

British Columbia's Private Sector in Recession, 1981-86: Employment Flexibility without Trade Diversification?*

TREVOR BARNES and ROGER HAYTER

In British Columbia, as in the rest of Canada and most other advanced economies, the recession of the early 1980s constituted the most significant economic downturn since the Great Depression of the 1930s. Unemployment increased from 6.7 per cent in 1981 to 14.7 per cent in 1984; 1981 levels of gross provincial product and employment were not reached again until 1986; and, in the critical goods-producing industries a zero growth rate in 1981 was followed by a disastrous 13.1 per cent decline in 1982.¹ In fact, even within the Canadian context the recession in British Columbia was particularly severe.²

If the recessionary conditions facing British Columbia in the early 1980s reflected cyclical concerns, notably a sharp reduction in demand for forest products, it became evident that longer term processes of "economic restructuring" — profound changes in the organization, location, and methods of production — were also occurring in global capitalism and were very much implicated in the recession. In this sense, the 1980s recession served to symbolize a transition from the tried and trusted economic assumptions of "the good old days" (circa 1945-74) to the more daunting uncertainties of a "new age," to use Cohen and Shannon's labels.³ At the nadir of the recession in British Columbia, that "new age" was expressed by the then Premier William Bennett as "the new economic reality," and heralded by the introduction of a battery of neoconservative policies analogous to those implemented by the Reagan and Thatcher govern-

* The authors appreciate the comments made by referees and the financial support of the Social Science and Humanities Research Council (grant number 410-87-0990).

¹ A. Reddish and W. Schworm, "Cyclical and structural elements in the current recession," in R. C. Allen and G. Rosenbluth (eds.), *Restructuring the Economy: Social Credit Policies for BC* (Vancouver: New Star Books, 1986), 43-64.

² G. B. Norcliffe, "Regional unemployment in Canada in the 1981-84 recession," *The Canadian Geographer* 31 (1987): 150-59.

³ D. Cohen and K. Shannon, *The Next Canadian Economy* (Montreal: Eden Press, 1984).

ments in the U.S. and U.K. respectively.⁴ Indeed, as Resnick suggests, the government of British Columbia's zeal in embracing right-wing views was unusual in a Canadian context.⁵ In effect, the provincial government saw the 1980s recession as an *opportunity* to widen the freedom of action of private business by simultaneously reducing the size of public sector, the power of unions, and corporate income tax. Underlying this government policy was the assumption that "leaner and fitter" private sector firms were those best able to compete in global markets.

This paper assesses the manner in which firms in the manufacturing, wholesale, and business service sectors responded to the "opportunities" offered by the recessionary conditions of the early 1980s, specifically between 1981 and 1986. The yardsticks we emphasize are trade performance and employment conditions. With respect to trade, export diversification of both products and markets has long been recommended as a means to offset the vulnerability associated with British Columbia's commodity and export market specialization. It might be supposed that the shock of a particularly severe recession would reinforce this admonition. With respect to employment, we would expect the recession to stimulate firms to seek lower labour costs by, for example, introducing labour-saving technologies, reorganizing the labour process, or by reducing the bargaining power of unions.

Our empirical analysis is based largely on personal interviews with 282 manufacturing firms, 255 wholesaling firms, and 129 producer service firms. We chose these particular sectors because they directly confront the forces of international competition both locally and in foreign markets, thereby defining British Columbia's role in the international division of labour. Moreover, these sectors are interrelated and constitute a major part of the goods-producing complex.⁶ Firms were chosen randomly from comprehensive, if not complete, published lists of plant operations. The manufacturing and wholesale samples are cross-sectional, while producer services are chosen from legal, computing and software, accounting, and consulting services. The wholesalers and service firms are located in the Vancouver metropolitan area, while the manufacturing firms are located province-wide. In 1986 our sample accounted for over one-third of provincial

⁴ P. Marchak, "The new economic reality: substance and rhetoric," in W. Magnussen, W. K. Carroll, C. Doyle, M. Langer, and R. B. J. Walker (eds.), *The New Reality* (Vancouver: New Star Books, 1984), 22-40.

⁵ P. Resnick, "Neoconservatism on the periphery," *BC Studies* 75 (1987): 2-23.

⁶ Because of limited financial resources, our analysis does not include the primary industries (fishing, farming, and mining), while for similar reasons we were unable to expand our definition of services to include financial services and tourism.

exports and about 12 per cent of manufacturing employment, and over 5 per cent of wholesale and producer service employment in British Columbia. It should also be noted that our data pertain to site-specific plants or complexes and not necessarily to firm-level operations.

Conceptually, our analysis of trade and employment draws upon two sets of ideas that have received much attention recently. First, there is the notion that over the last decade or so national economies have become more globalized or internationalized than ever before.⁷ This idea incorporates various trends: the move towards a new international division of labour (NIDL), the continuing growth of transnational corporations, and, of particular importance to us, the diversification of export markets. In fact, we believe that it was this general move towards globalization that implicitly underlay the provincial government's adoption of a neoconservative agenda; their policies were an attempt to enhance B.C.'s position as the world became the transnational corporation's oyster.⁸ The second idea that we employ is that there have been fundamental changes occurring within the labour process, discussed in the literature under the rubric of "flexible specialization."⁹ Flexible specialization is again a broad, multi-faceted term which can be explored from the perspective of industrial organization, technology, marketing, and, an issue on which we will focus, the creation of new forms of labour segmentation. In employing both these sets of concepts, we also seek to emphasize the importance of geography. In particular, drawing upon the work of the geographer David Harvey, we will argue that the trends toward globalization and flexible specialization are manifest as a broader tension between space and place in British Columbia, a tension that is transforming the economic geography of the province, as well as the global economy of which it is a part.¹⁰

⁷ For example, see F. Froebel, J. Heinrichs and O. Kreye, *The New International Division of Labour. Structural Unemployment in Industrialized Countries and Industrialization in Developing Countries* (London: Cambridge, 1980); B. Bluestone and B. Harrison, *The Deindustrialization of America* (New York: Basic Books, 1982); and C. Weaver, "Regions, decentralization and the new global economy: an overview," *Canadian Journal of Regional Science* 8 (1985): 283-97. See also R. Hayter and T. Barnes, "Innis' staple theory, exports and recession: British Columbia, 1981-86," *Economic Geography* 66 (1990): 156-73.

