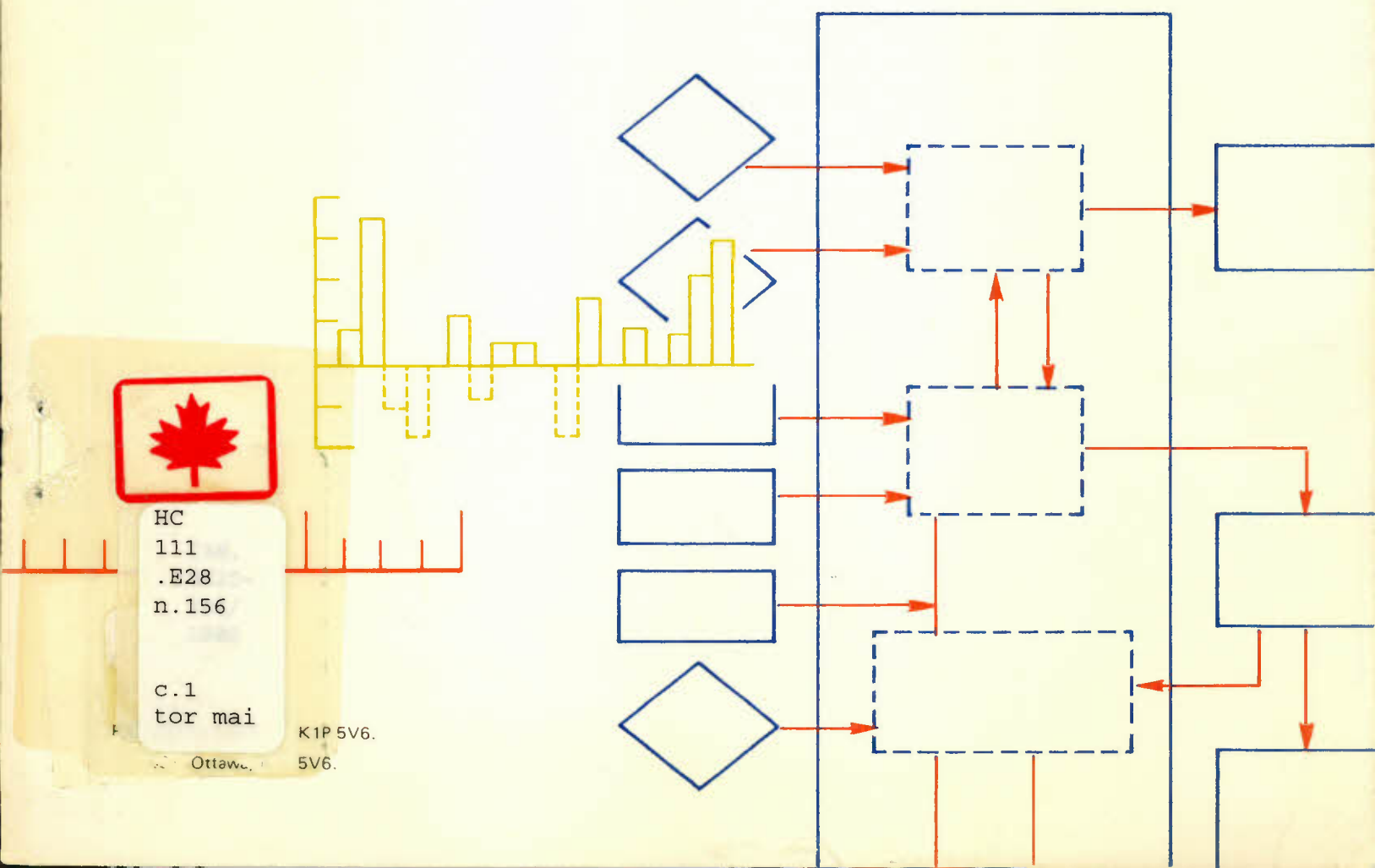


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DISCUSSION PAPER NO. 156

Aspects of
Job Search in Canada

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TREASURY AND ECONOMICS

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SUMMARY

The Job Search project undertaken by the Labour Markets group of the Economic Council of Canada is designed to examine the job search behaviour of Canadian workers.* In this paper we focus on the extent of job search activity in Canadian labour markets; the characteristics of Canadian job seekers; the duration of search; and the relative effectiveness of the various search processes.

In this paper, we limit ourselves to an exploration of Labour Force Survey data. This Survey provides information on the number of employed and unemployed searchers, searcher characteristics, search duration, and search methods. In Chapter II, certain search models are examined from our vantage point. We conclude that these models are rooted in micro behaviour and do not deal with questions of job search on the aggregate level. Further, their focus is exclusively on voluntary searchers. Thus, the guidance search models provide about searcher characteristics is of dubious value.

In view of the limitations of theory and of available data, we develop a novel approach to tackle the

*For other papers in this series see A. Hasan and S. Gera, Reservation Wages, Duration of Job Search and Labour Markets, Economic Council of Canada Discussion Paper No. 138 November 1979; and S. Gera and A. Hasan, Search Unemployment and Economic Returns to Job Search, Economic Council of Canada, mimeo, January 1980.

issues raised above. First, we consider search in its global context. Job seekers, whether they are voluntary searchers or are forced to look for a job because of lay-off, and whether they are employed or unemployed, are considered together to give a measure of the extent of search. This provides us with the notion of the aggregate search rate. In Chapter III, we pay particular attention to on-the-job searchers, while in Chapter IV, we examine unemployed job seekers. In Chapter V, we explore the interrelationships between certain major components of the searcher population. As well, the costs of search are discussed in this chapter.

Major Findings

(1) On-the-Job Search

(a) In any given month in 1977, some 270 thousand Canadians were looking for another job while still employed. Employed searchers made up more than a quarter of all job seekers (employed and unemployed). To examine the incidence of on-the-job search, we developed an indicator of the extensiveness of search -- the employed search rate. This rate is obtained by dividing the number of on-the-job searchers by total employed labour force, and in 1977 the annual average was 2.8 per cent. We found that the employed search rate is higher for the spring and summer months and

lowest in winter, and also that there is some evidence of a negative relationship between the rate of unemployment and employed search rate.

(b) Employed search in Canada is less frequent than in the U.S. For roughly comparable economic conditions, as judged by the aggregate unemployment rate, the U.S. search rate of 4.2 (May 1976) is over one percentage point higher than the comparable Canadian rate of 3.0. Differences in per capita incomes, the size of the market and the regional nature of the Canadian economy may be important explanations of the lower Canadian employed search rate. We suspect, however, that the Canadian unemployment insurance program may also induce greater off-the-job search.

(c) The ratio of employed searchers (ES) to the unemployed searchers (US) can be used as an indicator of the efficiency of search process and the competition unemployed job seekers face from employed job searchers. In 1977, on average, for every three unemployed searchers there was one employed person who looked for another job.

(2) Search Off-the-Job

(a) Of the individuals counted as unemployed, about 90 per cent are identified as searchers. The remaining

10 per cent, who are non-searchers, is composed of individuals "on lay-offs and expecting a recall", and individuals who expect to start a new job within a four week period (the "new starts"). Since unemployed job seekers (US) form such a large percentage of all unemployed, the characteristics of the two groups are similar: relative to their proportion among the labour force, women, youth and young adults are over-represented in the unemployed searcher population. The only difference of note is that white collar workers are relatively over-represented in the unemployed searcher population, relative to all unemployed.

(b) The major conclusion from duration data is that duration of search is shorter for females and youths, as compared with prime age males. On the other hand, females and youths experience higher unemployment rates. Some labour economists suggest that these higher rates are offset by the shorter duration, but the difference in duration is so small that the argument loses much of its sharpness. Moreover, when labour force transitions out of the labour force and back are considered, the duration of job search, as measured by the period of joblessness, is much longer than the duration of unemployment, and the difference is especially large for women and youth.

(c) To have some measure of intensity of search, we employ "average number of methods used" as an indicator, a

direct measure of intensity not being available from Labour Force Survey Data. Using this proxy measure, we find that Canadians use a somewhat larger number of search methods than do Americans. We also find that (i) intensity of search appears to be a function of awareness of information channels; (ii) our proxy measure is a useful indicator of search commitment; (iii) intensity diminishes with the duration of search.

(d) The LFS data show that the Canada Employment Centres are used by a large percentage of searchers. On the other hand, previous work in Canada suggests that while the utilization rates for these centres is high, their effectiveness is low. This evidence holds for the United States as well, but the disparity between the effectiveness and utilization rates of methods is much greater in Canada. Looking at the utilization rate of the centres by various categories of searchers, we find that youths and females, both with higher rates of unemployment, use Canada Employment Centres less than other groups of searchers. U.S. data would suggest that this differential in usage is a reflection of the lower effectiveness rates of the centres for these two groups.

(e) Unemployed job seekers can be divided into four major components: (i) voluntary leavers, (ii) job losers,

(iii) new entrants to the labour force who have yet to find a job, and (iv) re-entrants.

Voluntary leavers who identify themselves as looking for a job (LEAVERS) are defined as individuals who separate from job primarily as a result of their own decision, while the involuntarily unemployed (LOSERS) lose their job as a result of a decision by the employer.

Using the traditional definition of the LEAVER population (those who leave a job and begin searching for another immediately), we find that, as a proportion of all unemployed, voluntary job leavers are almost twice as prevalent in Canada as in the States. In Canada, in 1977, they were 28 per cent of the unemployed. However, using a definition of the LEAVER population which drops the immediacy criteria (so that job leavers who begin searching only after some time out of the labour force are included as LEAVERS), we find that 35 per cent of the unemployed job seekers in 1977 were voluntary leavers. Why is voluntary job leaving so high in Canada? Looking at the voluntary leaver characteristics, we find that the proportion is significantly higher for women. Also, the proportion of voluntary leavers among the unemployed falls as the unemployment rate rises, suggesting a certain sensitivity to the economic climate. The seasonal element is also a factor, but not a very important one, in explaining the

level of voluntary leaving. Finally, institutions such as the family and the UI compensatory scheme may be important determinants of voluntary leaving.

Job losers in Canada make up about the same percentage of unemployed as is observed in the U.S. It is particularly interesting that Canadian data do not bear out Feldstein's (1975) contention that laid-off individuals expecting recall form a large fraction of job losers. Individuals expecting recall are only 16 per cent of job losers and an even smaller 8 per cent of the total unemployed population. Furthermore, one-fifth of these individuals engages in job search despite their expectation of being recalled.

(3) Job Search in Canada -- Global View

(a) Voluntary searchers -- the unemployed who quit voluntarily and the persons who search while employed taken together -- make up more than one-half of all job seekers; the involuntary searchers (those who are laid-off or who lose their jobs) make up only one-third of the searcher population; the balance is accounted for by re-entrants and new entrants.

(b) The aggregate Canadian search rate (the numer of job searchers employed and unemployed expressed as a

proportion of the labour force) rose from 9.5 in 1976 to 11.1 in 1978, indicating a mild uptrend. When a comparison is made between Canada and the U.S., however, the latter exhibits a higher search rate. This evidence is one indication that, as the Canadian economy matures further, the rate of search may trend upward, indicating an income-elastic demand for "information". Price elasticity may also be a factor since communication is one industry with declining average costs.

(c) It is clear that search costs would be difficult to estimate from existing data, especially if welfare considerations are to be evaluated. The illustrative estimate of direct search costs we provide in the paper has the merit of providing a rough answer to the question of how much is spent on this activity in Canada. According to this estimate Canadians spent, in the form of lost output, approximately one billion dollars on job search in 1977. Even allowing for the roughness of our estimate, it seems certain that job search in Canada costs hundreds of millions of dollars whose output is expected to be better job-worker matching. This points up the importance of studying productivity of search.

(4) Conclusions and Policy Implications

The findings of this study suggest that job search is an extensive labour market activity costing in the neigh-

neighbourhood of a billion dollars a year. A number of indicators in our analysis point to a certain degree of inefficiency in Canadian job search processes. A most interesting finding of this paper relates to the extent of voluntary leaving. Voluntary leaving in Canada relative to the number unemployed is 50 to 150 per cent (depending on year) higher than is the case in U.S.

A number of policy implications can be drawn from our study, while bearing in mind the limitations of data.

(a) A clear inference of this study is that high rates of voluntary leaving may cause serious problems for attempts to lower the unemployment rate. Any efforts to lower the unemployment rate should pay particular attention to lowering the voluntary leaving rate.

(b) Policy-makers might consider creating (i) disincentives for leaving the job without prior search and (ii) incentives to search on-the-job. Advising Canadians through media ads about adverse market conditions when job leaving can be hazardous is the moral suasion approach to dissuading job leaving. A strong disincentive may be to put restrictions on UI benefits to voluntary leavers when the unemployment rate climbs above a certain level.

(c) Our analysis provides a profile of job searchers which can be used as a guide for the labour market information policies of government, especially for the Canada Employment Centres (CECs). Women and youth, two groups with high unemployment rates, do not use CECs as much as other groups. This is surprising because CECs are known to get job offers at lower end of the wage spectrum, where youths and women predominate. This low utilization rate should be a cause for concern.

RÉSUMÉ

Le projet d'étude sur la recherche d'emploi dont s'occupe le groupe de recherche sur le marché du travail du Conseil économique a pour objet d'étudier le comportement de recherche d'emploi des travailleurs canadiens*. Cette étude est centrée sur la place occupée par l'activité de recherche d'emploi sur les marchés du travail canadiens, les caractéristiques des Canadiens à la recherche d'un emploi, le temps passé à cette recherche et l'efficacité relative des différentes méthodes utilisées.

La présente étude se limite à l'examen des données de l'enquête sur la population active qui fournit des informations sur le nombre de personnes à la recherche d'un emploi -- personnes occupées ou en chômage -- leurs caractéristiques, le temps consacré à la recherche et les méthodes dont elles se servent. Au chapitre II, les auteurs passent en revue certains modèles à propos desquels, on peut conclure, qu'ils reposent sur le comportement individuel et ne rendent pas compte des questions relatives à la recherche d'emploi à un niveau agrégé. En outre, ils concernent uniquement les demandeurs d'emploi volontaires. Donc, l'orientation que fournissent les modèles de recherche d'emploi concernant les caractéristiques des demandeurs ne présente pas une valeur sûre.

* Voir d'autres études dans la même série A. Hasan et S. Gera, Reservation Wages, Duration of Job Search and Labour Markets, Document du Conseil économique du Canada n° 138, novembre 1979; et S. Gera et A. Hasan, Search Unemployment and Economic Returns to Job Search, Conseil économique du Canada, reprographié, janvier 1980.

Étant donné les limitations de la théorie et des données disponibles, une nouvelle façon d'aborder les questions soulevées ci-dessus a été élaborée. En premier lieu, l'activité de recherche est considérée dans un contexte global. En effet, les demandeurs d'emploi, qu'ils soient volontaires ou contraints de se trouver du travail pour cause de licenciement et qu'ils soient employés ou non, sont considérés globalement et permettent de mesurer la place occupée par la recherche d'un emploi. Cela nous permet de déterminer un taux global de recherche. Au chapitre III, on prend surtout en considération le cas des personnes employées qui sont à la recherche d'un autre emploi, alors qu'au chapitre suivant, il est question des demandeurs d'emploi chômeurs. Au chapitre V, on passe en revue les rapports mutuels qui existent entre certains facteurs importants à l'oeuvre chez toutes les personnes à la recherche d'un emploi. En outre, ce dernier chapitre traite des coûts de la recherche d'emploi.

Principales conclusions

1) La recherche d'emploi par des personnes occupées

a) Tout au cours de 1977, il y avait environ 270 000 Canadiens à la recherche d'un autre emploi, ce qui représente plus du quart de l'ensemble des demandeurs (occupés ou chômeurs). Afin d'étudier l'incidence de cette catégorie de demandeurs sur le marché du travail, on a élaboré un indicateur de l'importance du phénomène -- le taux de demande pour les non chômeurs, -- que l'on obtient en divisant le nombre de demandeurs non chômeurs par le nombre total de la population active. En 1977, la moyenne annuelle était de 2,8 %. On a trouvé que le taux

de demande pour les non chômeurs était plus élevé au printemps et pendant les mois d'été, et le plus bas en hiver, et également que les faits semblent indiquer l'existence d'une relation inverse entre le taux de chômage et le taux de demande des non chômeurs.

b) Au Canada, les demandes des non chômeurs sont moins nombreuses qu'aux États-Unis. Dans les mêmes conditions économiques, mesurées par le taux de chômage global, le taux américain de demande était, en mai 1976, de 4,2, soit un point de pourcentage plus élevé que le taux canadien de 3,0. Les différences de revenu par habitant, la grandeur du marché et le caractère régional de l'économie canadienne sont des facteurs importants pouvant expliquer le taux de demande inférieur au Canada. Néanmoins, des raisons portent à croire que le programme canadien d'assurance-chômage incite davantage à la recherche d'un emploi lorsque l'on est sans emploi.

c) Le coefficient rapportant les demandeurs non chômeurs (ES) aux demandeurs chômeurs (US) peut servir d'indicateur pour rendre compte de l'efficacité de la recherche et pour mesurer la concurrence que se font les demandeurs non chômeurs et les demandeurs chômeurs. Ainsi en 1977, pour trois demandeurs chômeurs, il y avait en moyenne un demandeur employé cherchant un autre poste.

