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REGIONAL DEVELOPMENT POLICIES

"Our choicest plans have fallen through,
Our airiest castles tumbled over,
Because of the lines we neatly drew,
And later neatly stumbled over."

- Piet Hien (Danish poet)

The above verse may strike the more scholarly person as frivolous. It is not intended to be. In these times of unexpected events and undisciplined aspirations, a growing number of people are searching for a simple and clear idea of where they, their city, their province and their country should be in five, ten or fifteen years, and how they can best get there.

To many, and with considerable justification, the answer seems to be offered by something called "planning". The need for planning, the lack of planning, the benefits of planning, are remarked upon and extolled to an increasing extent. For some, the implication is that "planning" will somehow tell us where we are going to be at some future date. To others, it seems to mean that apparent chaos and uncontrolled events will be replaced by order and reason.

The real danger is that groups and organizations in society, faced by the demand

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for more "planning" on the one hand, and undeveloped analytical tools and inadequate data and indicators on the other, will turn to a more formalized and less responsive decision-making process as the apparent solution. As a result, problems will multiply, frustrations will mount, and real efforts to develop a rational and evolving decision-making process will in due course be swept away. In that sense, the verse at the beginning of this paper contains an important warning.

But planning in the sense of a rational and empirical approach to achieving change is essential. Probably nowhere is this more true than in the case of regional development. In this field, decision-makers can not hope to achieve change in any effective way through other approaches. It seems likely, however, that the movement towards a more rational decision-making process in regional development, as in many other fields of importance to society, is going to be difficult and long. The will, the tools, and the information are still in a very rudimentary state.

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It is in the context of this hard reality that the remarks in this paper are cast. The paper will consist of three main parts. The first will contain a brief review of the kind of efforts which have been made in Canada in the past to reduce regional economic disparities. This part will conclude with a brief description of the current policies and programs. The second main part of the paper will outline the analytical and planning process that is evolving as a basis for applying the current regional programs of the federal government. The final part of the paper will discuss a few of the more difficult questions and issues which are involved in any serious attempt to reduce regional economic disparities in Canada.

The Evolution of Federal Policies to Reduce Regional Disparities

In the decades following the Canadian Confederation in 1867, the emphasis of federal policy was on national economic development. The assumption underlying this policy was that the development of a national economy, held together by regional specialization and east-west trade, would result in all regions enjoying growth and

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prosperity. This assumption lingered until the depression of the 1930's which vividly exposed the results of spatially unequal growth and the consequent fiscal weaknesses of the poorer provinces.

After World War II, therefore, on the proposition that the Canadian fiscal system should make it possible for every province to provide services to average Canadian standards for its people without the necessity of imposing heavier than average tax burdens, a system of "fiscal equalization" was adopted. The purpose of this program was the equalization of provincial public services, and it worked by the federal government augmenting the revenues of low income provinces with equalization payments. This step marked the first important phase of federal regional policy in Canada.

The recession of the 1957-61 period not only emphasized once more the existence of inter-regional economic differences, but also helped generate an increasing awareness of the long-term persistence of regional income imbalances and their

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serious economic, social and political implications. This led to the second phase of federal regional policy in Canada.

The ingredients of federal regional policy in this period were many and varied. The programs introduced were rather a reflection of the kinds of problems and special needs of particular parts of the country than of an attempt to evolve a general regional development strategy and program. Thus, one of these programs was concerned with the low income and land utilization problems of rural areas in Canada; another was intended to assist in the improvement of social and industrial infrastructure as part of development efforts in a broad but mainly rural region; still another was concerned with the provision of incentives for industrial development in relatively small areas of high and persistent unemployment and low levels of non-farm family income.

In retrospect, the approach to the problems of regional economic disparity in the 1960's amounted to an attempt to deal with them on a rather ad hoc basis, in response to the strongest needs and pressures at the time. This led to the establishment

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of a variety of programs, each one dealing with a specific problem or set of problems, each one with rather different objectives, and each one administered by different federal government agencies. The result was that effective co-ordination on an overall basis was difficult to achieve, and a certain degree of overlap, duplication and wasteful effort was inevitable.

The result was hardly encouraging. In spite of these special programs and the years of relative prosperity in the 1960's, there was no significant narrowing of the gap in income and unemployment levels between the provinces and regions of Canada. In fact, as the Economic Council of Canada pointed out in 1968, "federal policies have, on balance, probably prevented inter-regional disparities from widening.....There is little indication that these have contributed to a stronger basis for self-sustaining growth in the lagging regions of the country".

It is evident that although the forms of public action in this second phase of the evolution of federal regional policy were different from those in the first, the result was not particularly

different. Accordingly, there was a growing need to reconsider not only the nature of the "regional disparity problem", but also the program elements which a more integrated policy approach should contain.

The problem of regional economic disparities in Canada can, in a broad way, be seen as comprising three important elements: (a) long-term persistence of low income and high unemployment conditions in one large geographic region -- consisting of Eastern Quebec and the Atlantic Provinces; (b) areas of rural economic depression and social deprivation elsewhere in the country; (c) areas which have populations predominantly of native ancestry and which lack a diversified economic base.

Although all of these manifestations of regional disparity deserve equal attention from a socio-economic standpoint, the first is broader and more persistent than the others. In the eastern part of the country, a relatively large proportion of the labour force is engaged in family activities such as farming, fishing and coal mining, and productivity in these is generally low. Over the past decades, technological change

has tended to lessen the initial natural advantages of this region, and thus worsened its relative economic position. In the primary sectors, it has called for adjustments which the generally small scale operators were unable to make. In the secondary sectors, the thinly dispersed population has provided a poor base for industries serving the local market. With increasing economies of scale in many industries, this handicap has become more pronounced. Low capital-intensity in the private sector, and a relatively low level of public services, contributed to making the region less attractive to others in new industry.