⁸ This argument is particularly well made by P. Marchak, 1984.

⁹ See M. J. Piore and C. F. Sabel, *The Second Industrial Divide* (New York: Basic Books, 1984). See also R. Hayter and T. Barnes, "Labour market segmentation, flexibility and recession: a British Columbia case study," *Environment and Planning D* (forthcoming).

¹⁰ D. Harvey, "Between space and time: reflections on the geographical imagination," *Annals of the Association of American Geographers* 80 (1990): 418-34.

Restructuring and Recession: The Tension between Place and Space

According to Harvey, an important dimension underlying the seemingly escalating pace of change that has characterized capitalist economies since the early 1970s is a geographical tension between the fixity of place and the malleability of space.¹¹ On the one hand, the dynamics of capitalism, the search for profits rooted in accumulation, necessitates investment in fixed capital (plant and equipment) in particular places. Because of the benefits of producing in existing centres (for example, agglomeration economies) and the costs involved in scrapping existing and depreciated fixed capital in favour of investing elsewhere, places put a brake on wider spatial change. On the other hand, advances in production technology, transportation, and communications create rapidly changing economic conditions over space, encouraging geographical shifts in production and markets. Moreover, for Harvey the resulting tension between place and space is “creatively destructive.” For capitalists to exploit opportunities provided by spatial change, investment must occur in place — but not in all places; indeed, investment in one place may be associated with divestment elsewhere. In this latter regard, in response to the disruption created by spatial change, Harvey interprets the often novel and sometimes bizarre range of economic, social and political “bottom-up” initiatives undertaken by places as attempts to retain their identity and viability.¹²

During the thirty “golden years” prior to the mid-1970s, at least from North American and European perspectives, there was a certain regularity and predictability to the relationship between space and place across the global economy. In the most general terms, America and Western Europe were the core industrial workshops of the world, while through the agency of often American-owned transnational corporations primary resource extraction was undertaken in the remaining non-communist periphery. Canada had a foot in both worlds. Southern Ontario and Quebec represented in effect a continuation of America’s manufacturing belt, while Canada’s hinterland, including B.C., provided the raw materials that fed the core industrial powers. Shifts in industrial power among capitalist countries, notably towards West Germany, Japan and later other Southeast Asian nations, were gathering momentum, but before the 1970s these were scarcely noticed. Under American hegemony, the international trading system was liberalized while within capitalist countries overall economic

¹¹ Ibid.

¹² Ibid., 427; see also P. Cooke, *Back to the Future: Modernity, Postmodernity and Locality* (London: Unwin Hyman, 1990).

stability was accompanied by various forms of "alliance" among big business, government, and organized labour.¹³

Admittedly, the relatively stable economic growth enjoyed by capitalist countries during the 1950s and 1960s was punctuated by periodic recessions. Typically, however, these recessions were seen as temporary downturns which offered the offsetting social benefit of reducing inflation. In addition, the pattern of labour vulnerability associated with recession was understood and predictable. The labour segmentation thesis developed in North America, for example, classified occupational types partially by degrees of job stability.¹⁴ To use the vernacular, "white collar jobs" of management, scientists, and engineers ("primary independent labour markets") were rarely scathed, while lay-offs of "blue-collar" workers ("primary subordinate workers") were carried out on the basis of seniority. With economic recovery, the laid-off employees were then re-hired, based on an order determined by formal agreements between unions and management. In the non- or weakly unionized industries, managerial discretion over lay-offs and re-hiring of workers ("secondary labour markets") was greater. These industries were also often associated with higher rates of voluntary turnover and considerable inter-firm labour mobility.

The timing of such recessions varied with each region. In Canada's open economy, downturns were transmitted through its trade relations, particularly with the U.S. Such downturns were often magnified in Canada's resource hinterlands. Thus, British Columbia's impressive post-war boom was frequently interrupted by quite severe recessions brought about primarily by slumping U.S. demand for forest products.

From the mid-1970s, the established patterns of space and place, labour vulnerability and segmentation, and product and market specialization altered. In particular, the recessions of the 1970s, culminating in the one of the early 1980s, resulted in severe job losses, ones that were permanent rather than temporary, and which affected all labour market segments, including the hitherto privileged primary sector. The new tensions between space and place also changed the very foundations of capitalist economies. For example, the extensive "de-industrialization" in those regions of the

¹³ In Canada, this alliance rests on a "firm centred culture. See M. D. Atkinson and W. D. Coleman, *The State, Business and Industrial Change in Canada* (Toronto: University of Toronto Press, 1989).

¹⁴ P. Doeringer and M. J. Piore, *Internal Labour Markets and Manpower Analysis* (Lexington: D. C. Heath, 1971); D. M. Gordon, *Theories of Poverty and Underemployment* (Lexington: D. C. Heath, 1973); D. M. Gordon, R. Edwards, and M. Reich, *Segmented Work, Divided Workers: The Historical Transformation of Labor in the United States* (Cambridge: Cambridge University Press, 1982).

