

## *In this issue ...*

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### **PUBLICATIONS**

## *How is Canada Coping With Globalization and Knowledge-based Growth Trends?*

The internationalization of business activities and the information revolution are radically transforming the global economy. Advances in communications and computer technologies, together with relaxed restrictions on foreign ownership, are leading to increased integration of production and organizational facilities across nations. Many value-added activities are no longer restricted by national boundaries and have become global in scope and scale.

Similarly, the information revolution is changing the way work is being done in the economy. Corporations are no longer looking for ways to replace an older technology with a new technological advancement without radical changes in operating techniques. Instead, they are seeking ways to exploit the potential of sophisticated information technologies. As one innovation moves in and displaces another, the “new” knowledge required supersedes or renders less valuable the “old” knowledge. Learning, knowledge accumulation, and restructuring are going on throughout the economy, and all economic agents are being forced to adjust to the new technologies.

All of the articles in this issue deal with these trends in one way or another. The articles on strategic alliances, knowledge-based employment, and human capital concern the adjustment of the Canadian economy to the forces of globalization and the information revolution. The article on payroll taxes deals with their impact on employment, thus on human capital formation. The presentation by John Dunning deals with the impact of the European Union’s Internal Market Program on foreign direct investment and the integration of the European economies. Randall Morck discusses the implications of globalization and of the information technologies for the future of Canadian businesses. And Alan Rugman examines the impact of environmental regulations on trade flows and, hence, on global economic integration.



## INDUSTRY CANADA RESEARCH AND PUBLICATIONS PROGRAM

### RECENT RELEASES

#### WORKING PAPER SERIES

No. 14: *Employment Performance in the Knowledge-based Economy*, Surendra Gera and Philippe Massé.

This study examines the relationship between structural change and the employment performance of the Canadian economy over the 1971-91 period, using Statistics Canada's input/output model.

No. 15: *The Knowledge-based Economy: Shifts in Industrial Output*, Surendra Gera and Kurt Mang.

This study examines the extent, nature, and pace of changes in the Canadian industrial structure. It also analyzes the key factors driving this structural change.

#### OCCASIONAL PAPER SERIES

No. 15: *Payroll Taxation and Employment: A Literature Survey*, Joni Baran.

This paper is a survey of the more salient analyses performed in the area of employer payroll taxes and their effect on job creation, with an emphasis on Canadian empirical research.

### FORTHCOMING

#### WORKING PAPER SERIES

No. 16: *Business Strategies of SMEs and Large Firms in Canada*, Gilles McDougall and David Swimmer.

No. 17: *The Impact of China's Trade and Foreign Investment Reforms on the World Economy*, Winnie Lam.

#### OCCASIONAL PAPER SERIES

No. 16: *Sustainable Development: Concepts, Measures, Market and Policy Failures at the Open Economy, Industry and Firm Levels*, Philippe Crabbé.

### ANNOUNCEMENTS

#### DISTINGUISHED SPEAKERS IN ECONOMICS PROGRAM

Programming for the 1997-98 lecture season is underway. Details will be announced in the next issue of *MICRO*.

*MICRO* is a quarterly newsletter highlighting micro-economic research findings, published by the Micro-Economic Policy Analysis Branch of Industry Canada. Abstracts of Industry Canada research volumes, working papers, occasional papers, discussion papers, and the full text of *MICRO* can be accessed via STRATEGIS, the Department's online business information site, at <http://strategis.ic.gc.ca>. For more information about our research publications, or to place an order, contact the Micro-Economic Policy Analysis Branch, Industry Canada, 5th Floor, West Tower, 235 Queen Street, Ottawa, ON, K1A 0H5. Telephone: (613) 952-5704; facsimile: (613) 991-1261. ISSN 1198-3558.

*Canadian firms are increasingly realizing they not only have to compete fiercely but must cooperate strategically.*



## FEATURED RESEARCH

### ***Why Do Canadian Companies Opt For Cooperative Ventures?***

The days of the stand-alone business are going the way of the dodo bird, suggests Sunder Magun in a recent study prepared for Industry Canada.\* Canadian firms are increasingly realizing that, in a knowledge-based economy, they not only have to compete fiercely but also to cooperate actively with one another in order to advance their economic, especially strategic, objectives. Our firms now strongly believe that crucial knowledge and specialized capabilities are embedded in their company culture, business practices and internal routines and working relations, and that they can learn from one another through collaboration.

