University of Debrecen
Faculty of Economics and Business Administration
Doctoral School of Economics
„Competitiveness, Globalisation and Regionalism” Doctoral Programme

PhD Dissertation Summary

The Transformative Power of Fiscal Consolidation – Towards the Concept of Innovative Fiscal Policy

Olivér Kovács

Supervisor: Prof. Dr. László Csaba
University Professor, Central European University, Corvinus University of Budapest;
Regular Member of the Hungarian Academy of Sciences

Debrecen, 2013.

Table of Contents

Acknowledgements

Beyond the invaluable support of his parents, sister, grandparents and *Ágnes Orosz*; the author of the PhD dissertation would like to express his gratitude for those who contributed to the work in various ways: *László Csaba*, University Professor, Central European University, Member of the Hungarian Academy of Sciences; *László Muraközy*, Associate Professor, Department of Economics, Debrecen University; *Árpád Kovács*, University Professor, Institute of Finance and International Economic Relations, University of Szeged, Member of Board of Directors, Hungarian State Holding Company, Chairman of the Fiscal Council of Hungary; *Miklós Szanyi*, Head of the Doctoral School of Economics, Debrecen University, Scientific Adviser, Institute for World Economics, RCERS, HAS; *Stefan A. Musto*, Emeritus Professor, Technical University of Berlin. Furthermore, the author is also indebted to *István Benczes*, Associate Professor, Department of World Economy, Faculty of Economics, Corvinus University Budapest; *István Polónyi*, Head of Management and Marketing Department, Debrecen University, Faculty of Economics and Business Administration; *Csaba Makó*, Professor, Institute of Sociology, Hungarian Academy of Sciences; *Dóra Győrffy*, Associate Professor, Pázmány Péter Catholic University; *Judit Kapás*, Dean, Head of Department of Economics, University Professor, University of Debrecen, Faculty of Economics and Business Administration; *Pál Czeglédi*, Assistant professor, University of Debrecen, Faculty of Economics and Business Administration; and *Eszter Láng*, Assistant professor, University of Debrecen, Faculty of Economics and Business Administration.

"Those who desire appropriate insights
must raise proper doubts first."
Aristotle

1. Background

Most ancient Greek philosophers considered that scientific mindset starts with wonder and it all stands or falls on raising proper questions. The ideas outlined in this PhD dissertation have been taking shape through several years. In the very beginning of his research career, the author dealt with the general contemplation of fiscal policy and fiscal sustainability taking the concept of sustainability in a much broader sense. By paraphrasing Wilhelm Röpke (1950|1979), one can state that sustainability is similar to an enormous venerable tree trunk, and beneath its canopy cover we all have the feeling of protecting something common. This common, which is to be safeguarded, surely contains fiscal sustainability, i.e. the longevity of the state which exerts substantial influencing power on our economic, social and environmental existence alike. As a corollary, mechanisms and approaches are needed to be developed to provide the homeostasis of the state in the long run which is necessary to tackle the rapidly changing external and internal conditions through proper adaptive capacity.

Such an approach would be to put fiscal sustainability into practice, which quite often requires fiscal consolidations. In the beginning, the author's attention focused on success factors of a fiscal consolidation meaning whether mechanistically derived deficit and debt-to-GDP ratios were reached or not. In this regard, keeping the main achievements sustainable, the issue of rule-based fiscal responsibility frameworks arises (Kopits – Symansky, 1998; Kopits, 2007). Then the author's thinking was greatly influenced by the efficiency definition of Nicholas Káldor and John Hicks that appeared in their 1939 works. According to this definition we regard an economic decision as an efficient one if the generated capacity and ability make it possible to compensate the losers of the given decision. In a similar vein, if fiscal consolidation is associated with economic growth, the opportunity to compensate the losers can easily emerge. This is the reasoning behind the fact that the author's interest has become geared towards the issue of 'growth-friendly' or in other words, the so-called *non-Keynesian* fiscal consolidations.

2. Focus and objective

There is no gainsaying the fact that the budget can be considered to a large extent as a beacon capturing where the given economy is and where it wants to go. In this regard, there is a widespread understanding regarding the importance of a sustainable state having the necessary developmental potential to achieve sustainable development.

The dissertation focuses on the topic of fiscal consolidations and aims at refining one of its aspects by using a systemic approach which also gives us the opportunity to decipher some promising recognitions even on fiscal policy in general. Our basic question is *whether there is a fiscal consolidation with stabilising and dynamising functions at the same time – which targets achieving fiscal sustainability, while supports the cultivation of the general growth capability of the economy – and if so, what sort of theoretical framework may help unravelling such consolidation, and offering an explanatory framework for fiscal policy*.

After analysing the state-of-the-art theoretical and empirical literature on fiscal sustainability and fiscal consolidations, we called for a systemic approach to better understand non-Keynesian effects by incorporating the techno-economic paradigmatic context in a more vigorous way and by trying to bridge the gap between the theoretical and empirical explanations. The dissertation is pervaded by the view that the intellectual stream of economics community dealing with fiscal consolidations should not want to decipher a joint and several *'best practice'* of non-Keynesian fiscal adjustment, instead, they should always pursue the intelligent and context-specific form of it, which can be seen as a promising *'next practice'* within the confines of the given techno-economic paradigm.

3. Actuality and rationale

The question of stabilising in fiscal terms while giving impetus at the same time (i.e. dynamising from an economic growth and development point of view) has gained momentum in the aftermath of the 2008 economic and financial crisis and its ensuing sovereign debt crisis and has therefore become a central issue on the agenda nowadays. The period of 1992-2007, which was characterised by the term "Great Moderation" coined by Stock and Watson (2003), has ended and now is being replaced by the "Great Recession" (Coibion – Gorodnichenko, 2010) and the "decade of debt" (Reinhart – Rogoff, 2010). Debates on how to manage the crisis can be organised around the issue of how to stimulate growth. Apart from the fact that the dispiriting growth performance and its weakening has long been an accompanying phenomena in the world economy, which is often attributed by scholars to the secular deterioration of innovations throughout the global economy (Cowen, 2011; Atkinson – Ezell, 2012; Gordon, 2012; Kasparov et al. 2013), some argue that there is an increasingly important need for public investments in tackling old and new challenges that are requiring even closer interdisciplinary cooperation among representatives of various fields with more financial backing (Harford, 2011). This *per se* establishes a solid claim for the necessary fiscal latitude to armour the states with effective and efficient developmental functions.

