Economic Integration in Europe: Its Effects on Canada

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> It is not possible to forecast with any degree of precision the probable over-all effects on Canadian trade of the current movement towards European integration. . . . If the United Kingdom becomes a Member of the [European] Community, the long-term advantages will have to be very great to compensate Canada for the loss of the preferential position now enjoyed in the U.K. market.
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> L.D. Wilgress (1962, 25)

Introduction

For the past half century, European countries have undertaken a series of measures that have liberalized trade and factor flows among member states of the European Union (EU). They have also harmonized various

government policies, including external commercial policy and monetary policy. As a result of these changes, the EU has extended beyond the definition of a common market and is approaching an economic and possibly a political union. Consequently, this increased integration has greatly expanded economic transactions within Europe, possibly at the expense of trade and factor flows with non-member states, including Canada. Accordingly, the purpose of this paper is to examine how Europe's increasing economic integration has affected its trade with Canada.

From a historical perspective, the increase in postwar economic integration in Europe began in earnest with the 1957 Treaty of Rome and was gradually intensified over the years by legislation such as the Single European Act of 1987. This latter act in particular caused concern that the removal of barriers to trade between European nations could come at the expense of extra-EU trade partners. This apprehension regarding the construction of a "Fortress Europe" was especially pronounced among US and Japanese authorities during the late 1980s and early 1990s (Aho 1994).[1]

From the Canadian perspective, following the United Kingdom's initiative to co-found the European Free Trade Association (EFTA) in 1960, concerns were expressed regarding the possible impact on Canadian exports of the United Kingdom's prospective entry into the European Economic Community (EEC) (Wilgress 1962; Nadeau 1985; Hart 2002).[2] Indeed, at the time, the United Kingdom was Canada's second most important trading partner after the United States, and many Canadian exports, along with those of other Commonwealth countries (i.e., Australia and New Zealand), enjoyed long-standing preferential treatment in the British market.[3] In the end, the United Kingdom joined the European Community (EC) in 1973, at which time the special access afforded to Canadian exports in the British market came to an end. Tariff preferences were lost, and from that point on, Canadian exports faced the EC's common external tariffs, while competing imports into the United Kingdom from other members of the Community were admitted free of tariffs.

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1. Such concerns were significant, given that the United States and the EU in particular maintain the largest bilateral trading and investment relationship in the world, with investors from the EU supplying a substantial amount of capital to the United States.

2. The EFTA originally included six countries in addition to the United Kingdom, namely, Austria, Denmark, Norway, Portugal, Sweden, and Switzerland. The EEC originally included six countries, namely, Belgium, Luxembourg, France, the Federal Republic of Germany, Italy, and the Netherlands. See section 1 for more details.

3. In the mid-1940s, the United Kingdom's share of Canadian exports was about 27 per cent, while that of the United States was 37 per cent. In 2003, the United Kingdom's share was 1.6 per cent and United States' share was 86 per cent.

Partly in response to these concerns, a significant body of literature has grown to analyze the impact of increased European integration on trade and factor flows. Most of this research has focused on two central issues: the effect of commercial integration (or customs unions) and the effect of currency integration (or monetary unions) on trade and real GDP. The latter aspect has come under increased scrutiny since the advent of the European monetary union (EMU) in 1999.[4]

With regard to the effects of the EC on the welfare of European countries, Balassa (1967, 1975) provides evidence of net trade creation resulting from the Common Market.[5,6] Similarly, a 1995 United Nations study finds evidence of trade creation between the EFTA and EC countries following the liberalization of trade between the two country groups in 1973; however, this trade creation was accompanied by some trade diversion in the case of North America. Haaland (1993) investigates the welfare effects of the EC and the EFTA, finding evidence of positive welfare effects for the EFTA and EC countries, with the former area benefiting the most, and some degree of trade diversion for the United States and Japan. Similar conclusions are reached by Haaland and Norman (1992) and Winters (1997). In a survey of the literature regarding the economic effects of EC integration, Ohly (1993) argues that the consensus view suggests that the overall effects of EC integration are positive. Papadaki (1998) evaluates the welfare effects of the Europe 1992 program (i.e., the removal of non-tariff barriers) in a general multi-country, multi-sector equilibrium model. Her results show that all EU countries are likely to benefit from the completion of the single European market (Common Market), with Italy, Greece, and the United Kingdom benefiting the most (i.e., seeing the largest gains in welfare) and with a

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4. For a brief but thorough literature review on this issue, see Rose (2004) and references therein.

5. Balassa uses an ex post income elasticity analysis of Common Market trade (income elasticities of demand for imports of all commodities). It has since been argued that income elasticities varied substantially pre- and post-integration, making Balassa's results sensitive to the sample period.

6. In Viner's framework, as discussed by Clausing (2001), trade creation occurs when the lowering of tariffs allows partner-country imports to replace high-cost domestic production; this improves welfare. Trade diversion occurs when the removal of tariffs causes trade to be diverted from a third country in favour of trade with the partner country, despite the fact that, were the countries treated equally, the third country would be the lower-cost source of imports. Overall welfare increases when gains to consumer surplus outweigh the loss of tariff revenue and producer surplus. Welfare therefore depends on the extent of trade creation relative to trade diversion.

limited degree of trade diversion for the rest of the world.[7] Focusing more specifically on the effects of Western European integration on third-party countries, Head and Mayer (2001) find evidence of an important increase in the difficulty faced by American and Japanese producers in accessing the European market during the early 1980s. At the same time, the authors find evidence of a gradual fall in border effects for intra-European trade.[8]

Studies regarding the economic impact of increased European integration on Canada are very limited, likely because the EU accounts for a relatively small share of Canada's total trade (5 per cent of total Canadian exports and 10 per cent of total Canadian imports as of 2003). Moreover, even though the level of trade between Canada and the EU has continued to grow during the past fifty years, it has risen at a slower rate than Canada's trade with other regions of the world. Consequently, overall trade between Canada and the EU has fallen as a share of each area's total trade. Nonetheless, although this share is only a small fraction of that of the United States, the EU remains economically important as Canada's second largest trading partner.[9]

One of the few studies on EU integration and Canada-EU trade is a report presented by the Canadian Standing Senate Committee on Foreign Affairs, entitled *European Integration: The Implications for Canada*. This report identified several potential implications for Canada regarding Europe's upcoming monetary union, including: the effect of EMU on the Canadian-dollar exchange rate, the effect on trade and investment patterns between Canada and the EU, implications for the balance of power in international economic policy coordination forums such as the G-7, and the spectre of increased protectionism, including the creation of a "Fortress Europe." The report went on to make twenty-five related recommendations. Of particular interest, the Committee suggested that studies be undertaken to assess Canada-EU trade patterns and to discover in which sectors of the EU market Canada is losing or gaining market share. The Committee also recommended an analysis of the potential impact on Canada of future EU expansion, with a focus on potential "trade and investment diversion." Finally, the Committee recommended that the Department of Foreign

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7. Similar welfare analyses have been performed on the topic of Canada-United States economic integration. For example, Clausing (2001) examined the effects of the Canada-United States Free Trade Agreement on trade patterns at the commodity level and found substantial trade creation effects resulting from tariff removal, with little evidence of trade diversion with other countries.

8. Head and Mayer use the border-effect methodology over the 1976–95 period.

9. In terms of individual countries, China is currently Canada's second largest trading partner in total merchandise trade, having overtaken Japan in 2003. However, Japan remains Canada's second largest export market, while China now holds that position in terms of Canadian imports. The United States retains the top ranking.

Affairs and International Trade (DFAIT), in consultation with the Bank of Canada and the Department of Finance, undertake a study on the effects on Canada of the EU's economic and monetary union.

The following year, DFAIT released a study entitled *European Monetary Union and Its Implications for Canada*. This study, by Robert Hannah (1997), examined the proposed EMU and concluded that its implications for Canada would likely be minor. Indeed, the study suggested that, with time, Canada would probably be perceived increasingly as part of a North American market in a tripolar financial world. In a similar paper, Crowley (1997) explores some possible developments in the EU over the next decade, tentatively concluding that the direct effect of EMU would likely be an increase in intra-EU trade. In addition, the study noted that EMU could cause a reduction in trade with third-party countries outside the EU.

Updating their 1996 report, the Standing Senate Committee on Foreign Affairs presented a report in 1999 entitled *Europe Revisited: Consequences of Increased European Integration for Canada*. The Committee concluded that the short-term direct impact of EMU would likely be limited. It was also observed that, in the months after the launch of the euro, the Canadian dollar had not been affected by the new currency. The study also suggested that, given Canada's relatively small share of trade with EU members, Canada's trade would likely become more hemispheric in nature. Nevertheless, the report argued that, in the long run, EMU could cause structural reforms in Europe, prompting beneficial trade creation with open-economy partners such as Canada.[10]

The report recommended analyzing a possible Canada-EU free trade agreement, focusing on the implications of tariff elimination. Cameron and Loukine (2001a) explored this issue, concluding that Canada and the EU would both benefit from the elimination of tariffs. In a separate but related paper, Cameron and Loukine (2001b) also examine the implications of EU expansion for Canada. Their results suggest that EU enlargement would not have a large impact on Canada, given the relatively small size of pre-existing trade between Canada and the central and eastern European countries in question. Nevertheless, it is possible that EU accession would cause either trade diversion or trade creation effects for Canada. Empirical assessment of this question, however, will have to await the release of sufficiently long time-series data.

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10. Merchandise trade as a share of GDP has been trending upwards for Canada (from 46 per cent in 1980 to 61 per cent in 2003), a sign of more open trade. This ratio for the EU remained around 28 per cent over the same period.

While adopting a general definition of economic integration, we aim at contributing to the existing literature by documenting the stylized facts and presenting preliminary empirical evidence, using an export share model, regarding the effects on Canada of increased European economic integration.[11] To our knowledge, no other studies have attempted to empirically assess these effects. The few studies mentioned previously that do discuss European economic integration from a Canadian perspective focus primarily on an analysis of the stylized facts.

In general, examination of the stylized facts suggests that, while Canada's trade with the EU continues to rise in levels (in real terms), the EU's share of total Canadian trade has been declining since the 1950s.[12,13] More specifically, while the EU's share of Canadian imports has remained roughly level over this period, the EU's share of Canadian exports has fallen significantly. This decline coincides with a dramatic fall in the relative importance of Canadian non-energy commodity exports to the United Kingdom. In terms of investment, the EU's share has been relatively stable over past decades, while, at the regional level, the investment story is similar to that discussed above for trade flows. Canada's investment in the United Kingdom has declined markedly as a share of total Canadian direct investment in the EU.

What has caused the decline in the EU's share of Canadian exports? Can it be accounted for solely by the fundamental determinants of trade performance, or does Europe's increasing economic integration play a role? Admittedly, the issue of trade creation and trade diversion as a result of

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11. In general, this concept of integration refers to an economic environment where different sectors of an economy or, more generally, different countries work together efficiently and are mutually interdependent. However, other more narrow definitions of the term "economic integration" also exist in the literature. For instance, literature dealing with the theory of customs unions usually defines the term in reference to a reallocation of resources and/or production across countries resulting from the removal of trade restrictions. Such a reallocation is based on each country specializing in the products or lines of production in which it has a comparative advantage. Alternatively, the term may be defined as part of the economic development process. In this framework, financial integration, commercial integration (or customs unions), and real capital market integration are examples of types and stages of economic integration. In this context, monetary integration and common currencies can be interpreted as the highest level of economic integration.

12. Canada's merchandise trade represents 85 per cent of its total trade. We therefore use the term "trade" to refer specifically to merchandise trade. Note also that the EU's share of Canada's total services trade has been declining over the past twenty years.

13. In the analysis of this paper, the term "European Union" refers to the EU15 (Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden, and the United Kingdom), unless otherwise specified.

Europe's increasing economic integration is best addressed by examining the trend in EU imports within member countries and with other non-EU trading partners. A sophisticated counterfactual experiment would then be necessary to assess the welfare effect of tariff removal. This issue, however, is beyond the scope of our analysis.

Based on a Canadian export share model that controls for relative price competitiveness and relative real income, we find evidence over the 1972–2003 period, consistent with the stylized facts, that increased European economic integration has reduced Canada's relative exports to the EU. This decline can be attributed almost completely to a dramatic fall in the relative importance of Canadian exports to the United Kingdom. Moreover, these findings stand when increased Canada-United States trade is accounted for.

The remainder of this paper is organized as follows. Section 1 describes the major institutional changes that contributed to increased economic integration in the European economy over the past several decades and discusses the evolution of trade relations between Canada and the European Community over the same period. Section 2 reviews the stylized facts regarding the trade and investment relationship between Canada and the European Union. Section 3 provides empirical evidence on the effect of increased European integration on Canada's relative exports to the EU. The final section concludes and suggests areas for future research.

1 Economic Integration in the European Union and Trade Relations with Canada

1.1 The evolution of economic integration in the European Union

Europe's current drive towards economic integration took its first significant step in 1952, only three years after the end of post-World War II reconstruction, when "the Six" (Germany, France, Italy, Belgium, Luxembourg, and the Netherlands) took a critical step in reunifying Europe by establishing the European Coal and Steel Community (ECSC). Five years later, in 1957, the Treaty of Rome was signed, creating the EEC, which, among other things, marked the beginning of the push towards free movement of labour and capital. Indeed, it was in response to the removal of intra-EEC tariff barriers that several other European countries (Austria, Denmark, Norway, Portugal, Sweden, Switzerland, and the United Kingdom) formed the EFTA in 1960. In essence, the goal of the EFTA was to liberalize trade and counterbalance the EEC. In 1967, the ECSC and the EEC (as well as the European Atomic Energy Community) merged to form the EC. Following the establishment of the EFTA and the EC, tariffs on

internal trade within each of these groups were almost entirely removed by the end of the 1960s.

In 1970, the Werner Report laid out, for the first time, the eventual steps to European monetary union. In 1972, "the snake" exchange rate system was introduced, wherein the Six agreed to limit the margin of currency fluctuations to a 4.5 per cent band around an agreed central parity. When the United Kingdom and Denmark left the EFTA and entered the EC along with Ireland in 1973, they also joined the snake. However, this first attempt at European exchange rate coordination fell victim to the effects of the oil-price crises in the late 1970s. By 1978, only five of the nine member states remained on the snake. The mid-1970s had, nonetheless, brought progress on another front. A significant free trade agreement had been reached in 1974 between the EC and the EFTA. Indeed, by the end of the 1970s, virtually all tariff barriers had been removed on the trade of industrial products within Western Europe.

The experience of the snake paved the way for the establishment of the European Monetary System (EMS) in 1979. Within the EMS, the concept of the European Currency Unit (ECU), a virtual currency based on relative gross national product and trade values for all EC countries, was introduced, along with the exchange rate mechanism (ERM). The ERM marked the second attempt at a coordinated EC exchange rate policy and initially included all EC countries except the United Kingdom. Participants in the ERM were originally permitted, like the snake, to move within a 4.5 per cent band around a central parity with the ECU, except for Italy, which adopted a 12 per cent band because of its higher inflation rate.