Canadian firms are actively seeking domestic and foreign alliance partners and taking part in various forms of interfirm cooperative agreements. About one in nine Canadian companies has some sort of arrangement of this type. These alliances take many forms, ranging from “pre-competitive” R&D consortia to co-production, cross-equity arrangements and equity joint ventures with separate legal entities.

Global competitive pressures, large and rising costs of R&D and faster rates of product obsolescence have increasingly induced large numbers of firms to form strategic alliances. Indeed, Magun finds that many individual firms participate concurrently in a large number of international technology consortia. Securing complementary technologies, reducing the innovation time span and sharing the risks in technology development “at the frontier” are the main reasons for participating in multiple alliances.

In the past, joint ventures between Canadian companies and foreign firms were often a means of gaining access to foreign markets in an effort to circumvent high trade barriers. Today, the more obvious reasons for the emergence of strategic alliances are related to scale or scope

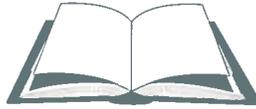
economies, resource pooling, and risk- and cost-sharing among alliance partners. However, the driving forces behind the growth of the partnership phenomenon are also more subtle, deeper and more permanent. They include globalization, systematic and more rapid technological change, and a growing acceptance of the view that, by itself, competition does not ensure an optimum innovation-led growth. In effect, both competition and cooperation between individual firms are needed to ensure such growth in a dynamic, uncertain world.

Government attitudes towards and expectations about the role of interfirm cooperation in promoting innovations or in sustaining or improving competitive advantage have also changed dramatically. In the past, governments used to believe that interfirm cooperation was harmful to the economy because of potential anticompetitive effects. Today, most business alliances are now seen as beneficial to the economy and are being promoted by various policy initiatives.

When Canadian firms enter into strategic alliances, they are motivated by a number of objectives, not just a single goal. Through these arrangements, the firm may be seeking to gain access to new markets or new technologies, to cope with escalating R&D costs, to speed up product or process development, or to achieve cost competitiveness. More than half the companies surveyed by Magun indicated that their primary goal was to gain access to new markets in order to build global or domestic capabilities. This motivation has a lot to do with the small size of Canada’s domestic markets. Several Canadian companies have grown by expanding into foreign markets through participation in strategic alliances. Two other important reasons that Canadian firms join strategic alliances include gaining access to new technologies or new resources, and reducing financial risks.

Many factors supposedly drive alliance activity. Magun has conducted an empirical analysis of alliance participation and found sharp differences between knowledge-

Canadian firms take part in various types of strategic partnerships, the most important ones including joint ventures and R&D consortia.

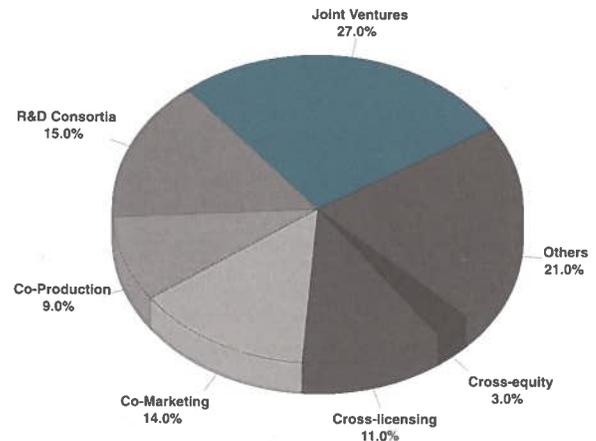


based and traditional industries in that regard. In the knowledge-based sector, the two significant elements that determine alliance participation are firm size and the rate of return. As firm size increases, participation in alliances also increases. Larger firms are likely to have better established marketing and R&D infrastructure and more physical and financial resources, and thus are often considered better partners for alliance formation. On the other hand, the rate of return is negatively related to alliance participation. Low rates of return induce firms to seek growth opportunities externally through alliances, mergers, or direct investment abroad.

In contrast, the three key determinants of alliance participation in the traditional industrial sector are: the debt/equity ratio, capital growth and exports. Rapid growth of capital investments implies that the firm is expanding internally, without relying on the external source of strategic alliances. Thus, when the firm's capital growth accelerates, its participation in alliances declines. Similarly, exporting firms do not need alliances to gain access to new markets or to jump barriers in emerging markets and regional trading blocks. On the other hand, with rising debt/equity ratios, firms will enter into strategic partnerships in order to leverage their resources. Overall, Magun's findings suggest that the average probability of taking part in strategic alliances in the knowledge-based sector is 72 per cent, compared to only 16 per cent in traditional industries.

