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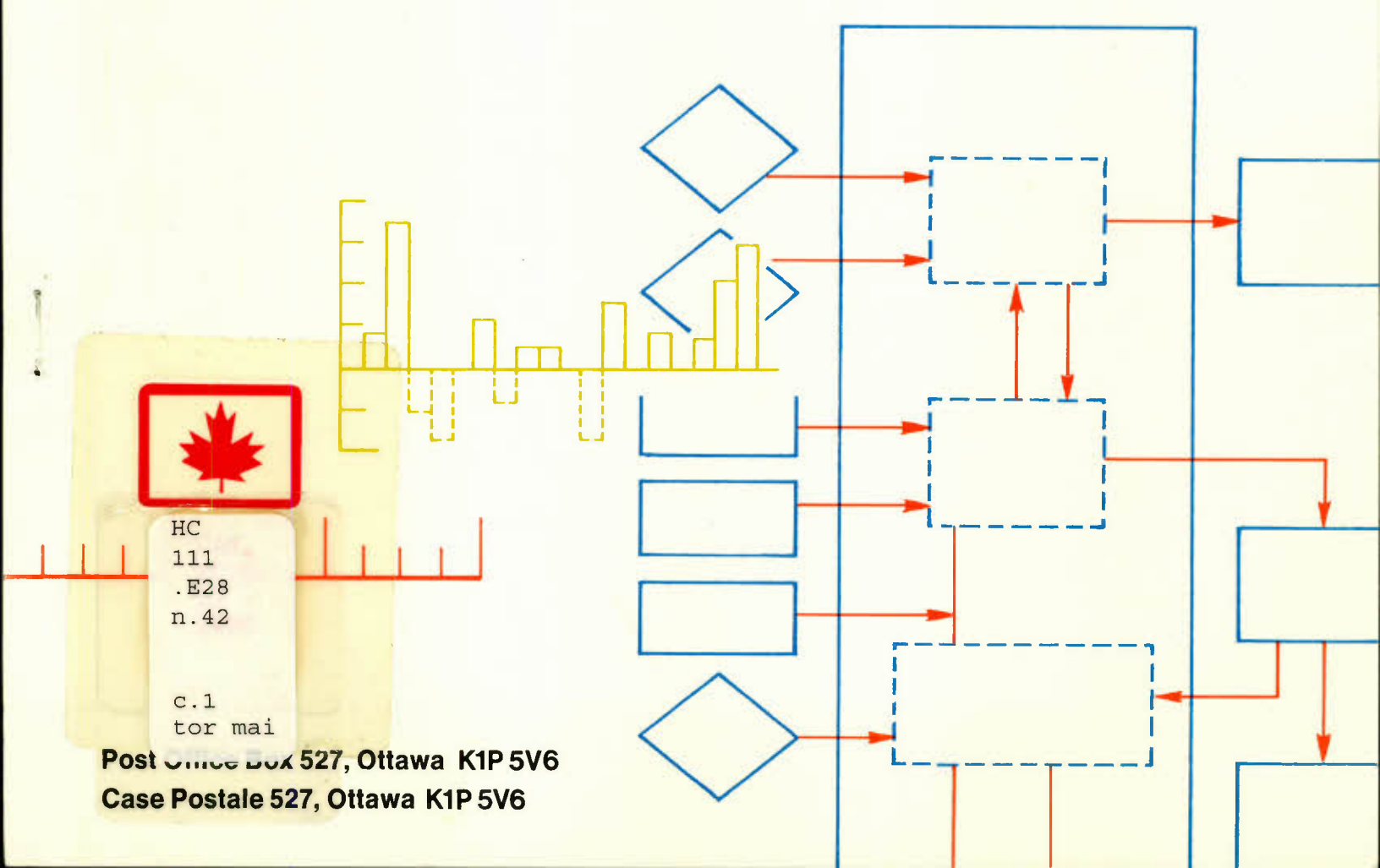



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DISCUSSION PAPER NO. 42

# Canadian Labour Market Data: Sources and Characteristics

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ABSTRACT

This paper is designed to describe and assess some of the major sources of labour market information utilized in the Economic Council of Canada's study of the labour market. It deals mainly with statistical information which appears regularly in official federal government publications but aims to provide the interested reader with an assessment of the adequacy, compatibility, and comparability of these major series in terms of their usefulness for economic analysis and policy formulation.

## RESUMÉ

Ce document a pour but de décrire et d'analyser certaines des principales sources des renseignements sur le marché du travail que le Conseil économique a utilisés dans son rapport sur cette question. Il y est surtout question des statistiques publiées par le gouvernement fédéral, mais l'auteur vise aussi à donner au lecteur intéressé une évaluation de ces séries statistiques pour établir si elles sont suffisantes, compatibles entre elles et comparables, du point de vue de leur utilité pour l'analyse économique et la formulation des politiques.

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# INTRODUCTION

During the course of the research undertaken for the Economic Council of Canada's study of the labour market a great deal of statistical information of varying characteristics was employed. While it was felt that a description of these data in terms of definition, availability, reliability, etc., would prove useful, space constraints obviated such a treatment in the body of the main report. The purpose of the present paper, accordingly, is to describe and comment upon some of the major sets of data which were utilized in the preparation of the main study.

A more comprehensive approach to the question of data requirements for analysis of the Canadian labour market would require, as a starting point, the construction of a model which would embrace the best current theoretical framework consistent with tractability. Such a model would constitute the vehicle for labour market analysis and policy formulation. The structure and properties of the model itself would then, of course, dictate the data requirements. Such a system would also be dynamic in the sense of incorporating a continuous feedback mechanism: the process of modeling is ongoing, so that the specification of data needs may shift over time. Meanwhile, the reconciliation of requirements with the data actually available gives rise to the identification of gaps and inadequacies in existing information, to data research and analysis, and, at the next stage, to the collection and publication of new and/or improved data. This in turn feeds into the body of existing data available to the model builders, etc.

The more modest aim of the present paper is simply to indicate some of the types of considerations which arise with respect to the characteristics of data relating to the Canadian labour market. In Part A we describe and discuss some major[1] data sources in Canada, including information from the census, various surveys, and from the records of various operating departments. Chapter 1 provides a brief overview of these sources in addition to a description of some important definitions. An assessment of the data in terms of their conformity with theoretical concepts, their comparability and compatibility, is undertaken in Chapter 2. Some recent developments in the design and generation of new data are described in Chapter 3, while the last chapter of Part A -- Chapter 4 -- attempts to point out some possible gaps in existing data.

In Part B we turn briefly to some international comparisons of unemployment and vacancy statistics in Chapters 5 and 6, respectively.

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1 An exhaustive listing of data sets is not attempted. A valuable reference work of this type is: Guide to Federal Government Labour Statistics, Statistics Canada, Cat. No. 72-512, occasional.

# PART A

## CANADIAN DATA

# CHAPTER 1

## DESCRIPTION OF MAIN DATA SOURCES

The first important point to arise from an investigation of Canadian labour market data is simply the wide number of agencies which collect, analyse, and publish such information. These include Statistics Canada, the Unemployment Insurance Commission, and the Departments of Manpower and Immigration, Labour, Health and Welfare, and National Revenue, respectively. The data themselves, moreover, are diverse in nature, having to do with many different aspects of the labour market: information on the numbers of people in the labour force, for example, and their characteristics; the number of jobs vacant in the economy; rates of pay; and conditions of work. And not only do these myriad items of information derive from many different sources, they are, in addition, collected in a variety of different ways, and for different purposes. Indeed, data pertaining to essentially the same concept, but emanating from different sources, may be characterized by shades of qualitative difference which arise, for example, from definitional nuances or methods of collection. Add to this the differences in the way various sets of data may be classified -- for example, by region, occupation, industry, or age-sex category -- plus differences in frequency of publication and in availability of the data, and it is apparent that one is faced with a complex welter of information.

