Risk Management in Public Administration

Edited by
Konrad Raczkowski



Konrad Raczkowski Editor

Risk Management in Public Administration



Editor Konrad Raczkowski University of Social Sciences Warsaw, Poland

ISBN 978-3-319-30876-0 ISBN 978-3-319-30877-7 (eBook)

Library of Congress Control Number: 2016946836

© The Editor(s) (if applicable) and The Author(s) 2017

This work is subject to copyright. All rights are solely and exclusively licensed 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.

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.

The publisher, the authors and the editors are safe to assume that the advice and information in this book are believed to be true and accurate at the date of publication. Neither the publisher nor the authors or the editors give a warranty, express or implied, with respect to the material contained herein or for any errors or omissions that may have been made.

Cover illustration: @ Mike Stone/Alamy Stock Photo

Printed on acid-free paper

This Palgrave Macmillan imprint is published by Springer Nature The registered company is Springer International Publishing AG The registered company address is: Gewerbestrasse 11, 6330 Cham, Switzerland

List of Figures

rig. I.I	Dependencies between risk, information and uncertainty,	
	against the background of time	9
Fig. 1.2	Types of risks in economic activities of private sector	
	entities	16
Fig. 1.3	Risk management process in public institutions	19
Fig. 1.4	Distribution of risk management values based on INFORM	
	in selected world countries	33
Fig. 4.1	Risk in international trade	107
Fig. 4.2	Risks in foreign export	108
Fig. 5.1	Fundamental processes carried out in public safety by	
	their management function	126
Fig. 5.2	Risk multidimensionality	134
Fig. 5.3	Assessment of the significance of factors that influence	
	effectiveness of activities accomplished within collaboration in	
	public safety management (L legal dimension, O organisationa	1
	dimension, R relational dimension, S situational dimension,	
	E environmental dimension.)	138
Fig. 6.1	Different sense of risk definition	153
Fig. 6.2	Characteristics of EW information	167
Fig. 6.3	The concept of EW tasks for identifying risks supporting	
	decision-making processes in a machine-building enterprise	178
Fig. 6.4	Scheme for creating systemic models of EW situation	182

X List of Figures

Fig. 7.1	Word cloud for social enterprise (Created with http://	
O	www.wordle.net)	200
Fig. 8.1	Individuals (% of population) having ordered/bought	
O	goods and services for private use over the Internet in	
	the last three months of 2014	234
Fig. 8.2	Users of e-administration in Europe in 2014	235
Fig. 8.3	Online banking penetration in 2014	237
Fig. 8.4	Technical and non-technical information securities	240
Fig. 9.1	Features of Intellectual Capital in the context of	210
1.6.	competitive advantage	260
Fig 9.2	Chosen fields of competitive advantage generated by	200
116 7.2	Intellectual Capital	261
Fig. 9.3	Risk management process	266
Fig. 9.4	The model of ability of IC to gain a competitive	200
11g. 7.4	advantage on the market	270
Fig. 9.5	Load factors statistics calculated for the IC ability model	278
Fig. 10.1	GRID method elements	304
Fig. 11.1	Means of clusters of general government sector	340
	Differentiation of clusters for the local government sector	350
Fig. 11.2		3)(
Fig. 12.1	Average annual rates of change in the value of life	
	insurers' investment portfolios and life gross written	277
E: 12.2	premiums in EU countries in 2005–2013 (%)	372
Fig. 12.2	Average annual rates of change in the value of non-life	
	insurers' investment portfolios and non-life gross written	272
F: 12.2	premiums in EU countries in 2005–2013 (%)	373
Fig. 12.3	Evolution of life insurers' investment portfolios in EU	27
E: 10 /	countries in 2007 (left), 2010 (middle), 2013 (right)	374
Fig. 12.4	Evolution of non-life insurers' investment portfolio	
	in EU countries in 2007 (left), 2010 (middle) and	277
Et. 10.5	2013 (right)	375
Fig. 12.5	Change in proportion of bonds (in %) in life insurers'	
	(left) and non-life insurers' (right) investment portfolios	-
	in selected EU countries in 2013 in comparison to 2007	378
Fig. 12.6	Change in proportion of shares (in %) in life insurers'	
	(left) and non-life insurers' (right) investment portfolios	
-	in selected EU countries in 2013 in comparison to 2007	379
Fig. 12.7	The structure of bonds in life insurers' (left) and non-	
	life insurers' (right) investment portfolios in 2013 (%)	381