Canadian companies take part in various types of strategic partnerships. The most important ones include joint ventures, research consortia and co-marketing. Joint ventures predominate, with 27 percent of the total, followed by R&D consortia with 15 percent and co-marketing with 14 percent. Cross-equity alliances are not popular, forming only 3 percent of the total. Joint ventures are mostly found in mining and construction, and in power, oil and gas, whereas research consortia are only found in informatics, electronics and computers, telecommunications, and transportation. Most co-marketing and cross-licensing alliances are also found in the two or three industries in this group.

Distribution of Strategic Alliances by Type

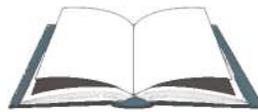


Interfirm alliances with distributors preponderate in Canada. Roughly four fifths of such arrangements are found in the informatics, electronics and computers, and telecommunications industries. These two sectors specialize in niche products and sell them through a worldwide network of distribution alliances.

Firms were also asked to identify and rank the specific effects of strategic partnerships on their competitive advantage. The most important impacts include: improving the company's market and resource access; enhancing strategic growth by building world-class capabilities; and building financial strength by lowering risks. At the other extreme, the results are a little surprising: the least important effects are related to increasing exports, increasing investments and building the company's knowledge and skills by reducing the learning curve at all stages in the production process.

Almost all respondents indicated that government could promote Canada's international competitiveness by encouraging strategic alliances. However, the intervention should be indirect, providing only a supporting role. Several firms see a dual role for government. First, as a broker, connecting potential alliance partners. And second, as an information source, providing background data about potential foreign alliance members.

For governments, however, strategic alliances are not



*The structure of all industrial economies has been changing towards knowledge-driven systems, and Canada is no exception.*

without their downside. Partnerships with foreign companies raise issues about national sovereignty, national security, and the control of the national economy. What is the nationality of cross-border alliances? Who owns the products and process technologies developed by cross-border R&D consortia? Who controls cross-border alliances in key strategic industries such as computers and telecommunications? These, suggest Magun, are difficult issues that will most likely be resolved only through multilateral negotiation.

\* *The Development of Strategic Alliances in Canadian Industries: A Micro Analysis*  
Working Paper Series #13  
by Sunder Magun

## **Your Job: Shift or Get Shafted!**

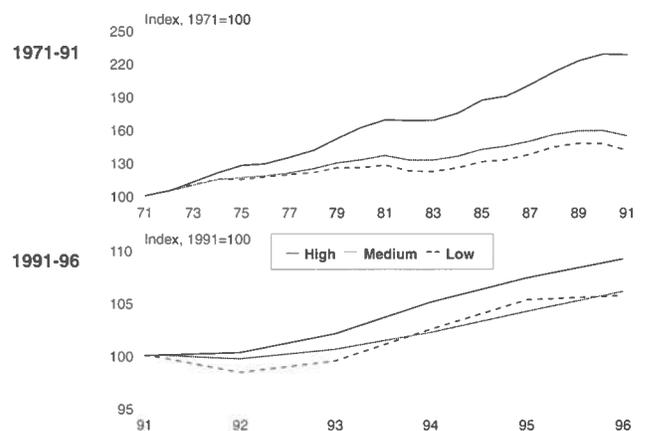
The composition of the Canadian job market is slowly moving towards more knowledge-intensive activities, say Surendra Gera and Philippe Massé in a recent Industry Canada working paper\*. There is strong evidence that the ability of those with little education or work experience to get or hold on to a job has been worsening since the early 1980s and that investment in education – and more specifically, in knowledge and skills – is the key to riding out employment corrections both at the firm level and in the economy as a whole.

Gera and Massé recently conducted a study that examines the relationship between structural change and Canada's employment performance over 1971-91. The paper addresses three questions: 1) Is the employment structure shifting towards innovative industries? 2) What factors are driving these shifts? 3) How are labour markets adjusting to the new demands of the knowledge-based economy? New growth theory suggests that knowledge, both as an input and an output, is a key source of long-term growth and job creation.

The structure of all industrial economies has been changing towards knowledge-driven systems over the past

decade, and the Canadian economy is no exception. Gera and Massé document a shift towards high-knowledge industries, using a definition of "knowledge-based industries" that includes services. The study reveals that high-knowledge-based industries have had higher employment growth than medium- and low-knowledge industries. For example, employment growth in high-knowledge industries was almost 2.5 times that of their medium-knowledge counterparts and almost twice that of low-knowledge industries.