In view of this complexity, the present chapter attempts to describe some of the more important data sets with a view to imparting to the reader some overall perspective of the Canadian labour data. The arrangement of the chapter employs the following

more or less arbitrary sequence: first, the major surveys concerned with labour supply, labour demand, and remuneration, respectively; next the main sets of data which derive from the operational or "administrative" requirements of some important government programs relating to the labour market; and, thirdly, some additional items of information which do not fall easily into either of the first two categories.

(a) Surveys

Probably the most important comprehensive source of labour market information in Canada is the Labour Force Survey conducted by Statistics Canada.[2] This provides the economy's basic data on the size of the labour force and the numbers employed and unemployed. Essentially it consists of a monthly survey of approximately 30,000 households visited by about 800 interviewers. A questionnaire is completed for each family member over the age of 14 years: about 70,000 questionnaires per month. A selected household remains in the sample for six consecutive months, rotation being staggered in such a way that one-sixth of the households are new to the sample each month. In addition to the data concerning labour force activity, information is collected on such characteristics as age, sex, marital status, family status, occupation, industry, region, duration of unemployment, and work status (i.e., part-time or full-time).

The Labour Force Survey, which at present excludes Armed Forces personnel, persons living in institutions, Indians on Reserves, and the populations of the Yukon and the Northwest Territories, asks interviewees about their labour force activity in the preceding week.

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2 Statistics Canada, The Labour Force, Cat. No. 71-001, monthly.

Replies are coded according to whether individuals (a) worked, (b) looked for work (including persons who would have looked for work had they not been ill, or on prolonged layoff, or believed no work was available in the community), (c) had a job but were not at work because of illness, vacation, or temporary layoff, (d) were permanently unable to work, (e) kept house, (f) went to school, (g) were retired or voluntarily idle, or (h) other.[3]

An unemployed person, according to the survey, is one who, in the reference week, was without work, and, demonstrated an immediate interest in work either by actually seeking a job or indicating that he or she would have looked for work except for special circumstances, or is a person temporarily laid off from his or her job. The employed, on the other hand, are persons who worked in the reference week, even if only for a few hours, and those who had a job but were not at work for reasons such as illness or vacation. The employed and the unemployed together constitute the labour force. The unemployment rate expresses the number of unemployed as a percentage of the labour force, while the participation rate indicates the percentage of persons 14 years and over who are members of the labour force.

The estimates produced by this survey are subject to two basic types of problems known as sampling error and nonsampling error. The first derives from the fact that inferences must be drawn on the basis of information collected from less than 1 per cent of the households in Canada. Statistics Canada reports

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3 For further discussion of concepts, see Peter Hicks, "The Measuring, Uses, and Limitations of the Unemployment Statistics", Canadian Statistical Review, July 1972.

estimates of sampling error, but a simple example will serve to illustrate the nature of the problem:

> "... the actual unemployment rate decreased from 7.4 per cent to 6.8 per cent between March and April, 1972. This represented a decline of 50,000 unemployed persons. Calculations of sampling error indicated that the chances were 2 out of 3 that this estimate of change was accurate within 15,000. In other words the chances are 2 out of 3 that the actual increase was between 35,000 and 65,000."[4]

Nonsampling errors may arise from such factors as misunderstanding on the part of interviewer and/or interviewee, or incorrect processing and tabulation of the data. Other sources of problems of interpretation emanate from the process of seasonal adjustment and from changes due to rounding. The former arises essentially because of the fact that the impact of seasonality changes from year to year and it is difficult to distinguish newly emerging seasonal patterns from other irregularities. Such changes can only be confirmed in retrospect, and revisions are therefore necessitated.[5] Rounding errors arise most particularly in the context of very small changes.

Two other surveys furnish important information concerning labour supply. They are the establishment payroll surveys of firms with 20 or more employees, and fewer than 20 employees, which are

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4 Hicks, op. cit., p. 121. The sampling error may, however, give rise to problems of interpretation in some cases. Hicks cites the example of the slight rise in unemployment from 543,000 to 551,000 between May and June 1971. The sampling error indicated that the chances were 2 out of 3 that this 8,000 increase was accurate only within 17,000. So there was a possibility that the real figures had declined rather than risen.

5 This question is dealt with in detail in J. Kuiper, Seasonal Adjustment, a Background Paper prepared for the Economic Council of Canada (forthcoming).

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sometimes known as the ES 1 and ES 2 surveys, respectively. These monthly surveys cover all salaried and wage-earning employees of the reporting units who are paid for rendering services or who are on paid absence during the reference period, except for casual employees working less than seven hours per week. The ES 1 survey reaches 52,000 reporting units; the ES 2, 24,000. Together they have provided estimates of employment at the province and industry level since 1961.[6] The ES 1 survey, moreover, yields data on weekly hours, average hourly earnings, and numbers of wage earners by three-digit SIC level (mining, manufacturing, etc.) and by region, province, and 50 urban areas, and on average weekly earnings by industry and a similar geographical breakdown.

These are the three main survey sources on the supply side of the market. On the demand side, Statistics Canada now collects data on unfilled jobs through the Job Vacancy Survey, which is financed through the Department of Manpower and Immigration.[7] Data are available since mid-1970 for about 500 occupational groups and about 30 areas in Canada. The data are compiled from a sample of all employers in Canada, excluding family farms, domestic service, fishing and trapping, and the military. This covers about 90 per cent of paid worker employment in Canada. Reporting units are surveyed on both a mail and a personal interview basis. Quarterly data on vacancies by industry and occupation are reported, with associated data on duration and starting rate of pay.

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6 See Statistics Canada, Employment, Earnings and Hours (formerly Employment and Average Weekly Wages and Salaries), Cat. No. 72-002, monthly; Manhours and Hourly Earnings, with Average Weekly Wages, Cat. No. 72-003, monthly (discontinued -- last issue February 1971); and Estimates of Employees by Province and Industry, Cat. No. 72-008, monthly.

7 In addition to the Job Vacancy Survey, the Department of Manpower and Immigration collects data on vacancies registered at the Canada Manpower Centres.

The definition of a job vacancy is a vacant job for which recruiting action is being taken. It must be available to workers from outside the establishment, be currently available, and be vacant for the full reference day. The definition excludes the jobs of laid-off employees and those unoccupied because of industrial disputes. While the "actively seeking" characteristic appears common to both the "unemployed" concept of the LFS and the "vacant" concept of the JVS, there are in fact other conceptual incompatibilities which will be mentioned in a later section.

The Canada Department of Labour also conducts a survey yielding valuable labour market information. Each year it publishes data on wage rates, salaries, and hours of labour by occupation, industry and community, derived from a mail survey of the ES 1 establishments every October. This department also publishes quarterly information on wage developments resulting from collective bargaining agreements (excepting those in construction) covering more than 500 employees. These data are disseminated through Research Bulletins and cover (a) the trend in base-rates of pay under agreements currently in force, and (b) settlements reached during the quarter and the annual increases in base-rates which they provide over the life of the contract. These data are broken down by industry and province. In addition, they constitute the basis for an index which shows changes, month by month, in the weighted average of base-rates for all the agreements.[8]

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8 Labour Canada, Wage Rates, Salaries and Hours of Labour, Volumes 1 and 2, and Research Bulletin: Wage Developments Resulting from Major Collective Agreements.

