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THE EUROPEAN ECONOMIC GOVERNANCE AS A BAD POLICY MIX COMBINING CONSTITUTIONALIZATION OF MACROECONOMIC PHILOSOPHY AND DECENTRALIZATION OF FISCAL POLICY*

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Abstract

This paper presents some thoughts on the economic governance of the EU, a subject matter that has steadily been at the forefront of European policies since the outburst of the euro area crisis. The working hypothesis I would like to present is the following: The European Governance in the Crisis (EGC) is a bad policy mix comprising a single –even rigid– set of macroeconomic presuppositions of economic policies and an inefficient –to the extent that it is decentralized– management of the euro area aggregate fiscal stance. I will argue that the optimal combination would be the exact opposite: a non-constitutionalized set of macroeconomic presuppositions open to democratic choice by shifting majorities via elections and a single, federal-type set of economic governance tools that can be defined as a "Fiscal Union" – notably a common Treasury Department and a common fiscal backstop for macroeconomic stabilization and risk mutualization. The opposite combination we have constructed brings about both lesser democratic legitimacy and inefficiency in economic management, especially in periods of crisis. In other words, we are stuck with a bad policy mix that should be overcome through a frank federalization leap via a Political Union.

JEL Classification: E61, E62, H11, H12, H77

Keywords: Macroeconomic Policy and Design, Rules versus Discretion, Fiscal Policy, Policy Mix, Role of Government, Debt Crisis, Fiscal Federalism, Multi-level Governance, Euro area Governance

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1. The constitutionalization of the basis of common economic policy as a source of the EU democratic deficit and a main cause of the rise of anti-Europeanism

I would like to develop first the problem of the constitutionalization of the common economic policy by the Stability and Growth Pact (SGP). I will call this problem the "paradox of the democratic deficit". This paradox is wrought by the *permanent establishment of macroeconomic presuppositions* that necessarily predetermine common economic policies to the extent that they are embedded in the Treaties, the so-called "EU primary law".

According to the Treaty on the Functioning of the European Union (TFEU), the guiding principles of the Union's Economic and Monetary Policy (EMU) are the following: "stable prices, sound public finances and monetary conditions and a sustainable balance of payments"[1]. I shall take up the EU Economic Policy[2] in order to expound and assess its foundational principles and its concrete functioning vis-à-vis analogous mechanisms in federal states, most prominently the United States of America, leaving aside EU Monetary Policy.

In a book called *Reflections on the Greek Sovereign Debt Crisis* I published with other authors in 2013[3], I explain the macroeconomic underpinnings of the EU Economic Policy enshrined in the Treaty. Under the implicit influence of New Classical Economics and of the *ordoliberal* version of Monetarism[4], the SGP has as its basic aim the attaining of a balanced budget, or otherwise the annihilation of public deficit. The grand opponent is Keynesian economics, which holds that each time an economy operates below its potential output and growth rate path, the state has to intervene by decreasing interest rates and taxes and by increasing the so-called "deficit spending" in order to replace falling aggregate demand and boost economic activity, since otherwise an economy can remain trapped in a low employment equilibrium[5]. Keynes' main thesis is that it is aggregate demand that determines the overall level of economic activity. In clear opposition to Keynesian economics, the SGP and the Fiscal Compact[6] *necessarily presuppose* that public deficits should in any case be proscribed, since they bring about an increase in the public debt ratio and, even when they are employed in a countercyclical manner in order to mitigate the effects of an economic downturn, they have an inherent tendency to become perennially established, since governments do not usually have the political courage to slash them once their country enters once again the virtuous phase of its economic cycle. Thus, fiscal policy should only allow for automatic stabilizers (legislated social security and unemployment insurance benefits) to exert a countercyclical action as long as an economy is in recession, and this

action will be offset during the growth phase of the cycle; accordingly, during the whole economic cycle the budget will be in balance and public debt will not rise, and no deficit spending via an expansionary fiscal policy in bad times should be allowed.