The crisis has revealed that there is a delicate need of fiscal consolidations that are more likely to enhance global competitiveness, that is to say, to rehabilitate and strengthen the growth ability (Rodrik, 2012; Spence, 2012a,b; OECD, 2012). The coordinated fiscal and monetary stimuli as a reaction to the 2007-2008 crisis resulted in sovereign debt overhangs thus further strengthening the risk aversion of creditors. The stimulus has been proved to be a futile undertaking in the sense that it has merely postponed the inevitable recessionary and depressive impacts of recent global turmoil (Skidelsky, 2012c; Spence, 2012a:167). The turnaround – shifting to austerity both in the United States (Feldstein, 2012) and in Europe – was a logical tail effect because of the malignant debt overhangs that triggered even more dramatic concerns over the solvency of nation states. Since monetary policy is near to its capacity limit (i.e. near-zero interest rates) nowadays, fiscal policy should act as a main conductor of recovery-targeting policies. In short, neither the fiscal stimuli nor the fiscal austerity seemed to be a prospectively instructive way forward in the sense that both had a negative effect on economic growth.[1]

This lesson learned resonates with the thought of Aristotle who expressed in his nicomachean ethics that we are better off if we are targeting some kind of *aurea mediocritas*. The literature and empiric do not offer us a comprehensive picture about such a fiscal consolidation – having a mix of pro- and anti-cyclical elements –, unless we are to establish a potential interpretative frame and go beyond the narrow fiscal discipline.

[1] This was mainly because of the admittedly wrong *a priori* estimations on fiscal multipliers which was systematically underestimated (Coenen et al. 2012; Eichengreen – O'Rourke, 2012; Holland – Portes, 2012; IMF, 2012) whereas the expected economic growth rates as well as the impact of the quantitative easing carried out by the monetary policy were overestimated (Velasco, 2012).

4. Novelty

The present dissertation has sought to have a systemic approach incorporated from development economics (Szentes, 2011a). This approach can be treated as a newfangled one if for no other reason than because it makes us able to refine and re-interpret a certain circle of insights linked to fiscal policy and fiscal consolidations in particular. We analyse the role of fiscal policy in the complex array of structural modernisation, i.e. in the shift to the new techno-economic paradigm (new economy). We argue that fiscal consolidation with a macroeconomic development function can serve as a significant catalyst of the transformation into the new economy.

Our narrative is imbued with the conviction that instead of consolidating mechanistically to the numerical deficit and debt-to-GDP targets mostly considered as optimal and sustainable, fiscal policy should aim at resorting to fiscal consolidation which takes into account the current economic and social structure and constructs its composition intelligently and in a context-dependent way. Otherwise, the disciplinary narrowness becomes a dominant feature, which in turn inhibits the developmental function of the nation state to emerge in the course of fiscal consolidation.

On the one hand, the dissertation dampens the dominating disciplinarian narrowness, which is registrable in case of fiscal consolidation related literature dedicated to analyse the growth effect, via broadening the research horizon. On the other hand, the dissertation can be seen as a decisive step towards a fiscal policy that encapsulates the main features of techno-economic paradigms, especially that of the new economy. Due to the systemic approach, one can get a better understanding of why some fiscal consolidation initiatives succeeded while others failed and why some episodes were associated (followed) with ameliorating economic growth even in the short term. In doing so we take the economies' capability to grow into account, hence elaborate a broader theoretical framework for analysing fiscal consolidations showing non-Keynesian behaviour.

Neglecting the context during fiscal consolidations can be regarded neither as a temporary option nor as a long lasting success in the era when success relies heavily on the degree of embeddedness into the regional and global economy and on the capability of structural adjustment. This is not a matter of choice any longer, but a pressing necessity (Szentes, 2011a:372).

The dissertation purports to shed light on the need to incorporate the main features of the techno-economic paradigm when analysing the effects of fiscal consolidations ex ante or ex post, simply because the techno-economic paradigm frames and influences the patterns of economic growth. In our context, fiscal consolidation should embrace the main features (i.e. consider the main drivers of growth and competitiveness) of the new economy (i.e. knowledge-based, or the lundvallian (2002) 'learning' economy which is largely built upon the central role of information and communication technology while being dominated by service sectors). Emphasising that there is no common development path is in order, however, as one of the greatest grandfathers of the endogenous growth theory, Robert Lucas accentuated in his seminal work: the theory should concentrate on those forces that tend to trigger the changes in the growth and development paths (Lucas, 1988:41). From our point of view, innovation as well as research and development (R&D) can be defined as a pivotal group of such forces in the new techno-economic paradigm when knowledge, created *inter alia* through innovation and R&D, has become a fundamental and *de rigueur* input factor. In this regard, the flexibility of financing is of key importance, as Kornai (2010, 2011) emphasised. Beyond a peradventure, there is a consensual view that supporting the improvement of R&D capacity and innovation is a priority among the state's tasks (Szentes, 2011b; Stancik – Biagi, 2012). At this point the dissertation outlines the rationale behind this argument by paying attention *inter alia* to the suboptimal investment in R&D due to its special features (high risk, uncertainty etc.), or to the issue of grand challenges requiring not-for-profit-oriented approaches which in turn can be initiated and cultivated by nation states. It is hardly by chance that achieving the ICT-based and service sector dominated knowledge economy – which was also emphasised in the Lisbon Strategy – and hence unleashing the full potential of innovation call for perceptible refinement of our macroeconomic and fiscal policies alike (Soete, 2006).

In sum, pursuing a static and context-independent fiscal consolidation is a nonstarter undertaking. Fiscal policies need fiscal consolidations tailored towards the features of techno-economic paradigm, developed in a dynamic and evolutive way. Thus, fiscal consolidation can contribute to the shift to the installation phase of the new techno-economic paradigm (path creation) by mitigating the probability of structural lock-in documented by Grabher (1993). As a consequence, the fiscal consolidation bears the stamp of transformative power.

5. Structure

Our dissertation tried to answer the question of *whether there is a fiscal consolidation which stabilises and dynamises the economy at the same time – which targets achieving fiscal sustainability, while supports the cultivation of the general growth capability of the economy – and if so, what sort of theoretical framework may help unravelling such consolidation.*

In an effort to answer this puzzling question first we first analysed the state-of-the-art knowledge on successful fiscal consolidation with special attention to the growth effect and we pointed out that the increasingly growing body of evidence is rather agnostic and at best mixed. The experience suggests that expecting better understanding – in deciphering the main constituents of growth-friendly consolidations – from concentrating merely on the narrow fiscal dimension would be of a Hayekian fatal conceit and be pervaded by a good deal of abstract thinking. Instead, we argue that there is a conspicuous need for a broader, systemic approach, which in turn has not yet been circumspectly addressed in contemporary studies on fiscal consolidations. Beyond all doubts, this approach provides an opportunity to interpret the context in a more dedicated way in which the given consolidation should be constructed and analysed.

The dissertation begins with a discussion on *sustainable development* (*Section 2*) which can be regarded as a *summum bonum* of permanent and balanced interactions among economic, social and environmental dimensions. One of the pivotal statements of Section 2 was that the state's fiscal sustainability is the *sina qua non* of the *broader concept of sustainability* because unsustainable public finances (and therefore unsustainable state) perceptibly undermine and endanger the fulfilment of the state's development functions required to deal with social and environmental problems.