The regional economy could not generate high growth rates in locally-oriented industries without substantial expansion of industries able to sell outside the region. The historic national policy of building an economy thinly spread from coast to coast has necessarily meant that eastern industry faced an extra transportation burden in reaching the main markets of Canada. Furthermore, with an inadequate base in either a regional or a national market, there has been little secondary industry in the region strong enough to take

advantage of its maritime location for trans-Atlantic trade, or for trade with the United States eastern seaboard.

These factors have set in motion further forces which, by mutual interaction, held the eastern Canadian economy in a pattern of slow growth. Because productivity was low and the stimulus to innovation weak, there has been much less pressure than elsewhere to raise educational standards, as well as less financial capacity to respond to such pressure. There has also been substantial out-migration over the years of people who tend to be the younger, the more adaptable, the more enterprising, and the better educated. This has combined with the other factors to restrain the quality of management and to hold the regional economy to traditional patterns of activity.

It is clear that problems of these kinds can not be dealt with in isolation. They must be recognized as interdependent aspects of the broad problem of the growth and structural change of the economy generally. Given this, a more effective regional development policy would seem to call for a co-ordinated set of special programs which

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operated as complements to national economic and social policies.

It was to serve as a framework for mounting such a development effort that the federal Department of Regional Economic Expansion was established on April 1, 1969. This marked the beginning of the present phase of federal regional policy in Canada. The goal of this policy is to assist in the dispersion and stimulation of economic growth across Canada so as to bring employment and earnings opportunities in the slow-growth regions as close as possible to those in the rest of the country. This goal means that major structural changes in the economy and society of low income regions will be required if they are to realize their developmental capabilities and aspirations. Such changes can only be brought about by sustained efforts over a relatively long period of time -- perhaps fifteen years.

The general goal of federal regional policies can be expressed more explicitly as follows:

(a) the reduction of unemployment rates in regions having consistently higher rates of unemployment than the country as a whole;

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(b) the reduction of under-employment and low productivity employment in slow-growth regions as compared with the rest of Canada;

(c) increased labour force participation rates so that these rates in the slow-growth regions are closer to those in the rest of the country.

With these objectives in mind, the programs of the Department of Regional Economic Expansion were developed along three interconnected lines: industrial development, infrastructure assistance in selected areas, and social adjustment and rural development. The purpose of the first is to help create new productive employment by making investment in viable industries more attractive in the relatively slow-growth regions of the country. The second assists in providing the additional social capital, such as water systems, roads, and housing, which is necessary to facilitate economic expansion and social adjustment in selected urban areas. The third is aimed at facilitating the access of people to new employment opportunities as well as improving their incomes by means of the more efficient utilization of rural resources.

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The main instrument adopted by the Department to promote industrial development in the slow-growth regions is a system of grants to private enterprises which locate, expand or modernize their operations in the slow-growth regions. Under the Regional Development Incentives Act of 1969, and in consultation with the provincial governments, certain broad regions in all provinces were designated for the purpose of these grants. In December 1970, the Act was amended to provide smaller special incentives in portions of Southwestern Quebec and Southeastern Ontario.

The industrial incentives available under this legislation apply to secondary manufacturing industry and to most kinds of processing activities. The level of the incentive awarded varies depending on the nature of the capital project, and in the case of new establishments, on the number of jobs expected to be generated by the operation. In no case, however, can a grant exceed the lesser of one-half of capital to be employed in the operation or $30,000 per job.

The grant is a once-and-for-all cash incentive designed to enable the entrepreneur to make a rational economic calculation as to whether

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or not it will ensure the viability of his operation. In particular, the incentive is intended to offset the initial extra cost of locating in a slow-growth region.

The amendment to the Regional Development Incentives Act of December 1970 also introduced a loan guarantee scheme to help entrepreneurs who have difficulty in gaining access to funds. It guarantees repayment of that part of a loan (and the payment of interest on it) which is in excess of what an entrepreneur is successful in obtaining from normal financial sources, provided that the total amount of the loan is less than 80 per cent of his capital investment, after deductions have been made for all grants and other financial assistance he has received. Loan guarantees are available in all regions currently designated under the legislation. As well as to manufacturing and processing, they apply to such commercial activities as office, shopping, and recreational facilities.

Incentives alone would not be enough to attract viable industries to places which could not provide efficient basic services for them and

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their workers. It is necessary to develop communities -- their utilities, their land for industry and housing, their educational and training facilities, and their transportation services.

In early 1970, the federal government designated twenty-two Special Areas for these purposes. A further area, Ste. Scholastique, was added in 1971.

Since then, federal-provincial development plans and agreements have been worked out jointly with most provinces where these areas are located. The agreements envisage a federal expenditure of over $300 million in the period April 1970 to June 1973. For the most part, the projects included in the plans relate to such infrastructure as water and sewer systems, industrial parks, roads and bridges, port facilities, schools and residential land assembly, as well as programs for social adjustment. About two-thirds of the planned outlay is in the form of grants and the rest in loans. Of the total amount, about 95 per cent will be spent in the provinces of Newfoundland, Nova Scotia, New Brunswick, and Quebec.

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The social adjustment and rural development programs are provided through a number of instruments. The Agricultural and Rural Development Act (ARDA) was passed in 1961 to make public assistance available to help meet the economic and social adjustment needs of low income rural areas. It provided (on a cost-shared basis) for the establishment of federal-provincial programs of alternative land use, soil and water conservation, and rural development.