As a consequence of this basic macroeconomic presupposition, the SGP obliges all EU member states to "commit themselves to respect the medium-term budgetary objective [MTO] of positions close to balance or in surplus"[7], which will allow them to deal with normal cyclical fluctuations while keeping the government deficit within the reference value of 3% of GDP[8]. In that framework, member states "will launch the corrective budgetary adjustments they deem necessary without delay on receiving information indicating the risk of an excessive deficit"[9]. The TFEU (article 126, paragraph 1) states that "Member States shall avoid excessive government deficits"[10]. The fear that an initially purely domestic sovereign debt crisis could evolve into a government insolvency crisis, which would eventually produce dire consequences for the EMU in its entirety, produced some purely *prudential* "no bail-out" rules enshrined both in the Treaty[11] and in the so-called "preventive" and "corrective" arms of the SGP[12]. This set of rules is prudential because it is based on the expected deterrent effect a possible sovereign debt crisis scenario would have on member states' fiscal policy[13], and therefore on the *ex ante* self-assumption of responsibility by each member state. Consequently, we are not in presence of –as could rationally be expected– a set of *political* rules at the EU level establishing strong economic governance structures *ex ante* and crisis management institutions *ex post*. In order to strongly deter governments from enacting overly lax or irresponsible budgetary policies, the SGP sets, at least as a trend, an objective of "zero deficit", and does not allow for a posterior granting of credit facilities to[14], nor a privileged access to financial institutions in favour of[15], nor a direct assumption of public debts of[16], any public body or organism. Yet, this sacrosanct objective inherently tends to have a procyclical, rather than a countercyclical, effect, which in periods of economic downturn is both economically irrational and politically problematic.

The SGP's philosophy clearly is procyclical because it tends to magnify economic or financial fluctuations instead of decreasing them[17]. Thus, the SGP mechanisms are mildly, if at all, activated when we are in the upward phase of the economic cycle, so that the eventuality of corrective measures remains distant for fiscally irresponsible governments. On the contrary, the SGP applies in full rigor when the economic cycle enters into a recession phase, fiscal revenues and employment automatically drop and the public deficit increases, sometimes beyond the 3% cap. In such case, the state paradoxically has to

implement a restrictive budgetary policy in order to lower the deficit ratio, which of course tends to *enhance* rather than constrict the already existing economic downturn effects[18].

The economic policy mix chosen by the European founders of the Maastricht Treaty and the SGP is not rational[19]. Indeed, a policy mix composed of:

I. A grant of primary responsibility for budget balance and debt sustainability to individual member states of a common monetary zone,

II. Prudential rules *ex ante* based on the deterrent effect some far-off and politically uncertain corrective measures might hopefully have against undisciplined member states, and

III. Overly rigid, overbroad and asymmetric rules *ex post* that only fortuitously will have an optimal budgetary adjustment effect instead of a recessive effect,

could not withstand a grave fiscal crisis inside the euro area.

In slight contrast to the rigid European approach, coupled with the strict legal requirement of achieving annual balanced budgets in the EU[20], in the United States no binding constraint was imposed on federal spending until the Gramm-Rudman-Hollings Balanced Budget and Emergency Deficit Control Act (popularly known as "Gramm-Rudman") was voted in Congress in 1985, and in reality, no balanced federal budget emerged until the late 1990's. There, rigidly fixed caps in budget deficits were replaced by a federal law limiting so-called "discretionary" spending and enforcing those caps through a mechanism requiring across-the-board cuts within any category of credits to make up for any overages[21]. Even though Gramm-Rudman and its aftermath are widely acclaimed as signs of an American political reorientation towards more fiscal rigour, the USA mechanism does not automatically lead to balanced budgets or surpluses, since *in the USA no one can say that there is an official macroeconomic understanding necessarily underpinning and constraining the design of economic policy by each and every administration*[22].

The Americans have learned their lesson from the infamous days of the so-called "*Lochner Era*"[23] (stretching between the 1880's and 1936). At that time, unelected officials –a majority of US Supreme Court Justices– unduly constitutionalized, under the code name of "substantive due process", a fundamentally libertarian *laissez faire - laissez passer* economic philosophy to be pursued by every elected government. Some courageous judges like Justice Oliver Wendell Holmes resisted in terms such as the following: "This case is decided upon an economic theory which a large part of the country does not entertain. If it were a question whether I agreed with that theory, I should desire to study it further and long before making up my mind. But I do not

