1. Introduction

Montague J. Lord

1. OVERVIEW

Latin America's current trade patterns are increasingly reflecting fundamental shifts in the composition of exports as a result of the rapidly growing participation of manufactured goods, as well as other non-traditional and agro-industrial products. For the region as a whole, manufactures currently contribute over half of total export earnings, compared with only about 10 per cent two decades ago. Although Brazil and Mexico dominate the region's exports of these types of product, many other Latin American countries are experiencing a rapid growth in the participation of manufactures in their exports. This movement towards a broader manufacturing export base is generating larger investments in the region, and is directing Latin America's exports into high-growth product markets in the industrialized countries and within the region itself.

As Latin America's role as a provider of traditional labour- and natural-resource-intensive manufactures changes, dynamic movements in comparative advantages, economies of scale and the globalization of industries are altering the productivity of skilled and semi-skilled labour and capital and the technological capabilities of countries. They are also producing systematic changes in the international competitiveness of exports. In Brazil and Mexico, exports of telecommunications equipment, electrical machinery and automobiles and their components are expanding much faster than traditional manufacturing exports such as clothing, textiles and footwear. In Colombia, plastic materials are now the fifth largest manufacturing export, and in Venezuela they are the sixth most important manufacturing export. Diverse supply sources of chemicals and basic manufactures are beginning to emerge throughout the region.

There are three important driving forces behind these changes that are reinforcing one another. The first refers to the growing technologies and human capital development effecting dynamic changes in the comparative advantages of countries. These changing factor intensities are influencing the structure of inter-industry trade both within and outside the region. Yet the

overall magnitude of this type of trade continues to be critically dependent on the level of tariffs and, more importantly, non-tariff barriers (NTBs) to trade in the foreign markets. The 1994 World Trade Organization (WTO) agreements in the areas of market access, textiles and clothing, technical barriers to trade, trade-related investment measures, and intellectual property rights are introducing major changes in the world trading system that are profoundly influencing the structure and growth of Latin America's manufacturing trade. Obstacles nevertheless remain, especially in the form of regulatory measures within the region.

The expansion of Latin America's inter-industry trade in manufactures is paralleling large shifts in global trade patterns. While the industrialized countries are increasingly concentrating their activities on service- and technology-intensive exports, Asia's newly industrialized economies (NIEs) are moving away from traditional unskilled labour-intensive exports into more sophisticated human-capital- and technology-intensive products. These changes are presenting the Latin American countries with valuable opportunities for the continued growth of both traditional and non-traditional manufacturing exports. None the less, Latin America is likely to continue to face stiff competition from the industrializing Asian exporters in unskilled labour-intensive products, particularly those such as textiles, travel goods and clothing, as well as in natural-resource-intensive products such as wood and cork manufactures. However, the region remains more competitive than the Asian NIEs in leather, footwear, fertilizers and non-metallic mineral manufactures. Moreover, fairly widespread supply sources are available in such non-traditional exports as chemicals, iron and steel and plastic materials, where Latin America is succeeding in developing a comparative advantage over other regions.

A second driving force behind Latin America's manufacturing export expansion is the large potential for intra-Latin American trade that regional and sub-regional trading arrangements offer. Although the price responsiveness of import demand for manufactures in the Latin American countries is considerably weaker and less stable than that of the industrialized countries, the fact that tariffs generally tend to be significantly higher in the industrialized countries means that trade liberalization within Latin America could lead to large increases in intra-regional manufacturing trade. Moreover, intra-regional imports of manufactures are small relative to both the GDP of the Latin American economies and to the total amount of manufactured goods imported by these countries. As a consequence, there is ample room for intra-regional manufacturing trade to grow and prosper through the current expansion of sub-regional trading arrangements.

A third driving force behind the changes taking place in the region's manufacturing trade relates to the increasing invocation of economies of

scale and the development of differentiated products, which are bringing with them a rapid expansion in intra-industry and intra-firm trade. The process of trade liberalization throughout the region is generating a faster rate of technological absorption through increased imports of high-technology products. The creation of sub-regional trading blocs within the region, driven by the need for wider markets and increased foreign investment, is offering opportunities to obtain economies of scale in the production of non-traditional export industries. These larger markets are, in turn, providing the basis on which to develop marketing processes that take advantage of vertical and horizontal product differentiation in those markets, thereby expanding the already large volume of intra-industry trade, and bringing in much-needed foreign direct investment (FDI) to the region. Together these changes are providing new opportunities for greater specialization of production through improved access to low-cost factors of production in neighbouring countries.