In drawing the lessons learned from the literature (*Section 3*), we defined *fiscal sustainability* as a fiscal behaviour which intends to create a strict and lasting management of public finances. Therefore maintaining a sustainable fiscal policy can be treated as a movement towards the governance for sustainable development. The section offers an overview of the main benefits of fiscal sustainability and that of the costs of an unsustainable budgetary management by taking also into account the role of fiscal institutionalisation in preserving sustainability and by discussing the trade off between flexibility and credibility. We emphasised the role of values in defining sustainable paths.

Then (*Section 4*) we put the issue of how to achieve fiscal sustainability through fiscal consolidation under the loupe. Although determining an optimal debt-to-GDP ratio in general can be seen as a deliciously tempting experiment, we pinpoint to the fact that this type of recognition – i.e. targeting and pursuing debt thresholds that are defined arbitrarily over time – would completely ignore the world complexity and the nuances of the contexts. This section was to devote special attention to the non-Keynesian effect of fiscal consolidations as well. To this end, we scanned and mapped the relevant literature and were led to the conclusion that there is merely a soupcon evidence regarding a 'best practice'; what is more, the perceivable hiatus in the explanations directs us towards broadening our research 'canvas' by embracing the growth capacity, in other words, the context. We raised and presented three issues related to the emergence of growth effect: (*i*) great uncertainty over the value of fiscal multiplier showing highly non-linear fashion while suggesting the crucial importance of growth ability; (*ii*) differing governmental intentions with regard to fiscal consolidation; and (*iii*) various channels through which the growth effect is anticipated. It is certainly hardly by chance that prominent scholars hint only at "[...] several episodes in which spending cuts adopted to reduce deficits have been associated with economic expansions rather than recessions." (Alesina – Ardagna, 2010:5). Consequently, as it was indicated in the dissertation, *all of these aspects convey the message that the emergence of non-Keynesian effects depends inextricably on the economy's capability to grow*. With this recognition, we called for using a systemic approach in getting a better understanding on such stabilising as well as dynamising consolidations.

In the following (*Section 5*), we shed light on the potential of fiscal consolidation bearing transformative power. Since the available literature does not offer a unified theoretical framework, it is our firm belief that an instructive way forward is to take into consideration the relationship between the economy's growth ability and the timing of fiscal consolidation (the Danish and Irish case also illustrated this need, see *Section 4*, Box 1). When we highlight the timing of fiscal consolidation, we inherently incorporate the growth potential in a broader sense as well. Let us underscore that the growth potential and the patterns of capacity for growth are influenced and shaped by the ruling techno-economic paradigm which evolves in an autochthonous way through the so-called technological revolutions.

Taking into account the features of the given techno-economic paradigm during fiscal consolidations in order to underpin its potential from fiscal side would be of key importance and can serve as a guide for all-time fiscal policy engineers. The theory of techno-economic paradigms was used as an interpretative framework to point out the potential polyphonic character (stabilising, dynamising) of fiscal consolidation. Fiscal governance should cultivate its ability to identify fields that seem to be more promising from the fiscal policy intervention point of view, whereby the successful transition into the new techno-economic paradigm – eventually the longer term sustained growth – can be a real perspective. In the era of highly globalised world economy, when ignoring the efficient involvement is a nonstarter from the side of economic development (Szentes, 2011a), shifting to the new techno-economic paradigm is an imperative prerequisite of competitiveness and economic growth. In other words, fiscal sustainability requires successful transition.

We outlined the theoretical background of techno-economic paradigm and stated that we focus exclusively on the 5th technological revolution and its ensuing new techno-economic paradigm (new economy). After having a comprehensive view on the new economy's specific features, we formulated and elaborated the rationale behind the role of fiscal policy in the transition into the new economy. To this end, we emphasised the central role of R&D and innovation in creating useful and relevant knowledge and we presented the main peculiarities of knowledge which is of key importance when addressing the role of fiscal policy. The state should support the R&D and innovation activities through R&D expenditures if it is to enhance the growth patterns and to promote the shift into the knowledge-based economy (IUS, 2012:93). Public R&D support is of paramount importance in dampening the innovation related costs and liquidity problems of firms. This is the rationale behind the fact that fiscal policy steps into the forefront of our intellectual puzzle.

Along *Section 5* we argued that fiscal policy can contribute to the evolvement of the installation phase of the new techno-economic paradigm even during fiscal consolidations. As a corollary, the probability of *structural lock-in* can be significantly diminished. Fiscal policy can therefore become a quintessence of the creation of a new development path (*path-creation*) (see Schienstock, 2004a, 2011). For this reason, the transformative power of fiscal consolidation emerges emphatically.

As far as the methodology is concerned, the dissertation goes beyond the prevailing approaches of restricting merely to analysing R&D expenditures in percentage of GDP. In doing so, we established the following relations along Section 5: (*i*) As fiscal policy is becoming more disciplinarian, the phenomena of fiscal illusion should lose grounds. (*ii*) As fiscal illusion dampens, and prudent budgetary management practice takes over the fiscal laxity; fiscal policy will have greater fiscal latitude, i.e. more financial resources to be allocated towards fields like innovation and R&D. (*iii*) Against this background, more resources towards R&D and innovation can be transmogrified into improving productivity patterns (*multi-factor productivity*) accepting that this development also requires the cultivation of improved absorptive capacity (Orosz – Kovács, 2011) of the innovation ecosystem for knowledge creation, sharing and utilisation (which can also be amplified through supporting R&D and innovation activities that are often associated with positive externalities (Götz, 1999), and that are therefore in support of joining the new techno-economic paradigm's installation phase). Related to the last point, in an effort to capture the economies' ability to produce and utilise knowledge, we take a glimpse onto the *Knowledge Economy Index (KEI)* developed by the World Bank. This index demonstrates the knowledge-base of the economies in a more emphatic way. Our dissertation also calls our attention to the relationship between the quality of fiscal governance – captured by the degree of fiscal illusion – and the degree of knowledge-base. With good fiscal governance (i.e. being able to spend more on innovation and R&D in supporting private sector firms), unlocking the potential of the new economy seems to be more efficient. In this regard, we recurred to the Danish and Irish consolidation episodes mentioned in earlier sections to refine the basic arguments on non-Keynesian effects. These fiscal consolidations were crystal-clearly pervaded by the view of fostering R&D and innovation *via* additional expenditures while reducing spending on unproductive fields (See *Section 5*, Box 2).

