Rongxing Guo

Cross-Border Management

Theory, Method and Application



Rongxing Guo

Cross-Border Management

Theory, Method and Application





Rongxing Guo Regional Science Association Peking University Beijing China

ISBN 978-3-662-45155-7 ISBN 978-3-662-45156-4 (eBook) DOI 10.1007/978-3-662-45156-4 Springer Berlin Heidelberg Dordrecht London

Library of Congress Control Number: 2014954354

© Springer-Verlag Berlin Heidelberg 2015

This work is subject to copyright. All rights are reserved by the Publisher, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, reuse of illustrations, recitation, broadcasting, reproduction on microfilms or in any other physical way, and transmission or information storage and retrieval, electronic adaptation, computer software, or by similar or dissimilar methodology now known or hereafter developed. Exempted from this legal reservation are brief excerpts in connection with reviews or scholarly analysis or material supplied specifically for the purpose of being entered and executed on a computer system, for exclusive use by the purchaser of the work. Duplication of this publication or parts thereof is permitted only under the provisions of the Copyright Law of the Publisher's location, in its current version, and permission for use must always be obtained from Springer. Permissions for use may be obtained through RightsLink at the Copyright Clearance Center. Violations are liable to prosecution under the respective Copyright Law.

The use of general descriptive names, registered names, trademarks, service marks, etc. in this publication does not imply, even in the absence of a specific statement, that such names are exempt from the relevant protective laws and regulations and therefore free for general use.

While the advice and information in this book are believed to be true and accurate at the date of publication, neither the authors nor the editors nor the publisher can accept any legal responsibility for any errors or omissions that may be made. The publisher makes no warranty, express or implied, with respect to the material contained herein.

Printed on acid-free paper

Springer is part of Springer Science+Business Media (www.springer.com)

Cross-Border Management

To Ronglian, Rongzhong, Rong'ai, Shurong, Rongxun, and Rongmei—from all of whom I have learnt how to deal with multi-dimensional border problems within a big family

Preface

Globalization—an increasingly driving force behind the vibrant economies throughout the world since the last decades of the twentieth century—is shaping a new era of interactions among various political, cultural and economic groups. As a result, it is increasing the contacts between people across various boundaries—geographical, political and cultural. When people say that 'the world is becoming smaller every day', they are referring not only to the increased speed and ease of transportation and communications but also to the increased use of international and intercultural market to buy and sell goods. Today, the interactions among people with different national and cultural identities are deeper than ever before.

There is no doubt about the increasing awareness of the importance of cross-border transactions in our daily life. An increasing number of companies are now relying on production chains that straddle many politically and culturally distinctive areas. Raw materials and components may come from different linguistic or religious areas and be assembled in another, while marketing and distribution take place in still other venues. Consumers' decisions in, for example, New York or Shanghai may become information that has an almost immediate impact on the products that are being made—and the styles that influence them—all over the world. The overall heightened presence of foreign goods, foreign producers and even foreign-owned assets causes many to question the impact and desirability of all international and intercultural economic transactions.

In this book, we assume that, due to the existence of various border barriers, production factors (such as labor, capital, technology, and information) cannot freely flow across, and are unevenly distributed between all sides of borders. This creates inequalities, disagreements, tensions and even armed disputes among various stakeholders. This book considers various types of borders. In brief, the objectives of this book are:

To clarify whether existing management theories and methods can be effectively
applied in an entity (which can be defined as either an independent state, a region, a community, a culture, or a firm) after the latter is increasingly interactive
with the rest of the world;

- To develop qualitative and quantitative methods by which to help make optimal
 decisions for the entity and, in the meantime, to maximize the positive (or minimize the negative) effects of the decisions on the rest of the world; and
- To design workable cross-border cooperation plans and conflict-management schemes by which policy-makers can better cope with the challenges and problems resulting from the increasingly interactive world.

Along with the increasing interactions between different parts of the world, the application of existing traditional theories and methods may become less effective, if not ineffective. This is particularly so when policymakers and practitioners want to seek rational and optimal solutions to complicated cross-border tasks.

This book intends to present a new approach to managing the increasingly interactive world. The use of the word "new" has two meanings. The first relates to the intent that I prefer a new definition of borders (which are natural, institutional, functional, or mixed) to the traditional definitions of them. The second concerns the fact that in this book I will apply (and, where necessary, develop) analytical tools, methods and models that are different from those used in other similar books.