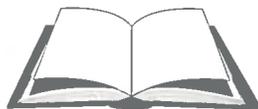
**Employment Growth by Level of Knowledge Intensity**  
Total Business Sector, 1971-1991 and 1991-1996



By international standards, however, the employment performance of the Canadian high-technology industries has been mediocre. In the OECD countries, employment in the high-technology sector increased by 5 percentage points over 1970-91 to about 20 percent of total manufacturing employment. The corresponding figures for Canada were only 1 percentage point and 12 percent, respectively.

Employment growth can be decomposed into six factors affecting structural shifts – namely, changes associated with final domestic demand, exports, imports, production techniques, labour productivity and all other factors. Domestic demand and labour productivity have always been important determinants of employment growth. The decomposition analysis conducted by Gera and Massé also shows that trade and technology play a greater role in job

*High-knowledge-based industries have had higher employment growth than medium- and low-knowledge industries.*



increases. Exports have become a dominant factor in employment growth, particularly in high-knowledge, high-technology and high-wage manufacturing industries. Conversely, import penetration has adversely affected employment growth in low-knowledge, low-technology, low-wage, low-skill and labour-intensive industries. The importance of trade and technology is also increasing in the Canadian service sector.

Finally, concurrent with the employment shift into knowledge-based industries, Gera and Massé find that a widespread “up-skilling” of Canadian employment has taken place across all sectors since 1971, mainly as a result of employment changes within industries rather than of shifts between them. This development, noted in both the manufacturing and service sectors, may reflect a wider diffusion of technology.

*\* Employment Performance in the Knowledge-based Economy  
Working Paper Series #14  
by Surendra Gera and Philippe Massé*

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## ***How Important Are People to Economic Growth?***

The study of economic growth has long focused on the growth of technological progress while implicitly accepting that strides in technology have somehow been accompanied by advances in technological knowledge. However, new growth theories suggest that knowledge has always been the driving force behind economic growth. Through the accumulation of knowledge, firms are able to develop more effective production processes as well as new products. The bottom line, according to a recent study by Keith Newton\*, is that performance depends increasingly on the human factor: to survive and prosper in the knowledge-based economy requires flexibility and speed in learning and applying new techniques and ideas. Learning involves a shift in emphasis from generating and disseminating codified knowledge in a structured, hierarchical system to fostering an environment of creativity and flexibility based on tacit knowledge. Thus human

resource strategies must occupy a central place in overall corporate strategy in order to create the conditions in which continuous learning and innovation can take place.

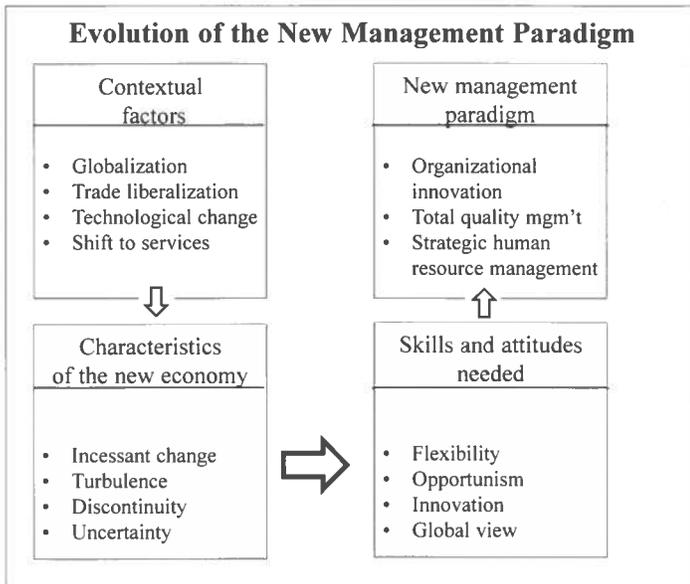
Newton describes the various kinds of human resource-based management strategies that have evolved in response to competitive pressures. In particular, three management strategies, each with its own conceptual identity, literature, and practice, are examined. They are: organizational innovation (OI), total quality management (TQM), and the “new” human resource management (HRM).

According to Newton, global competitive pressures have given rise to a systematic response aimed at maximizing firm-level performance through knowledge- and skill-based innovation strategies. Recent theoretical research and empirical evidence suggest that these human resource management strategies and their constituent practices have positive impacts on a variety of performance indicators, including productivity, unit labour costs, quality, and profit growth. In contrast, firms in “old economy” activities and those relatively more protected from open competition are less likely to engage in these practices.