Until March 1971, the ARDA program operated under five-year agreements which allotted $25 million annually from the federal government. Recently, new five-year agreements for the period up to 1975 were signed with all the provinces except Prince Edward Island. In the light of the comprehensive rural development plan in operation there, further ARDA programming was unnecessary.

The new agreements put more emphasis on human adjustment programs and, unlike their previous counterparts, make no fixed federal allotments available to the provinces (except in the cases of British Columbia and Ontario where the new annual allotments are $2 and $6 million respectively).

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In addition, they are designed to make it possible for activities under them to fit in more closely with other programs and to be part of an agreed development strategy for the provinces concerned.

The Fund for Rural Economic Development (FRED) was established in 1966. There are five FRED plans in operation. These are in the Manitoba Interlake Region; in Bas St. Laurent, Gaspé; in Northeast New Brunswick; in Mactaquac, New Brunswick; and in Prince Edward Island. The main purpose of the plans is to tackle problems of concentrated and severe rural poverty which cannot be effectively dealt with under the more general ARDA approach.

The Prairie Farm Rehabilitation Administration (PFRA) was originally set up in 1935 as a result of a severe drought in the three Prairie Provinces. The objective then was to rehabilitate drought-blighted areas and to bring more security to Prairie farmers. After 1939, activities under this program went forward along three main lines: the conversion of marginal land into community pastures; water development and conservation; and tree-planting to help agricultural rehabilitation.

When the Department of Regional Economic Expansion was established it was decided that PFRA should continue as a separate entity and that programs which were operational at that time should be continued. In addition, the Department is currently working towards agreements with the Prairie Provinces whereby PFRA will undertake to construct water supply and waste disposal facilities in a selected number of centres in agricultural areas on the Prairies.

The Canada NewStart Program originated in the federal Department of Manpower and Immigration in 1966. Its purpose is to identify and test new ways of motivating and counselling disadvantaged adults so that they can more effectively respond to regular training programs and employment opportunities as these develop. To provide the greatest freedom for experimentation, the NewStart program was implemented through independent corporations established under provincial law. Each corporation was provided with an annual budget of approximately $1 million for an average period of four to five years.

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In 1969, when the program was transferred to the Department of Regional Economic Expansion, NewStart Corporations were operating in Nova Scotia, Prince Edward Island, Alberta, and Saskatchewan. A year later, Corporations were established in New Brunswick and Manitoba.

Industrial development, infrastructure assistance, and social adjustment and rural development -- these, then, are the three major programs that the Department of Regional Economic Expansion has to pursue the objectives outlined earlier. Clearly, they are not in themselves sufficient to achieve those objectives, unless massive resources were allocated to them, and so they must be complemented by many other federal and provincial programs whose design and implementation is co-ordinated to the fullest extent possible. Nonetheless, the three major DREE programs are, as it were, the cutting edge of the effort to reduce regional economic disparities in Canada.

The Analytical and Planning Process

I want to turn now to the analytical process which is being developed to provide a strategy and a

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plan for the implementation of these programs and the related federal and provincial government activities. There are two basic types of analytical work being done for this purpose -- one is broad and integrative, and the other is specific and practical.

The broad and integrative analytical work consists of the development of regional economic models. A progress report on one of these was given earlier in this Conference by J. Lynn of the Treasury Board. Intensive work is also going forward on another type of econometric model, this time for the Canadian economy and then for a number of the component regions.

For the past several years, under the aegis of the Economic Council of Canada, work has been underway by it and several other federal government departments to construct a medium-term model of the Canadian economy. The model has recently become operational, although improvements to its various components will be made as the need arises and as more data become available. This model, named CANDIDE I (Canadian Disaggregated Interdepartmental Econometric Model), will not have, then, a definitive and final form for some time yet.

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Briefly, its characteristics and purposes are as follows. It contains approximately 1,500 equations, of which around 500 are behavioural and the remaining 1,000 identities. These equations are sorted out by blocks relating to, for example, income, final demand, industrial output, industrial prices, labour demand, labour supply, wages, the United States economy, balance of payments, and so forth. These blocks form a recursive structure; that is, the model operates sequentially in that what is an endogenous variable in one block becomes exogenous in a successive block. Another important feature is the input-output core which translates final demand into intermediate output and primary resource utilization.

The main purposes of CANDIDE I are to provide medium-term forecasts, say from five to fifteen years hence, and to carry out policy simulations. The forecasts are of a conditional variety, made possible by the use of lagged endogenous variables whose values the model generates over time, starting from observed values subsequent to around 1960. Simulations can be made by assigning to appropriate variables or parameters

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the values associated with contingent occurrences (say, a given unemployment rate) or specific government policy. More complete information on this model will be provided in the near future by the Economic Council of Canada.

The fact that CANDIDE I is a medium-term model is particularly relevant for purposes of regional development. It is the most difficult type to specify and estimate since it cannot take the present for granted, as does a short-term model, nor rely on asymptotic solutions, as does a long-term model. The medium-term time horizons appear to be those in which programs to reduce regional disparities can best be formulated.