2) La recherche d'emploi par les personnes sans emploi

a) De tous les individus comptés comme chômeurs, presque 90 % cherchent du travail. Les autres, qui ne cherchent pas (non demandeurs), ont été "mis à pied temporairement et attendent d'être rappelés", ou encore sont des personnes qui s'attendent

à prendre de nouvelles fonctions dans les quatre prochaines semaines ("emplois futurs"). Étant donné que les demandeurs chômeurs (US) représentent un pourcentage très élevé de tous les sans travail, on peut dire que les caractéristiques qui définissent les deux groupes sont analogues; et compte tenu de leur proportion au sein de la main-d'oeuvre, les femmes, les jeunes et les jeunes adultes sont surreprésentés dans la catégorie des chômeurs à la recherche d'un emploi. La seule différence à noter est que dans le groupe des demandeurs chômeurs, les cols blancs sont relativement surreprésentés par rapport à tous les chômeurs.

b) Des données qui ont trait à la période consacrée à la recherche d'un travail, on tire la conclusion importante suivante : les femmes et les jeunes consacrent moins de temps à se chercher un poste que les hommes adultes. D'autre part, le chômage sévit davantage chez les femmes et les jeunes. Certains économistes du travail disent que ces taux plus élevés sont compensés par la période plus courte de chômage, mais que cette différence de durée est si faible que l'argument perd beaucoup de sa pertinence. De plus, lorsque l'on prend en considération les mouvements de sortie et de retour à la population active, la durée de la recherche d'emploi, mesurée par la période pendant laquelle le demandeur est sans emploi, dépasse de loin la période de chômage et la différence entre ces deux périodes est surtout importante chez les femmes et les jeunes.

c) Pour donner une idée de l'intensité de la recherche effectuée, on s'est servi du "nombre moyen de méthodes utilisées" comme indicateur, toute mesure directe de cette intensité

étant impossible à déduire des données de l'enquête sur la population active. Cet indicateur indirect permet de montrer que les Canadiens utilisent un plus grand nombre de méthodes de recherche que les Américains. On remarque aussi ce qui suit : (i) l'intensité de la recherche est, semble-t-il, fonction de la connaissance des canaux d'information; (ii) notre mesure indirecte est un indicateur utile qui permet d'évaluer le sérieux des recherches; (iii) l'intensité est inversement proportionnelle à la durée de la recherche.

d) Les données fournies par l'enquête font apparaître qu'en très grand nombre, les demandeurs utilisent les services des Centres d'emploi du Canada. Cela étant, les données montrent aussi que ces centres sont peu efficaces. Il en va de même aux États-Unis, sauf que la différence entre le taux d'utilisation et l'efficacité des méthodes est de loin plus importante au Canada. Si on examine le taux d'utilisation des centres par catégorie de personnes à la recherche d'un emploi, on note que les jeunes et les femmes connaissent des taux de chômage plus élevés et s'adressent moins aux centres que les autres catégories. Les données américaines portent à croire que ce phénomène traduit une efficacité moindre de ces centres pour ces deux catégories.

e) Les chômeurs à la recherche d'un emploi peuvent être subdivisés en quatre sous-groupes, à savoir : (i) les démissionnaires; (ii) les licenciés; (iii) les nouveaux venus sur le marché du travail qui n'ont jamais occupé un poste; (iv) ceux qui réintègrent la population active.

Les démissionnaires qui disent chercher du travail (DÉMISSIONNAIRES) sont ceux qui, de leur propre chef, quittent leur emploi, alors que les chômeurs involontaires (LICENCIÉS) se trouvent sans travail du fait d'une décision de leur employeur.

D'après la définition traditionnelle des démissionnaires (personnes qui quittent un emploi et commencent aussitôt à en chercher un autre), on remarque que par rapport à tous les chômeurs, ils sont deux fois plus nombreux au Canada qu'aux États-Unis. En 1977, ils représentaient au Canada 28 % des chômeurs. Toutefois, si l'on considère les DÉMISSIONNAIRES sans prendre en compte le critère de la recherche immédiate (ainsi seraient aussi inclus dans la sous-catégorie des DÉMISSIONNAIRES, ceux qui, ayant quitté leur emploi, n'en cherchent pas un autre immédiatement), on voit qu'en 1977, 35 % étaient démissionnaires. Pourquoi y a-t-il tant de démissionnaires au Canada ? Pour peu qu'on s'attarde à leurs caractéristiques, on remarque qu'il y a chez eux une plus forte proportion de femmes. Aussi, on remarque qu'au fur et à mesure que le taux de chômage augmente, la proportion de démissionnaires dans le nombre global de chômeurs est moins forte, ce qui traduit une certaine sensibilité face à la conjoncture économique. Un autre facteur à prendre en considération, sans qu'il soit toutefois très important, pour rendre compte du nombre de démissionnaires, est l'aspect saisonnier. Enfin, il faut également faire une place au rôle joué par des institutions comme la famille et au mécanisme d'indemnisation de l'assurance-chômage, que l'on doit peut-être considérer comme des facteurs importants pour ceux qui veulent démissionner.

Les travailleurs licenciés représentent approximativement le même pourcentage de la population sans travail au Canada et aux États-Unis. On notera au passage, car la chose n'est pas dépourvue d'intérêt, que les données canadiennes ne corroborent pas l'opinion de Feldstein (1975) selon laquelle les travailleurs mis à pied attendant d'être rappelés forment une partie importante des licenciés. En effet, ils ne représentent respectivement que 16 % des travailleurs ayant perdu leur emploi et 8 % seulement de l'ensemble des chômeurs. En outre, il faut noter qu'un cinquième de ces personnes cherchent activement du travail, même si elles s'attendent à être rappelées.

3) La recherche d'un emploi au Canada - une vue d'ensemble

a) Les personnes volontairement à la recherche d'un emploi -- à savoir les démissionnaires et les personnes employées qui cherchent un autre poste -- comptent pour plus de la moitié de toutes les personnes à la recherche d'un emploi, contre seulement un tiers pour celles qui sont contraintes à rechercher un emploi (les travailleurs mis à pied ou qui perdent leur emploi); le reste des demandeurs étant soit des nouveaux venus sur le marché du travail, soit des personnes qui réintègrent la population active.

b) Le taux global de recherche au Canada (le nombre de personnes à la recherche d'un emploi -- employées ou en chômage -- par rapport à la population active) est passé de 9,5 en 1975 à 11,1 en 1978, ce qui indique une légère tendance à la hausse. Toutefois, si on compare la situation du Canada à celle des États-Unis, on constate que ce taux est plus élevé aux États-Unis; cela est une indication à mesure que l'économie canadienne élève

son degré de maturité, ce taux peut connaître une tendance ascendante révélant une demande d'"information" élastique au revenu. L'élasticité-prix peut aussi être un facteur à prendre en compte, car les communications sont un secteur à coûts moyens décroissants.

c) De toute évidence, il serait difficile d'estimer, à partir des données actuelles, les frais encourus pour la recherche d'un emploi, en particulier si l'on veut intégrer une évaluation de l'aspect bien-être. L'estimation relative aux frais directs de recherche donnée dans l'étude fournit, à tout le moins, une réponse approximative à la question de savoir combien d'argent les gens consacrent à la recherche d'un emploi au Canada. D'après notre estimation, en termes de production perdue, les Canadiens Y ont consacré en 1977 l'équivalent d'un milliard de dollars,. Même en tenant compte du caractère approximatif de l'estimation, il semble certain que cette activité coûte au pays plusieurs centaines de millions de dollars qui, on l'espère, permettent de mieux faire correspondre l'offre et la demande de travail. Tout cela montre bien l'importance que l'on doit accorder à l'étude du rendement des activités de recherche d'emploi.

4) Conclusions et implications de politiques

Les résultats de cette étude montrent que la recherche d'emploi sur le marché du travail constitue une activité importante qui coûte annuellement aux alentours d'un milliard de dollars. Certains indicateurs dans notre analyse font ressortir qu'il existe au Canada un manque d'efficacité dans les différents mécanismes de recherche. Une conclusion des plus intéressantes porte sur le nombre de démissions qui, par rapport au nombre

total de chômeurs, peut être de 50 à 150 % (selon l'année) plus élevé qu'aux États-Unis.

Nonobstant les limitations des données, l'étude permet donc d'inférer certaines mesures à prendre, à savoir :

a) Les taux élevés de démissionnaires risquent de causer des problèmes graves aux tentatives visant à faire fléchir le chômage. Tout effort concernant le chômage doit donc viser à abaisser le taux de démissionnaires.

b) Les responsables des politiques pourraient envisager :
(i) des "désincitations" à l'égard de ceux qui démissionnent sans avoir préalablement cherché un autre emploi, et (ii) des incitations pour ceux qui cherchent tout en continuant de travailler. Informer les Canadiens, par le moyen des médias, des conditions défavorables du marché de travail lorsque la démission présente un risque accru de chômage, constitue une approche persuasive en vue de dissuader des démissionnaires potentiels. Une autre désincitation importante peut être d'imposer certaines restrictions aux prestations de l'assurance-chômage servies aux démissionnaires, lorsque le taux de chômage dépasse un certain niveau.

c) Notre analyse fournit un profil des demandeurs d'emploi qui peut être utilisé comme guide pour les politiques d'information sur le marché du travail du gouvernement, surtout pour les Centres d'emploi du Canada. Comme on l'a dit, les femmes et les jeunes, qui connaissent des taux de chômage élevés, n'utilisent pas les CEC autant que les autres groupes. On a raison d'être surpris, car on sait que ces centres reçoivent une forte part de la

demande de main-d'oeuvre au bas de l'échelle des salaires, où
prédominent précisément ces deux groupes. Cette sous-utilisa-
tion ne devrait pas laisser indifférent.

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Chapter I: Objectives

A. Introduction

The prevalence, in recent years, of high unemployment rates coexisting with high rates of inflation -- the so-called stagflation phenomenon -- has confounded economists, policy-makers and the general public alike. One explanation of the stagflation phenomenon has been in terms of the natural rate hypothesis¹ (NRH), which has questioned the efficacy of government's aggregate demand management policies in reducing the unemployment rate below a certain floor without ever accelerating the inflation rate. Another approach, emerging from a detailed examination of turnover behaviour and demographic composition of the labour market, has questioned the unemployment rate itself as the key indicator of the state of the labour market.

This latter view has been shared by the Economic Council of Canada. In its study of the Canadian labour market, People and Jobs, the Council concluded that the single aggregate unemployment rate, without being supplemented by additional information, can be quite misleading both as a measure of labour market tightness, and of hardship.² This message was reinforced with greater emphasis in the Fifteenth Annual Review where the Council argued that "taken alone as the indicator of the state of the labour markets, it is likely to provide an

inadequate -- and, indeed, misleading -- basis for the formulation of macro-economic policy."³

The concept of job search is closely related to both these approaches. In its extreme formulation, the natural rate hypothesis attributes all unemployment to search. It is argued that time spent in job search is not unemployment but productive of better worker-job matching -- the concept of search unemployment. A key issue, therefore, is to examine what part of unemployment can, in fact, be regarded as due to search. This question is directly related to the meaning of the aggregate unemployment rate.

While few would deny that relative insufficiency of jobs is a major factor in high unemployment of recent years, a significant proportion can be accounted for by the fundamental changes that have taken place in the structure and characteristics of the Canadian labour market since the Second World War and especially since the last decade. These changes include not only the well-known demographic changes, but also changes in the number of earners per family, institutional changes, such as the revisions in 1971 of the Unemployment Insurance Act, and changes in attitudes and expectations concerning acceptable employment.⁴ These factors have added up to a larger proportion of "voluntary" or frictional unemployment, so that the "full employment rate of unemployment" is higher today than

it was a decade ago. One study estimates that the Canadian natural rate of unemployment is in excess of 6.0 per cent since 1972.⁵ Another study measures frictional unemployment directly and comes up with a steadily rising trend since 1961, reaching a rate of frictional unemployment in excess of 4 per cent in 1974.⁶

In view of the foregoing, we conclude that a study of job search is important for both theoretical and policy reasons.

B. Objectives of the Paper

A point that emerged consistently from Council's study People and Jobs is that macro-economic aggregates mask a tremendous diversity of labour markets with varying degrees of segmentation delineated by geography, demographics and economic structures. It became apparent that appropriate labour market policy responses must be carefully rooted in understanding the dynamics of the labour market processes at the more disaggregated level. Toward this objective, the Labour Markets Group has been charged with the study of the nature and extent of labour market imbalances into the 1980s.

A study of labour market imbalances -- shortages and oversupply of various types of labour -- must examine the mediation processes between demand and supply, the extent to

which they are effective, and the extent to which they fail and give rise to structural imbalances. The project on job search is one component of the study of the matching process. Job search may be viewed as a matching process where individuals with given labour productivity characteristics search for information related to jobs that most closely match their requirements. The first available job offer may not provide the most appropriate match. Job search in this sense adds to the duration of unemployment. However, with a better matching between jobs and people who hold them, overall productivity of resources is improved. The individual as well as the society gains. The process may be initiated voluntarily or generated by a layoff. An individual searching for the highest wage, if he is searching full time, appears as an unemployed individual in the official data. Seen in this light, job search activity generates a degree of frictional unemployment, at least for the voluntary job leavers. A portion of unemployment of those who begin their unemployment through job loss could also be so designated. To the extent that search process is a potent matching force and can be regulated through appropriate policies, it represents one option, a market-using option, for removing market "imbalances".

Although search activity is expected to improve the productivity of resources in the economy, we have seen that it generates unemployment which also represents costs both to the

individual and to the society. What amount of search is optimal for an economy becomes an important policy issue because the distribution of benefits and costs from search between the individual and the society is affected by government action. Search costs to the individual are lowered by a number of government programs, such as UI, mobility grants, provision of free LM information through placement services, etc. Even the provision of a maintenance allowance during training alters the relative desirability of continued search. Job creation programs similarly affect the expected gains from search. Decision between on-the-job and off-the-job search is affected by the UI treatment accorded the voluntary quits. Availability of labour market information during off-hours would also be a factor. Employers' search is also affected by labour market information provided by placement services.

To sum up, job search activity by individuals occurs in response to wage dispersion with the labour market. The stronger this response the more efficiently labour is allocated in the economy. But this higher productivity entails a certain amount of unemployment, as described above. If this process is alive and well, then aiding it would be an inexpensive way of curing certain types of imbalances and preventing other types from arising. From this perspective, the role of the job search project is then to examine the following four sets of questions: (i) how extensive is search activity? (ii) does it

work and if so, how strong a force is it? (iii) is it productive? and (iv) how does it stack up against other policies?

The present paper deals with the first question. Since 1975, the revised Labour Force Survey (LFS) has provided extensive new information on jobseekers. It was decided to utilize this source of information for a first look at the extent of jobseeking and its major correlates. Our first objective relates to an analysis of the overall 'magnitude' or the extent of job search taking place in the Canadian job markets. Individuals look for jobs not only when they are unemployed, but also while employed and even when they are counted as not-in-the-labour force. We find that search theory has focused on the voluntary searchers only at times treating all unemployment as voluntary. The empirical work also has concentration on the unemployed searcher ignoring on-the-job search. LFS data permit us a much more comprehensive look at the searcher population. Gauging the prevalence of job search activity involves an estimate of the 'quantity' of search in two dimensions: number of searchers and duration of their search. LFS data do not, unfortunately, provide information on the 'quality' of search. However, it is possible to develop rough proxies of intensity of search by using data available on methods of search used by jobseekers.

An analysis of the searcher characteristics is our second objective. We examine the demographic and personal

characteristics such as age, sex, marital status, education, etc.; job related characteristics such as occupation, industry, etc.; and, labour market related characteristics such as province and region. Our purpose is to inquire whether the incidence of search differs significantly between various groups of searchers and whether searchers are significantly different from the non-searcher population. These comparisons would suggest appropriate target groups for labour market information policies.

A third objective of the paper is to investigate the search input in some detail. We shall consider two variables on which information is available: the duration of search and the methods of search used. Here, again, differences in duration of job seeking between joblosers and jobleavers are examined as also between those who are unemployed for various other reasons. The choice of search methods used will be examined for each of these groups.

Fourth, we wish to assess the impact of aggregate demand conditions on each of the foregoing questions. Over the last three years, 1976-78, the aggregate national unemployment rate has been very high, but a comparison of the years 1976 and 1978 provides a difference of more than 1.5 percentage points in the unemployment rate. Greater variability is afforded by comparing various provinces since aggregate demand conditions among them are highly disparate.

Finally, in order to draw implications for labour market information policies, we would like to know how efficiently search is conducted. Unfortunately, the LFS does not contain information on wages and costs of search. It is possible, however, to develop some tentative indicators of how efficiently search dollars are allocated. Applying these notions to the aggregate behaviour of searchers, and comparing this behaviour with the U.S., wherever feasible, we are able to suggest how well the Canadian job search market is functioning. Using these indicators as a guideline, some implications for government labour market policies are drawn.

Chapter II: Methodology

A. Search Theory as a Guide

Since the seminal articles of G. Stigler,⁷ most economists agree that incomplete labour market information provides one rationale for unemployment of human resources. Information is an economic resource and search for information is time-consuming. According to search theorists, an individual searching for labour market information may appear in the official statistics as unemployed although his activities should be described as employed in the production of a better job.

The starting point of search theory is the micro behaviour of an individual. The main decisions confronting searchers are determining the appropriate amount (and quality) of information and the methods of acquiring information which are most efficient. There are a variety of micro-economic search models which explain how these decisions are taken. In the elementary job search model⁸ the searcher is assumed to know the parameters of the distribution of wage offers but not the wage rate associated with a particular job. The searcher also knows the cost of obtaining job offers, which are assumed to be independent random draws from the wage distribution. Searchers behave as if they have a reservation wage (RW), and the search process has been characterized as search for a wage greater than or equal to the reservation wage. The major

implications of the model are that the cost of search is negatively related to length of search and the expected post-unemployment wages while the wage offer distribution is positively related to the same two variables.

Theoretical literature on search behaviour has expanded rapidly in recent years and many attempts have been made to extend the elementary model to various real world situations.⁹ Advance search models look at various aspects of frictional unemployment including the discouraged worker phenomenon, occupational choice, labour market segmentation, turnover behaviour, retirement decisions, unemployment insurance, minimum wages and, of course, the Phillips curve. The relationship between search and employment status, which is of special interest to us has also been examined. An employed worker has two search options: on-the-job search and full-time (unemployed) search. The option chosen would depend upon the current wage rate of the worker and the costs and the expected gains associated with each type of search. These factors can be used to establish reservation wages (RW) for each type of search and these RWs can help to determine when an individual will prefer one state over the others.

Despite its recent advances, the role of search-theoretic explanations as a major factor in determining observed unemployment has been criticized for a number of reasons.¹⁰

First, a major criticism has focused on the small portion of unemployment or labour market behaviour that search theory can explain. This criticism has taken a number of forms. It is argued that search for job-related information is irrelevant where jobs are absent. In such cases, an unemployed individual is searching for any job rather than a better job. This argument suggests that job creation via macro-economic policies is the proper focus of public policy. Another argument contends that most search for jobs begins involuntarily through job loss rather than voluntarily through worker initiated job separation. Job search in such cases need not result in better job-worker matching. Furthermore, a large proportion of individuals who separate from jobs involuntarily are on short-term layoff, i.e., they are subject to recall to their former employers. It is argued that these individuals do not need to engage in search.

Second, search theory is basically a theory of micro behaviour, having little to say about the extent of search in the macro context. It tells us the conditions under which more or less search is undertaken by an individual but it does not tell us the genesis and persistence of distribution of wages. This is important since it is this dispersion of wages which eventually gives rise to profitability of search. As it stands, the theory does not present a complete, integrated explanation of labour market behaviour including how individuals choose their occupations, work and leisure pursuits over their

lifetime; how these decisions, together with the decisions of the employers, generate a distribution of wages which does not collapse into a single wage rate (for a homogeneous group of workers), despite search activities on the part of employers and employees.

Since, one of our major purposes in this paper is to examine the extent of job search activity we develop an aggregate measure of search, described by the concept of the search rate, \bar{s} . This rate is obtained by dividing the number of searchers (S) by the labour force (LF). Search theory has not looked at an aggregate measure like \bar{s} , but the search-theoretic framework may be used to explain the level and fluctuations of \bar{s} .