U.S. and U.K. that formerly provided the definition of industrialized cores represented, in effect, the destruction of place as millions of manufacturing jobs were lost.¹⁵ Indeed, the NIDL thesis implicitly accounted for de-industrialization in terms of changed relationships between place and space. In this view, because of the opening up of new global *spaces*, partly facilitated by telecommunication and transportation improvements, old manufacturing *places* were increasingly undermined as firms began to shift investment off-shore, tapping into the large pools of often pliant and cheap labour found in the third world. In addition, economic geographers argued that a similar process occurred within national spaces. The spatial division of labour thesis put forward by Doreen Massey suggested that even within countries corporations were increasingly relocating branch plants to peripheral, often rural places either to achieve lower labour costs or more favourable labour relations, or both.¹⁶ More generally, both the NIDL and spatial division of labour theses asserted that the relation between place and spaces was critical in understanding capitalism's latest turn. In each case, the key to comprehending the contemporary restructuring was the spatial switching of investment through the laying off of primary workers, especially primary subordinate workers, in high-wage, strongly unionized core regions, and replacing them with very different types of workers located in the periphery.

Impressive as this work has been, the geography of recent restructuring is more complicated than just a switching of investment between spatially separate but internally homogeneous labour markets, as the NIDL and spatial division of labour theses imply. Thus, even within the same place, heterogeneous labour markets often exist.¹⁷ Indeed, in many situations the impacts of restructuring and recession have been realized through *in situ* adaptation of existing operations where to varying degrees firms utilized existing resources and knowhow. That is, the search for flexibility, however defined, has not been confined to investment in new industrial spaces. Firms in the resource sector, for example, are most obviously severely, albeit not absolutely, constrained in terms of location precisely because of the very nature of the commodity produced. Indeed, in many cases, by no means confined to the resource sector, industrial viability has been sought by *in situ* investment in flexible specialization, involving various kinds of

¹⁵ Bluestone and Harrison, *The Deindustrialization of America*; A. P. Thirlwell, "Deindustrialization in the United Kingdom," *Lloyds Bank Review* No. 144 (1982): 22-37.

¹⁶ D. Massey, *Spatial Divisions of Labour* (London: Macmillan, 1984).

¹⁷ J. A. Peck, "Reconceptualizing the local labour market: space, segmentation and the state," *Progress in Human Geography* 13 (1989): 42-61.

shifts in production technology and the labour process, without there necessarily being re-investment across space.

Flexible specialization comprises a number of distinct features: the production of non-standardized goods for niche markets; use of CAD-CAM production techniques; extensive use of contracting out; labour reskilling as employees are expected to undertake a range of job tasks; and new forms of labour vulnerability because of changed patterns of labour segmentation. With respect to this last issue, Atkinson's recent work on the flexible firm is illuminating.¹⁸ He notes that firms have begun to replace "the conventional, unitary and hierarchical [system of] internal labour markets" with unorthodox deployments of labour designed to secure greater flexibility in one or more of three ways.¹⁹ First, functional flexibility involves creating multi-skilled workers who can perform an array of tasks, eradicating traditional job demarcations, and merging former job tasks into expanded combinations. Such workers typically fall within Atkinson's core segment, and for their ability to respond effectively and rapidly to change they are rewarded with employment security. Second, Atkinson defines numerical flexibility as adjustments by firms in the number of employees, or in hours worked, in response to changes in the level of demand. Numerical flexible workers are found in peripheral segments and comprise full-time workers of the firm whose skills are interchangeable, part-time and temporary workers, and, through contracting out, workers that are brought in from other firms to achieve specific tasks. Third, financial flexibility is achieved by lower wage costs and is realized by replacing traditional core workers with peripheral ones or using types of labour that are traditionally underpaid, such as women.

Atkinson argues that because firms "have put a premium on achieving a workforce which can respond quickly, easily and cheaply to unforeseen changes," a new form of labour market segmentation has arisen between a functionally flexible core labour force, and a numerically flexible peripheral one.²⁰ There are three points to make here: first, in Atkinson's scheme the archetypal primary sector workers of conventional theory who are not functionally flexible must be classified as part of the periphery, and are therefore vulnerable to recession and restructuring. Second, flexibility is both a cause and effect of declining union power, traditionally associated

¹⁸ J. Atkinson, "Flexibility or fragmentation? The United Kingdom labour market in the eighties," *Labour and Society* 12 (1987): 87-105.

¹⁹ J. Atkinson, "The changed corporation," in D. Clutterbuck (ed.), *New Patterns of Work* (Aldershot: Gower, 1985): 13-34.

²⁰ Atkinson, 1985: 16.

with the primary independent segment. A cause because the threat of unemployment allows firms to introduce flexible working practices that undermine the ability of unions to control job tasks. An effect because once the power of unions is weakened, other firms begin introducing flexible practices. Finally, many argue that flexibility, and the accompanying process of segmentation, is inherently gendered. Specifically, the conception of skill implied by functional flexibility is biased towards men, whereas the skills associated with the peripheral segment are typically associated with women.²¹

In summary, there were two fundamental changes to the global economy over the last decade, precipitating a new tension between space and place. On the one hand, through the NIDL and new spatial divisions of labour, former economically "stagnant" regions (South-East Asia or the Southern U.S.) are now some of the most dynamic ones, while on the other hand, former bulwarks of the old pattern have been undermined (the manufacturing belt is now the rust belt). How do places cope in this maelstrom of change? Some places cannot do anything. They are "annihilated," to use Harvey's phrase, as capital ups and leaves for new spaces. Other places attempt to adjust their economic base to deal with the new geographical order on its own terms, and it is here that flexible specialization is central. We can recognize at least two strategies places adopt. First, reorganizing trade. The new global spaces represent potentially large markets, albeit not necessarily for the same type of goods traditionally exported by old places. By tapping into these new markets, an old place can be reconfigured and become part of the new space. However, to do so often involves being able to produce different product lines and in variable quantities. In this, flexible specialization techniques are ideal; literally by a push of a button tools are set to new dimensions. Second, reorganizing employment. To compete with the cost advantages found in the new spaces, old places must find ways to increase productivity and lower per unit costs. Again, flexible specialization, by altering the very nature of the production and labour process, and by enforcing a new form of labour segmentation, meets both requirements. The important point is that through trade and employment reorganization, old places cope through *in situ* change. In the remainder of the paper we explore the use of both these strategies in British Columbia — strategies designed both to re-orientate the province to the new world economic order and to remap the relationship between place and space.