conceive that to be my duty, because I strongly believe that my agreement or disagreement has nothing to do with the right of a majority to embody their opinions in law. [...] The 14th Amendment does not enact Mr. Herbert Spencer's Social Statics. [...] Some of these laws embody convictions or prejudices which judges are likely to share. Some may not. *But a Constitution is not intended to embody a particular economic theory*[24], whether of paternalism and the organic relation of the citizen to the state or of laissez faire. It is made for people of fundamentally differing views, and the accident of our finding certain opinions natural and familiar, or novel, and even shocking, ought not to conclude our judgment upon the question whether statutes embodying them conflict with the Constitution of the United States"[25]. Still, these judges remained a minority. Finally, when President Franklin D. Roosevelt saw his New Deal legislation repeatedly struck down as unconstitutional because it was considered as "taking property from A to give it to B", he threatened with a "Court-packing plan", which produced a shift in the Court's policy towards an almost absolute deference vis-à-vis the ordinary legislator's choices in matters of social and economic policy, with the so-called "rationality test".

It is commonplace to note that the European Union suffers from a "democratic deficit"[26]. Indeed, unlike a federation like the United States, European citizens do not have the institutional capacity to elect a European government. This mainly means that they cannot choose, using political, ideological, and economic criteria, a President of the EU who is the chief of the executive branch and chooses his ministers, drawing up simultaneously the political guidelines of his cabinet, within which the ministers must forward their action. But this political representation deficit becomes not only stronger, but also qualitatively more serious during the economic crisis experienced by Europe in recent years. The EU is –we tend to ignore it– the largest single economic zone and internal market in the world. But it is also a geopolitical arrangement that has not really developed political tools to pursue an integrated economic policy. A comparison with the USA in the existing crisis management mechanisms proves it. In North America, the voters had to choose, both in 2008 and in 2012, between two clearly distinct macroeconomic proposals for the exit from the financial crisis, and they made their choice very clearly in favor of the Democrats' and President Obama's proposal[27]. The same had been done in 1932, when the American people had chosen by an overwhelming majority the proposal for a New Deal by Franklin Delano Roosevelt, after the Great Depression of 1929 and the precipitation of the economy in a big crunch.

Now suppose the majority of European citizens want to change the course of European economic policy, turning it from an *ordoliberal* monetarist philosophy

that insists on continuous budget cuts to balance the public deficits and a relatively tight monetary policy for fear of hyperinflation, to a Keynesian fiscal stimulus as countercyclical policy against the generalized stagnation, or recession, and unemployment. This would not, in fact, be possible because there really is no transmission belt between the floating policy choices Europeans make and the comprehensive economic philosophy that constantly governs the Union[28]. In other words, European citizens intuitively know that whatever they vote in the European elections, both the macroeconomic assumptions on which the operation of the euro area rests and the intergovernmental political management of the crisis –instead of a Community method one– will continue seamlessly. This diffuse impression has, sadly, proven true: the European Parliament which, as known, is the only EU institution that enjoys direct popular legitimacy via elections, neither has the slightest power to amend or put into question the generalized austerity recipe, nor can impose a shorter transition period towards a Fiscal and Banking Union[29]. The sense of this weakness sadly leads to the identification of current policies, which seem to be rejected by a social majority in the South and even in the North of the EU, with the European Union itself. The unfortunate result is the rise of euroscepticism, even in countries that have traditionally been considered very pro-European, such as Greece and Italy.

2. Towards a Fiscal Union: A rational mechanism for the management of the euro area fiscal stance

Now it is time to move to the management of the euro area aggregate fiscal stance[30]. By "fiscal stance" we understand the orientation given to fiscal policy by governments' discretionary decisions on tax and expenditures. We calculate the fiscal stance by the change in the structural primary balance (i.e. the budget balance corrected for the impact of the economic cycle, one-off measures and interest payments). If the government discretionarily decides to support the impact of public finances on the real economy by increasing spending, the fiscal stance is "expansionary", and if it does this by reducing spending, it is "contractionary". Fiscal policy influences both the short-term stabilization of the macroeconomic environment and the long-term fiscal sustainability: while a fiscal stimulus would tend to raise output in the short run, it would at the same time add to debt and thereby increase sustainability risks. Thus, there always are political choices to be made on an optimal trade-off between the sustainability and the stabilization objectives of fiscal policy[31], and depending on this balance, the orientation of the fiscal stance determines the more or less pro- or countercyclical role that fiscal policy plays in the economic cycle.