Fig. 12.8	The structure of insurers' portfolios of government	
	bonds in the EU by country of allocation in 2011 (in %)	382
Fig. 12.9	Aggregated proportions of government debt securities	
	issued by selected European Union countries in insurers'	
	investment portfolios (by country of issuer) in 2011	383
Fig. 14.1	GDP growth ratio for the Czech Republic, Poland, and	
	Slovakia in the last 10 years	412
Fig. 14.2	Gross VAT revenues, net VAT revenues and VAT	
	refund values between 2004 and 2013	416
Fig. 14.3	The ratio of VAT tax refund values to gross VAT	
	revenues, between 2004 and 2014 (left axis)	417
Fig. 14.4	Net VAT tax revenues in national currencies 2009–2014	
0	for: Czech Republic in KCZ (left axis) and Slovakia tin	
	EUR (right axis)	417
Fig. 14.5	C-efficiency 1, C-efficiency 2, VRR measures together	
1.6. 11.0	with const/ratio (proportional to the inverse ratio of VAT	
	refund values to gross VAT revenues)	422
	iciuliu values to gloss vili icycliues)	144

List of Figures

хi

List of Tables

Table 1.1	Scientific trends in defining risk: overview of concepts	6
Table 1.2	Risk management standards: 12 key characteristics	24
Table 1.3	Threats to institutional risk management: the systemic	
	approach	30
Table 1.4	Distribution of detailed risk management indices,	
	based on INFORM in the selected world countries	34
Table 2.1	Stages of development of mutual relations between	
	the EU and USA	46
Table 2.2	NTB index by branches (from 0 to 100)	56
Table 2.3	Economic relations between the EU and US markets	
	in 2011, 2012 and 2013 (trade in industrial foods,	
	services and capital transfers in mld euro)	57
Table 2.4	Five main trade partners of the EU and the USA:	
	export, import and balance in 2013 (mld € and mld \$)	58
Table 2.5	Ten biggest world economies	59
Table 2.6	Changes of GNP (in mln euro) in 2027 assuming	
	limited liberalization and a 20 % external impulse	59
Table 2.7	Turnover EU with the USA, basic indicators	60
Table 2.8	Greece macro indicators (public debt, unemployment	
	and rates of growth) 2007-2015	66
Table 2.9	Financial obligations of Greece July-December	
	2015 (in bln euro)	67
Table 3.1	The codification system of the credit rating assessment	79

xiv List of Tables

Table 3.2	The Spearman correlation coefficients	80
Table 3.3	Impact of European countries' credit ratings on	
	the CDS premium	81
Table 3.4	The impact of credit rating on the CDS premium,	
	taking into account the level of speculative and	
	investment notes	83
Table 3.5	The impact of credit rating on the CDS premium	
	while taking into account the level of speculative	
	and investment notes by using static panel data models	84
Table 3.6	The impact of S&P's long-term issuer credit ratings	
	on the CDS premium, using dynamic panel data models	85
Table 3.7	The impact of Moody's long-term issuer credit ratings	
	on the CDS premium by using dynamic panel data models	86
Table 3.8	The impact of S&P's long-term issuer credit ratings on	
	the CDS premium, using dynamic panel data models for	
	the moment of countries' credit ratings change	87
Table 3.9	The impact of S&P's long-term issuer credit ratings on	
	the CDS premium, using static panel data models for	
	the moment of countries' credit ratings change	87
Table 3.10	The impact of Moody's long-term issuer credit ratings on	
	the CDS premium, using dynamic panel data models for	
	the moment of countries' credit ratings change	88
Table 3.11.	The impact of Moody's long-term issuer credit ratings on	
	the CDS premium by using static panel data models for	
	the moment of countries' credit ratings change	89
Table 5.1	Primary hazards likely to occur in sub-processes of	
	public safety	127
Table 5.2	Impact of relational factors on relational risk	136
Table 7.1	Definitions of social enterprise	198
Table 7.2	Table of responses regarding risks in the activity of	
	social enterprises	208
Table 7.3	Main risks in the activity of social enterprises	213
Table 8.1	Acceptable delivery time for the product purchased online	242
Table 8.2	Preferred payment methods for online shopping in 2014	244
Table 8.3	Level of Internet skills among EU citizens in 2013	
	(% of citizens aged 16–74)	247
Table 9.1	Classification of risks associated with Intellectual Capital in	
	organizations	264

