JOURNAL of Applied Economic Sciences

JAES
Journal of Applied Economic Sciences

Volume VIII
Issue 1(23)

Spring 2013

I.S.S.N. 1843-6110

Publisher:

Spiru Haret University
Faculty of Financial Management Accounting Craiova
No 4. Brazda lui Novac Street, Craiova, Dolj, Romania
Phone: +40 251 598265 Fax : + 40 251 598265

European Research Center of Managerial Studies in Business Administration
http://www.cesmaa.eu
Email: jaes_secretary@yahoo.com *Web:* http://cesmaa.eu/journals/jaes/index.php

Journal of Applied Economic Sciences

Journal of Applied Economic Sciences is a young economics and interdisciplinary research journal, aimed to publish articles and papers that should contribute to the development of both the theory and practice in the field of Economic Sciences.

The journal seeks to promote the best papers and researches in management, finance, accounting, marketing, informatics, decision/making theory, mathematical modelling, expert systems, decision system support, and knowledge representation. This topic may include the fields indicated above but are not limited to these.

Journal of Applied Economic Sciences be appeals for experienced and junior researchers, who are interested in one or more of the diverse areas covered by the journal. It is currently published quarterly with three general issues in Winter, Spring, Summer and a special one, in Fall.

The special issue contains papers selected from the International Conference organized by the European Research Centre of Managerial Studies in Business Administration (www.cesmaa.eu) and Faculty of Financial Management Accounting Craiova in each October of every academic year. There will prevail the papers containing case studies as well as those papers which bring something new in the field. The selection will be made achieved by:

Journal of Applied Economic Sciences is indexed in SCOPUS www.scopus.com, CEEOL www.ceeol.org, EBSCO www.ebsco.com, RePEc www.repec.org and in IndexCopernicus www.indexcopernicus.com databases.

The journal will be available on-line and will be also being distributed to several universities, research institutes and libraries in Romania and abroad. To subscribe to this journal and receive the on-line/printed version, please send a request directly to jaes_secretary@yahoo.com.

Journal of Applied Economic Sciences

ISSN 1843-6110

Table of Contents

VOLATILITY SPILLOVER AND CHANNELS TRANSMISSION DURING SUBPRIME CRISIS: EMPIRICAL STUDY OF USA STOCK MARKET AND OTHER DEVELOPED STOCK MARKETS

Ghorbel ACHRAF
ghorbelachraf@yahoo.fr
Younes BOUJELBENE[1]
University of Sfax, **Tunisia**
boujelbeneyounes@yahoo.fr
Chouchene ISSAM[2]
University of Sfax, **Tunisia**
issamaster2008@yahoo.fr

Abstract

This paper proposes a framework to gauge the degree of volatility transmission during the subprime crisis of 2008 between U.S stock market and developed stock markets (France, Germany, United Kingdom, Japan) by deriving tests for conditional independence among daily volatility measures and identifies the important transmission channels on these macroeconomic variables (Real interest rate, Productivity index, Ratio of M2 to FER, Exchange rate, Terms of trade, account transaction). We use univariate and multivariate GARCH models to investigate the proprieties of conditional volatility and to estimate the volatility spillover effect by using specifically the Baba-Engle-Kraft-kroner BEKK-GARCH model and time varying correlation (DVEC). The GARH model shows the volatility persistence of U.S and developed stock markets. Based on the BEKK-GARCH model, the estimation parameters result are statistically significant identifying the volatility spillover between U.S stock market and developed stock markets. The results of the time varying correlation show that correlation increased between U.S and developed markets during the subprime crisis period. These finding results prove the contagion effect of U.S financial crisis of 2008. The estimation results of time varying correlation and BEKK-GARCH between the macroeconomic variables of U.S and developed countries prove that the trade link as a pertinent channel transmission of Subprime crisis.

Keyword: Stock market, volatility spillover, subprime crisis, channels transmission, time varying correlation (DVEC), GARCH-BEKK.

JEL Classification: G01, G15

1. Introduction

From the beginning of July 2007 in the US under the name of "subprime crisis", economists say it was the worst crisis since the successive waves of financial crises that hit more clearly emerging countries (America Latin 94, 97 and Russia in Asia 98 ... than developed countries (the attack of the EMS 92-93, the bursting of the dotcom bubble in 2000). However, many remarkable features of these crises were how a first shock to a specific country (USA) was rapidly transmitted to markets of different sizes and structures.

One of the most phenomenal studies in the contemporary financial world is financial integration in the form of spillover effects and transmissions of volatility across markets. Some previous research showed the existence of return and volatility spillover. Eun and Shim (1989) analysed daily return in Australia, Hong Kong, Japan, and France, Canada, Switzerland, Germany, USA, and UK capital market. They found a substantial interdependence between each market with USA capital market the most influential. Hamao *et al.* (1990) used daily and intraday data from Japan (Nikkei 225), UK (FTSE 100), and USA (S&P500) for three years (from April 1985 to March 1988). They research price interdependency and volatility between three capital markets. Their research using GARCH-M (1,1) model. The result concludes that there is significant spillover effect from USA and UK capital market to Japan, but there is no significant spillover effect from Japan capital market to USA and UK. Shamiri and Isa (2009) examined volatility transmission across South East Asia and US

[1] Department of Economics, University of SFAX-TUNISIA, URECA Research Unit Street of airport, km 4.5, LP 1088, Sfax 3018, **Tunisia**

[2] Corresponding author

stock markets using multivariate GARCH by adopting BEKK representation. Their result shows that influence of US stock market is important in South East Asia in term of return spillover.

Meanwhile, comparing to other stock market in South East Asia, Singapore, Korea, and Hong Kong stock market are the most influence stock market in term of volatility spillover as US investor hold of their market capitalization. Longin and Solnik find that international correlations have increased over the chosen time period and also that there exists a positive link between volatility and correlations. Le and Kakinaka (2010) has investigated transmission of mean return and volatility from US, Japan, and China stock market to Indonesia and Malaysia stock market using daily data from January 2005 to December 2007. By adopting GARCH model, they find that US stock market influence Indonesia and Malaysia stock market. The results also support significant feedback relationship in mean return between Japan and Indonesia, and between Japan and Malaysia. They also found significant level of mean and volatility spillover between China and Indonesia and Malaysia.

Existence of contagion and transmission of volatility has important implications. Because no open economy can insulate itself from what is happening in the rest of the world, to prevent contagious financial crises countries may need to adopt regionally or globally coordinated measures.

The main objective of this paper is to gauge the degree of volatility transmission during the subprime crisis between US stock market and developed stock markets (France, Germany, United Kingdom and Japan) by deriving tests for conditional independence among daily volatility measures and identify the channels transmission of subprime crisis. Theoretically, some authors, Forbes and Rigobon (2001), Gerlach and Smets (1995) and Corsetti *et al.* (2000), Rigobon (1998), Chari and Kehoe (2003) and Calvo and Mendoza (2000), Masson (1998) have identified the different propagation channels presented during previous crises (EMS, the Mexican crisis, Asian crisis, etc).

Conclusion

The main purpose of this study is to identify the contagion of US crisis in 2007, investigates the volatility spillover and identification of transmission channel of subprime crisis. The result, by time varying correlation, in times of crisis, suggesting evidence of contagion between stock markets considered. The empirical results from the BEKK-GARCH model supporting the presence of significant volatility spillover from stock market Countries. By focusing on GARCH parameters, we show that there is a strong evidence of significant transmission of volatility.

Also, volatility shocks are transmitted for all stock Markets. The coefficient estimates of volatility transmission show that there is high transmission of volatility (> 1%) of the US market to developed stock markets. Moreover, there is a significant transmission medic um low (<1%) of the volatility of other regions to the US market.

Finally, based on the BEKK-GARCH model to identify the transmission channels of the six possible channels of contagion considered, estimated tests in our paper prove the importance of trade link as a relevant channel of contagion from the US to other markets. The results show four significant variables i.e. ratio of M2 to FER (excluding Japan), real interest rate, term of trade and productivity index (except Germany). While reserves and budget balance are of little interest to represent the transmission channels of sub-prime crisis.

References

[1] Baig, T., Goldfajn, I. (1998). *Financial market contagion in the Asia crisis*, IMF Working Paper No. 98/155.

[2] Bollerslev, T. (1986*).* Generalized autoregressive conditional heteroskedasticity. *Journal of Econometrics* 31: 307–327.

[3] Bollerslev, T., (1990). Modeling the coherence in short-run nominal exchange rates: a multivariate generalized arch model, *Review of Economics and Statistics* 72(3): 498-505.

[4] Calvo, G.A and Mendoza E. (2000*). Rational contagion and the globalization of securities markets*. *Journal of International Economics,* 51: 79-113.

[5] Edwards, S., (1998). Interest rate volatility, Contagion and Convergence: an Empirical investigation of the cases of Argentina, Chile and Mexico, *Journal of Applied Economics*, 1(1): 55-86.

[6] Engle, R.F., Ng, V.K., (1993). Measuring and Testing the Impact of News on Volatility, *Journal of Finance*, 48(5): 1749- 1778.

[7] Engle R. Kroner, K. (1995). Multivariate simultaneous generalized ARCH, *Econometric Theory*, 11(1): 122–150.

[8] Edwards, S., Susmel, R. (2001). Volatility dependence and contagion in emerging equity markets, *Journal of Development Economics*, 66: 505-532.

[9] Eichengreen, B., Rose, A.K., Wyplosz, C. (1996*). Contagious currency crisis*. NBER Working Paper, 5681.

[10] Forbes, K., Rigobon, R. (2000). *Contagion in Latin America: definitions, measurements and policy implications*. NBER Working Paper.

[11] Forbes, K., Rigobon, R. (2001). Contagion in Latin America: definitions, measurement, and policy implications. *Economia*, 1: 1−46.

[12] Forbes, K., Rigobon R., (2001). *Measuring Contagion: Conceptual and Empirical Issues, in S. Claessens and K. Forbes, eds, International Financial Contagion*, Kluwer Academic Publishers.

[13] Gerlach, S., Smets, F., (1995). Contagious speculative attacks, *European Journal of Political Economy*, 11: 45-63.

[14] Le, T.N., Kakinaka, M., (2010). International transmission of stock returns: mean and volatility spillover effects in Indonesia and Malaysia, *Global Journal of Business Research* 4(1): 115-131.

[15] Masson, P., (1998). Contagion: monsoonal effects spillovers, and jumps between multiple equilibria, IMF Working Paper wp/98/142, Washington DC, International.

[16] Shamiri, A., Isa, Z., (2009). The US crisis and the volatility spillover across South East Asia stock markets, *Int. Res. J. Financ. Econom.*, 34: 7- 17.

[17] Valdés, R., (1996). *Emerging Market Contagion: Evidence and Theory*, Working Papers Central Bank of Chile.