In 1981, Greece acceded to the EC, followed five years later by Spain and Portugal. In 1987, the original Treaty of Rome was modified by the Single European Act, which formalized, among other things, the plan to create a single European economic market in goods and services, labour, and capital. In addition, the Act included a program for deeper integration within the EC through the removal of non-tariff barriers, the establishment of free labour and production factor flows, and the harmonization of standards by the end of 1992. From this point on, the term European Union was commonly, although informally, used to refer to the EC. In the following years, the ERM expanded to include Spain, the United Kingdom, and Portugal in 1989, 1990, and 1992, respectively, although using the wider 12 per cent band of fluctuation (Italy had, meanwhile, adopted the standard 4.5 per cent band in 1990). Despite several revaluations within the ERM, the mechanism functioned relatively smoothly until 1992, when speculative currency attacks forced the United Kingdom and Italy to withdraw from the arrangement. The following year, a new 30 per cent band was adopted to

provide added flexibility and reduce the threat of speculative attacks. Italy subsequently rejoined the ERM in 1996, whereas the United Kingdom has since abstained.

The formal EU as we know it today came about when the Maastricht Treaty took effect in 1993.[14] Besides enacting a common foreign and security policy and dealing with EU-level matters of justice, this treaty specified the three steps required for economic and monetary union: by the end of 1993, capital flows were to be completely freed within the EU; by 1999, member states preparing to adopt the euro currency upon its launch had to satisfy convergence criteria by which major economic policies were coordinated across nations; at the beginning of 1999, the European Central Bank would be established, along with the official euro currency for which member-country conversion rates were irrevocably set. As of 1999, the EMU was officially established (with the circulation of the common currency following in 2002).[15] The union, marking the final stage of economic integration, according to some, now includes Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, and Spain. Denmark, Sweden, and the United Kingdom have abstained, to this point, from joining the EMU. More recently, the process of European economic integration continued in May of 2004, when ten central and eastern European countries joined the EU, with plans to adopt the common currency in years to come.[16]

1.2 Canada-European Union trade relations

Canada and the EU maintain a decades-old political and economic relationship. Relations between the two are covered by World Trade Organization (WTO) agreements, as well as by a diversity of bilateral framework and sectoral agreements. More specifically, the economic partnership dates back to 1958, when Canada accredited its first ambassador to the EEC. In 1976, the EEC and Canada signed the historic Framework Agreement for Commercial and Economic Co-operation, the first international agreement between the EEC and an industrialized country. This framework agreement, which called on both parties to develop and diversify their reciprocal commercial exchanges and to foster economic co-

14. The original member states of the EU were Belgium, Denmark, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, and the United Kingdom.
15. The EMU originally consisted of Austria, Belgium, Finland, France, Germany, Ireland, Italy, Luxembourg, the Netherlands, Portugal, and Spain. Greece joined later in 2001.
16. Poland, Hungary, the Czech Republic, Estonia, Latvia, Lithuania, Slovakia, Slovenia, Cyprus, and Malta joined the EU on 1 May 2004.

operation, provided for regular dialogue on trade at several levels, and provided the legal basis for further collaboration between the two. Under this agreement, the Joint Cooperation Committee (JCC) was established. This committee meets every year and has a number of subcommittees, including the Trade and Investment Sub-Committee (TISC). Since 1976, as the EEC has evolved into the EU, Canada and the EU have concluded several agreements covering a wide spectrum of economic activities ranging from fisheries and wines and spirits to veterinary issues and nuclear research.[17]

By 1990, there was a desire to build on existing agreements and establish a political framework for Canada-Europe relations. The result was the Transatlantic Declaration on Canada-EU Relations, which set the institutional framework forming the basis for biannual (i.e., twice yearly) summit meetings between the Prime Minister of Canada and his counterpart in the presidency of the EU and the President of the European Commission.[18] The Declaration also established biannual ministerial meetings.

In recognition of the broad nature of common interests, the Canada-EU Action Plan was signed in 1996 to extend co-operation across a wide range of subjects falling under four headings:

• economic and trade relations;

• foreign policy and security issues;

• transnational issues;

• fostering links between the EU and Canada.

Under the umbrella of economic and trade relations, a new EU-Canada trade initiative (ECTI) was launched in 1998, on the eve of the introduction of the euro currency. The ECTI set out priorities for developing bilateral economic relations into the new century. Current issues on the ECTI agenda include: mutual recognition and regulatory co-operation, services, government procurement, intellectual property, competition, business-to-business contacts, cultural co-operation, and electronic commerce. It also includes a commitment to regular and enhanced discussions on multilateral issues.

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17. Several sectoral agreements are in place, including the Agreement on Research in Peaceful Uses of Nuclear Energy (1959); the Agreement on Cooperation in Nuclear Research (1998); the Fisheries Agreement (1981); the Agreement on Science and Technology Cooperation (1995, amended in 1998); the Agreement on Education and Training (1996); the Customs Cooperation Agreement (1997); the Mutual Recognition Agreement (1998); the Veterinary Agreement (1998); the Competition Agreement (1999); and the Agreement on Trade in Wine and Spirit Drinks (2003).
18. The presidency of the EU rotates every six months among the member states.

Also established under this heading was a vehicle for businesses involved in Canada-EU trade to make known their views to the trade ministers on high-level policy issues that have an impact on Canada-EU trade and investment relations. As such, the Canada-Europe Round Table (CERT) was established in 1999.

Under the auspices of ECTI, both the EU and Canada conducted business surveys with a view to assessing the business case for a closer type of Canada-EU economic co-operation. Along with general market factors, the surveys identified regulatory barriers as the main source of difficulties to bilateral trade and investment. From the European perspective, health and safety standards, labelling, packaging, provincial liquor boards, geographical indicators, customs formalities (e.g., the requirement to use 10-digit Harmonized System codes), lack of diploma recognition, and certain restrictions on investment were identified. Many of the same types of difficulties were also identified from the Canadian perspective, in particular, sanitary and technical regulations, packaging, labelling, certification requirements, crop protection rules, and bureaucracy in establishing service companies in the EU.

From these surveys, it was concluded that a new impetus should be given to the bilateral relations through a major political initiative, although a classical free trade negotiation was not necessarily the most appropriate instrument for this purpose. Thus, a new Trade and Investment Enhancement Agreement (TIEA) between Canada and the EU was signed in March 2004. TIEA is intended to be a forward-looking, wide-ranging bilateral trade and investment enhancement agreement covering a new generation of issues and outstanding barriers. In particular, it will tackle the significant impact of regulatory barriers in bilateral trade and investment and pay due consideration to the increasingly prominent role of investment in the bilateral economic relationship.[19]

Although the 1976 framework agreement and subsequent instruments of commercial and economic co-operation have facilitated efforts by both sides to manage and resolve trade and investment disputes, Canada-EU trade and economic relations are so broad that disagreements are almost inevitable. In recent years, trade relations between the two partners have been tainted by long-standing barrier issues for such products as chrysolite asbestos, automobiles, wine, lumber, seafood, beef reared on growth hormones, wheat, and transgenic products like canola. Furthermore, the Canadian government

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19. TIEA will address issues such as mutual recognition of professional qualifications, e-commerce, financial services, government procurement, trade and investment facilitation, competition, sustainable development, intellectual property rights, and science and technology co-operation.

believes that the EU's Common Agricultural Policy (CAP), in particular, price support and production subsidies, continues to restrict the access of Canadian agricultural products to the EU while distorting the markets of third-party countries.

2 Stylized Facts

This section summarizes the stylized facts regarding trade between Canada and the EU over the past several decades. The analysis first investigates aggregate trade flows between Canada and the EU, and their major trading partners, before digging deeper to discuss trade between Canada and the individual EU member states. Broad sectoral trade flow data are also examined to assess the Canada-EU trade relationship in more detail. The analysis then examines the evolution of investment between Canada and the EU over the past half century.

2.1 Aggregate trade flows

Canada and the EU maintain important and economically significant trade relations. Total merchandise trade (exports plus imports) between the EU and Canada reached a record level of US$3.6 billion at the end of 2003, having grown almost 86 per cent since the establishment of the EU in the fourth quarter of 1993. Over the same period, however, Canada's trade deficit with the EU increased by almost 250 per cent to a level of US$1.1 billion, implying that Canada is increasingly importing more from the EU than it is exporting.[20]

Although the volume of trade between Canada and the EU continues to grow, it is rising at a slower rate than Canada's trade with other regions of the world. Viewing these trade flows as a share of each area's total trade provides additional context.

2.1.1 The Canadian perspective

From the Canadian perspective, the EU was Canada's second largest trading partner in 2003, after the United States, in terms of both imports and exports. More specifically, the EU accounts for 11.5 per cent of total Canadian imports (versus 59 per cent accounted for by the United States) and 5.3 per cent of total Canadian exports (versus 85 per cent for the United States). These shares, however, have been decreasing. As is evident in

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20. Canada has consistently maintained a merchandise trade deficit with EU members since 1984.

Figure A2.1, the EU's share of Canadian imports averaged about 14.5 per cent in the 1960s. This share subsequently fell to about 10 per cent throughout much of the 1980s and 1990s, before rising somewhat to its current level. At the same time, Japan accounted for a growing share of total Canadian imports until the early 1990s, at which time that country entered a protracted economic slowdown. Meanwhile, economic reforms in China and its entry into the WTO have led it to account for a growing share of Canadian imports since the early 1980s, rising from about 0.2 per cent at that time to over 6 per cent at the end of 2003. In terms of individual countries, China is now Canada's second largest import market after the United States. A country-by-country breakdown of Canadian imports from the EU (Figures A2.2 and A2.3) reveals that the composition of imports from the EU has remained largely unchanged since 1980. Note that the share of imports from the United Kingdom has declined from about 30 per cent to about 22 per cent.

On the export side, the EU's share of Canada's exports has declined steadily from about 25 per cent in the 1960s to about 5 per cent since the late 1990s. At the same time, the United States' share has increased notably, from about 60 per cent in 1960 to over 85 per cent at the end of 2003 (Figure A2.4). As Figures A2.5 and A2.6 illustrate, the EU's relative decline was driven primarily by a steep drop in the share of Canadian exports to the United Kingdom. Indeed, as a share of total Canadian exports to the EU, the United Kingdom has fallen from over 85 per cent in the 1950s to about 23 per cent by the mid-1990s.[21] In terms of volume, although Canadian exports to the EU have continued to rise since the 1950s, Figure A2.7 shows that this was not always the case for the United Kingdom. In fact, the volume of Canadian exports to the United Kingdom declined 54 per cent between 1970 and 1985. In contrast, the volume of Canadian exports to the rest of the EU (excluding the United Kingdom) saw a steady upward trend.

These stylized facts are in line with the United Kingdom's increasing economic integration with other European countries over this period. As mentioned, the United Kingdom helped establish the EFTA in 1960. Through the removal of tariffs between the United Kingdom and other EFTA members, Canada now faced increased competition in the British market.[22] Thirteen years later, when the United Kingdom acceded to the EC, Canada faced an even more dramatic shift in competitiveness. In 1960,

21. Based on available exports data. Time series for exports to some members of the EU are not available before 1986. However, data for the six largest EU countries in terms of Canadian export shares to the EU are available from 1949.
22. For example, Hart (2002) notes that EFTA tariff cuts led Norway to threaten Canada's position as the top supplier of aluminum to Britain.

before the United Kingdom's accession, 97 per cent of Canadian exports to the United Kingdom entered duty-free, compared to about 75 per cent of Canadian exports that entered the EC without tariffs. Moreover, Canada maintained preferential tariff treatment with the United Kingdom on all dutiable goods and 42 per cent of non-dutiable goods, in comparison with goods from the EC. For all other goods, Canada stood on equal footing with the EC countries in terms of UK tariff rates. After the United Kingdom's accession to the EC, Britain shifted its tariffs to match the common EC external tariff rates. This process occurred gradually in five equal steps from 1973 to 1977. As a result, Canada (and other Commonwealth countries) lost all of its preferential tariff treatment with the United Kingdom and in many cases faced reverse preferences compared with other EC countries (Wilgress 1962; Hart 2002).

In stark contrast with the significant decline in the United Kingdom's share of Canadian exports, Figure A2.4 illustrates that the rest of the EU, excluding the United Kingdom, experienced a very modest decline from 1950 to 2003.

Taken together, the steady decline in the EU's share of Canadian exports combined with the relative stability of Canada's share of imports from the EU has left Canada with the aforementioned increasing bilateral trade deficit with the EU over the past forty years.

2.1.2 The European Union perspective

From the EU's perspective, Canada currently ranks eleventh in terms of EU imports (0.7 per cent) and fourteenth in terms of exports (0.8 per cent). As illustrated in Figures A2.8 and A2.9, Canada's share of EU exports fell from about 2 per cent at the beginning of the 1960s to about 0.8 per cent in the early 1980s where it has largely remained since that time. Concurrently, the United States oscillated around 8 per cent of total EU exports, while "Other Asia" and Japan trended upwards until the mid-1990s. China's share of EU exports has been rising since the mid-1980s and appears to be accelerating. At the end of 2003, China's share was over 1.6 per cent of total EU exports, compared to only about 0.5 per cent at the beginning of the 1990s.

In terms of EU imports, Canada's share declined steadily from about 2.6 per cent in the early 1960s to about 0.7 per cent, where it has been since the second half of 1992. On the other hand, the US share of total EU imports declined in the 1960s and again since mid-2001, while Japan's share increased rapidly until the mid-1980s (it has been in decline since the early 1990s). At the same time, the importance of China and "Other Asia" has been trending upwards strongly since the mid-1980s. More recently, China's

share seems to be gaining speed, posting a level of 4.2 per cent, roughly double its value only five years previously. Interestingly, the residual line labelled "Others" in Figures A2.10 and A2.11 makes up roughly twice as much of the EU's total imports as the United States. Since the mid-1990s, growth in this share has been driven by increased trade with the ten central and eastern European countries that acceded to the EU in 2004.[23]

In general, the EU import story mirrors that described above for Canadian exports. The decline in Canada's share of EU imports can be attributed almost completely to a dramatic fall in the relative importance of the United Kingdom's imports from Canada resulting primarily from the United Kingdom's accession to the EFTA (1960) and, later, the EC (1973). However, Figure A2.12 provides additional details. Interestingly, a similar downward trend in the share of UK imports also took place in other Commonwealth countries (e.g., Australia and New Zealand), which, like Canada, lost their preferential trade treatment with the United Kingdom over the 1960s and 1970s.

2.2 Sectoral trade flows

Broad sectoral data provide additional insight into the stylized facts regarding Canada-EU trade. As discussed in the previous section, the EU's share of total Canadian imports has, on the whole, remained fairly stable since the 1960s. The sectoral composition of these imports has remained much as it was twenty years ago (Figure A2.13). Figure A2.14, which disaggregates the commodities sector into energy and non-energy components, shows that the composition of commodity imports has also remained roughly the same since the mid-1980s. Likewise, Figure A2.15 shows little change over this period in the relative importance of the various subsectors that make up the total machinery and equipment sector. In addition, when the major sectors of Canadian imports from the EU are viewed in relation to total Canadian imports from all countries (Figure A2.16), we see that the modest rise in the EU's share of Canadian imports since the 1990s (see section 2.1) was driven primarily by machinery and equipment.