CANDIDE I, though highly disaggregated according to type of activity, is at present a model of the economy of Canada as a whole. While undoubtedly its use as such would provide many insights into the workings of the economies of certain regions, its usefulness will be considerably enhanced through some regionalization. That is our intent. Some of the useful, and achievable, regionalizations include output, wages, and

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employment by, say, thirty industries. Estimates of regional gross domestic products will be made, and a peripheral labour supply model with limited feedbacks developed. The principal purposes of this regionalized and modified version would be to give consistent characterizations of regional economies which are tied to national aggregates, to provide forecasts and simulations, and to furnish one means for assessing proposed programs and evaluating those in progress or completed. It is not intended to carry this disaggregation to the fine detail required for thorough resource and industrial studies. It is hoped, however, that this disaggregating from national totals will match, in a useable manner, the figures resulting from the aggregating of particular data series and special surveys and tabulations so that the work of each kind will serve as a check on the other.

CANDIDE I is a new tool, and its regionalization requires the development of some new concepts and data. First of all, concepts of regional income and output are needed which are capable of being estimated without an undue commitment of resources. These are not strict

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counterparts of the national variables. For example, because of the distinction between an establishment and a company, regional income is very difficult to ascertain. Second, partitioning matrices for re-casting and reallocating national output figures are required. Third, means of estimating interregional flows of commodities and of migration components must be developed. The important consideration in all of this is the conceptual framework, and its lack has impeded the development of data at the regional level.

The preceding discussion should indicate that the primary role of the regionalized CANDIDE I is to provide a framework for co-ordinating numerical statements about regional and sectoral performances of the economy, about what is likely to happen, and about the impact of programs to reduce regional disparities. Detailed studies of various aspects of problem areas or sectors will still have to be made, and CANDIDE will greatly assist them. But it will not supplant them. In addition, the conceptualization and data development work required, particularly on the regional side, will take some time to accomplish. While potentially very important, therefore, the fact remains that it will be some

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considerable time yet before this tool can be used at the regional level.

The need, therefore, remains for more specific analyses. These are going forward on a variety of fronts, and I would now like to turn to them.

The first specific task is to examine the performance of a regional or provincial economy over the relatively recent past in order to form a judgment about the causes of economic disparity, about their size, and to identify in a preliminary way some of the potentials for more rapid growth.

This kind of analysis has been underway for some time. For each of the provinces where disparities have historically been greatest, it reviews the causes and extent of changes over the past two to three decades in production, employment and productivity in each significant industry, assesses the consequential sectoral and spatial adjustments which have taken place, and spells out the consequences of the growth performance in the period covered on employment, unemployment, migration and the labour force.

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This analysis is, of course, a basic first step, and because of that it has been, and continues to be, done on a joint basis by federal and provincial government analysts. The first of these "analytical assessments", that for Nova Scotia, is now available for general distribution.

An important complement of this work is the preparation of a shift/share matrix which is used to assess industry performance, on the basis of employment trends, in a province or region in the context of the performance of that industry in the country as a whole. This analysis makes it possible, on the basis of past experience, to identify those industries in a province which have shown relatively high, medium or low rates of growth both in Canada as a whole and in the province, as well as any combination of these. Appendix A contains an example of this work.

The next step in the specific analytical process is to carry out a more intensive assessment of potential in the industries which, on the basis of the overall review, would seem to have unrealized potential and which therefore might contribute significantly to the future development of the province or the region. A considerable number of

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such industry studies are underway. They include, for example, an assessment of the development potential of the Newfoundland fisheries, an appraisal of future development possibilities in the New Brunswick forest-based industry, and a study of the impact of oil and gas discoveries on the economy of the Atlantic Provinces. In each case, the purpose is to review resources, markets, productivity, and comparative locational advantages.

This kind of analysis is considerably simplified in the Atlantic Provinces by the existence of many studies of a similar nature which were started or carried out by the Atlantic Development Board prior to the creation of the Department of Regional Economic Expansion. These industry analyses focus on market prospects, locational advantages and disadvantages, links with other industries both within and outside a region, estimated return on investment in a region, value added, and availability of required manpower. In some cases, such analysis is carried to the point of assessing feasibility in a particular location or locations.

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These kinds of specific analyses are making it possible to form some early views about where future development might be concentrated, both industrially and spatially. The spatial dimension of this analysis is particularly important since one of the basic assumptions of the general development strategy is that the processes of industrialization and urbanization complement and support each other.

To date, the results of the specific analyses have supported this assumption and a spatial scenario has emerged. This scenario is formally represented by the designation of "Special Areas" which, in effect, specifies the urban centres in the slow-growth regions which appear to offer the greatest attractions for the establishment and growth of new industries and serve as the main population centres for the provinces concerned.

The process of identifying the industries which may grow most rapidly, and the areas in which they may concentrate, provides an early view about the main centres of employment and their economic

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roles and functions. These views, in turn, constitute a set of assumptions which are the basis for developing land use and urban plans for such areas.

The task of formulating land use and urban plans has to date focussed on the major urban centres -- St. John's, Halifax-Dartmouth, Saint John, Moncton, and Quebec City. Such plans have been, or are being, developed for all of these cities so that there is an overall framework for planning and programming their future growth and their priority infrastructure needs.

Urban plans, however, while necessary are not in themselves sufficient for the purpose of identifying critical infrastructure and other needs. Also required is an inventory of existing community services and their capabilities and an indication of the kinds and amounts of services which those industries which can be expected to grow in a particular urban centre must have. Thus catalogues of the manpower and community service needs of various industries, at various scales of operation, have been developed. Appendix B is an example of one of these industry catalogues.

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The above series of analyses provides a basis for establishing a series of first judgments about where, both industrially and spatially, additional growth may be generated and about the kinds of public programs or activities which may be necessary to generate the increased industrial development. They also provide a framework for carrying out feasibility assessments of various activities on a cost/benefit basis.