	List of Tables	XV
Table 9.2	Principles of ICRM	267
Table 9.3	Listing of hypotheses and variables	271
Table 9.4	List of variables and positions examining the ability of	
	IC to gain competitive advantage in detailed factors	273
Table 9.5	Statistics of fit indices for individual factors of IC	
	ability to gain a competitive advantage	276
Table 9.6	Statistics of fit indices for complete model of IC	
	ability to gain a competitive advantage	277
Table 10.1	UAI by G. Hofstede for selected countries	296
Table 10.2	Identification of regulatory risk in the financial sector	300
Table 10.3	Measurement of regulatory risk	301
Table 10.4	System of regulations in the conditions of law risk	
	for a draft regulation on municipal waste utilization	305
Table 10.5	Adopted concept of regulation and elements of the	
	regulatory risk management process	308
Table 11.1	Definition of financial distress in public and	
	private entities	321
Table 11.2	Risk factors of financial distress based on	
	literature review	327
Table 11.3	Extended approach to indicators used in fiscal	
	distress analysis	330
Table 11.4	Countries and years with a fiscally distressed status (1)	
	and a not fiscally distressed status (0) for the general	
	government sector	335
Table 11.5	Elements of clusters for the general government sector	337
Table 11.6	Basic descriptive statistics of clusters for the general	
	government sector	339
Table 11.7	Evaluation of parameters done with GDA for the	
	general government sector (cluster 1)	341
Table 11.8	The means of the predictors in the fiscally distressed	
	group (1) and the not fiscally distressed group (0) for	
	the general government sector (cluster 1)	342
Table 11.9	Multivariate tests of significance for the general	
	government sector (cluster 1)	342
Table 11.10	Classification matrix to identify fiscal distress (1) or	
	a lack of fiscal distress (0) for the general government	
	sector (cluster 1)	343

xvi List of Tables

Table 11.11	Evaluation of parameters done with GDA for the	
	general government sector (cluster 2)	344
Table 11.12	The means of the predictors for the fiscally distressed	
	group (1) and the not fiscally distressed group (0) for the	
	general government sector (cluster 2)	345
Table 11.13	Multivariate tests of significance for the general	
	government sector (cluster 2)	345
Table 11.14	Classification matrix to identify fiscal distress (1) or a	
	lack of fiscal distress (0) for the general government	
	sector (cluster 2)	345
Table 11.15	Units and years with a fiscally distressed status (1) or a	
	not fiscally distressed status (0) for the local government	
	sector	346
Table 11.16	Elements of clusters for the local government sector	347
Table 11.17	Basic descriptive statistics of clusters for the local	
	government sector	349
Table 11.18	Evaluation of parameters done with GDA for the local	
	government sector (cluster 1)	351
Table 11.19	The means of the predictors for the fiscally distressed	
-	group (1) and the not fiscally distressed group (0) for	
	the local government sector (cluster 1)	352
Table 11.20	Multivariate tests of significance for the local government	
	sector (cluster 1)	352
Table 11.21	Classification matrix to identify fiscal distress (1) or a	
	lack of fiscal distress for the local government sector	
	(cluster 1)	352
Table 11.22	Evaluation of parameters done with GDA for local	
	government sector (cluster 2)	353
Table 11.23	The means of the predictors for the fiscally distressed	
	group (1) and the not fiscally distressed group (0) for	
	the local government sector (cluster 2)	354
Table 11.24	Multivariate tests of significance for the local government	
	sector (cluster 2)	354
Table 11.25	Classification matrix to identify fiscal distress (1) or a	
	lack of fiscal distress (0) for the local government	
	sector (cluster 2)	355
Table 12.1	The structure of investment portfolio allocation in	
	the life sector in EU countries in 2005–2013	377