Turning now to Canadian exports to the EU, Figure A2.17 shows that commodities have declined significantly since the 1960s as a share of total Canadian exports to the EU. At the same time, the importance of the machinery and equipment sector has risen while other types of exports have

23. Fuelled by free trade agreements signed in the early to mid-1990s, the ten acceding countries accounted for 12.7 per cent of total extra-euro-zone imports in 2002, up from 4.3 per cent in 1990 (see Anderton, di Mauro, and Moneta 2004, Table 5, p. 21).

remained fairly stable. Looking at a more disaggregated level, Figure A2.18 illustrates that the decline in the importance of the commodity sector was due entirely to non-energy commodities. Similarly, Figure A2.19 shows that the rising importance of the machinery and equipment sector was driven primarily by aircraft products and other residual types of machinery and equipment (the increase in the latter is spread fairly evenly between the miscellaneous machinery and miscellaneous equipment categories). As noted previously, Canada-UK trade plays a pivotal role in the trend of Canadian exports to the EU over the past fifty years. Indeed, the noted decline in Canadian non-energy commodities to the EU was driven primarily by a fall in non-energy commodities to the United Kingdom (Figures A2.20 and A2.21). As noted in Hart (2002), many Canadian non-energy commodity exports to the United Kingdom, such as wheat, barley, aluminum, lead, zinc, and chemicals, faced reverse tariff preferences compared to EC member states following the United Kingdom's accession to the EC in 1973. Such goods had previously held Commonwealth trade preference over other countries.[24] At the same time, Figure A2.22 shows that the decreasing relative importance of commodity exports is evident, not only in exports to the EU, but to all countries in general.[25]

In summary, the stylized facts show that the relative importance of Canada's trade with the EU has, in general, fallen over past decades. While the Canadian share of imports from the EU has remained fairly stable, exports to the EU have declined mainly because of a marked fall in non-energy commodity exports to the United Kingdom. This shift likely resulted primarily from the United Kingdom's accession to the EFTA and, later, the EC, within a context of generally weakening historical ties between Canada and the United Kingdom. A similar downward trend in the share of UK imports also took place in Australia and New Zealand, which, like Canada, lost their preferential trade treatment with the United Kingdom over the 1960s and early 1970s.

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24. Part of the United Kingdom's adoption of common EC external tariffs included the Common Agricultural Policy (CAP), which led the United Kingdom to become more self-sufficient in agricultural goods, while substituting some imports away from countries like Canada and towards other EC member states (Nadeau 1985).

25. Comparative advantage continues to drive a significant portion of Canada's trade, especially in commodity exports. However, the trend towards increasing two-way trade in industrial goods has risen significantly since the mid-1980s. In the machinery and equipment category, for example, the rapidly growing importance of office machines and telecommunications equipment in both exports and imports has fuelled two-way trade. For a review of trends in Canada's merchandise trade, see Dion (2000).

2.3 Investment between Canada and the European Union

For much of its history, Canada has been a net importer of direct investment capital, and this situation has been equally true of the Canada-EU investment relationship. Until 1996, Canadian holdings of direct investment in the EU were always lower than EU holdings in Canada. This situation changed with strong additions to the stock of Canadian direct investment abroad (CDIA) in the EU in 1997 and 1998, and carried through until 1999. The year 2000 was characterized by unprecedented levels of merger and acquisition activity. Canadian direct investment holdings in the EU shot up by 39.7 per cent, while EU holdings in Canada rocketed up by 85.9 per cent, led by France with a 458.5 per cent increase in its foreign direct investment (FDI) holdings in Canada. Notable Canadian firms that were acquired by French investors included Seagram's and Newbridge. The net result was that Canada again found itself in the position of being a net importer of EU direct investment capital at the close of 2000. It was only in 2003 that Canada again reversed the situation and became a net exporter of capital to the EU.

In 2003, Canadians invested just over $14.1 billion in the EU, raising the stock of total Canadian direct investment in the EU to $99.1 billion. At this level, the EU accounted for 24.8 per cent of the stock of total CDIA, second only to the 41.3 per cent invested in the United States. Indeed, Canadian investors have increased their holdings in the EU almost 361 times since the Treaty of Rome came into effect in 1957.[26] By way of comparison, Canadian investment to all countries has grown nearly 182 times since 1957 and CDIA to the United States has grown 107 times over the same period.

On the inward side, the stock of FDI in Canada from the EU stood at $96.7 billion in 2003, some 63.2 times larger than the $1.5 billion level estimated for 1957. Again, this pace has been faster than either that of total FDI in Canada (33.9 times larger in 2003 than in 1957) or that for US FDI in Canada (25.8 times). In 2003, the net flow of direct investment from the EU was $1.5 billion.

More globally, Canada's share of outward direct investment in the EU as a share of total CDIA has risen over the years (Figure A2.23). Until 1956, the EU accounted for less than 10 per cent of the total. In 1957, the EU's share registered 10.2 per cent and climbed to over 19 per cent by 1966. Thereafter, it slowly drifted downwards, falling to 11.4 per cent in 1984. Three years later, Canadian investment activity into the EU began to accelerate, and by

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26. Outward and inward direct investment stock data with the EU have been constructed back to 1957 using the available country time series for the EU15 member countries.

1990, the region represented just over one fifth of total CDIA, where it remained for the next dozen years, before jumping to 24.8 per cent of the total in 2003.

As shown in Figure A2.24, on the inward side, the EU's share of total FDI in Canada sat between 15 and 20 per cent until 1986, when it reached 20.3 per cent. It had risen to over 24 per cent by 1990 before sliding back to 20.4 per cent by 1999. The strong European investments made in the year 2000 then pushed the EU's share to just over 30 per cent. The EU's share subsequently receded to about 27 per cent in 2003.

As mentioned in section 1.2, Canadian businesses have experienced regulatory barriers in the EU markets. One way of circumventing these barriers is to establish a domestic presence within the EU market (i.e., CDIA) and sell to that market through a local subsidiary. Unfortunately, there is not much available information on the activities of Canadian foreign affiliates abroad. Only recently has Statistics Canada begun to produce such information, and thus, the data only exist for a limited number of years.

Nonetheless, Table 1 shows that Canadian companies have, in recent years, provided roughly twice as much in goods and services directly via their foreign affiliates in the EU than they have through traditional export channels. Moreover, it seems that the direct sales route is becoming more important, rising to two and a quarter times exports in 2001 from twice the amount of exports only a year earlier.

In terms of regional distribution, investment flows with the United Kingdom are of particular importance. When the United Kingdom joined the EC in 1973, it accounted for 56 per cent of the stock of EU FDI in Canada. Some sixteen years earlier, in 1957, it represented over three quarters of EU investment in Canada; over the next sixteen years, to the end of the 1980s, the United Kingdom more or less maintained its share in the 55 per cent range; since then, its share has been edging downwards and now represents 28 per cent of EU holdings in Canada. Likewise, about 56 per cent of all Canadian direct investment in the EU was placed in the United Kingdom in 1973, down from 84 per cent in 1957, but more than the 41 per cent observed in 2003. These figures represent relative share declines of almost two thirds on the inward investment side and one half for Canadian outward investment between 1957 and 2003. Thus, the overarching story of Canada-EU direct investment relations has been the relative diminishing role of the United Kingdom or, alternatively, the relative increased role of other member countries, notably, France, Germany, and the Netherlands.

On the inward investment side, these three other countries, in addition to the United Kingdom, make up the bulk of EU holdings in Canada. Over 1957–

Table 1
Canada-EU commercial relations:
Exports vs. foreign-affiliated sales

Year	($ Canadian millions)		
	Goods & services exports (1)	Foreign affiliate sales (2)	Ratio (2) as per cent of (1)
1999	29,102	62,000	213
2000	33,843	67,000	198
2001	33,766	77,000	228

Source: Statistics Canada.

2003, these three countries, along with the United Kingdom, accounted for an average of 87.9 per cent of total EU direct investment in Canada, ranging from a low of 81.8 per cent in 1999 to a high of 96.5 per cent in 1989. In 2003, these four countries accounted for 84.1 per cent of all EU FDI in Canada. They are also the only countries to register a greater than 10 per cent share of EU investment in Canada in any of the years between 1957 and 2003.

France first registered a greater than 10 per cent share in 1968 and managed to exceed that threshold over the next dozen years before falling under the mark in 1981. In 1989, France again exceeded the 10 per cent threshold and has continued to do so in every year since. As mentioned earlier, France engaged in some rather sizable merger and acquisition activity in the year 2000 (Figure A2.25). As a result of that activity, France's share of EU holdings jumped to 38.6 per cent in that year from 12.8 per cent the year before. Some of the acquired assets have been sold off in the ensuing years and, as of 2003, France accounted for almost a third (32.7 per cent) of all EU FDI in Canada, or $31.6 billion.

The Netherlands first breeched the 10 per cent threshold over 1965–66, then in 1969–70, and again over 1975–77, and has remained above that level since 1980. In 2003, the Netherlands accounted for 15.8 per cent of total EU FDI in Canada, equivalent to FDI holdings of $15.3 billion.

Germany surpassed the 10 per cent threshold in 1975 and continued to do so until the year 2000 when the sizable additions to total EU holdings (led by the French merger and acquisition activity) caused the German share to fall below the 10 per cent level. At 7.6 per cent of the total EU investment in Canada in 2003, or $7.3 billion, Germany is the smallest of the top four EU investors in Canada.

Turning to the outward investment side, Canadian direct investment into the EU has also been highly concentrated. In terms of preferred investment

locations, Canadian investors have tended to invest in those European countries that have invested most in Canada. That is, much of the Canadian FDI in the EU is situated in Britain, France, Germany, and the Netherlands. Ireland is also a major destination of CDIA in the EU (Figure A2.26).

With 40.1 per cent of the total, or $40.7 billion, the United Kingdom remains the largest recipient of CDIA in the EU, followed by Ireland (18.4 per cent, or $18.2 billion), France (11.7 per cent, or $11.6 billion), the Netherlands (10.8 per cent, or $10.7 billion), and Germany (7.9 per cent, or $7.8 billion). Together, these five countries accounted for, on average, about 88.8 per cent of total CDIA in the EU over 1957–2003. In 2003, these countries contributed 89.8 per cent of the total, and their collective shares have ranged from 86.1 per cent (in 1976) to 96.4 per cent (in 1957).

Excluding investment in the United Kingdom, Canadian investors have not often placed more than 10 per cent of their holdings of CDIA in the EU in other European countries. CDIA in France exceeded this 10 per cent threshold between 1974 and 1976 and again over 1988–89. With the acquisition of the French firm Pechiney by Alcan in December of 2003, the stock of Canadian investment in France grew 156.4 per cent in 2003, to $11.6 billion, or 11.7 per cent of total CDIA in the EU.

Ireland has captured more than 10 per cent of CDIA in the EU since 1993 (except for the year 2000), while the Netherlands has accounted for over 10 per cent since 1998. Germany, lone among the top five destinations for Canadian FDI in the EU, is the only nation in this group not to have surpassed the 10 per cent threshold at least once.

In summary, although Canada-UK investment levels have risen in absolute terms, they have not kept pace with those between Canada and the other EU member nations over 1957–2003; this explains the broad movement in shares over this period. Thus, there appears to have been a limited shift in the focus of Canada-EU investment relations away from the United Kingdom and, particularly, towards France, the Netherlands, Germany, and perhaps, Ireland.

3 Canadian Export Share Model

Assessing the impact of increased European integration on trade with Canada is an empirically difficult exercise given the complexity of modelling economic integration. We attempt to address the issue with a simple export share model, using a panel data set based on country-pair observa-

tions between Canada and each of the EU countries.[27,28] We would like to stress that the scope of our empirical analysis is limited to explaining the stylized facts regarding Canadian exports to EU member countries as presented in the previous section. Thus, our analysis does not attempt to account for movement in the EU's share of Canadian imports, given that this variable is driven by Canadian domestic factors that are unrelated to the issue of increased European economic integration.

As discussed previously, overall trade between Canada and the EU has fallen as a share of each area's total trade. What has caused the decline in these shares? Can they be accounted for solely by the fundamental determinants of trade performance, or does Europe's increasing economic integration also play a role? In this section, we investigate the factors contributing to the overall decline in Canadian exports to the EU as a share of total Canadian exports. To this end, a theoretically based reduced-form export share model is developed by combining both supply and demand determinants of export performance, such as relative price competitiveness and relative foreign real income. By specifying our model in relative terms (i.e., shares), we implicitly account for the general increase in world trade openness.[29] Linear time trend and dummy variables are then added to the basic model to capture excess trade resulting from other factors, such as increased European economic integration.

In developing our model, we proceed in two steps. We first specify Canadian exports to the individual EU member countries, as well as total Canadian exports to all countries, using the aforementioned fundamental determinants. Thus, defining Canada as country *i*, equations (1) and (2) specify Canadian real exports to country *j* and total Canadian real exports, respectively. In step two, the export share equation is then obtained by dividing equation (1) by equation (2), the results of which are given as equation (3).[30]

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27. All data are taken from Statistics Canada, the Organisation for Economic Co-operation (OECD) (2004), the Bank for International Settlements (BIS), and the International Monetary Fund (IMF) databases. All foreign variables were converted to Canadian dollars. Constant dollar and price index series were rebased to 2000 as the reference year, in cases where base years were different. Mnemonics are described in Appendix 1.

28. Based on data availability, the term "European Union" refers throughout our empirical analysis to the fourteen members of the EU (before the May 2004 expansion) excluding Luxembourg, unless otherwise noted.

29. Ideally, we would also like to explain the level of Canadian real exports to EU countries as well as the level of Canadian real exports to the world. However, we did not find evidence of cointegration in level terms, using both the panel Johansen cointegration test and within a panel error-correction model. Thus, we could not make valid empirical inferences.

30. Estimating the export share model as specified in equation (3) implicitly imposes the following restrictions: $\beta_0 = \alpha_{10}/\alpha_{20}$, $\beta_1 = \alpha_{11}/\alpha_{21}$, and $\beta_2 = \alpha_{12}/\alpha_{22}$.

$$X_{ijt}/PX_{it} \ = \ \alpha_{10} + \alpha_{11}(P_{it}/P_{jt})*ner_{jit} + \alpha_{12}Y_{jt}/ner_{jit} + \varepsilon_{ijt}, \tag{1}$$

$$X_{it}/PX_{it} \ = \ \alpha_{20} + \alpha_{21}(P_{it}/P_{wt})*neer_{it} + \alpha_{22}Y_{wt}/neer_{it} + \varepsilon_{it}, \tag{2}$$

$$X_{ijt}/X_{it} \ = \ \beta_0 + \beta_1(P_{wt}/P_{jt})*(ner_{jit}/neer_{it})$$

$$+ \ \beta_2(Y_{jt}/ner_{jit})/(Y_{wt}/neer_{it}) + \varepsilon_{xijt}, \tag{3}$$

where the variables are defined as:

X_{ijt}: Canadian exports to country j at time t; X_{it}: total Canadian exports; PX_{it}: the Canadian export price deflator; X_{ijt}/PX_{it}: Canadian real exports to country j; X_{it}/PX_{it}: total Canadian real exports; $Y_{(i \text{ or } j \text{ or } w) t}$: real GDP in country i or j or in the world; P_{it}: the GDP price deflator in country i; P_{jt}: the GDP price deflator in country j; P_{wt}: the world price deflator; ner_{jit}: the nominal exchange rate between country j and i (where an increase corresponds to an appreciation of currency i versus currency j); $neer_{it}$: the nominal effective Canadian exchange rate (an increase is an appreciation of the Canadian dollar); and ε_{ijt}, ε_{it}, and ε_{xijt} are random error terms.