MANAGEMENT ACCOUNTING FROM THEORY TO PRACTICE

Cristiana BOGDĂNOIU
University of Craiova
Faculty of Economics and Business Administration
Spiru Haret University, **Romania**
cristiana.bogdanoiu@yahoo.com
Carmen Gabriela MIREA
University of Alcalá de Henares, Madrid, **Spain**
mirea_carmen@yahoo.com

Abstract:

This paper describes the concept and characteristics of financial accounting, in general and particularly, it describes the concept and characteristics of management accounting, from the perspectives of various local and international authors. In the first part, the paper presents a brief history of the development of management accounting from the theoretical point of view and, in the second part, is a brief description of management accounting in practical terms.

Research in the history of accounting and management accounting was for some time considered to be of low value (because it isn't perceived to be made "scientific") or as an approach of finding practical answers to current problems.

Keywords: accounting, planning, control, management accounting systems, management accounting practice.

Jel Classification: M41

1. Introduction

„Accounting is in a period of fast transition and its environment has undergone great changes in recent decades and a rate of change is due to occur in the future". (Glautier and Underdown, 2001)

Not much has been written about the history of management accounting and it tended to be seen as a dusty topic, with no relevance to current theory and practice. (Loft, 1991) „However, with management accounting history, as with general history, change is a permanent feature and without an understanding of its development, we are poorly equipped to understand or guide its direction." (Shotter, 1999)

Conclusions

In this paper we studied the history of management accounting in several countries and found that, although studies have been conducted on management accounting in our country and around the world, where each researcher has contributed to it, this looks alike and expresses the same thing.

Management accounting refers to the provision of appropriate information to people within the organization for decision making, planning, control and performance evaluation, as well as improving the efficiency of existing operations.

If in the first part we discussed about management accounting theoretically, in the second part of the article we discussed management accounting in practical terms.

Practice emphasizes how the interests and achievements are reported to each system involved in the control and management. Improving management accounting methods must have as basis, the analysis of real conditions and the benefits of various methods and techniques, while taking into account their effectiveness. It was observed that, over time, management accounting has evolved along with the development of enterprises. Because of this, it was necessary to constantly review existing information system, in order to include all the necessary information for the managers, aiming to correct economic decisions.

References

[1] Abdel-Kader, M., Luther, R. (2006). *Management Accounting Practices in the UK Food And Drinks Industry*, Published by The Chartered Institute of Management Accountants (CIMA),

London, Great Britain.

[2] Anthony, R., Reece J., Hertenstein, J. (1995). *Accounting: Text and Cases*, Ninth Edition, Irwin.

[3] Azan, W. (2009). Management Control Competences and ERP: An Empirical Analysis in France, *European Accounting Association 32nd Congress,* Tampere, Finland.

[4] Boitier, M. (2007). L'influence des systems de gestion integers sur l'integration des systems de controle de gestion, *Comptabilite – Controle – Audit*, 14(1): 33- 48.

[5] Bouquin, H. (2006). *Comptabilité de gestion,* 4 édition, Paris, Economica Publishing.

[6] Capron, M. (1993). Accounting in perspective, Humanitas Publishing, Bucharest, Romania.

[7] Cavalluzzo, K.S., and Ittner, C.D. (2003). Implementing performance measurement innovations: evidence from government. Accounting Organizations and Society.

[8] Baines, A., Langfield-Smith, K. (2003). Antecedents to management accounting change: a structural equation approach. Accounting Organizations and Society, 28 (7-8): 657- 698.

[9] Maiga, A.S., and Jacobs, F.A. (2003). Balanced Scorecard, Activity-Based Costing and Company Performance: An Empirical Analysis. *Journal of Management Issues*, 15(3): 283-301.

[10] Călin, O., Cârstea, Gh. (2002). *Contabilitatea de gestiune și calculaţia costurilor*, Genicod Publishing, Bucharest, Romania.

[11] Davis, S., Albright, T. (2000). The Changing Organizational structure and Individual Responsabilities of Managerial Accountants: A Case Study, *Journal of Managerial Issues*, 12(4): 446- 468.

[12] Dechow, N. and Mouritsen, J. 2005. Enterprise resource planning systems, management control and the quest for integration, *Accounting, Organizations & Society*, 30(7-8): 691-733.

[13] Drury, C. 2004. *Management and Cost Accounting*, Cengage Learning EMEA.

[14] Drury, C. 2008. *Management and Cost Accounting*, 7th Edition, Cengage Learning.

[15] Glautier, M.W.E., Underdown, B. (2001). *Accounting Theory and Practice*, seventh edition, Prentice Hall, Financial Times.

[16] Iacob C., Ionescu I., Goagră D. (2007). Contabilitate de gestiune conformă cu practica internaţională, Universitaria Publishing, Craiova, *in Romanian.*

[17] Kaplan, R.S. (1984). The Evolution of Management Accounting. *The Accounting Review*, 59(3), 390-418.

[18] Kinney, M., Raiborn, C. (2011). *Cost accounting: Foundations and Evolutions*, Eight Editions, South-Western Cengage Learning, Canada, USA.

[19] Loft, A. (1991). *The history of management accounting: relevance found* in (ed.) Ashton, D., Hopper, T. and Scapens, R.W. 1991. Issues in management accounting. Prentice Hall: London.

[20] Maher, M. (2000). Management Accounting Education at the Millennium. *Issues in Accounting Education*: May 2000, 15(2): 335-346.

[21] Ristea, H. (2003). *Contabilitatea şi calculaţiile în conducerea întreprinderii,* Second Edition, CECCAR Publishing, Bucharest, Romania.

[22] Ristea, M., *et al.* (1999). *Contabilitatea societăţilor comerciale*, Volume II, CECCAR Publishing, Bucharest, *in Romanian.*

[23] Shotter, M. (1999). The origin and development of management accounting, *Meditari Accountancy Research,* 71999: 209-235.

[24] Vollmers, G. (1998). The Dennison manufacturing company. *The Accounting. Historians' Notebook*. 21(1): 12-13, 35- 40.

*** AICPA – American Institute of Certified Public Accountants.

*** Association of American Accountants.

*** National Association of Accountants in the United States of America.

*** IFAC – International Federation of Accountants.

*** American Institute of Certified Public Accountants.

THE MANAGEMENT OF PERFORMANCE SPORTS

Marian BONDREA
Faculty of Financial Accounting Management, Craiova
Spiru Haret University, **Romania**
marian.bondrea@yahoo.com

Abstract

As a genuine social phenomenon sport draws benefits from the system of contests and events that entails important economic sectors in the development of its material basis as well as in the increase of its scientific basis by the involvement of the research institutions in the sports issues.

The papers tackle the issue of performance in sports where professional sports are determining.

Keywords: managerial communication, public relations, sports organizations.

JEL Classification: L83, M12, J53.

Introduction

Performance, influenced by a combination of physiological, psychological, and socio-cultural factors, is defined as a thing done or carried through, an achievement, a deed, an act, especially an action of an elaborate or public character.

When it comes to sports, the definition of performance is related to skills - inclination - and physical activity - work - and the definition is: the carrying out of specific physical routines or procedures by one who is trained or skilled in physical activity. But these are barren, dull, technical definitions and we consider more appropriate to speak about sports performance as yesterday's work, today's outcome and tomorrow's sacrifice.

Representing a special value, which considerably hallmarks on man's spiritual physiognomy and personality, professional sports is now the subject of various scientific disciplines: philosophy, sociology, economics, psychology, pedagogy, biology , biochemistry, medicine and so on.

Nowadays, performance sport became a social, psychological, educational and cultural issue, which relates to the same extent to society and the individual. It concerns society as its progress and the progress of mankind depends on understanding international social relations, which sport influences; it concerns the individual as the his physical, mental, emotional and moral are influenced by the time spent to mould one's own person.

Today, professional sports actually turn into a unit of measure of social wealth and are an effective means for the harmonious development of personality and financial resources.

Conclusion

It is compulsory that managerial activity at the level of sports clubs, besides training and planning, imply to produce record keeping of activity. Accounts constitute a real *data base* that give details about athletes, technical staff, facilities, equipment, funds resulted from trading athletes, technicians or sponsorship, salaries, compensations and so on.

References:

[1] Coates, C. (1999). *Managerul total*. Bucureşti, Editura Teora, *in Romanian*.

[2] Cohen, E. (1999). *Liderul sau arta de a conduce*. Bucureşti, Editura Teora, *in Romanian*.

[3] Cornescu, V., Mihăilescu, I., Stanciu, S. (1994). *Management – Teorie şi Practică*. Bucureşti, Editura Actami, *in Romanian*.

[4] Zamora, E., Kory-Mercea, M. (2003). *Fiziologia efortului fizic*, Editura Casa Cărţii de Ştiinţă, Cluj-Napoca, *in Romanian.*

[5] Monea, Gh. (2010). *Selecţia şi orientarea în sportul de performanţă*. Editura Mido Print, *in Romanian.*

[6] Roman, Gh. (2007). *Antrenamentul sportiv*, Editura Napoca Star, Cluj-Napoca, *in Romania*.

[7] Voicu, A.V. (1998). *Managementul organizaţiilor şi activităţii sportive*, Editura Risoprint, Cluj-Napoca, *in Romanian*.

*** http://dictionary.sensagent.com/sports+performance/en-en/

INTERNATIONAL FINANCIAL INTEGRATION AND FINANCIAL SOUNDNESS IN EMERGING AND DEVELOPING ECONOMIES

Ezzeddine ABAOUB
University of Carthage, **Tunis**
Faculty of Economic Sciences and Managment of Nabeul
abaoub.ezzeddine@planet.tn
Nahil BOUSSIGA
University of Tunis El Manar, **Tunis**
Faculty of Economic Sciences and Management of Tunis
nahil.boussiga@fsegn.rnu.tn

Abstract:

In this paper, we analyze the effect of international financial integration on financial soundness in emerging and developing economies. To measure financial soundness, we use Financial Soundness Indicators (FSIs) developed by the International Monetary Fund (IMF) with aim of assessing strengths and vulnerabilities of financial systems. To estimate financial soundness, we use a panel dataset of emerging and developing economies from six regions of the world over the period 2000-2010. We use the Generalized Least Squares Method for panel estimation. The results show that the degree of international financial integration increases financial soundness of emerging and developing economies. We also examine the effect of the interaction between international financial integration and crisis on financial soundness. We find that our results are not confirmed in crisis situation.

Keywords: International financial integration, financial soundness, emerging countries, crisis, panel data, generalized least squares method.

JEL Classification: F36, G01, G1, G2.

Introduction

Since the early 90s, emerging countries make a lot of efforts to attract foreign investors by deregulating their financial markets and eliminating restrictions on cross-border capital flows. In fact, the degree of international financial integration in emerging and developing economies has increased over the last two decades (Agenor 2003, Lane and Milesi-Ferretti 2003, Morrison and White 2004, Vo 2005b, Vo and Daly 2007).