From a combined view of the theoretical and empirical evidence on fiscal consolidations as well as the specific role of fiscal consolidation in the transition to the new economy, we formulated our hypotheses to be justified. In an effort to demonstrate our argument in a more vigorous way, we presented two illustrative examples being in diametrical opposition since Finland can be characterised with the transformative power of fiscal consolidation (i.e. good fiscal governance coupled with the leading role among knowledge economies), while Portugal can be portrayed as a country showing impaired fiscal governance and being a laggard in terms of KEI, where the transformative character of fiscal consolidation is missing. Their cases confirm that rather than consolidating mechanistically onto the derived deficit and debt-to-GDP ratios, fiscal governance should always consider the context (i.e. growth potential) which seems to be of immense importance with regard to the emergence of growth effect as well.

6. Theses

Thesis 1: The decisive stream of fiscal consolidation related economic literature whose viewing angle is pervaded exclusively by the fiscal dimension – i.e. inexorably pursuing fiscal adjustment to mechanistically derived deficit and debt-to-GDP targets considered as optimal ones – does not take into account that due to the growth ability nourished by *internal* and *external* factors: (*i*) there can be cases when indebtedness appears to be sustainable for a certain time and under certain conditions; or (*ii*) expenditure-side fiscal consolidation is not associated with recessionary effect because of the economy's growth ability.

Our first hypothesis was derived from the economic literature linked to fiscal consolidation as well as fiscal sustainability and was also confirmed by our illustrative case studies. In case of Portugal, the internal factors directed the government toward fiscal laxity, and this tendency was further strengthened by the lack of external coercive power from the European Monetary Union (EMU) because core countries were also interested in maintaining the institutional configuration of the EMU due to the increasing asymmetric interdependence. The creditor countries were not interested in breaking up this *status quo* and therefore closed one of their eyes to the fiscal indisciplinarity of Portugal. For this reason, the Portuguese case undoubtedly highlights that that an economy might be able to a certain extent and duration to manoeuvre itself in the shadow of the winds even though its public finances is unsustainable, nonetheless, let us add immediately that if the state is unable to pursue and fulfil its developing function, the economic dementia, the withering growth can become a real perspective. In hindsight, the eurozone membership gave a misleading feeling of comfort without even pressuring externally the prudent public finance; hence the commitment to fiscal discipline has to be autochthonous. In contrast to Portugal, the Finnish case corroborated that the implemented expenditure-based fiscal consolidations were not associated with deteriorating growth performance because of the necessary growth ability. In this way, both the first and the second statements of the *Thesis 1* were demonstrated and reinforced.

Thesis 2: Fiscal consolidation can serve as a supportive mechanism of the shift into the new economy, which can have transformative power and by which not only the stepping into the installation phase can be facilitated, but also the progress along the phase.

The amalgam of introductory (Danish, Irish) as well as longer and much deeper case studies (Finnish, Portuguese) analysed in the European context lends support to *Thesis 2*. The Finnish and Portuguese cases were analysed on the basis of our recurrently emphasised systemic approach by devoting attention to the historical, economic, social, political and institutional developments and their weaving web of interactions complemented with the global economic trends. The Finnish case offers solid ammunition for our conceptual findings, namely that fiscal consolidations had transformative power. The coalition government intended to foster R&D and innovation activities during fiscal consolidation, and thus to leave behind the resource-based economic model and trigger the enhancement of knowledge-based economy and the birth of a mature information society in parallel. In comparison, the principal message of the Portuguese case, which can be regarded as a "long march" (Antal, 2009), is that its fiscal consolidations were not featured with transformative power, what is more, they were more likely to hinder the transition into the new economy. Portugal's fiscal policy has not been able to implement consolidation bearing not only the feature of pro-cyclicality, but also that of anti-cyclicality, which in turn would have been able to stimulate the economic performance by fostering fields that are of great importance in the era of the new economy (efficient education, R&D and innovation), and by reducing expenditures geared towards unproductive areas (i.e. constitutionally stipulated commitment to expand welfare expenditures). As a consequence, the Portuguese consolidations merely had ephemeral effects.

Thesis 3: Political consensus is needed to make efforts in promoting knowledge-based economy. More precisely, fiscal sustainability and structural transformation require *internal commitment* during fiscal consolidation. In this way, not only the mechanistic stabilisation to deficit and debt-to-GDP ratios can be achieved by means of fiscal consolidation, but the dynamisation can also become an integral part of the process. This implies that the fiscal consolidation bearing the stamp of transformative power is a mechanism with pro- and anti-cyclical elements, which takes into consideration the paradigmatic specifities and puts those forces (R&D, innovation) into the fiscal forefront that tend to engender changes in the development and growth trajectory.

In the dissertation we addressed several times (see *Section 4.3*) the issue of internal commitment. Empirical evidence suggests that the internal fiscal commitment is more likely to be effective than the external anchoring role of the European Union, hence due fiscal governance remains a priority at national level. This recognition was insightfully illustrated both by the Finnish and Portuguese cases. In Finland, fiscal consolidation measures required widespread consensus which came to life due to the claim for sustainability because maintaining the welfare model constituted a declared and common objective. Pursuing this goal, the Finnish fiscal policy resorted to consolidations having pro- and anti-cyclical components, i.e. intelligent allocations of additional expenditures from unproductive fields toward productive ones (R&D, innovation). With the view to fiscal institutionalisation and in accordance with the empirical literature, the Finnish case also conveys us the message that a predominantly expenditure-based fiscal consolidation is more likely to nurture fiscal discipline. Let us add immediately that fiscal discipline proved to be achievable without establishing a fiscal institution (e.g. independent fiscal council) due to realistic deficit targets and the political commitment to fiscal discipline spanning over governmental elections, whose sustainability is based on social trust and confidence that can be strengthened and maintained through pursuing promising growth perspectives (e.g. by creating new development path). Portugal stood in marked contrast to the Finnish case in the sense that the lack of internal commitment to fiscal sustainability became the new norm in the Iberian country. The weaving relations among internal factors provided a solid commitment to *status quo* rather than to fiscal discipline, and later the institutionally weakly performing EMU framework having no powerful tool for enforcement has not proven to be a *status quo* breaker force, either. As a consequence, fiscal unsustainability became normal which in turn created significant obstacles to the successful transformation into the new techno-economic paradigm and to the progress in it. The case studies confirmed that *the fiscal consolidation featured with transformative power is an innovative mechanism having pro- and anti-cyclical components and is based on internal commitment.* It summons to a certain extent the Schumpeterian line of thinking on ‘Durchsetzung neuer Kombinationen’ (Schumpeter, 1926|1952:100), because compared to the contemporary literature, there is a reasonable need for combining restrictive (i.e. stabilising) and expansive (dynamising) views in composing fiscal consolidations.