²¹ J. Jensen, "The talents of women, the skills of men: flexible specialization and women," in S. Wood (ed.), *The Transformation of Work?* (London: Unwin Hyman, 1989): 141-55; C. Lever-Tracy, "The paradigm crisis of dualism: decay or regeneration?" *Politics and Society* 13 (1984): 59-84.

Economic Change in British Columbia

The sanguine picture of the B.C. economy painted by Shearer, Young, and Munro in 1973 provides a useful point of departure for a summary appreciation of the longer-term changes affecting the B.C. economy since the early 1970s.²² As these authors emphasized, the export of a succession of resource-based commodities — in particular, forest products such as lumber, pulp, newsprint, plywood, and paperboard — to the United States was the main engine of growth in British Columbia for a century or more. Such staple exports expanded especially rapidly after 1945. This helped encourage a limited amount of small-scale, secondary manufacturing, including backward and final demand linkages to the resource sector, and the much more rapid growth of employment in the service sector.²³ Ultimately, Shearer, Young, and Munro saw the global role of British Columbia as narrowly based, but stable, and one that, more or less, had evolved according to free trade principles.

Underlying Shearer et al's view of the provincial economy during the long boom is a particular interrelated set of geographical, institutional and technological characteristics.²⁴ In brief, and beginning with geography *qua* physical geography, resources were plentiful and were perceived to be so. With respect to geography as spatial relations, external reliance on staple export markets, increasingly the U.S. was associated internally with the spread of resource production throughout the province, which was, in turn, strongly articulated with the emergence of Vancouver as a city of metropolitan status.²⁵

Institutionally, public and private sector policies co-operated to reinforce the province's staple export role. Thus, the provincial government traditionally emphasized large-scale resource development by building the necessary economic and social infrastructure, and by creating a favourable climate for private, increasingly foreign investment, by providing attractive resource contracts. In practice, resource exploitation was implemented by

²² R. A. Shearer, J. H. Young and G. R. Munro, *Trade Liberalization and a Regional Economy: Studies of the Impact of Free Trade on British Columbia* (Toronto: University of Toronto Press, 1973).

²³ D. Ley and T. A. Hutton, "Vancouver's corporate complex and producer services sector: linkages and divergences within a provincial staple economy," *Regional Studies* 21 (1987): 413-24.

²⁴ Recognition of the importance of the technological, institutional and technological conditions underlying Canadian economic history has its roots on the works of H. A. Innis. See Hayter and Barnes, 1990: 156-73.

²⁵ L. J. Evenden (ed.), *Vancouver: Western Metropolis*, Western Geographical Series Volume 16 (Victoria: University of Victoria, 1978).

large, especially foreign-owned corporations pursuing strategies of vertical and horizontal integration. Indeed, foreign control reinforced the province's resource orientation directly and indirectly by relying upon corporate R&D in donor economies. In addition, since 1945 corporate concentration in the resource sector was associated with powerful labour unions, and Fordist labour relations of the kind described in the original formulation of segmentation theory.

Finally, from a technological perspective, staple production in British Columbia has been dominated by large-scale, capital intensive units. In this regard, attitudes towards technology choice have been extremely conservative as emphasis was placed on the adoption of "proven" equipment that had first been tried elsewhere. To some extent, the capital goods industries, especially logging and wood processing equipment firms which had to develop machinery for distinctive local conditions, had been innovative. Even in these industries, however, for various reasons, including high levels of foreign ownership, R&D efforts were very limited in scope, and this in turn helped restrict the realization of export opportunities in secondary manufacturing.

Following the energy crisis of the early 1970s, questions began to be raised about the structure and direction of the B.C. economy. While the energy crisis itself did not particularly disadvantage the resource industries, it heralded a period of flux with respect to geographical, institutional, and technological conditions. With respect to geography, three issues should be mentioned. First, it became increasingly clear that resources could no longer be regarded as inexhaustible, or even abundant, but were limited in extent. Even in the context of the renewable forest resource, available supplies, especially of valued species, have dwindled in many areas. Environmental concerns have further sharpened worries about resource scarcity. Second, U.S. demand for B.C. exports became more volatile. Moreover, the compensating shift that has occurred in exports to Japan is based on a narrow resource base. Third, the discrepancy between Vancouver metro and many parts of the hinterland became more marked as the problems of resource dependency have been relatively concentrated among the specialized communities while the spin-offs of Pacific Rim links have favoured Vancouver metro.²⁶

Institutionally, the most significant changes in the resource sector featured corporate restructuring involving extensive plant closure, the sale of several well established foreign subsidiaries, and an increase in the impor-

²⁶ H. C. Davis and T. A. Hutton, "The two economies of British Columbia," *BC Studies* 82 (1989): 3-15.

tance of central Canadian-based conglomerates. The provincial government for its part began to dabble with "high-tech" policies as a means of diversifying the economy.²⁷ This initiative has so far been most visibly expressed by Discovery Park Policy and the creation of centres on metropolitan based campuses. Yet, as the development of north-east coal testifies, the provincial government remained committed to a staples-oriented policy of "megaprojects."²⁸ Moreover, as noted, the introduction of a neoconservative agenda in the early 1980s represented an attempt to retain the attractiveness of B.C. to foreign investors.

Technological change since the 1970s, however, has been profound. Thus, firms in a variety of industries, including the resource sector, have used rapidly developing CAD-CAM techniques to change their methods of production, sometimes dramatically so, and in turn these innovations have brought major changes in employment levels and practices. They have also at least offered opportunities for changes in product range and quality. In addition, technology has underlain important shifts in employment patterns. In particular, with the telecommunications revolution, the greater internationalization of production, and the rapid growth of Pacific Rim trade, Vancouver has experienced rapid growth in the office sector, particularly in producer services.²⁹

Within a context of increasingly rapid change, the onset of severe recession in the early 1980s provided a catalyst for firms to reconsider their production techniques and plans.

