Interdependence and Specialisation in the European Union:
Intercountry Input-Output Analysis and Economic Integration

Jan van der Linden
Interdependence and Specialisation in the European Union: Intercountry Input-Output Analysis and Economic Integration

Proefschrift

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To Jan and Erik
In the 1970s and 1980s, the department of Regional Economics at the University of Groningen gained a considerable experience in interregional input-output analysis. Basically, this involved estimating bi-regional input-output tables for a province versus the rest of the Netherlands. Furthermore, efforts were made in combining these tables into more-region input-output tables. In the course of the 1980s the need for an extension of the analysis beyond the Dutch economy increased, especially in the form of a European interregional input-output analysis.

Independent of this, there was also a growing desire to set up an intercountry input-output analysis. In this type of analysis, national input-output tables are combined into an 'interregional' system of countries. Both the interregional and intercountry approaches allow for the analysis of cross-border interdependence, which is relevant because of the further integration in the European Union.

The intercountry approach was materialised when a series of intercountry input-output tables covering 1959, 1965, 1970 and 1975 was obtained from dr. Schilderinck from the Tilburg University. Following Schilderinck's method, tables for 1980 and 1985 could be constructed from data that was to be made available by Eurostat. The basic construction method, however, was rather crude and did not lead to sufficiently balanced input-output tables.

To refine the compilation method and analyse the intercountry interdependence, two Ph.D studies were started. The first was started in 1990 and aimed at developing the intercountry tables in current prices; this book is the result of this study. The second was started in 1993 and aimed at developing the tables in constant prices.

Although the construction of the intercountry input-output tables is the starting point and primary motivation, this book has a wider scope. Its purpose is to explore the use of such tables for the analysis of economic integration. To this end, due attention is paid to the European economic integration. This is done in three introducing chapters that give an overview of the history, economics and analysis of European integration. Subsequently, an introduction into the construction of the intercountry input-output tables is given. The actual analysis is done in four chapters. The first two of these analyse the pattern and development of specialisation and interdependence; the other two present decompositions of input structure and value added change.

Writing this book has not been an easy task. Especially in the beginning I have had a hard time reading up on the subject and carrying out economic research adequately. Later on things went more smoothly, although it never was easy to complete this study.

I owe much to Jan Oosterhaven and Erik Dietzenbacher, who initiated and
supervised the project. This book is partly the result of their thorough and valuable comments on the manuscripts. In fact, many parts would never have been written without their efforts to carry the study into its present state. Apparently, I needed the sometimes unpleasant and confronting approach of Jan to develop myself into the researcher I am today. I thank Erik for his approach of discussing the methodology. He is able to ask questions in such a way that the (Ph.D) student is set thinking.

Apart from Jan and Erik, many others have contributed to the realisation of this book. First of all, I thank Geoff Hewings, who offered me the opportunity to gain experience with working in an international environment when I joined the Geographic research team at the University of Illinois in Urbana-Champaign.

I thank my roommates in Groningen and Antwerp: Niels Hermes, Alex Hoen and Antoon Soete. Niels gave me the indispensable moral support when times were hard in the beginning of the study. With Alex I had fruitful discussions about the study and science in general when the study was well underway. Now the study has come to an end, Antoon has been of great help in appraising the societal relevance of this study which, admittedly, I have often considered an academic exercise. I wish Alex and Antoon all the luck they need in completing their theses.

I thank Piet Boomsma, Carlos Meira, Marco DeMarch, Frederico Cuello, Michael Sonis, Bert Steenge, Willem Buiter, Gerard Eding, Harry Webers and Jakob de Haan for their comments and cooperation on separate parts of the study. Especially Piet has done a lot to improve the intercountry tables. I thank Dirk Stelder and Jan Beugels for their patience in teaching me to work with the computer. I thank Chris Peeters, my present employer, for offering all facilities needed to finalise a thesis, which is not easy in the busy world of carrying out policy research. I thank Ingrid Hadders for making the linguistic corrections. Last but not least, I thank Henny Wever, not only for the many hours she put in making tables and figures and taking care of the layout, but also for guiding me through all aspects of finalising a Ph.D thesis.

Finally, I am not someone who locks himself in for a year or so and then says: I apologise to my family and now dedicate my book to them. Still, I thank Joke and Lianne for adjusting to my strict time schedules so that soon I will be able to spend plenty of time with them and with little Gerwin. However, I dedicate this book to Jan Oosterhaven and Erik Dietzenbacher, whom I have kept waiting for so long.

Antwerp, September 1998
Jan van der Linden
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