Thesis 4: An omitted reason behind eschewing fiscal consolidations or preferring revenue-based fiscal adjustments can be the fact that the maturity of areas (e.g. institutional architecture, expertise, etc.) is rather limited for fiscal policy to concentrate on. Those relatively matured areas are needed to harness the promising economical outcomes with the aim at bringing new élan into the process of transition into the installation phase of the new techno-economic paradigm (new economy).

It can also be deciphered from our line of thinking that bringing consensus to life is much easier when the main goal is to preserve a common achievement (e.g. social welfare state in Finland) which is perceptible, discussed and that affects the value base and behavioural patterns of the people. In contrast, reaching a consensus can easily become a gargantuan and cumbersome task when the sheer goal is to achieve a future promise (e.g. more competitive economy with more balanced public finances in Portugal). Our illustrated case studies have also shown that *the essential prerequisite of fiscal consolidation with transformative power is the institutional basis* developed preliminarily in an organic way on which fiscal policy can put more emphasis during consolidations. If the institutional bases are insufficiently developed, it is not surprising – and even seems to be rational – that fiscal policy is more likely to prefer revenue-side adjustments. This *per se* carries an important message for the fiscal consolidation related economic literature which has not yet devoted enough attention to the mainsprings of revenue-based consolidations, but analysed their consequences instead.

Thesis 5: The timing of fiscal consolidation is an important issue since its outcome largely depends on whether the given economy is in: the phase before the transition into the new economy, the installation-, or in the deployment phases. *Differential diagnosis* is therefore required, which calls for distinguishing among the functions of the requested fiscal consolidations. This implies that understanding fiscal consolidations establishes a solid claim for *dynamic approach* from theorists and practitioners alike.

The issue of timing is considered crucial in various fields such as fiscal consolidation. Nevertheless, it is rarely expressed explicitly that economies are capable of executing some kind of control over the timing through their internal conditions. In our case, this internal condition is the fiscal room for manoeuvring which is of key importance not only to small and open economies, but also to large ones as well simply because economies' inertia to global processes is large (e.g. increasing debt intolerance due to the sovereign debt crisis). In our context, the question of timing is linked to the issue of when and in what societal, political and institutional embeddedness does the economy foster its internal structural adaptation to the ever-changing external environment. To effectively explore these conditions, fiscal policy should build competence. As we pointed out in case of Finland, supporting the science and technology policy and thus streamlining its institutional base has been a longstanding feature of the Finnish fiscal policy. This way, the timing as well as the success of fiscal consolidation did not depend on luck, but it was mainly realised by duly planning. In comparison, there were no deliberated series of actions in Portugal. Thereupon, the integral and incremental institutional building cannot be bypassed. What is more, the *existence of fiscal consolidation with transformative power calls for, by its very nature, a systemic approach complemented with dynamic view*. Furthermore, and according to Thesis 5, the systemic approach applied also implies that fiscal consolidations may have *functionally different content and purpose* depending on the position of the economy within the new techno-economic paradigm which position affects profoundly the competitiveness and major challenges of the country. In the transition to the installation phase, fiscal consolidation should also aim at cultivating the main drivers of the new techno-economic paradigm if the economic policy is equipped with the objective of fostering long term economic growth. Fiscal consolidation must then bear the stamp of the state's developmental function to be transformative. In the deployment phase, budgetary consolidation can become more pervaded by the classical stabilising function (i.e. bringing deficits and debt-to-GDP ratios down in numerical terms) without neglecting the warning tendencies of a new technological revolution. Let us underscore that the main objective should be to reach a lasting decrease in the accumulated debt-to-GDP ratio while minimising the threat over growth potential. This issue is a focal point of the contemporary European governance on EMU level as well since the economic rehabilitation of one European country cannot be achieved without strengthening the European growth in general.

Thesis 6: After the transition into the new economy, providing fiscal sustainability can be seen as one of the most pivotal cornerstones of the ability to structural change. In the absence of long-term sustainability of public finances, the fiscal room for manoeuvre becomes extremely limited to allocate towards the internal conditioning factors of later growth in another techno-economic paradigm. The *prospectively outbalanced fiscal policy can have the necessary ability to intervene discretionally, hence to be an impeding mechanism of the emergence of structural lock-in*.

The fifth thesis, regarding dynamic and systemic approach, offers us a direct link to *Thesis 6.* Its main message is that pursuing fiscal sustainability during the deployment phase is also a must because the later transition into the forthcoming new techno-economic paradigm – which is to be approached and achieved – will also require the necessary discretionary ability from fiscal policy in dampening the probability of the emergence of structural lock-in. *In other words, fiscal sustainability is an essential antecedent of the successful shift to another techno-economic paradigm.* By and large, the lifecycle of a techno-economic paradigm spans over a half-century. During this period, beyond the task of pursuing fiscal sustainability, the state should aim at investing meaningfully into education and at offering public services with improving quality. These are particularly strongly conducive to the evolvement of a more creative generation which might become a fertile ground for growth because it provides a better absorptive milieu for the economy in general for technological and non-technological progress. By the same token, the sustainability of sub-systems is of key importance whereby fiscal policy can be a supportive background for horizontal policies tailored towards research and development as well as innovation.

7. The concept of innovative fiscal policy

We have started to lay the foundations of the concept of innovative fiscal policy (*Section 6*), which is the synthesis of the cohort of conclusions unravelled from the theoretical and empirical literature related to fiscal sustainability and consolidations. It our firm belief that the line of thinking delineated in the dissertation provided us enough backing to elaborate this concept. After pondering on the economic justification of fiscal sustainability we collected the main stylised facts on fiscal consolidations and concluded that the importance of growth ability (i.e. growth context) has been undeservingly neglected by contemporary studies as well. We emphasised that the emergence of non-Keynesian effects heavily relies on the economy's growth ability. Since the available literature does not offer a unified theoretical framework, a more expedient way forward is to take into consideration the relationship between the economy's growth ability and the timing of fiscal consolidation thereby we can get a better understanding of the success and failure of budgetary adjustments. In so doing, we shed light on the opportunity of fiscal consolidations with transformative power that can be characterised as a manifestation of the innovative fiscal policy. Our conceptual framework *per se* establishes a claim for a fiscal policy which is able to *intelligently manoeuvre*, to provide the necessary fiscal latitude and to assure much more realistic expectations via more credible fiscal practice. By intelligent manoeuvring we mean that fiscal policy *is able to recognise* – due to permanent monitoring of the budget – those worthwhile fields that are more likely to have stronger positive outcomes even during fiscal consolidation by dampening the probability of structural lock-in. Accordingly, fiscal policy aspires *to intelligently allocate and/or combine* between revenues and expenditures through its discretionary ability within the framework of targeted deficit and debt levels. This also assumes that the fiscal policy has a *holistic character* as well, i.e. it has an integrated approach embracing both the environmental and societal dimensions. This type of fiscal policy behaviour can be regarded as *innovative.*

The economics of sustainability implicitly requires two characteristics from the aforementioned innovative fiscal policy. On the one hand, there is obviously a need for a '*sustaining'* character so that the fiscal policy continuously guarantees the sustainability of sub-systems through intelligent allocations and/or combinations without leaving the decisive structure of public finance. On the other hand, long term sustainability postulates the kind of fiscal policy which is adaptive to the epochal environmental, and to societal and economic changes even if it entails radical structural transformations. The latter can be seen as a '*disruptive'* character of innovative fiscal policy whereby public finance is profoundly re-aligned to accommodate the changed market structure. Apparently, the intellectual stream of the broadly defined sustainability demands a more emphatically disruptive character of fiscal policy. This is very important because the core internal presumption of sustainability is the system's ability to properly modify its operation according to the environmental changes and constraints, in which the role of innovative fiscal policy is undisputedly significant.

