1 | 11.1 | 11.1 | 11.1 |
| Difference ---: | 2/ | 602.2 | 542.4 | 176.4 | 291.8 | 2/ | 6.2 | 5.6 | 1.8 | 3.0 |
| County: | | | | | | | | | | |
| A - Franklin ---: | 179.6 | 191.6 | 202.6 | 133.6 | 123.6 | 35.7 | 28.2 | 29.8 | 19.7 | 18.2 |
| B - Cuyahoga ---: | 258.4 | 220.0 | 155.8 | 190.0 | 286.6 | 18.6 | 13.4 | 9.5 | 11.5 | 17.5 |
| C - Hamilton ---: | 140.2 | 143.2 | 145.2 | 98.0 | 109.0 | 19.4 | 16.7 | 16.9 | 11.4 | 12.7 |
| D - Stark ------: | 57.2 | 49.6 | 50.0 | 40.4 | 40.4 | 20.2 | 14.6 | 14.8 | 11.9 | 11.9 |
| E - Greene -----: | 35.8 | 37.2 | 35.8 | 28.0 | 17.0 | 60.7 | 39.7 | 38.2 | 29.9 | 18.1 |
| F - Clermont ---: | 38.3 | 42.6 | 36.6 | 27.4 | 14.0 | 90.9 | 53.5 | 46.0 | 34.4 | 17.6 |
| G - Darke ------: | 3.8 | 3.8 | 4.2 | 2.0 | 4.4 | 9.1 | 8.4 | 9.2 | 4.4 | 9.7 |
| H - Athens -----: | 1.2 | 1.4 | 9.8 | -0.6 | 3.2 | 2.5 | 3.0 | 20.8 | -1.3 | 6.8 |
| I - Perry ------: | -1.1 | -1.4 | -1.4 | -2.4 | 2.2 | -3.9 | -5.0 | -5.0 | -8.6 | 7.9 |

1/ Converted to 10 year equivalent for direct comparison with 1950-60 changes.     2/ Not Available.

Total labor force consists of all workers plus those seeking work, important additions to coverage in communities with large numbers of government employees, farm operators, farm workers, the self-employed in business and the professions, and the unemployed. By and large, statistics on the unemployed and those employed outside as well as in covered industries (OASI and State UI programs) are compiled from regu-

limiting correlations with consumer expenditures to the components of the latter that are for goods and hence show up in variations in retail sales.

Quality Controls

Such secondary indicators or quality controls as vital data, school enrollments and

motor vehicle registrations can be applied in screening out some inconsistencies in population and other estimates. Because employment and other transitions tend to be identified with specific location, income and other characteristics, other disparities can be adjusted in the process of relating statistics on various changes to the county or area correlatives shown by figure 3.

Although the steps mentioned are helpful the key to effective restructuring rests with the processing of labor force, population, income and other data by subregions, labor market or trade areas, or some other intermediate or multi-county areal entity. At this as contrasted with the individual county level, differentials in employment and earnings between locations of work and points of residence tend to be at a minimum.

fluctuations in annual sales should be particularly helpful in this allocation process. Much information is available in addition on the manner and degree to which previous interrelationships between localities have been altered by plant additions or closures, highway improvements, and similar changes. Also variously at hand for adding to the consistency of the final allocations are statistics on residential building and demolition permits, and utility connections and discontinuances, together with the information supplied by special population censuses, and annual counts of occupied dwellings.

