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REGIONAL DEVELOPMENT AND SERVICES IN QUEBEC:  
REVIEW OF THE QUESTION

Donna Brown

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1. INTRODUCTION

In recent years, economists have become widely aware of the growing domination of developed economies by the service sector. Parallel to this has grown the view that service industries may serve as an economic development panacea for less developed regions, given their apparent absence of locational constraints. Two major assumptions underlie this perspective: one, that service industries will locate in less developed areas, and two, that service industries, once established there, will have a motor or propulsive effect, thereby leading a regional economic revival. As a survey of the literature, this paper will examine and attempt to draw conclusions from the existing body of Canadian research concerning the role of the service sector in the economic development of Quebec's outlying regions.

Literature on the service industry in Canada or other regions will be considered here to the extent that it sheds light on Quebec, and particularly on its outlying, or resource, regions. Nevertheless, as the modalities of development of services in Quebec are not unique to that province, many of the questions and conclusions found in this paper may apply elsewhere. Questions that will be posed in this paper are: What models have been used to explain or interpret service sector activity, and with what success? What data have been developed, how do they clarify trends, and what gaps exist? What types of models, analyses, and observations have proven useful in explaining the development of the service sector? What avenues appear promising for research and theoretical development? How does this apply to policy concerning the development of outlying regions?

The objective of these questions is to lay the groundwork for a determination of the regional pattern of service development in Quebec, the regional development effects of this pattern, and whether, and what, policies can promote economic development via the service sector in Quebec's outlying regions. It should be noted that this paper examines services from a regional, not a sectoral, perspective. The growth of the sector on a national level, and policies encouraging its overall growth, are not the object of the paper. Rather, it focusses on the location and regional impact of services in particular sub-regions of Quebec.

## 2. THEORETICAL BACKGROUND

### i) Definitions of the Service Sector

While some researchers have noted that data unavailability has made the only viable definition of the service sector in Canada the one used by Statistics Canada, the vast majority of economists, at least conceptually, divide the service sector into two sectors<sup>1</sup>. The division is usually made on the basis of the location of demand for the service (external or intermediate demand versus domestic/local and final demand) rather than the nature of the supplier, be it government or business, commercial or non-commercial. (see Coffey, 1988, p. 3, for example). No distinction between commercial and non-commercial is made in most of the discussion in this paper because high-level or motor services can be either. The focus is the function, not the provider, of the service.

The first of the two sectors usually discussed, variously called personal, residentiary, non-basic, non-propulsive, or consumer is composed of those services directed towards the consumer, demand for which is largely determined by population and per capita income. Haircuts and dry-cleaning are often cited. The primary characteristic of such services is seen to be the requirement that the seller and buyer of the service meet face-to-face, and that production and consumption are simultaneous. The potential for export of these services is low although not non-existent; education could be considered such a service, as could amusement parks, and both can be "exported" in the sense of attracting foreigners or tourists. But it is widely agreed that there exist services aside from these exportable consumer services which have little potential for propelling economic development because

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<sup>1</sup> While it is true that some authors split the service sector into either more or different categories (for example, McRae's 1988 summary paper presents William Baumol's 1985 three sector categorization (McRae, 1988, pp. 34-35)) this two-sector split remains the most common among the authors reviewed here, and is still in use by such important researchers in the area of regional development as William Coffey and Mario Polèse (Coffey, 1988).



they are themselves a function of population, income or other productive activities<sup>2</sup>. In practice, it may be difficult to determine whether certain services belong to this category, but conceptually the category is clear. In policy terms, few would dispute the weakness of an economic development policy aimed at regional expansion via dépanneurs and hairdressers. The second category is the one to which economists refer when they discuss the development potential of service sector growth. No agreement exists on terminology: Cossette (1982) and Martin (1986) call it "le tertiaire moteur", Coffey and Polèse (1987) the "propulsive" service sector. Others denote it the dynamic or basic service sector (tertiaire dynamique), or refer to "productive services", high-level services, or "tertiaire supérieure". These terms refer to the same concept: that section of the service sector which is perceived to be essential to, and possibly drive, the development of advanced industrial economies. Albert Cossette defines such activities as those which are "initiatives de développement, des catalyseurs qui déclenchent des 'réactions économiques en chaîne'" (Cossette, 1982, p. 91). It is these services which are the focus of this paper.

#### ii) Motivity

Given that only some services are of interest in regional development, since only some are seen to have a "motor" effect, the meaning of this propulsive effect, here called "motivity", must be clarified. In addition, the question of which services fall into this category requires discussion.

Motivity itself is defined a number of different ways and has been the subject of dispute; a dispute that reflects the difficulty of identifying the "first cause" of ripple effects when the movement of variables is linked. By and large, authors on the subject can be divided into two groups. The first consists of those who rely simply on the idea of the multiplier, wherein a service activity is an engine of growth if it generates a multiplier effect on employment and incomes. In this camp is found Neil Swan (1985), for

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<sup>2</sup>

For example, data processing may be a function of a manufacturing activity to which it is connected, and therefore is not propulsive in itself.

example. On the other side are those who see an engine of growth as an export-based activity, for which demand is determined outside the region, which generates significant positive externalities for activities in the region (Mansell (1985), Scarfe (1985), Martin (1986)). The difference between the two groups is mainly a matter of scale: for those who rely solely on the multiplier, the induced employment or income effect of an increase in service activity need be smaller and less specifically identified for it to be considered "dynamic" than for those who have a narrower definition. The question, which was discussed in the academic debate over the Economic Council of Canada's Western Transition, is significant not in itself but because it demonstrates the difficulty of grasping the meaning of service-induced development. It also impacts on policy; for example, whether a funding program should consider the establishment of research institutes a higher priority than barber shops.

All economic activity has a multiplier effect and to promote services because they do as well would be poorly justified. A narrower definition of motivity is more useful because it enables the researcher to identify specific results to be expected, versus a broad multiplier-induced rise in income or employment that could be generated by any kind of government, business, or consumer expenditure. Given that the purpose of this paper is to support policy development, it will henceforth be considered that a service is a motor or engine of growth and therefore a target of regional development policy, only if it meets at least some of the following criteria:

- It is an autonomous source of growth (Martin, 1986, p. 125, Cossette, 1982, p. 95), leading, rather than a function of, other industries; one way in which this could occur is through the creation of new products or methods of production. In this manner, service activities could improve the productivity of all sectors. Cossette calls this "la dimension innovation". (Cossette, 1982, p. 102)
- it is an industry based on export outside of the region so that demand is not limited to that present within the region. In Canada, this is particularly important given the tendency for resource-based regional economies to enter periods of decline with consequent decreases in regional/local demand. It is via this



exportability that potential for growth, de-linked from regional circumstances, occurs. Cossette, for example, places exportability in first place among the dimensions of motivity, as does Polèse (Polèse, 1986, p. 139), who also considers import substitution to have a similar effect (Polèse, 1986, p. 140).

- it has a strong linkage to the regional economy, so that external demand has a significant multiplier effect within the region. This effect could be through employment creation, technology or skill transfer, investment in the region, revenues directed towards purchase of local inputs, or other links. Cossette calls this linkage "la dimension intersectorielle", (Cossette, 1982, p. 99).
- it attracts other firms, increasing the total production and employment in a region by acting as a magnet to productive activity [Cossette's "dimension polarisation" (Cossette, 1982, p. 100)]; Martin also discusses polarization (Martin, 1986, p. 127) as does Polèse (Polèse, 1986, p. 147). The attraction of this polarizing service lies in its contribution to reducing production costs, since the service purchaser is located near the supply of an important input - for example, management consulting, sophisticated financial services, or an "agglomeration" of a number of services that are found in urban areas. The more important service inputs become to the production process, the more important it is to locate where an agglomeration of services exists.

In the province of Quebec, Cossette identifies several sectors which meet some or all of the above criteria for the Province as a whole. Finance, insurance, and real estate all important exporters from the province (and highly centralized in Montreal). Wholesale and retail trade are also major exporters, and Montreal has traditionally played an important distribution role in the Canadian economy. "Services aux entreprises" exported as much in 1974 (the year of Cossette's data) as "vêtement", and more than the paper, primary metals, or chemical industries. Tourism, transport and storage, and public services (including electricity) are also key exporters. "Polarizing" services include seaports, such as the port of Montreal, which Cossette estimates impacts on 6% of the region's manufacturing jobs, airports, head offices, engineering, cargo

handling, repair shops, and high-quality municipal services (Cossette, 1982, p. 101-102). Service industries with an innovative impact include education in general, and universities in particular, research institutes and laboratories, some services to business such as management and engineering consulting, and other services that lead to the rationalization or modernization of production, for example. (Cossette, 1982, p. 102).

The above are mentioned by way of example. In any given region, such industries may or may not have a motor effect, depending on their linkages in, and exports from, that region. The particular circumstances in a region will determine the degree of motivity of a service, and only more detailed case studies can determine this on a regional level.