Both the European Commission and the European Central Bank have recently pointed out the limits to the EU's current fiscal framework[32]. Firstly, it contains no rules or instruments to directly manage the aggregate fiscal stance of the euro area, which is a key difference when compared to fiscal federations such as the United States that have important taxing and spending powers. The Commission Recommendation on the economic policy of the euro area is becoming a source of reference to guide efforts, but its effectiveness ultimately depends on the individual and collective willingness of the Member States to follow through. In fact, in the absence of fiscal policy instruments at the central level, the euro area-wide fiscal stance is a purely mechanical concept, since it is merely the sum of individual euro area countries' fiscal stances, and its direction may therefore reflect a very uneven distribution across member states, with fiscal tightening in some and fiscal loosening in others. There is no guarantee that the euro area's decentralized fiscal framework, based on the coordination of national policies through the SGP, results in an appropriate aggregate euro area fiscal stance, since the Pact affects the aggregate fiscal stance only indirectly rather than steering it directly.

In addition, the EU fiscal framework is asymmetrical, since the SGP does not entail obligations for countries –such as Germany and the Netherlands– that have fiscal space to contribute to a desirable aggregate fiscal stance by expansionary fiscal policies entailing an increase in public investments: the rules *proscribe* excessive deficits, but they can only *prescribe* the reduction of surpluses, without imposing it. In sum, the paradox is that those euro area member states who do not have fiscal space (such as Italy) want to use it but they can't, while those who have fiscal space (such as Germany) can use it but they don't want to. This paradox produces a sub-optimal situation and is a basic source of macroeconomic imbalances in the euro area as a whole.

As the European Commission and the ECB have shown, in a crisis environment such as the current one of subdued growth, when monetary policy is at the "zero lower bound" (i.e. interest rates are near to zero), the macroeconomic impact of fiscal policy on the real economy (known as the "fiscal multiplier effect") is likely to be stronger than in normal times[33]; also stronger is the "spillover effect" of expansionary fiscal measures in surplus countries on the rest of the euro area. Therefore, fiscal policy is more effective as a macroeconomic stabilization tool: when it is carefully combined with structural reforms on the supply side and support to investment, a more active fiscal policy can contribute to a faster reduction in unemployment in the short run, and lift the medium-term (potential) growth in the euro area. That is why the Commission argued, on 16 November 2016, in favor of a fiscal stimulus of up to 0,5%

of GDP at the level of the euro area as a whole (around 50 billion euros) for 2017, since "There is both a need and a window of opportunity to act on the fiscal front at this precise juncture" in order to "strengthen domestic sources of growth" and also to "rebalance the overall policy mix of the euro area"[34]. Yet, just a few days later, the Eurogroup gave short shrift to this call by declaring that "[it] takes note of the Commission Communication and analysis of the fiscal stance calling for a positive fiscal stance" and that in July "it concluded, on the basis of Commission analysis, that the broadly neutral aggregate fiscal stance in 2017 strikes an appropriate balance"[35]. By doing so, the Eurogroup silently rejected any need for a German effort to reduce its huge balance of payments surplus (then at 8.8% of GDP) through an increase of its expenditure for public investments.

This episode shows that we have reached the limits of our current fiscal framework on the setting of the euro area fiscal stance. The Five Presidents' Report in June 2015 said that as well, by pointing out the need for a *macroeconomic stabilization function at the euro area level* so as to complement automatic stabilizers at national level[36], and in the longer term, for a *euro area treasury* created and equipped with a large budgetary capacity and fiscal instruments[37]. Indeed, risks of non-compliance with the SGP remain high in a number of countries, impending elections and referenda are putting great strain to the pro-European center-right and center-left governments, and finally, no credibility of our fiscal governance framework can be ensured if it is not applied in a legally sound, transparent and consistent manner across times and member states. Even though recent institutional reforms (the Six-Pack in 2011 and the Two-Pack in 2013) have gone in the direction of strengthening the aggregate euro area perspective when assessing fiscal policies under the SGP, the effort is clearly insufficient and does not suppress direct intra-European clashes, such as the ones between European Institutions and some ministers responsible for national economic policies. We clearly need to make a quantum leap to a Fiscal Union as part of a Political Union, a Union democratically legitimized and accountable in order to carry out fiscal policy functions at the central level.