This type of fiscal policy might be able to implement fiscal consolidation that is featured with stabilisation and dynamisation at the same time. In other words, fiscal policy can strengthen the fundamentals of sustained growth required by sustainable development during fiscal consolidation by concentrating on *General Purpose Technology* (including Non-Technology) which is the engine of development within the given techno-economic paradigm.

In the course of outlining the concept of innovative fiscal policy, we have made four conceptual statements that are to go beyond the traditionally postulated views on fiscal sustainability and consolidation.

First, while the traditional view of fiscal sustainability has a predilection to define and pursue mechanistically derived strict deficit as well as debt-to-GDP targets that are considered as optimal, we argue that innovative fiscal policy should envisage them in a more holistic way by taking into account higher level economic, societal and environmental objectives as well. Additionally, the gradient of innovative fiscal policy should be tailored toward economic growth which is in turn largely influenced and shaped by the given techno-economic paradigm. Fiscal policy should therefore have both a sustaining and a disruptive character; fiscal governance should particularly consider the characteristics of the techno-economic paradigm in fostering the shift into the installation phase and the successful progress in it.

Second, while mainstream economics on fiscal consolidations considers pure anti-cyclical fiscal policy as a *panacea* by emphasising the primacy of *expenditure cuts* to meet deficit and debt-to-GDP targets defined as optimal, innovative fiscal policy is to call for *expenditure side* fiscal consolidations by stressing that the intelligent mixture of pro- and anti-cyclical elements seems to be more productive than the pure anti-cyclical approach.

Third, prevailing views are inclined to recommend the introduction of legislated fiscal rules. However, taking into account the world’s complexity with a view of our systemic approach and the holistic feature of the innovative fiscal policy lends support to the line of thinking that instead of legislated fiscal rules, political consensus and internal commitment to fiscal discipline seem to be more important, otherwise the rules can easily encourage mere circumvention.

Fourth, dominant discussions on fiscal policy represent the kind of formalism which proposes the establishment of independent fiscal institutions (e.g. Fiscal Council) with extended authority (political and legal responsibility) in an effort to strengthen credibility, transparency and the exuded trust of citizens in governmental institutions and to monitor the possibility of achieving deficit targets. By contrast, since deficit and debt levels can be regarded as social value orientations within a democratic framework, policymakers should refrain from giving extended authority to independent fiscal institutions. Accordingly, these independent institutions should be rather consulting than decision making bodies with the opportunity to address how existing fiscal rules relate to higher level social and economic objectives as well.

Finally, thinking through the issue of whether the concept of innovative fiscal policy is in accordance with the European context is in order; i.e. how does our concept relate to the institutional framework of the European Monetary Union and the repercussions of the financial and economic crisis of 2008 and its ensuing sovereign debt crisis. It can be ascertained that the concept of innovative fiscal policy does not violate the discussions and materialised actions related to developing further EMU framework and that of the fiscal surveillance mechanism. What is more, the concept is completely in line with the more and more widespread recognition that nodding sagely at internalising the spirit of Stability and Growth Pact in a more vigorous way by national governments would be an instructive way forward. As for fiscal institutionalisation, we argued that the state should actively underpin its role as an informant on sustainability through fiscal governance. Consolidation requires trust which in turn can easily be undermined by withering growth performance. For this reason, in countries showing weaker growth potential and having no or insufficiently developed areas – to focus on in fiscall terms in fending off the structural lock-in –, the introduction of various fiscal rules accompanied with independent fiscal institutional anchor (with consulting and monitoring role) can substantially feed into the successful trust and credibility building. Let us note that even though fiscal rules are primarily introduced in maintaining the results of fiscal consolidations, independent fiscal institutions play a critical role in exploring fields either to be placed into the heart of fiscal dynamisation to propel the growth potential or to be subjected to fiscal restriction. *This kind of formalism* helps identifying a proper context-dependent fiscal consolidation; hence it *is part and parcel of the concept of innovative fiscal policy*. As a corollary, innovative fiscal policy is a multi-actor concept based on adequate coordination that offers a more reflexive and calibrated way of fiscal governance.

8. Summary and potential future directions

In short, the main building blocks of our dissertation are fivefold. (*i*) First it documented the state-of-the-art knowledge on the issue of sustainability and the fiscal consolidations as well. (*ii*) Then it identified the non-Keynesian literature as an instructive field to be further researched and elaborated because of the opaquely discussed explanations identified in the course of the dissertation. (*iii*) As a result, it offered a potential interpretative framework with a view of systemic approach to have a better understanding of the success and failures of fiscal consolidations and that of the non-Keynesian effects in particular. The theory of techno-economic paradigm was used in order to provide a fertile conceptual basis for understanding the contextual peculiarities of growth that impinges on the implementation and, what is more, the effects of fiscal consolidations as well. (*iv*) In so doing, we called the attention to the transformative power of fiscal consolidation by analysing our hypotheses to explore the explanatory power of our framework. We also complemented our reasoning with illustrative examples of Finland and Portugal. (*v*) Last but not least, we started to lay down the foundations of the concept of innovative fiscal policy.

We claimed that considering exclusively the fiscal dimension when it comes to constructing fiscal consolidation cannot be seen as a necessarily useful approach. Instead, a broader context (e.g. internal growth ability, current status within the new techno-economic paradigm) should also be embraced with due diligence. It is thus possible to differentiate between the functions of fiscal consolidations even in case of comparable initial fiscal conditions in the respected countries, because the wider context might refer to entirely different trajectories and trends. Our main findings convey the message that due to the inbuilt complexity and dynamism of the techno-economic systems pursuing a general best practice for fiscal consolidation may be seen only as a bucolic wish.

We have good reasons to believe that the research offers many ways for future research that are of central interest from theoretical and empirical aspects alike:

(i) Since resent crisis brought the issue of supranational (international) governance to the forefront, the following questions arise: How do we interpret fiscal consolidations based on differential diagnosis? Is there a relevance of external coercive (enforcing) mechanism?