Attempts to measure motivity are relatively rare in the literature. Cossette uses the value of sectoral exports and input-output tables. The latter could be particularly useful in examining linkages among sectors if data were sound, although more recently Kenneth Norrie has pointed out a major weakness in Statistics Canada's input-output tables making them at present unfit for regional analysis of service industries (Norrie, 1988, p. 215). Both suffer from aggregation - often the information most desirable is at such a "micro" level that statistical aggregation excludes it, and special studies are required. To some extent, the study program carried out by DRIE's Services Sector Branch<sup>3</sup> will respond to this need. In addition, empirical studies examining the employment and multiplier effects of specific and narrowly-defined sectors or activities, such as head offices of banks in Montreal, or universities in towns like Trois-Rivières and Rimouski, or the taxation centre in Shawinigan, would be of interest. Several such studies exist for Canadian universities and research centres, although they tend to focus narrowly on employment and personal income effects, and not examine the attraction of companies to the area, the establishment of spin-off companies, the value of exported services, the lowering

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Service Industries Study Program (SISP), a DRIE-funded study program carried out by the Fraser Institute, the Institute for Research on Public Policy and Statistics Canada, from May 1986 to the summer of 1988.

of local production costs, or other aspects of motivity. This type of study could provide a stronger basis than existing data for policy decisions on regional development assistance, procurement, and location of government services and government-funded services.

To summarize, the service sector has normally been divided, at least conceptually, into two categories based on the extent to which any given service is able to provide impetus to economic development. High-level or "motor" services, such as management consulting or engineering, contrast with consumer services like barber shops. Throughout the remainder of this paper, the term "high-level services" will be used to distinguish those services seen to have a potential for propelling economic development. It is these services which are of interest in the elaboration of regional development policy, since via the mechanisms discussed above, they may have potential to propel economic development in Quebec's outlying regions. Whether this potential can be translated into reality will be discussed further on.

### iii) Explanations for the Growth of the Service Sector

Explanations for the growth of the service sector have tended to get bogged down in definitions of that sector - both what services are and where the line is between high-level and consumer services, and which of these is genuinely experiencing accelerated growth.

Statistics discussed below show that the service sector has been growing as a proportion of total economic activity for several decades, and no sudden shift has occurred (at this level of aggregation). The first explanation is therefore a common sense one: as industrial economies develop, goods become progressively less important and services more. Cossette, for example, discusses this type of simplistic stage theory (Cossette, 1982, p. 95) in terms of demand. Once basic needs are satisfied, economies produce manufactured goods. The production of these goods is at first closely tied to primary production (agriculture, for example) then, at maturity, freed from these ties. Similarly, high-level services begin as tied to manufacturing (e.g., bookkeeping) then develop their own dynamic - the stage we have now reached.

While the above is a useful economic "fable" its explanatory power is weak. Stage theories only apply loosely to the economies they are drawn from and often not at all to other economies, such as those of the developing countries.

A second type of explanation is related to the "stage" theory, but focussed on the income elasticity of demand. As family incomes increase over the years, it is said, consumers come to spend a greater proportion of their incomes on services. Services are thus seen as a kind of luxury. For example, decades ago parents may have cut their children's hair; now, children are taken to the barber or the salon. Again, the theory is intrinsically believable, but it should be recalled that it may only apply to consumer services. Related to this explanation is the view that there has been a decline in the price of services relative to manufactured goods causing consumers to substitute services for relatively more expensive goods. Various studies examined these two possibilities empirically, but early data did not appear to support the conclusion that consumer demand had shifted significantly towards services (Magun, 1982, more recent studies are required). Still, income increases, part of which are directed towards private purchases of services and part taxed to pay for publicly-provided services, must form part of any explanation of rising demand for services.

In its "corporate" version, service demand is said to be a function of revenue, so that as companies (and economies) grow, more and more inputs are services (seen to be sophisticated) rather than goods (seen to be simple). A corollary is that more and more services are contracted-out, leading to the creation of an independent producer service sector, rather than supplied in-house. While this explanation appears "common sense" it is much more difficult to substantiate than the explanation based on the income elasticity of consumer demand, and suffers from over-simplification of both economic trends and organizational behaviour. Dobell, MacRae, and Desbois review the literature on contracting-out, and conclude that Canadian evidence does not conclusively support the theory that increased contracting-out is occurring (Dobell et al, 1984, p. 32). William Empey's study of the role of contracting-out in the growth of the service sector also shows that evidence for such a trend is weak. On the contrary, the opposite trend toward increased "in-house" or head office production



of advanced services such as legal support, accounting, technical and market studies, management training, etc. confuses the issue considerably (Empey, 1987<sup>4</sup>). Consequently, more empirical work remains to be done before a conclusion can be reached on the significance of contracting-out.

Government contracting-out, on the other hand, may have increased in Canada. The study by Dobell, MacRae, and Desbois observes that in Quebec, the share of services purchased by government compared to the total of services and goods purchased grew from 39% in 1966 to 58% in 1973. The majority of services purchased at this time were medical, financial, and producer services (Dobell et al, 1984, p. 34). Only more recent data could substantiate this trend. One example is a recent study by the Quebec Government's Conseil de la Science et de la Technologie, showing that, under the federal contracting-out policy of the Department of Supply and Services, scientific and technological contracting-out increased substantially from 1973/74 to 1987/88, although Quebec's proportion of the value of these contracts fell from about 25% to about 10% in that period. (Quebec, 1988, p. 64). However, science and technology activities are not all either services or high-level services, and cannot be taken as a proxy for the service sector as a whole, so the impact of this activity on service sector development remains unknown. The study also shows, however, that almost none of the contracting concerned was received by Quebec's outlying regions (Quebec, 1988, p. 21); hence this particular aspect of contracting-out likely has had little impact on the development of these areas. Still, while government contracting-out may provide benefits in terms of lower costs, it is not a regional development policy if applied broadly; it must be narrowly focussed on a region, sector, or even company, to have an effect in an outlying region. Contracting-out to specific regions or companies may help develop those regions or companies and thereby prove a useful regional development tool.

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<sup>4</sup> A study prepared under DRIE's Service Industries Study Program (SISP). SISP studies will henceforth be identified by "SISP" appearing in parentheses after their reference.

In his overview of the role of service industries in regional economic development, James McRae attributes the rise of the service sector as a percentage of employment and GDP to productivity increases in the service sector being lower than those in the non-service sector, meaning that with the passage of time more employment is taken up by the service sector, and its rising relative prices increase its percentage of GDP. On the supply side, the explanation is plausible: services, especially those offered only "face-to-face", may have productivity constraints greater than those affecting goods, and a growing proportion of the labour force may be required for their production. (McRae, 1988, pp. 31-36 (SISP)). However, this is not more than a partial explanation. (This point, that service sector employment has grown faster than output, is not agreed upon by all authors. Some consider that employment increases in services are caused by an opposite effect: increasing productivity leading to lower prices, and given an elastic demand, greater demand for labour (Melvin, 1987, (SISP)). Empirical work may be able to clarify the issue given the availability of suitable data. The diversity within the service sector means that both positions may be true with respect to different industries.) Agglomeration/urbanization are also used as explanations for the growth of the service sector. Fernand Martin and Mario Polèse both have a highly urban-oriented theory of service sector development; this explanation also formed the basis of the Economic Council of Canada's now-dated report Western Transition. According to this perspective, there is a critical point in the development of urban agglomerations at which high-level producer services, whether already there, growing with the urban area, or later attracted by its size, begin to play a significant role. These specialized services, some of which require a certain population and level of business activity to be viable, then attract and support other business activities which would be less likely to locate in the area without their presence. Martin includes entertainment facilities such as Place des Arts (Martin, 1986, p. 125) as well as other businesses, institutions, centres, activities, and professions which he classifies as "rare": head offices, research centres, a stock exchange, information processing, and so on. In addition, Martin notes that urbanization leads to problems like congestion, crime, and pollution, which create a demand for specialized municipal services relying on modern



technology: a service demand with a service sector multiplier.

Related to the urbanization explanation is one generally only taken into consideration by development economists. This is the decline in agricultural employment consequent to productivity improvements in this sector. The freeing up, during the course of this century, of large amounts of agricultural labour created a pool of employees available for wage labour. Many services are employment-intensive; without this pool, the supply side of the service sector would have starved. And while supply may not generate its own demand, the migration into the cities and consequent need for municipal and social services formed an important portion of the demand for services as well. Increases in agricultural productivity, brought about by the mechanization of agriculture, may therefore have been an important aspect of service sector growth. Changes in family organization, with more women working outside the home, also appear to have affected the demand for services, at least consumer services, as well as supplying labour to this sector.