Many researchers find that financial liberalization of emerging markets increased economic growth (Quinn 1997, Kose *et al.* 2008, Quinn and Toyoda 2008). Other studies show that international financial integration decreases the cost of capital in emerging economies (Miller 1999, Henry 2000, Errunza and Miller 2000). However, these markets are weakened by financial crisis where they are internationally integrated. For example, a higher international financial integration of capital markets increases the probability of capital flight in crisis situation. In this, paper we are interested in the effect of international financial integration on financial soundness of emerging and developing economies[3]. We also examine the effect of international financial integration on financial soundness in situation of crisis. To measure financial soundness, we use two FSIs of the core set; Nonperforming loans to total gross loans (npl) and Return on Equity (roe)[4]. The ratio of nonperforming loans to total gross loans indicates asset quality and the ratio of return on equity is an indicator of bank profitability.

Literature review

Financial globalization has certainly many advantages but it also incurs important costs including financial crises. Bank system vulnerability and bad regulation have contributed to exacerbate financial crises of the late 90s. Obadan (2006) emphasizes the necessity of good economic policies and adequate capital account liberalization in order to enable countries to make use of financial globalization at the lowest cost.

[3] The distinction between emerging and developing countries is in accordance with the World Bank classification.
[4] FSIs of the core set are detailed in Appendix A.

In fact, there are various economic policies that could help emerging and developing economies manage the process of financial globalization. Kose *et al.* (2010) argue that sound macroeconomic policies are a precondition to a beneficial financial integration. However, Kose *et al*. (2010) suggest that there is a complex relationship between financial integration and economic policies. In fact, economic policies often need to be adapted to country-specific circumstances to improve the risk-benefit trade-offs of financial integration.

Moreover, Edwards (2008) argues that the capital control relaxation increases the probability of crisis. The author suggests that "financial liberalization first" strategies increase the degree of fragility to crises. The author emphasizes that this is the case if the economy adopt a pegged exchange rate system and if it results in current account imbalances.

Over the last two decades, foreign banks have considerably increased their presence in emerging markets. Bourgain *et al*. (2012) analyze the effect the risk taking behavior of banks in emerging economies in the context of financial integration. The authors find that depositors can make pressure on banks to control risk taking. They argue that financial integration drives banks to take excessive risk.

The last two decades financial crises accelerated research on Financial Soundness Indicators (FSI). These indicators are used, since the late 90s, to supervise financial system. The International Monetary Fund (IMF) and the World Bank encouraged FSI use, especially under the Financial Sector Assessment Program (FSAP).

In this study, we focus on the effect of international financial integration on financial soundness of emerging and developing economies. Financial soundness is measured by Financial Soundness Indicators developed by the IMF.

In the third section of this article, we study the effect of international financial integration on asset quality. We examine the effect of international financial integration on bank profitability in the fourth section. Main conclusions are detailed in the fifth section of the article.

Conclusions

In this study, we are interested in the effect of international financial integration on financial soundness of emerging and developing countries. We find that higher degree of international financial integration decreases nonperforming loans, and consequently, increases asset quality.

Table 10 – Panel estimation of bank profitability in situation of crisis

Variables	Coefficient	p-value
IFI	0.0467	0.347
npl	-0.4310	0.000
inflation	0.1619	0.023
IFI*crisis	0.0034	0.936

However, in crisis situation, our results show that the effect of international financial integration on asset quality becomes negative. We also examine the effect of integration on bank profitability. We find that higher degree of international financial integration increases bank profitability. However, in crisis situation, this effect is positive but small.

We draw attention to the fact that our results are robust because most of estimated coefficients are significant. We used Generalized Least Squares Method. We corrected for both heteroskedasticity and first-order autocorrelation.

Finally, this paper has policy implication for emerging and developing countries. Our results show that international financial integration has many advantages on emerging and developing economies if the governments of these countries provide sound macroeconomic policy and adapted institutional framework.

References

[1] Agenor, P-R. (2003). Benefits and costs of international financial integration: Theory and facts. *World Economy*, 26(8): 1089−1118.

[2] Arfaoui, M., Abaoub, E. (2010). On the determinants of international financial integration in the global business area, *Journal of Applied Economic Sciences*, 3(13): 153-172.

[3] Babihuga, R. (2007). *Macroeconomic and financial soundness indicators: An empirical investigation*, IMF working paper, WP/07/115.

[4] Bourgain, A., Pieretti, P., Zanaj, S. (2012). Financial openness, disclosure and bank risk-taking in MENA countries, *Emerging Markets Review*, 13(3): 283-300.

[5] Edwards, S. (2008). Sequencing of reforms, financial globalization, and macroeconomic vulnerability, *Journal of the Japanese and International Economies*, 23(2): 131–148.

[6] Errunza, V., Miller, D. (2000). Market segmentation and the cost of capital in international equity markets, *Journal of Financial and Quantitative Analysis*, 35: 577-600.

[7] Henry, P.B. (2000). Stock market liberalization, economic reform and emerging market equity prices, *Journal of Finance*, 55: 529-564.

[8] Kose, M., Prasad, E., Terrones, M. (2008). *Does openness to international financial flows contribute to productivity growth?* NBER Working Paper no. 14558.

[9] Kose, M.A., Prasad, E., Rogoff, K., Wei, S.J. (2010). Financial Globalization and Economic Policies, *Handbook of Development Economics*, 5: 4283–4359.

[10] Lane, P.R., Milesi-Ferretti, G.M. (2003). International Financial Integration. *Institute for International Integration Studies discussion paper*.

[11] Miller, D., (1999). The market reaction to international cross-listings: evidence from Depositary Receipts, *Journal of Financial Economics*, 51: 103-123.

[12] Morrison, A.D., White, L. (2004). *Financial liberalisation and capital regulation in open economies*. Oxford Financial Research Centre working paper, no. 2004-FE-10.

[13] Obadan, M.I. (2006). Overview of Exchange Rate Management in Nigeria from 1986 to Date in the Dynamics of Exchange Rate in Nigeria, *Central Bank of Nigeria Bullion*, 30(3): 1 – 9.

[14] Park, J. (2012). Corruption, Soundness of the banking sector, and economic growth: A cross-country study, *Journal of International Money and Finance*, 31(5): 907–929.

[15] Quinn, D. (1997). The correlates of changes in international financial regulation. *American Political Science Review*, 91: 531-551.

[16] Quinn, D., Toyoda, A.M. (2008). How and where capital account liberalization leads to growth, *Review of Financial Studies*, 21: 1403-1449.

[17] Vo, X.V. (2005b). A new set of measures on international financial integration. *Proceedings of the 3rd Financial Market Asia Pacific Conference*, Sydney University of Western Sydney.

[18] Vo X.V., Daly, K.J. (2007). The determinants of international financial integration, *Global Finance Journal*, 18: 228–250.

FINANCIAL/TECHNICAL ANALYSIS ABOUT ITALIAN "IV CONTO ENERGIA" FOR PHOTOVOLTAIC ENERGY: A CASE STUDY

Luca GRILLI[5]
Angelo SFRECOLA
Università di Foggia, Dipartimento di Economia, Foggia, **Italy**
l.grilli@unifg.it

Abstract:

In this paper the authors analyse the Italian "IV Conto Energia" for the Photovoltaic in the light of the Ministerial Decree of 05th may 2011. In the first part of the paper the technical aspects of "Conto Energia" are dealt with, highlighting the major changes with respect to the past. The second part of the paper shows a financial analysis of an investment project for a photovoltaic 2kWp plant on a building. The authors consider cash inflows and outflows and they evaluate the discounted value of these flows at the plant commissioning date. The actual return on investment is therefore calculated according to the elementary principles of financial equivalence. The analysis highlights the critical consequences of the proposed cuts to incentives that will slash the return on investment by 60% as from 2012 compared to 2011.

Keywords: renewable energy, public incentives, photovoltaic, bootstrapping, discounted values.

JEL Classification: C54; C63; G17; G13; H23; Q28; Q48

Introduction

"Conto Energia" is a European incentive feed-in tariff policy for the production of electric energy through grid-connected photovoltaic plants. "Conto Energia" was introduced to Italy following a European directive on green energy (Directive 2001/77/CE), and it was implemented in the government decree DL n. 387 in 2003. A tax in the electric bills of all Italian power companies has been financing this plan since 1991. In this incentive mechanism the producer is paid for the generation of electricity but doesn't receive any funding to build the plant.

The power plants involved are grid-connected, so there is another aspect called "scambio sul posto" (on-site exchange): the surplus of electricity produced can be transferred to the power grid and this power can be taken from the grid whenever the plant doesn't supply enough electricity to meet the users' demand.

In Italy the chronological order of the "Conto Energia" is First "Conto Energia" (Ministerial Decrees DM 28th July 2005 and DM 6th February 2006), Second "Conto Energia" (DM 19th February 2007), Third "Conto Energia" (DM 6th August 2010) and Fourth "Conto Energia" (DM 5th May 2011) [1], [2].

Thanks to the first three "Conto Energia" plans 226,993 photovoltaic power plants have started operating in Italy, for an installed power equal to 6,778,267 kWp. The region with the greater installed power is Puglia, with 980,818 kWp.

The authors will analyze the returns of a 2 kWp plant using the principle of financial equivalence.

Conclusion

The case study discussed in this article shows the effects that the incentive mechanism provided for in the Fourth "Conto Energia" has on the profitability of a plant. The gradual reduction of incentives for photovoltaic energy, and in general for the production of energy from renewable sources, is witnessed in all Europe (in France they were even suspended) and it is the natural consequence of the reasons that are behind such incentives. The incentive mechanism, in fact, must be interpreted as a support to the cost of a technology that is not ripe yet and is therefore still expensive, and not as a form of financial speculation. The building of a photovoltaic system should not be seen as

[5] corresponding author, Luca GRILLI, Università di Foggia, Dipartimento di Economia, Largo Papa Giovanni Paolo II, 1, I-71121 Foggia, Italy

a speculative financial investment in order to make a profit but rather as a purely financial investment, supported by an incentive, which is aimed at the development of a technology considered as "green." Moreover, we should not underestimate that the cost of these incentives affects significantly the energy costs of all consumers.

References

[1] Bazilian M., Onyeji I., Liebreich, M., MacGill I., Chase, J., Shah, J., Gielen, D., Arent, D. Landfear, D., Zhengrong, S. (2013). Re-considering the economics of photovoltaic power, *Renewable Energy*, 53: 329-338.

[2] Canada, S., Moore, L., Post, H., Strachan, J. (2005). *Operation and maintenance field experience for off-grid residential photovoltaic systems***,** *Progress in Photovoltaics: Research and Applications*, 13: 67–74.

[3] James, J., Webber, N. (2000). *Interest Rate Modeling*, John Wiley and Sons Ltd.

[4] Roth F., Ambs, L.L. (2004). Incorporating externalities into a full cost approach to electric power generation life-cycle costing**,** *Energy*, 29: 2125–2144.

[5] Simons G., O'Kelly M., Scheuermann, K., Landry, P. (2007). Moving to market-based photovoltaics: the impact of PV costs and performance on PV incentives**,** ASME Power Conference, pp. 587–593.

[6] Singh, P.P., Singh, S. (2010). Realistic generation cost of solar photovoltaic electricity, *Renewable Energy*, 35: 563–569.