A third limitation of search theory can be seen in its focus on the unemployed. A major use of search theory has been made in terms of the rationalization it has provided for frictional unemployment. This role is limited, some critics of the theory argue, in that a considerable amount of search occurs on-the-job. Little theoretical or empirical work has been undertaken to explain search by the employed.¹¹ Our data permits an examination of this dimension of search.

Fourth, while dealing with the unemployed, search theorists have concentrated on voluntary unemployment. Our

interest related to global measures of search, i.e., both of the voluntary and involuntary variety. The distinction between the two is difficult to make not only in practice but theoretically as well.¹² Hence, it is all the more important to examine both categories of job search.

These limitations suggest that search theory, as it stands, does not directly address itself to the kinds of questions we raise in this paper. A second constraint on our use of search theory is imposed by the data available to us. Search theory proceeds by equating an individual's costs of search to expected returns from search as the fundamental equilibrating mechanism which determines, simultaneously, an individual's reservation wage and his duration of search. The Labour Force Survey (LFS) data do not include information on cost of search, wage expectations or wages. Hence, search theory cannot directly be applied. What we argue is that the equating of costs and returns from search affects the inflow of individuals into the pool of searchers as well as the duration of their stay. The LFS provides data on these two variables. Hence, although we do not observe the behind-the-scene operation of the cost-return calculus, data on searcher characteristics and duration of search provide valuable insight into the search process.

B. The Approach

The approach adopted in this paper takes into consideration the limitations of search theory and the data available to us. The data utilized in this paper are based on the Monthly Labour Force Survey (LFS) for the period January 1977 - December 1977. With the revisions implemented since 1975, the Labour Force Survey provides information on whether an individual searched for a job (in the previous 4 weeks) regardless of the employment status of the individual. (Persons not-in-the labour force are asked to identify their job search activity in the preceding six months.) For the unemployed, questions are also included on the reasons for job separation. This information can be cross-classified by the usual demographic variables, by education, industry, occupation and province, by methods of search and by duration of search for the unemployed.¹³

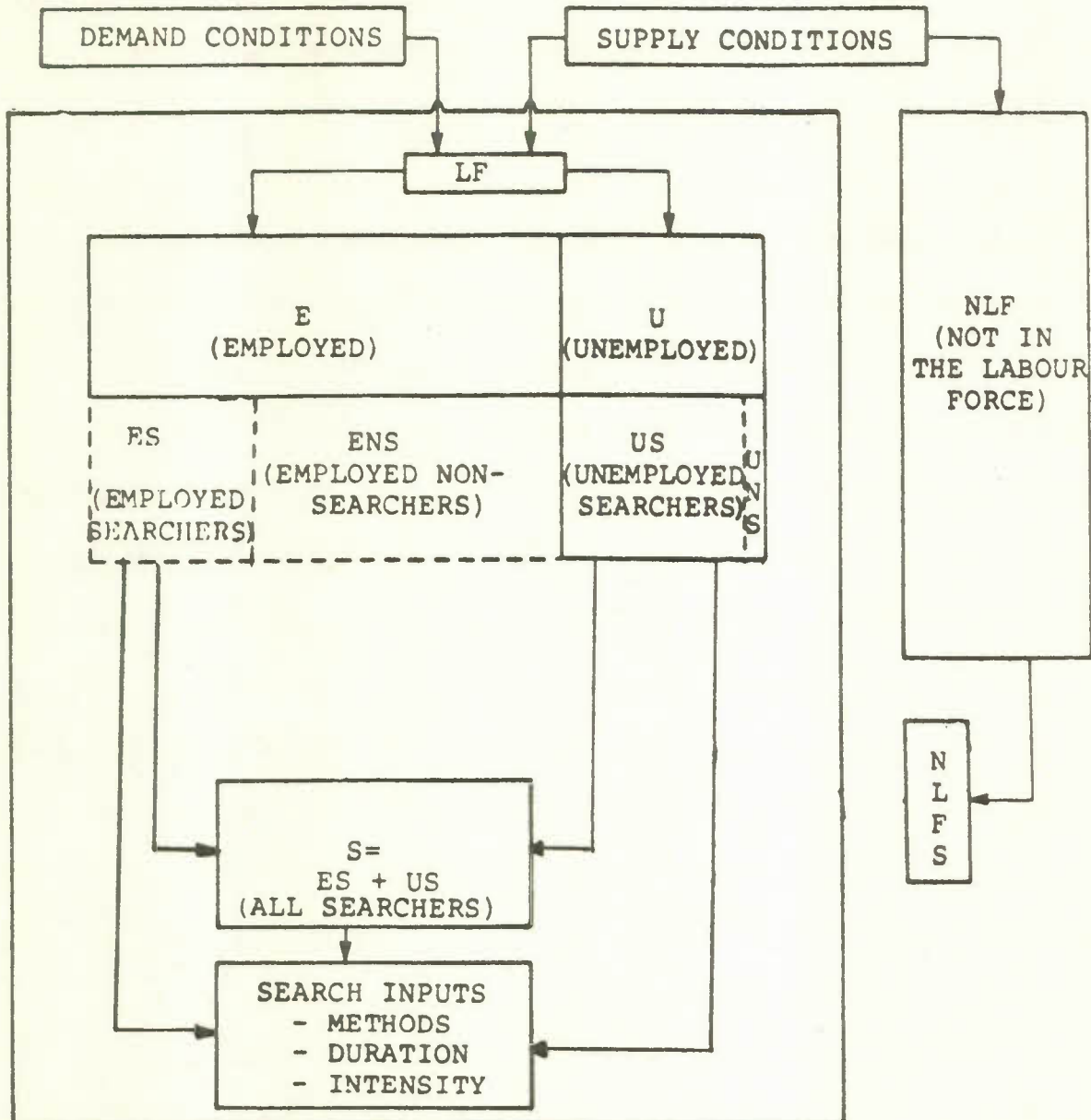
Our approach is best illustrated with reference to Figure II-1. Consider the total number of job searchers, S . They are composed of two groups, the employed searchers (ES) and the unemployed searchers (US). As mentioned earlier, search theory as well as the empirical work that has flowed from it, has concentrated on search among the unemployed, and, within this category, on voluntary unemployment only. Our approach is broader in that we consider not only the unemployed searchers but also the employed searchers. The employed and unemployed are then examined separately, in terms of their characteristics

and search inputs. On-the-job search is treated in Chapter III and search by the unemployed is examined in Chapter IV. Bringing together Chapters III and IV, we can obtain a global measure of the importance of search in the economy. This is presented in Chapter V.

Chapter VI summarizes our conclusions and develops certain indicators of search efficiency. From these indicators we are able to draw some policy implications. While some of our implications are of a general nature, a number of specific suggestions are also developed with respect to the UI program, the public employment service, labour market information policies and data development.

Figure II-1

Schematic Presentation: Job Search in
Relation to Labour Force Variables



Legend:

- LF = Labour Force
- NLF = Persons not in the Labour Force
- E = Employed Labour Force
- U = Unemployed Labour Force
- S = All Searchers (Employed + Unemployed)
- ES = Employed (Job) Searchers
- ENS = Employed Non-Searchers
- US = Unemployed (Job) Searchers
- UNS = Unemployed Non-Searchers
- NLFS = Searchers not in the Labour Force

Chapter III: On-the-Job Search

A. Introduction

In 1977, on an average each month, some 270 thousand Canadians were looking for another job while still employed. Employed searchers made up more than a quarter of all jobseekers (employed and unemployed) and some 2.8 per cent of the employed labour force. Despite its magnitude, on-the-job search has been almost entirely ignored by economists as an important element determining labour market outcomes. Job search by the employed workers represents a highly significant aspect of labour market dynamics, for a number of reasons. First, it is an important determinant of labour market flows. An individual may be led to a change in job, to full time (unemployed) searching, or to a spell out of the labour force as a result of search on the job. Second, an unemployed searcher must obviously compete for jobs not only with other unemployed individuals but also with employed searchers. As a result, the post-unemployment wage, the duration of unemployment, or both, can be affected by job search by the employed. Third, job search by the employed provides one explanation of wage movements. It is a major force for upward mobility and in the job-worker matching process in the labour market. This factor alone indicates the need for a careful study of employed searcher behaviour.

This chapter is divided into four additional sections. In Section B, we treat the motivations behind employed job

search and look at the determinants of on-the-job search in the light of search theory. Section C examines the behaviour of the aggregate employed search rate. Sections D and E look at methods and intensity of search, respectively.

B. Determinants of On-the-Job Search
and the Search Theoretic Framework

What factors explain the incidence of on-the-job search? From the search theoretic perspective, an individual has to make two related decisions. One is the decision to search and the other is the decision to search on or off the job.

Data on motivations for job-search by the employed can throw some light on the first decision. Although these data are not available for Canada, a survey conducted in the U.S.¹⁴ is instructive since we suspect that motivations for job search are unlikely to be very different between American and Canadian workers. Persons who had been employed for 4 weeks or more were asked whether they had "looked for another job" in the prior 4 weeks. If they had, they were then asked the main reason for looking. The responses indicate that two out of three of the employed jobseekers wanted a different job because they were dissatisfied with their present job. They wanted higher wages or salary (34 per cent), better hours or working conditions

(11 per cent), better advancement opportunities (10 per cent), better use of their own skills (9 per cent). Other reasons for looking included: want summer jobs (8 per cent), job ending or losing job (8 per cent), job seasonal or temporary (3 per cent) and other reasons (14 per cent). These results indicate that only about one in 10 searchers reported they were losing or expecting to lose their regular, seasonal or temporary job.

The decision to search on or off the job would depend upon the current wage rate of the worker and the costs and the expected gains associated with the two types of search. These factors can be used to establish reservation wages (RW) for each type of search which in turn determines when an individual will prefer one or the other search mode. If W represents the current wage, RW the reservation wage when an individual is unemployed and K contains all the out-of-pocket expenses of job quitting (including the loss of fringe benefits, human capital, etc.), then it can be demonstrated¹⁵ that an individual will quit and engage in full-time search when

$$W < RW - k \quad (III-1)$$

This framework is useful for analysing the decision to search on or off the job at the micro level. However, it has no direct implication for the proportion of labour force that will choose to search in one form or another. In order to examine this issue, we turn to the concept of employed search rate.

C. Employed Search Rate

We have seen above how the search theoretic framework can be used to examine the incidence of on-the-job search. As an indicator of the extensiveness of search, the number of these searchers is meaningful only when related to the volume of employment. This provides us with the concept of the employed search rate (\bar{s}_e). This rate is obtained by dividing the number of on-the-job searchers (S_e) by total employment (E)

$$\bar{s}_e = \left(\frac{S_e}{E} \right) \cdot 100 \quad (\text{III-2})$$

The explanation of s_e in the search theoretic framework is a complicated matter for two principal reasons. First, the volume of E is itself dependent on search activity and second the decision to search on or off the job is also an endogenous variable dependent on relative rewards to search in the two states of labour force activity. As an elaboration of this latter point, consider the following. As returns to search on the job increase (relative to costs), one would expect more S_e . However, if returns to full-time (unemployed) search are rising even faster, then it is possible that an individual may choose to search off the job rather than at work, thus decreasing S_e and E simultaneously. It is not apparent on a priori grounds as to which effect should dominate. These

considerations can be illustrated with reference to Table III-1 which presents monthly data on employed search rate, \bar{s}_e for the period 1976-1978.

Seasonality of Employed Search

We notice, first, an element of seasonality: \bar{s}_e is higher for the spring and summer months and lowest in winter. One explanation could simply be the availability of job opportunities which exhibits similar seasonality. And job opportunities may in turn be a good proxy for expected rewards from search. A different explanation for seasonal variations in \bar{s}_e might be the following. The same population (of seasonal workers) is always looking for permanent (year round) employment; in the summer most are employed and in the winter more are unemployed. Hence \bar{s}_e is higher in summer.¹⁶

Table III-1

EMPLOYED-SEARCH RATE (\bar{S}_e) BY MONTH, 1976-1978

Months	1976	1977	1978
January	..	2.2	2.1
February	..	2.8	2.9
March	..	3.0	3.0
April	..	3.0	3.1
May	..	3.2	3.1
June	..	3.2	3.2
July	..	2.6	3.2
August	..	2.8	3.1
September	2.7	3.0	3.1
October	2.5	2.5	3.1
November	2.3	2.6	3.0
December	..	2.2	2.7
Annual Average (\bar{S}_e)	2.6*	2.8*	3.0*

*Based on annual average data.

Source: Statistics Canada, 71-001, various issues.

Cyclical Behaviour of Employed Search

The cyclical behaviour of \bar{S}_e is even more complicated. In the expansion phase of the cycle, the employed search rate could increase if more of the employed are drawn into searching. More individuals could also, however, be motivated into quitting their job to search full time thus lowering \bar{S}_e . A possible scenario could then be that anticipation of higher wages elsewhere might cause employed individuals to decide to search. Hence S_e goes up; this leads to a higher volume of quits (Q); larger number of quits reduce the volume of

employment (E) as well as S . Hence the impact on search rate, \bar{s}_e , is indeterminate, from purely theoretical considerations, and becomes an empirical matter.

Sufficient data do not exist to allow us to examine the cyclical sensitivity of employed search behaviour. Cross-sectional unemployment rate data by province can, however, be used as a proxy for Canadian economy's movement through different phases of the cycle.¹⁷ Regressing provincial data on \bar{s}_e against provincial unemployment rates (see Table III-2 and Figure III-1), a negative but statistically insignificant relationship is found. However, our assumption of structural similarity among provinces may not be fully justified. The Atlantic provinces clearly represent a sharper structural variation from other regions. Taking out the observations for Atlantic provinces gives a statistically significant negative relationship between search rate and unemployment. Higher unemployment rate (looser job markets) causes cautious behaviour on the part of jobseekers. There is less jobseeking activity. This result is in broad agreement with what we would expect from search theory.

Table III-2

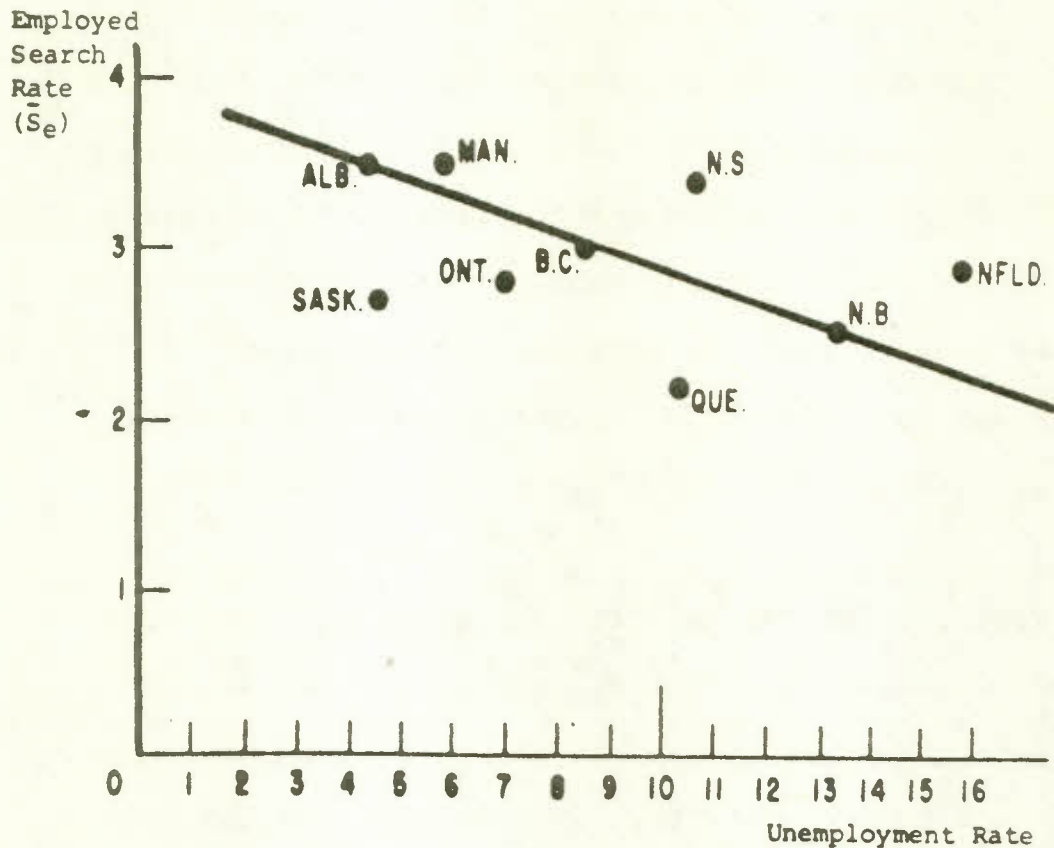
EMPLOYED SEARCH RATE AND UNEMPLOYMENT RATE,
1977

Province	\bar{s}_e	U-rate
Newfoundland	3.1	15.9
Prince Edward Island	...	10.0
Nova Scotia	3.4	10.7
New Brunswick	2.6	13.4
Quebec	2.2	10.3
Ontario	2.8	7.0
Manitoba	3.5	5.9
Saskatchewan	2.7	4.5
Alberta	3.5	4.4
British Columbia	3.0	8.5

Source: LFS Public Use Micro Data Tape, 1977; and Statistics Canada, 71-001.

Figure III-1

RELATIONSHIP BETWEEN THE EMPLOYED SEARCH RATE
AND THE UNEMPLOYMENT RATE, 1977



\bar{s}_e and the Long Run Trend

While the above provides some evidence of a negative relationship between the rate of unemployment (u-rate) and the employed search rate, a paradoxical result appears when the annual data on \bar{s}_e (see Table III-1) are put together with the annual unemployment rate. The employed search rate rose from 2.6 in 1976 to 3.0 in 1978, while the u-rate also moved up from 7.1 (in 1976) to 8.4 (1978).