The above explanations refer largely to the growth of the service sector as a whole, and not to the growth of high-level services. The basis for their growth is also likely to be related to urbanization. In addition, important sources of the growth of producer services may include an increased use of service sector inputs by business due to:

- increased contracting-out of very specialized activities (law, accounting, management consulting), perhaps as a result of the increased complexity of business and its legal and tax environment; or because of economies of scale in producer services making specialization less costly than in-house production;
- increased productivity in the service sector; lower relative prices for services either over time or in comparison with goods they can replace could result in substitution of service for goods inputs; an example would be technological changes such as computerization causing the use of more programmers, engineers, consultants, etc. Substitution would likely occur only in a "dynamic" way, i.e. in a given manufacturing process, services could not likely substitute for

goods, but over time new processes may rely more heavily on services than goods as inputs.

Again, empirical studies do not solidly support the view that Canadian business has increased its intermediate demand for services (Magun, 1982) despite the appeal of the concept. Still, the idea that capital is "splintering" into smaller, more specialized, and more efficient firms (at least at the margin) is not a new one, and it bears watching as a long-term trend.

To summarize, there appears to be no one simple explanation either for the growth of the service sector as a whole or for the apparently rising importance of dynamic, high-level services. Nevertheless, the "why" of the importance of this group of industries may be less important than the questions of whether they can propel economic growth and how they can be stimulated.

#### iv) Micro-Economic Models

While authors like Cossette attempt to describe, and examine empirically, the service sector, other researchers have taken a traditional neo-classical approach, basing their investigations mainly on the micro-economic model widely used in regional economics. The purpose of this section is not to detail every theory or even a standard use of this model, but to summarize some of results of various attempts to model the service sector.

Despite the widespread use of the neoclassical model to analyse service activity, there is no unified analytical approach to the sector. The result is a humber of graphs, boxes, and, more seriously, outcomes, so that the investigator seeking the impact of changing variables on output, employment, or location, is little enlightened. One of the difficulties of research into the service sector is the lack of consensus in the literature on how it should be modelled and, as a result, what the outcome of movements of variables will be.

A debate which occurred in the Western provinces around the Economic Council of Canada's 1984 publication, Western Transition, provides a good demonstration of the use of micro-economic theory in analyzing the service sector, as well as policy implications relevant to the province of Quebec.

Western Transition itself, though rooted in micro-economic analysis, provides a general and non-technical discussion of the issues, focussing on the importance of contracting-out (specialization), technological change, and especially "agglomeration economies" in the growth of the service sector, a sector whose growth is seen to make up for declines in the resource sector. The theoretical discussions that took place around the document, several of which were published together in a special July 1985 edition of Canadian Public Policy, were more detailed. The partial equilibrium model presented by Neil Swan is an example.

In his article concerning services in the Western economy, Swan first examines the effects on services and manufacturing of a resource shock. He deduces that a resource discovery (a typical resource boom) will lead to higher incomes in the resource industry and an export surplus (since all resources are assumed to be exported). Higher incomes expand demand for both goods and services, and labour demand and wages therefore increase in both sectors. In the end, production and consumption of goods and services rises, but domestic production of manufactures, unlike services, has dropped while imports have risen (Swan, 1985, p. 346). As for services, Swan has made an assumption which dictates that unlike manufactures, services imports are not likely to rise in this situation. Wages and prices increase in all sectors in his model, so the apparent unspecified assumption is that services cannot be imported to any significant degree; otherwise rising wages would outprice services as surely as they do goods. The soundness of this assumption can be questioned: it is true that haircuts are unlikely to be imported but the high-level services of interest to those concerned with regional development can be. Prices, on the other hand, may not be a significant determinant of demand. "Intangibles" rely to a greater degree on reputation, for example, than manufactured goods might, and it is often difficult to compare costs of services. The reliance on prices of this type of model is therefore a weakness. In any case, the important aspect of this model, for our purposes, is its assumption that services are not imported and its consequent conclusion that a "resource boom" (as parts of the outlying regions of Quebec periodically experience) will result in resource and service production together at least partially replacing manufacturing production. This is an interesting

conclusion and one that merits investigation in the context of Quebec's outlying regions.

Swan's second "cut" is to examine the effects of an increase in service industry productivity in a given region. As services are assumed to be inputs into the resource, manufacturing, and service sectors, the consequent decreased price of services (given that an increase in productivity generates a decrease in price) will increase their intermediate as well as final demand. With cheaper inputs and therefore cheaper outputs, all sectors will produce and sell more. Employment will increase, and so may wages as labour demand increases. Exports from all sectors will increase, as will imports. An economic expansion occurs wherein domestic production and living standards improve (Swan, 1985, pp. 347-8). Swan's essential point is that an economic "boom" can be led by services as easily as by a resource discovery or a productivity improvement in manufacturing. That improvements in service productivity can have an impact on economic growth (act as an engine of growth, according to Swan) is plausible. However, a significant shift in service sector productivity in one region as opposed to another--a shift large enough to overcome the effects of a decline in resource revenues--is less plausible. There is no particular reason why Abitibi, for example, would experience a surge in service sector productivity. On the other hand, investment in innovative service activities, such as research in mining technology, could conceivably act as an engine of growth in such regions, both by exporting "knowledge" directly, and by lowering production costs of local activities aimed at the export market.

It is the second argument discussed above that Swan tries to make with respect to the Western economy. The argument could apply to any resource economy: as resources decline in a region, high-level services have the potential to replace them as the engine of growth. This is an attractive concept for many areas of Canada as well as Quebec. But on what does Swan base his conclusion that services will indeed take on this broad role in the Western Provinces?

Swan's link between the possibility of the service sector propelling growth and the realization of this possibility is the same one favoured by the Economic Council of Canada: agglomeration economies. "Agglomeration economies", also called "external economies of scale", are described in Western



Transition as "the wide range of collective benefits that accrue to firms as a consequence of spatial concentration of activities" (Economic Council of Canada, 1984, p. 162). The more businesses and activities are concentrated in an area, the more efficient each will tend to be. This is an important concept in the work of Quebec authors like Fernand Martin and Mario Polèse as well. Swan theorizes that there exists a "threshold" level of urbanization. Once it is reached, service productivity will accelerate. It should be emphasized that this kind of agglomeration argument leaves no role for government: the market itself will generate the appropriate activities once the threshold level of urbanization is reached. It is the reaching of this threshold and subsequent acceleration of productivity (not specific investments in specific facilities) which creates the effect of an engine of growth. Swan (and the Economic Council of Canada) predicted that the West would experience faster productivity growth in the service sector than Central Canada just as the resource boom was ending because the threshold level of urbanization was then being reached in key western cities. The present economic situation in the West would suggest that their optimism was misplaced, whether because the argument was too simplistic or because they mistook the threshold.

For a region to reduce its disparity with the centre by this route, it should be emphasized that service productivity must improve faster in the region than in the centre. While there is a correlation between urbanization and service development, there is no evidence that "agglomeration economies" will lead to this result. On the contrary, greater urbanization may generate greater productivity, giving a permanent advantage to areas already urbanized. With reference to the resource regions of Quebec, it should be noted that Swan is referring to western cities as "taking off" due to agglomeration economies: from the context Calgary and Edmonton come to mind. If these are just reaching the required threshold, it is unlikely Swan would see his model applying to Val D'Or, Rimouski, or Sept-Iles. Quebec's outlying cities may be too small to qualify for the agglomeration economies required by high-level services, even if the theory should prove correct.

Other authors involved in the debate surrounding Western Transition are less positive about the effects of "agglomeration economies". James McRae (McRae, 1985, p. 352) notes that the growth of service sector

employment over recent decades may be related to many events other than urbanization, such as the contracting-out of services previously performed in-house, or slower productivity increases in the service sector. McRae's views on the causes of service sector growth lead him to the conclusion that more conditions than a threshold level of urbanization will be required for services to propel economic growth or substitute for resource-impelled growth (McRae, 1985, p. 353).

Norrie and Percy also discuss the inter-relationship of resource booms and service sector growth in a micro-economic model. They point out that resource booms can lead to greater service sector growth than manufacturing sector growth, since the higher incomes the boom generates may be spent proportionately more on services, which some maintain have a higher income elasticity of demand. On the other hand, unless migration supplies the additional labour needed by the resource industry, service output could fall as labour switches sectors, although this is unlikely in Canada since temporary migration to resource regions is common, and unemployment has, at least in the last decade or so, been high enough to ensure no labour shortage occurs, nor a significant bidding up of service sector wages<sup>5</sup>.

Norrie and Percy also point out that increased resource tax revenues increase the provision of government services, increasing absolutely and relatively the presence of the government in the economy and possibly crowding out manufacturing and some services (i.e., activities crowded out would be those whose input costs were bid up by increased demand for inputs, so that their prices exceeded the prices of competitive goods or services produced elsewhere. In other words, tradeables could be squeezed - manufactures and high-level services) (Norrie and Percy, 1987, p. 26 (SISP)). A regional resource boom could then force high-level services away from the region instead of attracting them. For symmetrical reasons, a resource

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Toronto is an exception to this; it appears some industries within the service sector, especially personal services, are suffering from a labour shortage and difficulties paying the wages demanded by the tight labour market.



contraction may attract exportable service or manufacturing industries. Again, it is not immediately evident that regional resource cycles in Quebec or Canada have had these effects, and further investigation of such impacts is necessary.

