

Quantitative Models for Agricultural Policy Analysis

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Contents

List of Tables	ix
List of Figures	xiii
List of Appendices	xvii
List of Abbreviations	xix
Preface	xxiii
CHAPTER 1. EPU Econometric Modeling for Malaysia <i>Muhamad Ab. Rahaman, Abu Zeid Mohd Arif and Tan Kay Kiang</i>	1
CHAPTER 2. Econometric Modeling for Agricultural Policy Analysis and Forecasting: Between Theory and Reality <i>Mad Nasir Shamsudin and Zainalabidin Mohamed</i>	21
CHAPTER 3. APSIM: A Multi-Market Framework for Policy Analysis <i>Tirso B. Paris, Jr</i>	61
CHAPTER 4. System Dynamics Modeling in Agricultural Sector <i>Setyo Pertiwi</i>	76
CHAPTER 5. An Econometric Model of the Malaysian Palm Oil Market <i>Shri Dewi d/o Applanaidu, Amna Awad Abdel Hameed, Fatimah Mohamed Arshad and Mad Nasir Shamsudin</i>	88
CHAPTER 6. Likely Implications of Biodiesel Demand on the Malaysian Palm Oil Market <i>Shri Dewi d/o Applanaidu, Fatimah Mohamed Arshad, Mad Nasir Shamsudin and Zulkornain Yusop</i>	113

CHAPTER 7.	Choosing an Estimation Methodology for Natural Rubber Price Forecasting Models	122
	<i>Aye Aye Khin, Zainalabidin Mohamed, Mad Nasir Shamsudin and Eddie Chiew Fook Chong</i>	
CHAPTER 8.	Export Supply Model of Sarawak Black Pepper: An ARDL Approach	156
	<i>Wong Swee Kiong, Khalid Abdul Rahim, Mad Nasir Shamsudin and Alias Radam</i>	
CHAPTER 9.	Supply and Demand Model for the Malaysian Cocoa Market	169
	<i>Amna Awad Abdel Hameed, Akram Hasanov, Nurjihan Idris, Amin Mahir Abdullah, Fatimah Mohamed Arshad and Mad Nasir Shamsudin</i>	
CHAPTER 10.	Malaysian Rice Market Model	191
	<i>Tey (John) Yeong Sheng, Mad Nasir Shamsudin and Tengku Mohd Ariff Tengku Ahmad</i>	
CHAPTER 11.	Estimating Export Demand for Malaysia's Fresh Pineapples Using the ARDL Bounds Test	212
	<i>Muzafar Shah Habibullah, Baharom Abdul Hamid and Alias Radam</i>	
CHAPTER 12.	Modeling Beef Subsector in Peninsular Malaysia: A Vintage Approach	242
	<i>Zainalabidin Mohamed, Anahita Hosseini Matin, Mohd Mansor Ismail and Nitty Hirawaty Kamarulzaman</i>	

CHAPTER 13. Bioeconomic Modeling of Peninsular Malaysian West Coast Pelagic Fishery <i>Gazi Md Nurul Islam, Kusairi Mohd Noh, Tai Shzee Yew, Aswani Farhana Mohd Noh and Illisriyani Ismail</i>	291
CHAPTER 14. System Dynamics Models in Fisheries <i>Kusairi Mohd Noh and Tai Shzee Yew</i>	310
CHAPTER 15. Malaysian Timber Market Model: Internalising the Externality Effects <i>Mohd Shahwahid Hj. Othman and Abdul Rahim Abdul Samad</i>	331
CHAPTER 16. Modeling Trade and Environment Linkages <i>Khalid Abdul Rahim</i>	348
Contributors	379

Preface

Policy analysis is normally guided by economic theory that helps the policy makers conceptualise and design policy reforms. However, there are always gaps between the realm of pure theory and the real world. Assisting the policy debate not only requires more than the qualitative insights given by the theory, but it also requires quantification of the various mechanisms proposed by the theory. As the framework of analysis is complex, one tends to miss the indirect effects of a policy. Empirical modeling can help reveal these effects. Besides, quantitative analysis allows running sensitivity tests to simulate the implications of alternative policies. It helps to clarify the role of key behavioral assumptions and important parameter values. Under a situation of multiple policy objectives, quantitative policy analysis enables quantification of trade-offs and better-informed policy debates leading to the choice of the appropriate policy to implement.

With the above premise, the Institute of Agricultural and Food Policy Studies (or Institut Kajian Dasar Pertanian dan Makanan, IKDPM), Universiti Putra Malaysia has embarked on a long term project of developing capacity in quantitative modeling for policy analysis. As a first step towards achieving this goal, the institute has organized a workshop titled “Agricultural Sector Modeling in Malaysia: Quantitative Models for Policy Analysis” on 26th – 28th October 2009. The objective of the workshop is to review the various quantitative methods for policy analysis in the agricultural sector to guide the institute in its future research and planning. We have invited a number of international speakers to share their experiences and expert views. They were, Prof. Dr. Tirso Paris from the University of the Philippines-Los Banos who presented his experience in applying an econometric model for agricultural policy analysis in the Philippines. We have also invited Dr. Setyo Pertiwi from Bogor Agricultural University, Indonesia to share her perspectives on system dynamics modeling of the food security policy in Indonesia. A number of local researchers have also presented their findings using a number of methodologies such as econometrics and other multi-variate methods. The other important participants were the stakeholders; i.e., the policymakers

themselves. In fact their presence has been fruitful as they provided the workshop the policy makers' perspectives to make the models relevant and useful.

The workshop saw a spectrum of approaches, each with its own unique strengths, usefulness and weaknesses in modeling the complex issues in agriculture. Of course no model is able to capture the reality in its true sense. However, with the correct specification, assumptions and theoretical foundations, quantitative models do have the capacity to enlighten the users in understanding the nature of relationship between variables in a system, to quantify them and most of all to make some policy simulations to derive at some reasonable forecast of the future trends and implications. These have been the major benefits or useful insights gained from the workshop. In view of this, the papers presented in the workshop have been rewritten taking into account of all the comments and suggestions by the participants. This book provides a compilation of selected papers presented at the workshop for future reference. We believe that this book will be very useful to researchers, students, policy makers as well as firms and individuals that are interested in modeling.

We take this opportunity to express our gratitude to all participants, particularly from the public agencies for providing useful comments and ideas in the workshop. We are also highly indebted to Prof. Dr. Tirso Paris and Dr. Setyo Pertiwi for their willingness to share their expert knowledge and experiences. Their valuable insights are instrumental in guiding our policy research in the future.

We would like to express our utmost gratitude to the authors for their papers. The dedication and commitment shown by Aswani Farhana Mohd Noh and Noraini Zahari in the preparation of the manuscript is very commendable indeed. Nevertheless, any errors that remain are the sole responsibility of the authors. Last but not least, we appreciate the continuing support from the IKDPM's staff in the preparation of this book.

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