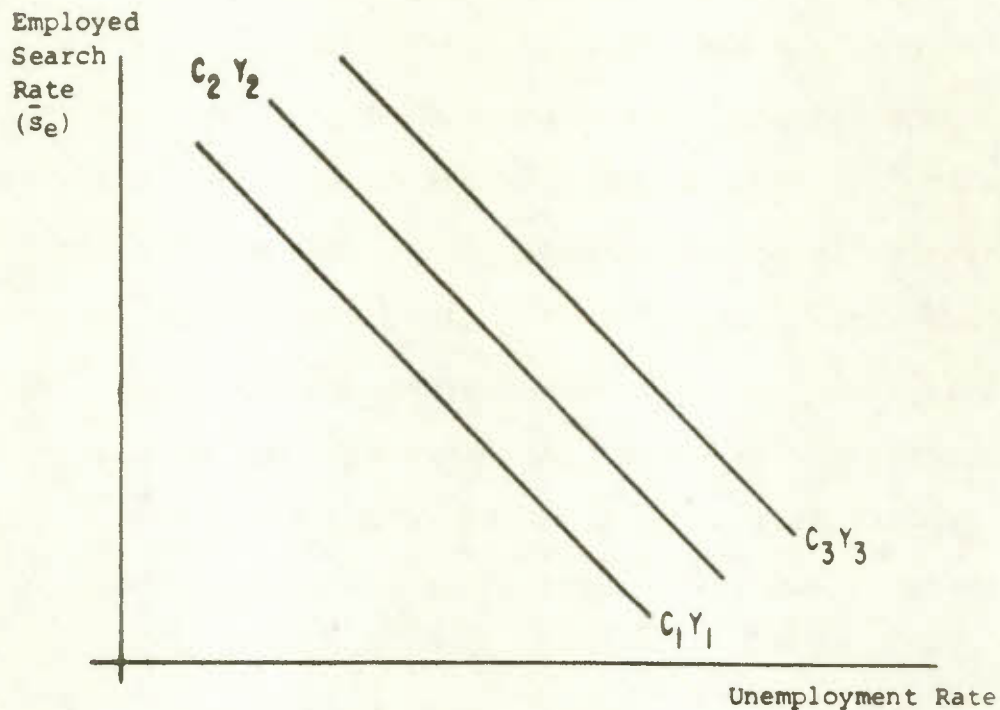
The apparent paradox could be explained by a long-run upward trend in \bar{s}_e , in the following manner. There are two reasons why \bar{s}_e may have an upward trend over time. First, the real cost of employed search may fall over time relative to other prices. This may happen if cost of information gathering declines with improvements in the communications industry -- the price effect. Second, the demand for "information", including labour market information, may be income elastic. As per capita incomes rise over time, there is more than proportionate increase in demand for information, since the society becomes more future and planning oriented.

In Figure III-2, we exhibit a negative relationship between \bar{s}_e and u , keeping the cost of information gathering, C , and per capita income, Y , constant. As these factors change, the negatively sloped curve shifts. It will shift to the right if C falls (relative to other prices) or Y rises, or both.

The foregoing reasoning provides one explanation for both a negative cyclical relationship between s_e and u and a positive relationship between \bar{s}_e and u , over time. The nature of this argument must be viewed as speculative since data sufficient to establish trend in \bar{s}_e are not available.

Figure III-2

RELATIONSHIP BETWEEN THE EMPLOYED SEARCH RATE
AND THE UNEMPLOYMENT RATE



Comparison with the United States

One bit of evidence supportive of the above reasoning is provided by data from the U.S. The U.S. survey of on-the-job search, referred to earlier, came up with a search rate of 4.2 (May 1976). Although this figure must contain some seasonal and cyclical elements, we note from Table III-1 that the Canadian search rate fluctuated between a low of 2.1 to a high of 3.1 and at no time approached the U.S. figure, despite significant changes in the u-rate over the period examined (1976-78).¹⁸

The higher per capita income and the different institutional and economic structure of the U.S. and the Canadian economy would be obvious explanations for the differences between the U.S. and the Canadian search rate. It is difficult to isolate the independent contribution of the two factors. Among the institutional elements, that could play a role, the greater generosity of the Canadian UI program may be a factor inducing a greater proportion of Canadian jobseekers, relative to the U.S., into full-time (unemployed) searching, instead of on-the-job search. As to the income effect, we leave it as an untested hypothesis that part of the reason for a higher search rate in the U.S. may lie in the higher per capita income of that country.

D. \bar{s}_e by Selected Searcher Characteristics

Further insight into jobseeking behaviour is afforded by the employed search rate disaggregated by selected searcher characteristic, depicted in Table III-3. A number of interesting conclusions emerge from the table.

First, it is apparent that employed search is a pervasive phenomenon. Even in Newfoundland, a province with unemployment rates as high as 16 per cent, the percentage of employed individuals looking for another job is high, relative

Table III-3

EMPLOYED SEARCHERS & EMPLOYED-SEARCH RATES,
SELECTED CHARACTERISTICS, 1977

Classifying Variable	Employed Searchers		Employed Search Rate (%)
	No. ('000)	%	
<u>1977 Annual Averages</u>			
Total	270	100.0	2.8
<u>Sex</u>			
Male	169	62.6	2.8
Female	101	37.4	2.8
<u>Age</u>			
15-19	66	24.4	6.9
20-24	74	27.4	5.0
25-44	102	37.8	2.3
45-64	22	8.2	0.8
65+	6	2.2	3.4
<u>Marital Status</u>			
Married	130	48.2	2.0
Others	140	51.9	4.5
<u>Education</u>			
Elementary	27	10.0	1.6
Secondary	182	67.4	3.2
Diploma	30	11.1	2.6
Degree	31	11.5	3.1
<u>Job-Market-Related Characteristics</u>			
<u>Industry</u>			
Primary	16	5.9	2.3
Manufacturing	41	15.2	2.2
Construction	25	9.3	3.9
Transportation	18	6.7	2.2
Trade & Finance	64	23.7	2.9
Public Administration	105	38.9	3.1
<u>Occupation</u>			
Managerial & Professional	48	17.9	2.2
Clerical-Sales-Service	126	46.7	3.1
Primary occ.	30	11.1	2.4
Fabrication	17	6.3	1.9
Construction	24	8.9	3.6
Transportation	25	9.3	3.3
<u>Type of Job</u>			
Full-time	199	73.7	2.3
Part-time	71	26.3	6.4
<u>Provinces</u>			
Newfoundland	5	1.9	3.1
P.E.I.	...	...	...
N.S.	10	3.7	3.4
N.B.	6	2.2	2.6
Quebec	56	20.7	2.2
Ontario	105	38.9	2.8
Manitoba	15	5.6	3.5
Sask.	11	4.1	2.7
Alberta	30	11.1	3.5
B.C.	32	11.9	3.0

Source: Based on Public Use Micro Data Tape, LFS, Statistics
Canada, 1977.

to the Canadian average. It is often argued that search theory has limited operational role in circumstances where jobs are scarce. We know from other evidence that vacancy rates in Newfoundland are lower than the Canadian average. Despite this adverse climate, on-the-job search appears to be extensive relative to the Canadian average.¹⁹

Second, females are as likely to be searching on the job as are males. From the search-theoretic perspective, there is no a priori reason why \bar{s}_e should be different for the two groups.²⁰

Third, a well recognized proposition of search theory states that job seeking should decline with age since younger age groups have longer time-horizon over which to amortize search costs. As anticipated by search theory, \bar{s}_e is significantly high for younger age groups, and, for the same reason, among unmarried individuals. The low rates for individuals in the age bracket 45-64 may reflect the high job-specific human capital content which are not portable.

Fourth, part-time workers have \bar{s}_e almost three times as large as others. It is easier for these employees to combine search with work than it is for full-time employees. The cost of on-the-job search is presumably lower for part-time

workers relatively to full-time employees. Job dissatisfaction may be another reason: many part-timers are "involuntarily part-time" and looking for full-time work.

Fifth, there is some evidence of seasonality reflected in high search rates for occupations and industry which have seasonal operations (e.g., construction). The relatively low rate for fabrication occupations may be due to assembly line and time-punch modes of work environment which may make on-the-job search relatively difficult to pursue. The lower than average rate for managerial and professional occupations is consistent with the notion of greater satisfaction with more prestigious occupations.

E. Methods, Intensity and Effectiveness of Search

So far, we have focused on the number of employed searchers, their characteristics and on the related search rates. In this section, we look at other dimensions of search, namely methods, intensity and effectiveness of search. Before proceeding further, we note that data on the duration of search of the employed are not available for Canada.²¹

Employed individuals who identify themselves as searchers are asked by the LFS to state their methods of search. This information can be used to develop the utilization rate,

which is defined as the percentage of job searchers who used a given method in the four week reference period. This variable adds another dimension to the "quality" of search. In keeping with earlier work,²² job search methods available to searchers can be divided into two broad categories:

(i) Formal Channels

- (a) Public Employment Service (PES);
- (b) Private Employment Agency;
- (c) Looking at advertisements and placing or answering advertisements;
- (d) Union hiring halls;
- (e) Other methods, e.g., use of school or college placement bureaux and professional registers, etc.

(ii) Informal Channels

- (a) Checking with friends and relatives;
- (b) Contacting employers directly.

Table III-4 provides utilization rates for three major methods of search (and one catch-all category), by selected searcher characteristics. Contracting employers is by far the most utilized method; about two-thirds of searchers used this

approach. Looking at ads is the next most common method, followed closely by the use of the public employment service (PES). This relative importance of methods holds, by and large, across age, sex and other searcher characteristics noted in Table III-4. However, a few exceptions should be mentioned.

Other generalizations emerging from Table III-4 include the following. First, direct contact of employers diminishes with age; about 76 per cent of young jobseekers (age 15-19), utilized this method as compared with 59 per cent of the age group (45-64). On the other hand, looking at ads increases in significance with age. Use of PES by age reveals that prime age workers (25-44) use it the least compared with other age groups.

Second, the use of PES diminishes with educational attainment jobseekers while looking at ads increases in significance with greater education. Less use of PES by the highly qualified manpower may be due to the lower penetration of the highly qualified manpower market by PES as well as a cause of the lower penetration. Direct contact of employers also diminishes with educational attainment.

Data are not available on the number of hours that employed searchers spend in looking for work per week. This variable is usually identified as intensity of search. One proxy for the intensity variable can be developed from the

Table III-4

UTILIZATION RATE OF SEARCH METHODS BY CHARACTERISTICS
OF EMPLOYED SEARCHERS, 1977

1977 Annual Averages	Employed Searchers ('000)	Contacted Employers Directly	Used Public Employment Agency	Looked At Ads	Used Other Methods	Average Number of Methods Used
Total	270	65.2	29.3	36.7	24.1	1.55
<u>Age</u>						
15-19	66	75.8	33.3	31.8	22.7	1.64
20-24	74	66.2	32.4	37.8	24.3	1.61
25-44	102	63.7	25.5	40.2	26.5	1.56
45-64	22	59.1	31.8	40.9	27.3	1.59
65+	6	..	..	..	..	..
<u>Sex</u>						
Male	169	65.7	29.6	34.3	25.4	1.55
Female	101	65.4	28.7	40.6	21.8	1.56
<u>Education</u>						
None or elementary	27	66.7	37.0	25.9	22.2	1.52
High School (some or completed) & some post secondary	182	66.5	31.3	36.3	24.2	1.58
Post Secondary Certificate or Diploma	30	63.3	23.3	40.0	23.3	1.47
University Degree	31	61.3	16.1	48.4	25.8	1.52
<u>Occupation</u>						
Managerial & Professional	48	64.6	18.8	39.6	22.9	1.45
Clerical-Sales-Service	126	64.3	29.4	40.5	23.0	1.57
Primary Occupations, Mining & Processing	30	70.0	40.0	26.7	23.3	1.60
Fabrication	17	64.7	29.4	29.4	23.5	1.47
Construction	24	62.5	33.3	25.0	33.3	1.54
Transportation	25	72.0	32.0	36.0	24.0	1.64
<u>Industry</u>						
Agriculture & Other Primary Industries	16	68.8	37.5	31.3	25.0	1.63
Manufacturing	41	63.4	31.7	36.6	24.4	1.56
Construction	25	64.0	32.0	28.0	36.0	1.60
Transportation	18	66.7	27.8	38.9	22.2	1.56
Trade & Finance etc.	64	65.6	25.0	37.5	23.4	1.52
Community, Business & Personal Service & Public Administration	105	66.7	27.6	39.1	20.9	1.54
<u>Job Tenure</u>						
1 to 6 months	150	62.0	34.0	34.0	24.7	1.55
7 to 12 months	29	62.1	27.6	41.4	24.1	1.55
1 to 5 years	68	61.8	22.1	41.2	23.5	1.49
6 to 10 years	15	66.7	20.0	33.3	20.0	1.40
11 to 20 years	5	60.0	20.0	40.0	20.0	1.40
20 & over years	2	...	...	...	...	...
<u>Changed or Found Job</u>						
Yes	83	69.9	31.3	28.9	25.3	1.55
No	187	63.6	28.3	40.1	23.0	1.55

(1) The sum of the methods does not equal the total because an individual may use more than one method.

(2) Other methods include use of private employment agencies, unions, friends or relatives, placed or advertised ads school placement offices, professional registers, etc.

Source: Based on Public Use Micro Data Tape, LFS, Statistics Canada, 1977.

methods data: the greater the number of methods used the more intensive the search. Thus, average number of methods used becomes a measure of intensity of search. Clearly, the measure is rather a poor one: some individuals may simply use one method very intensively while others may use more methods but only infrequently. However, a comparison of average number of methods by characteristics is included in Table III-4. On the average, employed Canadian jobseekers use 1.55 methods. Variations by age, sex and other characteristics are marginal. Youths and young adults use marginally larger number of methods. These data on average number of methods assume some significance when compared with those for the unemployed searchers. This will be taken up in Chapter IV.

How effective is search by the employed? Which methods of search are most useful in landing a job? Again, LFS data do not have direct observations on these questions. However, there is information on the number of individuals who changed or found jobs in the survey month and were employed in the survey month and the month preceding. This number expressed as a proportion of all employed jobseekers is present in Table III-5.

Table III-5

ON-THE-JOB SEARCHERS WHO CHANGED OR FOUND JOBS¹
AS A PROPORTION OF ALL ON-THE-JOB SEARCHERS
BY AGE AND BY SEX, 1977

Age	Male	Female	Both Sexes
15 - 19	40.5	34.5	37.9
20 - 24	33.3	27.6	31.1
25 - 44	27.5	24.2	26.5
45 - 64	28.6	25.0	27.3
65 +	25.0	--	16.7
All Age Groups	32.5	27.7	30.7

1 Covers only job changers who are employed in both months,
t - 1 and t.

Source: Based on Public Use Micro Data Tape, LFS, Statistics
Canada, 1977.

On average, about one-third of on-the-job searchers also reported that they changed or found jobs. Males were marginally more successful than females (33 vs. 28). The highest percentage appears to be for male youths (age group 15-19) followed by females in this age category (41 and 35).

It is interesting to relate this evidence to search methods shown in Table III-4. A comparison of utilization rates of search methods between those who changed or found jobs and those who didn't is shown in the last two rows. A chi-square test reveals no significant difference in the utilization rates of 'contacted employers directly' and used 'public employment agency' between job-changers and non-changers. Looking at ads, however, contributes less to job-changing than the two methods just mentioned.

F. Competition With the Unemployed

Employed searchers represent competition for the unemployed. The 270 thousand employed searchers when added to the 777 thousand unemployed searchers increased the total number of persons looking for jobs in 1977 by about 35 per cent. On average, for every three unemployed searchers there was one employed person who looked for another job, which provides a measure of competition unemployed searchers face from the employed jobseekers.

The employed searchers provide more competition in some groups of the unemployed than in others, as is apparent from Table III-6. To the extent that different age and sex classifications represent different labour markets, unemployed males face more competition from the employed than do females and prime age unemployed individuals experience greater competition relative to other age categories. Educational categories provide an interesting insight into on-the-job search. Unemployed persons with diplomas or degrees experience much greater employed searcher competition. This no doubt reflects the career opportunities inherent in the professional fields, as well as the smaller risk of unemployment.

While searchers with the foregoing characteristics need not imply separate labour markets, the occupational, industrial and provincial designations do approximate this

Table III-6
EMPLOYED-UNEMPLOYED SEARCHER RATIO, 1977

Classifying Variable	Searchers		Unemployed to Employed Searchers Ratio	Classifying Variable	Searchers		Unemployed to Employed Searchers Ratio
	Employed (000)	Unemployed (000)			Employed (000)	Unemployed (000)	
Total	270	777	0.35				
<u>Sex</u>				<u>Marital Status</u>			
Male	169	433	0.39	Married	130	373	0.35
Female	101	344	0.29	Other	140	403	0.35
<u>Age</u>				<u>Education</u>			
15-19	66	195	0.34	Elementary	27	154	0.18
20-24	74	194	0.38	Secondary	182	532	0.34
25-44	102	266	0.38	Diploma	30	59	0.51
45-64	22	119	0.18	Degree	31	31	1.00
65 +	...	...	...	
<u>Job-Market-Related Characteristics</u>							
<u>Industry</u>				<u>Province</u>			
Primary	16	41	0.39	Newfoundland	5	29	0.17
Manufacturing	41	152	0.27	Prince Edward Island	...	...	...
Construction	25	96	0.26	Nova Scotia	10	32	0.31
Transportation	18	43	0.42	New Brunswick	6	32	0.19
Trade and Finance	64	149	0.43	Quebec	56	264	0.21
Public Administration	105	235	0.45	Ontario	105	254	0.41
<u>Occupation</u>				Manitoba	15	24	0.63
Managerial and Professional	48	75	0.64	Saskatchewan	11	16	0.69
Clerical - Sales	126	310	0.41	Alberta	30	33	0.91
Primary Occupation	30	99	0.30	British Columbia	32	88	0.36
Fabrication	17	75	0.23				
Transportation	24	92	0.26				
Construction	25	66	0.38				

Source: Based on LFS, Statistics Canada, Public Use Micro Data Tape, 1977.

condition. Again the employed-unemployed search ratio exhibits considerable variability. The highest ratio, by industry, is found in the service sector -- transportation, trade and finance and public administration. Occupationally, managerial and professional occupations have by and large the highest ratio.

Chapter IV: Search Off-the-Job

A. Introduction

Economists agree that a certain amount of unemployment will always arise in the normal functioning of a labour market. In a changing economy, the composition of labour force participants is subject to continual flux. Individuals move into and out of jobs and this turnover represents a substantial fraction of the labour force during a year. An expanding economy encourages labour force participation and facilitates job change by quits. Workers quit jobs and search for more lucrative opportunities. A slack economy inhibits labour force participation and induces employers to lay off workers and to search for more productive replacements. Thus, the labour force turnover is stimulated by the business cycle. The job search process is an important element of the labour turnover phenomenon.

Critics of search theory have pointed out that unemployment due to search for a better job per se is a small part of total observed unemployment: most job searches are initiated by involuntary job loss; once unemployment occurs the duration of search is conditioned by the availability of any job rather than a better job; individuals on temporary layoff do not have to search since they expect to be recalled to their former employers and that layoffs are an important portion of all unemployment. These issues form the subject matter of this chapter.

A global view of the unemployed searcher population is provided in Section B, paying special attention to how these patterns accord with search theory explanations. We examine searcher characteristics such as age, sex, education, occupation and industry, to determine their importance in the search process. The duration of search and duration of joblessness data are also examined in Section C. In Section D, methods and intensity of search are treated and a major problem with the Canadian public employment service is identified. Section E is devoted to reasons for job separation with particular emphasis on the voluntary leaving phenomenon. The proportion of voluntary leaving is examined in terms of characteristics of job leavers and cyclical sensitivity of voluntary leaving. Among the involuntary causes of unemployment we pay special attention to individuals who are on layoff and who expect to be recalled by their former employers. Finally, in Section F, we raise the question whether voluntary leaving is excessively high in Canada.