2. COVERAGE

This handbook offers a comprehensive analysis of the issues surrounding the rapidly changing trade of manufactured goods in Latin America. It is divided into five parts. Part I addresses cross-country issues affecting the region's manufacturing trade expansion, particularly national and international policies influencing exports of manufactures, the growing significance of intra-industry and intra-firm trade in manufactures, the emerging trade in high-technology products, and the relationship between trade and macroeconomic adjustment policies. The remainder of the book presents country case studies for Argentina, Brazil, Mexico and Chile. The experiences of these countries offer numerous lessons for other Latin American countries, whose own manufacturing export growth is likely to intensify as the sharing of production processes among countries becomes increasingly commonplace for multinationals taking advantage of the comparative advantages provided by different locations.

There are, however, circumstances that are endemic to each country. The experiences of Argentina, Brazil, Chile and Mexico serve to point out for other countries some of the adjustment difficulties that can be encountered in developing export-oriented industries, using FDI to further the process of technology transfer, and participating in regional integration schemes to access wider markets, achieve scale economies in production and enhance the quality standards of manufactures.

2.1 The Region

Chapter 2, by Montague Lord, begins by reviewing manufacturing trade patterns in Latin America and the factors affecting the region's international competitiveness. It examines the comparative performance of the main manufacturing exporters and the newly emerging exporters in the region, the changing competitive position of the Latin American countries in their major export markets, the types of manufactured goods that have evolved most rapidly in the export sector, the factor intensity of those exports, the growth and stability of manufacturing imports in both the industrialized countries and Latin America, the demand for imports of manufactures in the region's principal markets, new directions in the regionalization of international trade manufactures, and changes taking place in the world trading system under the WTO agreements.

In Chapter 3, Samuel Laird and Ramiro Guzman provide new insights into the barriers to manufacturing trade facing Latin America in the light of the WTO agreements. Latin America's outward-oriented development strategy depends on trade liberalization, the removal of overvalued exchange rates, and the use of the price mechanism as a means of allocating productive resources. Laird and Guzman show that the process of trade liberalization is expected to continue through the implementation of the Uruguay Round results, the regionalization process and the ongoing implementation of trade policy reforms. The resulting enhancements of market access opportunities may, however, be partly offset by the erosion of preferences. In any event, Laird and Guzman emphasize that the ongoing reforms are important for the efficient allocation of domestic resources so that the region's countries can compete effectively in the world trading system.

In Chapter 4, Sarath Rajapatirana examines trade policies as instruments of macroeconomic adjustment and the role that manufacturing exports play in that process. While the past literature has focused on sequencing issues with the view that macroeconomic stabilization and adjustment should precede trade policy reforms, there has been little work undertaken on the use of trade policies for macroeconomic adjustment. These policy instruments have been used to remedy imbalances such as those in the current account that cannot be effectively financed when the authorities respond to them by restricting imports. Rajapatirana's findings show that for selected Latin American countries, the use of these trade policies has had little impact on real exchange rates, foreign market demand, the fiscal deficits and the terms of trade. As a result, countries are no longer invoking trade policies for macroeconomic adjustment purposes to the extent that they did in the past. The expansion of manufacturing exports, however, continues to play a critical role for these adjustments by lowering the foreign exchange constraints and thereby sustaining the adjustment processes.

The increased participation of technology-intensive manufacturing exports provides a means by which countries can improve their export performance by moving to high-growth markets. In Chapter 5, Caroline Beetz Fenske compares Latin America's growth in technology-intensive exports with that of the so-called East Asian miracle countries, and she explores some of the reasons for Latin America's slower export expansion in these types of product. The empirical evidence points to the importance of both research and development (R&D) and the availability of research scientists and engineers in explaining the differences in the development of technology-intensive exports between the two regions. In Latin America the amount of R&D expenditures relative to GDP constitutes about one-third of that in East Asia. Despite these differences, Latin America is nevertheless gaining competitive strength in technology-intensive product areas such as chemicals, medicinal and pharmaceutical products, plastic materials, machinery, transport equipment and professional and scientific instruments. However, greater technology transfers from the industrialized countries are essential if the region is to accelerate its output growth of technology-intensive products, and the most effective means of obtaining these transfers are through increased foreign direct investment and larger imports of products embodying technology.

2.2 Argentina

The manufacturing export performance of Argentina has been closely linked to both macroeconomic and sector policy reforms. In Chapter 6, Marcela Cristini examines the scope of structural reforms and export growth since the introduction of the wide-ranging market-oriented policies of the 1991 Convertibility Plan. After examining the country's comparative advantage in both traditional and non-traditional exports, the rapid growth of the non-traditional exports since 1993, and the different export promotion mechanisms that have been used over time, Cristini provides a detailed analysis of the trade liberalization measures and exchange rate initiatives that have been undertaken as part of the Convertibility Plan. Although current distortions in the labour and energy markets have undercut profits in the external sector, the Southern Cone Common Market (MERCOSUR) is providing a dynamic vehicle for growth, particularly for intra-industry trade in manufactured products. On balance, therefore, the stimuli to trade appear to outweigh the obstacles, and the prospects for manufacturing exports under the current structural reforms appear favourable for the country.