Other micro-economic analyses have been produced by researchers of the Institute for Research on Public Policy (IRPP) and the Fraser Institute; a large number were produced for DRIE's Service Sector Industries program (discussed above). Those by the Fraser Institute are, as intended, sectoral, and thus not of direct use for policy aimed at the economic development of outlying regions. Similarly, few of the IRPP papers have direct applications to regional economics. The micro-economic models used by James Melvin and James Markusen in their discussion papers on trade in services produced for DRIE hold some interest.

Melvin's paper makes the interesting point that services exist to overcome the constraints of time and space in economic activity (i.e. reduce or eliminate transaction time, bringing people and goods together etc.) thereby helping to equilibrate the micro-economic model that previously lacked a capacity to deal with time and space (Melvin, 1987, p. 5 (SISP)). While this is a useful observation, it does not apply to all services: it may be true of telecommunications and transport, but not of law, architecture, or management consulting. In addition, this role for services does not resolve the theoretical problem created by adding "real world" time and space to the model; this is a more challenging theoretical problem than Melvin implies. However, it is true that increased efficiency in the provision of some services would reduce transaction costs; if this does not clear markets in the model at least it ought to improve the competitiveness of an economy. Better services in the outlying regions (especially transport) should reduce disparities by reducing the cost differences between production in urban areas and in outlying regions.

Markusen's paper develops a more sophisticated model in which increasing returns to scale result from specialization in human-capital intensive service industries. As the division of labour increases, so does productivity, resulting in agglomeration economies. The assumption of increasing returns to scale (number of services offered) in the dynamic service sector creates a situation wherein the service sector underproduces at a competitive equilibrium, and

a country (or region) can get stuck at a low-level equilibrium where welfare is less than optimal. In addition, the model as structured by Markusen gives not only the conclusion that urban agglomerations have an advantage, but also that large trading countries have an advantage over small ones, and early entrants into a market over late ones, (Markusen, 1986, p. 16 (SISP)). In order for Canada (or a region) to overcome these disadvantages and the possibility of a low-level equilibrium, Markusen proposes a subsidy on human capital (the cost of producing skilled services). However, subsidizing the creation of human capital can lead to an inefficient "brain drain" when migration is permitted; therefore regions or nations supporting the development of the high-level service sector should subsidize the use of human capital in skill-intensive activities or products (Markusen, 1986, p. 33 (SISP)). Whether this is practical or cost-effective has not been studied.

James McRae's overview of "Service Industries in Regional Development" produced for DRIE's Service Industries Study Program sums up the results of a number of the studies done for that program. As much of the substance has already been discussed above, the following discussion will focus on some remaining points of interest.

McRae's section on regional development, while well-argued, demonstrates some of the weaknesses of equilibrium analyses when applied to the development of outlying regions. He assumes the existence of full employment in all regions, so that "regional disparities" are caused by regional variations in wages, profits, or rents. These differences can exist in equilibrium if skills or resource endowments differ, or in disequilibrium if there are barriers to the movement of goods, people, and capital. [This view, that regional disparities are an equilibrium phenomenon resulting from variations in consumer preferences, regional endowments, provincial services, etc. is advocated by Thomas Courchene and James Melvin in a 1986 article on regional policy (Courchene and Melvin, 1986, pp. 61-62)]. One method to reduce "equilibrium" disparities would be to replace low-skill jobs with high-skill (McRae, 1988, p. 37 (SISP)) in the target region.

Disequilibrium disparities could only be reduced by reducing barriers to trade, capital flows, and migration. Within the province of Quebec, therefore,

the solutions to the disparity, say, between Matane and Montreal, would be to switch high-skill jobs to Matane from Montreal, and low-skill jobs from Matane to Montreal, and to remove government regulations on the flow of goods, capital, and workers. Given that such movements within the province are virtually unregulated, and despite this, disparities persist, one may question the value of this latter policy. Moving high-skill jobs to Matane would certainly be an effective policy, provided the jobs could be kept there, but not for the reasons provided; rather, because it would create new jobs in a region where there is significant unemployment. It is this factor which McRae's model cannot capture: regional disparities in Canada are often more a question of disparity in job opportunities than in wages.

McRae relates this model to the service sector and first asks if service growth has contributed to regional disparity. Assuming the difference between services and goods to be that services are non-tradeable, McRae notes that non-tradeability will only affect disparities if migration is constrained. Otherwise, prices and wages will equilibrate among regions for services as well as goods. Equilibrium disparities may persist however, if regional technology differences, differences in relative demand, or other factors mean service sector prices, wages, and profits vary regionally. It is inputs that are geographically specific, such as unique locations, that mean service industries can generate incomes that vary by region.

McRae uses the example of "urban land" as perhaps the only factor that could be regionally specific in the service sector (McRae, 1988, p. 40 (SISP)). While showing his affinity for the agglomeration argument, this example may also demonstrate a flaw in his analysis. Urban land may be identical to rural land; the "specific factor" receiving varying returns is location, not land. Regions therefore have varying endowments of "location" and incomes vary by location because locations have different values. But the logic of this is circular: locations are valued differently because regional differences in economic activity exist - these differences in activity do not exist because locations are inherently valued differently. Urban land in general earns more rent than rural land, it is true, and this contributes to the income gaps that characterize disparity, but urban land is worth more because agglomeration economies and closer markets increase the profitability of producing on it versus

another location; these exist because production is concentrated in the urban region rather than the rural region, in other words, because of regional differences in economic activity. At bottom, it is the location of production, not the level of wages, profits, or rents, that defines regional disparities in Canada. The key is not that services earn more in Montreal than Sept-Iles, but that they produce more in Montreal than Sept-Iles. Services contribute to disparity by locating in urban areas, not by earning greater returns in Montreal than similar operations in Sept-Iles. McRae's prescription of migration and free flows of goods and capital risks increasing, not reducing, this disparity by moving production from outlying regions to central regions, where, other things being equal, it is attracted by agglomeration economies.

McRae also addresses the questions of services as an engine of regional growth via technological change or resource booms (basing his discussion on the work of James Melvin and Niel Swan), and services in urban growth, concentrating on the highly urban location of export oriented services (McRae, 1988, pp. 41-54 (SISP)). As these have been discussed above, his arguments will not be repeated; of note is McRae's useful summary of Western spatial studies (McRae, 1988, pp. 47-53 (SISP)). McRae suggests, comparing these with the work of Coffey and Polèse on Quebec, that Quebec's exportable service pattern is slightly unusual due to linguistic barriers. These have allowed exportable services to spread more beyond Montreal, than, say, Vancouver (facing less extra-provincial competition) (McRae, 1988, p. 51 (SISP)).

To summarize this section on micro-economic models, theorizing to date within this framework has been useful but not without difficulties. The first area of weakness has been the lack of consensus among economists as to how to model the sector, and consequently on the outcome to be expected under given circumstances. More work is required in this area so that an integrated body of work is available to support policy development. The second area of weakness is the model itself. Equilibrium analyses of differences in the level of economic activity among regions, by assuming the problem is income gaps rather than insufficient production or the urbanization of production, begin with a basic flaw that then influences their predictions and prescriptions. Micro-economic thought will continue to inform regional



economics, but economists should also seek eclectic and disequilibrium approaches.

However, much of the work done remains useful, particularly in its evocation of concepts and questions for empirical research. An example is the possibility of services and resources "crowding out" manufacturing in Swan's model. In the development of outlying regions, this is not necessarily a desirable outcome, and the circumstances under which it may occur should be investigated. Whether equilibrium or disequilibrium, Swan's theorizing provides a useful warning and an avenue of research for regional economists. In the same way, Markusen's paper suggests a study of the policy possibilities of subsidizing the use of human capital. That theory has reached only the stage of development of suggesting further areas of research is to be expected given the recentness of interest in the dynamic potential of the service sector.

v) Theorizing within Quebec

In contrast to the above-discussed neo-classical economists, Quebec researchers such as Cossette, Martin, and Polèse, have taken a more empirical approach.

Alfred Cossette's La Tertiarisation de l'Économie Québécoise is a mainly empirical study examining the nature and growth of the service sector. Like Polèse and Martin, he views "le tertiaire moteur" as an urban phenomenon, and he does not examine it from the perspective of the development of outlying regions. In preference, therefore, to examining his book in detail, the more recent works of Polèse and Martin will be discussed.

Mario Polèse has written extensively on the dynamic service sector in Quebec, usually in tandem with William Coffey or other authors, and he and his colleagues can be said to have had a major influence on the development of the existing body of literature in Quebec. The works of Polèse and his collaborators, particularly William Coffey, studied here centre on two themes: definition and measurement of motivity, and the location of motor services. His definition of motivity has much in common with those of other authors although he was an early exponent; it is briefly discussed earlier in this paper. Consequently, only Polèse's view on the locational pattern of high-level

services, the reasons for this pattern, and the impact of this on regional development, will be examined below.

