

Kansas Labor Market Information System:

A Technical Note

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## Introduction

State and local planners, policymakers, and analysts often complain that available Kansas labor market data is incomplete and inadequate for their purposes. Their complaint is legitimate; in fact, the state and local labor markets are data deficient, and the data which is available, though very useful, is dispersed and not readily accessible.

This disorganized data makes it difficult for the planner and analyst interested in a particular set of data to determine its existence, and, if it exists, its location. Further, even with the expenditure of a significant amount of effort, no guarantee exists that the searcher will locate all the available data. As a result, considerable time, energy, and resources are wasted solely in the data search. In summary, the current unorganized approach to labor market data collection and dissemination has proven to be both inefficient and ineffective.

This is a problem to all state and local jurisdictions. To deal with the problems faced by those seeking labor market data in Kansas, the Institute for Economic and Business Research (IEBR) is developing a Kansas labor market information system (LMIS) as part of its ongoing labor market research program. This information system will provide a coherent structure to the existing Kansas labor market data by listing all available data sources in one repository. By so doing, the search for data will be enormously simplified: all that the labor market data searcher needs to do is use the information system to find a convenient location for those sources which contain the needed data. In addition

to helping the researcher find and properly use the collected data, IEBR's system also will help the researcher identify the weaknesses of the existing data, thereby encouraging the acquisition and development of new data bases. The following section describes the system in detail.

### Nature of the System

In more concrete terms, Kansas LMIS will be an "on line" data base which will be accessed through the University of Kansas Academic Computer Center's time-sharing system. The data base will be structured as a complete bibliography of all sources of Kansas labor market information and will contain the source of the data, the type of data contained in the source, and some specific reference (i.e., table numbers or page numbers) to aid the user of the system in finding the data. The data sources may be in the form of periodicals, published articles, or other established data bases (see Appendix 1 for a review of the data bases which IEBR currently maintains). As well, the data base will be updated continually as the sources and types of information concerning the Kansas labor market continue to expand.

### Design of the System

The LMIS is designed with the primary concern of making the sources of labor market data readily available to the user as efficiently and effectively as possible. All of the sources of labor market data will be classified in terms of the type of data they contain. For example, some of the basic categories will contain data by geographic region (i.e., information at the state and substate

level; city, county, and SMSA will be included, if available), by general market characteristics, and by specific market characteristics. Examples of general labor market characteristics are the size of the civilian labor force and the unemployment rate. An example of a specific market characteristic would be manufacturing productivity in, say, Wichita. (For a more complete listing of the types of data contained in the system, see Appendix 2).

Of course, many sources of data will contain more than one type of labor market data. In such cases, the source of data would be classified with all of the different types of data it contains. That is, each time a new reference source is obtained, the source will be "marked" as containing some of the above categories of information. Moreover, as much additional reference text will be included with each "category" as possible (i.e., page numbers, table numbers, etc.). Although the LMIS will be structured like a bibliography, it will, in fact, function as an index. This will help to make the LMIS a powerful tool for the user in search of labor market data.

#### Method to Use the System

To obtain the desired information, the user need only to follow a simple process. First, the user accesses the Academic Computer Center's time-sharing system, and then invokes the LMIS which, upon being "called", lists the categories of data it contains. In the next step, the user chooses the needed category and then, through a code, signals the chosen system. The system will then print the list of sources either at the terminal or provide a hard copy list of sources, along with references for each source which contains the desired data.

If interested in more than one type of data or desiring data which combines several categories, then the user will be allowed, to a point, to combine categories in the request for data sources. The limitations on combining several categories of data types are solely to keep the system efficient and within a reasonable cost range. (For several detailed examples of interaction between a user and the LMIS, see Appendix 3).

The only immediate limitations to this system are that the user either must have an account with the Academic Computer Center at the University of Kansas or access the system through the Institute for Economic and Business Research. For the user who does not have an account, IEBR staff will run the request and provide a hard copy of the output. A minimum operational cost might be charged for this service.

Because of the relatively clean structure of the data base and of the accessing program, LMIS will be a dynamic information system. The changes necessary to keep the data base current will be made by the IEBR research staff. The process of expanding the data categories will be primarily a matter of simply adding new documentation to the already existing list whenever necessary. The accessing program is also designed to contribute to the overall system's growth and refinement: the user will be able to leave messages to IEBR staff suggesting corrections, additions, revisions, etc., that will help maintain the system's accuracy and integrity.

#### Concluding Remarks

In summary, the Kansas Labor Market Information System (LMIS) will be an organized reference index for people interested in Kansas labor

market data. It will provide easy reference for state and local planners and analysts. LMIS will be operational for the fiscal year 1982/83, and, if resources permit, it will be kept operational on a continuing basis. Depending upon the extent of user response, IEBR might expand this system to cover the data in addition to their references and, if possible, references for national data.

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## Appendix I: IEBR Data Bases

Institute for Economic and Business Research (IEBR) currently has several large data bases which it maintains to facilitate its work in economic analysis. The following is a brief description of these data bases.