The analyses outlined so far have been primarily concerned with the public and private capital decision-making process insofar as it does or might influence the level of output and employment in selected slow-growth regions. It yields a profile of the future structure of output and employment which is different from that prevailing at present, and so it implies that there will be a re-distribution of population and employment.

Given the assumptions on which this development approach is based, that re-distribution of manpower will have two important characteristics -- a growing proportion of people will live and work in urban environments, and the knowledge and skills they require in their jobs will be different from those needed in rural and resource types of employment.

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Thus different and sometimes new processes of social adjustment are set in motion. These, if they do not take place, can inhibit if not thwart the tempo of industrialization and urbanization. Since the words "industrialization" and "urbanization" have come to have some considerable emotive significance, I should add that I am not talking in the Canadian context of vast metropolitan complexes composed of several million people who live in the haze of thousands of tons of smog. I am talking of a speeded up movement of people away from small rural villages, isolated fishing outports, straggling rural settlements, to medium-sized towns and cities where schools, housing, hospitals and industry are concentrated.

There are, of course, many facets to the social changes which are caused by increased industrialization and urbanization. From the point of view of the objectives of the Department of Regional Economic Expansion, the key ones are those which affect the ability of people in the slow-growth regions to gain access to new job opportunities as these emerge. This can be labelled the problem of employability, and it includes changes in skills and knowledge, location of employment and residence, and attitudes towards new vocational pursuits.

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The expected changes in employment arising out of the types of analyses described earlier make it possible to form some approximate judgments about the structural changes which will take place on the demand side of the labour market. At the same time, a picture of the present knowledge, skills and location of existing manpower resources can be developed. From these assessments, possible major imbalances in labour demand and supply can be detected and consideration can be given to the nature and extent of public programs which may be needed to ensure that the adjustments required can take place.

Some Issues and Problems

The preceding section of this paper outlined in a rather general way the analytical and planning process being developed to help implement federal regional development programs. It is obviously an evolving process and there are many difficult and complex questions which must be resolved. I would like to draw attention to a few of these.

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Government policies concerned with marked disparities in income and employment opportunities within a country are in effect dealing with a problem of welfare maximization. The welfare loss occasioned by regional employment and income inequalities can be corrected by three different types of policies: those which stimulate employment generation within labour surplus regions, those which promote migration from such regions, or those which increase transfer payments to assist the unemployed and under-employed. In most cases, the final policy approach will consist of some mixture of these alternatives.

A number of major considerations will influence this mix. Migration from a labour surplus region, for example, will help to standardize unemployment rates throughout the country, but the exodus of the unemployed may itself generate new unemployment in the labour surplus region. That is, there may be a negative multiplier impact associated with out-migration. Estimates of regional employment and income multipliers are important, therefore, not only from the standpoint of measuring the effectiveness of various ways of re-deploying jobs but also for measuring the effects of increased labour mobility on those remaining behind.

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The negative multiplier impact associated with out-migration may be felt in other ways than by job loss. Detrimental changes in population structure and other demographic variables commonly result from emigration -- causing the average productivity of the remaining labour force to fall. In addition, some under-utilization of social infrastructure will likely occur in the region from which people are moving, while that part of this infrastructure which is financed locally must be carried by a smaller tax-paying population. Further, migration from labour surplus regions may intensify the congestion problem facing the major growth centres of a country. In short, a number of factors associated with migration may weigh in favour of shifting the site location of jobs rather than that of workers.

But other considerations may weigh in favour of relocating the unemployed. Most fundamental is the greater output and productivity potential of those regions that prosper without the benefit of special stimulants. Obviously, national output will be reduced if labour and capital are used where the value of their marginal products is lower than would be the case in some

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other location. While this may not necessarily be sufficient to warrant a single policy of relocating the labour force, the cost of forgone output is one which should be taken into consideration at least so that one knows what one is doing.

At the forefront of any debate over policies to achieve a greater regional balance in economic opportunities must be the difficulty of quantifying the net social benefits flowing from different strategies. Psychic income associated with family ties and hereditary domiciles, for example, is highly subjective and people and groups with particular ideologies give it especial weight. The necessary budgetary appropriations to effect the degree of migration needed to reach the goal of regional balance is unknown. Equally difficult to calculate are the budgetary resources needed to attract that combination and volume of industrial investment in the slow-growth regions which would fulfil the self-sustaining employment goal. In short, there is more than ample room for honest men to differ about the most efficient and effective strategy for achieving a better regional balance in employment and income opportunities.

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The present federal regional development policies give priority to job creation in the slow-growth regions. At the same time, they emphasize that job creation does not mean "make work" employment, nor does it mean the establishment of industries which can only be viable if they have a continuing subsidy. It does mean the generation of economic activity which can be self-sustaining and which will stimulate in turn, both directly and indirectly, as much other employment as possible.

This is a terribly difficult task, and successful as it may be in a particular region it may still mean that out-migration or continuing transfer payments of considerable size are necessary. It would be a miracle indeed if even with the best public policies in the world every region could support at roughly similar overall income levels the natural increases which are taking place in its population. New and more productive industries can frequently be developed, employment opportunities can often be improved, incomes can frequently be raised, but there will undoubtedly always remain some differences in the relative levels of economic activity in various regions.

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The problem is to ascertain the point at which development efforts have gone far enough.

Regional development policies constitute another field of public action in which public and private decision-making becomes mutually inter-dependent. This is clearly the case because an important part of these policies is designed to influence the decisions of private investors. It becomes important, therefore, that the instruments of public policy used for this purpose do not make the private decision-making process unduly complicated and thus reduce its effectiveness.