(ii) Some contemporary studies attribute recent anaemically performing growth to the secular withering of innovations contributing therefore not so spectacularly and intensively to the improvement of well-being and welfare in the era of service economies. In this regard, what kind of fiscal consolidation, and fiscal support in general, might be able to dampen this tendency?

(iii) And last but not least; can we interpret the transformative fiscal consolidation in developing countries, if so, what are the main conditionings of that?

References

Alesina, A. – Ardagna, S. (2010): Large Changes in Fiscal Policy: Taxes versus Spending. In: Brown, J. R. (ed.) (2010): Tax Policy and the Economy, Vol. 24. Chicago: University of Chicago Press, pp. 35-68.

Antal László (2009): A hosszú menetelés – A fiskális politika fordulatai és hatása az ezredforduló után. In: Muraközy László (ed.) (2009): A jelen a jövő múltja. Járatlan utak – járt úttalanságok. Budapest: Akamémiai Kiadó, pp. 69-98.

Atkinson, R. D. – Ezell, S. J. (2012): Innovation Economics: The Race for Global Advantage. Yale University Press

Coenen, G. – Erceg, C. J. – Freedman, C. – Furceri, D. – Kumhof, M. – Lalonde, R. – Laxton, D. – Lindé, J. – Mourougane, A. – Muir, D. – Mursula, S. – de Resende, C. – Roberts, J. – Roeger, W. – Snudden, S. – Trabandt, M. – in't Veld, J. (2012): Effects of Fiscal Stimulus in Structural Models. *Macroeconomics*, Vol. 4., No. 1. pp. 22-68.

Cowen, T. (2011): The Great Stagnation: How America Ate All The Low-Hanging Fruit of Modern History, Got Sick, and Will (Eventually) Feel Better. Dutton Adult, New York

Eichengreen, B. – O'Rourke, K. H. (2012): Gauging the Multiplier: Lessons from History. VoxEU.org, Available: http://voxeu.org/article/gauging-multiplier-lessons-history Accessed on: 23.10.2012

Feldstein, M. (2012): Avoiding a New American Recession. Project Syndicate, Available: www.nber.org/feldstein/projectsyndicatenov2012.pdf Accessed on: 30.11.2012

Gordon, R. J. (2012): Is US Economic Growth Over? Faltering Innovation Confronts the Six Headwinds. *CEPR Policy Insight* No 63.

Götz, G. (1999): Monopolistic Competition and the Diffusion of New Technology. *RAND Journal of Economics*, Vol. 30., No. 4. pp. 679-693.

Grabher, G. (1993): The Weakness of Strong Ties: The look-in of Regional Development in the Ruhr Area. In: Grabher, G. (ed.) (1993): The Embedded Firm: On the Socio-economics of Industrial Networks. Routledge, London, UK & New York. pp. 255-277.

Harford, T. (2011): Adapt. Why Success Always Starts with Failures. Farrar, Straus and Giroux, New York

Hicks, J. (1939): The Foundations of Welfare Economics. *The Economic Journal*, Vol. 49., No. 196. pp. 696-712.

Holland, D. – Portes, J. (2012): Self-defeating Austerity? National Institute of Economic and Social Research, *National Institute Economic Review*, Vol. 222., No. 1. pp. 4-10.

IMF (2012): IMF World Economic Outlook. Coping with High Debt and Sluggish Growth. Box 1.1: Are we underestimating short-term fiscal multipliers? October 2012. pp. 41-43.

IUS (2012): Innovation Union Scoreboard 2011. European Commission, DG Entreprise and Industry.

Kaldor, N. (1939): Welfare Propositions in Economics and Interpersonal Comparisons of Utility. *The Economic Journal*, Vol. 49., No. 195. pp. 549-552.

Kasparov, G. – Levchin, M. – Thiel, P. (2013): The Blueprint: Reviving Innovation, Rediscovering Risk, and Rescuing the Free Market. W. W. Norton & Company

Kopits György – Symansky, S. (1998): Fiscal Policy Rules. *IMF Occassional Paper* No. 162.

Kopits György (2007): A költségvetési felelősség keretrendszere – nemzetközi tapasztalatok és magyarországi tanulságok. *Pénzügyi Szemle*, Vol. 52., No. 2. pp. 197-216.

Kornai János (2010): Innovation and Dynamism. Interaction between Systems and Technical Progress. *Economics of Transition*. Vol. 18., No. 4. pp. 629-670.

Kornai János (2011): Gondolatok a Kapitalizmusról – Négy tanulmány. Akadémiai Kiadó, Budapest

Lucas, R. E. (1988): On the Mechanics of Economic Development. *Journal of Monetary Economics*, Vol. 22., No. 1. pp. 3-42.

Lundvall, B. A. (2002): The University in the Learning Economy. *DRUID Working Paper* No. 6

OECD (2012): Restoring Public Finances, 2012 Update. Available: http://www.keepeek.com/Digital-Asset-Management/oecd/governance/restoring-public-finances-2012-update_9789264179455-en Accessed on: 21.11.2012

Orosz Ágnes – Kovács Olivér (2011): Science and Technology Policy in the European Union – Innovation Leaders with Different Outcomes. *The Annals of the University of Oradea*, Department of International Affairs and European Studies, Vol. 3., No. 1. pp. 94-113.

Rodrik, D. (2012): No More Growth Miracles. Available: http://www.project-syndicate.org/commentary/no-more-growth-miracles-by-dani-rodrik Accessed on: 09.08.2012

Röpke, W. (1950|1979): Mass und Mitte. Haupt, Bern

Schienstock, G. (2004): From Path Dependency to Path Creation: A New Challenge to Innovation System Research. In: Schienstock, G. (ed.) (2004): Embracing the Knowledge Society. The Dynamic Transformation of the Finnish Innovation System. Edward Elgar, Cheltenham, UK & Northampton, MA. pp. 1-27.

Schienstock, G. (2011): Path Dependency and Path Creation: Continuity vs. Fundamental Change in National Economies. *Journal of Futures Studies*, Vol. 15., No. 4. pp. 63-76.

Schumpeter, J. A. (1926|1952): Theorie der wirtschaftlichen Entwicklung. Duncker & Humblot, Berlin.

Soete, L. (2006): From Industrial R&D to ICT-based Innovation: the Social Policy Challenge for Europe. In: Compañó, R. – Pascu, C. – Bianchi, A. – Burgelman, J-C. – Barrios, S. – Ulbrich, M. – Maghiros, I. (ed.) (2006): The Future of the Information Society in Europe: Contributions to the Debate. IPTS-DG JRC, pp. 57-66.