A truly cross-disciplinary title, this book covers various disciplines of the social sciences as well as those of natural and environmental sciences and information technology. In brief, the key features of this book include the following:

- Develop a so-called 'cross-border' framework by which to solve the bilateral and multilateral problems and challenges stemming from the increasingly interactive world.
- Measure—qualitatively or quantitatively—various effects of borders on global and local economic activities.
- Provide various solutions or options to an efficient cross-border management, many of which cannot be found in other books.
- Adopt end-of-chapter case studies in parallel with shorter, boxed examples in the text, all of which are focused on the current situations of and the recent progresses towards cross-border management.

This book is not intended to serve as a standard textbook for a specific discipline or course. Instead, it is a multidisciplinary text. Specifically, I hope that this three-in-one book will satisfy the needs of students and specialists coming from the following three disciplines:

- i. business administration
- ii. international relations
- iii. regional planning and resource management

Frankly, it is a challenging task for me to write suck kind of book. And students of each discipline may not be interested in some chapters of this book—even though I believe that, given that the world is becoming increasingly interactive, students of one discipline will need more knowledge of other disciplines. In this book, Chaps. 4, 11 and 18 are not for students of regional planning and management; Chaps. 10 and

Preface

12 are not written for business administration students; and Chap. 15 is not for international relations students.

Throughout this book, both customary and metric systems are adopted. This is intended to help readers to have knowledge of the diversity of the real world—an issue with which cross-border management should deal. A table of conversion from some US customary units to metric units is provided in Pages 401 and 402 at the end of this book.

Acknowledgements

Even though I began to write this book in early 2014, my research on cross-border issues can date back to as early as the late 1980s when I was a student. During the past decades, I have received encouragement and support from various organizations and individuals. They have been mentioned in my three early books: (i) "Border-Regional Economics," which was published by Physica-Verlag in 1996 and was reprinted in 2013; (ii) "Cross-Border Resource Management", which was published by Elsevier Science in its *Development in Environmental Science* series in 2005 (first edition) and 2012 (second edition); and (iii) "Territorial Disputes and Conflict Management: The Art of Avoiding War," which was published by Routledge in its *Security and Conflict Management* series in 2012. Some ideas and material in the present book draw on the above three books. However, they are not simply done by the 'copy-and-paste' approach. Most of the content that appears in this book is completely new and original.

I would like to thank Dr. Javier Sanchez-Reaza (Regional Development Policy Division of the OECD) who kindly sent me many useful documents and materials relating to the US-Mexico border area. Thanks also go to Ms. Jose-Luis Alvarez-Galvan (OECD), Mr. Oliver Torres (State of Chihuahua, Mexico) and Mr. John F. Cook (mayor of El Paso, Texas, USA) for their logistical assistance in 2011. During the field-surveys in southern China in January 2014, I received generous help from the following individuals: Mr Jia Gaoshan (Shaoguan city, Guangdong province), Mr Sheng Yaodong (Zhanjiang city, Guangdong province), and Mr Gao Ming (Xinglong town, Sanya city, Hainan province).

The following individuals and organizations have provided photos and maps that have been adopted by this book. They are: Buddhi N. Shrestha of Bhumichitra Mapping, Kathmandu, Nepal (Fig. 12.1), Gao Ming of Heilongjiang Technology University, Harbin, Heilongjiang, China (Fig. 15.3), University of Texas Libraries, University of Texas at Austin (Fig. 1.3), the government of Hong Kong Special Administrative Region (Figs. 2.1b and 12.4), Commonwealth of Australia (Fig. 8.1), and U.S. Central Intelligence Agency, Washington, DC (Figs. 9.2, and 10.2). In addition, this book also uses photos published in the Wikimedia Commons, the original authors of which are: Frank Janssen (Fig. 1.2), Tos (Fig. 1.4), Historicair

xii Acknowledgements

(Fig. 6.1), Fly Navy (Fig. 12.2), Wladyslaw (Fig. 12.3), Benutzer (Fig. 15.1), James Reyes (Fig. 17.1), Seyon (Fig. 17.2), and an anonymous author (Fig. 15.2).

The data cited in Case 3 of Chap. 3 are provided by the Open Technology Institute of the New America Foundation. The major part of Case 6 of Chap. 6 is based on an article entitled "The East China Sea disputes: Context, claims, issues, and possible solutions" (*Asian Perspectives*, vol. 31(2007), pp. 127–167). Dr Dean J. Ouellette (Institute for Far Eastern Studies, Kyungnam University, Seoul, Republic of Korea, also Assistant Editor to the journal of *Asian Perspective*) has kindly granted me in his e-mail of July 30, 2014 to use this material without conditions.

Every effort has been made to trace the copyright holder of Fig. 2.1a, but if any have been inadvertently overlooked, the publisher and the author will be pleased to make the necessary arrangements at the first opportunity.