Tracing the Migration of Today's Youth

Present data can furnish only a fairly general notion of the work force and population changes resulting from the streams of migration between the local, metropolitan and regional
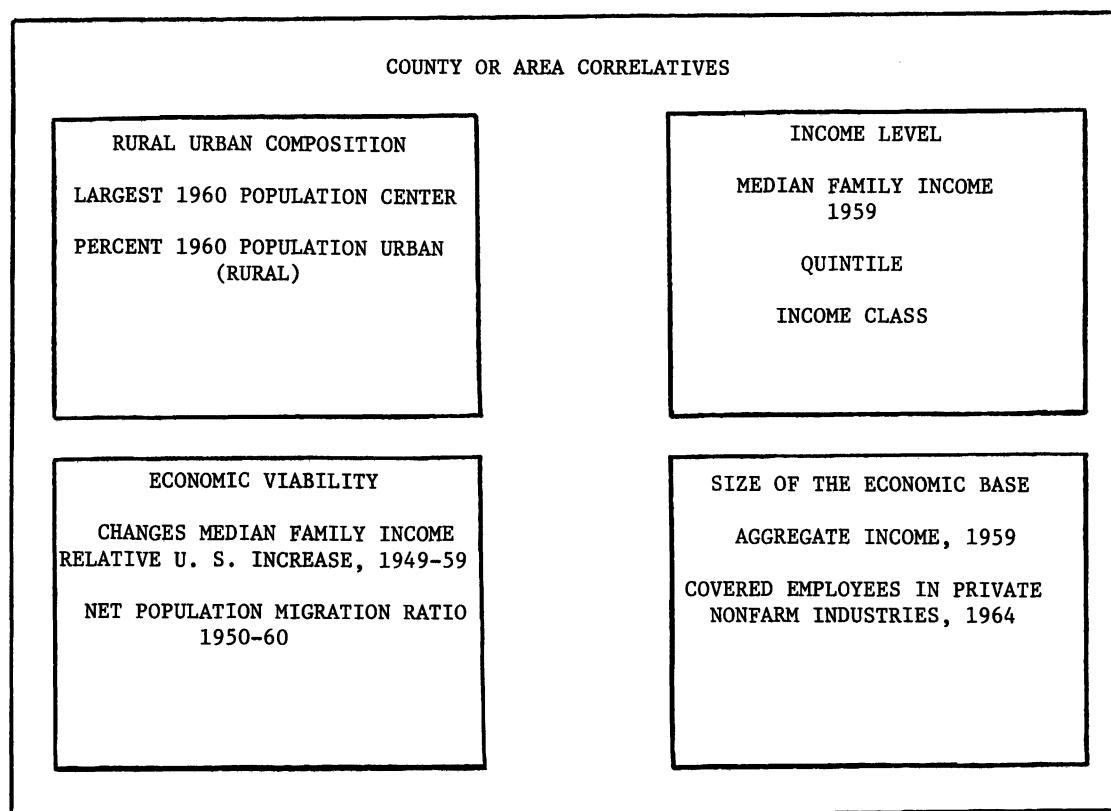
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COUNTY OR AREA CORRELATIVES

RURAL URBAN COMPOSITION

LARGEST 1960 POPULATION CENTER

PERCENT 1960 POPULATION URBAN (RURAL)

INCOME LEVEL

MEDIAN FAMILY INCOME 1959

QUINTILE

INCOME CLASS

ECONOMIC VIABILITY

CHANGES MEDIAN FAMILY INCOME RELATIVE U. S. INCREASE, 1949-59

NET POPULATION MIGRATION RATIO 1950-60

SIZE OF THE ECONOMIC BASE

AGGREGATE INCOME, 1959

COVERED EMPLOYEES IN PRIVATE NONFARM INDUSTRIES, 1964

Figure 3

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As with the impact of work commutation patterns, resolution of differentials between where people live and where they shop and bank also will usually be unnecessary at this level. With the opportunity thus presented for a thorough and relatively uncomplicated checkout of labor force participation and other ratios, the entire set of indicator values can be verified before having to proceed to final allocations to subareas.

Because of its sensitivity to changes in year-by-year incomes, the breakdown of sales to include those from types of establishments more locally oriented and less susceptible to

growth areas illustrated by figure 4. Even less specific information is provided on the changes involving youth -- the most mobile element in our population, and a group concerning whose movements very little actually is known.

Special classifications of jobholders and job seekers and the charting of local labor market, school and other destinations of high school graduating classes represent significent additions to the data needed. Information on places of residence furnished by college enrollees and military personnel can be applied to identify county or other areas of orgin. For those required to register, the records maintained by