[7] Timilsina, G.R., Kurdgelashvili, L., Narbel. P.A. (2012). Solar energy: markets, economics and policies, *Renewable and Sustainable Energy Reviews*, 16: 449–465.

[8] Yang, C.J. (2010). Reconsidering solar grid parity, *Energy Policy*, 38: 3270–3273.

*** Homepage GSE (Gestore Servizi Elettrici) http://www.gse.it/ (accessed in June 2011)

*** D.M. 05 maggio 2011 (http://www.sviluppoeconomico.gov.it) (accessed in June 2011)

*** http://www.sma-italia.com/it.html (accessed in June 2011)

POWER-TYPES IN BUSINESS PROCESS MODELING

Frantisek HUNKA[6]
University of Ostrava, **Czech Republic**
frantisek.hunka@osu.cz

Abstract:
The paper deals with the application of power-types in business process modeling, particularly within Resource-Event-Agent (REA) business ontology. This ontology, which originates from accounting information systems, has gradually extended into full-fledged tools for business processes and information systems modeling. To cope with the rules imposed by standards and budgets and to integrate concepts of planning into the business process model, REA ontology introduces power-types as part of the REA value model (business process). These models can be arranged into an REA value chain which can then comprise the whole application. However, relations between individual REA value models within the REA value chain do not currently meet all modeling requirements. The aim of the paper is not only to describe but also to reveal all of the variations of power-type utilization within REA value models and to extend these possibilities so that they may be applied to the REA value chain concept.

Keywords: power-types, business process modeling, REA ontology, REA value model, REA value chain.

JEL Classification: L15, L23, M11, O21

Introduction

We ourselves mostly apply classification and composition to organize our knowledge. But grouping the objects by categories or types is closer to our natural perception of the real world. The idea of power-type, originally introduced by (Odell 1994) is a construction that uses two different object oriented constructs simultaneously: generalization and instantiation. It is thus a hybrid, using as it does both metamodeling ideas (an object is an instance of a type) and object-oriented modeling ideas, whereby a class can be thought of as a subtype of another class; see (Gonzalez-Perez 2008).

This abstraction is useful for these reasons; see (Martin 1997). Firstly, it indicates that each type e.g. Flight Type possesses unique properties, such as its indicative e.g. *source location*, *destination location*, *time of departure*, etc. Secondly, the Flight Type type provides a mechanism for maintaining an organized collection of flight types. For instance, if a new Flight Type is identified, it becomes a member of the Flight Type type. If a Flight Type is removed, it is deleted as a member. Furthermore, changing a list does not require us to change the class diagram. Finally, indicating that individual flights are classified by types, without listing every possible type, is graphically economical. Instead of thinking of this partition as a set of subtypes, think of it as a collection of objects. The underlying theme of this partition would be that it contains types of Flights; see Figure 1.

Conclusion

In the background of the REA ontology that is primarily designed for business process modeling and for information system design, the paper deals with the possibilities of employing power-types abstraction in the REA value model, which also results in the extended REA value chain concept. This abstraction not only enables the categorization of the entities but can be also inherently applied in the planning activities of the business processes. Power-type abstraction enables consistent storing of past and future data provide for the REA framework to exert large potential in the modeling of business applications. This abstraction allows for the modeling of support/infrastructure processes and to include them in the extended REA value chain. Full development of the power-type abstraction enables the creation of more effective business applications.

[6] University of Ostrava, Dvorakova 7, 701 03 Ostrava, Czech Republic

Acknowledgements

The paper was supported by the grant reference no. SGS08/PRF/2013 provided by Ministry of Education, Youth and Sports.

References

[1] Batra, D. (2005). Conceptual Data Modeling Patterns: Representing and Validation. *Journal of Database Management* 16(2): 84-106.

[2] Dunn, C., Cherrington, J.O., Hollander, A. (2004). *Enterprise Information Systems: A Pattern Based Approach.* New York: McGraw-Hill/Irwin.

[3] Geerts, G.L., McCarthy, E.W. (1997). *Using Object Templates from the REA Accounting Model to Engineer Business Processes and Tasks*. European Accounting Congress, Gratz, Austria.

[4] Geerts, L.G., McCarthy, E.W. (2000). *The Ontological Foundation of the REA Enterprise Information Systems.* The Annual Meeting of American Accounting Association. Philadelphia, PA.

[5] Geerts, G.L., McCarthy, E.W. (2006). Policy-Level Specification in REA Enterprise Information Systems, *Journal of Information Systems* 2: 37-63.

[6] Gonzalez-Perez, C., Henderson-Sellers B. (2008). *Metamodeling for Software Engineering. Chichester*. John Wiley & Sons.

[7] Gordijn, J., Akkermans, M.J. (2010). *Value based Requirements Engineering: Exploring Innovative e-Commerce Ideas. Requirements engineering 8, No 2* [cit. 22.3.2010] URL: http://www.springerlink.com/content/5ne64nnr0jun0nxk.

[8] Hruby P., (2006). *Model-Driven Design Using Business Patterns.* Berlin Heidelberg: Springer-Verlag.

[9] Hunka, F., Hucka, M., Kasik, J., Vymetal D. (2009). Some Ontological Issues of the REA Framework in Relation to Enterprise Business Process. *Journal of Applied Economic Science,* IV(8): 203-209.

[10] Hunka, F., Hucka, M, Kasik, J., Vymetal, D. (2010). REA Value Chain Applied on Production Planning Model, *2nd International Conference on Logistics and Transport. Queenstown, New Zealand*, pp. 803-809.

[11] McCarthy E. W. (1982). The REA Accounting Model: A Generalized Framework for Accounting Systems in a Shared Data Environment. *The Accounting Review*, July: 554-578.

[12] McCarthy, E. W. (2003). The REA Modeling Approach to Teaching Accounting Information Systems, *Issue in Accounting Education,* 18(4): 21-32.

[13] Martin J., Odel J. J. (1997). *Object-Oriented Methods: A Foundation, UML Edition.* 2nd Ed. Prentice Hall.

[14] Odell J. J. (1994). Power Types. *Journal of Object-Oriented Programming,* 7(2): 8-12.

[15] Porter, M. (1980). *Competitive Strategy: Techniques for Analyzing Industries and Competitors*. Free Press, New York.

[16] Snapka, P., Kasik, J. (2012). A Simplified Model of an Interaction Dynamics in Work Group. *Journal of Applied Economic Science,* VII(21): 302-311.

[17] Suchanek, P., Bucki, R. (2011). Method of Supply Chain Optimization in E-Commerce. *Journal of Applied Economic Science*, VI(17): 257-269.

*** IDEF0, Integration Definition for Function Modeling. 1993. National Institute of Standards and Technology, FIPS publication (1993) [cit. 10.9.2010] URL: http://www.idef.com/ pdf/idef0.pdf

SPECIFICS OF SIZE STRUCTURE AND MANAGING ROLE OF THE LARGE COMPANIES IN ENTERPRISE ENVIRONMENT IN THE CZECH REPUBLIC

Ladislav LUDVÍK
Faculty of Economics, Ostrava
VŠB- Technical University of Ostrava, **Czech Republic**
ladislav.ludvik@vsb.cz
Jindra PETERKOVÁ
Faculty of Economics, Ostrava
VŠB- Technical University of Ostrava, **Czech Republic**
jindra.peterkova@vsb.cz

***Abstract**:*

Enterprise size structure is understood from historical point of view. Today enterprise size structure is connected with better capture of global market. For evaluating sizes of companies the basis is very simple classificatory point of view – number of employees.

In the Czech Republic 1,1 million enterprises realize active entrepreneurial activity. The most common legal form of business is micro-firm (nearly 95%). Number of large enterprises is much lower – it is only 0.2% and they realize about half of the Czech economy. These enterprises have decisive influence on real economic and business processes. Our analysis brought approximate profile of large enterprise in the Czech Republic (according to the number of employees, legal form of business, branch, owner, localization). By realizing insight into selected large enterprises in the Czech Republic there come out externally important questions that concern their capital ties, managing and decision-making practice in the Czech Republic.

Keywords: Analysis, enterprise size, enterprise structure, large enterprises, management, strategy.

JEL Classification: L26, L21, L14, M10, M21

Introduction

Period, in which we live, brings many problems, surprises, conflicts, paradoxes and also many challenges. It can be observed how enterprises try to solve their existential, strategic and also everyday problems in many ways. Some enterprises derive their benefits from their size, others look for the way of using their innovative potential, and others decide to realize marketing, organizational and other similar steps. Nevertheless only a few of them significantly grows.

Analytical-statistical insight into enterprise size structure and it`s changes can provide certain reflection concerning this evolution. By this we can uncover aspects that are worth of more attention from the point of view of entrepreneurial developing trends, overcoming contemporary barriers, increasing company competitiveness, reaching social and ecological sustainability due to entrepreneurial activities etc. Deeper analysis can uncover risks that are connected with certain types of enterprises and their size structure.

We can meet with the ideas of ongoing polarization of enterprise size structure. On one side many enterprises are seen to be stronger and more dominant. They purposefully use possibilities that contemporary findings about enterprise management provide. On the other side small enterprises are seen to accept more and more conditions of strong enterprise subjects. It is apparent that small firms and micro-firms significantly lose their competitiveness. Only a few of them will succeed and get to higher enterprise levels.

Considering size structure of enterprises in the Czech Republic authors of this paper focus on numerically small but as for performance strong group of enterprise subjects. It is a group of large enterprises.

Conclusion

From analysis of statistical data in years 2007 – 2011 resulted that number of active entrepreneurial subjects increased and in 2011 it reached 1,1 million enterprises. The most remarkable increase appeared in group of micro-firms (over 25 % in 5 years). In the whole size structure of enterprises micro-firms generate approximately 95 % share. In remaining size groups (small, medium-sized and large firms) there was not registered significant change. However there was observed rather stagnation in their quantity. We suppose that the main reason of increasing number of micro-firms is extension of so called "Schwarz system" (increasing number of self-employed) and also decreasing number of employees in large companies more than higher tendency to do business in economically active age.

In the whole structure only 0.2% is classified as large firm. Regardless they realize half of the Czech economy performance and significantly influence entrepreneurial environment. Resulting from deeper analysis of large firms there was proposed general profile of large company in the Czech Republic: such enterprise has 250 – 499 employees, its` legal form of business is limited liability company, field of interest is manufacturing industry, it is owned by foreign owner and is registered in Prague.

From short case studies result some specifics from managing practice in large firms – subsidiary companies under property control of foreign owners. Studied firms were subsidiaries of large transnational controlling companies. They differed in owners` strategy plans respectively in the way of managing (ethnocentric and polycentric). One of these enterprises is fully under strategy leadership of controlling company; it does not make decisions in the sphere of production type and quantity as well as profit figure and allocation. It loses own possibility to make decisions in own development. On the other side the other firm has possibility of decision making in the field of sort of goods and quantity of production. Own decision making competency underlies economic criteria of owner, required level of profit, that has to be reached by subsidiary company. Profit allocation is in this case on the side of controlling company.