During the review and revision stage, the feedback and encouragement received from Mr. Toby Chai, Ms Lydia Wang and other editors and readers at Springer have helped us refine many parts of this research. However, all views and errors in this book certainly are mine only.

Huairou, Beijing, China Summer 2014

Rongxing Guo

List of Abbreviations

ADIZ Air Defense Identification Zone
APEC Asia-Pacific Economic Cooperation
ASEAN Association of Southeast Asian Nations

B2B Business-to-business
B2C Business-to-consumer
BCP Boundary Control Point

BDS BeiDou System

CBP Customs and Border Protection

CEPA Closer Economic Partnership Arrangement

CJV Cooperative Joint Venture

CPA Comprehensive Peace Agreement

DMZ Demilitarized zones
DNS Domain Name System
DSB Dispute Settlement Body

e-BCMS electronic Border Control Management System

EEZ Exclusive Economic Zone
EJV Equity Joint Venture

EKC Environmental Kuznets Curve

EU European Union

FDI Foreign Direct Investment
FTP File Transfer Protocol
FTZ Free Trade Zone
GFW Great Firewall

GNSS Global Navigation Satellite System

GPS Global Positioning System
GTI Greater Tumen Initiative
GWB George Washington Bridge
HTTP Hypertext Transfer Protocol
I2P Invisible internet project

IBRU International Boundaries Research Unit

ICC International Court of Justice

ICEC Information and Communications Ethics Committee

xxiii

xxiv List of Abbreviations

ICJ International Court of Justice

ICRC International Committee of the Red Cross

IDL International Date Line

IGAD Intergovernmental Authority on Development
 IGCP International Gorilla Conservation Program
 IGO International Governmental Organization

ILA International Law Association

IMS-GT Indonesia-Malaysia-Singapore Growth Triangle

IP Internet Protocol

IUCN World Conservation Union JDZ Joint Development Zone

JPDA Joint Petroleum Development Area

LMB Lower Mekong Basin
M&A Mergers and Acquisitions
MDL Military demarcation line
MOU Memorandum of understanding
MRC Mekong River Commission

NAFTA North American Free Trade Agreement NATO North Atlantic Treaty Organization

NBA Niger basin authority

NGO Nongovernmental organization OAS Organization of American states

OMVS Organization pour La Mise en valeur de Fleuve Sénégal

OPEC Organization of Petroleum Exporting Countries

OSCE Organization for Security and Cooperation in Europe

PCA Permanent court of arbitration

PCIJ Permanent court of international justice

POP Post office protocol PRS Public regulated service

PTA Preferential trade arrangement

SAARC South Asian Association for Regional Cooperation

SADC Southern Africa Development Community

SAR Special administrative region

SARC South Asian Association for Regional Cooperation

SEZ Special Economic Zone

SIJORI-GT Singapore-Johor-Riau Growth Triangle

SIS Schengen Information System

TBA Tri-border area

TCP Transmission Control Protocol

TRADP Tumen River Area Development Program

TSS Traffic separation scheme

UNCLOS United Nations Convention on the Law Of the Sea

UNMIK United Nations Mission Interim in Kosovo

UNSC United Nations Security Council
URL Uniform Resource Locator

List of Abbreviations xxv

UTC Coordinated universal time (French: Temps Universel Coordonné)

VIS Visa Information System VPN Virtual Private Network WTO World Trade Organization

List of Figures

Fig. 1.1	The Great Wall of China	9
Fig. 1.2	Graves of a Catholic woman and her Protestant husband	
	in Het Oude Kerkhof, Roermond, the Netherlands	12
Fig. 1.3	Iran's concave boundary along the Strait of Hormuz	17
Fig. 1.4	Where are the borders between Belgium and the	
	Netherlands?	19
Fig. 2.1	The Shenzhen river—a once-ever forbidden border	
	between Hong Kong and mainland China	35
Fig. 2.2	The impacts of 'distance' on transnational water pollution	37
Fig. 2.3	Economic analysis of trade barriers	43
Fig. 2.4	Tariff rate decreases with respect to per capita GDP	44
Fig. 4.1	Christianity and its major sects	81
Fig. 5.1	The officially defined scope of the US-Mexico	
	border region	102
Fig. 5.2	The Rumaila-Ratqa oil fields and the Iraq-Kuwait	
	boundary	103
Fig. 6.1	Berlin divided by the Potsdam Conference	126
Fig. 6.2	The method of markers—an example of three players	129
Fig. 7.1	The equilibrium and maximum sustainable	
	yields of fishery	137
Fig. 7.2	The 'chain store' paradox	145
Fig. 7.3	Adam's demand and Jeff's supply of widgets	141
Fig. 8.1	The joint petroleum development area, Australia	
	and East Timor	159
Fig. 8.2	The shared fishing area of China and Vietnam at the	
	Tonkin Gulf	162
Fig. 9.1	The delimitation of the Abyei area (central Sudan)	191
Fig. 9.2	The US-Canada maritime boundary dispute in the Gulf	
	of Maine	195