Spence, M. (2012a): The Next Convergence. The Future of Economic Growth in a MultiSpeed World. Farrar, Straus and Giroux, New York

Spence, M. (2012b): Hard Truths About Global Growth. Project Syndicate, Available: http://www.project-syndicate.org/commentary/hard-truths-about-global-growth-by-michael-spence Accessed on: 14.09.2012

Stancik, J. – Biagi, F. (2012): Characterizing the Evolution of the EU-US R&D Intensity Gap Using Data from Top R&D Performers. IPTS-JRC.

Szentes Tamás (2011a): Fejlődés-gazdaságtan. Akamédiai Kiadó, Budapest

Szentes Tamás (2011b): Concept, Measurement, and Ideology of "National Competitiveness". *Köz-Gazdaság*, Special English Language Issue, 2011. december.

Velasco, A. (2012): Europe's Debt-Relief Calculus. Available: http://www.project-syndicate.org/commentary/brady-bonds-to-eliminate-europe-s-debt-overhang-by-andres-velasco Accessed on: 13.12.2012

The author's scientific activity

Scientific publications related to the dissertation

Peer-reviewed journals (in foreing language)

Kovács, O. (2013 – *forthcoming*): Black Swans or Creeping Normalcy? – An Attempt to a Holistic Crisis Analysis. *Eastern Journal of European Studies*, Vol 4., No. 1. pp.

Kovács, O. – Orosz, Á. (2011): Innovation Leaders with Different Outcome. The Annals of the University of Oradea, Department of International Affairs. February 2011

Other publications (in foreign language)

Kovács, O. (2013 – *forthcoming*): Fiscal Sustainability in the Lights of a Political Economic Theory in Practice: The Case of Hungary. ICEG European Center, Working Paper Series No. 27

Kovács, O. (2012): Policies Supporting Innovation in Public Service Provision. European Commission, DG Enterprise and Industry, INNO-Grips Policy Brief. Available: http://ec.europa.eu/enterprise/policies/innovation/files/proinno/inno-grips-policy-brief-5_en.pdf Accessed on: 28.12.2012

Kovács, O. (2011): Policies in Support of Service Innovation. European Commission, DG Enterprise and Industry, INNO-Grips Policy Brief. Available: http://ec.europa.eu/enterprise/policies/innovation/files/proinno/inno-grips-policy-brief-3_en.pdf Accessed on: 28.12.2012

Kovács, O. (2011): Innovative Fiscal Policy in the Context of Sustainability. Trends and Future of Sustainable Development Conference Proceedings. Available: http://www.utu.fi/fi/yksikot/ffrc/julkaisut/e-tutu/Documents/eBook_2011-15.pdf Accessed on: 28.12.2012

Peer-reviewed journals (in Hungarian)

Kovács, O. (2011): A fiskális fenntarthatóság közgazdaságtani megalapozottsága. *Valóság*, Vol. 54., No. 3. pp. 37-52

Kovács, O. (2011): The Concept of Innovative Fiscal Policy: Theory and Empirical Evidence. *Competitio*, No. 2. pp. 56-72

Kovács, O. (2010): Fiskális fenntarthatóság és konszolidáció – Portugália és Finnország ellentmondásos esete. *Köz-Gazdaság*, Vol. 5., No. 2. pp. 167-188

Kovács, O. – Orosz, Á. (2010): Felsőoktatási innovációk gazdasági hasznosítása – elmélet és gyakorlat. In: Polónyi, I. (ed.): Az akadémiai szféra és az innováció. A hazai felsőoktatás és a gazdasági fejlődés. Új Mandátum Kiadó, Budapest

Kovács, O. – Orosz, Á. (2010): A tudománypolitika lehetőségei a felsőoktatási innováció gazdasági hasznosulásában. In: Kotsis Ágnes – Polónyi István (ed.): Innováció és felsőoktatás, *Competitio Könyvek*, Vol. 8. pp. 9-53

Other publication (in Hungarian)

Kovács, O. (2009): Üzenet Haza – Fiskális fenntarthatóság európai panorámában. Study in the National Student Research Competition, University of Debrecen, Faculty of Economics and Business Administration. Supervisor: Dr. László Muraközy

Reviews

Kovács, O. (2013 – *forthcoming*): Temin, P. – Vines, D. (2013): The Leaderless Economy: Why the World Economic System Fell Apart and How to Fix It. Princeton University Press. *Acta Oeconomica, Vol. No. pp.*

Kovács, O. (2011): Benczes, I. – Kutasi, G. (2010): Költségvetési pénzügyek. Hiány, államadósság és fenntarthatóság. *Közgazdasági Szemle*, Vol. 58., No. 4. pp. 383-387

Conference Report

Kovács, O. (2011): Thrown-up Stone? Facts and Trends in the XXIst Century. *Public Finance Quarterly*, Vol. 56., No. 3. pp. 398-405

Conference Presentations

Kovács, O. (2012): Policies Supporting Innovation in Public Service Provision. INNO-Grips Workshop, 19 June 2012, Vienna.

Kovács, O. (2011): Innovative Fiscal Policy in the Context of Sustainability. Conference: Trends and Future of Sustainable Development. 9 June 2011, Tampere, Finland.

Kovács, O. (2011): IMD World Competitiveness Yearbook 2011. Presented at: Gazdasági alapkérdések, diagnózisok és gyógymódok – Mit mérnek a versenyképességi indexek? Organiser: Budapesti Gazdasági Főiskola Külkereskedelmi Kar. 6 October 2011.

Kovács, O. (2011): Szolgáltatás innováció az Európai Unióban – Út az európai növekedés és megújulás irányába. Presented at: Gazdasági alapkérdések, diagnózisok és gyógymódok – Innováció a szolgáltatási szektorban – Elméleti szempontok, gyakorlati példák. Organiser: Budapesti Gazdasági Főiskola Külkereskedelmi Kar. 23 November 2011.

Kovács, O. (2010): Discussant presentation on „Schaltegger – Weder (2010): Fiscal Adjustment and the Costs of Public Debt Service: Evidence from OECD Countries". Discussant: Olivér Kovács, University of Debrecen, Doctoral School of Economics. 4th CESifo Workshop on Political Economy, 19-20 November 2010, Dresden, Germany.

Scientific publications not related to the dissertation

Co-authored and peer-reviewed publication (in foreign language)

Sass, M. – Kovács, O. (2012): MOL Group, the petrol company, continues to lead the ranking of Hungarian multinationals. ICEG EC – Columbia University, The Vale Columbia Center on Sustainable International Investment. Research Report. April 2012

Sass, M. – Kovács, O. (2011): Hungary's Global Players – A Strong Presence in their Neighbourhood in 2009. In: Sauvant, K. P. – Govitrikar, V. P. – Davies, K. (ed.) (2011): MNEs from Emerging Markets: New Players in the World FDI Market. Vale Columbia Center, Columbia University, New York. Available: http://www.vcc.columbia.edu/files /vale/content/EMGP_-_eBook_PDF_2_11.pdf Accessed on: 29.12.2012