(b) Administrative Data

In addition to the survey data relating to labour demand, supply, and remuneration described above, there exists a wealth of labour market information which is generated in the course of operating a number of government programs. Chief among these are the programs administered by the Department of Manpower and Immigration and by the Unemployment Insurance Commission. The former agency generates program statistics which cover a wide range of labour market agents, including immigrants. For example, data are collected on participants in the Canada Manpower Training Program, the Canada Manpower Training-on-the-Job Program, the Canada Manpower Mobility Program, the Local Initiatives Program, and the Opportunities for Youth Program. These data are largely for the purpose of maintaining and evaluating the programs in question. In addition, the operational statistics of the Canada Manpower Centres provide data on their clients, including registered vacancies, placements, and occupational shortages.

A variety of data emanate also from the Immigration Branch, including information concerning the source countries of immigrants, their labour force destination, occupation, etc.[9]

The operations of the Unemployment Insurance Commission also yield a great deal of information on an important segment of the labour force. A wide array of data on the insured population, based on samples of UIC administrative records and survey data, coded by occupation and industry, is available for the period 1965-71. For 1972 and 1973 there is a complete file, used for

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9 Department of Manpower and Immigration, Canada Manpower Review and Quarterly Immigration Bulletin.

administrative purposes, of applicants, claimants, and beneficiaries which contains data on such client characteristics as age, sex, occupation, and prior earnings. For research purposes the Commission employs a sample drawn from this file. In addition, a benchmark survey of contributors for 1971-72 collected information from a large number of employers on the insured status, occupation, place of residence, and place of employment, of a sample of their employees. In 1973 the coverage was extended to include all ES 1 establishments and a sample of smaller firms.[10]

(c) Other Data

The major portion of the data described so far has to do with the labour force status of workers, job availability, and the impact of government programs in the labour market. Another interesting set of information concerns the activities of labour unions. Under the authority of the Corporations and Labour Unions Returns Act data on union membership by type of union and affiliation, by industry and by region, are collected by Statistics Canada for unions of over 100 membership, and published annually by the Department of Labour.[11]

Information on work stoppages involving 500 workers or more is gathered from a number of sources (including Department of Labour field offices, Canada Manpower Centres, provincial Labour Departments, and, occasionally, the press) and published monthly

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10 See also Statistics Canada, Statistical Report on the Operation of the Unemployment Insurance Act, Cat. No. 73-001, monthly; and Benefit Periods Established and Terminated under the Unemployment Insurance Act, Cat. No. 73-201, annual.

11 Labour Canada, Labour Organizations in Canada, and Statistics Canada, Corporations and Labour Unions Returns Act - Part II - Labour Unions, Cat. No. 71-202.

in press releases and annually in the Department of Labour's Strikes and Lockouts in Canada. Further information pertaining to organized labour is contained in annual reports concerning working conditions in Canadian industry, which report hours of work, paid holidays, and numbers of employees covered by collective agreements, by province and industry, and by office and non-office employees.[12]

Finally, a brief mention must be made of the labour market data furnished by the Census. The 2,000,000 households which answer labour force questions constitute a sample which permits breakdowns in much finer detail than are regularly available from the Labour Force Survey. For example, data are published on the working-age population, labour force, employment, unemployment, unemployment rate, and participation rate by age and sex for each province. Labour force status by sex, level of schooling, and province, is another example of the detailed cross-classifications which the Census yields, as are the breakdowns at the level of Census metropolitan area and municipality.

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12 See, for example, Labour Canada, Working Conditions in Canadian Industry, and Collective Bargaining Review.

# CHAPTER 2

## ASSESSMENT

In this chapter we attempt to comment upon some of the data sets described above in terms of their characteristics, comparability, and compatibility. The essential aim of the chapter is to provide illustrations of the care which must be taken in interpreting and using labour market information. To this end we examine the conceptual and methodological differences between the unemployment series of the Labour Force Survey on the one hand, and the Job Vacancy series and the UIC claimants series, on the other. The labour force data from the LFS and from the Census are also compared. Finally, we look at the Canadian data relating to wages.

### (a) Unemployment and Job Vacancies

The relationship between vacancies and unemployment is one which is firmly entrenched in the theoretical literature of labour economics, as well as one which, potentially at least, may provide useful information on the state of the labour market to the practical observer. Unfortunately, however, although the notion of vacancies as an indication of excess demand, and of the unemployed as an indication of excess supply, in the labour market has intuitive appeal -- an unemployed person being a "worker without a job" and a vacancy being a "job without a worker" -- the data do not lend themselves to so convenient a characterization, as the following points will illustrate.[1]

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1 See "The Canadian Job Vacancy Survey: Its Development, Methodology and Application", Canada Manpower Review, vol. 6, no. 4, IVth Quarter, 1973; and "A Note on Job Vacancy and Unemployment Statistics", Quarterly Report on Job Vacancies, IVth Quarter, 1972.

First, although compatibility with the unemployment series was a specific goal in the development of the Job Vacancy Survey, divergences in concept and definition arise from certain innate differences between two phenomena which necessitated different treatment in order to produce the best possible estimates of vacancies. A job vacancy, for example, does not share with an unemployed person the characteristic of tangible existence: the interviewer attempting to enumerate vacancies may encounter not only well-defined vacant positions but also more or less concrete plans for hiring new workers that should perhaps be excluded lest they fail to materialize. Next, there is a difference in the reporting units for the two data sets: for unemployment it is the household, where the labour force activities of the members is generally known to the respondent; for vacancies it is the hiring locus of the business enterprise, many of which do not maintain formal records. These latter circumstances necessitated the adoption of a rather stringent definition for vacancies, and, in order to minimize recall errors, a one-day reference period (as against one week for unemployment).

Definitional stringency is illustrated by the fact that the vacancies reported must have been available for the full reference day. Vacancies filled <u>during</u> the day are therefore excluded. Further, recruiting action must have been undertaken to establish a vacancy: if no recruiting activity has taken place during the previous four weeks the vacancy is not counted. In tight labour market situations this requirement may exclude the vacancies of "discouraged employers" who have given up active attempts to hire workers in short supply. (This contrasts with

the unemployment measure which includes not only persons who actively sought employment but also those who would have done so but believed no work was available in the community.)

A further incompatibility concerns the vacancies which arise when workers are laid off subject to definite recall. These are excluded from the vacancy measure on two counts: first they would not satisfy the recruiting criterion just mentioned and, secondly, they would not satisfy the requirement that vacancies be open to workers from outside the firm. Workers on layoff subject to recall, on the other hand, are classified as unemployed.

One of the most important barriers to direct comparison of the vacancy and unemployment counts[2] concerns a data characteristic which receives emphasis in the Council's Labour Market Study and to which we shall return in a later section of the present chapter -- namely, the fact that they have both a stock and a flow dimension. Thus the stock figures provided by the LFS and the JVS, respectively, mask the importance of the underlying flow magnitudes. Duration data for the fourth quarter of 1972, for example, indicate that while only about a third of vacancies existed for a month or more, about 70 per cent of the unemployed were in that duration category. Now, the stock of vacancies or of unemployed persons at any point in time depends upon the magnitude of the flows, per period of time, of people and of jobs, and upon the length of time they remain in the pool of vacant jobs and of unemployment, respectively. A very large flow of vacancies may give rise to a

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2 A recent article warns of the dangers inherent in the use of vacancy and unemployment data in "trade-off" analyses of the Phillips curve type: J. A. Boucek, "Job Vacancy Survey", Canadian Statistical Review, April 1975.

low stock figure if the duration is small in magnitude. Thus the small stock of vacancies (relative to unemployed) may mask considerable job turnover.

Finally, differences in coverage between the two data sets render direct comparison a hazardous undertaking. Relying, as it does, upon replies from business establishments, the JVS does not take account of vacancies arising either in agriculture or in domestic service which, according to the figures reported to Canada Manpower Centres, account for between 5 and 10 per cent of job orders.

