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DYNAMIC PRODUCTS IN WORLD EXPORTS

Jörg Mayer, Arunas Butkevicius and Ali Kadri

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DISCUSSION PAPERS

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* Fax: (4122) 907 0274; E-mail: mdpb-ed.assistant@unctad.org

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Jörg Mayer, Arunas Butkevicius and Ali Kadri

United Nations Conference on Trade and Development

Abstract

The values and market shares of three product categories have grown most rapidly in world exports during the period 1980–1998: electrical and electronic goods (including parts and components for such goods), goods which require high R&D expenditures, and labour-intensive products, particularly clothing. A strong geographical concentration in developing countries at both regional and country levels is discernable regarding the origin of these products. There appears to be a sustained movement in world exports towards the growing significance of a limited number of products and it would seem that there has been a rapid and sustained technological upgrading in the export composition of developing countries. However, since the involvement of developing countries is usually limited to the labour-intensive stages in the production process of technology-intensive goods in the context of international production sharing, simple measures of growth in gross export values are poor guides for an assessment of the nature of participation of developing countries in world trade.

INTRODUCTION

The rate of growth in the value of international trade has been strong and since the mid-1980s has consistently exceeded that of world output. As is well known, this is linked to the increasing integration of national economies into world trade, the deepening of the international division of labour and the concomitant emergence of increasingly internationalized production patterns. These developments have greatly increased the difficulties of monitoring trade performance with a view to providing appropriate trade policy support.

The key objective of this study is to identify options available to policy makers in developing countries in their strategic approaches towards the integration of their countries into the international trading system with a view to promoting development. While trade integration in general can bring about substantial efficiency gains and lead to better communication and trading networks, imports and exports play distinct roles in this process. A number of recent studies have emphasized imports as a carrier of knowledge and shown that developing countries with rapid growth in total factor productivity have imported more from the world's technology leaders. On the export side, emphasis has been on benefits deriving from specialization according to comparative advantage and from the exploitation of increasing returns from larger markets. These contributions have usually looked at exports in general, ignoring the importance of specific products on which the export drive is based. However, to the extent that a developing country can concentrate its exports on what may be called 'dynamic' products, it will be able both to limit the risk that its export markets will become rapidly saturated as a result of more and more countries concentrating their export drives on the same products, and to exploit the potential for long-term productivity growth associated with an export-oriented industrialization strategy.

Satisfying the dual policy goals of limiting the risk of an export product's becoming subject to the 'fallacy of composition' and maximizing the developmental impact of the chosen export strategy requires different definitions of 'dynamic products'. For the first goal, dynamism can be defined on the basis of past average export value growth of a specific product. This is a purely statistical measure that treats all products equally irrespective of differences with regard to the impact of their production and exports on overall development and the potential for long-run productivity growth. The second goal requires defining dynamism in a way that reflects sectoral differences in skill and technology intensity. For this purpose, products can be grouped according to (i) differences in factor intensity regarding technology, capital, and skilled labour, or (ii) long-run rates of sectoral productivity growth which have been observed in large developed countries. Products can also be classified (iii) according to the main factor that affects the competitive process (such as factor intensity, scale of production, product differentiation, etc) in order to assess the main type of economic benefits that can be derived from exporting such products.

It needs to be noted that the results of any analysis of export dynamism are sensitive to the time period chosen. Given that export data at the low level of aggregation used in this paper are available only on an annual basis and that the methodological tools used to analyse these data require long-time series in order to obtain reliable estimates, the analysis has been based on a long-term perspective, namely the period between 1980 and 1998. This period is the longest one for which reliable export data are available. However, this long-run perspective will be supplemented by indicators based on developments during the 1990s as necessary in order to put the results of the long-run analysis into proper perspective. It should also be noted that the data source used for this study (i.e. mainly COMTRADE[1]) reports trade in a comprehensive way only in value terms, with volumes available only for a small number of items (mainly primary commodities). As a consequence, the analysis could be conducted only on the basis of trade values.

The structure of the study is as follows. Section I takes a product-specific perspective and analyses the evolution of the export values (in terms of current US dollar) of 225 products (see Appendix I for discussion on which products are excluded) from 234 developed and developing countries and territories, and economies in transition, i.e. all countries and territories for which data are available in the United Nations' COMTRADE database. The section first looks at trend growth over the 1980–1998 period and relevant composite measures which are also applied to growth during 1996–1998 (to capture developments associated with the East Asian crisis[2], as well as possible dynamics following the beginning of the staged implementation of the Uruguay Round concessions); it then examines the stability of trend growth and product share in global exports and looks at the

[1] United Nations Department of Economic and Social Affairs (UN/DESA), *Commodity Trade Statistics* database.

[2] Duttagupta and Spilimbergo (2000) show that the growth rate of export earnings of East Asian economies (including Hong Kong (China), Indonesia, Republic of Korea, Singapore, and Thailand), i.e. developing economies that are among those whose export earnings have grown most over the past three decades or so, started to decline in 1995, with export earnings basically stagnating during 1996 and 1997 and declining in 1998. They also show that this decline in export earnings was specific to East Asia and cannot be explained by worldwide demand factors.

predictability of export value growth; section I finally analyses the export experience of specific product categories. Section II first takes a country-specific perspective and examines the export experience of regional groups and selected developing countries to delineate the extent to which they have succeeded in keeping pace with changes in world trade. The last part of section II looks at the direction of trade flows in an attempt to explain why certain products have followed a more dynamic export pattern than others and briefly discusses the role of preferential tariff provisions for international production sharing, particularly at the regional level. Section III discusses policy implications of the findings. Discussions of data availability and their limitations as well as the definitions of statistical measures and product categories are in the Appendix.

As such, the study complements existing work on dynamic products in world exports undertaken by UNCTAD (2000, Table 4.3; and 1997] and Lall (1998, 2000), or the estimations included in the TradeMap analysis tool of the International Trade Centre UNCTAD/WTO as discussed in ITC (1999), and in TradeCAN of UNECLAC and the World Bank (1999).

I. IDENTIFICATION OF DYNAMIC PRODUCTS IN WORLD EXPORTS

A. A survey of all products

1. Average annual export value growth during the period 1980–1998

Various measures can be used to define the dynamism of a specific product's evolution in global exports over time, including the rate of growth over alternative periods, the degree of growth stability, and changes of a product's share in total exports. The results based on these measures, however, are not necessarily consistent, as can be seen by comparing table 1a which ranks the products according to the average rate of annual export value growth during the period 1980–1998, and table 1b where ranking is based on growth during the last three years of this period, i.e. 1996–1998.[3] Of the 20 products that are identified as the most dynamic products during the longer period, only four (optical instruments, knitted under garments, telecommunications equipment, and medicinal and pharmaceutical products) appear also on the list of the 20 most dynamic products during 1996–1998.

Most of the fastest growing products listed in tables 1a and 1b broadly fall in four groups, namely (i) electrical and electric goods (Standard International Trade Classification (SITC) 75, 77)

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