Newton advocates a role for government in the diffusion of high-performance human resource management practices, for several reasons. First, as mentioned above, these strategies appear to have positive impacts on key economic variables that measure industrial performance. Second, the “take-up” of these practices is not as rapid or comprehensive as efficiency considerations warrant. There is a “public good” element to investment in such strategies, analogous to that found for R&D and for the diffusion of “hard” technologies; hence there is a collective benefit in the form of wealth and job creation. Third, there is the question of “externalities.” As these human resource strategies require substantial investment in people, there are legitimate concerns about an investor’s ability to capture sufficient benefits if the workforce is somewhat mobile. Finally, because of imperfect or costly information, it may be difficult for businesses (small firms, in particular) to assess the costs and benefits of these strategies.



*Human resource strategies aimed at maximizing firm-level performance through knowledge- and skill-based innovation must occupy a central place in overall corporate strategy.*



This is not to say that government is not already active in a number of ways. At the federal level, the departments of Employment and Labour (now combined under the Human Resource Development Department) have been actively involved in many aspects of human resource development over the years. As well, the Industry department has put into place programs and policies designed to provide services to business pertaining more specifically to the management strategies outlined above, as well as to disseminate strategic information products and services.

Notwithstanding the current level of understanding of these human resource development issues, there is room for evolution on the research and data collection fronts, suggests Newton. On the research front, a variety of activities are warranted. First, further empirical work is needed on the impact of management skills development and innovative management practices on bottom-line performance indicators. Second, a review and evaluation of various kinds of initiatives, activities and events that disseminate empirical findings is required in order to effectively transmit the results to managers. Third, there is a need for an assessment of the most effective means of delivering advice, information and direct training services to address perceived needs.

As data needs are most likely to be filled by the survey approach, a "4-C" approach to data collection is advocated: coordination, comprehensiveness, comparability, and continuity. Coordination would make it easier to explore and exploit opportunities for linkages, cross-references, and complementarities with other studies. Comprehensiveness refers to covering a broad variety of technological and organizational innovations as well as changes in high-performance management practices. Comparative information on the uptake of innovative practices of competitors at home and abroad is vital if Canadian managers are to measure their performance. And finally, continuity allows for the assessment of one's position over time.

*\* Management Strategies in the Knowledge-based Economy  
Occasional Paper Series # 14  
by Keith Newton,*

## ***Do Payroll Taxes Kill Jobs?***

Policy discussions often turn to questions related to the causes of persistent unemployment. One of the areas examined has been employer payroll taxes and their effect on job creation. Joni Baran, an Industry Canada researcher, has surveyed some of the more noteworthy studies dealing with the impacts of payroll taxes on employment, with an emphasis on Canadian empirical research\*.

Payroll taxes have been around for quite some time. The first payroll taxes in Canada were introduced in 1915 to fund a worker's compensation program in Ontario. Payroll taxes made their appearance on the federal scene in 1940, with the implementation of an Unemployment Insurance scheme. Premiums were levied on both employers and employees to fund the program. A quarter of a century later, in 1966, the feds were at it again with the introduction of the Canada/Quebec Pension Plans (CPP/QPP). Since then, several provinces have imposed payroll taxes to fund programs in areas as varied as worker's compensation, health spending and education.

Not only do governments tax our wages, but the size of

*The size of the tax bite has been growing. Payroll taxes per employee have vaulted from \$803 in 1966 to \$3,273 in 1993.*



the tax bite has been growing. As a proportion of wage income, the level of payroll taxation in Canada has increased from 1.9 per cent in 1961 to 11.6 per cent in 1993. Payroll taxes as a percentage of gross domestic product have more than doubled since 1970 and stood at 6.0 per cent in 1994. Total payroll taxes per employee, expressed in 1993 constant dollars, have vaulted from a national average of \$803 in 1966 to \$3,273 in 1993.

Unemployment Insurance (now Employment Insurance) premiums comprise the largest component (42 per cent) of payroll taxes, and increases in UI contribution rates have been the main catalyst behind the rise in the absolute level of payroll taxes. Increases in the UI component accounted for almost half of the overall payroll tax increases in the 1970s, for one third in the 1980s and for three quarters in the 1990s. Changes to UI financing arrangements in 1990 eliminated any general revenue contributions to the program, leaving it funded entirely through employee/employer contributions. This change has tended to put upward pressure on premium rates. CPP/QPP contribution rates are set to cover outlays, and the proposed combined employee/employer contribution rates are expected to climb from 5.6 per cent in 1996 to 9.9 per cent by 2003.