	List of Tables	xvii
Table 12.2	The structure of investment portfolio allocation	
	in the non-life sector in EU countries in 2005–2013	378
Table 13.1	The OECD classification of taxes	498
Table 13.2	Total taxes as % of total taxation, 1995-2012	499
Table 13.3	Major types of taxes (indirect, direct, VAT, PIT) as	
	a percentage of total taxation	401
Table 13.4	VAT and PIT as percentage of GDP, 1995–2012	403
Table 13.5	Numbers of tax brackets in selected EU	
	member states, 1981-2014	405
Table 13.6	Top tax rates in EU member states, 1995-2014	406
Table 13.7	Tax-free allowance (income tax threshold) in selected	
	EU member states in 2006 and 2014 (in euro terms at the	
	exchange rate on the last day of the year)	407
Table 14.1	Population and development statistics for the Czech	
	Republic, Poland, and Slovakia	412
Table 14.2	Comparison of tax structure for selected EU countries	
	(values are expressed in national currencies)	414
Table 14.3	VAT to GDP/GNI ratios	418
Table 14.4	VRR, VAT Gaps for selected EU countries	423
Table 14.5	VAT fraud schemes. Scheme no 1 (mostly UK).	
	Schemes 2 and 3 (mostly Poland)	425

Introduction

Although risk is a feature that is deeply rooted in the practice of economic trading, there is still a wide knowledge gap as far as the determination of the theoretical rules underlying the creation and management of risk involved in individual economic actions is concerned. This is also, and perhaps particularly, true for the public sector, where individual management functions are burdened with constant strategic and operational risk that is political, economic, social, technological, legal, and environmental in character— and thus influenced by volatile cycles. There are two primary reasons behind this. The first is related to the fact that it is not possible to consider risk in fully logical terms, if the assumptions of neoclassical economics are not rejected or challenged, especially in regard to the rationality of human behaviour. The second is the existence of an intense causal relationship between taking risk and gaining an advantage, as well as incurring irrational losses in the case of excessive acceptance of risk under the circumstances of limited possibilities of risk dispersion. Additionally, we are faced with the phenomenon of incomplete information, as developed by the agency theory or transformed transaction costs theory within the framework of new institutional economics. It is also inconceivable to discuss risk management in the economy if we disregard individual management functions understood in classic terms, such as planning, organizing, managing, and controlling, which are applied in the theory of rationality of crime that is increasingly common in contemporary business relations. It is thus justified to claim that an economic entity strives for an increase in individual and/or collective utility in the contemporary economy, which is marked by certain behavioural and information asymmetry. Therefore, the objective of this book is to demonstrate the multifaceted nature of risk management in public administration in a form of an enrichment of finance theory, the theory of economics, and management theory, which might be pragmatically reflected in real economic trading and public administration. One could even claim that risk management in public administration should identify and constantly develop the capacity of an organization in order to achieve the result - measured with the efficiency of operation - of the capability of cooperation with the real economy - under the circumstances of continuous decrease in the number of court cases between the citizen and the state. At the same time, accounting standards for calculating budgetary expenses or proper integration of systems and processes, which may not stray from the global reality, should be sustained.

In the economic and financial context, the significance of the lack of an appropriate approach to economic risk management in public administration is greater than ever before. This is because public administration may be the creator of public policies which establish the organizational and economic order and simultaneously acts in the vital national interest, and takes care of business competition, social security, and the fair redistribution of incomes. Public administration is supposed to ensure that citizens have access to desired services and must, at the same time, strive for balance in decision-making situations where it is profitable to take extreme risks, if it may enable success. Such tasks may not be delegated to the free market exclusively in the hope that it will spontaneously redress social inequalities or take care of sustainable development.