(b) Unemployment Counts from the Census, LFS, and UIC

Our next example concerns the comparisons which are frequently made between the number of unemployed persons as reported by the LFS and the number of claimants for unemployment insurance benefits. The necessary admonition is made bluntly and succinctly in the following quotation:

> "... the numbers in the two series seldom coincide, and misleading inferences are often drawn about the accuracy of the measures ... the two series are not intended to measure the same characteristics and, therefore, direct comparisons are not valid."[3]

There is, first of all, a difference in the populations from which the "unemployed" and claimants' measures are drawn: the labour force comprises the civilian working-age population attached to the labour market and includes self-employed persons, while the insured population consists largely of paid workers and includes members of the Armed Forces. Moreover, not all paid workers are insurable:

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3 M. Naemark, "Comparing Unemployment Statistics With Data From the Unemployment Insurance Commission", Canadian Statistical Review, September 1973.

those over 70 years of age, CPP or QPP pensioners, those earning less than a specified minimum weekly wage, and persons with no previous work experience -- i.e., new entrants to the labour force.

Furthermore, UIC claimants may augment their benefits by working part time. According to the LFS, by contrast, persons who worked even for only a few hours in the reference week are considered as "employed". Finally, some overstatement of UIC claimants occurs when claimants fail to report a change in status when they return to work: a period of five weeks is allowed to lapse before their files are classified as inactive.

The labour force data emanating from the Census and from the LFS, respectively, constitute the next illustration of problems of comparability. As far as coverage is concerned the LFS includes 14-year-olds and excludes residents of the Yukon and Northwest Territories, Indians on Reserves, members of the Armed Forces, and inmates of institutions. The Census treats the latter as "not in the labour force". Methodological differences derive from the fact that the LFS is based upon a personal interview involving an experienced interviewer who can furnish expert assistance to the respondent. The Census, by contrast, relies upon self-enumeration with access for the respondent to an instruction booklet and a telephone-answering service. While the Census questions were formulated to measure the same concepts, the difference in collection methods inevitably necessitated the use of different questions which in turn involves some noncomparability of results. Further, the reference periods differ: that for the 1971 Census fell between the May and June periods of the LFS. Differences in the magnitudes involved are illustrated in the following table.

Table 1

Unemployment: Census[1] and Labour Force Surveys[2] Compared, Canada, May 1971

| | Unemployed | | Unemployment Rate | |
|---|---|---|---|---|
| | Census | Labour Force Survey | Census | Labour Force Survey |
| | (Thousands) | | (Per cent) | |
| Total | 696 | 542 | 7.8 | 6.3 |
| Male | 425 | 403 | 7.3 | 6.9 |
| Female | 271 | 139 | 8.8 | 5.0 |

1 Week ending May 29, 1971.

2 Week ending May 22, 1971.

Source: 1971 Census data from Census volume 3 (part 1) - Labour Force and Individual Income: Basic Distributions (3.1); Statistics Canada, Labour Force Activity by Sex, Cat. No. 94-703, Table 4; and Labour Force Survey data for May 1971 from The Labour Force, Cat. No. 71-001, monthly.

(c) Wages

We turn now to a few comments concerning Canadian wage data. Probably the most damning comments on this subject are contained in a recent book by Cragg, whose section on wage data begins:

> "There is a severe lack of solid or comparable information on wages in Canada which is surprising in view of the importance of wages both in their own right and in connection with inflation."[4]

Briefly, the Canadian labour market analyst is faced with five main series, three from the Department of Labour and two from Statistics Canada. The Index Numbers of Average Wage Rates cover non-office

4 J. G. Cragg, Wage Changes and Labour Flows in Canada, Prices and Incomes Commission (Ottawa: Information Canada, 1973), p. 61.

occupations only and are published annually by the Department of Labour. They are based upon a survey of the ES 1 establishments each October. The other two series published by this department provide quarterly information obtained from collective agreements covering 500 employees or more. The construction industry is excluded and the employees covered account for only about one-sixth of the labour force. Both series concern "base-rates" (i.e., the straight-time hourly wage rates of the lowest paid qualified workers in the bargaining unit). The first provides information on the trend in base-rates of pay under all agreements currently in force; the second, on settlements reached during the quarter, measuring the annual increase in base-rates of pay over the life of the contracts. The narrow coverage, the concentration on base-rates, and the limited length (from 1965) of these series impose severe limits on their utility.

The Statistics Canada data, published quarterly, are quarterly earnings series of hourly and weekly earnings, respectively, derived from the ES 1 survey. As Cragg points out, earnings series too entail some drawbacks: even for the same workers, a weekly wages measure will vary with the amount of work done in the particular period; an analogous problem arises with hourly earnings if over-time occurs. Further, changes in the distribution of employment between categories will affect the (weighted) average earnings figure. Finally, cyclical variations in employment are unlikely to exert a uniform impact on the wage structure of firms, so that changes in economic activity may effect changes in average earnings even when the same pay rates prevail in each job.[5]

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5 Cragg, op. cit., p. 65. Note that Estimates of Labour Income, Statistics Canada, Cat. No. 72-005, provides estimates of wages, salaries, and supplementary income by major industry group and province.

# CHAPTER 3

## RECENT DEVELOPMENTS

The business of collecting, compiling and disseminating labour market information is, of course, a dynamic process: the types of data collected, their quality, quantity, detail, availability, currency, and frequency of publication must respond to the needs of the users which, in turn, are affected by new developments in methods of analysis and by the complex changes which accompany the process of growth in the economy itself. It follows, therefore, that research and development is an important aspect of the process of data generation. Work of this type is obviously underway on a large number of data sets in many departments. Here we draw on only a couple of examples which serve to illustrate the way in which changing data requirements are accommodated.

### (a) The Occupational Employment Survey

The first example concerns the occupational employment survey which is presently being tested by Statistics Canada. The tremendous growth, in the last 15 years, of what has now come to be known as "manpower policy", has placed new demands on data-generating agencies for information by occupation, since this is one of the characteristics of workers and of jobs which is fundamental to their effective matching. There is a need then, for employment data with considerable occupational detail which will permit analysis -- and forecasting -- on the demand side of the market. That is, the series will provide valuable information on "jobs filled" which, along with the vacancy series of "unfilled jobs", will yield estimates of trends in the composition of the "job stock" in the economy.

Accordingly, the survey will collect information from a sample[1] of establishments to produce estimates of the occupational mix within industries. These estimates, in turn, will be applied to the data on total employment by industry that are obtained from the ES 1 and ES 2 establishment surveys, to produce the final statistics. Coverage will extend to the nonagricultural sector, excepting defence and domestic service, and will be classified by province, industry, and size of establishment. Whenever possible, job titles will be coded to the seven-digit level of the Canadian Classification and Dictionary of Occupations (CCDO). Data will be published biennially.

The provincial dimension of the survey is considered to be very important insomuch as provincial governments are making large expenditures on education and training, while federally sponsored manpower training programs are implemented through province-level delivery systems. It is hoped that the OES will provide valuable information to administrators of education and training for planning purposes, while the analysis of trends and projections based on estimates of occupational employment should also be of value in the area of career counselling.

(b) Labour Force Survey Assessment and Revision Project

The next example of current developments to which we turn concerns the Labour Force Survey Assessment and Revision Project at Statistics Canada -- a classic illustration of adaptation

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1 The sample is large: about 34 per cent of the establishments in the ES 1 (large firm) survey, and about 18 per cent of the ES 2 (small firm) survey. These proportions amount to about 15,000 and 54,000 firms, respectively.

to changing data requirements.[2] There have, in fact, been a number of revisions -- in sampling techniques, estimation procedures, and in the compilation and dissemination of data -- to the Labour Force Survey since its inception in 1945. Basically, however, its questions and the amount of data it yields have varied little in two decades. The considerable increase in the demand for labour market data in recent years, however, has proved too great to be accommodated within the constraints of the existing survey and a revised survey was deemed necessary. This new survey will be the source of official labour market statistics early in 1976, following a year of parallel operation with the existing survey.