In a competitive labour market, an increase in employer payroll taxes raises the cost of labour relative to other factors of production. As a result, the demand for the more expensive labour falls and wage rates must shrink to clear the market. Likewise, an increase in employee payroll taxes reduces the proceeds from work; the number of those will-

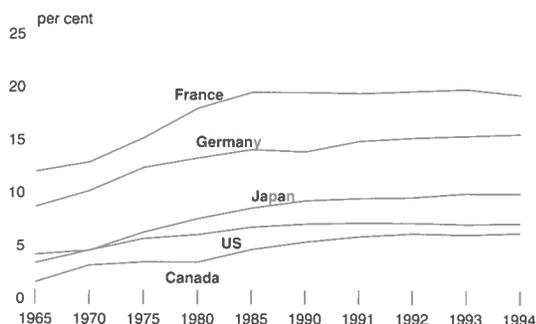
ing to work at a reduced rate declines and (holding the demand for labour constant) wage rates must rise to compensate for the additional taxes. In either situation, non-tax wage rates and employment levels fall, and employers and employees share the burden of the payroll tax increases. Precisely who bears that burden depends on relative changes in the supply and demand of labour resulting from the change in the price of labour associated with the payroll tax. The magnitude of these changes is known as the elasticity of labour supply and demand, respectively. The less elastic the supply of labour and the more elastic the demand, the greater the share of the burden that labour will bear.

Following a technical review of the literature, Baran writes that six general conclusions can be drawn about payroll taxation. First, there is a general consensus that increases in payroll taxes have adverse employment effects in the short run. Second, earlier findings which suggested that these increases had no long-term effects on employment have been called into question in recent studies. Third, the empirical evidence tends to support the notion that increases in the employer's share of payroll taxes have a greater adverse short-run impact on employment than taxes imposed on the employee. Fourth, there are compelling arguments suggesting that the effects of a decrease in payroll taxes would not be symmetrical to those of tax hikes. Thus, assuming payroll tax changes are passed through to workers and are reflected in changes to wages, reducing employer payroll taxes is likely to yield a smaller boost to employment than the corresponding loss attributed to a comparable increase in employer contributions. Fifth, ceilings on maximum contributions make marginal payroll tax rates higher for lower-income employees, which suggests that payroll taxes have greater negative employment impacts on these employees. Finally, arguments have been advanced that the impact of payroll taxes may be different for small businesses, since these taxes constitute a larger portion of total taxes for smaller firms and these firms tend to be more labour-intensive.



*\* Payroll Taxation and Employment: A Literature Survey  
Occasional Paper Series # 15  
by Joni Baran*

**Social Security Contributions  
as a Percentage of GDP**



*European integration has had a definite impact on foreign investment in the European Community.*



## DISTINGUISHED SPEAKERS SERIES

### **John Dunning Holds Forth on European Integration**



The European Community (EC) has been integrating for close to forty years now, since the common market strategy was announced in the mid-1950s, says John Dunning, State of New Jersey Professor of International Business at Rutgers University. In an October 1996 Distinguished Speakers in Economics presentation, Professor Dunning contended that initially, European integration took the form of the removal of intra-EC tariffs (tariffs between member countries of the EC) and the establishment of a common external tariff. In the early 1980s, European businesses began to push for the removal of non-tariff barriers as well in order to improve their competitiveness. These pressures led to the announcement in 1985 of the Internal Market Program (IMP) for inbound foreign direct investment (FDI).

During the 1960s and 1970s, the reduction or elimination of tariff barriers was the principal means of integration. American and Japanese firms, it seemed, were better able to take advantage of the removal of tariff barriers in certain sectors as they switched from defensive import-substituting FDI to a rationalized (or efficiency-seeking) and offensive (market-seeking) FDI. About 90 per cent of that investment was concentrated in the "core" countries of the EC, with much of it taking place within a 500-mile radius of Frankfurt. Sectorally, U.S. investment in manufacturing subsidiaries was most marked in sectors subject to plant economies of

scale, where U.S. firms had the greatest competitive (or ownership-specific) advantages, where pre-Community tariffs between EC member states were the highest, and where Common Market barriers to U.S.-EC trade were the most severe.

The IMP had a definite impact on the stock of FDI directed to the EC, says Dunning. Over the five years immediately prior to the announcement of the IMP, the share of FDI directed to the EC was 29.4 per cent of that of all recipient economies worldwide and 40.0 per cent of that of the developed economies. Five years after the announcement, the EC's shares had risen to 40.0 per cent of all economies and 49.8 per cent of all developed economies. Thereafter, the EC's share of FDI directed to developed economies stabilized and even declined slightly as a share of worldwide FDI, mainly due to the increasing attractiveness of developing economies and, in particular, China.

There was, however, a marked difference in the pattern of *who* was investing after the IMP was announced. The EC countries attracted a slightly higher share of FDI from the United States and Japan in the early 1990s than they did over the period 1985-87; the intra-EC share more than doubled over the same period.