There is a potential major problem here. It could be that the public policies needed to attain the objectives sought have to be both substantial and complicated. If that is so, it may be that the efficiency of the whole decision-making process becomes eroded. To avoid this, the public policy-maker may have to give consideration to some unique and innovative approaches and these could involve types of action which are different from incentive devices.

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The co-ordination of regional development policies with other governmental policies and programs at the federal, provincial, and municipal levels is also of critical importance. This in turn is a very complex issue since different public policies have somewhat different objectives. Even when these are defined with some precision, it still remains a formidable task to assess their effects on each other. It is noteworthy that many people call for a greater co-ordination of public policy but few turn their minds to the intricacies involved in achieving this, and fewer still come forward with well-considered and practical proposals. Nevertheless, the problem remains, and it is particularly important in the regional development field.

Finally, the formulation of regional development policies continues to be hampered by serious and substantial data gaps. The development and production of aggregative statistics at the national level has been considerable over the past few decades. Improvements have also taken place in the availability of data for regions and areas. But the latter field of statistical development is still far from adequate.

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The problem of statistical development is particularly important in the social field. It is heartening that Canada is working with a number of other countries to develop better "social indicators". These will make it possible to obtain a better appreciation of social change. It is to be hoped that the development of social statistics in general will make provision for geographical disaggregation to the fullest extent possible.

The preceding comments are not intended to leave the impression that public policies designed to reduce regional economic disparities face insurmountable problems. They are intended to illustrate the fact that the difficulties are formidable. If such policies are to succeed, it is abundantly clear that a great deal needs to be done to develop and improve the required analytical tools and to extend the range and quality of data available. At present, the disparity between the needs of public policy in the regional development field and the capability of present analytical tools and data banks means that for some time yet public policy in this field must have an important experimental character.

Shift/Share Matrix: Nova Scotia - Canada

This matrix is used to illustrate industry performance in the province on the basis of employment changes in manufacturing industries between 1961 and 1968.

To arrive at the matrix, we assign industry growth rates in employment over the period to one of three classifications, which are:

a) High, over 3.81 percent per annum;

b) Medium, 1.81 percent to 3.81 percent per annum;

c) Low or declining, less than 1.81 percent per annum.

We chose these breaks on the following basis. The average rate of growth for the 165 manufacturing industries in Canada, 1961 to 1968, was 2.81 percent per annum. We thus chose to class medium growth industries as those with a rate of growth of $\pm$ 1.00 percent around the mean; that is 1.81 percent to 3.81 percent. Thus the two other categories High and Low or Declining were defined as being above and below the "medium" range.

The industry's national rate of employment growth is put on the vertical axis of the matrix and its employment growth in Nova Scotia on the horizontal axis. Thus, for example, Industry X may have a national rate of growth that is high, while in Nova Scotia its rate is medium. As the matrix is basically 3x3, nine initial possibilities exist. To these we have added three others as described below.

When the growth rate for Canada and Nova Scotia are the same (high-high, medium-medium or low declining-low declining) we have broken the cell into two parts, Nova Scotia's growth exceeding or not meeting Canada's growth. Thus, for example Canada's and Nova Scotia's growth rate for Industry X may both be in the medium class but Nova Scotia's 3.00 percent per annum and Canada's 2.50 percent. Thus, this industry would be classed in the upper half of the "medium-medium" cell.

The table below gives the cell number, the growth classification, what the cell indicates regarding Nova Scotia's growth in an industry vis-à-vis Canada's growth, the employment shift and how we rate the industry's performance in Nova Scotia.

Cell	Canadian Growth	Nova Scotia Growth	Employment Shift	Rating
1	High	High (higher than Canada)	+	Excellent
2	High	High (lower than Canada)	-	Good
3	High	Medium	-	Fair
4	High	Low or declining	-	Poor
5	Medium	High	+	Excellent
6	Medium	Medium (higher than Canada)	+	Good
7	Medium	Medium (lower than Canada)	-	Fair
8	Medium	Low or declining	-	Poor
9	Low or declining	High	+	Good
10	Low or declining	Medium	+	Fair
11	Low or declining	Low or declining (higher than Canada)	+	Poor
12	Low or declining	Low or declining (lower than Canada)	-	Poor

Our decision to rate each cell as excellent, good, fair or poor in performance was based on the following decision:

Cell 1: Industry is a high growth one in Canada and Nova Scotia and in Nova Scotia is growing even more quickly - excellent.

Cell 2: Industry is a high growth one in Canada and Nova Scotia but Nova Scotia's growth somewhat slower than Canada's. Not so desirable as Cell 1- good.

Cell 3: Industry is a high growth one in Canada but Nova Scotia's growth for the industry is only medium. Undesirable performance in a high growth industry - fair.

Cell 4: Industry is a high growth one in Canada but Nova Scotia's growth low or declining. Very undesirable performance in a high growth industry - poor.

Cell 5: Industry is a medium growth one in Canada and Nova Scotia's growth is high. Very good Nova Scotia performance in a good medium growth industry - excellent.

Cell 6: Industry is a medium growth one in Canada and Nova Scotia's growth medium also but somewhat higher than the Canadian rate. Good performance in a good medium growth industry - good.

Cell 7: Industry is a medium growth one in Canada and Nova Scotia's growth medium also but lower than the Canadian rate. Poorer performance than desirable - fair.

Cell 8: Industry is a medium growth one in Canada but Nova Scotia's growth low or declining. Undesirable performance - poor.

Cell 9: Industry is a low growth one in Canada but Nova Scotia's growth high. Excellent performance in a poor industry - good.

