

BIALYSTOK UNIVERSITY OF TECHNOLOGY
FACULTY OF MANAGEMENT



ISMSME
International Society for Manufacturing,
Service and Management Engineering

ECONOMICS AND MANAGEMENT

EKONOMIA I ZARZĄDZANIE

VOLUME 8 • ISSUE 3 • 2016

FREQUENCY

ECONOMICS AND MANAGEMENT
is published quarterly since 1998

COPYRIGHTS ©

Białystok University of Technology
All rights reserved / Białystok 2016

PUBLISHER

Białystok University of Technology
Wiejska 45A, 15-351 Białystok, Poland

PRINTING AND BINDING

Białystok University of Technology Publisher
Oficyna Wydawnicza Politechniki Białostockiej

Wiejska 45C, 15-351 Białystok, Poland
www.pb.edu.pl/oficyna-wydawnicza
oficyna.wydawnicza@pb.edu.pl

EDITOR-IN-CHIEF

JOANNA EJDYS

Białystok University of Technology
Faculty of Management
Wiejska 45A, 15-351 Białystok, Poland
Phone: (+4885) 746 9825
Fax: (+4885) 746 9835
e-mail: j.ejdy@pb.edu.pl

SUBMISSION

Papers for submission should be prepared
according to the *Authors Instructions* available
at www.jem.pb.edu.pl

All papers should be submitted through
the electronic submission system

DEPUTY EDITORS-IN-CHIEF

ŁUKASZ NAZARKO
e-mail: l.nazarko@pb.edu.pl

KATARZYNA A. KUŹMICZ
e-mail: k.kuzmicz@pb.edu.pl

EDITORIAL OFFICE SECRETARY

DANUTA SZPILKO

Białystok University of Technology
Faculty of Management
Wiejska 45A, 15-351 Białystok, Poland
Phone: (+4885) 746 9880
Fax: (+4885) 663 1988
e-mail: d.szpilko@pb.edu.pl

EDITORIAL OFFICE

Białystok University of Technology
Wiejska 45A, 15-351 Białystok, Poland
Phone: (+4885) 746 9825
Fax: (+4885) 746 9835
e-mail: zneiz@pb.edu.pl
www.jem.pb.edu.pl

TECHNICAL EDITORS

KRZYSZTOF STEPANIUK
e-mail: k.stepaniuk@pb.edu.pl

TOMASZ TROCHIMCZUK
e-mail: t.trochimczuk@pb.edu.pl

ANDRZEJ IWANIUK
e-mail: a.iwaniuk@pb.edu.pl

EDITORIAL REVIEW BOARD

Editors

Witold Łojkowski
Production engineering

Katarzyna Halicka
Logistics management

Wiesław Urban
Manufacturing and service management

Jerzy Paszkowski
Organisation management

Romuald Ziółkowski
Tourism economics

Zbigniew Korzeb
Economics and politics

Katarzyna Dębkowska
Statistical Editor

Katarzyna Kuźmicz
Erling Hesla
Justyna Kozłowska
Jūratė Griškėnaitė
Aleksandra Gulc
Linguistic Editors

INTERNATIONAL ADVISORY BOARD

Head

Joanicjusz Nazarko
Białystok University of Technology, Poland

Members
Joanna Cygler
Warsaw School of Economics, Poland

Casimir Dadak
Hollins University, Virginia, USA

Józef Gawlik
Cracow University of Technology, Poland

Romualdas Ginevičius
Vilnius Gediminas Technical University, Lithuania

Zbigniew Korzeb
Białystok University of Technology, Poland

Barbara Kryk
Szczecin University, Poland

Juan Jose Garcia Machado
University of Huelva, Spain

Alojzy Nowak
Warsaw University, Poland

Volodymyr Onyshchenko
Poltava National Technical Yuri Kondratyuk University, Ukraine

Magdalena Osińska
Nicolaus Copernicus University, Toruń, Poland

Aleksander Panasiuk
Szczecin University, Poland

Henryk Sasinowski
Białystok University of Technology, Poland

Włodzimierz Sroka
The University of Dąbrowa Górnicza, Poland

Stefan Trzcieliński
Poznan University of Technology, Poland

Leonas Ustinovičius
Vilnius Gediminas Technical University, Lithuania

Andrzej Wasiak
Białystok University of Technology, Poland

Kazimierz Zaráś
Université du Québec en Abitibi-Témiscamingue,
Canada of the Russian Academy of Sciences,
St. Petersburg, Russia

Samuel Yen-Liang Yin
National Taiwan University, Taiwan
Beijing University, Beijing, China

Edmundas Kazimieras Zavadskas
Vilnius Gediminas Technical University, Vilnius, Lithuania

Hongyan Zhang
The University of Toledo, Toledo, USA

TABLE OF CONTENTS

Iga Rudawska

Approaches to evaluating efficiency and quality of integrated health care: state of the evidence.....7

Krzyszyna Zimnoch

Capital accumulation in a region. Cooperatives versus foreign direct investments15

Anetta Barska, Janina Jędrzejczak - Gas

The concept for the development of a functional area illustrated by the case of the Functional Area of the Oder Communes.....25

Aneta Pachura

Empowerment in the open innovation concept.....35

Ryszard Pukała

Use of neural networks in risk assessment and optimization of insurance cover in innovative enterprises....43

Katarzyna Szczepańska-Woszczyzna, Joanna Kurowska-Pysz

Sustainable business development through leadership in SMEs57

Dariusz Kiełczewski, Anna Matel, Tomasz Poskrobko

Project management in behavioural perspective – cognitive biases in the formulation of the aim of the project.....70

Artur Czech, Jerzy Lewczuk

Taxonomic and econometric analysis of road transport development in Poland – the voivodship approach.....79

Svetlana Manzhos

The situation of bank lending in Ukraine: current problems and prospects of recovery.....89