Recession and Trade Diversification

During the 1980s recession, resource-based firms suffered major financial losses and reductions in sales. Yet, if this recession pointedly indicated a need for diversification, B.C.'s external trade remains emphatically staple-oriented. In fact, if anything, the export economy seems more staple-oriented than before (table 1). Thus, by 1988 exports had more than recovered from their 1981 levels but over 90 per cent comprised crude materials (especially coal) and fabricated material (especially lumber and pulp). Interestingly, while Pacific Rim markets continued to grow in

²⁷ R. Hayter and T. I. Gunton, "British Columbia's Discovery Park Policy: A Regional Planning Perspective," in B. M. Barr and N. M. Waters (eds.), *Topics in Cartography and Physical Human Geography*, BC Geographical Series No. 40 (Vancouver: Tantalus Press, 1984): 27-42.

²⁸ C. Weaver and T. I. Gunton, "From drought assistance to mega-projects: fifty years of regional theory and policy in Canada," *The Canadian Journal of Regional Science* 5 (1982): 5-38.

²⁹ Ley and Hutton, 1987.

TABLE 1
Merchandise Exports from British Columbia, 1980 and 1988

	\$m	
	1980	1988
Forest Products	5,587.1	9,706.7
Minerals	1,472.2	2,224.2
Chemicals	60.7	192.5
Energy	1,087.1	1,940.8
Food	311.8	459.4
End Products	289.0	811.8
Other	845.9	2,041.9
	9,653.8	17,377.3

SOURCE: British Columbia: Financial and Economic Review 1980 and 1988 (Vancouver: Ministry of Industry and Small Business Development, 1980 and 1988).

relative importance during this time period, so did the U.S. — at the expense of EEC and other markets. In contrast, in 1988, manufactured end products comprised less than 5 per cent of total exports. Secondary manufacturing (as opposed to primary manufacturing) firms in B.C. remain relatively small, and their export links, individually and collectively, are relatively minor.³⁰

With respect to our sampled manufacturing, wholesale, and service firms, between 1981 and 1986 sales increased from \$5.9 billion to \$8.1 billion, and exports increased from \$2.3 billion to \$4.1 billion (table 2). Bearing in mind that the primary sector (fishing, mining, agriculture) is excluded, manufacturing was the most important sector in terms of sales and especially export performance. Even given the smaller sample size, the revenues generated by the producer service sector are small in comparison. In all three sectors, however, exports were noticeably more important in 1986 than in 1981; in the case of the service sector, the export sales ratio almost doubled while exports accounted for over half of total sales in manufacturing and almost half in wholesaling. These trends indicate that these crucial sectors have become even more integrated into the international economy.

³⁰ R. Hayter, "Export performance and export potentials: western Canadian exports of manufactured end products," *The Canadian Geographer* 30 (1986): 26-39.

TABLE 2
*Sales and Export Sale Ratios among Sampled Manufacturing,
 Wholesale and Service Firms 1981 and 1986*

	<i>Sales \$m</i>	<i>1981 Percentage of Sales Exported (%)</i>	<i>Sales \$m</i>	<i>1986 Percentage of Sales Exported (%)</i>
Manufacturing	3,947.5	40.1	5,171.7	56.6
Wholesale	1,751.0	39.6	2,630.0	42.0
Service	151.6	16.2	283.0	29.6

SOURCE: Fieldwork, 1988.

At the level of the individual firm, there are considerable variations in export performance. On the one hand, the majority of firms (at least 70 per cent in each sector) did not export at all in either 1981 or 1986. On the other hand, sample firms that exported more than half of their sales increased from 10.0 to 13.0 per cent in the manufacturing sector, 5.0 to 6.0 per cent in wholesaling, and 5.0 to 7.0 per cent in producer services. Thus, a relatively small group of firms dominated export sales. Typically, firms with high export sales ratios were large firms. The concentration of export effort becomes particularly evident when it is realized that the five largest exporters in manufacturing accounted for 67.5 and 69.3 per cent of exports in 1981 and 1986; the two leading wholesalers accounted for 83.5 and 87.1 per cent in that sector's exports in 1981 and 1986; and the two largest producer service firms accounted for 46.0 and 63.0 per cent of service sector exports.³¹ It is also interesting to note that in the crucial manufacturing sector, these five largest exporters are all externally controlled and four are forest product plants. The two largest wholesalers are also mainly engaged in forest product exports. In contrast, the two largest producer service exporters are locally owned but relatively small, not exporting to Japan or other Asian Pacific countries.

In terms of aggregate trade, the geographic diversification of B.C.'s exports towards the new economic spaces of the Pacific Rim, and most notably Japan, a trend which became clear in the 1970s, continued during the recession of the 1980s (table 1). Thus Japan increased its share of B.C.'s total visible exports from 14 per cent in 1971 to 23 per cent in 1981 to 27 per cent in 1988. The U.S., whose share of B.C.'s exports dropped

³¹ Hayter and Barnes, 168.

TABLE 3

Distribution of Exports to Major Market Regions among Sampled Firms by Sector, 1981 and 1986

	<i>Manufacturing</i>		<i>Wholesale</i>		<i>Services</i>	
	<i>1981</i>	<i>1986</i>	<i>1981</i>	<i>1986</i>	<i>1981</i>	<i>1986</i>
United States (%)	76.9 (71)	76.0 (98)	20.4 (37)	22.0 (47)	87.4 (24)	71.1 (38)
Japan (%)	10.3 (20)	11.8 (20)	57.5 (14)	56.0 (17)	—	0.4 (6)
Europe (%)	12.7 (14)	12.2 (18)	22.2 (7)	22.0 (10)	12.6 (5)	28.5 (13)
Total (\$m)	1,442.0	2,639.9	603.8	944.2	18.2	69.2

SOURCE: Fieldwork, 1988. The figures in parentheses refer to the number of sampled firms exporting to each region.

from 44.1 per cent to 42.8 per cent between 1981 and 1988, remained the main, if slightly less important, export market.