Cell 10: Industry is a low growth one in Canada but Nova Scotia's growth medium. Good performance in a poor industry - fair.

Cell 11: Industry a low growth one in both Canada and Nova Scotia. Nova Scotia's growth somewhat better than Canada's. Fair performance in a poor industry - poor.

Cell 12: Industry is a low growth one in both Canada and Nova Scotia. Nova Scotia's growth below Canadian growth. Poor performance in a poor industry - poor.

It should be kept in mind that this type of analysis is useful primarily to highlight the area of industrial strengths and weaknesses in the province. It can do no more than suggest industries that are potentially candidate for industrial promotion.

NOVA SCOTIA INDUSTRIES – SHIFT/SHARE ANALYSIS – GROWTH AND EMPLOYMENT GAINS AND LOSSES
1961–1968

	NOVA SCOTIA HIGH GROWTH INDUSTRY (over 3.81% p.a.)		NOVA SCOTIA MEDIUM GROWTH INDUSTRY (1.81% to 3.81% p.a.)		NOVA SCOTIA LOW GROWTH OR DECLINING INDUSTRY (less than 1.81% p.a.)	
	SIC INDUSTRY	EMPLOYMENT	SIC INDUSTRY	EMPLOYMENT	SIC INDUSTRY	EMPLOYMENT
CANADIAN HIGH GROWTH INDUSTRY (over 3.81% p.a.)	PROVINCIAL SHARE OF A CANADIAN HIGH GROWTH INDUSTRY INCREASING 23.23%					
	111 Fish products industry					
	335 Communication equipment manufacturers					
	348 Ready mix concrete manufacturers					
	274 Other paper converters					
	323 Motor vehicle manufacturers					
	216 Carpet, mat and rug industry					
	304 Metal stamping, pressing, coating					
	3815 Dental laboratories					
	2299 Miscellaneous textiles industry					
	147 Wineries					
	PROVINCIAL SHARE OF A CANADIAN HIGH GROWTH INDUSTRY DECLINING 1.18%		PROVINCIAL SHARE OF A CANADIAN HIGH GROWTH INDUSTRY DECLINING 1.07%		PROVINCIAL SHARE OF A CANADIAN HIGH GROWTH INDUSTRY DECLINING 2.97%	
	328 Boatbuilding and repair		308 Machine shops		301 Boiler and plate works	
	318 Office and store machinery manufacturers		294 Iron foundries		309 Miscellaneous metal fabric industry	
	324 Truck body and trailer manufacturers		3998 Artificial ice manufacturers		315 Miscellaneous machinery, equipment	
	306 Hardware, tool and cutlery				266 Other furniture industries	
					305 Wire & wire products manufacturers	
					385 Plastic fabricators	
CANADIAN MEDIUM GROWTH INDUSTRY (1.81% to 3.81% p.a.)	PROVINCIAL SHARE OF A CANADIAN MEDIUM GROWTH INDUSTRY INCREASING 12.84%		PROVINCIAL SHARE OF A CANADIAN MEDIUM GROWTH INDUSTRY INCREASING 2.92%			
	271 Pulp and paper mills		141 Soft drinks manufacturers			
	326 Railroad rolling stock industry		302 Fabricated structural metal industry			
	261 Household furniture industry		259 Miscellaneous wood industries			
	303 Ornamental & architecture metal		201 Synthetic textile mills			
	347 Concrete products manufacturers					
	1799 Miscellaneous leather products mfrs.					
	338 Manufacturers of electric wire and cable					
	337 Battery manufacturers					
	397 Signs and displays industries					
	221 Canvas products industry					
			PROVINCIAL SHARE OF A CANADIAN MEDIUM GROWTH INDUSTRY DECLINING 0.49 %		PROVINCIAL SHARE OF A CANADIAN MEDIUM GROWTH INDUSTRY DECLINING 19.30%	
			103 Poultry processors		291 Iron and steel mills	
					239 Other knitting mills	
					321 Aircraft and parts manufacturers	
					139 Miscellaneous food manufacturers	
					286 Commercial printing	
					2541 Sash, door and millwork	
					256 Wooden box factories	
					2732 Corrugated box manufacturers	
					3814 Ophthalmic goods manufacturers	
					143 Distilleries	
					378 Industrial chemicals	
					379 Other chemical industries	
CANADIAN LOW GROWTH OR DECLINING INDUSTRY (less than 1.81% p.a.)	PROVINCIAL SHARE OF A CANADIAN LOW GROWTH INDUSTRY INCREASING 5.58%		PROVINCIAL SHARE OF A CANADIAN LOW GROWTH INDUSTRY INCREASING 4.08 %		PROVINCIAL SHARE OF A CANADIAN LOW GROWTH INDUSTRY INCREASING 10.99%	
	112 Fruit & vegetable canners and pres.		129 Bakeries		105 Dairy factories	
	334 Manufacturers of household radio & TV		101 Slaughtering and meat processing		289 Publishing and printing	
	123 Feed manufacturers				365 Petroleum refineries	
	341 Cement manufacturers				183 Cotton yarn and cloth mills	
	287 Plate making, typesetting plant				145 Breweries	
	2731 Folding cartons & set up boxes				353 Stone products manufacturers	
	174 Shoe factories					
					PROVINCIAL SHARE OF A CANADIAN LOW GROWTH INDUSTRY DECLINING 15.47%	
					327 Shipbuilding and repair	
					2513 Sawmills and planning mills	
					131 Confectionery manufacturers	
					2431 Men's clothing factories	
					3511 Clay (domestic) products	
					128 Biscuit manufacturers	
					375 Paint and varnish manufacturers	
					258 Coffin and casket industry	
					372 Mixed fertilizers manufacturers	
					247 Hat and cap industries	
					231 Hosiery mills	

excellent	36.07
good	9.60
fair	5.84
poor	48.69
	100.00

APPENDIX B

STUDY No. 6

METAL STAMPING, PRESSING AND COATING

METAL STAMPING, PRESSING AND COATING

1. Production Process:

This industry is engaged in cutting, coating and pressing metal into a variety of final products. Larger plants make their own dies for the stamping and pressing operations. Although the majority of products are intermediate goods, items such as bottle caps, kitchen ware, hub caps, steel office furniture and cafeteria equipment are typical of the final products that are also fabricated. The majority of goods produced by the industry are identified under the miscellaneous category in Statistics Canada publications, complicating attempts at classification.