There was also a change in *how* investors were investing, says Dunning. The evidence available points to an increasing concentration of external FDI into the EC in high-technology sectors (for example, computers, motor vehicles, pharmaceuticals, electronic equipment and industrial instruments) and a rise in FDI by both EC and non-EC investors in the service sector, particularly in finance, banking and insurance, telecommunications and business

- *The Internal Market Program had a definite impact on FDI into Europe.*
- *Intra-EC FDI took off after the announcement of the IMP.*
- *Non-European investment was concentrated in sensitive sectors.*
- *Evidence suggests a shift of investment away from core countries to southern Europe and Ireland.*
- *Trade and foreign direct investment are found to be complementary.*

*Environmental policies and regulations are being manipulated unilaterally to form barriers to trade.*



services. Dunning cautions that it is difficult to establish to what extent this is due to the IMP *per se* or to other factors such as the deregulation and liberalization of service-related markets.

In addition, there were subtle changes in *where* investors were investing. Professor Dunning notes that in all sectors except services there was a slight decline in geographical concentration between 1982 and 1991. This decline is in contrast to the increase in geographical concentration that occurred between 1972 and 1982. Data on U.S. affiliates in the EC suggest a slight shift towards U.S. investment in medium-income EC countries – Greece, Ireland, Portugal and Spain – while data on intra-EC investment indicate a possible shift to southern Europe.

Turning towards the links between trade and FDI, Dunning suggests there are close ties between FDI and trade intensities. He presents evidence that reveals similar trends in changes in the FDI of U.S. multinationals in Europe to exports from these corporations to their European affiliates and to the intra-EC trade of these affiliates. This, Dunning argues, suggests complementarity between the sales of affiliates and exports from the investing countries and between both of these variables and intra-EC trade.

Overall, concludes Professor Dunning, the effects of the IMP are also found to be industry-specific. And the evidence is consistent with the fact that EC external trade barriers and the notion of “Fortress Europe” perceived by some non-EC foreign investors have led to more defensive FDI by non-European investors.

## ***Alan Rugman Discusses Environmental Regulations as Trade Barriers***



Environmental regulations captured by domestic groups and used for protectionist purposes are one of the “hot” topics on the agenda at the World Trade Organization (WTO). “Don’t look now, but it’s happening,” says Alan Rugman, professor of International Business at the University of Toronto.

In a November 1996 Distinguished Speakers in Economics lecture, Professor Rugman presented his framework for assessing the trade-distorting aspects of environmental regulations by discussing several case studies where environmental standards have been manipulated to form barriers to trade.

According to Professor Rugman, environmental policies and regulations are being manipulated unilaterally to offset the competitive advantages gained by foreign firms through their governments’ policies and standards. This type of direct interference with trade is rarely the best way of realizing specific environmental objectives.

Seven major cases were examined in detail. Each was categorized according to the type of environmental regulation imposed — either shelter-based or environmentally based. Shelter-based regulation is defined as an environmental regulation “captured” in its administration by a domestic industry lobby seeking to use the regulation as a discriminatory entry barrier against foreign competitors. Environmentally based regulations are founded on main-

- *Increasingly, environmental policies and regulations are being manipulated unilaterally to gain a competitive advantage on the trade front.*
- *Governments should focus on promoting non-discriminatory domestic policies that offer the most efficient approach to dealing with environmental concerns and support the true spirit and intent of liberalized trade measures.*
- *International cooperation to develop and implement appropriate environmental policies and standards for products and processes is required as a means of reducing and eliminating potential trade frictions. But trade and environmental policies need to be separated and should be dealt with in their respective international fora.*



*The real competition in a capitalist economy is the competition to innovate, not to cut prices ...*

ly environmental concerns, with no clear domestic producer benefiting from the regulations. In five of the seven cases analyzed (UHT milk, lobsters, PCB exports, salmon/herring, and the Ontario canned beer levy), shelter-based regulations were imposed as disguised environmental regulations to protect the home market of a given country or region from foreign competition. The two remaining cases (tuna/dolphins, and MMT additives) are, according to Rugman, environmentally based trade objectives.

“What this means for governments,” says Rugman, “is that they should focus on promoting non-discriminatory domestic policies that offer the most efficient approach to dealing with environmental concerns and which support the true spirit and intent of liberalized trade measures. On the international front, cooperation to develop and implement appropriate environmental policies and standards for products and processes is additionally required as a means of reducing and eliminating areas for potential trade friction.”