Polèse and his collaborators focus on high-level services, and while noting the heterogeneity of those classified as such, observe that nearly all are urban phenomena, declaring that "the propensity of high order services to concentrate in the largest urban places is clear" (Polèse and Coffey, 1987(a), p. 77). The observation is backed with tables of "location quotients" which demonstrate its validity: services we normally see as propulsive, such as transport, communications, and finance, are presently highly concentrated in urban areas. In order to explain this phenomenon, Polèse examines the locational decision: why do services, more footloose, at least conceptually, than the capital-intensive manufacturing and resource industries, become so heavily urban?

Three principal factors influencing the location decision are presented: proximity to markets, to a skilled labour pool and to complementary activities for which transport and communication costs must be minimized. A fourth factor sometimes raised is linguistic constraints.

High-level services, Polèse points out, can and are often produced at a distance from their markets, since they are traded nationally and internationally (Polèse and Coffey, 1987(b), pp 597-8). Examples of trading would include the supply of consulting services to the Third World, or the management and administrative services provided by a head office to a regional office. Hence, the pull of proximity to market, while undoubtedly important, is not the only or even the key factor in the locational decision. Market pull is important if the service requires face-to-face contact, if transport costs are high, or, in the case of Montreal, when linguistic barriers mean "locals" can deliver the product most successfully. Polèse postulates that beyond a certain threshold, say 500,000 population, market pull becomes less important than other factors (Polèse and Coffey, 1987(b) p. 606). That market pull is not the only explanatory factor is shown by figures on export-oriented service employment: Montreal's urban area is not that much smaller than Toronto's, but "its total share of export-oriented producer-service employment (7.2%) is barely one-sixth that for Toronto and considerably less than the share of Calgary (17.6%), a much smaller area with fewer head



offices" (Polèse and Coffey, figures calculated by the authors, based on Statistics Canada 1981 employment data, 1987(b) p. 608). Again, better and recent data would enable a more conclusive argument to be made in this regard.

Another factor Polèse identifies as leading to the urbanization of services is the attraction of pools of skilled labour, in particular pools featuring diverse skills: engineers, architects, lawyers, film-makers, financial analysts, computer programmers and so on (Polèse and Coffey, 1987(b) p. 605). However, not only are diversified skills required, so normally are highly specialized skills in each field. The depth and breadth of the skilled labour pool available outside large agglomerations is likely to be insufficient to attract high-level service operations (Polèse and Coffey, 1987(b) p. 608). Polèse focuses more on the skill, knowledge, and size of the local population base, from which springs new and expanded enterprises, than physical infrastructure attracting outside enterprises to a given location. Coffey's 1988 report, however, mentions the "social-cultural-political-physical" environment as having a role to play in attracting the skilled labour force and complementary activities to which high-level services are attracted, and therefore the level of public investment may indirectly influence the locational decision (Coffey, 1988, p. 6).

In addition, firms must minimize the transportation and communications costs of both inputs and outputs. This includes minimizing the cost of importing skills, the cost of delivery of the output, (Polèse and Coffey, 1987(b) p. 605), and the cost of communicating with complementary economic actors: financial institutions, "symbiotic" service functions, consultants etc. (Coffey, 1988, p. 5). The point of minimization is likely to be a large city - Montreal when the province is considered, or Toronto nationally.

Two examples studied by Polèse are engineering services and real estate development services, both of which are highly concentrated, the former mainly in Montreal and latter mainly in Toronto. Polèse's explanation for this concentration brings in elements of all the above arguments: the combination of skills required, specialized financing needs, high-level management requirements, and high costs for acquiring these inputs. In addition, the particular circumstances of each city have led to particular responses in the

respective industries. Toronto's city-planning tradition was more conducive to the development of large, international real-estate companies than Montreal's freer market, for example, while the particular policies of Hydro-Quebec assisted the growth of internationally- competitive Montreal engineering consulting firms. Government activities have had an impact on each of these industries, but not direct regional development activities. In one case, contracting-out was key, in another urban planning policies and in both, the growth of the service activities was indirect result of other activities (Polèse, 1988, pp. 10-11). This implies that a wide range of government activities may be considered as instruments for the development of high-level services. Whether such services can be established within outlying regions may depend on the primary or secondary activity with which they are associated.

The final factor considered by Polèse and his colleagues is language. Partly because of language, Montreal is isolated from exports to nearby North American markets, while benefiting from a closed market inside Quebec. Polèse notes:

Les services, plus que les biens, sont très sensibles aux barrières culturelles et linguistiques, à cause, notamment, de leur forte teneur en information et en communication interpersonnelle (Polèse and Stafford, 1984, p 47).

As a result, Montreal succeeds over Toronto as the dominant pole of service development in Quebec, (even in Western Quebec where Toronto is not disadvantaged by distance), and is the principal source of the high-level services consumed in Quebec's regions (Polèse and Stafford, 1984, p. 51). The majority of these services are locally controlled (Polèse and Stafford, 1984, p. 54).

Polèse's view leaves little room for the diffusion of high-level services among regional growth centres. For he and his collaborators, Montreal is the regional growth centre: its role is to provide services to its hinterland and purchase from it resource products, thus promoting "complementary" and apparently, divergent, development. (Polèse and Stafford, 1984, p. 52). The following expresses this perspective in more detail:

Si certains services supérieurs doivent se développer au Québec... ils se développeront à Montréal ou pas du tout: sinon le Québec les importerait d'ailleurs... Il est certes possible d'identifier des cas isolés de succès à l'extérieur de Montréal, comme par exemple la publicité à Québec; mais l'édification d'un complexe d'activités de bureau, surtout à vocation internationale, ne pourrait se faire qu'à Montréal (Polèse and Stafford, 1984, pp 51-52).

He adds: "Il faut donc parler d'une complémentarité de rôles entre Montréal et les autres régions" (Polèse and Stafford, 1984, p. 52).

Where does this leave the outlying regions of Quebec? While admitting that "le phénomène des disparités régionales (est) autant un problème de localisation tertiaire qu'un problème de localisation industrielle" (Polèse, 1986, p. 136), he recommends no method for diffusing high-level services nor developing the outlying resource regions. For Polèse, the development of the province is equivalent to the development of Montreal, whose linkages will bring along the regions - regions that remain dependent on resources. While the view may have a certain realism, it offers no solutions to regional disparity. Still, it is important to note that the factors Polèse considers important in locational decisions are ones that those interested in regional development must overcome if services are to assist in reducing, rather than maintaining, disparities. It should be noted that while Polèse views the question of decentralization of high-level services negatively, he does see these services as having a motor effect where they do locate.

Fernand Martin has also written a perceptive article on the service sector, and his views have much in common with those of Polèse. He shares this latter's emphasis on urban centres, and extends it, noting that the city not only has an advantage in market, labour and transport/communication costs, but also, via a shift in mentalities, creates a demand for, and supply of, new goods. "L'effet combiné du changement des mentalités et du grand nombre des habitants donne naissance à des commerces, institutions, et professions rares servant les nouveaux besoins de la population" (Martin, 1986, p. 125). Urbanisation also creates externalities like

congestion and crime, which new services are created to overcome. All of these are sources of urban growth.

Martin also goes farther than Polèse in his concept of polarization. For Martin, services polarize the provincial economy geographically, giving urban areas an increasing advantage over outlying regions. High-level services are important to encourage, because they provide the indispensable environment for attracting industry, but only large urban areas can sustain them: Martin seems to favour populations around one million (Martin, 1986, p. 132), meaning that Montreal can be Quebec's only growth centre. The size is crucial because the catalyzing effects of high-level services, particularly via innovation, "repos(ent) avant tout sur une base quantitative... C'est à partir d'un certain seuil de population que peut exister et se développer un système d'enseignement : écoles techniques, universités, grandes écoles, etc., capable d'assurer à la fois la formation initiale... la formation permanente, l'information scientifique et technique et la recherche" (Martin, 1986, p. 131). A broader milieu, he adds, is necessary for the circulation and development of ideas, and the "consommations différenciées" of city life are crucial to attracting skilled professionals (des cadres) who demand a high standard of living (Martin, 1986, p. 132).

It should be noted that Martin's view of economic development rests on the attraction of national and international enterprises to a particular area through the creation of a satisfactory environment. He places no emphasis on "growing" local companies. The establishment of high-level services in his eyes appears to become a process of establishing government-funded educational, social, cultural, and physical infrastructure, as a locational incentive, possibly replacing in spirit DREE/DRIE-type programs, but only in cities which have already reached a threshold population (where such facilities would likely develop without necessarily being part of an economic development policy).

While this may be feasible for Montreal, it is not necessarily possible for outlying regions. In addition, one must question, even for Montreal, the effectiveness of this as an economic development policy, given the unproven developmental value of locational incentives in general [see, for example, Savoie, 1985, p. 14 -this is not to imply they have not



been successful in many particular instances.]. Martin's views, in other words, may demonstrate a trend among economists in Quebec to view regional development as the development of Montreal, but add little to policy development aimed at the outlying regions of the Province. Instead, they raise even more difficulties to be faced by any policy to diffuse high-level service activities, than do the view of Polèse. Martin, like Polèse, considers high-level services to have a motor effect.