MAIN FLOWS OF YOUTH MIGRATION

Local Growth Areas

Regional
Growth
Areas

Metropolitan
Growth Areas

Labor Surplus
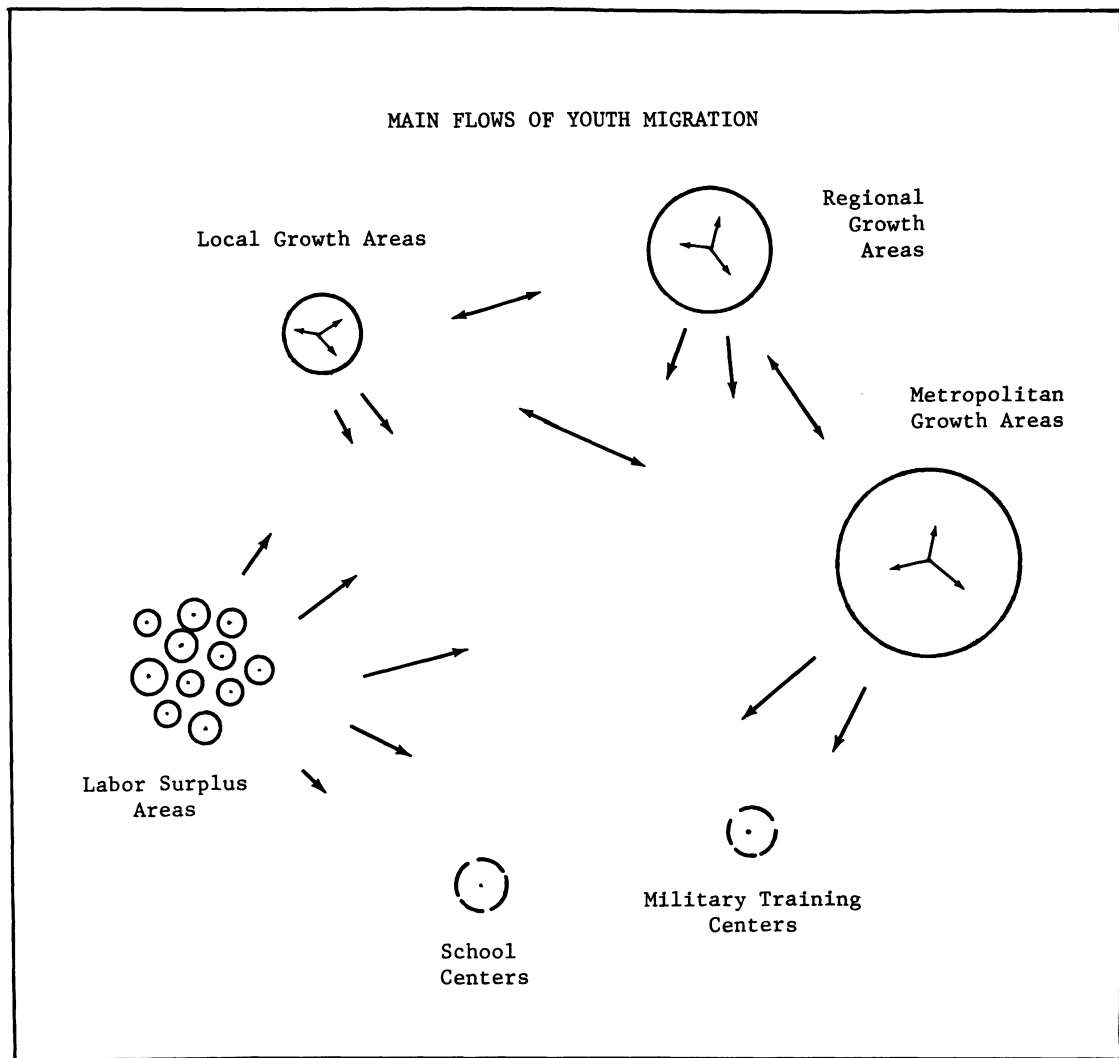Areas

Military Training
Centers

School
Centers

Figure 4

the State Selective Service Systems comprise an
as yet almost untapped source of basic data on
original and current places of residence, status,
education, present occupation, etc.

Evaluating the Impacts of
Community Development Activities

Regardless of whether feasible otherwise,
direct measurement is not intended to, and cannot,
supply a figure or set of figures on jobs created,
income produced, and people added by various
development activities, planned or unplanned.
What can be readily furnished is a fairly detailed
data sheet indicative of employment and other
levels before and after an activity or a combi-
nation or series of activities is introduced.

Also supplied is a framework of reference
for determining impacts of projected programs
and facilities on communities with known economic
and related characteristics. Provided in addi-
tion is a basis for examining variations between
activities in the directness or indirectness and
the immediacy or remoteness of their contributions
to employment and income buildups, and for explor-
ing their interrelationships with each other.

This points to both a need for comprehensive
as opposed to superficial examination of what is
happening in individual areas, and more import-
antly to the challanging opportunities presented
for fully exploring the implications arising
from the introduction of a variety of plans, pro-
grams, and facilities into equally varied commu-
nity or small-area environments.

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