CHANGES IN EUROPEAN ENERGY MARKETS

CHANGES IN EUROPEAN ENERGY MARKETS

What the Evidence Tells Us

FELICETTA IOVINO

University of Sannio, Italy

NICHOLAS TSITSIANIS

Queen Mary University of London, UK



United Kingdom – North America – Japan – India Malaysia – China Emerald Publishing Limited Howard House, Wagon Lane, Bingley BD16 1WA, UK

First edition 2020

Copyright © 2020 Emerald Publishing Limited

Reprints and permissions service

Contact: permissions@emeraldinsight.com

No part of this book may be reproduced, stored in a retrieval system, transmitted in any form or by any means electronic, mechanical, photocopying, recording or otherwise without either the prior written permission of the publisher or a licence permitting restricted copying issued in the UK by The Copyright Licensing Agency and in the USA by The Copyright Clearance Center. Any opinions expressed in the chapters are those of the authors. Whilst Emerald makes every effort to ensure the quality and accuracy of its content, Emerald makes no representation implied or otherwise, as to the chapters' suitability and application and disclaims any warranties, express or implied, to their use.

British Library Cataloguing in Publication Data

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

ISBN: 978-1-83909-110-0 (Print) ISBN: 978-1-83909-107-0 (Online) ISBN: 978-1-83909-109-4 (Epub)



ISOQAR certified Management System, awarded to Emerald for adherence to Environmental standard ISO 14001:2004.

Certificate Number 1985 ISO 14001



CONTENTS

List of Figures	i>
List of Tables	xvi
About the Authors	xix
1. The European Energy Markets: The Liberalization	
Processes	1
1.1 Introduction	1
1.1.1 First Energy Package	6
1.1.2 Second Energy Package	10
1.1.3 Third Energy Package	13
1.1.4 Fourth Energy Package	16
1.2 The Liberalization Processes in the Main	
European Countries	20
1.2.1 United Kingdom	23
1.2.2 Germany	25
1.2.3 France	28
1.2.4 Spain	30
1.3 Characteristics of European Retail Markets	32
1.3.1 Electricity Companies in the European	
Countries: An Overview	34
1.3.2 Gas Companies in the European	
Countries: An Overview	36
1.3.3 Electricity and Gas Companies in the	
Main European Countries	37

vi Contents

2.	Italian Energy Markets: Structure and Functioning	45
	2.1 Introduction	45
	2.2 Italian Production	48
	2.3 The Electricity and Gas Supply Chain	54
	2.4 Main Charges of the Different Phases	57
	2.5 The Regulated Market in Italy	58
	2.6 The Energy Bill in Italy	60
	2.7 Institutional Actors and Charges of Different	
	Phases	63
	2.8 Italian Electric and Gas Markets	70
	2.9 Different Organizations of the Electricity and	
	Gas Markets	72
	2.10 Conclusions	75
3.	The Methodology of the Research	79
	3.1 Introduction	79
	3.1.1 Research Methodology and Process	79
	3.2 The Research Onion	82
	3.3 Research Philosophy	83
	3.3.1 Research Philosophy: Positivism	
	(Objectivism)	84
	3.3.2 Research Philosophy: Realism (Factualism)	86
	3.3.3 Research Philosophy: Interpretivism	
	(Subjectivism or Anti-positivism)	87
	3.3.4 Research Philosophy: Pragmatism	
	(Actionism)	88
	3.4 Research Approach	89
	3.5 Research Strategy	90
	3.5.1 Grounded Theory Based on Archival	
	Research	91
	3.6 Time Horizon	92
	3.7 Data Collection and Analysis	93
	3.8 Conclusions	94

Contents

4.	The	Financial Performance of Energy Companies: A	
		ew of Literature	97
	4.1	Introduction	97
	4.2	Methodology	101
	4.3	Results	102
		4.3.1 Financial Statements Indices and Internal Characteristics of Energy Companies and Energy Related External Elements	102
		4.3.2 Effects of Gas Price and Oil Price	102
		Changes on Financial Performance	105
	4.4	Discussion	106
	4.5	Conclusions	108
5.	and	lysis of the Financial Performance of the Electricity Gas Companies: Empirical Evidence from the an Case	111
		Introduction	111
		Methodology	114
		Distribution of Italian Energy Companies	115
		5.3.1 Geographical Distribution	115
		5.3.2 Distribution of Business	118
	5.4	Analysis of the Indices	120
		5.4.1 Analysis of Current and Non-current	
		Assets	120
		5.4.2 Analysis of Intangibles Assets	132
		5.4.3 Profitability Analysis	14C
	5.5	Conclusions	147
Rei	erend	ces	149
Inc	lex		163

