

# **MATHEMATICAL ECONOMICS**

**10(17)**



**The Publishing House  
of Wrocław University of Economics  
Wrocław 2014**

Reviewers cooperating with the journal

*Maria Balcerowicz-Szkutnik, Alessandro Barbiero, Francesco Bosello, Lucio De Capitani,  
Mirko Cesarini, Jacek Cukrowski, Igor N. Dubina, Pier Alda Ferrari, Vladimir Gazda,  
Alessandro De Gregorio, Francesca Greselin, Giancarlo Manzi, Marian Matłoka,  
Jerzy Mika, Anatol Pilawski, Angiola Pollastri, Francesco Porro, Giuseppe Porro,  
Emanuela Raffinetti, Nadia Solaro, Tadeusz Stanis, Achille Vernizzi*

Copy-editing

*Elżbieta Macauley, Tim Macauley*

Proof reading

*Barbara Cibis*

Typesetting

*Elżbieta Szlachcic*

Cover design

*Robert Mazurczyk*

Front cover painting: Paris – Petit Pont  
(private collection)

Information of submitting and reviewing paper is available on  
the Publishing House's websites  
[www.me.ue.wroc.pl](http://www.me.ue.wroc.pl); [www.wydawnictwo.ue.wroc.pl](http://www.wydawnictwo.ue.wroc.pl)

The publication is distributed under the Creative Commons Attribution 3.0  
Attribution-NonCommercial-NoDerivs CC BY-NC-ND



The journal is indexed at:  
BazEkon [www.kangur.uek.krakow.pl/bazaekon/nowy/index.php](http://www.kangur.uek.krakow.pl/bazaekon/nowy/index.php)  
CEJSH [www.cejsh.icm.edu.pl](http://www.cejsh.icm.edu.pl)  
EBSCO [www.ebscohost.com](http://www.ebscohost.com)

This publication is available at: [www.journal.ue.wroc.pl](http://www.journal.ue.wroc.pl), [www.me.ue.wroc.pl](http://www.me.ue.wroc.pl), [www.ibuk.pl](http://www.ibuk.pl)

© Copyright by Wrocław University of Economics  
Wrocław 2014

ISSN 1733-9707  
e-ISSN 2450-1131

The original version: printed

## TABLE OF CONTENTS

<b>Sabina Denkowska</b>	
Controlling the effect of multiple testing in Big Data .....	5
<b>Stanisław Heilpern</b>	
Multivariate measures of dependence based on copulas .....	17
<b>Janusz Łyko, Antoni Smoluk</b>	
On maximal social preference .....	33
<b>Zbigniew Michna</b>	
The bullwhip effect in the AR(1) demand structure .....	53
<b>Paweł Siarka</b>	
Exposure at default. The problem of its estimation in the context of capital requirements .....	61
<b>Grzegorz Sitek</b>	
Modeling income on the basis of distribution mixture .....	79
<b>Małgorzata Szerszunowicz</b>	
On the search for conditions for production process optimization ...	91
<b>Andrzej Wilkowski</b>	
Internet security .....	103