Fig. 9.3	The Spratly islands showing occupied features	198
	The UN buffer zone in Cyprus	209
Fig. 10.2	The existing territorial claims in Antarctica	221
	The "art-of-avoiding-war" flowchart	239
Fig. 12.1	The shifted boundary between China and Nepal	253
Fig. 12.2	George Washington Bridge looking from Manhattan	
	to New Jersey	258
Fig. 12.3	The Three-Country Bridge connecting France	
-	and Germany, near Switzerland	260
Fig. 12.4	The new Hong Kong-Shenzhen border control	
	point (two floors)	267
Fig. 13.1	Cost-benefit analysis of China's oil/gas operations at the	
	East China Sea	294
Fig. 14.1	Growth patterns of lagging regions	303
Fig. 14.2	Per capita GDPs relative to national levels, Chihuahua	
	and Guangdong	318
Fig. 14.3	A cross-border economic puzzle	319
Fig. 15.1	The tripoint of Germany, France, and Switzerland	324
Fig. 15.2	Café in Baarle-Nassau (Netherlands), on the border	
	with Belgium (right side)	326
Fig. 15.3	A tri-lingual road signpost located in a southernmost	
	resort of China	332
Fig. 16.1	The asymmetry of water pollution in a transnational	
	river system	343
Fig. 16.2	Pollution as a function of income level	
	(the EKC hypothesis)	345
Fig. 16.3	The environmental and economic relationships	
	(by group of samples)	346
Fig. 17.1	The US-Mexico border fence on the beach on the Pacific	365
~	The junction of Argentina, Brazil, and Paraguay	366
Fig. 18.1	Gini coefficient versus income level	396
Fig. 18.2	Gini coefficient versus religious diversity	397

List of Tables

Table 1.1	The principal rivers as inter-state borders, USA	7
Table 1.2	The first-class administrative regions, selected countries	14
Table 2.1	A comparison of China's three short-lived dynasties and	
	their predecessors	31
Table 2.2	Cross-border reliability scores (R) with respect to the	
	number of sub-areas (N)	39
Table 4.1	Economies with largest numbers of languages/religions	89
Table 4.2	Economies with least population shares of linguistic/	
	religious majority (%)	90
Table 4.3	Diversity examples	96
Table 6.1	The bidding results of the five children	
	(in thousand dollars)	128
Table 6.2	The allocation results of the five children	128
Table 6.3	How to achieve the fair division scheme: six methods	
	and their characteristics	131
Table 7.1	The prisoner's dilemma	139
Table 7.2	The 'chain store' paradox	141
Table 7.3	A win-win game	144
Table 7.4	The "widgets" for "money" game	145
Table 7.5	Agricultural productivity in the	
	Shanxi-Hebei-Shandong-Henan border region	152
Table 7.6	Output targets by product and by region (unit: million/kg)	153
Table 7.7	Optimal solutions to the production plans (unit: 1000 ha)	154
Table 7.8	Maximized outputs under different production plans	
	(unit: million yuan)	154
Table 9.1	Competing maritime and territorial claims over	
	the South China Sea, by country	199
Table 11.1	Comparative (dis)advantages of five techniques	
	on dispute settlement	237
Table 12.1	A detailed territorial exchange scheme between China	
	and Nepal	253

Table 12.2	The max number of lanes of US-Canadian	
	border ports of entry	264
Table 12.3	The max number of lanes of US-Mexican border ports	
	of entry	265
Table 13.1	Changes of wetland in the lower Tumen river area,	
	1964 and 2004	283
Table 13.2	Summary of China's current oil/gas fields ^a in the East	
	China Sea	286
Table 14.1	A comparison of selected cross-border development	
	and cooperation programs	306
Table 14.2	How cross-border cooperation works in Chihuahua	
	and Guangdong, 1993–2009	317
Table 15.1	Data on interprovincial floating population in Sanya	
	and other variables	333
Table 15.2	Regressions for the determinants of interprovincial	
	floating population in Sanya	334
Table 16.1	The health-based ambient air quality standards,	
	United States vs. Mexico	342
Table 16.2	Regressions for transnational water pollution	
	(chemical oxygen demand)	357
Table 18.1	Eastern versus Western cultures: values	383
Table 18.2	Eastern versus Western cultures: organizational patterns	386
Table 18.3	Eastern versus Western cultures: communication styles	392
Table 18.4	Cultural influences on income (re)distribution	396