The three major areas of new data requirements which the new survey is designed to accommodate are as follows. First of all there is a need for more detailed information on the labour force by status -- particularly on groups which are on the margins between employment and unemployment, and between unemployment and not in the labour force: part-time workers, students, new entrants, would-be participants who, for various reasons are not seeking work, and so on. In addition, more information on the characteristics of the working-age population have been requested by data users. Educational attainment, geographical mobility, and family status information are required for all members of the working-age population. For the employed in particular such items as hours of work, multiple job-holding, and part-time work are deemed important. For the unemployed, data are needed on duration, reasons for becoming unemployed, and previous employment. For those out of the

2 Much of the material in this section is based upon B. Petrie, "The Labour Force Survey Assessment and Revision Project", Canadian Statistical Review, vol. 49, no. 2, February 1974.

labour force it would be useful to know why they are not looking for work, when they last worked, and why they left their previous job.

The second major area of need is for additional information on the dynamics of the labour market -- including the "flow" data discussed in the Council's Labour Market Study.

Third, there is a demand, quite simply, for more detailed data, and finer cross-classifications. The reliability of such information of course depends upon sample size, and plans do in fact call for an approximate doubling of the present sample size.

The new survey will comprise three major parts, for in addition to the questionnaire itself there will be what is known as a Household Record Docket and also a regular Supplementary Survey. Data from the three documents will be linked to provide an extensive and detailed cross-sectional file which can be used, over the six months during which each household remains in the survey, to form a longitudinal profile.

The series of steps by which the new survey is to be brought into operation is particularly interesting. The first phase, in 1973-74, involved feasibility tests of a survey approach incorporating all the minimum requirements of the project -- including the full range of operating systems -- except for the expanded sample size. Simultaneously a program of consultation was underway with data users, to determine their requirements. Closely associated with this was a series of experiments to improve on the questionnaire design, to explore new methods of collection,

to develop a framework for analysing the new types of data anticipated, and to set in motion an ongoing program of research. Next, the survey sample is being redesigned on the basis of information derived from the 1971 Census. In addition to some new sampling techniques, it is anticipated that the redesign will include consideration of the inclusion of the Northwest Territories and of Indian Reserves. The fourth stage, following selection of the final questionnaire and survey techniques, will involve the parallel operation, during 1975, of the existing and the revised survey. This will provide the data needed to develop the linkage procedures which are so important for the establishment of consistent historical series and for seasonal adjustment of the new data. Finally, as soon as possible after the introduction of the new survey an approximate doubling of the sample size will be incorporated.

# CHAPTER 4

## SHORTFALLS

Any discussion of possible gaps or inadequacies in labour market information requires the careful specification of the criteria by which data might be judged: their conformity to theoretical concepts, for example, their reliability, detail, currency, and accessibility. The criteria are many and varied, and the emphasis which each receives will depend upon the particular requirements of each of an equally varied and numerous set of users. The data may be used, for example, by theoretical researchers analysing the intricacies of certain aspects of the operation of the labour market; by analysts evaluating the performance of government programs, reviewing past trends and anticipating future developments; and by businessmen and union representatives. Labour data are, moreover, the concern of many disciplines, including law, sociology, psychology, medicine, economics, and political science -- each with its own perspective and its own corresponding requirements.

The details of a comprehensive framework of criteria for the assessment of labour market data are beyond the scope of this. The comments of the present section are therefore confined to a number of observations which arise from the foregoing description of Canadian labour market data, with a view to some rather general criteria concerning current requirements for research and policy formulation.

(a) Data on Dynamics

The first area to which we turn concerns the need for data to capture adequately the dynamic workings of the labour market. The flows of people and jobs, and their rate of turnover, which determine the stock figures, have come to be recognized by analysts and decision-makers as an important source of information to which increasing attention is being paid. Indeed, a great deal of current labour market research, in this country and elsewhere, is concentrated in this area.

The existing data on the month-to-month movement of people among the categories of "employed", "unemployed", and not in the "labour force" have served to show the interesting information which this type of analysis can reveal.[1] It is apparent that more detailed classifications of this type of information -- that is, on the characteristics of the people, and jobs, in transition -- could prove richly informative. In addition, however, the extent of turnover in the market requires precise information on the length of time for which a person or a job remains in a particular labour market category: what is the duration[2] of unemployment for a worker of a particular type; how long does a certain type of job remain filled?

It is anticipated that, at least for the labour force, this kind of information requirement may be filled by the revised

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1 The findings of such a study are contained in a report for the Labour Market Study: see F. T. Denton, C. H. Feaver, and A. L. Robb, Stock-Flow Relationships and Short-Run Dynamics: A Study of the Canadian Labour Market, Economic Council of Canada Discussion Paper No. 37.

2 Duration data have, in fact, constituted a major "gap" since the discontinuation of the Survey of Hirings and Separations in 1966.

Labour Force Survey. As mentioned in Chapter 3 above, this vehicle is intended to furnish longitudinal data. With respect to the question of duration, too, the revised survey will classify duration of unemployment into single-month intervals rather than the present "range" system (one to three months and four to six months) with its open-ended upper class (over six months) which makes precise calculation of duration impossible.

On the "job side" of stock-flow accounting, the new survey should also aid in estimating the extent of multiple job-holding which is necessary if a correct count of jobs (as opposed to persons employed) is to be achieved. Further to this requirement, however, there is a need for measures of the gross movements of jobs between the "filled" and "unfilled" categories, of the number of new jobs created and the number eliminated, and of the flow of jobs from one duration category to the next.

(b) Wages

The next major area of need relates to wage data. The description and assessment of these series in Chapter 3 served to show the gaps in coverage and in concept of the existing series. A minimum requirement for such data would seem to be their classification by four-digit CCDO code and by geographical location, since these are two of the most important descriptors. Their coverage should be comprehensive (that is, not just organized workers, and not just employees of large firms) and current (monthly rather than quarterly). In addition, however, the remuneration dimension is also most important in the context of the characteristics of the working population. The employment history -- previous jobs by occupation, location, duration, rates of pay -- of persons

unemployed or not in the labour force, for example, would provide powerful information for analysis and policy formulation. If, for instance, one had the pay characteristics, occupations, and location of persons moving from one labour market status to another -- the flow data discussed above -- the precision with which labour market matching problems could be diagnosed would be immensely augmented.

(c) Concluding Comments

Our next set of comments flow quite directly from the discussion of this and previous sections but do not concern any particular data series. They stem largely from our observations concerning the variety of sources of labour market data, the problems of comparability and compatibility of ostensibly related data sets, and the number and variety of user needs. It is perhaps the very essence of development in any field that ad hoc responses to stimuli are institutionalized in the process of growth and change. In the field of data generation and dissemination this certainly appears to be the case, and it may be argued that a certain degree of duplication of effort has resulted. Some perspective might, however, be lent to the complex relationships between data source agencies and data users if a more comprehensive approach were to be taken.

The LFSARP has shown the importance and utility of carefully eliciting user requirements and of maintaining these requirements over time. This process, however, relates only to the revised labour force survey. What would be useful would be to have some agency responsible for closely monitoring all labour data needs, by developing a framework for communication with all

potential users. This would permit the development of a compendium of minimum data requirements for labour market analysis and policy which in turn would aid in the delineation of blocks of related data which could be obtained by a common method. Such a framework could also serve to improve considerably the communication and co-operation between government and private researchers in the utilization and analysis of the data: the mere identification of data sources, on the one hand, and of users, their requirements, and their utilization of the data, on the other, would obviate a great deal of the duplication of effort which presently arises, promote data accessibility, and foster greater co-operation and feedback in labour market research.