Looking further at equation (1), X_{ijt}/PX_{it} denotes real exports from Canada to country j at time t. The export performance of Canada with respect to country j depends primarily on its price competitiveness relative to country j as measured by its real bilateral exchange rate, $(P_{it}/P_{jt})*ner_{jit}$, and also on the Canadian dollar level of real income in country j, denoted Y_{jt}/ner_{jit}.

In equation (2), X_{it}/PX_{it} denotes total Canadian real exports to the world at time t. In this traditional export equation, Canada's export performance is expected to depend primarily on its relative price competitiveness versus all trading partners, in addition to the level of world demand. Relative price competitiveness is captured by the price of Canada's goods, P_{it}, relative to the price of world goods, P_{wt}, expressed in Canadian dollars using the nominal effective exchange rate for Canada, denoted $(P_{it}/P_{wt})*neer_{it}$. The level of world demand (or world real GDP) is expressed in Canadian dollars and is denoted $Y_{wt}/neer_{it}$.[31] The latter specifies shifts in world demand for Canada's export goods.

Finally, expressing Canadian real exports to country j as a share of total Canadian real exports yields the export share function as represented by equation (3). This export share is expected to depend on the ratio of relative price competitiveness, denoted $(P_{wt}/P_{jt})*(ner_{jit}/neer_{it})$, in addition to the

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31. World real GDP is defined in US dollars and converted to Canadian dollars using the nominal bilateral Canada-US exchange rate.

relative real income of country j as a share of world real income, $(Y_{jt}/ner_{jit})/(Y_{wt}/neer_{it})$.[32]

Empirical estimation of the export share equation (equation (3)) uses a panel data set covering 14 country pairs (i.e., exports from Canada to each of the EU15 countries, excluding Luxembourg owing to data availability).[33] The data are of a quarterly frequency and include the period from 1986 to 2003.[34] The estimated long-run parameters are obtained using the panel dynamic ordinary least squares (DOLS) leads-and-lags procedure, which corrects for potential endogeneity bias (Kao and Chiang 2000; Mark and Sul 2002).[35] These estimates are derived with four leads and four lags on the first difference of the two fundamental determinants. Note that our results are robust when the lag process is reduced from fourth order to second order. Table 2 presents the panel estimation results for Canadian exports to the EU as a share of total Canadian exports.

Overall, our base-case results (equation (3) reported in column (1)) for the Canadian export share equation suggest that relative real income accounts for about 57 per cent of the long-run movement in the Canadian export volume to the EU as a share of total Canadian exports. Furthermore, the estimated parameter associated with EU income relative to world income takes the expected positive sign and is statistically significant. On the other hand, the estimated parameter on the relative real exchange rate is not statistically significant.

In column (2) of Table 2, after controlling for relative price competitiveness and relative real income, the base-case equation is augmented with a linear time trend over the entire estimation sample period to help account for the trend decline in the EU's share of Canadian exports not accounted for by movements in its long-run determinants (see column (2)). Because our model is specified in terms of shares, the general increase in world trade

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32. Admittedly, the foreign price deflator of country j at time t should be measured by the domestic price deflator of country j at time t (price of domestic substitutes). For reasons of data availability, however, we use the GDP price deflator for each country in the calculation of the relative bilateral real exchange rate.
33. All panel estimations and statistical tests were performed using the Stata and Eviews packages.
34. Although it is theoretically inappropriate for a bounded variable such as a share to be truly non-stationary, it may nevertheless be so, in a statistical sense, over a given sample period. This is the case for several of our share variables over our sample period. Indeed, we find evidence of a unit root in the level of all relevant variables, based on the Hadri panel stationarity test.
35. We test for cointegration using the panel Johansen cointegration test and through a panel error-correction model using the Granger representation theorem (1987). In both cases, we reject the null of no cointegration, thus allowing valid inferences.

Table 2
Canadian export share equation (1986–2003)

Panel estimations,[a] Canada and 14 EU countries, sample: 1986Q1–2003Q4, N = 1008				
Dependent variable: X_{ijt}/X_{it}				
Long-run factors	**(1)**	**(2)**	**(3)**	**(4)**
Constant	–0.008	–0.005	0.007	0.007
	(0.97)	(0.53)	(1.47)	(1.53)
Relative bilateral real	0.009	0.009	–0.001	–0.003
exchange rate:[b]	(1.13)	(1.01)	(0.38)	(1.07)
$(P_{wt}/P_{jt})*(ner_{jit}/neer_{it})$				
Relative income of country j	0.159	0.157	0.117	0.116
as a ratio to world income:	(4.65)**	(4.46)**	(6.99)**	(6.84)**
$(Y_{jt}/ner_{jit})/(Y_{wt}/neer_{it})$				
EU trend		–0.00002	–0.00004	
		(1.16)	(2.12)*	
UK dummy			0.011	0.031
			(15.43)***	(17.44)***
UK trend				–0.0002
				(13.87)***
EU trend (ex-UK)				–0.00003
				(1.94)
RBAR^2	0.5701	0.5735	0.7793	0.8109

a. The panel DOLS estimation procedure uses four leads and four lags. The estimated parameters of the first-difference terms are constrained to be the same across countries (i.e., homogeneous dynamics). White heteroscedasticity-consistent errors are used in the calculation of the *t*-statistics (in parentheses). * (**) (***) denote that the parameter is statistically different from zero at a 10 per cent (5 per cent) (1 per cent) level. Critical values are from the standard distribution. See Kao and Chiang (2000) for a discussion of the properties of panel DOLS.
b. + (–) appreciation (depreciation) of the Canadian dollar.

openness is implicitly accounted for. After controlling for fundamental determinants, our trend variable, therefore, captures excess trade resulting from other factors, such as increased European economic integration. Although of the expected negative sign, the estimated parameter associated with the EU trend is not statistically significant.

Reflecting the extraordinarily strong historical trade relationship between Canada and the United Kingdom, we are interested in determining whether the inclusion of a UK dummy variable would significantly change our results. We therefore re-estimate our panel regressions over the same sample period, including a dummy variable that takes a value of one only for Canada-UK country-pair observations and zero otherwise. The results, reported in column (3) of Table 2, show that including a dummy variable for the United Kingdom's share of Canadian exports does indeed significantly increase the explanatory power of the estimated equation (from 0.57 to 0.78). As expected, the estimated parameter associated with the UK dummy

variable takes a positive value, reflecting larger Canadian exports to the United Kingdom, on average over our sample, as a share of total Canadian exports. At the same time, the estimated parameter on relative real income falls modestly, while the estimated parameter on the relative real exchange rate remains statistically insignificant.[36]

As discussed in section 2, the relative importance of Canada's exports to the EU has been driven primarily by a marked fall in non-energy commodity exports to the United Kingdom (Figures A2.4 and A2.6). Given this dramatic fall in exports to the United Kingdom as a share of total Canadian exports, we re-estimate our panel regressions over the same sample period, including a UK-specific linear time trend variable along with a separate trend for exports to all the other EU countries (i.e., excluding the United Kingdom). The results, reported in column (4) of Table 2, show that including a distinct UK linear time trend variable and another for the other EU countries (denoted EU ex-UK) increases the explanatory power of the estimated equation (from 0.78 to 0.81). More importantly, the estimated parameter on the UK trend is ten times that of the EU ex-UK trend variable consistent with the stylized facts reported earlier.

As mentioned previously, the dramatic fall in the United Kingdom's share of Canadian exports began in the early 1950s (based on available data). The estimation results reported in Table 2 cover the period from 1986 to 2003. By removing three country pairs from the sample (i.e., Canadian exports to Greece, Spain, and Portugal), we are able to extend the sample period to cover 1972 to 2003. This longer sample helps to more fully incorporate the large and gradual fall in exports to the United Kingdom as a share of total Canadian exports. The results of this exercise, reported in Table 3, reveal that extending our sample period back to 1972 effectively doubles the estimated parameter on both the UK dummy variable and the UK-specific linear time trend, while the estimated parameters on the other explanatory variables remain broadly unchanged. The only exception is the estimated parameter on the relative real exchange rate, which takes the expected negative sign and is statistically significant when the UK dummy variable and the two trend variables are also included.

In summary, while fundamental trade determinants (i.e., relative price competitiveness and relative real income over the period) explain, in part, the EU's declining share of Canadian exports over the period, the characteristics of Canada-UK trade, in particular, also played an important

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36. When dummy variables for other major country pairs (e.g., Canadian exports to Germany, France, and the Netherlands) are included in the regression, the estimated parameter for the Canada-UK dummy variable dominates in size.

role. A dummy variable for the Canada-UK country pair takes a relatively large positive parameter, indicative of the United Kingdom's relatively strong trade ties with Canada. In addition, a linear time trend for the same country pair takes a negative and highly statistically significant estimated parameter, reflecting the dramatic decline in the United Kingdom's share of Canadian exports. At the same time, a single trend variable included for all other EU countries (excluding the United Kingdom) takes a smaller, but still statistically significant, negative parameter. More importantly, the estimated parameter on the UK trend is roughly ten times that of the EU ex-UK trend variable. This is consistent with the fact that Canada's exports to the EU, excluding the United Kingdom, only trended downwards very modestly over the period.

These empirical results are further substantiated by narrowing our sample down to six countries (Belgium, France, Germany, Italy, the Netherlands, and the United Kingdom) for which data are available from 1960 to 2003. This sample period allows us to fully cover the United Kingdom's membership in the EFTA and the EC up until 2003. The results of this exercise, which are available upon request, effectively double the estimated parameter on both the UK dummy variable and the UK-specific linear time trend, while the estimated parameter associated with the EU ex-UK trend variable remains unchanged when compared to the results reported in column (4) of Table 3. At the same time, the estimated parameters on the other explanatory variables are reduced roughly by half. Hence, these results provide additional evidence that the decline in the EU's share of Canadian exports was driven largely by the United Kingdom's increased economic integration with Western Europe during the 1960s and 1970s.

To capture the effects resulting from changes in the relative tariff rate on the EU's share of Canadian exports, we included data on relative tariff rates charged by the EU and the United States on imports from Canada. Taking the ratio of the EU tariff rate to that of the United States, we use the US rate as a proxy for the average world tariff rate (recall that the United States comprises 80 to 85 per cent of Canada's exports over this period). This tariff ratio was added to the specification in column (4) of Table 3. However, our results show that the estimated parameter on the tariff ratio, although of the expected negative sign, was not statistically significant. Nonetheless, this result does not imply that tariff changes have had no impact on Canada-EU trade patterns. Our tariff data begin only in 1988 and, thus, may not adequately capture the steep decline in the United Kingdom's share of Canadian exports since the early 1970s.[37] At the same time, Clausing (2001)

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37. As an alternative, the ratio of the UK tariff rate to the US tariff rate may better reflect the shift in tariff rates that most affected Canada.

Table 3
Canadian export share equation (1972–2003)

Long-run factors	(1)	(2)	(3)	(4)	(5) Excluding the US
Panel estimations,[a] **Canada and 11 EU countries, sample: 1972Q1–2003Q4, N = 1408**					
Dependent variable: X_{ijt}/X_{it}					
Constant	–0.013	–0.011	0.009	0.014	0.049
	(1.09)	(0.70)	(1.19)	(2.29)*	(2.03)*
Relative bilateral real exchange rate:[b] $(P_{wt}/P_{jt})*(ner_{jit}/neer_{it})$	0.016 (1.29)	0.015 (1.03)	–0.002 (0.30)	–0.008 (2.16)*	–0.049 (2.33)*
Relative income of country j as a ratio to world income: $(Y_{jt}/ner_{jit})/(Y_{wt}/neer_{it})$	0.165 (3.19)**	0.164 (3.08)**	0.119 (3.84)**	0.113 (4.40)**	0.303 (4.37)**
EU trend		–0.00001 (0.42)	–0.00005 (2.49)*		
UK dummy			0.019 (8.35)**	0.050 (22.22)***	0.142 (12.72)***
UK trend				–0.0004 (16.34)***	–0.0006 (9.05)**
EU trend (ex-UK)				–0.00004 (2.41)*	0.00007 (2.84)*
RBAR^2	0.4473	0.4483	0.7027	0.8421	0.8209

a. The panel DOLS estimation procedure uses four leads and four lags. The estimated parameters of the first-difference terms are constrained to be the same across countries (i.e., homogeneous dynamics). White heteroscedasticity-consistent errors are used in the calculation of the *t*-statistics (in parentheses). * (**) (***) denote that the parameter is statistically different from zero at a 10 per cent (5 per cent) (1 per cent) level. Critical values are from the standard distribution. See Kao and Chiang (2000) for a discussion of the properties of panel DOLS.
b. + (–) appreciation (depreciation) of the Canadian dollar.

argues that the use of highly aggregated data to estimate the effects of integration does not allow one to exploit the variation in tariff rates that occur at the commodity level. Thus, in our empirical work, our dummy and linear time trend variables likely capture the effect from changes in tariff and non-tariff barriers.

Returning to our 1972–2003 sample, Figure A2.27 illustrates the relationship between the EU's share of Canadian exports and the two fundamental determinants used in our export share model, namely, the EU's share of world real income and the real bilateral exchange rate as a share of Canada's real effective exchange rate. Alone, these two factors explain about 45 per cent of the variance in the EU's share of Canadian exports (see column (1) of Table 3). The graphic representation in Figure A2.27 reveals the expected co-movement between the two fundamental determinants and the EU's share of Canadian exports. This co-movement appears less certain after

about 1990. Overall, part of the general trend decline in the EU's share of Canadian exports appears to be consistent with a gradual trend decline in the EU's income share, which falls by about half over the period shown in Figure A2.27. In addition, periods of notable strength in the EU's income share (e.g., late 1970s and late 1980s) correspond to intervals of growing relative Canadian exports to the EU. Likewise, when the EU's share of world income falls significantly (e.g., in the early 1980s), Canadian exports to the EU generally decline as a share of Canada's total exports.

At the same time, a clear negative relationship is visible between the relative real exchange rate (where a higher value corresponds to a relative appreciation of the Canadian dollar) and the EU's share of Canadian exports. When the Canadian dollar appreciates strongly versus the EU currencies (relative to the Canadian effective exchange rate), exports to the EU fall as a share of total Canadian exports (e.g., early 1980s). On the other hand, when the Canadian dollar depreciates versus the EU currencies in relative terms, the EU's share of Canadian exports grows (e.g., around 1980, and the mid- to late 1980s).

