An Inframarginal Approach_{to} Trade Theory

Increasing Returns and Inframarginal Economics

Series Editors: James Buchanan, Yew-Kwang Ng, (Xiaokai Yang)

Associate Editor: Guang-Zhen Sun

Published

Vol. 1 *An Inframarginal Approach to Trade Theory*

Edited by Xiaokai Yang, Wenli Cheng, Heling Shi &
Christis G. Tombazos

Forthcoming

Vol. 2 *Readings in the Economics of the Division of Labor: The Classical Tradition*

Edited by Guang-Zhen Sun

Increasing Returns and Inframarginal Economics - Vol. 1

An Inframarginal Approach to Trade Theory

edited by

Xiaokai Yang

Wenli Cheng

Heling Shi

Christis G. Tombazos

Monash University, Australia

World Scientific

NEW JERSEY • LONDON • SINGAPORE • BEIJING • SHANGHAI • HONG KONG • TAIPEI • CHENNAI

Published by

World Scientific Publishing Co. Pte. Ltd.

5 Toh Tuck Link, Singapore 596224

USA office: 27 Warren Street, Suite 401-402, Hackensack, NJ 07601

UK office: 57 Shelton Street, Covent Garden, London WC2H 9HE

British Library Cataloguing-in-Publication Data

A catalogue record for this book is available from the British Library.

AN INFRAMARGINAL APPROACH TO TRADE THEORY

Copyright © 2005 by Xiaokai Yang, Wenli Cheng, Heling Shi & Christis G. Tombazos

All rights reserved. This book, or parts thereof, may not be reproduced in any form or by any means, electronic or mechanical, including photocopying, recording or any information storage and retrieval system now known or to be invented, without written permission from the Publisher.

For photocopying of material in this volume, please pay a copying fee through the Copyright Clearance Center, Inc., 222 Rosewood Drive, Danvers, MA 01923, USA. In this case permission to photocopy is not required from the publisher.

ISBN 981-238-929-6

ISSN 1793-0960

Printed in Singapore by World Scientific Printers (S) Pte Ltd

This book is dedicated to our dear friend and colleague Xiaokai Yang who died earlier this year. Xiaokai was a pioneer in the development of inframarginal analysis and new classical economics and he is one of the co-editors of this project.

It is with great sadness and a heavy heart that the remaining co-editors of this book, Cheng, Shi, and Tombazos, acknowledge this contribution as one of the last joint projects with Xiaokai.

Farewell.

This page is intentionally left blank

Preface

The inframarginal approach to trade theory has attracted considerable – and rapidly expanding – interest in recent years. Yet, little has been done by way of organizing the accumulated knowledge in a single volume. This book represents a first effort to fill this gap by collecting key articles in this new and important area of research.

As in any collection of reprinted contributions, primary credit for this project goes to the authors of the various chapters. We are also grateful to the original publishers for their permission to reprint articles that appear in this volume.

Unlike the remaining contributions, Chapter 1 is written specifically for this volume. It offers an investigation of the origins of inframarginal analysis in the context of the evolution of economic thought since the publication of Adam Smith's well known 1776 treatise. Reliance of this Chapter on direct quotes from contributions not included in this volume is not so much adopted for stylistic reasons, but as an effort to provide a tangible bridge between the chapters that follow and a body of relevant literature that the usual constraints did not allow inclusion in the volume.

The production of the camera-ready copy of this manuscript was a formidable task, and represents the joint effort of a large number of people. In particular, we thank Cora Ng for outstanding logistical support, and Ye Deng, Tino Filippelli, and Scott Harding for excellent research assistance. We also thank our in-house copy editor Aiko Yoshibayashi for her extraordinary attention to detail, and her hard work in managing almost every aspect of this project.

As well, we gratefully acknowledge the generous financial support of the Department of Economics and the Faculty of Business and Economics of Monash University.

Finally, we thank the Research Centre for Increasing Returns and Economic Organisation of Monash University for providing the hardware and office space without which this project would not have been possible.

Christis G. Tombazos
Managing Editor

Contents

Part 1. Introduction

1. Division of Labor and Corner Solutions in Positive Trade Theory 3
Christis G. Tombazos

Part 2. Origins of Inframarginal Applications to Trade Theory

2. Economics and Biology: Specialization and Speciation 19
Hendrik S. Houthakker
3. Substitution and Division of Labour 29
Sherwin Rosen
4. Trade and Insurance with Moral Hazard 53
Avinash Dixit
5. Trade and Insurance with Imperfectly Observed Outcomes 75
Avinash Dixit

Part 3. Exogenous Comparative Advantage: Corner Solutions in the Heckscher-Ohlin and Ricardian Models of Trade

6. An Inframarginal Analysis of the Ricardian Model 87
Wen Li Cheng, Jeffrey Sachs and Xiaokai Yang
7. A Ricardian Model with Endogenous Comparative Advantage and Endogenous Trade Policy Regimes 109
Wen Li Cheng, Meng-Chun Liu and Xiaokai Yang
8. A General-Equilibrium Re-Appraisal of the Stolper-Samuelson Theorem 131
Wen Li Cheng, Jeffrey Sachs and Xiaokai Yang

Part 4. Division of Labor in Models of Trade with Economies of Scale

9. A Ricardo Model with Economies of Scale 153
Ralph E. Gomory

10. Pattern of Trade and Economic Development in a Model of Monopolistic Competition 185
Jeffrey Sachs, Xiaokai Yang and Dingsheng Zhang

11. Market Led Industrialization and Globalization 223
Jeffrey Sachs and Xiaokai Yang

Part 5. Economies of Specialization and Endogenous Comparative Advantage

12. Specialization and Product Diversity 249
Xiaokai Yang and He-Ling Shi

13. Endogenous vs. Exogenous Comparative Advantage and Economies of Specialization vs. Economies of Scale 261
Xiaokai Yang

14. A New Theory of Demand and Supply and Emergence of International Trade from Domestic Trade 291
Xiaokai Yang

15. Walrasian Equilibrium Computation, Network Formation, and the Wen Theorem 325
Shuntian Yao

Part 6. Inframarginal Analysis of Trade Policy, Dual Structures, and Globalization

16. Globalization, Dual Economy, and Economic Development 349
Jeffrey Sachs, Xiaokai Yang and Dingsheng Zhang

17. Endogenous Structure of the Division of Labor, Endogenous Trade Policy Regime, and a Dual Structure in Economic Development 383
Xiaokai Yang and Dingsheng Zhang

Part 7. Dynamic Inframarginal Analysis of Trade Models with Endogenous Comparative Advantage

18. A Microeconomic Mechanism for Economic Growth 409
Xiaokai Yang and Jeff Borland

19. Specialization and a New Approach to Economic Organization and Growth	437
<i>Jeff Borland and Xiaokai Yang</i>	
20. Specialization, Information, and Growth: A Sequential Equilibrium Analysis	447
<i>Yew-Kwang Ng and Xiaokai Yang</i>	
21. Evolution in Division of Labor and Macroeconomic Policies	475
<i>Junxi Zhang</i>	
22. Division of Labor, Money and Economic Progress	491
<i>Wen Li Cheng</i>	
Index	515