To summarize the state of theoretical development within Quebec concerning the service sector, the "agglomeration" approach clearly dominates. The work of these Quebec economists focusses strongly on the relationship between high-level services and urbanization: for them regional development in Quebec results from (if not being equivalent to) the development of Montreal. This "trickle down" view of the development of outlying regions shows little evidence of having worked in the past. While the development of Montreal is important to ensure that the economy of Quebec remains strong, it cannot be the sole policy for regional development in the Province. The theories discussed above, therefore, shed little light on the question of the development of outlying regions. Their greatest contribution may be in underlining the strong attraction urban areas have for high-level services, and the difficulties in diffusing these services for the purposes of regional development. On the positive side, these economists do not disagree that services can be productive and promote development, though the strength of this "engine of growth" remains to be measured. On the negative side, however, the vast majority of economists concerned with the service sector do not see it as easily dispersed to outlying regions and in fact perceive it as much more highly urban than other economic activities.

### 3. STATISTICAL BACKGROUND

#### i) Statistical Definitions of the Service Sector

Research on the service sector has been partially conditioned by the availability of data. DRIE's Service Industries Study Program (SISP) has recognized the unsuitability of much of the data traditionally produced for the study of high-level services and is taking steps to improve the availability of appropriate data through work with Statistics Canada, which is undertaking a Service Statistics Program initiated by

SISP. The principal difficulty at present is the level of aggregation of data, which inhibits distinguishing between various types of services, particularly at a regional level.

The difficulty of obtaining disaggregated statistics, particularly for regions, has led, first, to the use of aggregated statistics as proxies, and second, to attempts by researchers to gather basic statistics on their own. The results of efforts like this will be examined below, beginning with the results of aggregated statistics.

ii) Statistical Profile of the Canadian Service Sector

Statistics Canada includes the following industries in its definition of the service sector: Transportation and Utilities; Trade (wholesale and retail); Finance, Insurance and Real Estate (FIRE); Community, Business, and Personal Services; and Public Administration. Since measurements of the service sector vary considerably depending on which industries are included, care must be taken to ascertain the definition used in any particular case. The statistics below are derived from Statistics Canada data and use its definition. (Most researchers use employment data rather than output data, given its greater availability.)

In 1911, the earliest year for which Statistics Canada publishes data, services formed 32.9% of total employment in Canada. This percentage grew fairly steadily over subsequent decades. The greatest increases were in the decades of the 1940's, 50's, and 70's. In every decade back to 1911 (except the 1930's), the average annual employment growth rate of the service sector has significantly exceeded that of the "goods" sector, as the following table demonstrates:



Average Annual Employment Growth

|                  | <u>1911-<br/>1921</u> | <u>1921-<br/>1931</u> | <u>1931-<br/>1941</u> | <u>1941-<br/>1951</u> | <u>1951-<br/>1961</u> | <u>1961-<br/>1971</u> | <u>1970-<br/>1987</u> |
|------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Service Sector   | 2.9                   | 3.3                   | 1.0                   | 4.4                   | 4.4                   | 4.0                   | 3.2                   |
| Non-Serv. Sector | 0.8                   | 1.8                   | 1.1                   | 1.3                   | 0.0                   | 0.8                   | 1.0                   |
| Total Employment | 1.6                   | 2.4                   | 0.7                   | 2.6                   | 2.2                   | 3.4                   | 2.5                   |

Sources: Derived from Statistics Canada 71-201 (1970-87 data) and Statistics Canada Historical Statistics of Canada, 2nd edition, 1983.

Figures for Canada also do not show any sharp structural shift toward the service sector. While service sector employment grew faster than that of the non-service sector throughout this century, it started from a smaller base, and in terms of number of jobs, did not exceed the non-service sector until the 1950's. To compare two key industries, "manufacturing" was exceeded in number of jobs by "community, business, and personal services" in about 1965 in Canada. Declining or low growth rates in manufacturing were not key to the domination of services until at least the 1950's: manufacturing employment growth rates in Canada were high prior to that, averaging 2.6% annually 1921-31, 3.8% 1931-41, and 4.3% 1941-51; the decline has been more recent. The influence of negative employment growth in agriculture was much more important, and underlines the weakness of using employment figures to compare sectors: agricultural output was not similarly declining.

To summarize the above in aggregate terms, services are indeed a large sector, and to date a growing one; in the Canadian economy, at present, approximately 70% of employment is found in this sector. This is the result of a long and gradual growth process wherein the economy has grown but manufacturing has not grown as a proportion of it, while agriculture has fallen dramatically, as follows:

Percent of Employment in Canada  
by Sector, 1911 and 1987

|                      | <u>1911</u>  | <u>1987</u>  |
|----------------------|--------------|--------------|
| Agriculture          | 34.2         | 4.0          |
| Other Primary        | 5.0          | 2.4          |
| Manufacturing        | 17.4         | 17.1         |
| Construction         | 7.3          | 5.7          |
| Services             | 32.9         | 70.8         |
| Industry Unspecified | 3.2          | N/A          |
|                      | <u>100.0</u> | <u>100.0</u> |
|                      | =====        | =====        |

Source: Ibid.

Finally, as many authors point out, the vast majority of jobs created this century are in the service sector. Statistics Canada data show that approximately 9,300,000 net new jobs were created between 1911 and 1987; 7,570,000 of these, or 81%, were in the service sector, with the "community, business, and personal services" sector leading with 38.7% of net new jobs.

If the figures are disaggregated by industry, it appears that industries within the service sector have experienced widely different rates of growth during different periods. For example, public administration experienced high growth rates in the 1940's and 1950's but low or negative growth rates in the 1980's. Finance, Insurance, and Real Estate, has experienced high but cyclical growth in most decades, but its growth in the 1970's and 1980's is lower, perhaps surprisingly, than any decade since the 1930's. Industry growth profiles differ considerably among each other and over time within the service sector, and service employment can be cyclical. It is often suggested that service employment is more stable than "goods" employment, but service sector employment growth declined considerably in 1982 and 1983, although not as seriously as that of the non-service sector. As some authors postulate, the Canadian service sector does appear to have been more stable in employment than the non-service sector over the last 17 years, but this is not to say the service sector is immune to economic downturns.

A 1985 study by the Canadian Department of Finance using Statistics Canada data suggests that the annual growth rate of commercial services has slowed in the

nineteen-eighties and services (or at least commercial services) may therefore approach stabilization as a percentage of GDP at some point in the future. The narrower category of services to business has also experienced a slower growth rate in the 1980's than previously. (Canada. Department of Finance, 1985, p. 2). This "trend" cannot be established for certain without longer term data. The study also concludes that the statistical phenomenon of services rising as a percentage of GDP is not an illusion caused by similar activities being contracted-out to specialized service firms rather than performed in-house by manufacturing firms. More services are being produced, not just the same services in a different corporate location (Canada. Department of Finance, p. 2).

When output figures are considered instead of employment, results appear broadly similar (Statistics Canada 15-512 and 15-001). Service GDP as a percent of total GDP is lower in most years measured than service employment as a percent of total employment. Service GDP shows the same rising trend as service employment. Interestingly, Canadian figures appear to show that service employment is rising faster, and therefore diverging from, service GDP as a percent of total GDP. This raises the issue of the meaning and measurement of productivity in service industries. Neither the significance of this trend, nor the extent of the "trend" itself, have been investigated in detail. The question of whether service sector productivity is in general lower than that of the non-service sector, or growing more slowly, is not especially relevant if one's concern is only the more dynamic high-level services. Other authors have written extensively on the productivity question for services in general.

One final point concerning service sector growth has been made by Kenneth Norrie and Michael Percy. This is that, during the period from 1926 to 1983 (for which they present data), the pattern of regional disparity, as measured by personal income, changed very little in Canada<sup>6</sup>. These data suggest that the rise of the

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<sup>6</sup> "Changed very little" is a matter of perspective. Figures assembled for Still Living Together show that personal income per capita is much more evenly distributed among provinces in the 1980's than during the 1920's, 1940's, or 1960's, for example. Even when transfer payments are excluded, figures comparing 1966, 1980, and 1983 show improvements by 1983. While changes

services as a major sector of the economy therefore had little impact in itself on the distribution of economic activity across the country, and that services and industrial development followed approximately the same regional pattern. (Norrie and Percy, 1987, p. 7-9 (SISP)). The possibility exists that services may have acted to offset centralizing forces affecting other variables, but more highly disaggregated data would be required to show this. (Norrie and Percy, 1987, p. 7).

iii) Statistical Profile of the Quebec Service Sector

In general, statistical trends in the province of Quebec follow those of Canada - differences among provinces appear only at a more disaggregated level. Quebec's service sector labour force grew from 64% of the total in 1975 to 71% in 1987. As in Canada, service sector growth showed cyclical characteristics but was more stable than total labour force growth. Of interest is a possibility revealed in the 1975-87 data: Quebec's percentage of total Canadian service sector jobs has declined slightly over the period, from about 28% to about 25% (Statistics Canada 71-001 and 71-529). This may be insignificant, but if it shows Quebec's share of "dynamic" service sector jobs really is declining, policy-makers may wish to examine such lags with a view towards improving future performance.