# PART B

## SOME INTERNATIONAL COMPARISONS

# CHAPTER 5

## UNEMPLOYMENT STATISTICS

The only regularly produced data on international unemployment rates adjusted for comparability is furnished by the United States Bureau of Labor Statistics, and published periodically in its Monthly Labor Review. Since the early 1960s the Bureau of Labor Statistics has published such rates for Canada, Britain, France, Germany, Sweden, Italy, and Japan. More recently, Australia has also been included.

The labour force and unemployment data for the various countries -- Canada and Australia excepted -- are adjusted for all known definitional differences to render them comparable with U.S. data. Table 2 illustrates the extent of the adjustment that is made. It is apparent that the BLS adjusted series is identical to the published unemployment rate series for Canada and Australia, almost the same for Japan and Sweden, slightly lower than the published rate for Germany, about 0.3 or 0.4 percentage points higher for Italy, about 0.6 points higher for France, and a larger but variable amount higher than the official rate in the case of Britain.

Table 2

Labor Force, Employment, and Unemployment in Nine Countries, 1970-74

(Numbers in thousands; participation and unemployment rates in per cent)

| Item and year | United States | Canada | Australia | Japan | France | Germany | Great Britain | Italy | Sweden |
|---|---|---|---|---|---|---|---|---|---|
| | Adjusted to U.S. concepts | | | | | | | | |
| Civilian labor force: | | | | | | | | | |
| 1970 | 82,715 | 8,323 | 5,404 | 50,730 | 21,000 | 24,480 | 24,810 | 19,090 | 3,884 |
| 1971 | 84,113 | 8,579 | 5,512 | 51,030 | [1] 21,190 | 24,230 | 24,540 | 19,010 | 3,932 |
| 1972 | 86,542 | 8,840 | 5,614 | 51,140 | [1] 21,430 | 24,540 | [1] 24,760 | 18,800 | 3,939 |
| 1973 | 88,714 | 9,225 | 5,748 | 52,310 | [1] 21,660 | 24,780 | [1] 24,990 | 18,930 | 3,952 |
| 1974 | 91,011 | 9,602 | 5,889 | 52,080 | [1] 21,960 | [1] 24,710 | [1] 24,850 | 19,230 | 4,013 |
| Labor force participation rate: [2] | | | | | | | | | |
| 1970 | 60 4 | 57 1 | 60 9 | 64 5 | 58 3 | 56 9 | 60 7 | 47.4 | 62 4 |
| 1971 | 60 2 | 57 4 | 60 7 | 64 2 | 58 0 | 56 5 | 60.4 | 47.1 | 62.8 |
| 1972 | 60.4 | 57 8 | 60 8 | 63 7 | 58 2 | 56 0 | [1] 60 7 | 46 1 | 62.7 |
| 1973 | 60 8 | 58 9 | 61 2 | 63 9 | 58 1 | [1] 56 0 | [1] 60 8 | 45 9 | 62.7 |
| 1974 | 61.2 | 59 6 | 61 4 | 62.9 | ([3]) | [1] 55 3 | [1] 60 1 | 46.0 | 63.5 |
| Employment: | | | | | | | | | |
| 1970 | 78,627 | 7,829 | 5,329 | 50,140 | 20,470 | [1] 26,100 | 23,730 | 18,430 | 3,830 |
| 1971 | 79,120 | 8,028 | 5,424 | 50,390 | [1] 20,600 | [1] 26,170 | 23,300 | 18,350 | 3,831 |
| 1972 | 81,702 | 8,279 | 5,488 | 50,410 | [1] 20,820 | [1] 26,070 | [1] 23,480 | 18,050 | 3,832 |
| 1973 | 84,409 | 8,706 | 5,640 | 51,650 | [1] 21,080 | [1] 26,160 | [1] 24,040 | 18,210 | 3,854 |
| 1974 | 85,936 | 9,079 | 5,756 | 51,350 | [1] 21,270 | [1] 25,650 | [1] 23,970 | 18,630 | 3,933 |
| Unemployment: | | | | | | | | | |
| 1970 | 4,088 | 494 | 75 | 590 | 530 | [1] 140 | 750 | 660 | 59 |
| 1971 | 4,993 | 551 | 88 | 640 | [1] 590 | [1] 180 | 930 | 660 | 101 |
| 1972 | 4,840 | 561 | 126 | 730 | [1] 610 | [1] 240 | [1] 1,060 | 750 | 107 |
| 1973 | 4,304 | 519 | 108 | 670 | [1] 580 | [1] 260 | [1] 740 | 720 | 98 |
| 1974 | 5,076 | 523 | 133 | 730 | [1] 690 | [1] 550 | [1] 740 | 600 | 80 |
| Unemployment rate: | | | | | | | | | |
| 1970 | 4.9 | 5.9 | 1.4 | 1.2 | 2.5 | [1] 5 | 3.1 | 3.5 | 1.5 |
| 1971 | 5.9 | 6.4 | 1.6 | 1.3 | [1] 2.8 | [1] 7 | 3.8 | 3.5 | 2.6 |
| 1972 | 5.6 | 6.3 | 2.2 | 1.4 | [1] 2.8 | [1] 9 | [1] 4.3 | 4.0 | 2.7 |
| 1973 | 4.9 | 5.6 | 1.9 | 1.3 | [1] 2.7 | [1] 1.0 | [1] 3.0 | 3.8 | 2.5 |
| 1974 | 5.6 | 5.4 | 2.2 | 1.4 | [1] 3.1 | [1] 2.1 | [1] 3.0 | 3.1 | 2.0 |
| | As published [4] | | | | | | | | |
| Unemployment rate: | | | | | | | | | |
| 1970 | 4.9 | 5.9 | 1.4 | 1.2 | 1.7 | .7 | 2.5 | 3.2 | 1.5 |
| 1971 | 5.9 | 6.4 | 1.6 | 1.2 | 2.1 | .8 | 3 4 | 3.2 | 2.5 |
| 1972 | 5.6 | 6.3 | 2.2 | 1.4 | 2.3 | 1.1 | 3 8 | 3.7 | 2.7 |
| 1973 | 4.9 | 5.6 | 1.9 | 1.3 | 2.1 | 1.2 | 2 6 | 3.5 | 2.5 |
| 1974 | 5.6 | 5.4 | 2.2 | 1.4 | [1] 2.4 | 2 6 | 2.6 | 2.9 | 2.0 |

Note: Data for the United States relate to the population 16 years of age and over. Published data for Canada, France, Germany, and Italy relate to the population 14 years of age and over; for Sweden, to the population aged 16 to 74; and for Australia, Japan, and Great Britain, to the population 15 years of age and over. The adjusted statistics have been adapted, insofar as possible, to the age at which compulsory schooling ends in each country. Therefore, adjusted statistics for France and Sweden relate to the population 16 years of age and over; and for Canada and Germany, to the population 15 years of age and over. The age limits for adjusted statistics for Japan, Italy, and Great Britain coincide with the age limits of the published statistics. Statistics for Sweden remain at the lower age limit of 16, but have been adjusted to include persons 75 years of age and over.

1 Preliminary estimates based on incomplete data.

2 Adjusted civilian labor force as a per cent of the civilian population of working age.

3 Not available.

4 For France, unemployment as a per cent of the civilian labor force; for Japan, Italy, and Sweden, unemployment as a per cent of the civilian labor force plus career military personnel; for Germany and Great Britain, registered unemployed as a per cent of employed wage and salary workers plus the unemployed. With the exception of France, which does not publish an unemployment rate, these are the usually published unemployment rates for each country. Canadian data are adjusted only to exclude 14 year-olds; this adjustment does not change the Canadian unemployment rate. Published and adjusted data for the U.S. and Australia are identical.