Limited or even none decision making competencies of these companies lead to reducing investments in research and development. It reflects on nonsufficient innovative potential. Own research and development disappears from companies. Demand for labor force has been changed, high qualified workers loose sense. Property cohesion become primary and has new features of company size as well as concentration of decision making competencies.

Finally there appears a question how many such really large dominant companies in the Czech Republic really exist. Probably it is not a big number. Our hypothetical estimation is from 6 to 10 dominant companies that factually influence fundamental economic processes in entrepreneurial environment in the Czech Republic.

Acknowledgement

This paper was supported by the project SGS Analysis of size structure and demography of companies in the Czech Republic from 2006 till 2010.

References

[1] Jirásek, J.A. (2006). *Agenda příštích let*, Professional Publishing.

[2] Kuratko, D. (2009). *Entrepreneurship: Theory, Process, Practice,* South-Western Cengage.

[3] Ludvík, L., Peterková, J. (2012). The size of an enterprise and enhancing innovation potential, *7th European Conference on Innovation and Entrepreneurship (ECIE)*, Academic Publishing, International Limited Reading UK, Portugal, pp. 54 – 55 (book version).

[4] Pillania, R. (2012). Corporate Governance in India: Study of the Top 100 Firms, *Journal of Applied Economic Science*, VII(19) : 87-92.

[5] Vochozka, M. (2011). *Metody komplexního hodnocení podniku,* Grada Publishing.

[6] Veber, J., Srpová, J. (2005). *Podnikání malé a střední firmy,* Grada Publishing.

*** Annual report of Bidvest Group Limited.

*** Annual report of Teva Pharmaceutical Industries Ltd.

*** Czech Statistical Office and Business Register. http://www.czso.cz/eng/redakce.nsf/i/home.

*** Information about company Bidvest. [cit.m2012-12-30]. Available at: http://www.bidvest.co.za/.

*** Information about company Teva. [cit.m2012-12-15]. Available at: http://www.tevapharm.com/About/Pages/Organizational-Structure.aspx.

LESSONS LEARNED FROM TAX VERSUS EXPENDITURE BASED FISCAL CONSOLIDATION IN THE EUROPEAN TRANSITION ECONOMIES

Rajmund MIRDALA
Faculty of Economics
Technical University of Košice, **Slovakia**
rajmund.mirdala@tuke.sk

Abstract:

European Union member countries are currently exposed to negative implications of the economic and debt crisis. Questions associated with disputable implications of fiscal incentives seem to be contrary to the crucial need of the effective fiscal consolidation that seems to be necessary to reduce excessive fiscal deficits and high sovereign debts. While challenges addressed to the fiscal policy and its anti-cyclical potential rose steadily but not desperately since the beginning of the economic crisis, the call for fiscal consolidation became urgent almost immediately and this need significantly strengthen after the debt crisis contagion flooded Europe.

In the paper we provide an overview of main trends in public budgets and sovereign debts in ten European transition economies during last two decades. We identify episodes of successful and unsuccessful (cold showers versus gradual) fiscal (expenditure versus revenue based) consolidations by analyzing effects of improvements in cyclically adjusted primary balance on the sovereign debt ratio reduction. We also estimate VAR model to analyze effects of fiscal shocks (based on one standard deviation in total expenditure, direct and indirect taxes) to real output. It is expected that responses of real output to different types of (consolidating) fiscal shocks may vary and thus provide more precise ideas about a feasibility (i.e. side effects on the macroeconomic performance) of expenditure versus revenue based fiscal consolidation episodes. Economic effects of fiscal consolidating adjustments are evaluated for two periods (pre-crisis and extended) to reveal crisis effects on fiscal consolidation efforts.

Keywords: fiscal policy adjustments, fiscal consolidation, cyclically adjusted primary balance, government expenditures, tax revenues, unrestricted VAR, Cholesky decomposition, SVAR, structural shocks, impulse-response function.

JEL Classification: C32, E62, H20, H50, H60

Introduction

European Union member countries are currently exposed to negative implications of the economic and debt crisis. Questions associated with disputable implications of fiscal incentives seem to be contrary to the crucial need of the effective fiscal consolidation that seems to be necessary to reduce excessive fiscal deficits and high sovereign debts. As a result, governments tend to reduce public expenditures and raise taxes during the periods lagging recession and thus cooling down economies. However, an appropriate composition of fiscal incentives without direct negative effect on the public budget and its revenue and expenditure sides may help to reduce negative budgetary pressures through increased tax capacity of the economy followed by stronger growth of real output.

While challenges addressed to the fiscal policy and its anti-cyclical potential rose steadily but not desperately since the beginning of the economic crisis, the call for fiscal consolidation became urgent almost immediately and this need significantly strengthen after the debt crisis contagion flooded Europe.

The overall success of the fiscal consolidation may seem to differ across countries reflecting the overall burden of sovereign debt and associated costs of debt service. Significant reduction in primary budget deficit (aiming to primary surplus during a reasonable period) is the only way to reduce a negative impact of sovereign debt on economic growth. While the need to reduce a fiscal imbalance is clear, the composition (expenditure versus revenues based consolidation) and nature (gradual or sharp consolidation) of fiscal consolidation, together with the role played by accompanied policies (quantitative monetary easing, exchange rate internal versus external devaluation, reforms of fiscal institutions, etc.), seems to be quite disputable (Barrios - Langedijk - Penc 2010).

In the paper we provide an overview of main trends in public budgets and sovereign debts in ten European transition economies during last two decades. We identify episodes of successful and unsuccessful (cold showers versus gradual) fiscal (expenditure versus revenue based) consolidations by analyzing effects of improvements in cyclically adjusted primary balance on the sovereign debt ratio reduction. We also estimate VAR model to analyze effects of fiscal shocks (based on one standard deviation (fall) in total expenditure and (rise) in direct and indirect taxes) to real output. It is expected that responses of real output to the different types of (consolidating) fiscal shocks may vary and thus provide more precise ideas about a feasibility (i.e. side effects on the macroeconomic performance) of expenditure versus revenue based fiscal consolidation episodes. Economic effects of fiscal consolidating adjustments are evaluated for two periods (pre-crisis and extended) to reveal crisis effects on fiscal consolidation efforts.

Following the introduction, we provide some stylized facts about fiscal stance in the European transition economies over the period of last two decades. We emphasize main trends in the evolution of government consumption, rate of secondary redistribution, total expenditures and total revenues, fiscal deficit and sovereign debt. In the third section we provide an overview of current empirical evidence about fiscal consolidation and fiscal policy shocks. Wide range of causal effects and implications of expenditure and tax revenue based fiscal adjustments as well as their size and durability seem to be well documented in papers published in last two decades. Fourth section begins with some methodological remarks to fiscal consolidation and cyclically adjusted primary balance. Subsequent analysis of fiscal consolidation episodes provides an in-depth insight into the degree of success of expenditure and tax revenue based fiscal adjustments in the view of a sustainable sovereign debt reduction in the European transition economies. In section five we deal with fiscal policy shocks trying to provide some alternative guideline for evaluation of side economic effects related to expenditure and tax based fiscal adjustments on the real output performance.

Conclusion

In the paper we have analyzed main trends in the financial stance of general governments in ten European transition economies during last two decades. Brief overview of main trends in selected fiscal indicators and rapid deterioration in the fiscal policy stance during the crisis period revealed a crucial need of fiscal consolidation as it became urgent almost immediately after the debt crisis contagion flooded Europe.

We have identified episodes of successful and unsuccessful (cold showers versus gradual) fiscal (expenditure versus revenue based) consolidations by analyzing effects of improvements in cyclically adjusted primary balance on the sovereign debt ratio reduction. It seems that individual countries have experienced several episodes of fiscal consolidation that in total represents 37 episodes of both types - one year consolidation (30) and gradual consolidation (7). However, we have assessed only 26 percent success in one year episodes of fiscal consolidations (8 *cold showers* succeeded). We have investigated only one successful gradual consolidation (14 percent degree of success). It seems that governments in our sample of countries significantly seek an effort to undertake gradual multi-year fiscal consolidations and thus strengthen financial discipline during a significant period of their political cycle. At the same time, none of six gradual consolidations (only one of them was successful) undertaken during the pre-crisis period was associated with deteriorating effects on the overall macroeconomic performance, revealing wasted chance of potentially effective fiscal consolidation.

We have also estimated VAR model to analyze effects of fiscal shocks (based on one standard deviation (fall) in total expenditure and (rise) in direct and indirect taxes) to real output. Both, government expenditures reductions and tax revenues increases were followed by real output declines. However, effects of expenditure based adjustments seem to be more significant within the same fiscal year (effects of the shock culminated during first four quarters). As a result, expenditure based approach seems to be more convenient (effective) for episodes of gradual fiscal consolidations provided that distortionary effects on the real output tend to be reduced during the year following fiscal adjustment. On the other hand, effects of adjustments in both direct and indirect tax revenues were largely distributed across several years (with slightly reduced deteriorating effect during the first year in most countries) and thus revenue based fiscal adjustments seem to be more appropriate for episodes of one-year fiscal consolidations.

Crisis period accelerated negative side (macroeconomic) effects of fiscal adjustments associated with tax and expenditure based fiscal consolidation in the European transition economies. Generally, we emphasize increased durability of deteriorating effects of fiscal adjustments (both revenue and expenditure based) on the real output. Provided that a degree of success of fiscal adjustments during the crisis period is reduced due to excessive pressures on both revenues and expenditure sides it seems, that increased durability of real output deterioration, followed by tax and/or revenue based adjustments, significantly reduced a degree of success to perform an effective (without deteriorating side effects on real output) fiscal consolidation.

Acknowledgement

This chapter was written in connection with scientific project VEGA no. 1/0892/13. Financial support from this Ministry of Education's scheme is also gratefully acknowledged.

References

[1] Altãr, M., Necula, C., Bobeicã, G. (2010) Estimating the Cyclically Adjusted Budget Balance for the Romanian Economy. A Robust Approach, *Romanian Journal of Economic Forecasting* 13(2): 79-99.

[2] Alesina, A., Perotti, R. (1997). Fiscal Adjustments in OECD Countries: Composition and Macroeconomic Effects. [*International Monetary Fund Staff Paper* No. 44/1997] Washington, D.C., International Monetary Fund, pp. 297-329.

[3] Alesina, A., Ardagna, S. (2009). Large Changes in Fiscal Policy: Taxes vs. Spending. [*National Bureau of Economic Research Working Paper* No. 15438] New York, National Bureau of Economic Research, 37 p.

[4] Antonescu, M., Manea, S., Antonescu, L. (2008). Fiscal Aspects Regarding Taxing the Incomes of Non-Residents in Romania, *Journal of Applied Economic Sciences*, 3(4): 359-364.

[5] Barrios, S., Langedijk, S., Penc, L. (2010). EU Fiscal Consolidation after the Financial Crisis. Lesson from Past Experience, [*European Commission Economic Paper* No. 418/2010] Brussels, European Commission, 47 p.

[6] Benčík, M. (2008). Analysis of Fiscal Policy Impacts of the Business Cycle, [*National Bank of Slovakia Working Paper* No. 2/2009] Bratislava, National Bank of Slovakia, 30 p.