Despite these facts, it also appears that a portion of the general downward trend in the EU's share of Canadian exports over the 1972 to 2003 period cannot be accounted for by these two fundamental factors. The stylized facts and empirical results presented above suggest that much of this downward trend is attributable to the relative decline in Canada's exports to the United Kingdom. Indeed, when the United Kingdom is excluded, Canadian exports to the rest of the EU, as a share of total Canadian exports, appear to follow the fundamental determinants more closely (Figure A2.27). Accordingly, the UK dummy variable and UK trend included in our empirical specifications explain roughly half of the adjusted R^2 (0.8421) estimated by our export share model over the 1972 to 2003 period. When Britain co-founded the EFTA in 1960 and then acceded to the EC in 1973, it removed trade barriers between itself and the rest of Western Europe. This shift in trade policy occurred within a context of generally weakening historical ties between Canada and Britain. Indeed, like Canada, Australia and New Zealand lost their preferential trade treatment with the United Kingdom over the 1960s and early 1970s. As such, the story is one of increasing economic integration between the UK and the EC, at the expense of Britain's former colonies.

It is important, however, to keep in mind that Canada was making strides to strengthen its trade ties with the United States over the same period by signing the bilateral Auto Pact in 1965. More recently, North American economic integration increased significantly with the advent of the Canada-US Free Trade Agreement in 1989 and the subsequent signing of the North

American Free Trade Agreement (NAFTA) in 1994. Indeed, as reported in the section on stylized facts, the US share of Canadian exports has substantially increased over the past fifty years. This increase in the US share may have contributed to the decline in the EU's share of Canadian exports over the same period.

To empirically analyze this issue, we re-estimate our panel regression of column (4) in Table 3 over the 1972 to 2003 sample period, but we exclude Canadian exports to the United States in our calculation of total Canadian exports. The results, reported in column (5), show that excluding Canadian exports to the US increases the estimated parameters on all the variables, including a significant increase in the UK dummy (three times larger). More importantly, the estimated parameter on the EU ex-UK trend variable now takes on a significant small positive value consistent with our main conclusion that, excluding the United Kingdom, the EU's share of Canadian exports has remained relatively unchanged over the past fifty years.

Conclusion

This paper has examined the effects of increasing European economic integration on the EU's trade with Canada over the past fifty years.

In broad terms, the stylized facts suggest that, while Canada's trade with the EU continues to rise in terms of levels (export and import volumes), the EU's share of total Canadian trade has been declining since the 1950s. More specifically, while the EU's share of Canadian imports has remained roughly level over this period, the EU's share of Canadian exports has fallen significantly. This decline can be attributed almost completely to a dramatic fall in the relative importance of Canadian non-energy commodity exports to the United Kingdom. This shift in UK imports was likely driven primarily by Britain's co-founding of the EFTA in 1960 as well as that country's accession to the EC in 1973, which left Canada (and other Commonwealth countries, such as Australia and New Zealand) without its pre-existing preferential trade treatment. At the same time, increased North American economic integration has further boosted the United States' dominance as Canada's primary export market.

In terms of investment, the EU has been relatively stable over past decades, both as a share of total Canadian investment abroad and as a share of total foreign investment in Canada, although the latter has declined modestly. At the regional level, the investment story is similar to that discussed above for trade flows, namely, the United Kingdom's share of total Canadian direct investment in the EU has fallen dramatically, as has its share of total EU investment in Canada. Since the signing of the Treaty of Rome in 1957,

these shares have fallen by at least half, with Canada investing relatively more in Ireland and the Netherlands, while, on the flip side, France and the Netherlands are investing relatively more in Canada.

To empirically analyze these stylized facts, the study uses a quarterly panel data set of trade between Canada and fifteen EU countries. Estimates based on an export share model (over the 1986–2003, 1972–2003, and 1960–2003 periods) provide evidence consistent with the idea that increased European economic integration may have helped reduce Canada's relative exports to the EU, and most notably, to the United Kingdom. More specifically, while fundamental trade determinants (i.e., relative price competitiveness and relative real income over the period) explain about half of the EU's declining share of Canadian exports over the period, the United Kingdom, in particular, also played a separate, but important, role (roughly explaining the other half). A dummy variable for the Canada-UK country pair takes a relatively large positive parameter, indicative of the United Kingdom's comparatively strong trade ties with Canada. In addition, a linear trend for the United Kingdom takes a negative and highly statistically significant estimated parameter, reflecting the United Kingdom's gradually declining relative importance in terms of Canada's exports. At the same time, a single trend variable included for all other EU countries (excluding the United Kingdom) takes a very small statistically significant negative parameter. This result is consistent with the fact that Canada's exports to the EU, excluding the United Kingdom, only gradually trended downward over the period.

Clearly, the evolution of Canada-UK trade has been an important influence in this downward trend. Within the context of generally weakening historical ties between the two countries, evidence suggests that the United Kingdom's declining importance to Canadian exports was caused primarily by its increased economic integration with Western Europe, as mentioned previously. As a result of this process of integration, Canada lost its preferential trade treatment by the United Kingdom. However, at the same time, the EU's share of Canadian exports may also have been affected by increased Canada-US economic integration (e.g., the 1965 Canada-US Auto Pact, the 1989 Canada-US Free Trade Agreement, and the 1994 North American Free Trade Agreement). To the extent that these factors increased Canadian exports to the United States, they would also reduce the EU's relative export importance. Our results suggest that, when increased Canada-US trade is accounted for, however, Canada's export share to the EU, excluding the United Kingdom, has been stable over the past fifty years, while that of the United Kingdom has trended downward.

In summary, our analysis suggests that while increased European economic integration does not appear to have resulted in a decline in the general EU-wide trade with Canada since the 1950s, it has nevertheless played a very significant role with regard to Canada's exports to the United Kingdom. Indeed, given that a similar decline occurred in the former British colonies of Australia and New Zealand, evidence suggests that the majority of the decline in Canada's relative exports to the EU was caused by the United Kingdom's growing economic integration with the rest of Europe. In the end, it appears that there was some validity to the concern expressed by L.D. Wilgress in 1962 (as quoted at the beginning of this paper), at least in terms of export shares. Indeed, the loss of Canada's former preferential trade treatment under the British Commonwealth proved to be an important factor in this respect.

Looking towards future research, the empirical analysis of this paper could be extended to use a larger sample of country pairs, subsuming the indirect effect on Canada-EU trade caused by bilateral trade with and between other countries (e.g., intra-EU trade; extra-EU trade with countries such as the United States, Japan, Switzerland, and China). As a result, such an expanded model would better capture the effect of increased European economic integration, while controlling for other factors such as increased North American economic integration and the recent favourable supply-side developments in China. As shown in the section on stylized facts, EU trade with Asia has been on the rise, especially with China. Indeed, the increase in relative price competitiveness resulting from favourable supply-side developments in China contribute, other things being equal, to increased trade with that country, while possibly reducing trade with other trading partners. These facts draw attention to the importance of accounting for any significant change in extra-European trade patterns resulting from factors unrelated to European integration.

Dependent on available data, future research could also account for EU trade with the ten new EU member states. Indeed, although significant trade agreements were reached in the early 1990s between the EU15 and the ten future members, their accession to the EU in May of 2004 marked another large step towards European economic integration.

Appendix 1
Data Description

This appendix describes the data mnemonics used in this paper. Data are taken from Statistics Canada, OECD (2004), BIS, and IMF databases.[1] All time-series mnemonics consist of an "economic variable" component, as shown in the table below. Each mnemonic also contains a second component that denotes the country.

Mnemonic	Description
Economic variable component	
M<country>	Value of merchandise imports
ner<j><i>	Nominal bilateral exchange rate between country *j* and *i* (+: appreciation of currency *i* versus currency *j*), expressed as an index (2000 = 100)
neer<i>	Nominal effective exchange rate of country *i* (+: appreciation of currency *i* versus its main trading partners), expressed as an index (2000 = 100)
P<country>	GDP price deflator (2000 = 100)
PC<country>	Consumer price index (2000 = 100)
PM<country>	Goods import price deflator (2000 = 100)
PX<country>	Goods export price deflator (2000 = 100)
Pw	World price deflator (2000 = 100)
X<country>	Value of merchandise exports
Y<country>	Real GDP
Yw	World real GDP
<Country> component	
EMU countries	Austria (*aut*), Belgium (*belg*), Finland (*fin*), France (*fr*), Germany (*gy*), Greece (*gr*), Ireland (*ire*), Italy (*it*), Luxembourg (*lux*), the Netherlands (*neth*), Portugal (*pt*), Spain (*sp*)
EU countries	EMU countries plus Denmark (*dnk*), Sweden (*swed*), United Kingdom (*uk*)
Other countries	Canada (*ca*), China (*china*), Japan (*jpn*), Switzerland (*swit*), United States (*us*)

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1. Any Canadian statistics taken from OECD (2004) were originally collected by Statistics Canada and supplied to the OECD.

Appendix 2
Figures

Figure A2.1
Canadian imports by country (share of total Canadian imports)
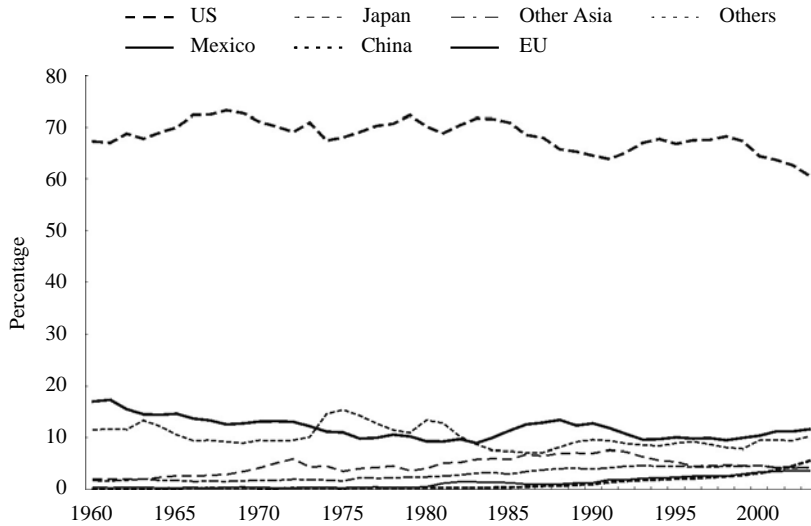
Figure A2.2
Canadian imports from individual EU countries
(share of total Canadian imports from the EU)
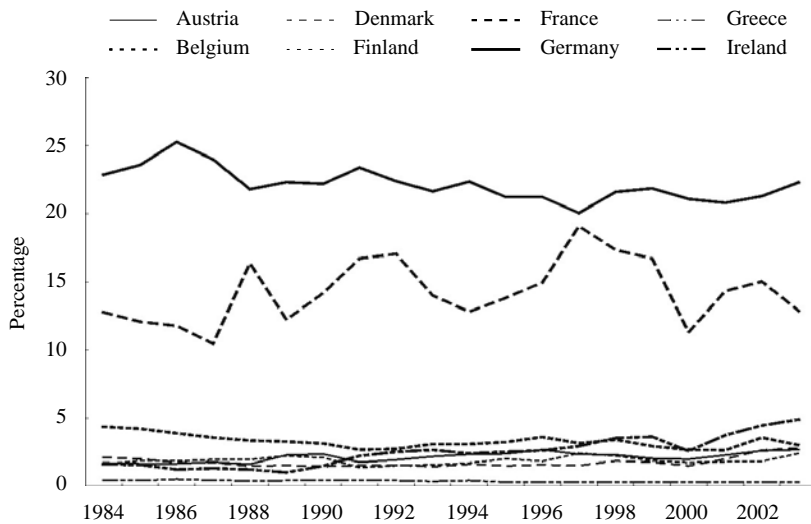
Figure A2.3
Canadian imports from individual EU countries
(share of total Canadian imports from the EU)
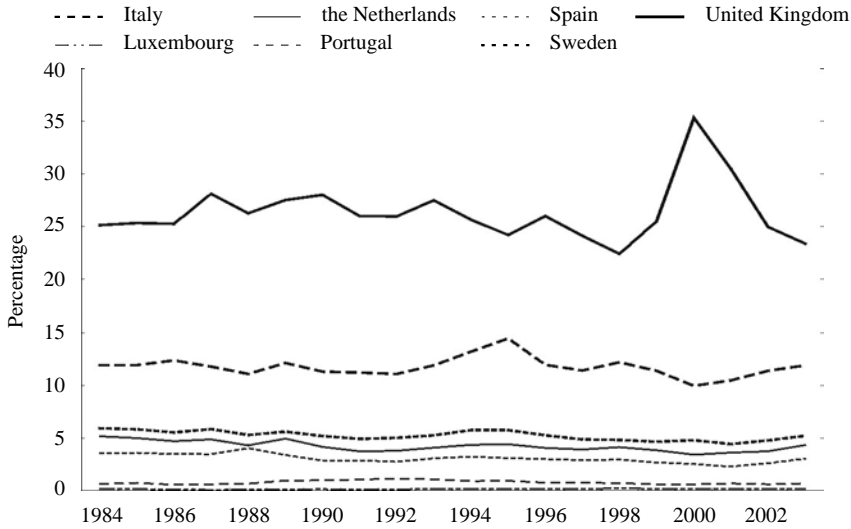
Figure A2.4
Canadian exports by country
(share of total Canadian exports)
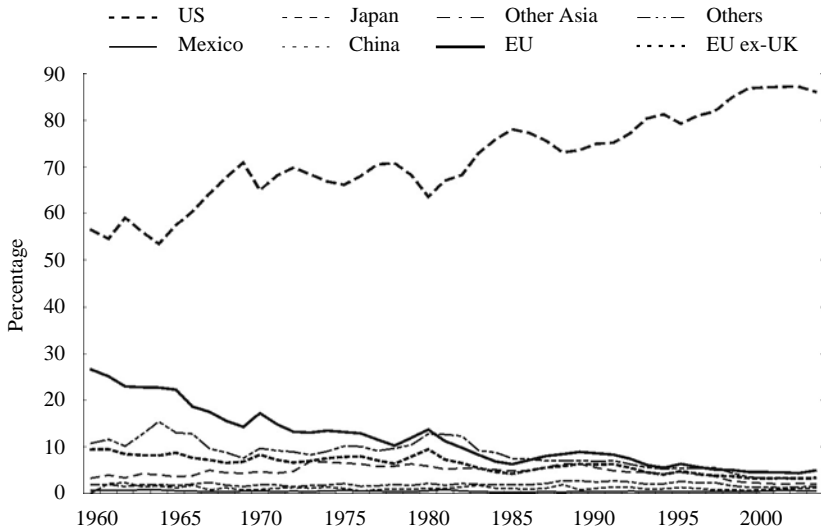
Figure A2.5
Canadian exports to individual EU countries
(share of total Canadian exports to the EU)