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## ***Randall Morck Provides a Vision of the Future for Canadian Corporations***



“The trouble with our times is that the future is not what it used to be” is an old and very familiar lament. “Not quite so,” says Randall Morck, the Stephen A. Jarislowsky Distinguished Professor of Finance at the Faculty of Business of the University of Alberta. In a recent

Distinguished Speakers in Economics presentation on his vision of the future for Canadian corporations over the next ten to fifteen years, Professor Morck argued that the key to making “educated guesses” about the future is to understand and use economics.

The real competition in a capitalist economy is the competition to innovate, not to cut prices. Prosperity is built on innovations rather than cheap capital or cheap

labour. When viewed in this light, innovation and globalization are two aspects of the same factor driving change. Specifically, the return on innovation as an investment depends on the firm’s scale of operation; if the scale of operation is small, then small returns are to be expected; if the firm has a large scale of operation, the return is much bigger. Companies that have innovated want access to as many markets as they can, will lobby for free trade and will try to produce for the largest market possible, thus contributing to globalization. Similarly, innovating companies with very big markets want to apply their innovations all over the world. In other words, globalization spurs innovation. Buttressing this view is the conjecture that innovating firms earn temporary “supra natural” rates of return because their innovation provides them with a kind of monopoly, and hence with monopoly returns, until another competitor innovates and creates its own monopoly. In short, prosperity is built on innovations rather than cheap labour or cheap capital.

Two other factors are key to understanding the future. First, human nature, being what it is, is both hard to change and slow to change. What this implies for the future, according to Morck, is that individuals and firms will continue to try to maximize their own well-being. As long as there are reasonable protections for innovative ideas, people (and firms) will continue to have an incentive to innovate and to try to gain some advantage that will make them rich. This particular feature of capitalism enabled it to survive the rise and fall of communism, says Morck. Under socialism, where the benefits accrue largely to the state, there were no incentives for individuals to innovate. However, human nature reared its ugly head under the socialist systems, with factory managers deliberately creating production shortfalls in order to receive bribes for additional shipments. If they could not get rich via innovation, they could by bribery. For corporations, this suggests that 1) there are unique advantages to gaining a competitive edge over their rivals; and 2) firms that develop profitable innovations will need to invest a large part of their profits in developing further innovations.

*Governments should resist policies aimed at regulating prices, subsidizing small firms, and providing direct subsidies for R&D.*



Second, demographic factors are such that they will certainly impact on corporations. As the demographic bulge of baby boomers ages, they will once again begin to receive more government services than they pay for *via* their taxes — just as they did when they were of school age. Furthermore, with their size and potential political clout, they may begin to demand a more leftist government agenda, replete with programs aimed at seniors. This may pressure governments to raise taxes and will undoubtedly affect corporations.

Professor Morck foresees that management fads — diversification, downsizing, re-engineering, total quality management, just-in-time delivery, quality circles, Zen philosophy and the like — are short-term phenomena and are not likely to have lasting effects. The corporation of tomorrow will look pretty much like the corporation of today. Nor will there be a mass migration of Canadian companies to low-cost developing countries. Middle managers may be shed as out-sourcing gains popularity, and corporations and governments will be pressed to retain workers. On the other hand, Canadian firms will become more decentralized and will use more merit-based compensation. Corporations will need highly educated employees but will be reluctant to pay for their education. This will put pressures on blue-collar job security.

Globalization will have its effects, suggests Dr. Morck. Companies that prosper in the information age will need significant international experience. Even if no domestic rivals arise, firms that fail to innovate will be threatened by foreign competitors. The high growth rates of emerging economies will stall when they pull even with the currently developed economies. Emerging markets will become less attractive over time.

And while there are roles for public policy in the emerging information economy, argues Professor Morck, governments should resist policies aimed at correcting “non-competitive prices,” since setting prices at regulatory hearings removes the incentive for regulated firms to innovate. Governments should also avoid subsidizing small firms. “If viable small firms cannot raise funds, the real issue is that the banking and finance industries need more competition,” says Morck. He adds that government should not provide direct subsidies for R&D except to subsidize training, education and basic research. The government’s role is to create the right economic environment for firms to carry out successful R&D. And, continues Morck, higher rates of innovation imply a higher rate of obsolescence, creating economic instability. Business failures will increase as a result of increased innovation, and people will be put out of work. There will be, predicts Morck, calls for government action to compensate and retrain them. “The bottom line”, according to Professor

Morck, “is that government should return to its core business: fostering trust so that people will invest. Paramount to this role is the design of good laws governing financial markets and corporations”.



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