In Chapter 7, Daniel Chudnovsky, Andrés López and Fernando Porta analyse Argentina's growth of intra-industry trade with Brazil in automobiles and automobile parts, and they examine how MERCOSUR has affected trade patterns in that industry. Since the implementation of that sub-regional inte-

gration scheme, intra-industry trade between Argentina, Brazil and Uruguay has greatly expanded, though not necessarily with that of the fourth member country, Paraguay. This phenomenon is especially noticeable in capital goods, transport materials, textiles and, to a lesser extent, in steel, petrochemicals and photographic materials. To some degree, geographical proximity explains the new trade patterns, and in this regard the findings are in line with Paul Krugman's recent research on economic geography and the determinants of regional growth. However, the expansion has not been associated with Argentina's current wave of trade liberalization and market deregulation. Instead, it has resulted from active intervention in the resource allocation process. For automobiles and automobile parts in particular, the restructuring of those industries in Argentina and Brazil under national sectoral policies that include trade liberalization has paralleled the bilateral agreement regulating trade in the industry. The result has been a regionalization of the automobile manufacturing industry and the consequent expansion of intra-firm trade. Such proactive policies have produced dynamic comparative advantages, as reflected not only in export expansion, but also in increased productivity levels, the modernization of productive facilities and the acquisition of new skills. Nevertheless, other performance indicators have revealed that the vehicles being produced are of a lower quality and higher price than those in other countries, and technological externalities are not fully developed. The experience therefore points to the need to adopt more neutral market-oriented policies within MERCOSUR for those manufacturing industries to benefit from dynamic comparative advantages that could be sustained through the regionalization process.

2.3 Brazil

The rapid growth of Brazil's manufacturing exports in the last 25 years has been one of the most important phenomena of the country's external sector. In Chapter 8, Pedro da Motta Veiga examines the dynamic performance of Brazil's manufacturing exports in the first part of the 1990s, which contrasts sharply with the near-stagnation of these exports in the last decade. Much of this recent growth is attributable to the devaluation in the real exchange rate, the resurgence of economic activity in the rest of Latin America, where most of Brazil's manufacturing exports are directed, and the opening of markets under the MERCOSUR integration process. Equally important is the reduction of barriers to imported goods that has increased domestic competition and produced a restructuring of the manufacturing industries. This liberalization process is beginning to shift the composition of exports away from resource-intensive manufactures. Although the trade and exchange rate policies implemented under the 1994 stabilization programme have had a damp-

ening effect on the demand for Brazil's manufactures, it is possible that the industrial restructuring instigated by these policies has had a favourable effect on the country's manufacturing exports.

Brazil's diversification policies have been remarkably successful in augmenting the participation of manufactures in the country's total exports in reaching new export markets and in developing a broad product base for exports. In Chapter 9, Renato Baumann examines the Brazilian model in terms of the factorial and technological contents of manufacturing export industries. He shows that while the country's endowment of natural resources is shared by other countries in the region, the Brazilian model has characteristics that are unique, as reflected for example in the export of products with particularly dynamic growth. At the same time, intra-industry trade has risen sharply and intra-firm trade has almost doubled from about 5 per cent in the early 1980s to 9 per cent in the first part of the 1990s. These developments are favourable for the country's future export prospects, and are supported by a high degree of adaptability by firms to changing conditions brought on by the trade liberalization process. According to survey results, these firms are now more concerned with reducing production costs than in the past, and they are favouring specialization of production activities for both the domestic and foreign markets. These conditions point to the likely reversal of Brazil's poor export performance during the last decade and the possibility of a sustainable dynamism in the future performance of manufacturing exports.

In Chapter 10, Carmem Aparecida Feijó and Paulo Gonzaga M. de Carvalho examine the growth of Brazil's manufacturing industry during the period of high inflation of the 1980s. Despite these adverse conditions, investment by the private sector was strong during that period and eventually led to a resurgence of manufacturing exports in the first part of the 1990s. Although industrial productivity has been positive during most of the last 25 years, the performance among industries has varied greatly. Recent improvements have been shown to be related to technological advances associated with the restructuring of industries, which has been spurred by the liberalization of trade, increased competition from abroad and the government's privatization programme.