### I. Bureau of Economic Analysis (BEA) Data

Institute for Economic and Business Research is a repository for BEA regional data which includes all the data developed by BEA for Kansas as well as some data for other states and the nation as a whole. The data is kept on microfiche and, in most cases, is annual data from 1969 to the present. The series includes:

- A. A detailed breakdown of Kansas Personal Income back to 1959 with a few years omitted.
- B. Personal Income by major source by county and SMSA in Kansas.
- C. Population by county and SMSA in Kansas.
- D. Employment by industrial source by county and SMSA in Kansas.
- E. Farm income and expenditures by county in Kansas.
- F. Government transfer payments by type, by county, and SMSA for Kansas.

### II. Citibank Economic Database

The Citibank Economic Data base consists of about 5,000 monthly, quarterly, or annual time series for national economic variable. The data are primarily national aggregates and are documented in the Citibase Directory. The data covers the period from 1947 to the present and is updated quarterly. The data base is maintained by the



Institute for Economic and Business Research in machine readable form. The following is a brief outline of the data base with an emphasis on the labor statistics it contains.

- A. Financial Data
- B. Business Formation, Investment and Consumer Sentiment.
- C. Construction Data
- D. Manufacturing and Trade Data
- E. Prices
- F. Industrial Production
- G. Capacity Utilization, Productivity and Employment Cost Index
- H. Population
- I. Labor Statistics
  - 1. Labor Force and Employment by Age and Sex
  - 2. Household Survey - Employment Status of Noninstitutional Population
  - 3. Household Survey - Unemployment
  - 4. Establishment Survey - Workers on Nonagricultural Payrolls by Industry
  - 5. Establishment Survey - Average Hourly and Weekly Earnings and Compensation of Production Workers
  - 6. Establishment Survey - Labor Turnover, Work Stoppages and Collective Bargaining
  - 7. Miscellaneous
- J. National Income and Product Accounts
- K. Forecasts, Projections and Expectations
- L. Business Condition Digest

### III. Kansas Department of Human Resources Data

The most important data available on the Kansas labor market is that generated on a recurrent basis by the Research and Analysis Section of the Kansas Department of Human Resources. This and other data from state agencies will be referenced in the LMIS. Within that large data base, a small, relatively specialized data set is maintained primarily for dissemination in the Kansas Business Review, the bimonthly journal published by the Institute. These data are primarily monthly or quarterly and include, in addition to a selected set of aggregate economic indicators, banking and financial information as well as data for Kansas on employment by county and SMSA, retail sales by county, and agricultural prices and production.

### IV. State Data Center Census Data

The State data center program was initiated by the Census Bureau in 1978 to improve dissemination of Census material. The Institute for Economic and Business Research and the Center for Public Affairs at the University of Kansas share affiliate status in the State Data Center for Kansas. With affiliate status the Institute for Economic and Business Research receives or has access to most major census bureau publications for Kansas and neighboring states -- Colorado, Missouri, Nebraska, and Oklahoma. Specific published census reports received or to be received include:

- A. 1970 Census of Population and Housing
  - 1. Characteristics of the population
  - 2. Housing characteristics -- cities and counties
  - 3. Metro. Housing characteristics -- K.C., Topeka, Wichita

4. Block statistics for Kansas Urbanized areas
5. Census tracts for Kansas SMSA's
- B. 1980 Census of Population and Housing
  1. Same breakdown as (A), above plus
  2. Summary statistics for governmental units and SMSA's
- C. 1977 Economic Censuses
  1. Census of Retail Trade
  2. Census of wholesale trade
  3. Census of service industries
  4. Census of construction industries
  5. Census of manufacturers
  6. Census of mineral industries
  7. Census of transportation
- D. Census of governments
- E. Census of agriculture -- 1974 and 1978
- F. Current economic reports
- G. Current demographic reports

Additionally, as an affiliate center, the Institute for Economic and Business Research receives Census information in tape form which includes the published data as well as more detailed data which will not be published.

#### V. Other National Data Bases

These data bases have been procured for labor market information analysis in Kansas. There are following two types of data which have

been developed on the national level but that also allow state and substate analysis.

- A. Survey data
- B. Administrative data

In the first category, the Institute for Economic and Business Research has already procured 1) Current Population Survey data and, 2) survey of income and education data. The following describes the nature of these two survey data bases.

1. Current Population Survey (CPS): This survey is done by the Bureau of the Census. The CPS has recently been expanded to include over 80,000 households, and it provides demographic information and different labor market information at the state level.

2. Survey of income and education: This survey data also provides demographic and earning information at the state level.

The Institute for Economic and Business Research is now in the process of procuring the following survey data:

- 1. Survey of income and program participation
- 2. Various state surveys, e.g., occupation employment survey, Bureau of Labor Statistics labor turnover survey and Center for Public Affairs survey.

In the administrative data category, Institute for Economic and Business Research has procured 1) Continuous Work History Sample (CWHS) and 2) Dunn and Bradstreet's Census of Business.