LIST OF FIGURES

Figure 1.1	Electricity Value Chain before and after Liberalization.	5
Figure 1.2	Natural Gas Value Chain before and after Liberalization.	6
Figure 1.3	Development of Number of Active Suppliers and Customers in Europe – Electricity.	33
Figure 1.4	Development of Number of Active Suppliers and Customers in Europe – Gas.	34
Figure 1.5	Germany: Total Number of Electricity and Gas Retailers to Final Consumers, 2003–2017.	37
Figure 1.6	Italy: Total Number of Electricity and Gas Retailers to Final Consumers, 2003–2017.	39
Figure 1.7	UK: Total Number of Electricity and Gas Retailers to Final Consumers, 2003–2017.	40
Figure 1.8	Spain: Total Number of Electricity and Gas Retailers to Final Consumers, 2003–2017.	40
Figure 1.9	France: Total Number of Electricity and Gas Retailers to Final Consumers, 2003–2017.	41

× List of Figures

Figure 2.1	Italian Electricity Production by Sources.	49
Figure 2.2	Net Italian Electricity Production by Sources.	49
Figure 2.3	Italian Natural Gas by Sources.	50
Figure 2.4	Italian Natural Gas by Sources 2008–2017, EUROSTAT.	51
Figure 2.5	Italian Natural Gas by Type of Sources.	51
Figure 2.6	Percentage of Electricity Production from Renewable Sources in Italy.	52
Figure 2.7	Italy Crude Oil Production and Consumption by Year 1980–2013.	53
Figure 2.8	Italy Dry Gas Production and Consumption by Year 1980–2013.	54
Figure 2.9	Geographical Distribution of Oil Reserves.	54
Figure 2.10	Geographical Distribution of Gas Reserves.	55
Figure 2.11	Disaggregation and Liberalization Electricity Chain.	55
Figure 2.12	Disaggregation and Liberalization Gas Chain.	55
Figure 2.13	Italian Gas Interconnection and Storage Capacities.	56
Figure A1	Italian Electricity MGP and Bilateral Contracts.	77
Figure A2	Gas MGP and Bilateral Contracts.	77
Figure A3	Italian Gas Market.	78
Figure A4	Italian Electricity and Gas Markets.	78

List of Figures xi

Figure 3.1	The Research Onion.	83
Figure 4.1	Electricity Traditional Value Chain.	99
Figure 4.2	Gas Traditional Value Chain.	99
Figure 4.3	New Electricity Chain, under the EU Directives.	99
Figure 4.4	New Gas Value Chain, under EU Directives.	99
Figure 4.5	Main Factors Affecting on Financial Performance of Energy Companies.	107
Figure 5.1	Distribution of Italian Energy Companies for Geographic Area.	115
Figure 5.2	Distribution of Italian Electricity Companies by Geographic Area.	116
Figure 5.3	Distribution of Italian Gas Companies by Geographic Area.	116
Figure 5.4	Resident Population in Italy for Geographical Area.	117
Figure 5.5	Distribution of Italian Energy Companies for Business.	119
Figure 5.6	Trend of Total Current Assets/Total Assets for Electricity and Gas Incumbent Companies.	122
Figure 5.7	Trend of Total Non-current Assets/Total Assets for Electricity and Gas Incumbent Companies.	123
Figure 5.8	Trend of Total Current Assets/Total Assets for Electricity and Gas Big 10 Companies.	123

xii List of Figures

Figure 5.9	Irend of Iotal Non-current Assets/Iotal Assets for Electricity and Gas Big 10 Companies.	124
Figure 5.10	Trend of Total Current Assets/Total Assets for Electricity and Gas Minor Companies.	124
Figure 5.11	Trend of Total Non-current Assets/Total Assets for Electricity and Gas Minor Companies.	125
Figure 5.12	Trend of Current Liabilities/Total Liabilities for Electricity and Gas Incumbent Companies.	125
Figure 5.13	Trend of Non-current Liabilities/Total Liabilities for Electricity and Gas Incumbent Companies.	126
Figure 5.14	Trend of Current Liabilities/Total Liabilities for Electricity and Gas Big 10 Companies.	127
Figure 5.15	Trend of Non-current Liabilities/Total Liabilities for Electricity and Gas Big 10 Companies.	127
Figure 5.16	Trend of Current Liabilities/Total Liabilities for Electricity and Gas Minor Companies.	128
Figure 5.17	Trend of Non-current Liabilities/Total Liabilities for Electricity and Gas Minor Companies.	128
Figure 5.18	Trend of Non-current Liabilities/Total Assets for Electricity and Gas Incumbent Companies.	129