——— Austria	- - - - Denmark	· · · · · France	— · · — Greece
- - - - Belgium/Luxembourg	· · · · · Finland	——— Germany	— · — Ireland
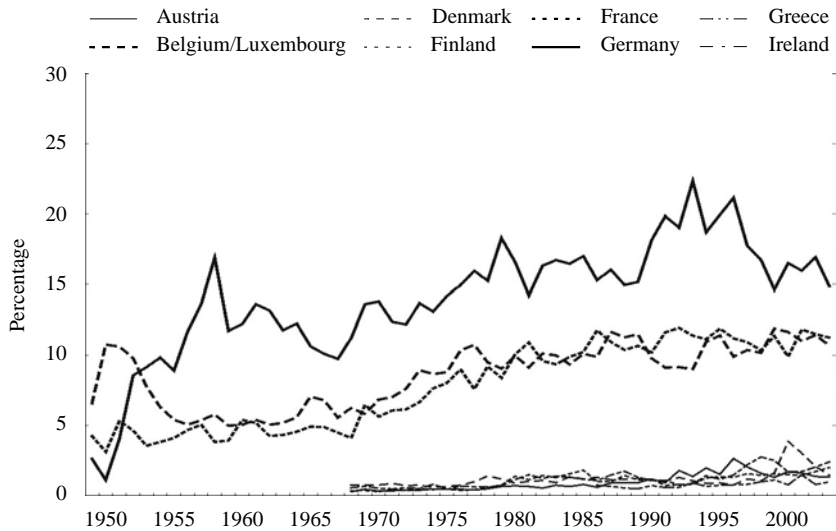
Figure A2.6
Canadian exports to individual EU countries
(share of total Canadian exports to the EU)

· · · · · Italy	——— Portugal	· · · · · Sweden
- - - - the Netherlands	- - - - Spain	——— United Kingdom
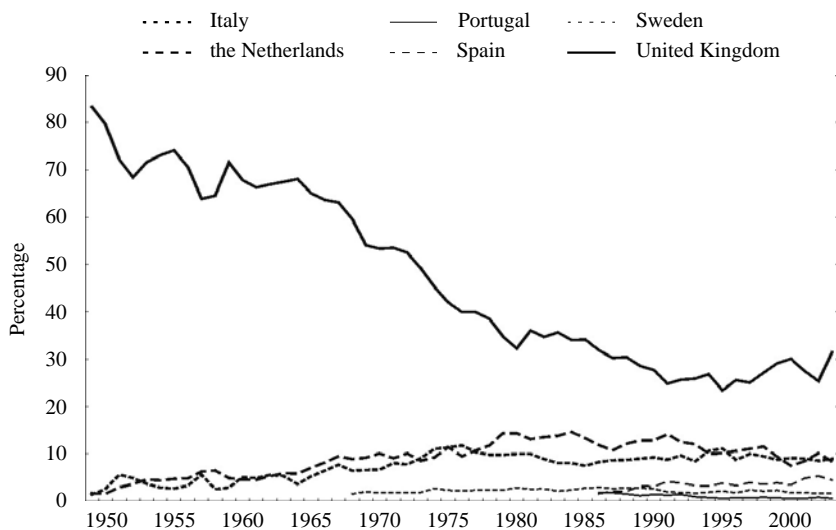
Figure A2.7
Canadian exports to the EU (volume)
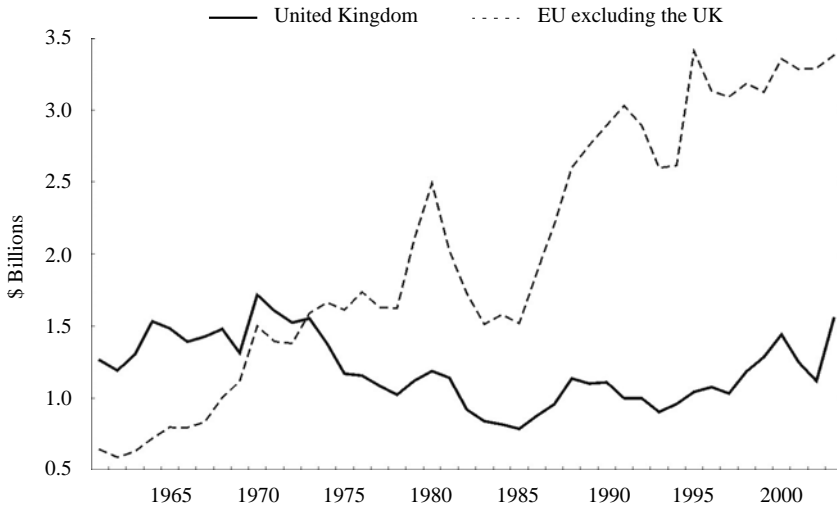
Figure A2.8
EU exports by country
(share of total EU exports)
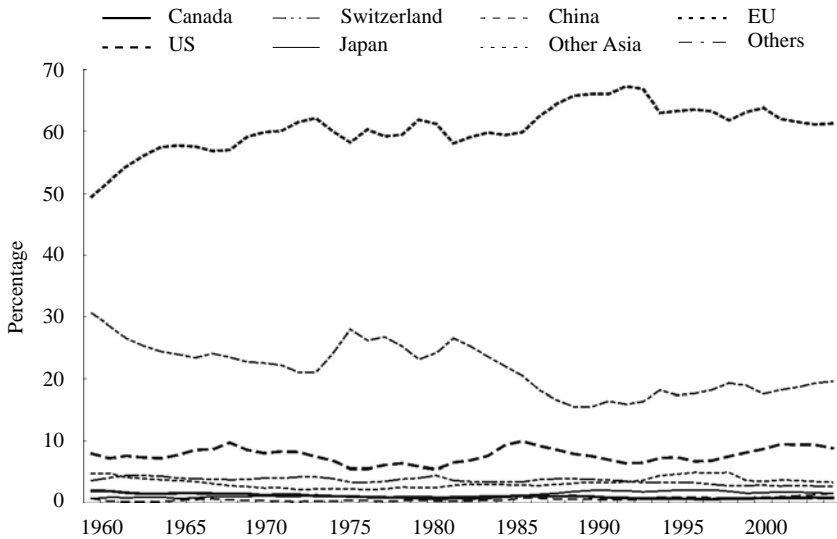
Figure A2.9
EU exports by country
(share of total EU exports)
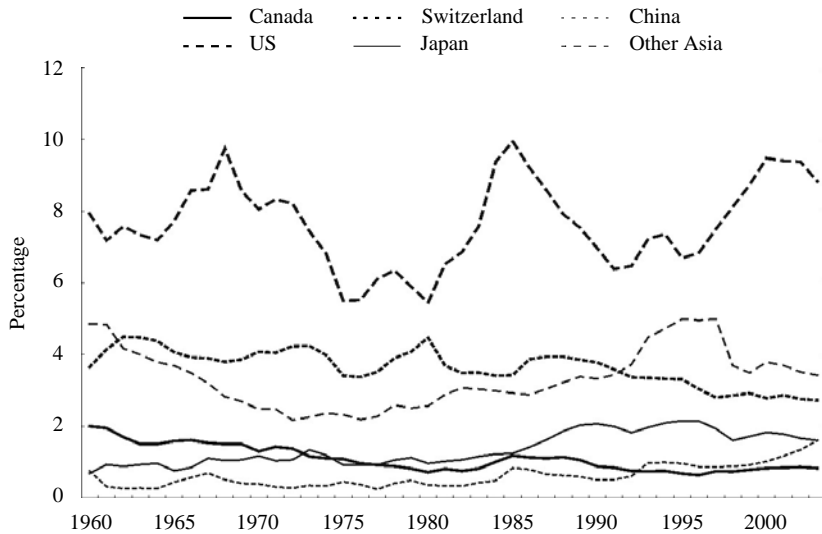
Figure A2.10
EU imports by country
(share of total EU imports)
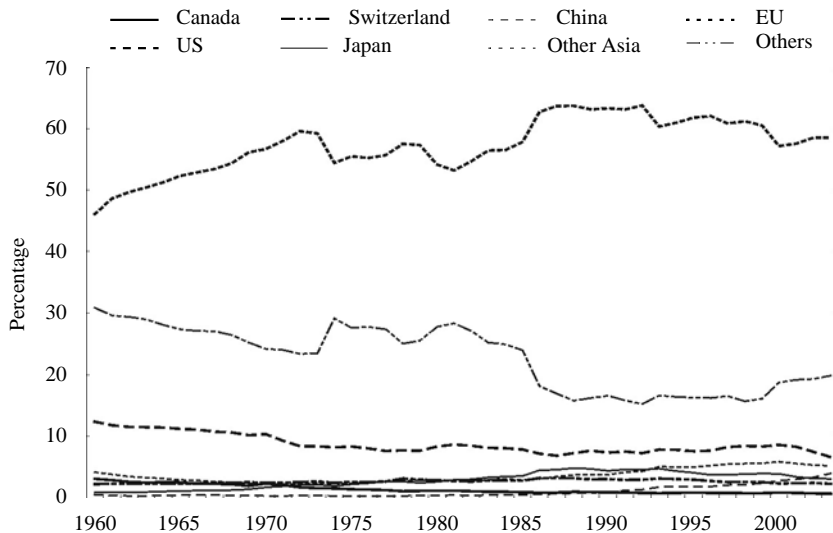
Figure A2.11
EU imports by country
(share of total EU imports)
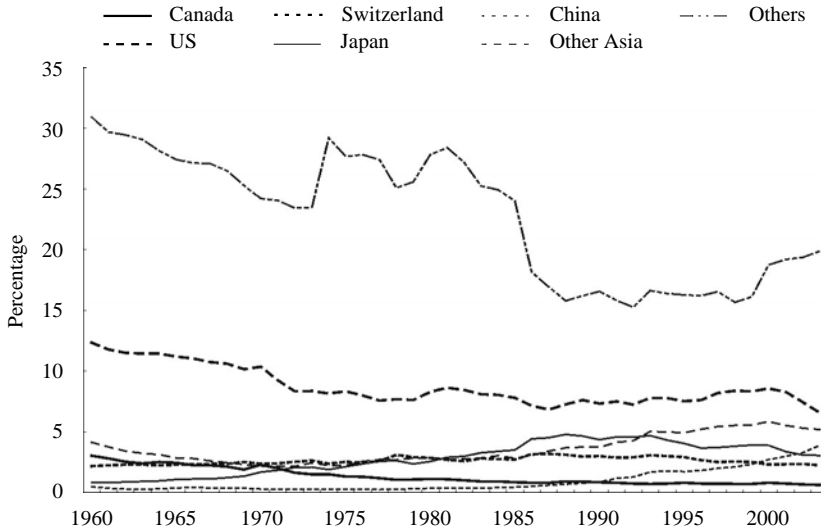
Figure A2.12
UK imports by country
(share of total UK imports)
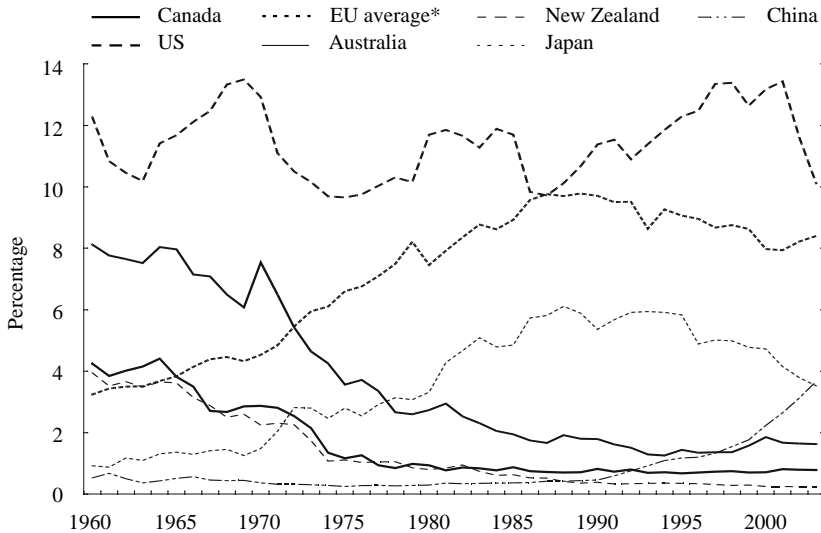
* Four largest EU trading partners.