2. Marketing:

Since most products of this industry are intermediate goods, close industrial linkages exist. The assembler of the final product will often have stampers and other bulky input producers in close proximity to minimize transportation costs and servicing time.

At small scales of output, management tends to concentrate on the technological aspects of production. However, as the scale increases, management becomes increasingly concerned with marketing per se.

3. Research and Product Development:

Due to the heterogeneity of the industry, it is difficult to generalize about technological progress. No current innovations

are recognized that are likely to change significantly the relative labour input.

4. Industrial Linkages and Locational Choice:

In general, the firm's location is closely tied to that of its customers, and three factors tend to affect the geographic size of its market - the value-to-weight ratio, the degree of specialization of the plant, and the level of industrial activity in the region.

Whereas a high value-to-weight item that is costly to produce can enjoy an international market, since transportation costs are only a small portion of value added, a low value-to-weight, or low cost heavy product, will render transportation costs a significant portion of value added and hence restrict the extent of its market. Ceteris paribus, teaspoons would enjoy a larger market than bathtubs. Because of special expertise, high technology, or a new product, a firm may become a specialist and hence can afford to ship over a large area. In addition, different densities of industrial activity will, other things being equal, permit firms in Chicoutimi for example to ship over a larger area than firms in Toronto.

5. Employment-Income Characteristics:

Small operators require their employees to be capable of operating a variety of machines and equipment, and hence must have a diversity of skills. As the size of the operation increases, greater work specialization is possible and an increasing proportion

of semi-skilled and unskilled workers can be utilized. Large shops have their own tool and die works employing highly skilled toolmakers.

The utilization of women as workers in these shops depends on the product. The female staff ratio could range from nil in an auto bumper factor to a large proportion of the staff in the production of jewellery items.

6. Major Municipal Service Requirements:

Water is not generally required in the production process, and consumption is related to the normal requirements of employees. Electricity is used to power machinery but not in large quantities. Some effluent from the metal coating operation is highly toxic and cannot be drained into a normal sewage disposal system. Accordingly, special arrangements for disposal on or off the site must be made. Sewage effluent is mainly sanitary.

7. Transportation:

The transportation mode used will depend on the geographical area served. Although most products will be sent by truck, other products due to size, comparative costs, or where long lead times permit, can be shipped by rail. Certain items might also be shipped by air.

8. Building-Production Space Requirements:

The space requirements depend to a very large extent on the product being manufactured and these could range from bath-tubs to teaspoons. Generally, a suitably built industrial building capable of holding the machinery loads required in the operation is satisfactory. A shell type structure is considered adequate.

Due to the nature of items produced and the possibility of corrosion of products, little to no outside storage is utilized in most operations.

9. Other:

If a tradesman possess a certain level of skill, he can and often does set up his own shop. Such an operation frequently specializes in the low technology end of the spectrum, and the relative ease of entry into this particular area has resulted in much competition. The firm mortality and rebirth rate is very high.

INDUSTRY MANPOWER CHARACTERISTICS AND INFRASTRUCTURE REQUIREMENTS

INDUSTRY: Stamping, Pressing and Coating (S.I.C. 304)

		SCALE OF FIRM		
		SMALL	AVERAGE	LARGE
	Yearly Sales	$330,000	$1,200,000	$5,000,000
A.	Labour Force - Total	10-15	30-50	150-200
	- Professional and Managerial	8-16%	6-8%	6-8%
	- Skilled	84-92%	10%	8%
	- Semi-skilled	0	20%	15%
	- Unskilled	0	60%	70%
	- Female - all categories	0	0-75%	0-75%
B.	Municipal Service Requirements			
	- Water (GPD)	200	1,150	4,000
	- Sewer - Sanitary (GPD)[1/]	200	700	2,670
	- Industrial (GPD)	0	450	1,330
	- Electricity (1,000 Kwh/year)	100[e/]	405	1,400[e/]
C.	Preferred Transportation Mode			
	- Rail	10% inputs 5% outputs	10% inputs 5% outputs	10% inputs 5% outputs
	- Truck	90% inputs 95% output	90% inputs 95% output	90% inputs 95% output
	- Air	Negligible	Negligible	Negligible
	- Water	Negligible	Negligible	Negligible
D.	Building-Production Space Requirements			
	- Plant floor space (1,000 sq. ft.)	4	20	80
	- Beyond-building space	Loading space, some yard space, and employee parking as required.		

[e/] By Extrapolation.

[1/] By assuming that each employee uses 15 gallons of water per day.

PRIMARY SOURCES

1. W. Ellis and W. Black, - 992-0025
Iron and Steel Division,
Materials Branch,
Department of Industry, Trade and Commerce,
Place de Ville,
Tower B,
OTTAWA, Ontario.

2. Statistics Canada, Publication Number 41-227