B. Unemployed Searchers: Global View

Not all individuals defined as unemployed²³ by Statistics Canada are jobseekers. The number of unemployed during 1977 averaged 862 thousand. Of these, 777 thousand stated they were looking for a job while 85 thousand did not search. Thus, 90 per cent of the unemployed were jobseekers.

It is this group of individuals, the unemployed job searchers (US), on which we presently focus. As seen in Table IV-1, the group of non-searcher unemployed population consists of a portion of individuals who are on layoff (OLO) expecting to be recalled to their former employers (55 thousand) and persons with a job to start within four weeks of the reference week (the future starts) who were available for work during the reference week (30 thousand).

Table IV-1
NUMBER AND PERCENTAGE OF UNEMPLOYED BY
JOBSEEKING STATUS, 1977

	Total Unem- ployed	Looked for Work				Did Not Look for Work		
		Total	With- out Work	On Lay- Off	Future Starts	Total	On Lay- Off	Future Starts
Number ('000)	862	777	730	13	34	85	55	30
Per cent	100.0	90.1	84.5	1.5	3.9	9.9	6.4	3.5

Source: Based on Public Use Micro Data Tapes, LFS, Statistics Canada.

Table IV-2 presents data on the unemployed jobseekers by selected characteristics. To make this distribution meaningful, comparable data on the labour force are also included. Since unemployed searchers form such a large percentage of all unemployed, some very familiar conclusions emerge: (a) females account for roughly 44 per cent of the searcher population but, in relation

Table IV-2

UNEMPLOYED JOB SEARCHERS BY SELECTED CHARACTERISTICS, 1977

Characteristics	Unemployed Searchers		Labour Force Per Cent Distribution
	Number (000)	Per Cent of Unemployed Searchers	
Total	777	100.00	100.00
<u>Sex</u>			
Male	433	55.7	61.9
Female	344	44.3	38.1
<u>Age</u>			
15 - 19	195	25.1	11.1
20 - 24	194	25.0	15.8
25 - 44	266	34.2	45.0
45 - 64	119	15.3	26.4
65 +	2	...	1.7
<u>Education</u>			
Elementary	154	19.8	17.8
Secondary	532	68.5	60.8
Diploma	59	7.6	11.6
Degree	31	4.0	9.8
<u>Industry*</u>			
Primary	41	5.3	7.2
Manufacturing	152	19.6	19.6
Construction	96	12.4	7.1
Transportation	43	5.5	8.3
Trade & Finance	149	19.2	22.6
Public Administration	235	30.2	34.8
<u>Occupation*</u>			
<u>White Collar:</u>			
Managerial & Professional	48	6.2	21.2
Clerical-Sales- Service	310	39.9	41.1
<u>Blue Collar:</u>			
Primary Occupations	99	12.7	12.8
Fabrication	75	9.7	9.1
Construction	92	11.8	7.3
Transportation	66	8.5	8.0

* Distribution of unemployed searches by industry and by occupation does not add up to 777,000 because some unemployed jobseekers fail to identify their industry and/or occupation of previous attachment.

Source: Based on Public Use Micro Data Tapes, LFS, Statistics Canada.

to their proportion in the labour force, they are significantly over-represented (44 vs 38); (b) teenagers and young adults (age 20-24) are, likewise, over-represented in the searcher category relative to their proportions in the labour force -- these younger persons make up half of all unemployed searchers; (c) about 88 per cent of searchers have educational attainment of secondary school or less, a higher percentage than is the case with the labour force; (d) white-collar occupations account for 46 per cent of all searchers, which is significantly lower than the corresponding percentage for the labour force (46 vs 62).

C. Duration of Unemployment

An important dimension of job search is that of weeks spent in search. Duration of unemployment²⁴ is the result of a complex set of forces such as the state of the labour market, the cost and the expected returns of search and so on. Here, our concern is limited to an analysis of duration data as a factor reflecting the extent of search among searchers with certain characteristics.

Labour force survey data on duration consist entirely of incomplete spells of unemployment.²⁵ Two different measures of duration, the average and the distribution of weeks of unemployment are shown in Tables IV-3 and IV-4. The average

duration,²⁶ is a shorthand way of expressing duration of unemployment for a class of searchers while frequency distribution by weeks of unemployment provides a better measure of concentration of unemployment. These data confirm a familiar theme of turnover literature that demographic groups with high unemployment rents have lower duration of unemployment. The duration of unemployment is shorter for women than for men (averaging 14.4 weeks vs 14.6) and shorter for young persons than for other age groups (13.1 weeks vs 15.0 weeks for 20-44 years, 17.6 weeks for 45 years and over). However, the differences observed in duration data are very small and not much comfort can be drawn from them.

In a recent paper, Clark and Summers (1978) have pointed out that the shortness of average spell of unemployment has been overemphasized. Their argument is based on the fact that duration of measured unemployment does not measure correctly the length of period an individual is without a job. A fundamental flaw of the duration data emerges in its failure to consider labour force transitions. Most spells of unemployment end not in employment but in labour force withdrawal.

Table IV-3

AVERAGE DURATION OF UNEMPLOYMENT, 1977

	Average duration of unemployment (in weeks)
<u>Both sexes</u>	14.5
15 - 24 years	13.1
25 - 44 years	15.0
45 years and over	17.6
Married	14.9
Single	13.7
Other	17.5
<u>Men</u>	14.6
15 - 24 years	13.0
25 - 44 years	15.1
45 years and over	18.1
Married	15.1
Single	13.9
Other	18.2
<u>Women</u>	14.4
15 - 24 years	13.3
25 - 44 years	14.8
45 years and over	17.0
Married	14.7
Single	13.3
Other	17.1

Source: Statistics Canada, The Labour Force, Catalogue No. 71-001 monthly, December 1977, p. 87.

Table IV-4

DISTRIBUTION OF UNEMPLOYED INDIVIDUALS BY WEEKS LOOKING
FOR WORK, BY CHARACTERISTICS OF UNEMPLOYED SEARCHERS,
1977

		Duration of Job Search (in weeks)			
		1 to 4	5 to 10	11 to 26	27 and over
		(Percent of Unemployed Searchers)			
<u>1977 Annual Averages</u>					
	Total	29.3	23.8	30.5	16.3
<u>Age</u>	15 - 19 years	35.9	25.6	27.2	11.2
	20 - 24 years	30.8	25.4	31.2	16.1
	25 - 44 years	27.5	23.4	31.4	17.8
	45 - 64 years	21.9	20.9	34.5	22.7
	65 +	--	--	--	--
<u>Sex</u>	Male	29.2	24.3	31.7	16.4
	Female	30.7	23.4	29.8	16.7
<u>Education</u>	None or elementary	25.0	21.8	33.2	20.0
	High school (some or completed) and some postsecondary	30.4	24.3	29.8	15.5
	Postsecondary certificate or diploma	30.8	23.9	29.2	16.1
	University degree	30.6	26.4	29.4	13.7
<u>Occupation</u>	Managerial and professional	30.9	24.0	27.9	16.8
	Clerical-sales service	29.6	23.6	30.3	16.6
	Primary occupations, mining and processing	27.8	22.8	33.1	16.3
	Fabrication	25.6	22.1	34.1	16.1
	Construction	28.6	25.1	31.9	14.8
	Transportation	26.5	24.5	31.1	17.6
<u>Industry</u>	Agriculture and other primary industries	28.5	23.7	34.2	13.9
	Manufacturing	25.3	22.9	33.3	18.5
	Construction	28.1	25.5	31.9	14.6
	Transportation	26.7	23.5	30.7	19.3
	Trade and finance, etc.	29.0	23.6	30.9	16.6
	Community, business and personnel service and public administration	31.0	23.7	29.2	16.0
<u>Provinces</u>	Newfoundland	23.5	21.7	31.7	22.4
	Prince Edward Island	27.5	25.0	40.0	15.0
	Nova Scotia	25.6	22.2	32.8	20.0
	New Brunswick	22.8	21.6	35.0	21.9
	Quebec	26.2	22.1	32.4	19.5
	Ontario	30.2	25.5	29.5	14.9
	Manitoba	35.4	27.5	28.8	8.8
	Saskatchewan	40.6	25.6	26.3	9.4
	Alberta	51.2	26.1	11.5	5.2
	British Columbia	31.5	24.7	29.9	14.8

Source: Based on Public Use Micro Data Tapes, LFS, Statistics Canada, 1977.

Many of the individuals counted as out of the labour force are functionally indistinguishable from the unemployed. Many re-entrants would almost certainly be better classified as job-losers and leavers completing long spells of unemployment rather than as entrants starting a new spell of unemployment.²⁷

We intend to carry out work along these lines for Canadian data at a later stage. Presently, let us consider the distribution of unemployed searchers by duration of joblessness by sex. This is presented in Table IV-5.

Table IV-5

PER CENT DISTRIBUTION OF UNEMPLOYED SEARCHERS BY
DURATION OF JOBLESSNESS, BY SEX

Sex	Less than 1 month	1-3 months	4-6 months	7-12 months	13-24 months	2 years and over
Male	5.9	35.5	26.2	20.8	8.1	3.6
Female	11.2	21.6	20.8	21.2	14.4	10.6

Source: Based on LFS Public Use Micro Data Tapes.

It is clear from the table that, contrary to the duration of unemployment data, females are clearly more concentrated in the upper ranges of the distribution than are males.

D. Methods, Intensity and Effectiveness of Search

In the search literature, it is hypothesized that both market conditions and individual characteristics of the searcher

would affect utilization rates. In a slack labour market, for example, searchers might depend more on informal search methods. In tight labour markets, workers might prefer to use high-cost formal methods, such as private employment agencies, since the return may justify any fees paid.²⁸ Table IV-6 provides utilization rates by selected searcher characteristics.

Table IV-6 shows that, overall, "contacted employer directly" was the most common method of search -- two out of three jobseekers reported using this method. The second most frequently used method was contacting "public employment agency", being used by 60 per cent of the jobsearchers, while about 40 per cent of searchers reported "looking at ads". The next four methods had relatively low utilization rates: "placed or answered ads" (15 per cent), "checked with friends or relatives" (13 per cent), "checked with union" (4 per cent). Only about one per cent used a job search method not listed above.

The predominance of direct employer contact and public employment services (PES) utilization is manifest in all categories of searchers. However, while the relative importance of methods remains the same across most of the searcher categories, there are some significant variations within that structure that may be noted.

Table IV-6

UTILIZATION RATES BY METHODS OF SEARCH BY SELECTED SEARCHER CHARACTERISTICS, UNEMPLOYED JOBBEEKERS, 1977

	Used Public Employment Agency	Checked with Private Employment Agency	Checked with union	Contacted Employer Directly	Checked with Friends and Relatives	Placed or Answered Ads	Looked At Ads	Other Methods
Total	60.2	5.1	4.1	68.7	12.7	14.5	39.7	0.9
<u>Age</u>								
25 years & over	58.3	5.5	6.3	65.9	11.7	14.8	39.1	1.0
15-19 years	56.9	4.1	1.0	73.3	14.4	13.3	38.9	0.5
20-24 years	67.4	5.3	2.7	69.5	12.8	14.9	41.7	1.1
<u>Sex</u>								
Male	63.9	4.9	6.8	68.8	13.4	13.2	36.4	1.2
Female	55.1	5.3	0.6	68.3	11.4	16.1	43.7	1.2
<u>Marital Status</u>								
Married								
Other								
<u>Education</u>								
None or elementary	61.8	3.3	6.6	64.5	11.2	7.2	28.3	0.7
High School (some or completed) and some Post Secondary	60.2	4.9	3.2	69.3	12.8	15.4	42.1	0.2
Post Secondary Certificate or Diploma	58.6	6.9	5.2	68.9	12.1	17.2	43.1	1.7
University Degree	51.6	12.9	3.2	70.9	16.1	25.8	48.4	3.2
<u>Occupation</u>								
Managerial and Professional	58.8	11.8	2.9	73.5	14.7	29.4	44.1	2.9
Clerical-Sales-Service	51.3	5.1	2.6	74.4	12.8	17.9	41.0	2.6
Primary occupations, mining and processing	57.5	6.6	0.6	68.5	12.7	19.3	49.2	1.1
Fabrication	61.1	3.9	1.6	68.3	11.9	13.5	39.7	0.8
Construction	59.1	4.6	1.8	72.7	13.6	9.1	31.8	0.9
Transportation	66.7	...	3.3	33.3	10.0	6.7	10.0	...
<u>Industry</u>								
Agriculture and other primary industries		-	-	-	-	-	-	-
Manufacturing	63.6	4.2	8.1	67.4	12.6	11.9	35.8	1.1
Construction	63.3	6.7	6.7	66.7	13.3	16.7	36.7	1.3
Transportation	62.5	12.5	2.5	62.5	12.5	25.0	50.0	1.3
Trade and Finance, etc.	60.3	7.9	2.0	70.9	13.3	17.9	45.7	2.0
Community, Business and Personnel Service and Public Administration	58.6	5.2	1.3	68.5	11.6	15.5	40.5	1.3

1 The sum of the methods does not equal the total because an individual may use more than one method.

2 Other methods include use of school placement offices, professional registers, etc.

Source: Based on information provided by LFS Division, Statistics Canada.

Relative to other age groups, teenagers (15-19) appear to rely more on informal methods such as contacting employers directly. They exhibit a relatively lower utilization rate of public employment agency, especially in comparison to the 20-24 age group. Given that youth unemployment is a matter of wide public concern, that obtaining the first job may represent the toughest hurdle for them, and that PES provides free service, one would expect that youth would rely more on public agencies. The contrary result suggests two possibilities: either youths are unaware of the facilities provided by PES or the facilities are not seen as meeting their needs.²⁹ Since young adults (20-24) seem to be making much greater use of PES it is probable that PES could improve its performance by actively seeking out unemployed teenagers. Perhaps greater linkages with school employment and counselling services are required.

In addition, females also make less use of public employment services. This brings up a more general point. Unemployment in recent years has often been viewed as a special problem of youth and secondary workers. Both these groups, utilize PES less than the average searcher. In this report, we cannot go into details of why this is so. On the surface, our findings point to target areas where PES performance could be modified.³⁰

A more serious problem with the PES is observed when we compare utilization rates with the success ratio of search methods. The success ratio is defined as how often, in percentage terms, a method is successful in landing a job. In the absence of any current data, Table IV-7 presents, in descending order, the ranking of success ratio of methods of search employed by Canadian jobseekers in 1971. The corresponding ranking of the utilization ratio is also indicated.

Table IV-7

RANKING OF METHODS OF SEARCH BY SUCCESS RATIO
AND UTILIZATION RATES, 1971

	Gower's Data	
	Success Ratio	Use Ratio
Check with Employers	1	1
Friends or Relatives	2	3
Check with Trade Union	3	5
Place or Answer Ads	5	4
Canada/Quebec Manpower Centres	4	2
Private Employment Agency	6	6

Source: D. E. Gower, "Job Search Patterns in Canada", Special Labour Force Studies, Series A, No. 10, 1975.

With reference to the PES we find that while its utilization rate is ranked high (2) its success ratio is much lower (4). In general, the rank correlation coefficient between the two series is low; Gower gets a coefficient of .26. He rationalizes the low coefficient, and especially the discomfoting figures for PES, by noting that Canada Manpower Centres - CMC's - (or Quebec MC's) do not hire employees but merely refer them to prospective employers, which might lead respondents to identify job placement with employer visits rather than with the PES. Gower's argument doubtless has some merit. We suspect, however, that it does not explain the whole problem; the discrepancy between utilization and the success ratio is so wide that inaccuracy of reporting alone is not a sufficient explanation. Given the low success ratio for the PES, its higher utilization rates may simply be a waste of jobseekers' time and of corresponding public funds in support of PES. The argument here is not to reduce the utilization rate of PES but to increase its effectiveness.

In the absence of direct data on intensity we use a proxy measure, namely the average number of methods (ANUMET) used per searcher. The higher the average number of methods used, the more intensive job search is likely to be. While the average measure cannot be linked to hours of search directly, we contend that differences in average number of methods used is a useful indicator of differences in intensity of search among individuals and groups of individuals.

Table IV-8 presents data on average number of methods used by selected searcher characteristics. No notable differences between males and females are found. There is a high degree of positive correlation between years of education and number of search methods used. Teenagers use lower number of methods than young adults. The average number of methods used by managerial and professional workers is significantly greater than that used by other occupational groups. Transportation workers used a smaller number of methods on average, probably reflecting highly specialized markets and the importance of union hiring halls. The difference between part-time and full-time workers is noteworthy, the former using far fewer methods of search, on average.

An indication of how intensity varies with the duration of search is also included in Table IV-8. Length of search and intensity can affect each other in a number of ways. A more intensive search can reduce the duration of unemployed search, other things being equal. On the other hand longer duration of unemployment can also induce greater intensity of search -- as an individual becomes more desperate he might search more intensively. The contrary case is also possible: given the availability of social security benefits and the fruitlessness of search when unemployment is high, some searchers might get discouraged and not search so intensively. It is observed from

the table that search intensity appears to be at a maximum when individuals are unemployed between 5 to 10 weeks and diminishes gradually thereafter. Search is least intensive for individuals unemployed between 1 to 4 weeks, since a proportion of such individuals may not even begin their job search during this period.

Table IV-8

AVERAGE NUMBER OF METHODS USED BY SELECTED
SEARCHER CHARACTERISTICS, 1977

Searcher Category	Average No. of Methods Used (ANUMET)	Searcher Category	Average No. of Methods Used (ANUMET)
<u>Sex</u>		<u>Occupation</u>	
Male	2.08	White Collar:	
Female	2.02	Managerial and professional	2.38
		Clerical-sales-service	2.08
<u>Marital Status</u>		Blue Collar:	
Married	-	Primary occupations	
Other	-	mining and processing	2.15
		Fabrication	2.01
<u>Age</u>		Construction	1.93
15-19 yrs	2.03	Transportation	1.33
20-25 yrs	2.14		
15-24 yrs	2.09	<u>Industry</u>	
25 yrs & over	2.03	Agriculture and other	
		primary industry	-
<u>Education</u>		Manufacturing	2.05
None or elementary	1.84	Construction	2.11
High school (some or		Transportation	2.29
completed)		Trade & finance, etc.	2.18
Some post-secondary	2.09	Community business and	
Post-secondary certi-		personal service and	
ficate or diploma	2.14	public administration	2.03
University degree	2.32		
		<u>Type of Job</u>	
<u>Weeks looked for a job</u>		Full-time	2.42
1- 4 weeks	1.93	Part-time	1.98
5-10 weeks	2.17		
11-26 weeks	2.12		
27-39 weeks	2.03		
40 and over 40 weeks	2.05		

Source: Based on information provided by LFS Division, Statistics Canada.