DRIE's Commercial Services Directorate prepared a report in 1987 using unpublished 1978 and 1984 Statistics Canada data based on employer tax records, showing the approximate employment and number for firms in each sub-sector of the service industry. These figures show services as a whole to employ about 75% of workers in Quebec and about 76% in Canada. In Quebec, sub-sectors experiencing higher employment growth than the service sector total growth of 10% from 1978 to 1984 were retail trade (21%), business services (22%), and community services (21%). In the meantime, goods producing industries saw a drop in total employment.

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are minor in Newfoundland and New Brunswick, they are substantial in Prince Edward Island and Nova Scotia. Quebec's income compared to Canada's rose and then fell over the period under consideration. (Coffey and Polèse, (eds) Still Living Together, p. 21 and p. 23). Data at present are inadequate to judge the role services may have played in these movements.

Service sub-sectors also experiencing employment decreases were construction, transportation, wholesale trade and communications and utilities. Public administration grew about 10% over the period and finance, insurance and real estate, and other selected services, were characterized by roughly stable employment.

Comparing these figures to those for Canada as a whole, Quebec's total service employment grew slightly less. The two jurisdictions experienced equally strong retail growth as well as negative construction growth. Where Quebec's transportation, communications, and utilities employment decreased, Canada's remained stable. In the important area of business services, Quebec's employment grew significantly less - at 22% - than Canada's, at 28%, and especially Ontario's at 32%. It should be noted that of Canada's approximately 459,000 business service jobs in 1984, Ontario had 200,000, or 44%, while Quebec had 105,000, or 23%, and Quebec's percentage had declined slightly over the previous six years. Again, this is a "trend" worth investigating given that it may show Québec's representation in the high-level service sector is declining.

A more detailed breakdown of business services shows that Quebec experienced strong growth in computer services over the period (181%), stronger than Ontario at 120% and Canada at 156%. On the other hand, in the key category of "Engineering and Scientific employment", where Canada increased by 5% and Ontario by 10%, Quebec dropped by 26%, a figure worth further study to check if it is a "blip" due to time-specific circumstances, or represents a trend. Variations among provinces appear in other business service sub-sectors, but with limited data it is difficult to draw significant conclusions from, say, the observation that management consulting employment grew more in Quebec than Ontario over the period under consideration. One final non-business service of interest in regional development is transportation. Transportation employment dropped in all sub-sectors of this industry in Canada over the period except "other transportation", but changes were minor in all categories. Variations were wider in Ontario as air transport grew and rail dropped, with "other" growing fairly significantly. "Other" grew very slightly in Quebec, while all other sub-sectors saw fairly large decreases: air (-7%), rail (-15%), water (-28%), trucking (-15%). Given the importance of transportation for economic development in outlying



regions, such figures may be cause for concern, and further investigation is merited to determine the regional pattern of this, if "output" is also decreasing, and if these figures represent a longer-term trend (all above data is from Canada. Department of Regional Industrial Expansion, 1987).

As discussed above, the regional distribution of services within Quebec is only available on an ad hoc basis. William Coffey and Mario Polèse have been working on locational quotients of service activities. Examining the location of employment by producer sector category, they note that producer services (those of interest in developing regional economies) are highly concentrated in urban centres. High-level services such as computer services, accounting, advertising agencies, and management consulting do not appear to be particularly "footloose": in the province of Quebec they are heavily concentrated in Montreal (Coffey and Polèse, 1987). A study using 1971 data by Polèse and Robert Stafford reveals that 94% of net regional service exports in Canada are accounted for by the three largest urban areas: Toronto, Vancouver, and Montreal. A fourth important service "pole" is Calgary, especially for financial services.

In terms of specialization, Montreal's service exports are largely transportation-related, as are Vancouver's; Toronto's strength is business and financial services (Polèse and Stafford, 1982, pp. 317-322). Data show, in addition, that public service production and export do not necessarily attract private sector growth: cities with strong public sector exports, such as Quebec, Ottawa, and Halifax, are net importers of business and financial services (Polèse and Stafford, 1982, p. 324). A more detailed examination of industries shows that Montreal, while weak overall compared to Toronto in financial services, is strong in "sociétés d'investissement et de portefeuille" as well as banks and deposit-taking institutions. Weaknesses lie instead in insurance and real estate. High-level services vary in their degree of concentration: advertising is more concentrated than accounting, while scientific activities appear detached from other services and are prospering more in Vancouver and Calgary than Toronto and Montreal. Montreal is more a centre for engineering consulting than is Toronto; vice versa for management consulting. Despite these differences, the importance of "agglomeration economies" appears to be borne out by the urban

concentration of the high-level services examined. (Polèse and Stafford, 1982, pp. 325-326).

Coffey and Polèse are now completing further studies of service location 1971 to 1981 period in Quebec. A preliminary report of the results of this study is available (Coffey, 1988). Research shows that the period 1971-1981 experienced "a slight decentralization of high order services toward smaller urban areas and rural regions" (Coffey, 1988, p. 3). However, it appears that this decentralization is closely related to changes in the location of manufacturing and to an increased level of resource exploitation. In other words, services appeared to have followed, not led, other activities, and if this is the case, may be as cyclically vulnerable as the sectors to which they tied.

A more detailed examination of the type of location experiencing high-level service growth showed that medium and small sized urban areas in the "shadow" of larger cities like Montreal had greater difficulty in attracting such services than cities of 25,000 to 100,000 population beyond the shadow of a large centre. The influence of a nearly major centre, in which such services could presumably more profitably locate, seems to discourage high-level service activity. (Coffey, 1988, pp. 4-5). One could therefore postulate that Rouyn or Chicoutimi-Jonquière face better odds in attracting/ establishing high-level services than, say, Saint-Jérôme or Boucherville. However, a clearer idea of the type of services that have decentralized, and their economic impact, would be necessary before a final conclusion could be reached. Finally, Coffey points out that the decentralization noted is small and relative: in absolute terms, larger centres continue to dominate in high-level service and head office functions remain in metropolitan areas (Coffey, 1988, pp. 4-5).

Another example of a study using "ad hoc" data is one by Polèse and Stafford (Stafford and Polèse, 1984, p. 42) in which the yellow pages are used to count advertising, informatics, and management consulting firms in Montreal and Toronto. Figures show that Toronto has significantly more firms than Montreal in each of the fields selected and that each firm is larger. On average, Toronto's number of companies is 57% greater over the three industries than Montreal. The gap between the two cities has grown over the 1971-80 period for the advertising industry, but is

roughly stable for the other two industries surveyed. The authors conclude that "la métropole québécoise joue, par rapport à Toronto, un rôle relativement modeste au plan des services aux entreprises, du moins pour les trois secteurs examinés." (Stafford and Polèse, 1984, p. 43).

To summarize, no standard source of statistics exists which would clarify the regional location of high-level service activities in Quebec. Studies using census data, such as Coffey and Polèse are undertaking, are one future source of such information. In addition, studies should examine the multiplier or "engine of growth" effects of services in the outlying regions on a "micro" scale or case-by-case basis, in order to circumvent the problem of disaggregating statistics to a useful level. SISP's work with Statistics Canada should provide a further source of data. If any conclusion can be drawn from these figures, it is that the market has not led to a significant diffusion of high-level services, nor has government policy to date. Both theory and statistics therefore suggest that decentralization would be difficult. The impact of such services on regional development, once decentralized, has been studied too little for a conclusion to be drawn.

#### 4. POLICY IMPLICATIONS

##### i) Introduction

One of the conclusions to be drawn from the above analysis is that statistical development, theoretical development, and research concerning the service sector in regional development, have not yet reached a level where policy-makers can confidently draw upon results. Consequently, additional work is required in these areas. In the domain of statistics, Statistics Canada's component of DRIE Service Industries Study Program (SISP) is expected to generate a much more sound basis for policy than has existed in the past. In terms of regional development, a key need is data disaggregated to sub-provincial levels, thus enabling analyses of location and regional impact.