[7] Blanchard, O.J., Perotti, R. (2002). An Empirical Characterization of the Dynamic Effects of Changes in Government Spending and Taxes on Output, *Quarterly Journal of Economics* 117 (4): 1329-1368.

[8] Bouthevillain *et al.* (2001). Cyclically Adjusted Budget Balances: An Alternative Approach, [*European Central Bank Working Paper* No. 77/2001] Frankfurt am Main, European Central Bank, 73 p.

[9] Briotti, M.G. (2002). Fiscal Consolidation in EU Countries in the Nineties: New Facts and Policy Implications, VI. International Conference in Economics, September 11th-14th, Ankara, Turkey, 52 p.

[10] Burnside, C., Eichenbaum, M., Fisher, J. (2003). Fiscal Shocks and their Consequences, *Journal of Economic Theory*, 115(1): 89-117.

[11] Caldara, D., Camps, C. (2008). What are the Effects of Fiscal Policy Shocks, [*European Central Bank Working Paper* No. 877/2008] Frankfurt am Main, European Central Bank, 47 p.

[12] Corsetti, G., Kuester, K., Meier, A., Müller, G.J. (2010). Debt Consolidation and Fiscal Stabilization of Deep Recessions, *American Economic Review*: Papers & Proceedings, 100: 41-45.

[13] Fedelino, A., Ivanova, A., Horton, M. (2009). Computing Cyclically Adjusted Balances and Automatic Stabilizers. [*International Monetary Fund Technical Notes and Manuals* No. 5/2009] Washington, D.C., International Monetary Fund, 15 p.

[14] Girouard, N., André, Ch. (2005). Measuring Cyclically-Adjusted Budget Balance for EOCD Countries, [*Organization for Economic Cooperation and Development Working Paper* No. 21/2005] Paris, Organization for Economic Cooperation and Development, 42 p.

[15] Giuliodori, M., Beetsma, R. (2004). What are the Spill-overs from Fiscal Shocks in Europe? An Empirical Analysis, [*European Central Bank Working Paper* No. 325/2004] Frankfurt am Main,

European Central Bank, 43 p.

[16] Günaydin, E., Uğraş Ülkü, Z. (2002). Cyclically Adjusted Primary Balance: The Case of Turkey, VI. International Conference in Economics, September 11th-14th, Ankara, Turkey, 52 p.

[17] Johansen, S. (1988). Statistical analysis of cointegrating vectors, *Journal of Economic Dynamic & Control*, 12(2-3): 231-254.

[18] Johansen, S. (1991). Estimation and Hypothesis Testing of Cointegrating Vectors in Gaussian Vector Autoregressive Models, *Econometrica*, 59(6): 1551-1580.

[19] Lambertini, L., Tavares, J. (2003). Exchange Rates and Fiscal Adjustments: Evidence from the OECD and Implications for EMU, *Boston College Working Papers in Economics* No. 576/2003, Boston College Department of Economics

[20] Mirdala, R**.** (2009). Effects of Fiscal Policy Shocks in the European Transition Economies, *Journal of Applied Research in Finance*, 1(2):141-155

[21] Mirdala, R**.** (2011). Stimulation Effects of Fiscal Policies in the European Converging Economies, *Journal of Economics (Ekonomický časopis)*, 59(9): 918-941

[22] Mountford, A., Uhlig, H. (2008). What are the Effect of Fiscal Policy Shocks? [*National Bureau of Economic Research Working Paper* No. 14551] New York, National Bureau of Economic Research, 46 p.

[23] Perotti, R. (2005) Estimating the Effects of Fiscal Policy in OECD Countries, [*European Central Bank Working Paper* No. 168/2005] Frankfurt am Main, European Central Bank, 63 p.

[24] Redžepagic, S., Llorca, M. (2007) Does Politics Matter in the Conduct of Fiscal Policy? Political Determinants of the Fiscal Sustainability: Evidence from Seven Individual Central and Eastern European Countries (CEEC), *Panoeconomicus*, 54(4): 489-500.

[25] Romer, C.D., Romer, D.H. (2007) The Macroeconomic Effects of Tax Changes: Estimates Based on a New Measure of Fiscal Shocks, [*National Bureau of Economic Research Working Paper* No. 13264] New York, National Bureau of Economic Research, 71 p.

[26] Tsibouris, G.C., Horton, M.A., Flanagan, M.J., Maliszewski, W.S. (2006) Experience with Large Fiscal Adjustments. [*International Monetary Fund Occasional Paper* No. 246/2006] Washington, D.C., International Monetary Fund, 51 p.

[27] von Hagen J., Hallet, A.H., Strauch, R. (2002) Budgetary Consolidation in Europe: Quality, Economic Conditions, and Persistence, *Journal of the Japanese and International Economics*, 16: 512-535.

*** European Commission (2012), Report on Public Finances in EMU - 2012, *European Economy* No. 4/2012, (Brussels: European Commission).

APPLICATION OF THE CROSS IMPACT MATRIX METHOD IN PROBLEMATIC PHASES OF THE BALANCED SCORECARD SYSTEM IN PRIVATE AND PUBLIC SECTOR

Vincent **ŠOLTÉS**[7]
Beáta **GAVUROVÁ**
Faculty of Economics, Technical University of Košice, ***Slovakia***
vincent.soltes@tuke.sk beata.gavurova@tuke.sk

Abstract:

Company performance measurement using profit indicators seem to be overcome. Currently, the tendency to apply new synthetic metrics involving actual activities into future results of a company has occurred. One of more and more popular methods of performance measurement and management is the Balanced Scorecard (BSC) the use of which has increased significantly over the past 10 years. In response to the contradictive opinions on the BSC this paper presents findings during the period of 2008-2011 on implementation of the BSC in Slovak companies. Key problematic issues of the BSC system implementation were identified and possible solutions were suggested. The emphasis is on the MICMAC (Matrice d'Impacts Croises Multiplication. Appliquee a un Classement, angl. Cross-Impact Matrix) method to point out its broad use within the strategic management. The analysis is based on a non-functionality of the BSC if the system does not meet all requirements. Hence, the proper knowledge of the factors influencing the BSC is essential.

Keywords: performance management, Balanced Scorecard, structural analysis, MICMAC method.

JEL Classification: M10, M19, M29

Introduction

Development of performance measurement systems is influenced by a rapidly changing competitive environment. A success of a company strategy is determined by using of proper methodology and metrics respecting characteristic features of production systems and management criteria (e.g. Zachar *et al.* 2011, 199). The strategy design requires the consideration of the economical, political and social instability and in the same time forecasting as closer as possible to the real life (Doval 2010, 317). Strategy development starts from the identification and comprehension of true consumer needs (e.g. Ward 2009, 441; Zgodavová and Bober 2012, 59). Quality of the performance measurement and management process depends on the mutual symbiosis of financial and nonfinancial indicators. This issue has been an object of continuing discussions of domestic and foreign experts searching for the possibilities to create an efficient managerial tool supporting systematic improvement of the performance measurement system. An ambition of advisory and consulting companies to implement new performance measurement and management methods into practice has been a significant contribution. With respect to the intensive competition and globalization processes, the above mentioned companies have become centers of expert knowledge of various managerial disciplines combined with rich practical experience and access to the primary company data. They provide relevant information from the subjects disposing of valuable experience with performance measurement and management system implementation and utilization.

The strategic oriented Balanced Scorecard (BSC) represents a new approach to the company performance measurement, because it enables decomposition of the strategy to measurable objectives and their consequent connection to performance indicators. The BSC puts emphasis on drivers of success within four main perspectives: finance, customers, internal company processes and learning & growth. The current business environment is characterized by continuous performance monitoring and efficiency of organizations (e.g. Gavurová and Klepáková 2012, 23; Kiauta 2012, 103). The competitiveness of organizations, regions and countries is significantly determined by the innovation activities (Szabo *et al*. 2013). Recent research studies in Slovakia confirm that only a negligible part of Slovak managers is familiar with the BSC, and therefore its practical application encounters many

[7] Faculty of Economics, Technical University of Košice, **Slovakia**, Němcovej 32, 040 01 Košice, Slovakia

Conclusion

Analyzing performance and efficiency of organizations is typical for present business environment. Performance measurement and evaluation is beside really achieved outputs significantly influenced by applied methods. One of the successful systems for performance measurement and management and strategy implementation is the BSC system. Its essence is harmonizing and realizing a strategy by its transformation into particular objectives and indicators within a company. By providing a group of indicators, the BSC system has become a relevant basis for difficult strategic Benchmarking.

We have applied the structural analysis method MICMAC and thus proposed a model of potential disfunctionality causes of the BSC system and classified the variables according to their influence and dependence on specific categories. Early and proper diagnosis of critical factors of the system may reveal significant functionality deficits and enable its continuous improvement.

To conclude, we consider important for subjects with implemented BSC system to analyze and evaluate its theoretical and methodological platform. Moreover, it is necessary to verify if specific characteristics of each business subjects have negative impact on reliability of information for strategic decision-making.

Contribution has been supported by project VEGA No. 1/1050/12 "Proposal of the performance measurement system in the medical institutions in the Slovak Republic and implementation of the performance metrics".

References

[1] Arcade, J., Godet, M., Meunier, F., Roubelat, F. Structural analysis with the MICMAC method & Actors' strategy with MACTOR method, Laboratory for Investigation in Prospective and Strategy,http://www.agriperi.ir/AKHBAR/cd1/FORESIGHT%20METHODOLOGY%20&%20FORECASTING/FORESIGHT%20METHODOLOGY/related%20articles/books/Future%20Research%20Methodology/4-stranal.pdf.

[2] Bilodeau, B., Rigby, D. (2009). *Management Tools and Trends*. Bain&Company.

[3] Braam, G.J.M., Nijssen, E.J. (2009). Performance effects of using the Balanced Scorecard: a note on the Dutch experience. *Long Range Planning.* 37(4): 335-349.

[4] Bryant, L., Jones, D. A. *et al.* (2004). Managing Value Creation within the Firm: An Examination of Multiple Performance Measures. *Journal of Management Accounting Research* 16: 107-131.

[5] Buckmaster, N.T. (2002). The Performance Measurement Panacea. *Accounting Forum* 24(3): 264-277.

[6] Davis, S., Albright, T.L. (2004). An Investigation of the Effect of Balanced Scorecard Implementation on Financial Performance, *Management Accounting Research*, 15(2): 135-153.

[7] Doval, E. (2010). A model of planning process by using scenarios in strategic management, *Journal of Applied Economic Sciences* 4: 317-323.

[8] Duperrin, J.M., Godet, M. (1975). SMIC 74: a new cross impact method, *Futures* 7: 302-312.

[9] Gavurová, B., Klepáková, A. (2012). Barriers of introduction and usage of BSC system in public and private sector organizations, *Economics Management Innovation,* 4: 23-33.

[10] Gervais, M., Kita, J., Vološin, M. (1999). *Company Strategy. Ways of Flexibility and Reaction Ability Improvement*, Manacon.