The geographic distribution of exports of our sampled firms provides revealing insights into the nature of the geography of export diversification for the 1981-86 period (table 3). In the manufacturing sector, for example, the U.S. overwhelmingly dominated exports in 1981 and 1986, although Japan's share did increase. Similarly, the U.S. dominated producer service exports, and by 1986 just six of our sample producer service firms had managed exports to Japan. In fact, our producer service firms were more successful in penetrating European markets. In contrast, Japan was the major export market for the wholesale sector, if slightly less so in 1986. It is also likely that Japan and other Pacific Rim countries will become more important to manufacturing firms and at least remain as important for wholesale firms. This trend is likely to continue. Thus, identification of market regions with export potential by the sampled manufacturing and wholesale firms depends on whether or not firms are already exporters.³² In particular, non-exporters typically judge the U.S. to have the most export potential, while established exporters are more likely to think of non-U.S. export markets, most notably Pacific Rim markets. If it is reasonable to argue that existing exporters are the key to trends in the immediate future — after all, they are typically larger, more knowledgeable and better able to sustain larger scale export marketing — then this admittedly crude assessment of export potential indicates further trade diversification in non-U.S. Pacific Rim markets is to be expected. It should be added that this trend would be further encouraged if there were continuing problems in the U.S. economy, an increase in U.S. protectionism, or any relative growth in the importance of Pacific Rim equity capital entering the B.C. economy.

In fact, the export behaviour of our sample firms confirms that, so far, the geographic diversification of B.C.'s exports, especially towards the Pacific Rim, has been almost exclusively restricted to traditional staple sectors. Indeed, exports to Japan contain an unusually high proportion of relatively unprocessed commodities such as logs, fish, coal, and copper. Many of these exports are shipped in large volumes and organized by a relatively few wholesalers. The main exception in this regard comprises lumber exports to Japan which have typically been of higher value than those elsewhere, especially compared to the U.S., because the Japanese market has required wider and more accurate technical specifications and different types of higher quality and aesthetically appropriate products.

³² *Ibid.*, 166.

Nevertheless, the prospects for diversification in the industrial composition of exports are problematical. Supplementing the resource exports, especially forest products, are a few firms in the transportation, machinery, metal fabricating, and electrical industries which have established export markets, especially in the U.S. In fact, the potential of these firms, many of which represent backward linkages to the resource industries, has been mooted for some time. The effects of the recession, however, have severely curtailed the prospects of these firms in establishing themselves as important exporters. Admittedly, in the producer service sector, many of the sample firms surprisingly did not have significant backward linkages into the resource sector, and as a result may offer further potential for the industrial diversification of exports from B.C. Even so, this potential must be placed within the context of the very small size of producer service exports.

If to an important degree, the export trade of British Columbia has changed rapidly with the emergence of new global spaces, the timing and nature of this "diversification" has been largely shaped by external forces, particularly the demands of the Japanese economy. Consequently, the province's visible exports, at least, have become even more concentrated on resources and primary manufacturers (table 1). Whatever the increase in value added among exports, the beneficial effects have likely been dissipated because of increased competition from the new industrial spaces in secondary manufactured goods. Finally, producer services represent minuscule contributions to export trade.³³ In this light, any free trade deal between Canada and Mexico would not seem to offer reasons to hope for more significant trade diversification.

Recession and Employment Flexibility

If within the context of a highly dynamic global economy the main features of B.C.'s global role remained more or less the same after the recession of the early 1980s, there have been more obvious fundamental changes in employment conditions. Indeed, during the 1980s it became apparent that B.C.'s economy took on some of the general characteristics of flexible production and the related forms of flexible labour.³⁴ That is, to remain competitive in the face of changing spatial realities, the provincial economy has sought ways to increase labour productivity. Thus, part-time workers

³³ We do, of course, recognize that tourism is a major generator of export revenues in gross terms and that various other services, including those in the financial sector, also export.

³⁴ T. Barnes and D. E. Edgington, "Vancouver, the province and the Pacific rim," in T. Oke and G. Wynn (eds.), *Vancouver and its Region* (Vancouver: UBC, forthcoming).

in the province increased their share of total employment from 12.9 to 19.1 per cent between 1975 and 1989, a trend reflecting a growing numerically flexible labour force. Also, union membership in B.C. peaked in 1981 and then declined by 50,000, or 10 per cent of all union workers, by 1989, a trend reflecting the effects of government policy and increased contracting out by, in particular, forest companies. In addition, large income disparities between core and periphery workers may be noted. For example, core workers in the community, business, and personal service industries were paid on average three times as much as peripheral workers in the same industries.

The possibility of fundamental changes occurring in employment conditions in B.C., including a thrust towards a more flexible work force, is given more credence and specificity by our survey of employment characteristics among sampled plants in the manufacturing, wholesale, and producer service sectors. Thus, in 1986, by which time the B.C. economy had recovered from recession, employment levels in manufacturing were still less than in 1981 (—5.3 per cent), while wholesaling (12.7 per cent) and producer services (67.6 per cent) grew impressively (table 4). With respect to employment trends by occupation and sex, two major points should be highlighted. First, in the manufacturing sector, the number of male administrative workers declined noticeably (—7.3 per cent). Second, in each of the three sectors, in virtually all categories the number of female workers grew.

With respect to male administrators in manufacturing, such a trend clearly contradicts traditional segmentation theory, which stresses that male administrators should be the prime of the primary independent segment and therefore the least vulnerable group in recessions because of their status as a quasi-fixed factor of production. Part of the explanation for this “unexpected” trend is that traditional segmentation theory does not consider the possibility of large and *permanent* declines in primary subordinate workers, a group which declined by 13.7 per cent (table 4). Regardless of training, fewer managers are required if there are fewer workers to manage. But why reduce production workers? An important part of the answer to this question, we suggest, is provided by Atkinson’s argument that changing technologies and labour practices brought about by flexibility produce a smaller core production staff than utilized under the previous technology, with resulting job losses for all occupations—even when levels of production remain the same or even increase.