List of Figures xiii

Figure 5.19	Trend of Current Liabilities/Equity for Electricity and Gas Incumbent Companies.	130
Figure 5.20	Trend of Non-current Liabilities/Total Assets for Electricity and Gas Big 10 Companies.	131
Figure 5.21	Trend of Current Liabilities/Equity for Electricity and Gas Big 10 Companies.	132
Figure 5.22	Trend of Non-current Liabilities/Total Assets for Electricity and Gas Minor Companies.	132
Figure 5.23	Trend of Current Liabilities/Equity for Electricity and Gas Minor Companies.	133
Figure 5.24	Trend of Intangible Assets/Total Non- current Assets for Incumbent Electricity and Gas Companies.	133
Figure 5.25	Trend of Intangible Assets/Total Assets for Incumbent Electricity and Gas Companies.	134
Figure 5.26	Trend of Intangible Assets/Total Non- current Assets for Big 10 Electricity and Gas Companies.	135
Figure 5.27	Trend of Intangible Assets/Total Assets for Big 10 Electricity and Gas Companies.	135
Figure 5.28	Trend of Intangible Assets/Total Non- current Assets for Minor Companies Electricity and Gas Companies.	136
Figure 5.29	Trend of Intangible Assets/Total Assets for Minor Companies Electricity and Gas Companies.	136

xiv List of Figures

Figure 5.30	Trend of Goodwill/Total Non-current Assets for Incumbent Electricity and Gas Companies.	137
Figure 5.31	Trend of Goodwill/Total Assets for Incumbent Electricity and Gas Companies.	137
Figure 5.32	Trend of Goodwill/Total Non-current Assets for Big 10 Electricity and Gas Companies.	138
Figure 5.33	Trend of Goodwill/Total Assets for Big 10 Electricity and Gas Companies.	139
Figure 5.34	Trend of Goodwill/Total Non-current Assets for Minor Electricity and Gas Companies.	139
Figure 5.35	Trend of Goodwill/Total Assets for Minor Electricity and Gas Companies.	140
Figure 5.36	Trend of Net Income/Sales for Incumbent Electricity and Gas Companies.	141
Figure 5.37	Trend of EBIT/Total Non-current Liabilities + Equity for Incumbent Electricity and Gas Companies.	141
Figure 5.38	Trend of EBITDA/Total Non-current Liabilities + Equity for Incumbent Electricity and Gas Companies.	142
Figure 5.39	Trend of EBITDA/Total Debt + Equity for Incumbent Electricity and Gas Companies.	142
Figure 5.40	Trend of Net Income/Sales for Big 10 Electricity and Gas Companies.	143

List of Figures xv

Figure 5.41	Trend of EBIT/Total Non-current Liabilities + Equity for Big 10 Electricity and Gas Companies.	144
Figure 5.42	Trend of EBITDA/Total Non-current Liabilities + Equity for Big 10 Electricity and Gas Companies.	144
Figure 5.43	Trend of EBITDA/Total Debt + Equity for Big 10 Electricity and Gas Companies.	145
Figure 5.44	Trend of Net Income/Sales for Minor Electricity and Gas Companies.	145
Figure 5.45	Trend of EBIT/Total Non-current Liabilities + Equity for Minor Electricity and Gas Companies.	146
Figure 5.46	Trend of EBITDA/Total Non-current Liabilities + Equity for Minor Electricity and Gas Companies.	146
Figure 5.47	Trend of EBITDA/Total Debt + Equity for Minor Electricity and Gas Companies.	147

LIST OF TABLES

Table 1.1	Main Phases of the Energy Sector Reform.	5
Table 1.2	Eligible Electricity Consumers during First Package.	7
Table 1.3	Clean Energy for All Europeans Package – Legislative Process.	17
Table 1.4	European Energy Directives.	21
Table 1.5	Number of Main Electricity and Gas Retailers and Their Cumulative Shares, 2017.	42
Table 3.1	Comparison between Positivism and Interpretivism.	88
Table 3.2	Major Differences between Deductive and Inductive Approaches.	90

ABOUT THE AUTHORS

Felicetta Iovino is a Fellow at University of Sannio and Visiting Researcher at Queen Mary University of London. She has a PhD in Public Sector Management. Her research interests include financial performance, energy policy and companies, tourism. She is a reviewer and member of editorial board of several international journals.

Nicholas Tsitsianis is a Senior Lecturer at Queen Mary University of London and he has obtained his PhD from Brunel University. His research focuses on financial and accounting performance, corporate governance as well as well-being. His research has been published in journals, books and has made contributions to public policies.