[11] Godet, M. (1982). From forecasting to 'la prospective' a new way of looking at Futures. *Forecast* 1: 293-301.

[12] Hoque, Z., James, W. (2000). Linking Balanced Scorecard Measures to Size and Market Factors: Impact on Organizational Performance, *Journal of Management Accounting Research*, 12: 1–17.

[13] Ittner, C.D., Larcker, F.D., Meyer, M.W. (2003). Subjectivity and the Weighting of Performance Measures: Evidence from a Balanced Scorecard, *The Accounting Review*, 78: 725-758.

[14] Ittner, C.D., Larcker, F.D., Randall, T. (2003). Performance implications of strategic performance measurement in financial services firms, *Accounting, Organizations and Society*, 28: 715-741.

[15] Janke, F. (2011). The Use of Hidden Data in Electronic Business Networks: Benchmark and Network Performance Indicators, 19th Interdisciplinary Information Management Talks, September 7-9, in Jindřichův Hradec, Czech Republic.

[16] Kaplan, R.S., Norton, D.P. (1992). The balanced scorecard: measures that drive performance. *Harvard Business Review*, 71: 71-80.

[17] Kaplan, R.S., Norton, D.P. (1996). *The Balanced Scorecard*. Harvard Business School Press.

[18] Kaplan, R.S., Norton, D.P. (2001). Transforming the Balanced Scorecard from Performance Measurement to Strategic Management: Part II, *Accounting Horizon**s**,* 15(2): 87-104.

[19] Kiauta, M. (2012). Idea of Quality Versus Idea of Excellence, *Quality Innovation Prosperity*, 16(2): 103-114.

[20] Klepáková, A. (2011). Customer perspective of Balanced Scorecard, Paper presented at scientific seminar during Week of Science and Technology in Slovakia, November 11, in Kosice, Slovakia.

[21] Lipe, M.G., Salterio, S.E. (2000). The Balanced Scorecard: Judgmental Effects of Common and Unique Performance Measures, *The Accounting Review*, 75: 283-298.

[22] Malina, M.A., Selto, F.H. (2007). Communicating and Controlling Strategy: An Empirical Study of the Effectiveness of the Balanced Scorecard. http://ssrn.com/abstract=278939.

[23] Malmi, T. (2001). Balanced scorecards in Finnish companies: A research note, *Management Accounting Research*, 12 (2): 207-220.

[24] Maiga, A.S., Jacobs, F.A. (2003). Balanced Scorecard, Activity-Based Costing and Company Performance: An Empirical Analysis, *Journal of Managerial Issues*, 15: 283-301.

[25] Olson, E.M., Slater, S.F. (2002). The balanced scorecard, competitive strategy, and performance, *Business Horizons*, 45(3): 11-16.

[26] Parmenter, D. (2007). *Key Performance Indicators*, John Wiley & Sons.

[27] Prídavok, M., Delina, R. (2013). Effective Spend Management Through Electronic Reverse Auction Configurations, *Quality Innovation Prosperity*, 17 (1): 1-9.

[28] Ramík, J. (2000). *Analytic Hierarchical Process (AHP) and its Utilization in SME*, Published by Slezská univerzita in Opava.

[29] Rigby, D. (2001). Management Tools and Techniques: A Survey, *California Management* Review, 43(2): 139-160.

[30] Saaty, T.L. (2008). Decision making with the analytic hierarchy process., *Services Sciences* 1(1): 83-98.

[31] Sim, K.L., Koh, H.C. (2001). Balanced Scorecard: A Rising Trend in Strategic Performance Measurement, *Measuring Business Excellence*, 5(2): 18-27.

[32] Schulz, A.K.D., Wu, A., Chow, C.W. (2010). Environmental Uncertainty, Comprehensive Performance Measurement Systems, Performance-Based Compensation, and Organizational Performance, *Asia-Pacific Journal of Accounting & Economics*, 17(1): 17-39.

[33] Speckbacher, G., Bischof, J., Pfeiffer, T.A. (2003). A descriptive analysis on the implementation of Balanced Scorecards in German-speaking countries, *Management Accounting Research*, 14(4): 361-388.

[34] Strohhecker, J. (2007). Does a Balanced Scorecard Management Cockpit Increase Strategy Implementation Performance? System Dynamics Society Conference. http://www.systemdynamics.org/conferences/2007/proceed/papers/STROH532.pdf.

[35] Szabo, K.Z., Šoltés, M., Herman, E. (2013). Innovative Capacity & Performance of Transition Economies: Comparative Study at the Level of Enterprises, *E+M Ekonomie a Management*, 16(1): 52-69.

[36] Vysušil, J. (2004). *The Balanced Scorecard Method in Context,* Profess Consulting, 120.

[37] Wagner, J. (2009). *Performance Measurement. How to measure, to evaluate and to use information about company performance.* Grada Publishing.

[38] Ward, D. (2009). Needs Seeded Strategies. *Journal of Applied Economic Sciences* 3(9):441-456.

[39] Zachar, P., Šoltés, M., Kasarda, R., Novotný, J., Novikmecová, M., Marcinčáková, D. (2011). Analytical methods for the species identification of milk and milk products. *Mljekarstvo.* 61(3): 199-207.

[40] Závadská, Z., Závadský, J., Sirotiaková, M. (2013). Process model and its real application in the selected management areas, *E+M Ekonomie a Management*, 16 (1): 113-127.

[41] Závadský, J., Závadská, Z. (2011). *Process audit criteria oriented to human resources*. Human Resources Management & Ergonomics, V(1): 49-58.

[42] Zgodavová, K., Bober, P. (2012). An Innovative Approach to the Integrated Management System Development: SIMPRO-IMS Web Based Environment, *Quality Innovation Prosperity*. 16(2): 59 - 70.

*** American Productivity & Quality Center, *Performance Measurement: Implementing the Balanced Scorecard*, http://217.114.165.229/reportinfo.asp?report_id=42762.

*** Balanced Scorecard Institute. Best Practice Poll 2008: So...How Did You Measure Up? http://www.balancedscorecard.org/Portals/0/PDF/BalancedScorecardInstituteSurveyResults.pdf.

*** Balanced Scorecard Interest Group. *Lessons Learned in Implementing Balanced Measures By Members of the Balanced Scorecard Interest Group*. http://unpan1.un.org/intradoc/groups/public/documents/ASPA/UNPAN003418.pdf.

*** European Commission: *The new SME definition. 2006: User guide and model declaration. European communities*, http://ec.europa.eu/enterprise/enterprise_policy/sme_definition/sme_user_guide.pdf

ECONOMIC POTENTIAL OF REMITTANCES: EVIDENCE FROM THE SOUTH ASIAN COUNTRIES

Wadim STRIELKOWSKI
National University of Ireland Galway, **Republic of Ireland**
Charles University in Prague, **Czech Republic**
strielkowski@fsv.cuni.cz

Abstract

This paper describes the economic potential of remittances, especially in comparison with the Official Development Assistance (ODA) in selected South Asian countries.

It appears that remittance transfers contribute to the increase of GDP per capita in South Asian countries and beat the ODA both in absolute values and in the effectiveness.

The results of the empirical model that employs seemingly unrelated regressions demonstrate the importance of remittances over ODA, and support the implementation of targeted development policies devised by the West in order to support efficient remittance transfers which represent one of the best ways how to promote development and growth in less-developed economies.

Keywords: remittance transfers, economic development, Official Development Assistance, seemingly unrelated regressions, international economics.

JEL Classification: F22, J61, O55, P45

Introduction

The main purpose of Official Development Assistance was to fight poverty and enhance economic development in the Third World. However, the effectiveness of ODA for the last five decades, particularly in the least-developed countries (LDCs), is unsatisfactory (see e.g. Charron, 2011). This is reinforced by the low market dynamics in emerging economies (see e.g. Karadagli and Omay, 2012) and the negative impact on environment due to the poor environmental standards and the pursue of rapid capital accumulation neglecting the environmental concerns (see e.g. De Santis, 2012).

For instance, the success of poverty alleviation at the global level as the most important goal of development interventions is, above all, based on the rapid long-term economic growth in China and India in the last few decades, as well as the implementation of other quantitative targets within the framework of the Millennium Development Goals (Cuong, 2011). The global measures are not very useful in this context simply because of the significance of China and India in these figures (Collier, 2007; Posso, 2012). It might be that several developed countries are beginning to re-think their emphasis on poverty alleviation as a primary development strategy.

De Haas (2012) shows in his paper that remittances beat ODA in terms of amounts that are transferred to low-income and middle-income countries. According to the World Bank (2012) from 55 billion USD in 1990, the ODA decreased to 50 billion USD in 2000 and reached 100 billion USD in 2008, while at the same time remittances to low and middle-income countries constituted a mere half of ODA in 1990 (23 billion USD), reached 60 billion USD in 2000 and 243 billion USD in 2008 (Figure 1).

Cruz Zuniga (2011) shows that one of the reasons why the remittance transfer peaked was probably due to both the structural increase of South-North and East-West migration over the past twenty years or so, and due to the rapid decrease in the price of financial products (opening and maintaining a bank account, using traveler's cheques, using cheap and sufficient money transfer agencies to send money abroad) and technological progress allowing the use of safer channels for transferring money (Internet and telephone banking).

Recent experience of some EU countries (Germany or Austria) with Turkish workers in the 1960s and 1970s represents a good example of how these trends evolved (Glazar and Strielkowski, 2010).