With respect to employment change by gender, the most surprising result is the rate of increase of female administrators in manufacturing:

TABLE 4
*Employment Change by Occupation and Sex among
 Sampled Firms by Sector, 1981 and 1986*

	1981		1986		% Change		Total % Change
	Males	Females	Males	Females	Males	Females	
Manufacturing							
Administration	1,919	229	1,779	323	-7.3	41.1	-2.1
Clerical	491	1,042	472	1,032	-3.9	-1.0	-1.9
Trades	3,518	60	3,588	81	2.3	35.0	2.5
Production	11,263	1,096	9,502	1,159	-15.6	5.7	-13.7
Other	621	118	646	115	4.0	-2.5	3.0
Total	17,191	2,545	15,987	2,710	-7.0	6.5	-5.3
Wholesale							
	1981 Males	1981 Females	1986 Males	1986 Females	% Change		Total % Change
					Males	Females	
Administration	753	168	795	263	5.6	38.1	11.9
Clerical	106	597	106	636	0.0	6.5	5.5
Warehouse	1,315	210	1,341	254	2.0	21.0	4.6
Other	1,517	484	1,748	687	15.2	41.9	21.7
Total	3,691	1,459	3,990	1,813	8.1	24.3	12.7
Services							
	1981 Males	1981 Females	1986 Males	1986 Females	% Change		Total % Change
					Males	Females	
Professionals	955	185	1,948	430	104.4	132.0	108.6
Clerical	514	770	548	1,301	6.6	69.0	44.0
Other	294	91	291	191	-1.0	109.9	25.2
Total	1,763	1,046	2,787	1,922	58.1	83.7	67.6

SOURCE: Fieldwork, 1988.

while employment in such occupations fell by over 7 per cent for men, they increased by 44 per cent for women. Similarly, in wholesaling and producer services employment growth rates for women in administrative positions surpassed that for men. Such trends are not anticipated by traditional segmentation theory and are not consistent with the fears expressed about gender bias associated with functional flexibility. It is possible that there has not been enough appreciation for informal as well as formal attempts at affirmative action. We would also suggest that firms when

hiring functionally flexible female administrators are also likely to achieve financial flexibility. We are certainly aware of examples of firms hiring relative young female workers straight from business school who were both paid less and expected to perform a wider range of tasks than their male counterparts.³⁵

Even after recognizing the growth of a functionally flexible female work force, if we look at the absolute amounts of employment across all sectors in the administrative and professional categories, it is clear that market discrimination has been historically pervasive. In manufacturing, for example, just 15 per cent of the total administrative positions were held by women in 1986. In contrast, and more expectedly, female employment in clerical work, traditionally part of the peripheral workforce, increased substantially (69 per cent in producer services). Furthermore, there is evidence that part-time employment, at least in the manufacturing and wholesale sectors, increased faster for women than for men, again supporting Atkinson's claim of a shift towards flexibility. Thus, over the 1981-86 period the number of firms that used part-time female employment in manufacturing and wholesaling rose by 54 and 55 per cent respectively, while the comparable figures for male workers were 42 and 39 per cent.

A case study which graphically illustrates the trends towards flexibility is provided by the rebuilding of MacMillan Bloedel's lumber mill at Chemainus, and the associated employment changes. The details are provided elsewhere.³⁶ In brief, in 1982 the mill was closed and its 654 workers were laid off, with severance pay awarded on the basis of seniority. Just over two years later, the firm built a completely new mill with state-of-the-art technology and hired 145 workers, including about one-third from the old mill, while instituting completely different labour practices. The desire to achieve production flexibility dominated the concept of this new mill. Thus, the new highly computerized machinery allowed the firm to produce a wider range of high value products to meet more diverse market needs; particular but not exclusive emphasis was given to serving the Japanese market. In addition to the new technology, the mill instituted work teams, job tasks were recomposed and the previous practices of demarcating and advancement based on seniority halted or modified. All workers were now expected to learn the manual, and tests were given to ensure they did. The capacity of the new plant was almost the same as the old, although a few

³⁵ See Hayter and Barnes, forthcoming.

³⁶ T. Barnes, R. Hayter, and E. Grass, "MacMillan Bloedel: corporate restructuring and employment change," in M. de Smidt and E. Wever (eds.), *The Corporate Firm in A Changing World Economy* (London: Routledge, 1990): 145-65.

activities, such as planing, were contracted out. The objective of the firm was plain; to create a compact core of functionally flexible workers, while relying on subcontracting and other numerical flexible workers to complete tasks formerly undertaken in-house. We might simply further note that all occupation groups in the mill's 1981 workforce were cut back and three females were added to a much reduced administrative staff.

Even if Chemainus is regarded as a leading-edge example of flexibility within the forest industry, to varying degrees other firms, including in the wholesale and producer sectors, are pursuing similar policies. Indeed, among producer services computer software firms are growing particularly rapidly. Employment in such firms such as MacDonald Dettweiler, which specializes in the development of computer-based systems for advanced aerospace applications, are dominated by (non-union) highly qualified scientists and engineers whose project-oriented, research-driven, time-constrained work is the epitome of functional flexibility. Even within the wholesale sector, new technology is requiring higher qualified "core" workforces willing to perform a wider range of tasks while clerical and related peripheral functions are being increasingly contracted out.

In aggregate terms it should also be recognized that trends among the manufacturing, wholesale, and service sectors show variation by industry, region, and ownership.³⁷ A few summary points can be offered to illustrate these variations. The wood industry, for example, the most important of the province's manufacturing industries, experienced the greatest employment losses: an 18.6 per cent decline in production workers, with women (—32.3 per cent) not surprisingly more badly affected than men (—18.0 per cent). Even in this industry, however, female administrators increased as male administrators declined. Geographically, employment trends varied among metro B.C., the coast, and the interior. In the case of the coast and the interior, an important reason for the differences relates to changes in the wood industry, and especially the existence of antiquated sawmills such as Chemainus, prior to 1981, and more costly timber supplies in coastal areas. While such mills suffered significant job loss, in the interior many mills were built in the 1950s and 1960s and experienced limited job loss during the early 1980s and sometimes even job gain.