Figure A2.13
Canadian imports from the EU by sector
(share of total imports from the EU)
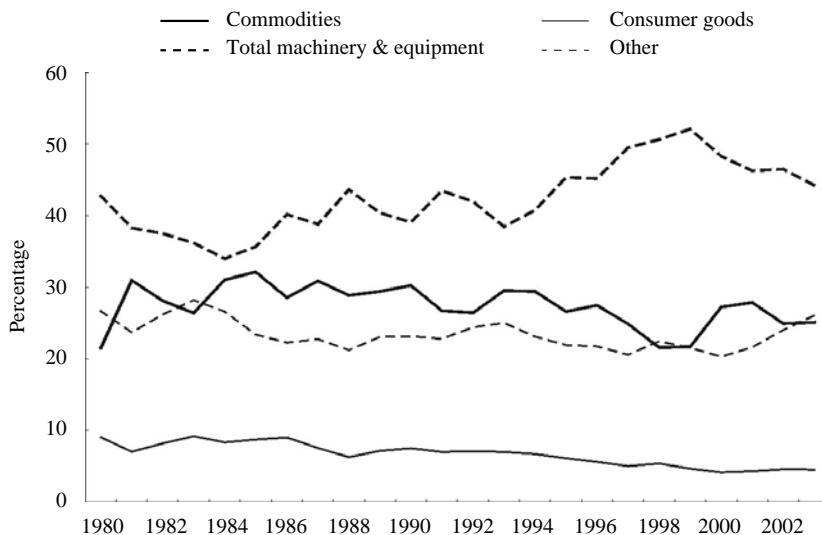
Figure A2.14
Canadian commodity imports from the EU by subsector
(share of total imports from the EU)
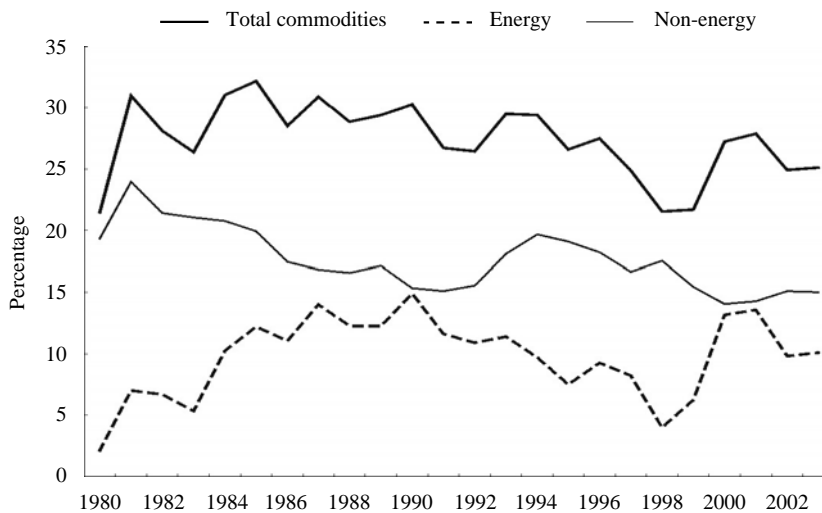
Figure A2.15
Canadian M & E imports from the EU by subsector
(share of total imports from the EU)
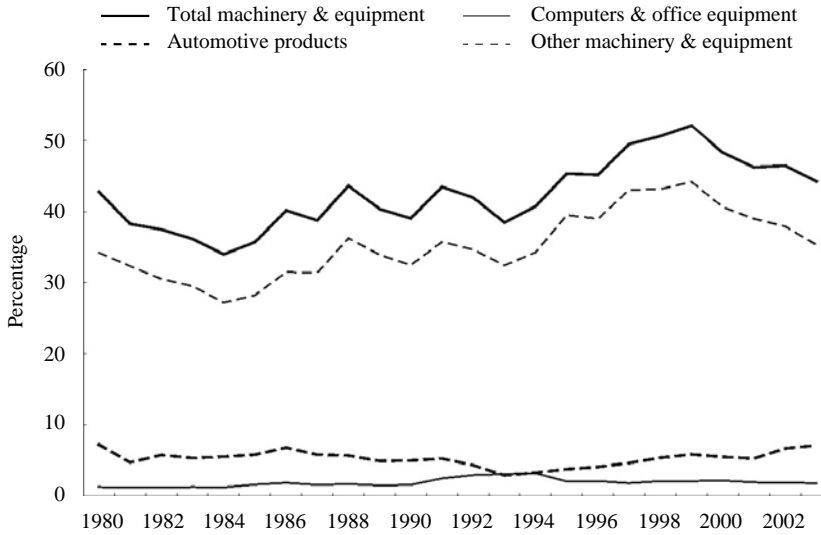
Figure A2.16
Canadian imports from the EU by sector
(share of total imports from all countries)
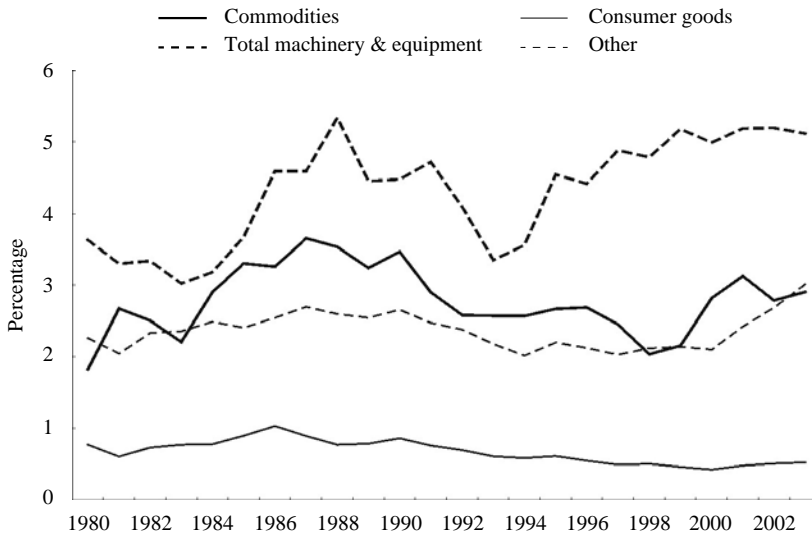
Figure A2.17
Canadian exports to the EU by sector
(share of total exports to the EU)
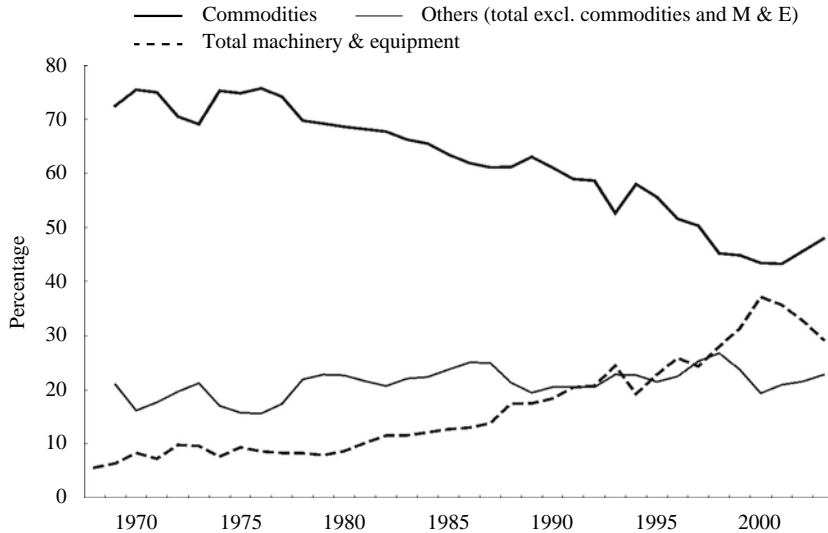
Figure A2.18
Canadian commodity exports to the EU by subsector
(share of total exports to the EU)
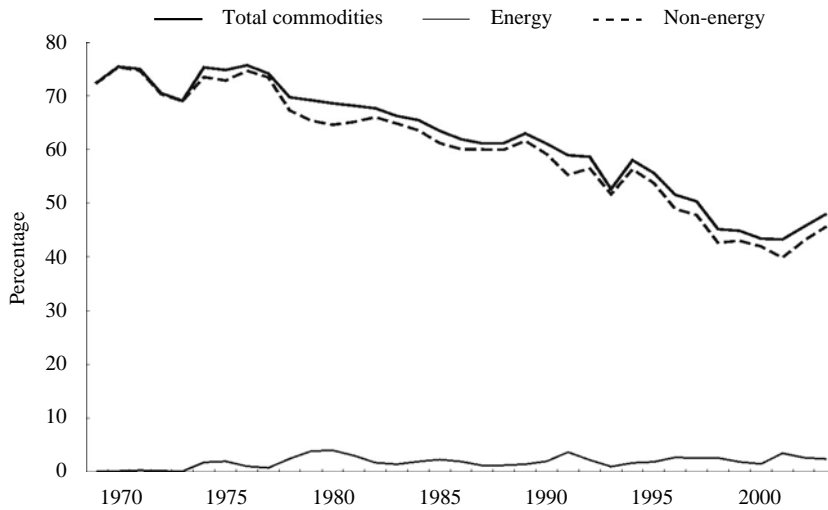
Figure A2.19
Canadian M & E exports to the EU by subsector
(share of total exports to the EU)
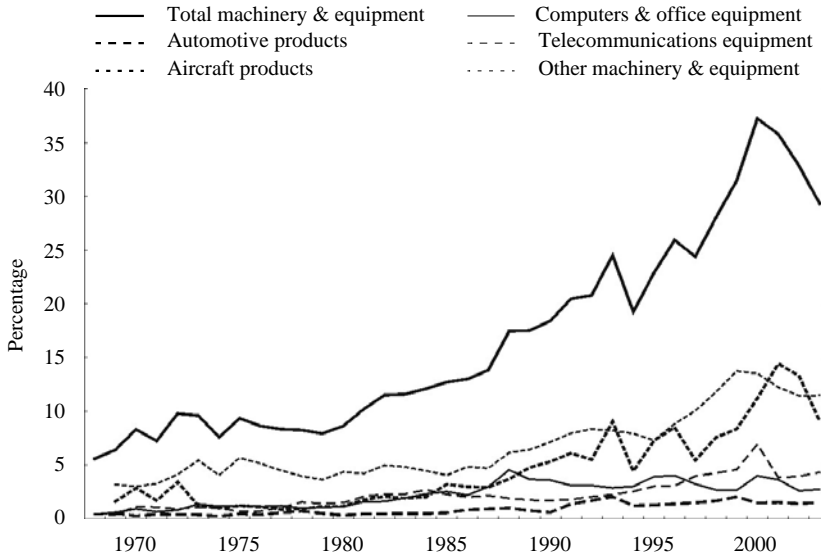
Figure A2.20
Canadian exports to the EU by sector
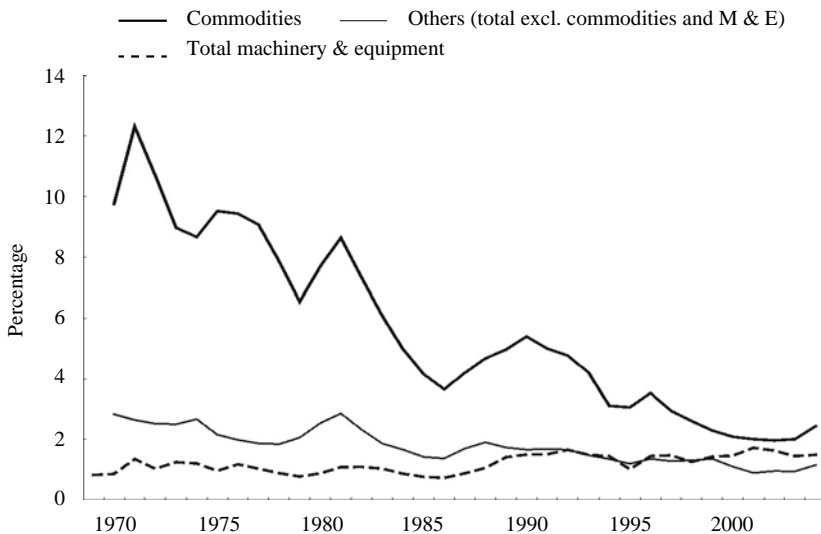**(share of total exports to all countries)**

Figure A2.21
Canadian commodity exports to United Kingdom by subsector
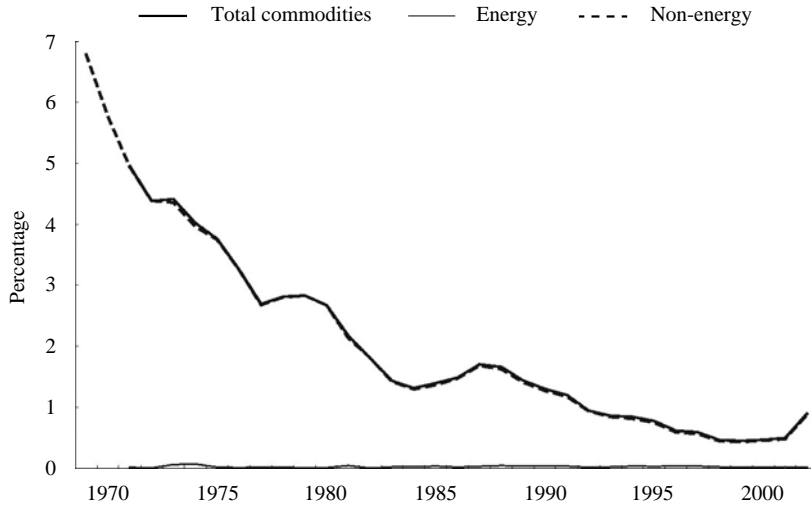**(share of total exports to all countries)**

Figure A2.22
Canadian exports to all countries by sector
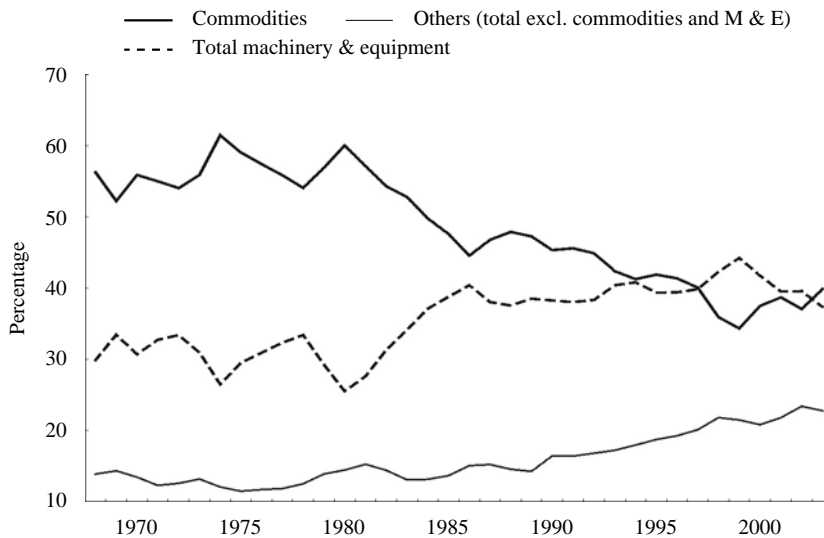**(share of total exports to all countries)**

Figure A2.23
Canadian direct investment abroad by country
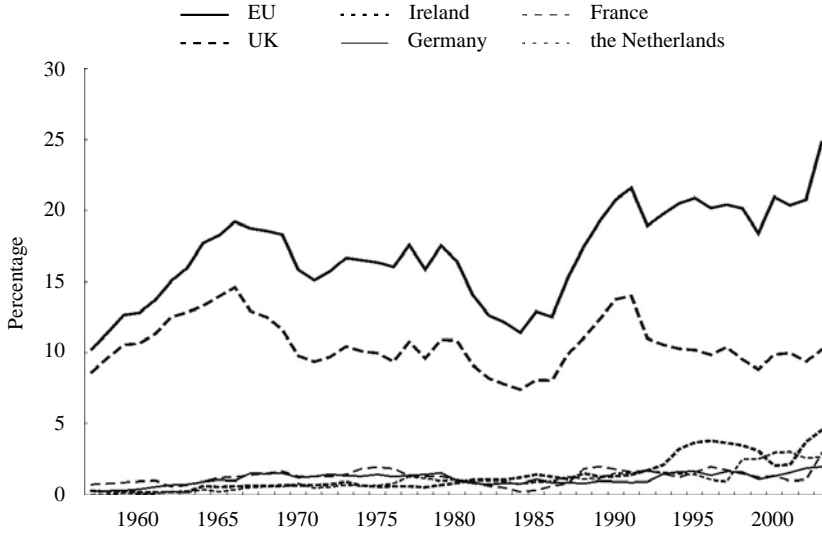**(share of total Canadian investment abroad)**

Figure A2.24
Foreign direct investment in Canada by country
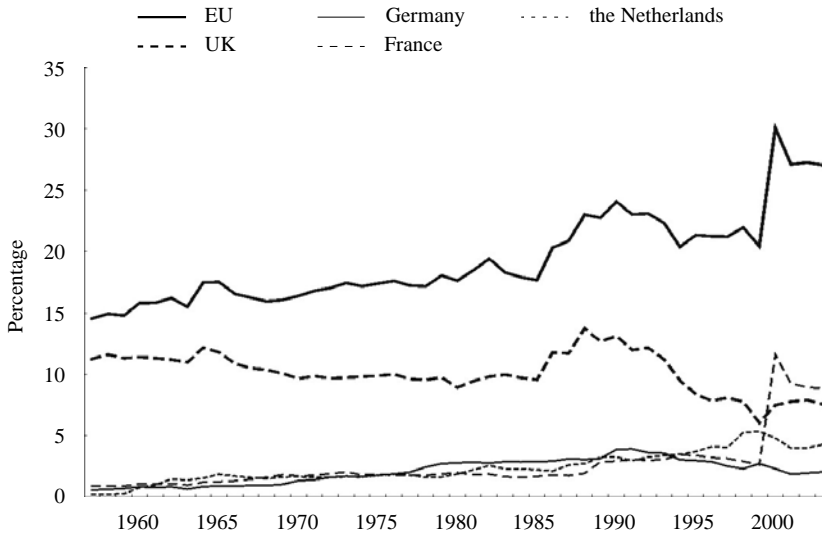**(share of total foreign direct investment in Canada)**