The Canadian figure for ANUMET is 2.06 for 1977, which is somewhat higher than comparable U.S. data, 1.58 (for 1976 when the U.S. unemployment rate, 7.7, was closer to the 1977 Canadian rate of unemployment 8.1).³² The higher Canadian figure is probably due to the larger UI coverage in Canada and a more universal requirement that all potential UI beneficiaries register with public employment agencies.

E. Unemployed by Reason for Leaving Last Jobs

In this section and the one following we examine the unemployed searcher population disaggregated by reason for leaving last job. New-entrant unemployment then is excluded from consideration by definition. As we shall see below the re-entrant unemployment can be accorded alternative treatment.

As noted before, critics of search theory have argued that search unemployment is a small part of total unemployment. One way to examine this issue is to look at the number of spells of unemployment that can be classified as initiated by the employee himself. There are a number of definitional issues here which need to be clarified first.

Consider the components of flow into unemployment. They fall into two groups: one group consists of the individuals who move into unemployment from employment and the other from

outside the labour force. This latter group is subdivided into those who enter the labour force for the first time -- the new-entrants -- and those who have a prior employment history -- the re-entrants.

Data from the Labour Force Survey identify reason for job separation for all individuals with a previous employment history. These can be used to identify job leavers and job losers in two alternative ways. The broader approach considers all individuals who moves from employment to unemployment, whether directly or as a re-entrant. The traditional (and narrower) definition applies the reason for job separation only for those individuals who move directly from employment to unemployment, and treats the re-entrants as a separate group and disregards whether they left their jobs voluntarily or not.

A second problem arises in terms of the reasons of job separation which should be included to identify voluntary leaving. The LFS questionnaire records the following reasons for job separation: own illness or disability, personal or family responsibilities, going to school, quit job for no specific reason, lost job or laid-off, changed residence, dissatisfied with job, retired, and other reason not elsewhere specified. The definition of "job losing" is quite clear: all individuals identifying "lost job or laid-off" as a reason for job separation are included in this category. Job leavers, then, could be

identified by all the remaining causes of job separation. This would be the broader view of job leaving. A narrower view would exclude "own illness or disability", "retired", and "other reasons".

In the section that follows we use reasons for job separation for all individuals with a prior employment history -- if that employment occurred in the last five years -- to define job leaving. Also, we take the broader definition of job leaving, as identified in the previous paragraph. Later in Section G we use the traditional way of counting the job leavers, i.e., by excluding the re-entrants. In addition, "own illness or disability", "retired" and "other reasons" are also excluded to define job leavers.

Voluntary Leaving

Table IV-9 shows the incidence of voluntary leaving in Canada. From column 5 of this table it is clear that voluntary leavers represent a large component of the unemployed. The incidence of voluntary leaving represents an important feature of the Canadian labour market. Although the data are not sufficient to examine the behaviour of voluntary leaving over the business cycle, Table IV-9 suggests that as the overall unemployment conditions worsens, the u-rate rises, the ratio of voluntary leavers to total unemployment falls.

Table IV-9

INCIDENCE OF VOLUNTARY LEAVING IN CANADA,
1975-78

Year	u- rate (%)	Volun- tary * leavers (000)	Total Unem- ployed (000)	Total Employed (000)	Voluntary Leavers as a % of		
	(1)	(2)	(3)	(4)	Unem- ployed	Employed	Labour Force
1975	6.9	325	697	9284	46.6	3.5	3.3
1976	7.1	303	727	9479	41.7	3.2	3.0
1977	8.1	326	862	9648	37.8	3.4	3.1
1978	8.4	340	911	9972	37.3	3.4	3.1

* For definition see page 58.

Source: 71-001, Statistics Canada, various issues.

As noted earlier, all voluntary leavers may not be searchers. If we look at the proportion of searchers among the voluntary leavers, we find that, on average in 1977, about 76 per cent of leavers were engaged in job search. This figure bears an unfavourable comparison with the 90 per cent searcher component among all unemployed. Table IV-10 provides the number and percentage distribution of voluntary leaver-searchers (VLS) by selected characteristics. About 56 per cent of voluntary leaver-searchers (VLS) are females; youths and young adults make up about 50 per cent, a proportion very similar to their weight in the unemployed searcher group. Married individuals are less numerous than non-married VLS and about two-thirds of all VLS reside in Quebec and Ontario.

A more interesting analysis is in terms of relative likelihood of unemployed searchers leaving their job voluntarily. We designate this by the ratio of VLS to total unemployed searchers in that category which expresses the likelihood that an unemployed searcher will be a voluntary leaver-searcher. This information is in the last column of Table IV-10. Women have much higher likelihood to be a VLS than men (0.40 vs 0.25). Within age categories, youth (20-24 group) are more likely to be a VLS. A more instructive way of looking at the possibility of quitting for younger persons would be to exclude new entrants from the unemployed category. The new entrants by definition have no job they can quit. Looked at this way we find that youth with some employment experience do indeed exhibit a greater likelihood to quit than the average worker. Data by marital status indicate that married individuals have a marginally lower probability to quit than others. By province, Albertans and residents of Saskatchewan exhibit a very high probability to be VLS. Manitoba, B.C. and Ontario are also higher than average. Other things being equal, lower unemployment rate tends to encourage voluntary leaving.

Table IV-10

VOLUNTARY LEAVER-SEARCHERS (VLS) BY SELECTED CHARACTERISTICS, 1977

	Voluntary Leaver- Searchers (VLS)		VLS as proportion of total unemployed searchers in that category
	Number	% of Total	
Total	247	100.0	0.32
<u>Sex</u>			
Male	109	44.1	0.25
Female	138	55.9	0.40
<u>Age</u>			
15-19	63	25.5	0.32
20-24	68	27.5	0.35
25-44	83	33.6	0.31
45-64	33	13.4	0.28
65+			
<u>Marital Status</u>			
Married	116	45.1	0.34
Other	140	54.9	0.36
<u>Province</u>			
Newfoundland	6	2.4	0.20
Prince Edward Island			
Nova Scotia	11	4.4	0.34
New Brunswick	8	3.2	0.25
Quebec	71	28.7	0.27
Ontario	90	36.4	0.35
Manitoba	9	3.6	0.38
Saskatchewan	7	2.8	0.44
Alberta	15	6.1	0.46
British Columbia	31	12.5	0.35

Source: Based on Public Use Micro Data Tape, LFS, Statistics Canada.

Involuntary Job Separation

Table IV-11 shows the incidence of involuntary job loss in Canada. In 1977, the annual average number of involuntarily unemployed was 466 thousand. This constituted almost 55 per cent of the total unemployed. Indeed, involuntary job separation is a significant fraction of unemployment in Canada.

Table IV-11

INCIDENCE OF INVOLUNTARY JOB SEPARATION IN CANADA,
1975-78

Year	u-rate (%) (1)	Involuntary Unemployed (000) (2)	Total Unemployed (000) (3)	Total Employed (000) (4)	Involuntarily Unemployed as % of		
					Unem- ployed (5)	Employed (6)	Labour Force (7)
1975	6.9	313	697	9,284	44.9	3.4	3.1
1976	7.1	375	727	9,479	51.6	4.0	3.7
1977	8.1	466	862	9,648	54.1	4.8	4.4
1978	8.4	499	911	9,972	54.8	5.0	5.0

Source: 71-001 Statistics Canada, various issues.

Job loss is a key indicator of economic cycles. Involuntarily unemployed as a proportion of total unemployed should therefore increase with the rate of unemployment. Table IV-11 confirms this expectation.

Not all involuntarily unemployed persons are job searchers, but more than 85 per cent are. A distribution of involuntarily-unemployed searchers (INVUS) by selected characteristics is portrayed in Table IV-12. Column 2 gives the distribution by INVUS category. It is instructive to look at Column 3 which gives the percentage INVUS make of total unemployed searchers by the appropriate characteristics being considered.

Involuntarily unemployed searchers (INVUS) formed 51 per cent of all unemployed searchers. That is, the likelihood that an unemployed searcher in INVUS is 0.51. The likelihood is

much greater for males than for females (0.61 vs 0.40), and for young adults (20-24) than for teenagers 15-19. This is presumably reflective of the new entrant phenomenon which is more highly concentrated in age group 15-19 than in 20-24 -- new entrants do not have a job they can lose. Looking at education categories we find that the likelihood of job loss decreases significantly with education. By province, individuals in the Maritime provinces and in Quebec face significantly higher probabilities of job loss than do other Canadians. In terms of occupations, construction, managerial and professional, and primary occupations exhibit higher likelihood of job loss than do other occupations. The incidence of job loss is higher for individuals in mining and construction than for individuals in other industries.

F. Temporary Layoffs

A component of involuntarily unemployed which requires special treatment consists of laid-off individuals who expect to be recalled to their former employers. Feldstein (1975) has recently pointed out the importance of temporary layoffs in the theory of unemployment.³² He has used the magnitude and behaviour of this group to point out weaknesses in search theory's approach to unemployment. He argues that temporary layoffs account for about 50 per cent of all unemployment spells

among all persons classified as involuntarily unemployed and in manufacturing about 75 per cent of laid-off workers return to their original employers. Based on data from the current population survey (CPS) conducted in March 1974, Feldstein estimated that only 10 per cent of laid-off workers were engaged in search for alternative jobs. The extent of job search among laid-off workers being so low, he questioned search theories that "equate unemployment with search and job change", and suggests that search theory is not appropriate in explaining the behaviour of a substantial portion of unemployed workers. Moreover, the ending of a spell of unemployment for workers on temporary layoff is not voluntary, as implied by search theory, since it depends on the decision of the employer.

In this report we define temporary layoffs as laid-off individuals who expect to be recalled by their former employers within six months. Table IV-13 shows that in each of the years for which comparable data exist temporary layoffs as a proportion of total unemployed were significantly higher in the United States than in Canada.

Table IV-12

INVOLUNTARILY UNEMPLOYED SEARCHERS (INVUS)
BY SELECTED CHARACTERISTICS, 1977

Category	INVUS		INVUS as proportion of total unemployed searchers in that category (3)
	Number (1)	% of Total (2)	
Total	398	100.0	0.51
<u>Sex</u>			
Male	262	65.8	0.61
Female	136	34.2	0.40
<u>Age</u>			
15-19	81	20.4	0.42
20-24	104	26.1	0.54
25-44	144	36.2	0.54
45-64	68	17.1	0.57
65+	--	--	--
<u>Education</u>			
Elementary	89	24.7	0.58
Secondary	238	66.1	0.45
Diploma	23	6.4	0.39
Degree	10	2.8	0.32
<u>Province</u>			
Newfoundland	18	4.5	0.62
Prince Edward Island	3	0.8	0.75
Nova Scotia	16	4.0	0.50
New Brunswick	19	4.8	0.59
Quebec	154	38.7	0.58
Ontario	118	29.7	0.47
Manitoba	10	2.5	0.42
Saskatchewan	7	1.8	0.44
Alberta	11	2.8	0.33
British Columbia	41	10.3	0.47
<u>Occupation</u>			
Mgmt. & Prof.	32	8.0	0.67
Cler. Sales & Serv.	144	36.2	0.46
Primary Occ.	66	16.6	0.67
Fabrication	48	12.1	0.64
Construction	68	17.1	0.74
Transportation	40	10.1	0.61
<u>Industry</u>			
Primary	27	6.8	0.66
Manufacturing	91	22.9	0.60
Construction	72	18.1	0.75
Transportation	24	6.0	0.56
Trade & Finance	74	18.6	0.50
Public Admin., etc.	109	27.4	0.46

Source: Based on LFS Micro Data Tape, 1977.

Table IV-13

INCIDENCE OF TEMPORARY LAYOFFS IN CANADA AND THE UNITED STATES
1975-1978

Year	u- rate %	Temporary Layoffs (000) (1)	Total Unemployed (000) (2)	Total Employed (000) (3)	Ratio [1/2] (%) (4)	Ratio [1/3] (%) (5)	Ratio [1/2+3] (%) (6)
1975 Canada	6.9	88	690	9284	12.8	0.95	0.88
U.S.A.		1662	7838	84783	21.2	1.96	1.79
1976 Canada	7.1	67	727	9479	9.2	0.71	0.66
U.S.A.	7.7	1040	7288	87485	14.3	1.19	1.10
1977 Canada	8.1	67	850	9648	7.9	0.69	0.64
U.S.A.	7.0	853	6856	90545	12.4	0.94	0.88
1978 Canada	8.4	62	911	9972	6.8	0.62	0.57
U.S.A.		...	...	...	...	...	...

Source: Statistics Canada, 71-201, 1978 U.S.A., B.L.S. and Employment and Earnings various issues.

Columns (5) and (6) show the likelihood of being laid-off temporarily faced by an employed individual and for the labour force, respectively. Relative to the U.S. the proportion of unemployment accounted for by temporary layoffs is much smaller in Canada. Column (4) gives the ratio of temporary layoffs to total unemployed. This ratio displays negative relationship with respect to the u-rate ranging from 12.8 per cent of the unemployed in 1975, when the unemployment rate was a relatively

Table IV-14

PERCENTAGE DISTRIBUTION AND INCIDENCE OF LAYOFFS
CANADA AND THE U.S.A., 1977

AGE/SEX	Percentage Distribution						Incidence		
	Canada			U.S.A.			Canada		U.S.A.
	Temporary Layoffs (1)	Unem- ployment (2)	Employ- ment (3)	Layoffs (4)	Unem- ployment (5)	Employ- ment (6)	Ratio [1/2]	Ratio [1/3]	Ratio [4/5]
Male	Total	62.9	55.7	62.5	63.0	59.5	8.99	0.71	14.98
	15-24	20.4	27.1	13.6	19.6	12.3	6.00	1.05	9.78
	25+	42.7	28.6	48.9	43.4	47.2	11.90	0.61	19.69
Female	Total	37.1	44.3	37.5	37.0	40.5	6.68	0.70	9.67
	15-24	7.5	20.8	11.4	9.2	10.3	2.88	0.46	5.17
	25+	29.9	23.5	26.1	27.9	30.2	10.12	0.80	13.56
FAMILY ²	Head	49.9	26.3	47.7	52.8	35.9	15.12	0.73	18.30
	Spouse	29.4	24.4	21.9	21.9	20.7	9.61	0.94	13.20
	Children	18.3	32.9	15.6			4.43	0.82	
INDUSTRY GROUP ²	Primary	8.5	5.8	7.3	3.0	4.5	11.69	0.82	13.02
	Manufacturing	28.9	20.1	19.6	41.6	22.8	11.46	1.04	24.52
	Construction	21.0	13.0	6.6	18.4	6.1	12.89	2.25	26.97
	Transport	7.9	5.9	8.5	5.5	6.4	10.68	0.65	19.86
	Trade	10.1	15.9	17.4	14.3	20.7	5.05	0.42	8.46
	Service	22.3	33.4	40.7	16.2	39.5	4.94	0.38	7.32
TOTAL							8.35	0.69	14.56
TOTAL combined with other country's industry weights							7.97	0.69	15.04

1 U.S.A. 16-24

2 Aside from rounding, percentage distributions do not add up to 100 because the family and industrial classifications are not exhaustive.

* The data used in this table do not correspond exactly to those shown in Table IV-13, since the latter but not the former have been adjusted for the 1976 population benchmark.

Source: Kaliski (1979).

low 6.9 per cent to 6.8 per cent when the unemployment rate increased to 8.4 per cent. This might indicate that the involuntarily unemployed are more numerous during slack labour market conditions but those on temporary layoff are fewer due to the employers' strategy of releasing permanently or over the longer term most of those workers they are letting go.

Table IV-14 provides greater details for temporary layoffs by age-sex, family, and industry groupings. Despite this disaggregation of data, the major exclusion remains that temporary layoffs in Canada are a smaller proportion of unemployment. The ratio of layoffs to employment is also larger in the United States data except for two industry groupings - primary and service. In the United States manufacturing accounts for over 40 per cent of all temporary layoffs. In Canada, this concentration is 29 per cent which might be due to a different composition of that diverse group.³³

In Table IV-15, we present temporary layoffs as a proportion of involuntarily unemployed. The final column displays the substantial variation in the ratio of temporary

Table IV-15

CYCLICAL VARIATION IN TEMPORARY LAYOFF AS A PROPORTION
OF INVOLUNTARY LEAVERS CANADA, 1975-78

Year	u-rate	Temporary Layoffs (000) (1)	Total Involuntary Unemployed (000) (2)	Ratio (1/2) % (3)
1975	6.9	88	313	28.1
1976	7.1	67	375	17.8
1977	8.1	67	466	14.4
1978	8.4	62	499	12.4

Source: Statistics Canada, 71-201, 1978 and 71-001, various issues.

layoffs to involuntarily unemployed (INVUS) in relation to the u-rate. This ratio of temporary layoffs to INVUS falls as the aggregate unemployment rates increase. On average over the four year period, these layoffs account for 18 per cent of the INVUS.

How does this evidence stack up against Feldstein's data? First, in the U.S. itself Bradshaw and Scholl (1976) have questioned Feldstein's estimates, since they are drawn from questions which, they argue, do not measure job search activity. On the basis of a Job Finding Survey, conducted along with the CPS in January 1973, they found that 83 per cent of those identified as on layoff stated that they looked for work before the unemployment spell ended in a recall or a new job.³⁴

Thus, a much larger proportion of workers on layoff engage in job search than Feldstein estimated. Clark and Summers have also questioned Feldstein's data.³⁵

There are two parts to Feldstein's argument: one, that temporary layoffs are an important part of total job losers and, two, that only a small percentage of individuals on temporary layoffs engage in job search. Data presented above does not bear out his first contention for Canada: joblosers awaiting recall are a small proportion of all joblosers.

In order to evaluate the importance of search activity among the temporary layoffs we present the following information from the LFS data. Table IV-16 shows the quarterly averages of the number of involuntarily unemployed searchers, the number of persons on temporary layoff awaiting recall and the search status of the latter.

Of those who expect to be recalled about one-fifth look for a job. This proportion is higher than what Feldstein reports but lower than that of Bradshaw's 83 per cent.³⁶ Thus, the weight of Feldstein's criticism of search theory is somewhat diminished in light of Canadian data.

Table IV-16

PERSONS ON LAYOFF, QUARTERLY AVERAGE 1977

Quarter	Involuntarily Unemployed Searchers (000) (1)	Total on Temporary Layoff as Per Cent of (1) (2)	Searchers as Per Cent of Temporary Layoffs (3)
1977			
Q1	552	17.9	22.2
Q2	470	12.3	20.7
Q3	413	13.6	12.5
Q4	458	12.9	18.6

Source: Statistics Canada, 71-001 various issues.

G. Is Voluntary Unemployment High in Canada?

The primary objective of this section is to examine how the incidence of voluntary leaving in Canada compares with the experience in the U.S. Recent estimates of NAIRU (non-accelerating-inflation rate of unemployment) suggest that the Canadian NAIRU has increased more rapidly than in the United States since the mid-1950s and is now perhaps a full percentage point higher.³⁷ Certain estimates in Canada vary from 6.4 to 6.7 per cent during the years 73-78.