The countries studied by the BLS use two means of measuring unemployment: labour force sample surveys and employment office registrations. The former are generally regarded as yielding the best statistics since they include groups of persons who are not covered in the unemployment statistics obtained by other methods; also, changes in legislation and administrative regulations do not affect the continuity of the series. The sample surveys record the labour status of a person in a reference week, while employment office figures usually relate to the number of persons registered as of one day during a month. At the present time labour force sample surveys provide the official unemployment statistics for the United States, Canada, Australia, Italy, Japan, and Sweden. Britain, France, and Germany, by contrast, rely upon unemployment registrations, though even they now run periodic surveys to check on the accuracy and consistency of their unemployment data.

As far as concepts and definitions are concerned, the common criterion for classification as unemployed in all countries is that a person has no job and performed no work for pay or profit in the reference period (day or week). There seem to be only two minor exceptions to this rule: in Canada persons with a job who did not work and looked for work are counted as unemployed, and in Germany the unemployment count includes part-time workers seeking full-time jobs.

Generally, also, to count as unemployed a person must have shown or reported some effort to find work. The major exception is that the Germans do not count persons actively seeking part-time work (24 hours per week or less).

Countries using labour force surveys, with the exception of Italy, count as unemployed those persons who would have been actively seeking work but for temporary illness. Only Canada and Australia count persons who would have been looking for work but believed no suitable jobs were available. In the United States such "discouraged workers" are regarded as not in the labour force but are counted separately on a regular basis.

Those without work in the reference period and not seeking because they already have definite arrangements to start a new job, are counted as unemployed in Canada, Australia, Sweden, and the United States, but are regarded as employed in Italy. For countries using administrative statistics, those persons with future starting dates who are still eligible for social security payments would be counted as unemployed; those registered only to use the employment agency function would drop off the register.

As far as layoffs are concerned, Australia, Sweden, Canada, and the United States count as unemployed those persons who are waiting to be called back to a job from which they have been laid off. Persons temporarily laid off are counted as employed in Japan and Italy, though Italy considers persons without definite instructions to return to work as unemployed. In the United Kingdom, persons "temporarily stopped" are classified as employed; however, a separate count is made of this group. In Germany the criterion for being counted as unemployed is that the person not have a contract of service.

Most of the countries studied publish a measure of the unemployed which is drawn from the operational statistics of their

respective social security programs. (In Canada, for example, in addition to the data from the Labour Force Survey, we have statistics from the Unemployment Insurance Commission.) Britain, Germany, and France are the countries for which such data are the main source of official, published statistics. Registration is, in all cases, voluntary, though necessary to obtain social security benefits. However, those uninterested in, or ineligible for benefits may nevertheless register to avail themselves of the job market information of the exchange.[1]

> "Usual U.K. unemployment statistics ... refer to those who register as unemployed at unemployment exchanges, the prime motive for which is to draw unemployment compensation. However, many of those actually out of work are not eligible for compensation and frequently do not want to use the exchanges for finding alternative employment.... Many married women are in this category, as may be men who were dismissed for misconduct, young entrants in the labour force and those whose entitlement is exhausted. A gauge of the importance of this phenomenon is available in Census years, when people are asked whether they are out of work but looking for, or eager to find, a job. Thus in April 1966 by the regular definition there were 234,000 people unemployed, whereas the Census definition had 420,000 people unemployed. It is clear then that our official statistics do not expose fully the true magnitude of unemployment.
>
> "Unhappily the relationship between the two groups is not constant over time. For example, when the economy becomes slack the size of the labour force changes; typically it is thought to fall, implying that the discrepancy between the number of registered unemployed, all of whom are included in the labour force, and the total number who are out of work grows even larger."[2]

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1 In May 1973, for example, 21 per cent of the registered unemployed in the United Kingdom were receiving neither unemployment benefits nor supplementary allowances.

2 D. Metcalf and R. Richardson, "The Nature and Measurement of Unemployment in the U.K.", The Three Banks Review, March 1972, pp. 30-45.

Despite such inadequacies of the administrative data, and the definitional differences discussed above, the BLS now appears reasonably satisfied with its ability to make adjustments which permit meaningful comparisons between countries.

CHAPTER 6

## VACANCY STATISTICS

In contrast to the situation regarding unemployment statistics, Canada appears to be the only major western nation at the present time which regularly carries out a comprehensive sample survey to obtain a measure of job vacancies. Most other countries have been more prepared than Canada to rely on administrative statistics for vacancies. In some cases this may have been due to lower mobility behaviour and more centralized exchange mechanisms in the labour market. More plausibly, the reluctance to undertake full-fledged sample surveys stems from the difficulties involved in getting useful results economically -- defining the vacancy concept which is comparable with unemployment, identifying the appropriate response unit, and devising the right questions. Some years ago, A. Sturmthal commented, "I still have to be convinced that vacancy data obtained by questionnaires or interviews are anywhere near as reliable as those that emerge out of actual business needs and operations".[1]

A survey of the literature reveals that a few countries have attempted to mount vacancy surveys but these have either been abandoned or have realized very limited objectives. The United States, for example, terminated its job vacancy survey at the end of 1973 on the grounds that "the program failed to meet the needs of economic analysts because data could not be matched with major elements of the employment and unemployment survey (though) ... the

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1 The Measurement and Interpretation of Job Vacancies (New York: National Bureau of Economic Research, 1966), p. 317.

information proved to be a sensitive indicator of economic change".[2] Until the BLS realizes its plan to run a national survey more compatible in scope and detail with employment and unemployment data, the United States will have no national vacancy measure of unfilled demand, other than the index of help wanted advertising.[3]

The United States job vacancy series, extending from April 1969 to December 1973 was based on a voluntary mail survey of establishments (using the Monthly Report on Job Openings and Labour Turnover). It was less comprehensive in certain aspects than the Canadian. First, the U.S. survey covered manufacturing industries only while the Canadian covers every sector of the economy except domestic service and agriculture. Moreover, the published U.S. series did not give as detailed an occupational breakdown. Other differences have been noted:

> "It is interesting that the U.S. vacancy survey has not insisted that a job be vacant for an entire reference day, although most of the remaining requirements (for classification as a job vacancy) are similar to Canada's. Omission of the so-called 'instant-fills' would be expected to lower the Canadian vacancy levels relative to the American. But there are some operational factors -- e.g. no interview collection in the U.S., and 'end-of-month' reporting -- which probably have the opposite effect. The small amount of comparative data presently available indicates a rather close correspondence in the results of the Canadian and American surveys."[4]

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2 Monthly Labor Review, August 1974, p. 27.

3 The "nonagricultural job opening pending" series, which was published by the U.S. Employment Service from late 1949 through early 1971 was never considered by the BLS to be an adequate measure of unmet demand for labour. The series was based only on job orders placed by employers using the Employment Service and provided no information on the industries in which the unmet labour demand existed. It covered only hard-to-fill occupations and was subject to variations in managerial practices among the States. (Monthly Labor Review, August 1974, p. 27.)

4 D. Gower, "The Job Vacancy Survey and Labour Market Analysis", Notes on Labour Statistics 1971, Statistics Canada, Cat. No. 72-207, p. 23.