Due to that fact, public administration must understand contemporary business models that are characterised by an increasing level of optimization in terms of limiting the tax base and/or attempting to introduce unfair competition on the market. It must understand that the power of international corporations is rising and active economic policies run by sovereign countries are becoming more and more limited, usually by means of indirect mechanisms of exerting influence and win-lose (or less often win-win) relationships. Such administrations must be aware that it

is not the same thing for certain entities to accept compliance rules and to implement them in their practical business activity. Therefore, a question emerges whether if there is a lack of compliance of the accepted rules and principles with an actual activity, it is possible to limit or eliminate risk at all? The answer is clear—of course it is possible to limit or eliminate risk—but only provided that the administration adopts various perspectives of thinking and decision-making with respect to the same entities, situations, and events, which will reflect the particular course of action in the process of evaluation. Not everyone is a law-abiding citizen, nor are all economic entities, while the manner or thinking and acting of two even declaratively analogous entities may be radically different due to pursuance of secret objectives.

The following book fills the cognitive gap with respect to the possibilities of risk management in public administration and, due to its economic character enriched with a considerable number of case studies, it may indicate trends in risk development both from a micro- and macro-perspective. The book is comprised of fourteen chapters; each is preceded by a summary and followed by conclusions. Chapter 1 presents the theory underlying risk and risk management on micro- and macroeconomic levels. Chapter 2 contains an interesting description of the elimination of currency risk in the Transatlantic Trade and Investment Partnership by way of inserting a clause combining the Euro and the Dollar. Whereas an illustration of changes that credit ratings undergo due to the influence of credit spreads is provided in Chap. 3. Chapter 4 presents the elements of risk management, especially with reference to the public financial sector. The next chapter (Chap. 5) contains a description of the possibilities for management of public safety based on the concept of risk processes. Chapters 6, 7 and 8 elaborate on risk in economic activity in the light of the early warning system within the framework of the social economy and operations on the Internet. The next chapters (Chaps. 9, 10, 11 and 12) are concerned with the risk involved in intellectual capital, bank regulatory risk in the EU, the financial distress of public sector entities, and systemic risk in the insurance sector. The final two chapters (Chaps. 13 and 14) elaborate on extremely important issues in the contemporary economy, which are concentrated around the European tax gap in personal income taxes and VAT carousel fraud in selected European States.

xxii Introduction

As the scientific editor, I hope that the book presented to you will explain what risk management in the public administration and economy is, as there are still no widely acceptable standard constructions and scientific laws which would be, first and foremost, approved by the majority of researchers and simultaneously implemented in the practices of economic entities.

Konrad Raczkowski

Contents

1	Really Mean? Konrad Raczkowski and Piotr Tworek	1
2	Elimination of Exchange Rate Risk in TTIP by Inclusion of a Clause Linking Dollar and Euro Katarzyna Żukrowska	43
3	The Effect of Countries' Credit Ratings on Credit Default Swap Spreads Patrycja Chodnicka-Jaworska	71
4	Risk Analysis as an Instrument of Public Management Marta Postula	93
5	Multidimensionality of Risk in Public Safety Management Processes Barbara Kożuch and Katarzyna Sienkiewicz-Małyjurek	115

6	Early Warning Concept in Identifying Risks in Business Activity Katarzyna Dohn, Wojciech Zoleński, and Adam Gumiński	149
7	Risk Perception in the Activity of Social Enterprises Martyna Wronka-Pośpiech, Aldona Frączkiewicz-Wronka, and Konrad Laska	189
8	Identification of Risks Related to the Operations in the Internet Sylwia Wojciechowska-Filipek and Zbigniew Ciekanowski	227
9	Intellectual Capital Risk Management for Knowledge- Based Organizations Jolanta Jurczak	257
10	Regulatory Risk in the EU Banking Sector Stanisław Kasiewicz and Lech Kurkliński	283
11	The Financial Distress of Public Sector Entities, Causes and Risk Factors. Empirical Evidence from Europe in the Post-crisis Period Magdalena Ziolo, Małgorzata Porada-Rochon, and Elżbieta Szaruga	315
12	Impact of Insurance Companies' Investment Policy on Risk Management in the Public Sector Teresa Czerwińska	361