In order to examine the phenomenon of voluntary unemployment, we look at the major components of flows into the unemployed searcher population. The traditional definitions of these components of unemployment, used by Statistics Canada and the United States Bureau of Labor Statistics are provided below in Appendix A.³⁸

Table IV-17 shows that job leaving in Canada is significantly higher than in the United States. Even if we calculate the jobleavers as a per cent of unemployed minus new entrants,³⁹ it is clear that, defined either way, voluntary quitting is high in Canada relative to the U.S.

Results in Table IV-17 and Figure IV-1 also provide support to the sensitivity of job leaving with respect to the u-rate. As the overall unemployment condition worsens, the ratio of jobleavers to total unemployment falls consistently. This indicates that this voluntary component of unemployment varies pro-cyclically. The point to note from Figure IV-1 is that voluntary quitting does not decrease as fast as unemployment rates rise.

The comparison between Canada and the U.S. portrayed in Figure IV-1 suggest that the explanation for higher voluntary leaving in Canada must be sought not so much in cyclical fluctuations in the economy as in the demographic factors affecting the labour force and the institutional, structural and attitudinal features peculiar to the Canadian economy and society. The availability of a generous UI program, the very seasonal character of the economy, and the smallness of a labour market stretched across a wide geographical area with heavy transportation costs, plus attitudinal features which have somewhat militated against geographical mobility, appear to be factors closely related to the relatively high incidence of voluntary leaving in Canada.

Table IV-17

FLows INTO UNEMPLOYMENT:
CANADA AND THE UNITED STATES, 1975-78

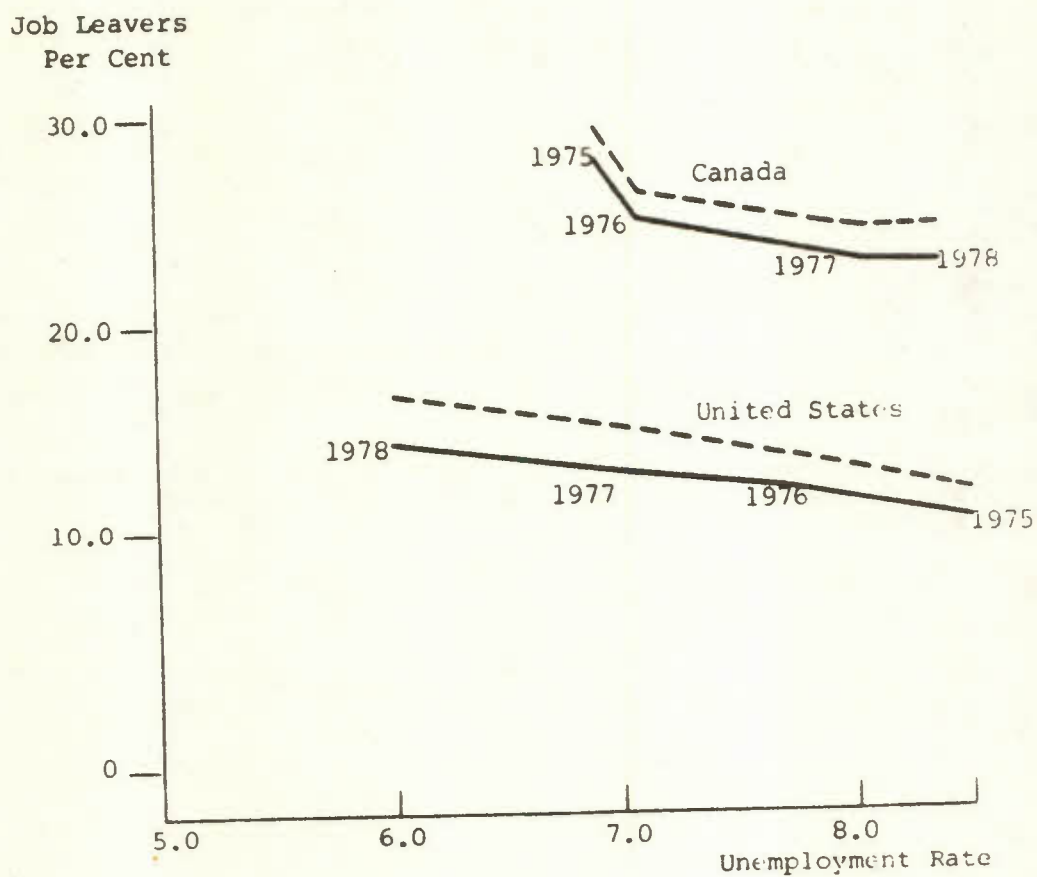
Year		u- rate	Total Unemployment %	Jobleavers %	Joblosers %	Entrants %	Re-entrants %
1975	Canada	6.9	100.0	27.8 (29.5)*	39.4	5.8	26.7
	U.S.A.	8.5	100.0	10.3 (11.6)	55.7	10.3	23.7
1976	Canada	7.1	100.0	24.6 (25.9)	45.1	5.6	24.7
	U.S.A.	7.7	100.0	12.2 (13.5)	49.7	12.1	26.0
1977	Canada	8.1	100.0	22.9 (24.3)	48.7	5.6	22.7
	U.S.A.	7.0	100.0	13.0 (15.0)	45.3	13.7	28.1
1978	Canada	8.4	100.0	22.9 (24.4)	48.4	5.8	22.7
	U.S.A.	6.0	100.0	14.1 (16.4)	41.5	14.3	30.0

* Numbers in brackets show jobleavers as a per cent of (unemployed minus new entrants).

Source: Statistics Canada, Labour Force Annual Averages, 71-529 Occasional, 1975-78, and U.S. Dept. of Labour, Employment and Earnings, Jan. 77-79.

Figure: IV-1

JOB LEAVERS AS PER CENT OF UNEMPLOYED AND U-RATE,
CANADA AND UNITED STATES, 1975-1978



--- line shows job leavers as per cent of (Unemployed-New Entrants).

Source: As in Table IV-17.

Chapter V: Job Search in Canada -- Global View

A. Introduction

This chapter looks at searcher characteristics from a more global perspective. For this purpose Section B presents major components of the searcher population. In Section C, we present the aggregate search rate. Its importance and likely future trends are also discussed. Section D provides search rates by detailed searcher characteristics. In Section E, search costs are estimated. The approach in this latter section is illustrative rather than definitive.

B. Major Components of the Searcher Population

The major components of searcher population along the employed-unemployed dimension are shown in Table V-1 below.

Table V-1

SEARCHER POPULATION BY LABOUR FORCE STATUS
CANADA, 1977

LF Status	Number (000)	Per Cent of Total Searchers (S)
Employed	270	25.8
Unemployed	777	74.2
Total	1047	100.0

Source: LFS, Based on Public Use Micro Data Tape, 1977,
Statistics Canada.

Employed workers searching for another job make up just over a quarter of all searchers. A higher figure, 36 per cent was reported by D. Gower,⁴⁰ but is not comparable to ours since Gower's data were based on a six month period. The point to note is that employed search makes up an important part of the searcher population.

C. The Search Rate (\bar{s})

To examine the question of extent of search at a macro level, we use the concept of search rate. Consider the number of jobseekers (employed and unemployed) in an economy, (S). This number expressed as a proportion of labour force (LF) gives the aggregate search rate (\bar{s}). On an average basis in 1977, it is estimated that about 1047 thousand Canadians were looking for a job each month. The search rate, \bar{s} , is then given by:

$$\bar{s} = \frac{1,047,000}{10,616,000} \cdot 100 = 9.86$$

The search rate indicates that about one in ten LF participants is a searcher. This high rate of job seeking activity is an important element of the dynamism in the Canadian labour markets.

Table V-2 exhibits the aggregate search rate (\bar{s}) by month for September 1976 to December 1978. These data show that the aggregate monthly search rate has a distinct seasonal

Table V-2

AGGREGATE SEARCH RATE (\bar{s}) BY MONTH,
1976-1978

Months	1976	1977	1978
January	..	9.7	10.6
February	..	10.7	11.3
March	..	11.0	11.5
April	..	10.6	11.2
May	..	10.0	11.1
June	..	9.7	10.1
July	..	9.1	10.2
August	..	9.2	9.7
September	8.4	9.6	10.1
October	8.2	9.2	9.6
November	8.3	9.6	10.9
December	8.7	9.4	9.8
Annual	9.4	9.9	10.3

Source: Statistics Canada, 71-001, various issues and 71-529, Labour Force Annual Averages, 1975-78.

element as one would expect, given the seasonality of the unemployment rate on the one hand and of the employed search rate (\bar{s}_e) discussed in Chapter III. The interesting point to note is that s does not show as much seasonality as does the u -rate. This difference is due to the moderating influence of s , which is less seasonal than the u -rate.

Is the \bar{s} cyclically sensitive as well? Search theory provides a clue to the factors that may cause \bar{s} to fluctuate. Other things being equal, a reduction in the cost of search for an individual or an increase in the expected rewards from search would increase the number of searchers out of a given labour force. Increased dispersion of wages, similarly, increases the desirability of search. Since changes in economic conditions

affect the cost of search, the distribution of wages and the probability of obtaining a job with a given amount of search, we should expect \bar{s} to be cyclically sensitive if these changes were not fully anticipated.

In addition to the cyclical variation of s the level of search rate is itself an important concern: if s has an upward trend, policy-makers must be prepared, in the long run, to tackle an ever increasing degree of demand for job information and the possibility of a steadily rising rate of "voluntary" unemployment.

Is the trend of \bar{s} likely to continue upward? The answer is probably in the affirmative. It is believed by some that we are in the midst of a communications revolution.⁴¹ Given that both the price and income elasticity of demand for "information" are likely to be greater than unity, Canadians are likely to be increasingly consumers of "information", including, particularly, labour market information.

A comparison of the Canadian annual aggregate search rate (\bar{s}) with the U.S. rate reveals that our search rate is lower. For May 1976, we obtain a search rate of 11.9 per cent for U.S. For Canada, the May 1977 figure for the search rate is at 10.7. The U.S. u-rate in May 1976 was close to the Canadian rate in May 1977. Despite the fact that data are quite limited and not strictly comparable, it is indicative that the Canadian

search rate is lower than the U.S. rate. What accounts for the difference? Casual thought suggests that, if two economies are being compared, the aggregate search rate will be higher in the economy where costs of searching are lower or, given the costs, the rewards to search are greater. The more rigid and institutionalized an economy, the greater the cost of search. The greater geographical segmentation of Canadian labour markets may also be a factor. We know from mobility-studies that Canadians are geographically less mobile than are the Americans.⁴²

D. Search Rate by Selected Searcher Characteristics

Although we argued earlier that search theory does not tackle the question of search on the macro level, the theory can be applied to explain differences in search rates among classes of searchers. If we make certain assumptions about relative costs and expected returns between classes of searchers we come up with the following implications from the search theory:

- (i) Other things being equal, search rate \bar{s} will be higher for younger persons than others, since search costs incurred in early years are lower and can be amortized over a longer working span.

- (ii) Ceteris paribus, \bar{s} will be larger for females than for males because search costs for the latter are relatively higher because of higher foregone earnings.
- (iii) From (i) and (ii), we would expect that industries and occupations with a concentration of youths and females would exhibit greater \bar{s} . This fits the description of service industries and its occupations.
- (iv) \bar{s} will be relatively higher for regions with slack labour market conditions.

Table V-3 presents the number and distribution of searchers along with search rates by selected searcher characteristics. As anticipated by search theory, the rate is greater for females than for males. The search rate is highest for youths and decreases monotonically with age, again in conformity with theory. The married person search rate is lower than for others (7.2 vs 15.6), a result which is reflective of the age factor just mentioned. By industry, the rate is lowest for transportation and highest for construction. Occupationally, construction again ranks high, while search rates are lowest for managerial and professional occupations. Provincially, search rates are relatively higher for looser labour markets, reflecting no doubt the incidence of unemployment.

Table V-3

SEARCHERS & SEARCH RATES BY SELECTED CHARACTERISTICS, 1977

1977 Annual Averages

Classifying Variable	Total Searchers (S) Number	Per Cent	Search Rate (s)	Classifying Variable	Total Searchers(S) Number	Per Cent	Search Rate (s)
Total	1047	100.0	10.0				
<u>Sex</u>				<u>Marital Status</u>			
Male	602	57.5	9.3	Married	503	48.0	7.2
Female	445	52.5	11.1	Other	543	51.9	15.6
<u>Age</u>				<u>Education</u>			
15-19	261	24.9	22.3	Elementary	181	17.3	6.3
20-24	268	25.6	16.2	Secondary	714	68.2	13.4
25-44	368	35.2	7.8	Diploma	89	8.5	3.9
45-64	141	13.5	5.1	Degree	62	5.9	6.0
65 +	8	0.8	4.4				
<u>Industry</u>				<u>Province</u>			
Primary	57	5.8	7.6	Newfoundland	34	3.3	17.8
Manufacturing	193	19.6	9.4	Prince Edward Island	...	...	...
Construction	121	12.3	16.3	Nova Scotia	42	4.0	12.8
Transportation	61	6.2	7.0	New Brunswick	38	3.7	14.6
Trade and Finance	213	21.6	9.0	Quebec	320	30.7	11.6
Public Administration	340	34.5	9.3	Ontario	359	34.5	9.0
<u>Occupation</u>				Manitoba	39	3.7	8.6
Managerial and Professional	123	14.2	5.5	Saskatchewan	27	2.6	6.6
Clerical-Sales-Service	436	50.5	10.1	Alberta	63	6.1	6.9
Primary Occupation	129	14.9	9.6	British Columbia	120	11.5	10.5
Fabrication	92	10.7	9.6				
Construction	116	13.4	15.1				
Transportation	91	10.5	10.9				

Job-Market Related Characteristic

Source: LFS, Public Use Micro Data Tape, 1977, Statistics Canada.

E. Search Costs

Since one in every ten Canadian labour force participants is searching for a job, a natural question to ask is: what magnitude of resources, in aggregate, is devoted to this process each year? According to the search theory, the cost of search for an individual can be defined by considering the decision to accept or refuse a job offer. In considering a job offer, the unemployed individual balances the cost of refusal against the marginal return from continued search. Our concern is with the aggregation of such individual search costs. The aggregate search cost is defined as the amount of resources devoted to the search process. Assuming that a part of unemployment can be characterized as search unemployment, we present some illustrative estimates of search cost. The calculations presented below should be considered as suggestive in the sense of simply expressing some general orders of magnitude.

The cost of search activity depends on the acceptance wage, below which an individual will not accept a wage offer. In this context, the cost of search can be given as:

$$C = \sum_i (1 - h) W_0 \quad (1)$$

where C is the weekly cost of search, h is a fraction of wage representing employment-related expenses and W_0 is the wage on the previous job. For an unemployed individual i , the wage rate on the previous job (W_0) is assumed as equal to the minimum acceptance wage (y).⁴³

The total cost of search (TC) over the duration of unemployment (DU) in weeks will be given as:

$$TC = \sum_i (1 - h)W_0 * DU \quad (2)$$

But this estimate may not be the foregone value of time actually spent searching due to the likelihood that only a fraction of unemployed time is in fact devoted to search activity. Although by definition all unemployed individuals are required to search full time various studies have come out with different estimates of search time.⁴⁴ Thus if SD is the estimate of search time in weeks then equation (2) can be rewritten:

$$TC = \sum_i (1 - h)W_0 * SD \quad (3)$$

The average previous weekly wage (W_0) of the unemployed in 1977 is adjusted for h equals \$175 per week.⁴⁵ In 1977, the average duration of unemployment was 14.5 weeks. In

the absence of any estimates regarding the amount of time devoted to search activity in Canada, we assume that the average unemployed individual spends only about 15 hours per week or about 40 per cent of time of normal working week in search activity.⁴⁶ But in terms of weeks, the average SD for an unemployed individual in 1977 was 5.8 weeks.

When these estimates are weighted by the total number of unemployed searchers in 1977, the total resources devoted to search activity are 0.8 billion. We do not have any estimate of search time by employed individuals. Suffice it to say that the addition of the employed would in all probability give us an estimate suggesting that job search in Canada is a billion dollar industry.

Chapter VI: Conclusions and Policy Implications

A. Conclusions

In this paper, we have identified the importance and extent of job search phenomenon. It was noted, that Canadians in the aggregate, spend approximately a billion dollars on job search. The findings of the paper lead to a number of conclusions. These are treated in turn below:

1. Job Search is Extensive, Pervasive and Expensive

One in ten Canadian labour force participants is a jobseeker. This statistic which we referred to as the search rate suggests that job search is an extensive labour market activity. There is some, although not definitive, indication that search rate is likely to have a long run upward trend, which would suggest a growing demand for labour market information through time.

The pervasiveness of job search activity is indicated by a number of actors. First, no matter which socio-economic characteristic is examined, we find a significant degree of associated search activity. Variations in degrees of search are broadly supportive of search theoretic explanations e.g., the higher search attachment exhibited by younger age groups. Second, another indication is provided by on-the-job search.

Even in a province with extremely high rates of unemployment, such as Newfoundland, there is a significant number of employees always searching to improve their economic lot. Job scarcity does not lead to stifling of job search. Clearly on-the-job search is an indication of search for a better job rather than for any job. Third, when we look at the unemployed, the high degree of voluntary job separation is an indication of worker initiated full-time search. While we abstract from calling the total duration of such unemployment as voluntary because of the conceptual complexities involved in this term, it is clear that voluntary separations do represent voluntary causes of an unemployment spell. Finally, even among the involuntary job separations persons who are on layoff and subject to recall by their former employers also exhibit significant degree of search activity.

In light of this evidence the criticism that search theory has relevance only for a small segment of the unemployed appears to be misplaced. Although much of search theory has focused only on voluntary quits, we have emphasized the importance of job search activity as an allocator of human resources in the global context and that it is an important activity whether the individual is employed or involuntarily or voluntarily unemployed.

Our illustrative estimate of the magnitude of resources, in aggregate, devoted to search activity each year

comes to an approximate figure of \$1 billion. Hence, job search is virtually a billion dollar industry. The output of this industry is supposed to be better job-worker matching. This points up the importance of studying the productivity of job search.

2. Job Search Process Exhibit Signs of Inefficiency

A number of indicators point to a degree of inefficiency in Canadian job search processes. Economic efficiency is expressed in terms of costs and returns of an activity. The LFS does not contain information on costs of and returns from search, but is quite rich, as we have seen, in identifying characteristics of searchers and their duration of search. These latter variables represent the outcome of the interplay of costs and returns to search activity. Hence, looking at searcher activity itself can be used as indicators of efficiency of the process.