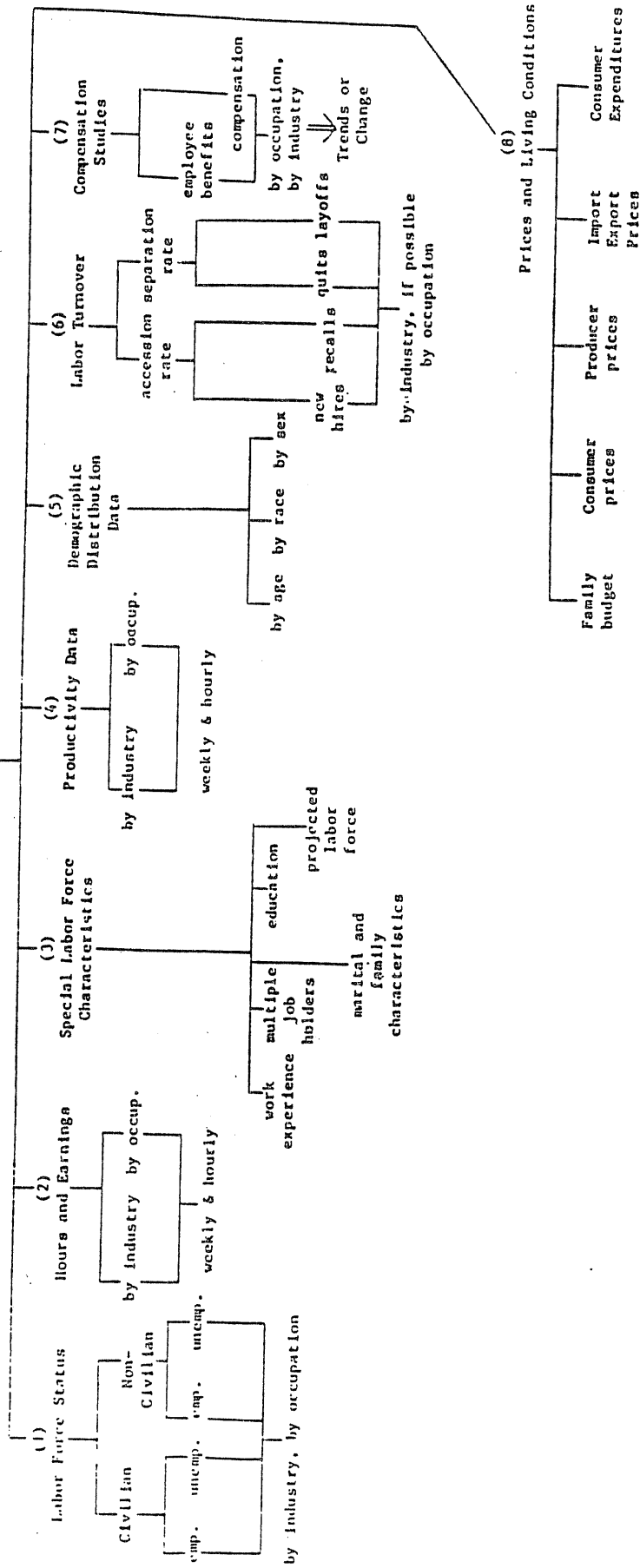
CWHS: The Social Security Administration's CWHS is a detailed source of information on workforce characteristics for state and substate areas, especially for intercensal years. The CWHS is a sample of workers' earning records from employers' reports to the SSA.

The Institute for Economic and Business Research is also trying to procure the following administrative data bases:

- a) Internal Revenue Service data, and
- b) ES 203 Survey data bank.

APPENDIX 1A

Design of Labor Market Information System<sup>a</sup>



<sup>a</sup> This information system would have geographic coverage of state, city, SMSA and county if it is available.

### Appendix III: How to Use Labor Market Information System

The LMIS data base will be maintained on disk memory allowing fast access to the data. Therefore, the information desired will be available to the user immediately. Options within the program will allow hard copy prints of the session, should they be desired.

As an example, suppose the user wishes to find the nonagricultural employment of Kansas for 1980. A typical query in this data base may be of the following form:

Input

function?? Get (A1,E3,T80)

Output

Source: Kansas Statistical Abstract 1980

reference: p.97

In this simplified example, the user is prompted for a function. The function entered was "get" meaning scan the data base. The parameters to the function are 'A1', designating region number 1 (Kansas), 'E3' designating employment characteristic number 3 (non-agricultural) and 'T80', designating 1980 as the time period.

As a more complex example, suppose the user wishes to find the black population for Wyandotte County for ages over 65 in 1980. This query would appear in this form:

Input

function?? Get (A31,Pop,R2,T80,Age)

Output

source: General population characteristics Kansas (Census)

reference: p. 18-157 table 45

Here, 'A31' designates region number 31 (Wyandotte County), 'Pop' designates that population characteristics are desired, 'R3' designates that these characteristics are to be made by race number 2 (black), and

'age' designates that age characteristics are desired. 'T80' is the same as in the previous example.

Additional references within a source would also be printed if they exist. If the number of sources corresponding to a given query is too large to be comfortably printed at the terminal display, the user will be allowed to redirect it to a scratch file which can later be printed at the Academic Computer Center on campus.