The metropolitan area, with the greatest degree of industrial diversity, occupied an intermediate position. In fact, it is in metro B.C. where there was the greatest growth in the peripheral workforce as measured by part-

³⁷ These trends are discussed in more detail in T. Barnes and R. Hayter, "Labour market segmentation, flexibility and recession: A British Columbian case study," *Environment and Planning Canada: Government and Policy* 10 (1992): 333-53.

TABLE 5
*Employment Change by Occupation, Sex and Ownership
 among Sampled Firms in the Manufacturing Sector, 1981 and 1986*

	<i>Owner-Managed</i>						<i>Branches</i>					
	<i>1981</i>	<i>Males 1986</i>	<i>Shift</i>	<i>1981</i>	<i>Females 1986</i>	<i>Shift</i>	<i>1981</i>	<i>Males 1986</i>	<i>Shift</i>	<i>1981</i>	<i>Females 1986</i>	<i>Shift</i>
Admin.	644	681	5.7%	87	112	28.7%	1,275	1,098	-13.0%	142	211	48.6%
Clerical	123	161	30.9	102	442	10.0	368	311	-15.5	640	590	-7.8
Trades	1,168	1,370	17.3	40	59	47.5	2,620	302	9.8	20	22	+
Production	1,823	1,968	8.0	423	487	15.1	9,431	7,534	-21.1	673	672	-0.1
Other	222	265	19.4	20	51	+	399	381	-4.3	98	64	-34.7
Total	3,980	4,445	11.7	972	1,181	21.5	14,099	9,626	-17.1	1,573	1,559	-0.9

time work; thus in metro B.C., manufacturing firms employing part-time labour grew by 50 per cent for male and 70 per cent for female workers, a rate of increase at least double that found in the other two regions. It is also interesting to note that skill levels, on average, were significantly lower among metro manufacturing firms than in the two hinterland regions. This surprising difference partly reflects industrial mix, but it is also the result of the very nature of labour supply in the Vancouver region. Plentiful supplies of both first generation immigrant labour, especially from Asia, and female workers provide metro firms with ample access to a peripheral labour segment.

Finally, there is a difference in the employment experiences of owner-managed and branch plant operations between 1981 and 1986, differences which are especially striking in the manufacturing sector although they are also evident in the wholesale sector (table 5). Thus, all male worker occupations increased employment in the owner-managed category, while for branch plants they all declined (as much as —20.0 per cent for production workers). A similar bipolar experience is evident for female workers except in the administrative category, which increased by 48 per cent in branch plants (28.7 per cent in owner-managed firms). One interpretation of these trends is that to some extent owner-managed firms were already more flexible than the branch plants, and therefore were better able to weather the recession; that is, the process of determining core workers had already occurred while it still needed to take place for the (larger) branch plants, most of which were externally controlled. Indeed, even by 1986 there remained a gap in skill levels between the two ownership types, indicating potential further job reduction as branch plants attempted to achieve a functionally flexible work force (57.1 per cent of branch plants employed workers of whom at least half were unskilled, which compares to only 35.1 per cent for owner-managed). Such figures at least give pause for concern for the provincial government's fetish (at least until 17 October 1991) for ensuring the "attractiveness" of B.C. to large, foreign-owned firms. During B.C.'s severest economic crisis since the Depression it is precisely these plants that have performed the worst in terms of employment levels and developing functional flexibility.

B.C. in Recession: Space or Place?

Ironically, it seems to us that the provincial government's policies during the recession of the 1980s were inappropriate to private sector needs, especially as they pertained to employment. Government policy chose to focus on reducing labour costs and enhancing numerical and financial flexibility

by increasing the power of management in relation to labour. Yet since labour power was, and remains, in decline throughout North America (and elsewhere, for that matter), such policies were hardly needed. What was really needed was labour policies that would have promoted the level of functional flexibility in the workforce. Two recent reports testify to the barrenness of provincial policy in this critical period of provincial economic history. The first is by the Science Council of B.C., which notes that the most significant labour problem facing B.C.'s high tech secondary manufacturing firms at the present time is *a shortage of skills*.³⁸ The second is a joint study by the IWA-Canada and the Council of Forest Industries of B.C. which found that 56 per cent of mill employees (the survey included management) have difficulty understanding workplace material *at the Grade 4 level*.³⁹

As a result of the failure to install appropriate manpower training schemes, and related forms of industrial development, the province continues to experience the layoff of highly specialized but poorly qualified and even illiterate workers while industrial potentials, even with the same industries in which workers are being laid off, go unrecognized or undeveloped for shortage of worker skills. This tendency to interpret labour simply as a commodity whose cost must be minimized reflected the Social Credit's acceptance of right-wing economics and its own interpretation of B.C. as just another space with an evolving capitalist economy. In this view, competitiveness reduces to labour cost.

An alternative view would interpret B.C. as a place with its own particular geography, institutions, and technology. In this view, comparative advantages can and should be developed internally, and competitiveness increasingly based on the quality of labour, not just its cost. Only with the development of a larger, functionally flexible workforce can B.C. expect to broaden its global role and achieve greater levels of economic stability. The fact that the province elected a new government in 1991 at least gives hope that the lessons of the 1980s recession might be learned.

³⁸ L. Au, *Survey Results of the B.C. Manufacturers' Needs Survey*, Spark Manufacturing Sector (Vancouver: Science Council of British Columbia, 1990).

³⁹ JCP Research, *A Preliminary Study of Job Related Communication Skills in British Columbia's Sawmills* (IWA-Canada and Council of Forest Industries: Vancouver, 1990).