(i) From the society's point of view job search can be regarded to be more productive the greater the ratio of on-the-job searchers to off-the-job searchers. This proposition is based on the following arguments. Search theory would suggest that the form of search (on- or off-the-job) be such as to equate the marginal returns from each search in proportion to the respective marginal cost. The social marginal cost of search off-the-job is a multiple of cost on-the-job search -- this is

because the society subsidized unemployed search in the form of UI payments. Therefore, to justify off-the-job search, one must show that it is not only more productive than on-the-job search, but exceeds it by a multiple. This is unlikely to be the case. It has been pointed out that the state of unemployment of an applicant itself represents a negative signal to prospective employers.⁴⁷ Carrying the argument further, we know that the probability of escaping unemployment decreases as the length of unemployment increases.⁴⁸ Studies also show that unemployed searchers spend only a small proportion of their time in actual search.⁴⁹ The search methods they use is not very different from those employed by on-the-job searchers.

Based on these arguments we can use the ratio of employed to unemployed searchers as an efficiency indicator. We find the Canadian ratio to be smaller than the comparable U.S. ratio, hence a relatively inefficient allocation of Canadian job search dollars.

(ii) As a corollary of the foregoing the larger the proportion of voluntary leavers who begin their search on-the-job the more efficient the search process, all other things being equal. It would be highly efficient if all the voluntary leavers began their search while they were still employed. This, as we know, is not the case. Some employees quit their jobs first and search later. The more this happens, the more inefficiently job search

dollars are being spent. As we showed in Chapter IV, this kind of inefficiency, is especially marked for women searchers.

(iii) Search process can also be regarded as inefficient when individuals upon becoming unemployed do not begin their search immediately. We have documented this form of inefficiency again especially for female employees.

(iv) Search can be regarded as efficient if utilization rate of search methods used is highly correlated with the effectiveness rates of these methods. It would be wasteful if searchers concentrated on a method which is not effective in finding a job. We find the correlation between effectiveness and utilization rate to be low in Canada lower than in the U.S. Data on which these correlations are based may not be strictly comparable but there remains a broad impression that either the extent to which the Canada Employment Centres are used is artificially high or their effectiveness rate is too low.

3. The Number of Voluntarily Unemployed is Excessively High and Appears to be Institutionally Determined

The single most striking information from this paper relates to the extent of voluntary leaving. Voluntary leaving in Canada relative to the number unemployed is 50 to 150 per cent (depending on year) higher than is the case in U.S. This is a

first indication that it is institutional and structural differences between the two countries that explain differences in voluntary leaving.

There is some evidence that voluntary leaving may be related to the nature of jobs -- analysis of on-the-job search data indicates little difference between search rates for males and females. Employed search rates vary more by occupation than by sex. This suggests that it is the nature of jobs, not the sex of the worker, which may be one explanation of labour market instability. Viewed in this light the higher female voluntary leaving phenomenon (compared with men) may be explained by two other institutions: the existence of UI and the family. Family is seen to be important because the married females have higher likelihood of voluntary leaving than single females. For males the relationship is opposite. UI appears to be important in that all females, married or single, indicate a higher likelihood of voluntary leaving than men. If women are indeed in poor paying jobs the UI-benefit rate ceiling applies to them less often than in the case of men and UI-subsidized search becomes relatively inexpensive. It is just as well for them to search off-the-job than while employed, since the unemployed state may confer additional non-pecuniary benefits as well, especially to the married. UI appears to be inducing greater off-the-job search for these individuals.

Since we have suggested that institutional factors are responsible for high degree of leaving, it follows that in addition to macro-economic policies to reduce unemployment, institutional and structural changes to reduce voluntary leaving need also to be considered. Some of these changes may be relatively easy and are suggested in the section on policy implications. Others, such as structural changes in the types of jobs the economy is producing is a far more intractable problem.

B. Policy Implications

A number of policy conclusions can be drawn from our findings and conclusions. We must caution the readers, again, to bear in mind the limitations of our data and the suggestive nature of our conclusions. What we can say with certainty is that voluntary leaving phenomena is causing serious problems with attempts to lower the unemployment rate. Hence efforts must be made to lower the voluntary leaving rate if lowering the aggregate measured unemployment rate is one of the goals of governments. These efforts can take a number of directions.

First, it is important to educate Canadians about the proportion of unemployment rate which is due to voluntary leaving. More refined measures have to be developed than have been reported here. Statistics Canada should be asked to develop these indicators.

Second, efforts must be made to create (a) disincentives for leaving the job without search and (b) incentives to search on-the-job. Advising Canadians through media ads about adverse market conditions when job leaving can be hazardous is one way, the moral suasion way, of dissuading job leaving. A more painful disincentive may simply be to deny UI benefits to voluntary leavers when the unemployment rate exceeds a selected level. This measure may be deemed very harsh by some. A less harsher measure may be to require all voluntary leavers to register with Canada Employment Centre (CEC) prior to their job leaving. They could then be counselled about the appropriateness of job leaving given the labour market conditions in their specific occupations. UI claim approval could be made dependent on UI-claimants having seen a Canada Employment Centre (CEC) counsellor prior to quitting. One negative effect of this measure might be to increase the CEC workload. However, since UI applicants must, under current regulations report to CECs anyway we do not see this as creating a large problem for these Centres. A beneficial side-effect of our suggestion may be that the jobs vacated by voluntary leavers will be known to CECs and could be quickly filled from the ranks of the unemployed.

Third, the effectiveness of the CECs in placement is quite out of line with the extent to which it is used and must be improved. This is easier said than done. While we don't have specific suggestions in this regard, we must point out a major problem area.

Fourth, our analysis suggests the profile of searchers which must guide labour market information policies in general and the CECs in particular. Women and teenagers, two groups with high unemployment rates, do not use CECs as much as other groups. This is surprising because CECs are known to get job offers at lower end of the wage spectrum, where teenagers and women are also supposed to be placed. This low utilization rate needs to be investigated. One specific suggestion about youths may be made here. While the young adults' use of CEC is highest, teenagers (15-19) use it the least. This contrast suggests that liaison of CECs with colleges may be strong but not so with the schools. If so, the school-to-job transition may be an area where CECs need to be strengthened. Although we have not examined employer search behaviour in this paper, we note in passing that CEC effectiveness cannot be brought in line with its utilization rates without improving the share of vacancies referred to CECs.

Fifth, a number of important data limitations have been unearthed and suggest the need for special data gathering by the Statistics Canada. Data need to be generated on intensity of search, effectiveness of search methods, cost of search, wage expectations and motives of search.

Finally, a number of important areas need to be looked at. Labour force transitions are very important in determining the duration of joblessness and need to be investigated further. We suggest that movements in and out of the LF are an important indicator of commitment to search, which, in turn, can be an important criterion for UI payments. Our research has also shown that productivity of job search is a key area that needs to be investigated, since the Canadian society spend large sums on search.

Appendix A

Jobleavers: Job separation from the jobleavers occurs primarily as the result of employee decision. The reasons for leaving their last job recorded on the LFS questionnaire are: own illness or disability, personal or family responsibilities, going to school, quit job for no specific reason, changed residence, dissatisfied with job, retired or other reason not elsewhere specified. The precise definition of jobleaver includes all individuals who leave their jobs for one of the reasons specified above and who:

(i) begin looking for their work immediately following or possibly before the termination of their last job and who were still looking for work at some time in the four week reference period ending with the Reference Week, or

(ii) were not looking for work because they were to begin a new job within 4 weeks of the end of Reference Week.

Joblosers: Joblosers are unemployed individuals who separated from their last job because the job itself ceased to exist, either permanently or temporarily. This definition includes all persons who lose job or are laid-off from their job and who:

- (i) begin looking for work immediately following (or possibly before) the loss of their job and who are still looking for work at some time in the four week period ending with the survey's Reference Week, or
- (ii) are not looking for work in the expectation that they would be recalled to their former jobs, or
- (iii) are not looking for work because they are to begin a new job within 4 weeks of the end of the Reference Week.

Entrants to the Labour Force: New entrants are unemployed persons who have never worked.

Re-entrants to the Labour Force: These are unemployed persons, who, following separation from their last job, were for some period out of the labour force.

FOOTNOTES

- 1 This hypothesis holds that "real" market forces, as opposed to monetary phenomenon, determine a rate of unemployment which is consistent with maximizing behaviour on the part of individuals within the institutional constraints in the economy. Any attempt to lower the rate of unemployment below this threshold would lead to ever increasing rates of inflation unless there is a change in the underlying "real" forces.
- 2 Economic Council of Canada, People and Jobs: A Study of the Canadian Labour Market (Ottawa: Supply and Services, 1976), pp. 80-81.
- 3 Economic Council of Canada, A Time for Reason, Fifteenth Annual Review (Hull, Supply and Services, 1978), p. 83.
- 4 M. Burstein, N. Tienhaara, P. Hewson and B. Warrander, Canadian Work Values, Manpower and Immigration, Information Canada, (Ottawa, 1975).
- 5 See D.A. Smith, "Alternative Measures of Unemployment", Carleton University Discussion Paper No. 77-11. See also P. Fortin and L. Phaneuf, "Why is the Unemployment Rate so High in Canada", paper presented at the Meetings of the Canadian Economic Association, Saskatoon, May 30, 1979.
- 6 L.K. Li, "Causal Disaggregation of Unemployment: A Feasibility Study", Department of Manpower and Immigration, Ottawa, April 1975. Work currently underway at the Council also suggests a higher rate of unemployment (5.5) attributable to frictional and structural causes. See Tom Siedule and Keith Newton, "The Unemployment Gap in Canada", Economic Council, 1980.
- 7 See G. Stigler, "The Economics of Information", Journal of Political Economy, June 1961, pp. 213-225; and "Information in the Labour Market", Journal of Political Economy, 70, 1962, pp. 94-104.
- 8 For a concise treatment of the elementary model see J.J. McCall, "Economics of Information and Job Search", Quarterly Journal of Economics, 84 (1970), 113-126 and D.T. Mortensen, "Job Search, the Duration of Unemployment and the Phillips Curve", American Economic Review, December 1970, pp. 847-862.
- 9 For a survey of various applications of search theory see S. Lippman and J.J. McCall, "The Economics of Job Search: A Survey (Part II)", Economic Inquiry, September 1976, pp. 347-368. See also C.A. Pissariades, Labour Market Adjustment, Cambridge University Press, 1976.

- 10 Most of these criticisms were first voiced by James Tobin, "Inflation and Unemployment", American Economic Review, June 1972, pp. 1-18. See also R.J. Gordon (1975) and M.S. Feldstein (1975).
- 11 The only treatment of this subject is in C. Rosenfeld, "The extent of job search by employed workers", Monthly Labour Review, March 1967, pp. 58-62.
- 12 Richard Kahn, "Unemployment as Seen by the Keynesians", Michael J. Hill, "Can We Distinguish Voluntary from Involuntary Unemployment", in G.D.N. Worswick (ed.), The Concept and Measurement of Involuntary Unemployment, (London: Norton, 1976). Robert Hall argues that "the Keynesian dichotomy between frictional and involuntary unemployment, however useful to the study of cyclical contractions in aggregate demand, for which it was originally formulated, is not helpful in examining the problem of unemployment at full employment", R.E. Hall, "Why is Unemployment Rate so High at Full Employment", Brookings Papers on Economic Activity, 3, 1970, p. 371.
- 13 Details of the LFS survey are available on request from the Labour Force Survey Division, Statistics Canada. For various definitions, explanations and scope of LFS see, The Labour Force, Catalogue 71-001 Monthly, Statistics Canada.
- 14 Rosenfeld (1977).
- 15 S. Lippman and J.J. McCall (June 1976).
- 16 A special case of this argument may apply to those students who combine school with part-time work. Since the value of s_e is much higher for part-time workers, the seasonality in S_e may reflect the phenomena of these students looking for full-time summer jobs.
- 17 This assumption does not contradict the observation that the significance of unemployment rate as a measure of labour market tightness has changed in the 70s compared with what it was in the previous decade.
- 18 The U.S. unemployment rate in May 1976 was 7.7 while the Canadian u-rate varied from 7.1 in 1976 to 8.4 in 1978 (annual data). It is important to treat U.S.-Canada comparisons with caution. From the parallel run of the Labour Force Survey and the Revised Labour Force Survey questionnaires in 1975 Statistics Canada found that job search is subject to extreme response bias depending on the formulation and ordering of questions.
- 19 The reasons why on-the-job search is so high in Newfoundland will be explored in greater detail in subsequent extensions of our present work.

- 20 A conventional view held by labour economists is that secondary workers exhibit unstable job attachment. Robert Hall (1972) has presented an alternative hypothesis: it is not the secondary workers themselves who have unstable job attachment patterns but the nature of their jobs which force them into instability. To the extent that search on-the-job is a prime move for job changes we find this element to be similar for the sexes. By looking at the employed-search rates for males and females by occupation and industry we find that these vary together in a great majority of cases. This could be one indication of support for Hall's hypothesis.
- 21 For the U.S., some information is available about duration of search while employed for those individuals who were eventually unemployed. This group is a subset of all employed jobseekers and its characteristics may be different from employed jobseekers who move to another job without a spell of unemployment. Nevertheless, the data for 1973 indicate that some 50 per cent of these workers searched for less than two weeks; close to three-quarters searched for one month or less and some 20 per cent more than two months. See, "Jobseeking Methods of American Workers", U.S. Department of Labour, Bulletin 1886, 1975.
- 22 A. Rees and G.P. Schultz, Workers and Wages in an Urban Labor Market (Chicago: University of Chicago Press, 1970).
- 23 See Statistics Canada, "The Labour Force", Catalogue No. 71-001 for definition of the term unemployed.
- 24 The term "weeks looking for work" and "duration of search or unemployment" are used synonymously.
- 25 The LFS data counts the duration of unemployment up to the survey date, and so the distribution of duration generally falls short of the eventual length of time unemployed. For an analysis of the relationship between incomplete and complete spells of unemployment see S. Salant: "Search Theory and Duration Data: A Theory of Sorts", Quarterly Journal of Economics, Vol. 91, February 1977, pp. 39-57; and H. Kaizt, "Analyzing the Length of Spells of Unemployment", Monthly Labour Review, November 1970.
- 26 The average duration of unemployment is not available for the unemployed searcher population. The data presented in Table IV-3 are based on the unemployed group as a whole. Since the job-seekers among the unemployed are such a large proportion of the latter, and the characteristics of the two groups are very similar, duration data for the unemployed should be a good approximation for the searcher group among the unemployed. The table on distribution of unemployed by weeks looking for work, Table IV-4, however, is for the searcher group only.

- 27 Kim B. Clark and Lawrence H. Summers, Labour Force Transitions and Unemployment, Technical Analysis Paper No. 59, U.S. Department of Labor, October 1978.
- 28 D. Maki, Search Behaviour in Canadian Job Markets, Special Study No. 15, Economic Council of Canada (Information Canada: Ottawa), 1972.
- 29 It is also possible that the hirers of teenagers -- many of whom are part-time or part-year workers -- often prefer to hire directly rather than through PES references.
- 30 The fact that youths (15-19) and other secondary workers utilize the PES less than other groups might be the only true indication of the productivity of search through PES for all workers. Since recent labour force entrants are not required (by UIC) to register with the PES, they are free to utilize it only up to the point where marginal benefit = marginal cost ($MB = MC$). All other workers might be being forced to use it to a point where $MC > MB$. The conclusion is not that secondary workers should make greater use of PES but rather that other workers should be required to use it less. In fact the subsequent discussion concerning the success ratio of PES seems to confirm this view. We owe this point to Frank Flatters.
- 31 Comparisons between U.S. and Canadian data should be made with caution because of the differences in questionnaires used in the two countries.
- 32 M.S. Feldstein, "The Importance of Temporary Layoffs: An Empirical Analysis", Brookings Papers on Economic Activity, 3, 1975, pp. 725-745.
- 33 S. Kaliski, "Layoffs in Canada and the United States", preliminary draft included in "Notes on Unemployment" presented to Issues in Canadian Public Policy II, conference held at Queen's University, April 1979.
- 34 These estimates may be biased upward as the survey sample was limited to only those jobseekers who obtained a new job or returned to an old one. See Bradshaw and Scholl (1976), pp. 517-518.
- 35 Kim B. Clark and Lawrence H. Summers, "Labour Market Dynamics and Unemployment", Brookings Panel on Economic Activity, April 1979.
- 36 T.F. Bradshaw and J.L. Scholl, "The Extent of Job Search during Layoff", Brookings Papers on Economic Activity, No. 2, 1976, pp. 515-526.
- 37 Pierre Fortin and Louis Phaneuf, "Why is the Unemployment Rate so High in Canada?", paper presented at the Meetings of the C.E.A., Saskatoon, May 30, 1979.

- 38 There are minor definitional differences between the data provided by these two sources. See B. McDonald, "Flows into Unemployment", Statistics Canada, Research Paper No. 17, May 1978.
- 39 See the numbers in brackets in Table IV-17. It is argued that new entrants, as a flow into unemployment, are determined by extraneous factors such as demography, immigration, etc. Thus jobleavers as per cent of (unemployed minus new entrants) is a better criterion for understanding the extent of voluntary unemployment.
- 40 D.E. Gower, Job Search Patterns in Canada, Statistics Canada (Ottawa 1975), p. 21.
- 41 Bernard Ostry, "A Silent Revolution Vital to Canadians", The Globe and Mail, Tuesday, Jan. 30, 1979 and Daniel Bell, "Communication Technology -- For Better or For Worse", Harvard Business Review, May-June 1979, pp. 20-42.
- 42 John Vanderkamp, Mobility Behaviour in Canada, Economic Council Special Study No. 16, Ottawa, 1975.
- 43 For an individual the social opportunity cost of search may be reduced by the amount of unemployment insurance benefits.
- 44 See R.J. Gordon, "The Welfare Costs of Higher Unemployment", Brookings Papers on Economic Activity, 1: 1973, pp. 133-195; and H.E. Felder, "Job Search: An Empirical Analysis of the Search Behaviour of Low Income Workers", Centre for the Study of Welfare Policy, SRI International, Research Memorandum 25, May 1975.
- 45 The average weekly wages and salaries of those employed during the year 1977 were \$249.95 as reported by Canadian Statistical Review, Statistics Canada, Jan. 1979, p. 55. Assuming that the average earnings of those who became unemployed are equal to the average for all employed individuals, the estimate of W_0 adjusted for h is then only 70 per cent of average weekly wages and salaries.
- 46 According to Gordon's (1973) estimates in United States, average unemployed searcher spends only about 8.4 hours per week in search activity. Felder (1975) estimated on average about 17 hours of search per week by unemployed individuals. In the absence of any evidence in this regard for Canada, we assume unemployed individuals spend about 15 hours per week in search activity.
- 47 Finis Welch provides a good treatment in "What Have We Learnt From Empirical Studies of Unemployment Insurance", ILLR, Vol. 30, No. 4 (July 1977), pp. 451-461.

- 48 A. McGregor, "Unemployment Duration and Re-employment Probability", The Economic Journal, 88 (December 1978), pp. 693-706. See also Clark and Summers, "Labour Market Dynamics".
- 49 R. Gordon (1973).

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