With respect to theoretical development, SISP an important step in bringing together the views of a large number of economists, and the results will make a significant contribution to the field. In addition, the passage of time and the increase of interest in the service sector should lead to the development of a more

unified body of Canadian literature treating the service sector. Given the difficulties of extracting a set of clear and well-justified policies from the literature reviewed above, the following section represents a preliminary discussion of the ideas, possibilities, and future activities suggested by either the authors of relevant works, or by the gaps in our knowledge on the role of the service sector in the development of outlying regions.

ii) Case Studies

In terms of policy towards outlying regions, the most important area for research at this time is empirical case studies, particularly in outlying regions. This is important because work to date has not demonstrated conclusively that there exist high-level services that will propel regional economic development if decentralized to outlying regions. A series of case studies showing the impact of already decentralized services would enable the researcher to reach conclusions on what services could help propel regional development, and under what circumstances. Questions such as whether high-level services must be associated with primary or secondary sector economic activities to succeed in outlying regions must also be addressed. An example would be the decentralization of government services. (A partial evaluation of this has been done by Donald Savoie, 1986). The economic impact of the University of Quebec's decentralized campuses should be considered a priority for study, given the importance many authors give to schools and universities as dynamic services. [A number of such studies have been done on Canadian universities, most recently on the Université de Moncton (see Higgins and Beaudin, 1988).] Another example that could be assessed in more detail is the Department of Fisheries and Oceans' Mont-Joly Research Centre, which DFO estimates to have created 920 indirect jobs in the province of Quebec on top of its 153 direct jobs, and, via the multiplier effect, total provincial personal income of over \$15 million. (Canada, Department of Fisheries and Oceans, 1988, p. 43). Whether this means this Centre has had a "motor" effect as well as an employment and income effect within the Gaspé and across the Province would be worth assessing. Such examples abound, and other direct government services located in the regions should be evaluated, as should private high-level services where they are located in Quebec's outlying regions.



Recommendation: That a study program be undertaken, aimed at evaluating the growth impact of specific high-level service activities, public and private, in Quebec's outlying regions, on a case-by-case basis.

iii) Development-Associated Expenditures

The concept of agglomeration economies appears important in discussing the relationship of the service sector and the development of outlying regions. All indications are that high-level services remain a highly urban phenomenon and that strong constraints exist on their diffusion to outlying regions. Hence, broad locational incentives to encourage services to relocate would be costly and ineffective. If any policy recommendation can be drawn from the models and figures presented above, it is that locational incentives, or any other blanket policy aimed at the decentralization of high-level services, face enough obstacles that a complete study and assessment of potential impacts would be required before it is undertaken. While high-level services may play a role in regional development, work to date has not clarified this role sufficiently either for regional development policy to rely on the service sector, or for specific policies or programs to be clearly recommended. The most that can be said is that any policy should be regionally and locally specific, because circumstances appear to vary considerably by region, sub-region, and city.

However, the work done to date raises a number of possibilities and suggests some options. Given the apparent weaknesses of locational incentives, consideration of other policies should be a greater priority. Among the variables suggested by the literature as influencing services in regional development are government spending affecting the outlying regions, such as procurement, federal decentralization, and contracting-out. More market-oriented possibilities include deregulation, human capital subsidies, or, as implied by some authors, no action at all. These various options will be examined only briefly, as all need further study focussed on the particular effects of each.

- a) Procurement: At the political level, it is widely recognized in Canada that procurement can have a regional development impact. Total federal



(government and crown corporation) procurement in all sectors in 1983 (the most recent detailed data available) was \$25 billion (Canada, Department of Supply and Services, 1987, p.11), vastly in excess of direct regional development expenditures. In the service sector, federal procurement spending was approximately \$9 billion in 1983. The potential impact of strong regional procurement efforts therefore should not be ignored. Given this potential impact, further assessment of the possibilities for decentralization of high-level services via the procurement mechanism, should be considered.

- b) Federal Decentralization: A second area of federal expenditure with a direct regional impact is federal services and the services of federally-funded institutes and facilities. Data suggest these are easier to decentralize than private sector activities. Some, like research and education, may have a motor effect directly, while others, like health care and sections of federal departments may not be high-level services nor act as engines of growth but nevertheless create jobs and a multiplier effect that can have a significant impact in outlying communities. An example would be the federal decentralization program initiated in 1975 and terminated in 1981, under which approximately 4500 jobs were decentralized. A summary assessment of the impact of this program has been done by Donald Savoie (Savoie, 1986); a more detailed case-by-case evaluation would be useful.
- c) Contracting-out: In addition to procurement and decentralization, federal contracting-out may have potential for regional development via the encouragement of regional high-level service industries. Like procurement, contracting-out would have to be carefully targeted to have the desired effect. Often cited in this regard is the case of Lavalin Inc., the Montreal-based engineering consulting company whose success is widely attributed in part to the contracting-out of work for Hydro-Quebec. Whether a company or industry based in a resource region could grow in a parallel manner is unknown, but again this is an area where further research may lead to policy development.

Recommendation: That further analysis of the potential roles of procurement, contracting-out, and federal direct decentralization in regional development for the outlying regions of Quebec, be given priority.

iv) Macroeconomic Policies:

While specific measures are recommended by some economists working on the service sector, the view that government intervention either has led to problems, or is simply not required at present, is widespread. Neil Swan's arguments, for example, imply that Western Canada will "take off" once a threshold level of urbanization is reached, and no intervention is required. James McRae and others view barriers to the movement of goods, capital, and people, as a source of regional disparity, and advise freer trade and deregulation. The work of Mario Polèse and his colleagues leads to the conclusion that attempts to decentralize high-level services will disadvantage the province of Quebec, whose economic health relies on the strength of Montreal. Active programs in the areas of skill development, cost minimization via, for example, improvement in transport services, and possibly the promotion of the french language in Quebec as a barrier to the entry of Toronto firms, appear to be seen as acceptable by these authors however, provided they do not disadvantage Quebec's central regions. Fernand Martin appears to grant a more active role to governments: establishing the "consommations différenciées" and physical infrastructure that attract professionals and businesses to Montreal, as well as schools, universities, and research facilities.

Since much "investment" in the service sector is in human capital, the policy implications of a number of the authors reviewed above involve human capital. Markusen, for example, recommends a federal subsidy on the use of human capital in the regions, as an incentive to develop and keep highly-paid professionals and their jobs within the regions. This would be a subsidy as a locational incentive, aimed at lowering the cost of operating in a region so that, in the calculus of location, a firm chooses, say, Sept-Îles over Montreal, or Montreal over Toronto. There are two problems with such a subsidy: first, locational incentives are unproven as a development tool, and in the service sector, given agglomeration economies, they are likely to be even less effective than in

manufacturing; second, subsidization of the operating costs of profitable businesses runs counter to the approach of most regional development programs, and may prove difficult to justify.

Markusen recommends not funding students or educational institutions since human capital can migrate away from its "home" region. (Markusen, 1986, pp.32-33 (SISP)). However, given the problems of attempting to subsidize the private sector's use of human capital, as well as the educational system in Canada, Markusen's recommendations would be difficult to accept. (Its implicit suggestion that service "subsidization" should be made at least "equal" to the existing manufacturing "subsidization", is, however, a point well taken, although the context is one in which federal direct funding to capital costs in manufacturing appears to be declining).

Proposed policies that would encourage service sector development therefore vary depending on the author. Overall, the most useful "macroeconomic" policy may be improved support for education, training, and research, without which Canada's high-level service sector will fall behind that of other nations. The assessment of the possibility that a general reduction of inter-regional barriers to the movement of goods, capital, and people would significantly reduce disparities in Canada is beyond the scope of this paper, but again merits continued study. As well, the policy proposals that follow from the work of Polèse and Martin deserve consideration and a more detailed assessment.

## 5. CONCLUSION

The above study of the role of the service sector in the development of the outlying regions of Quebec reveals that, while a number of authors have examined the question both theoretically and empirically, many key questions have not been answered. The strong focus of economists on urban development, and their apparent view that urban success will "trickle down" to outlying areas, something that has not occurred to date, means a gap exists in the area of the development of the outlying regions of Quebec via the growth or decentralization of high-level services. Work appears to show that high-level services are not regionally footloose, but face powerful incentives to locate in urban agglomerations. Attempts to diffuse services offered by the private sector in order to either create

jobs directly or to create an environment attractive to business development must take these factors into consideration. In addition, it has not been shown that such services in general, if decentralized, would have a significant development impact. It may be that some do and some do not, and the particular circumstances affecting this require evaluation.

On an aggregate level, the rise of the service economy does not appear to have resulted in a reduction of regional disparities. However, more micro-level empirical studies may show that the diffusion of, say, certain research centres and universities may well have a local or regional effect, and this would be a useful focus of both enquiry and activity. It may be that with concerted efforts supported by industry and government, a given region could become a centre for, say, mining, aquaculture, or ocean technology, with such technologies giving valuable support to regional enterprises. Incubators are also a tool for creating an environment where high-level services can support new businesses, but it should not be considered that such services alone can overcome the constraints of small local markets and high transport costs.

To conclude, services are highly urban in location now and attempts to displace them must overcome the strong incentives placing them in urban centres. While it cannot be said that the service sector is without potential as a tool for the development of outlying regions, policies must be strategic, coordinated among relevant actors, narrowly focussed and above all, well justified by further research on the specific impacts of the policy under consideration. The rise of the service sector is not a broad panacea for regional disparities, but once further research is done, services could prove a useful tool to encourage the development of Quebec's outlying regions.

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