In the mid-1960s the U.S. Bureau of Labor Statistics undertook an investigation of vacancy measures covering all major western countries, and it found that only four countries -- Sweden, Canada, Japan, and the Netherlands -- obtained some information on job vacancies through establishment surveys.[5] In all cases, however, the survey data were not sufficiently comprehensive to be more than a supplement to the administrative statistics. The Swedish annual survey of the mining and manufacturing sectors did not measure unfilled vacancies as such but rather employers' forecasts of labour shortages in the following year; nonresponse to the vacancy question in the Canadian annual survey of hirings and separations seriously reduced the usefulness of the results; the Dutch annual survey of full time "shortage" vacancies by occupation (in which judgment is used to exclude frictional vacancies) is not based on a true sample survey; the Japanese annual survey of establishments attempts to measure shortages of skilled workers only, where a shortage is defined to include not only currently existing vacancies, but also those expected to arise within the next six months. The results of these surveys were not considered to give a very reliable indication of actual vacancies in the case of Sweden, Canada, and Japan. As far as the Netherlands was concerned, "The annual estimates of shortage vacancies are only knowledgeable guesses, but they may be fairly reliable".[6]

Countries relying on administrative statistics for job vacancies might be considered to enjoy one advantage in that counts of both vacancies and unemployed can come from one source -- the

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5 The Measurement...., op. cit., p. 147.

6 Ibid., pp. 153-58.

national employment exchange network. Same source, however, does not necessarily mean that job openings and applicants of a similar type have a similar incentive to report. Indeed, there have been claims that for some countries (e.g., the United Kingdom and Canada) the combination of distribution of unemployment insurance and employment agency functions reduces the effectiveness of the latter function.[7] Certainly administrative statistics have definite disadvantages as a measure of unfilled demand because coverage is incomplete and variable in the short as well as medium term, as well as variable across occupations. Moreover, the extent of coverage is impossible to judge without survey backup. The coverage rate obviously will move with the fortunes of the exchange system (e.g., budget allocations for canvassers), and the stringency and enforcement of the registration rules. The BLS in 1963 reported several countries with laws requiring employers to list job vacancies at the exchange but found little evidence of enforcement

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7 An OECD publication on Manpower Policy in the United Kingdom (Paris, 1970), stated on p. 24, "Its (The Public Employment Service) close connection with the unemployment insurance administration and allied social services has kept it under the spell of the vicious circle of low expectations about the value of the services to be received both among workers and employers. Consequently the PES has difficulties in becoming the meeting-place it should be for vacancies and job-seekers of all kinds. On the registers of the PES one therefore finds mainly those who have to go there to register in order to receive unemployment benefits." A similar debate in Canada led to the separation of the manpower and unemployment insurance offices. The OECD found in the cases of Sweden and Japan, however, that combination of functions did not inhibit the exchange in its role as hiring agency.

of the regulations.[8] The incentive to report vacancies also fluctuates over the business cycle, though in times of manpower shortages, at least, there are opposing, immeasurable tendencies.[9] In addition, many countries have noted that vacancies notified are concentrated in the low-skilled manual occupations (e.g., the United Kingdom and Canada) and/or in openings for young people (e.g., Japan). A special study of job vacancies listed at U.S. local employment offices, by contrast, found a large proportion of openings for white-collar positions.[10]

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8 France, for example, required employers to register their vacancies, but direct hiring without resort to the employment exchange was authorized and the mandatory reporting requirements had not been enforced. The law in Italy generally required that nonexecutive workers be hired through the employment office but there were many exceptions that allowed direct hiring of individuals and enforcement seemed to be lax. Even Canada in the mid-1960s had compulsory reporting requirements for NES but these had not been enforced after the War. National authorities in Sweden and certain other employers were generally required to recruit through employment offices. Moreover, private employment exchanges were prohibited except for some nonprofit agencies. Compulsory listing was required for an important segment of the Japanese job market. The listing of vacancies for junior high school graduates must go through PESO, and most of the senior graduates are also listed. See The Measurement...., op. cit., pp. 238, 147, 174, 268, and 226 for the respective country references.

9 "Most countries also stated that they believe employer patronage of the employment offices increases and decreases to some extent with changes in the available labour supply relative to demand. In general, most countries feel that a relatively high proportion of vacancies are registered with their employment offices under labour shortage conditions. A number of countries, for example, the Netherlands, West Germany, and Australia, noted that some employers probably even inflate their requests for workers under labour shortage conditions in the hope that at least some referrals will be made. On the other hand, the Netherlands and West Germany also indicated that some employers may stop registering their vacancies when there is a lack of applicants and rely on their own initiative to obtain workers. As unemployment increases, there is less need to inflate requests, and there is also less need to seek employment office assistance in locating available workers. With considerable unemployment, sufficient job applicants may apply at factory gates to make registering most vacancies seem unnecessary." Ibid., p. 153.

10 Ibid., p. 385.

Countries where the registration of vacancies is now mostly voluntary (Canada, Sweden, and the United Kingdom) estimate that the penetration rate ("notified" to "actual" vacancies) is far less than 50 per cent.[11] Countries such as Italy and France, which, in theory at least, legally required the listing of vacancies at the exchange in the early 1960s, did not provide estimates of the penetration rate to the BLS. The French, however, claimed that information obtained from two special surveys of employers made during the Algerian repatriation, "have shown that a certain number of available openings have not been reported to the labour services by the employers".[12] In fact the discrepancy was probably even greater than was the case for Sweden and Germany.[13] French manpower services were reformed in 1967 and a National Employment Agency created which is servicing an increasing number of unemployed and

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11 In the mid-1960s, W. Thomas estimated that in Canada "vacancies reported to the N.E.S. represent more than 30% of the actual job vacancies in the country although this percentage would vary widely by industry and occupation" (The Measurement...., op. cit., p. 190). The OECD study of Manpower Policy in the United Kingdom, 1970, reported on pp. 24 and 161 the penetration rate on the basis of available rather inadequate information would seem to be of the order of magnitude of 20 per cent. For Sweden, where the Labour Market Board enjoys a virtual monopoly as a placement service, it has been estimated that only about one-third of all job openings (during the period prior to 1963) would have been registered. (The Measurement...., op. cit., p. 151.) Another rather dated report (I. Sobel and R. Wilcock, Placement Techniques for Older Workers, OECD, 1966, p. 33), reported an estimated penetration rate for Germany, where the Federal Institute also enjoys a monopoly position, in the vicinity of 30-35 per cent. The more recent OECD report on Manpower Policy in Germany, Paris, 1974, on p. 53, while it provided no numerical estimates, reported a tendency for a declining placements role by the agency and concluded "it is clear that a large number of Germans do not use the placement services of the Federal Institute". The Institute, it should be noted, now has the power (as yet unused) to make an Order requiring employers to register all vacancies.

12 The Measurement...., op. cit., p. 255.

13 I. Sobel and R. Wilcock, Placement Techniques...., op. cit., p. 33.

job openings although apparently persuasion only has been employed to increase vacancy registration.[14] But an estimate of the penetration rate for recent years is not available.

It seems fair to conclude that in the past, whether or not the laws required vacancy registration, and whether or not the National Employment Agency enjoyed a monopoly position, registered unfilled vacancies represented only a minor proportion of the actual number.[15] With recent increases in unemployment, however, some European governments (Sweden, Germany, and Belgium, for example) are moving towards making registration of vacancies compulsory. It remains to be seen whether legal changes, given problems of enforcement, will produce a permanent improvement in coverage by the administrative statistics.

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14 Organisation for Economic Co-operation and Development, Manpower Policy in France, Paris, 1973, pp. 50 and 96-8.

15 The OECD report on Manpower Policy in Belgium, Paris, 1971, for example, comments on p. 162 "... there is a tendency among employers - naturally enough - to notify their vacancies only to the extent that there was some chance of filling them from those registered at the employment exchanges as seeking work, that is to say from unemployed persons in trades for which the labour market is in general unfavourable". While the Belgians did not blame this fact on the lack of legal monopoly of placement (citing a penetration rate of only 20 per cent in Luxembourg where such a monopoly exists), a Royal Order was issued in October 1969 which provides that employers should inform the regional services of the National Employment Office of any vacancy not filled for at least three days. The OECD did not try to assess the practical importance of this measure. Data on registered vacancies in Belgium given in OECD Main Economic Indicators suggest that the impact was considerable but, in part, short-lived.