Figure A2.25
Foreign direct investment in Canada by country
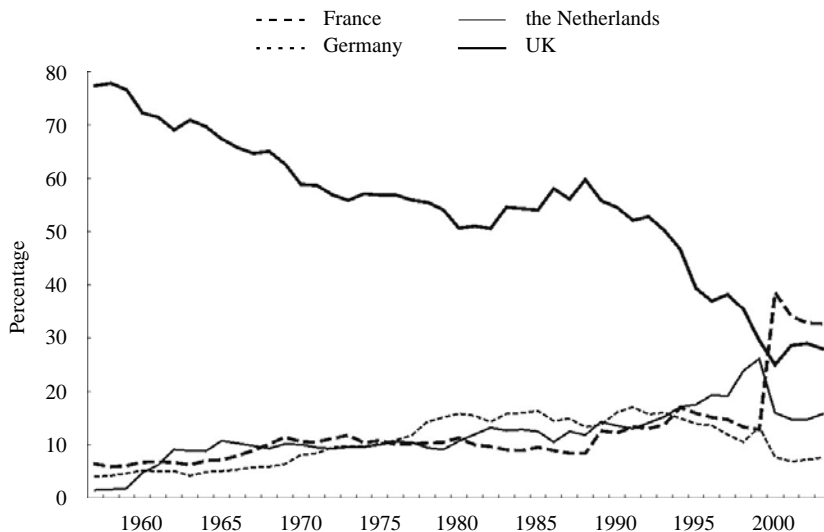**(share of EU foreign direct investment in Canada)**

Figure A2.26
Canadian direct investment abroad by country
(share of total Canadian investment in the EU)
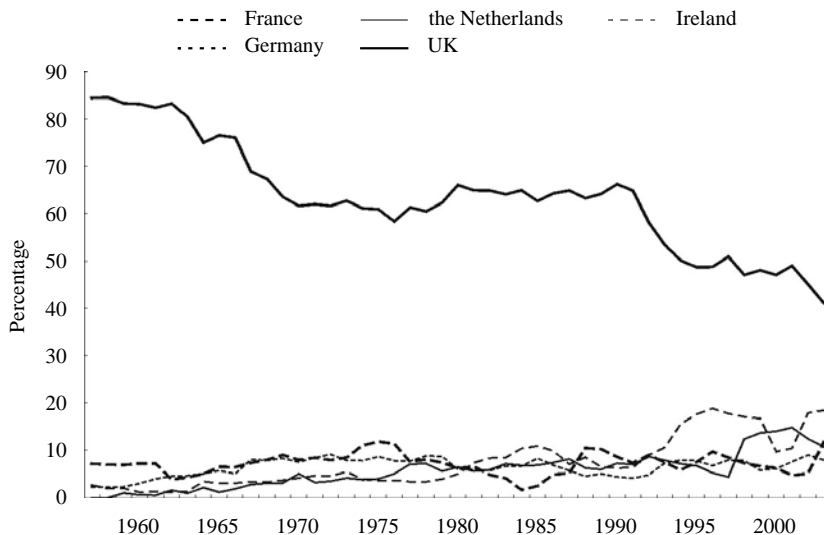
Figure A2.27
Fundamental determinants of Canadian exports to the EU*

← ——— Canadian exports to the EU (share of total exports)
← ——— Canadian exports to the EU excl. UK (share of total exports)
← - - - - EU Real GDP (share of world real GDP)
     · · · · · Relative Canada-EU bilateral real exchange rates**   →
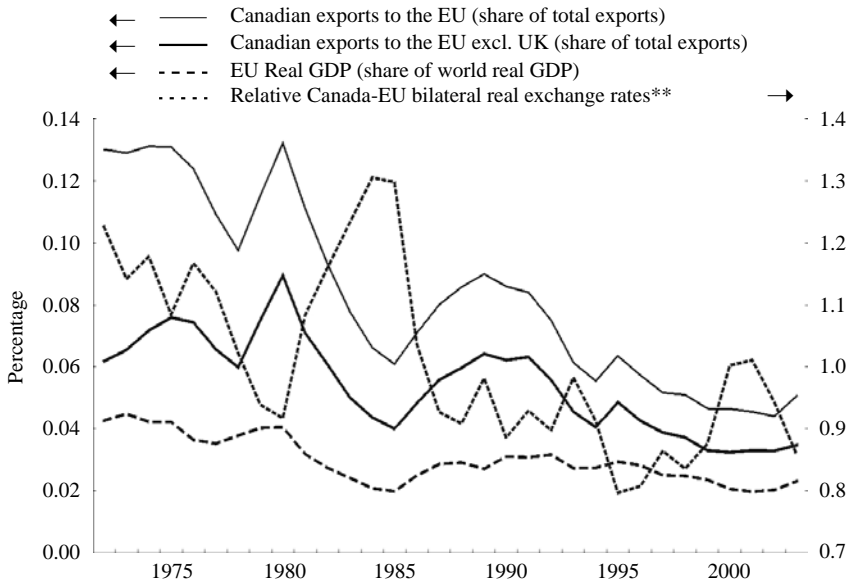
*   Simple average of individual EU15 countries.
** +(–) appreciation (depreciation) of the Canadian dollar.

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Discussion

Marcel Fratzscher

The process of European integration is in many ways a unique experiment. One issue that has been widely studied is whether this process, in addition to the benefits it provides, has negative repercussions for other economies by inducing trade creation within Europe at the expense of trade diversion with other economies. Cameron, Côté, and Graham tackle this issue for the case of Canada by asking whether Canada's exports to the European Union (EU) have declined as a result of EU integration. They do so by presenting a broad array of stylized facts relating to Canada's trade patterns and market shares, and by estimating a simple export share model of Canada vis-à-vis 14 of the old EU countries.

The authors focus on the key stylized fact of Canada's decline of export share in the EU since 1960. They put forward two hypotheses to explain this decrease. First, EU integration may have raised intra-EU trade at the expense of trade diversion with non-EU members. Second, the removal of preferential treatment by the United Kingdom of Canadian exports in the 1960s and 1970s may have contributed to the steady decline of market share of Canadian exports. I would stress that the two hypotheses are separate and distinct. In fact, I will argue that the evidence presented in the paper supports the second hypothesis, and that there is compelling evidence against the first. Moreover, other explanations, foremost among them the integration of Canada with the United States, may play a critical role in the evolution of Canada's exports over the past five decades.

In their investigation of the two hypotheses, the authors present an interesting and compelling picture of Canada-EU trade since the 1960s. The main factor that accounts for the drop of Canada's export share in the EU is the decline of its exports of non-energy commodities to the United Kingdom (Figures A2.6 and A2.17). By contrast, the export share to other EU

countries has remained relatively stable since the 1960s. This already suggests that if there had been trade diversion from EU integration, one would have expected that Canada's export shares in other, non-UK EU countries should have dropped as well. However, we do not observe this. Even stronger evidence against the trade-diversion hypothesis is that intra-EU trade has remained stable at around 60 per cent since the mid-1960s (Figure A2.8). Again, if trade diversion from EU integration had been such a force, one would expect intra-EU trade to rise relative to extra-EU trade. Both pieces of evidence thus rule against the trade-diversion hypothesis, at least for the EU excluding the United Kingdom.

This leads to the questions of why the United Kingdom was, and to some extent still is, such an important partner for Canada, and how to explain the sharp drop in Canada's export shares in the United Kingdom. The authors discuss the special relationship between Canada and the United Kingdom in the 1960s and 1970s and how this has resulted in very close trade and investment ties between the two economies. A remarkable feature is that in the 1960s, Canada had an export market share in the United Kingdom of around 8 per cent, compared to only 12 per cent for the United States and to only 4 per cent each for Germany and France (Figure A2.12). It is in many ways impressive that a smaller and quite distant economy such as that of Canada had about twice the market share of UK neighbouring countries such as France and Germany. From this 8 per cent share in the 1960s, Canada's export market share in the United Kingdom has fallen to around 2 per cent in recent years. But does this decline reflect the effects of EU integration or other factors?

One way of understanding this decline is to investigate the counterfactual: in a world free of trade barriers, preferential treatments, and trade agreements, what would Canada's trade with the EU, and in particular with the United Kingdom, be? Clearly, the counterfactual question is inherently difficult to answer. But it seems obvious that Canada's export market share in the United Kingdom of around 8 per cent in the 1960s, compared to only 4 per cent each for Germany and France, was most likely not a natural outcome that reflected "normal" levels of trade between the two countries, but the result of the above-mentioned preferential treatment of Canada's exports by the United Kingdom.

The literature frequently employs gravity models of trade to find not only the determinants of trade, but to derive such "normal" or equilibrium trade shares that are explained by factors such as distance, common borders, transportation, and communication costs, and not by trade barriers or trade agreements. The authors note that relatively little work has been done on Canada-EU trade, but it seems obvious that an 8 per cent export market

share for Canada, compared to 4 per cent for countries such as France or Germany, was not such an equilibrium level, but rather an artificially high level. By contrast, the 2 per cent export market share Canada now has in the United Kingdom seems much closer to what one would expect to find in a gravity model of trade. Therefore, this finding that Canada's current trade share with the EU is largely in line with what one would expect based on factors independent of EU integration, provides an additional argument against the trade-diversion hypothesis of EU integration.

The second main element of the paper is an empirical model based on Canada's export market shares. In the benchmark model, the size of export market shares has two principal determinants: price competitiveness— proxied by relative real exchange rates—and relative demand—proxied by relative income. The authors estimate this model for a panel of 14 country pairs, i.e., of Canada vis-à-vis 14 of the old EU member states. They find that relative demand is a significant factor in explaining the time and cross-sectional variations in export market shares. The authors then extend the model to include country dummies and time trends. The country dummy for the United Kingdom is positive and significant, indicating that Canada traditionally has higher exports to the United Kingdom than to other EU countries. Moreover, the time trend for the United Kingdom is negative, indicating a decline in Canada's export market share to the United Kingdom over time, even after controlling for price competitiveness and relative demand. By contrast, the time trend for the EU excluding the United Kingdom is not significant in the benchmark model of Table 2.

These findings are interesting, although not easily interpreted. In particular, what do the model's time trends capture? Do they really reflect EU integration? First, the EU integration process has been far from linear and steady since the 1950s. In fact, some work in the literature has shown that European integration has gone through phases of very rapid progress, such as the 1960s and late 1980s-early 1990s, while in other decades there was little change in terms of economic integration (see, e.g., Dorrucci et al. 2004). Other strands in the literature stress that exchange rate uncertainty, and, in particular, the creation of currency unions, such as achieved with the European monetary union in 1999, have a marked impact on trade (Rose and van Wincoop 2001). This suggests that the model's linear time trend may indeed not capture EU integration well.

Second, the stylized facts that the paper presents implicitly propose a potentially important, complementary explanation for the decline of Canada's export shares in the EU. This explanation is that the rapid integration of Canada with the United States may have induced trade diversion away from trade with the EU. In fact, there are several pieces of

strong evidence for this hypothesis. In particular, Canada's exports to the United States, as a share of its total exports, rose from around 55 per cent in the 1960s to 85 per cent in recent years. Canada's export shares to the EU correspondingly declined significantly, but so did Canada's exports—again not in absolute terms but as a share of Canada's total exports—vis-à-vis most of its trading partners apart from the United States. This 85 per cent export share to the United States compares to intra-EU trade of currently only around 60 per cent, and has been stable since the mid-1960s.

Together, these two pieces of evidence suggest that it was not EU integration but Canada-US integration that caused trade diversion, thus possibly explaining an important part of the drop of Canada's export shares in the EU. It would therefore be important to test this hypothesis in the paper's proposed export share model, and also to control for a potential excluded-variable problem of a model that looks only at Canada's trade with the EU. Another interesting test would be to exclude commodities from the empirical model to determine whether the current results are driven by this one sector or whether they hold for all export sectors.

In summary, the authors tackle an interesting issue from both a Canadian and a European perspective. My reading of the evidence in the paper is that EU integration most likely has led to remarkably little, if any, trade diversion away from extra-EU trade. In fact, Canada's current export market shares in the EU seem very much in line with what gravity models of trade would tell us they should be, despite existing preferential trade within the EU. The main factor explaining the decline of Canada's export market shares in the EU is its rapid drop of trade with the United Kingdom, from (possibly unsustainably) high levels in the 1960s. An interesting hypothesis for future research is to extend this work to understand to what extent Canada's integration with the US economy has induced diversion of the trade with the rest of the world and whether it can explain Canada's evolving trade patterns.

References

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General Discussion*

Michael Francis agreed with Steven Kamin's comments, pointing out that it was quite a challenge to isolate the impact of developments in India and China on Canada. Christopher Graham agreed with Marcel Fratzscher's comments and recognized the need to consider the effect on North American economic integration in his analysis.

In the general discussion that followed, Paul Masson suggested that the Cameron, Côté, and Graham paper would benefit from estimating the effects of tariff reductions and taking into account the fact that these trends occurred when tariffs were being reduced globally under successive GATT/WTO (General Agreement on Tariffs and Trade/World Trade Organization) rounds. Graham responded that tariff data availability was a problem. Masson added that the Desroches, Francis, and Painchaud paper probably exaggerated the effect of institutions. He also noted a number of problems related to data quality in the growth-regression literature. Francis agreed with Masson, but pointed out the difficulty of measuring such things as the shift of China from a command and control economy to a market economy. Richard Harris was surprised by the estimated impact of China's opening to trade on Canada's growth. Francis replied that more work is needed to check the regression results and to explore non-linear relationships. He said that the results are not meant to imply that openness should not be encouraged, only that it is more beneficial when institutional quality is higher. (In effect, there is no welfare analysis in the paper.)

Andrew Rose, based on his own work with these data, pointed out that the PSI rankings in the Desroches, Francis, and Painchaud paper were often counter-intuitive and not particularly informative. Francis concurred, noting that, for instance, energy-exporting industrial countries (such as Norway) can get a low PSI ranking because of low and medium income oil exporters. Rose added that in the Cameron, Côté, and Graham paper, the data suggested that the United Kingdom was the dominant factor, not tariffs, and that this could reflect the slow growth that the United Kingdom experienced compared to the other EU countries. He also pointed out that trade diversion as envisaged by Jacob Viner implies estimating the net gains or losses for the country as a whole, not trade flows or shares. Denise Côté argued that in future work, the degree of openness would need to be controlled for before estimating the degree of trade diversion.