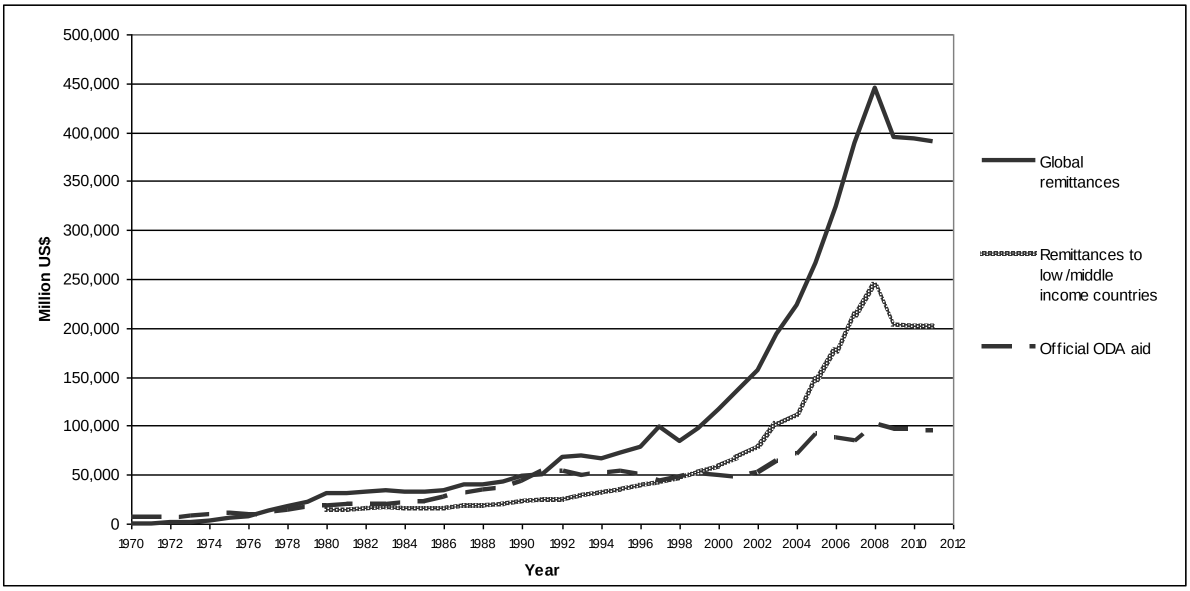

Figure 1**:** Global remittances and official ODA (1970–2011)
Source: World Development Indicators database, World Bank (2012)

Remittances in economic literature

One of the most noticeable effects of migration on the source country is represented by remittances. Remittances that are defined as "*transfers of money (or in kind transfers) that migrants send back to the country of their origin directly to families they left behind*" (IMF, 2008) usually constitute enormous inflows of foreign money for receiving countries. In 2010, remittance flows are estimated to more than USD 440 billion, from which amount USD 325 billion is received by developing countries. As remittances often flow via informal channels (see further in this section), the amount could be much bigger than remittances officially registered. Top recipient countries in 2010 were India, China, Mexico, the Philippines and France. Probably more striking statistics of remittances is their share on GDP, reaching enormous values in developing countries. Top recipients in this category in 2009 were Tajikistan (35%), Tonga (28 %), Lesotho (25%), Moldova (31%), and Nepal (23%). Among the countries that are source of remittances there are mainly US, Saudi Arabia, Switzerland and Russia (World Bank, 2011).

Remittances transfers usually take place between family members and close relatives, so the motives behind them are personal and depend on human behavior. One of the motives described in the literature is *pure altruism*. Migrants simply care about their families that are left behind drives flow of money. Economic theory copes with altruistic motives to remit with incorporating the consumption level of remittances as the argument in the utility function of the migrant (Chami *et al*., 2008). However, the problem is more complex and also other motives stemming from households arrangements that do not have to appear obvious for the "first sight" are probably present as well (Lucas and Stark, 1985).

According to Rapoport and Docquier (2005) and Lucas and Stark (1985), the main motives of remittance behavior might be: exchange, inheritance, pure self-interest, loan (debt) repayment or insurance. In addition, Massey, Durand, Pren (2011) state that, primarily, remittances as an alternative stream of earnings are sent to diversify risk to households' income.

Bougha-Hagbe (2004) researched motivations of remittance senders in Morocco and found that altruism and the "attachment" to the home country is considered as the main long-run determinants and motives of remittances. The same conclusion was supported by Schiopu and Siegfried (2006) who found that altruism is the main motive for remittances as the GDP differential between source and destination country determines to the amount remitted. The investment motive that is also investigated in the study is not as significant. Remittances of Pakistani migrants are most likely driven by altruistic motives but sometimes co-insurance and investment motive play the role (Anwar and Mughal, 2011).

The motives of migrants to remit funds back home can also affect the relationship of remittances to economic cycle: pure altruistic motive – to help your friends and family – can make remittance flows countercyclical as the amount of money sent is higher in the time of economic slowdown. If the motive is to invest, then the amount is lower under the fear of the unstable economy; hence remittances could be pro-cyclical (Vargas-Silva, 2011).

In searching for determinants of remittances researchers are usually interested in demographic characteristics of migrant and his family and financial information. Carling (2008) provides an overview of main potential determinants: i) personal characteristics of migrants, ii) migrants' incomes (positive or no relationship with remittances), ii) level of education (also might imply possible motive of loan repayment).

From the recipient' side, household income seems to be one of most important determinants of remittances (negative relationship meaning altruistic motive). The fluctuations and volatility of household income (insurance motive) was found as a determinant by Lucas and Stark (1985) during Botswana's drought. The presence of close family in the host country also reduces remittances. Further, the quality of transmitting services, the rural vs. urban status of family or nationality and ethnicity affect remittances in various countries.

Massey, Durand and Pren (2011) found that odds of remitting rise with age, number of minors in household, years of prior experience with migration, physical capital ownership, wages of migrant and odds is higher if migrant is a male, whereas presence of spouse or family in the country of destination lowers odds of remittances. Anwar and Mughal (2011) used similar approach and came to the conclusion that gender of the household head, number of household members, family income, urban and rural settings are strong predictors of remittances, whereas education and wealth of the family are not among significant predictors.

Conclusions

This paper demonstrates that remittances might have a higher development potential than ODA. This happens not only due to the fact that remittances beat ODA in absolute values but also because remittance transfers are more effective. Administrative and other related costs deplete about 50 per cent of ODA while remittances are fully absorbed and properly used. Remittances might also represent a more stable and reliable source of income than ODA.

The empirical model presented in this work based on seemingly unrelated regressions that use the data for selected South Asian countries supports the evidence from migration and remittances literature and shows that remittances have a larger net effect on economic growth expressed as the annual growth of GDP per capita. Our model reveals some general trends that are worth taking into account when comparing the effects of remittances and ODA in LDCs. Surely, ones should not underestimating the importance of ODA the crucial role of international organizations in bringing aid to the people in need. However, it might be useful for the policy-makers and stakeholders in the Western countries to realize that there are other possibilities for development in LDCs that might be more useful and effective.

References

[1] Adams, R.H., Page, J. (2005). Do international migration and remittances reduce poverty in developing countries? *World Development*, 33(10): 1645–1669.

[2] Alvarez-Plata, P., Brücker, H., Siliverstovs, B. (2003). *Potential Migration from Central and Eastern Europe into the EU-15 – an Update*, DIW Berlin.

[3] Anwar, A.I., Mughal, M.Y. (2011). Motives to remit: some microeconomic evidence from Pakistan. *Economics Bulletin*, 32: 574-585.

[4] Baltagi, B. (2005). *Econometric Analysis of Panel Data.* 3rd Edition. New York: John Wiley & Sons.

[5] Boeri, T., Brücker, H. (2000). *The Impact of Eastern Enlargement on Employment and Labor Markets in the EU Member States*. European integrated consortium, Berlin and Milan.

[6] Boeri, T., Brücker, H. (2001). Eastern Enlargement and EU-Labor Markets: Perceptions, Challenges and Opportunities. *World Economics* 2(1): 49-68.

[7] Boeri, T., Brücker, H. (2005). *Migration, Co-ordination Failures and EU Enlargement*. German Institute of Economic Research paper no. 481; Berlin.

[8] Bougha-Hagbe, J. (2004). *A Theory of Workers' Remittances with an Application to Morocco*. IMF Working Paper No. 04/194;

[9] Carling, J. (2008). The determinants of migrant remittances. *Oxford Review of Economic Policy*, 24(3): 582–599.

[10] Collier, P. (2007). *The Bottom Billion*. Oxford University Press, Oxford, United Kingdom.

[11] Cruz Zuniga, M., (2011). On the path to economic growth, do remittances help? Evidence from panel VARs. *The Developing Economies*, 49: 171–202.

[12] Cuong, N.V. (2011). Can Vietnam achieve the Millennium Development Goal on poverty reduction in high inflation and economic stagnation? *The Developing Economies*, 49: 297–320.

[13] De Haas, H. (2012). The Migration and Development Pendulum: A Critical View on Research and Policy. *International Migration* 50: 8–25.

[14] De Santis, R. (2012). The impact of growth on biodiversity: an empirical assessment. *Journal of Applied Economic Sciences*, VII 3(21): 283-290.

[15] Glazar, O., Strielkowski, W. (2010). Turkey and the European Union: possible incidence of the EU accession on migration flows. *Prague Economic Papers*, 3: 218-235.

[16] Hatton, T.J. (1995). A Model of UK Emigration, 1870-1913. *The Review of Economics and Statistics*, 1: 407-415.

[17] Hausman, J.A. (1978). Specification Tests in Econometrics. *Econometrica*, 46(6): 1251-1271.

[18] Charron, N., (2011). Exploring the impact of foreign aid on corruption: has the 'anti-corruption movement' been effective? *The Developing Economies*, 49: 66–88.

[19] Chiami, R., *et al.* (2008). *Macroeconomic Consequences of Remittances. Occasional* Paper No. 259, Washington: International Monetary Fund;

[20] Johansen, S. (1991). Estimation and Hypothesis Testing of Cointegration Vectors in Gaussian Vector Autoregressive Models, *Econometrica*, 59: 1551–1580.

[21] Karadagli, E.C., Omay, N.C. (2012). Testing weak form market efficiency of emerging markets: a nonlinear approach, *Journal of Applied Economic Sciences*, 3 (21): 235-245.

[22] Katseli, L.T., Lucas, R.E.B., Xenogiani, T. (2006). *Effects of Migration on Sending Countries: What Do We Know?* Paris: OECD Development Centre. Working Paper No. 250.

[23] Lucas, R.E.B., Stark, O. (1985). Motivations to remit: Evidence from Botswana, *Journal of Political Economy*, 93(5): 901-918.

[24] Massey, D.S., Durand, J., Pren, K.A. (2011). *Migradollars and Development in Eight Latin American Nations.* Available online: http://www.seminar.wne.uw.edu.pl/uploads/Main/Migradollars%20and%20Development%20in%20Latin%20America.pdf (Accessed 30.11.2012).

[25] Ozden, C., Schiff, M. (eds.) (2006). *International Migration, Remittances, and the Brain Drain*. Palgrave MacMillan: New York.

[26] Ozden, C., Schiff, M. (2007). *International Migration, Economic Development and Policy*. Palgrave MacMillan: New York.

[27] Posso, A. (2012). Remittances and aggregate labor supply: evidence from sixty-six developing nations, *The Developing Economies*, 50: 25–39.

[28] Rapoport, H., Docquier, F. (2005). *The Economics of Migrants' Remittance*. IZA Discussion Paper No. 1531, available at SSRN: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=690144 (Accessed 25.11.2012).

[29] Schiopu, I., Siegfried, N. (2006). *Determinants of Workers' Remittances: Evidence from European Neighbouring Region.* Working Paper Series No. 688, Frankfurt: ECB.

[30] Skeldon, R. (2002). Migration and poverty, *Asia-Pacific Population Journal*, 17(4): 67–82.

[31] Vargas-Silva, C. (2011). *Remittances and Development: Recent Evidence in the Times of Financial Turbulence*, Oxford: University of Oxford.

*** AMECO. (2008). *AMECO database.* Available for download from: http://ec.europa.eu/economy_finance/indicators/annual_macro_economic_database (Accesed 20.11.2012).

*** World Bank (2011). *Migration and Remittances Factbook 2011*. Washington: World Bank.

*** World Bank (2012). World DataBank: *World Development Indicators (WDI) & Global Development Finance (GDF).*

*** International Monetary Fund. (2008). *International Transaction of Remittances: Guide for Compilers and Users.* New York: IMF