In Chapter 11, Eduardo Luzio analyses Brazil's protective policy towards the domestic microcomputer industry. Known as the 'market reserve policy', it has excluded foreign competition from the domestic market for microcomputers and other information-processing goods and services. Although other countries have also treated their domestic computer industry as an infant industry, Brazil's policy assumed unprecedented proportions that distinguished it from the strategies followed by other countries. Luzio's assessment of Brazil's microcomputer industry provides important insights into the infant industry policy in its extreme form. The analysis shows that the eventual

demise of the microcomputer industry was due to (a) an excessively ambitious policy for the input industries that served to raise the costs of microcomputer producers, (b) the inefficient strategy adopted by policy makers to promote competition in the product market, and (c) a regulatory structure that gave excessive power to too few.

2.4 Mexico

The move from import substitution to outward-oriented policies has been widely accepted as a prerequisite for countries that want their industries to be cost-effective and able to adopt new technologies that will enable them to compete in foreign markets. In Chapter 12, Adriaan Ten Kate describes Mexico's dramatic expansion of manufacturing exports, and he examines whether the import liberalization process has positively affected it. To test the relationship, he uses a translog model that takes into account lagged adjustment processes and the effects of import liberalization from exchange rate devaluations that occurred during the period. The results suggest that import-liberalizing reforms did indeed lead to increased manufacturing exports, thereby supporting the hypothesis that import liberalization has been an effective catalyst for Mexico's manufacturing exports.

According to conventional theory, Mexico's trade liberalization should have led to an expansion of those sectors in which the country has a comparative advantage. However, in Chapter 13, Luis Alberto Ibarra shows that the patterns of resource allocation and factor intensity following trade liberalization have not been consistent with the factor abundance hypothesis of international trade. Belief in the permanence of those trade barrier reductions may have contributed to the outcome. This credibility problem was one of the motivating factors behind the Mexican government's decision to join the North American Free Trade Agreement (NAFTA) in so far as the binding international trade agreement helped to ensure that the trade reform process would be perceived as permanent. As a result of NAFTA, the trade liberalization process is now helping businesses to reallocate resources in a manner that more closely reflects Mexico's comparative advantages.

The recent transformation of Mexico's industrial sector from one based on a natural-resource-intensive process to one encompassing high value-added, technology-intensive processes reflects the globalization strategies of multinationals and domestic industrialization efforts. In Chapter 14, Mitsuhiro Kagami examines the expansion of in-bond processing zones in Mexico. These *maquiladora* operations have had a remarkable growth performance in the past 20 years, thereby helping the country to achieve a dynamic comparative advantage and support its liberalization process – particularly under NAFTA. The fact that *maquiladora* exports currently account for about one-

fifth of Mexico's manufacturing export earnings underscores the striking success of this type of operation as a catalyst for the outward orientation of the Mexican economy. However, their expansion has not been trouble-free, and problems have arisen with the enclave nature of their operations that has inhibited forward or backward linkages with domestic industries and diminished the impact of technology transfers throughout the economy.

2.5 Chile

In Chile the rapid growth of manufacturing exports has contributed to the economy's expansion. Yet despite the diversification, exports remain concentrated in natural resources and natural-resource-based products. In Chapter 15, Ricardo Ffrench-Davis and Raul Saez examine the changes in Chile's trade since the opening up of that economy. Their findings show that the markets within Latin America are playing an important role in the development of Chile's manufacturing export growth, and that the expansion has been linked to the consolidation of the trade liberalization by other countries in the region and the sustainability of their macroeconomic policy reforms. Moreover, the simplification of Chile's procedures governing non-traditional exports has allowed domestic producers to take advantage of the opening up of those markets. This experience provides a valuable lesson on the relationship between economic policy reforms and regulatory reforms of bureaucratic and administrative obstacles to manufacturing trade that still remain in other Latin American countries.

3. CONCLUSIONS

The analysis of regional and country-specific issues in this handbook provides important lessons for the opportunities and challenges facing Latin America and other regions in the 1990s and beyond. Undoubtedly, the issues covered in this volume in the fields of macroeconomic stabilization and adjustment policies, trade and investment policies, and industry-specific policies will continue to play a critical role in determining Latin America's competitiveness in the world trading system. Indeed, as Latin America's trade and industrialization progress, competition policies will become increasingly important to the export performances of many industries, particularly in the context of the globalization process under way through the WTO multilateral agreements and the regional and sub-regional integration schemes.

Ultimately, trade policy initiatives in each of the Latin American countries are meant to support those export industries in which the country can become internationally competitive. The chapters in this handbook show that such

initiatives need not imply a diversification of exports that causes non-traditional exports to expand at the expense of those traditional industries that remain internationally competitive. Instead, new industries can be developed that coexist with those export industries, as has been the case of the vegetable oil, cattle, and steelmaking industries of Argentina, and the automobile components and soybean industries in Brazil. Latin America's outward-oriented policies have therefore set the stage for countries to develop dynamic comparative advantages that allow countries to move from one level of comparative advantage defined by national boundaries to another one determined by the free movement of factors of production and products.