3. The necessary components of a Fiscal Union in lieu of a constitutionalization of the macroeconomic presuppositions of policy choices

If we don't manage to arrive to a deconstitutionalization of the macroeconomic philosophy underlying the SGP, there certainly is a risk that we will then constitutionalize by institutional reform the wrong "Fiscal Union". Of course,

the EU is certainly not the USA, where grand constitutional change can happen when political momentum gathers at a given historical moment. In the EU, the Community method of step-by-step and gradual integration is generally followed, to a point where the final passage will become obvious and desirable. But even in the USA, there are "constitutional moments"[38], when gradual and informal changes of a constitutional nature ensue. That could very well be what could happen in Europe as well, since the Commission and the European Central Bank are already starting to shift to another kind of philosophy under the guise of "flexibility" to the SGP. In any case, we need a solid theoretical framework that can serve as a template by the euro area authorities for such an eventual European "soft constitutional" moment.

Here I will briefly frame the necessary components of a Fiscal Union[39] that can and should –contrary to the macroeconomic presuppositions of policy choices– either be enshrined in the Treaties ("hard constitutional moment") or pursued by gradual legislative changes together with a renewed form of political legitimacy provided to the euro area authorities ("soft constitutional moment")[40].

Central to any kind of fiscal union are the ideas of direct transfers and of a central fiscal actor. In my view, there are six necessary components of any type of fiscal union, and consequently of a European Fiscal Union[41]:

3.1. A Treasury Department (or Finance Ministry)

Such a central authority is intended to impose common fiscal rules, like the SGP criteria (public debts no higher than 60% and budget deficits no higher than 3% of GDP). It will also manage European public debt through the issuance of jointly guaranteed bonds (Eurobonds or "stability bonds") backed by important EU revenue so as to maintain an excellent credit rating. This mutualisation of debts can only happen logically if the Treasury constantly reviews budgetary positions of member states and monitors the macroeconomic patterns of each EU member state so as to prevent in time excessive macroeconomic imbalances, especially concerning the connection between productivity and wages, the viability of pension and social security systems, inflationary or deflationary tendencies, the growth rate of private debt for housing and consumption, and more generally the balance of payments of each member state.

3.2. A Treasury Bond (Eurobond)

A single European market for jointly guaranteed bonds will certainly close

the gap for the often unbearable spreads between Europe's national bond markets, and will thus protect vulnerable member states of a Union from the markets in their effort to refinance their outstanding debt[42]. It will also attract much liquidity from private savings, from inside the state and outside, and will help finance European recovery. A deep European bond market will refinance public debt at the lowest cost and recapitalise banks.

3.3. A Central Bank as lender of last resort

Since 2015, the ECB has been buying up sovereign bonds and mortgage loans in the secondary market and has been giving long-term and cheap loans to commercial banks by expanding the monetary basis, i.e. by printing fiat money, in order to fight against the lurching credit crunch and deflationary tendencies[43]. Yet, the strict rule-bound (*ordoliberalism*) variation of monetarism underlying the Stability and Growth Pact goes against the ECB's fully playing its role in order to restore confidence in the real economy, by fear of medium-term inflationary tendencies[44].

3.4. A system of direct transfers

A system of direct transfers works like an automatic stabilizer for a fiscal union. It absorbs a big part of the asymmetric shocks that are due to divergent economic cycles or to purely conjunctional reasons such as energy price shocks. The existence of direct transfers presupposes a serious rise in the EU's own resources in order to finance Europe-wide economies of scale, programs and operations. It also necessarily implies a mechanism of solidarity and redistribution, generally referred to under the code name "fiscal federalism"[45], through some sort of European tax, such as a financial transactions tax or a carbon tax.

3.5. A strong Investment Bank

Every fiscal union needs to have a financial arm able to raise large amounts of capital through the issuance of project bonds and the leveraging of private resources in order to finance industrial reinvigoration, Trans-European infrastructures, R&D, innovation, sustainable development, life-long learning, and capital spending in general, through public-private partnerships and economies of scale. And lastly,

3.6. A Monetary Fund

A European Monetary Fund, i.e. a large, flexible and credible safety net against the possibility of a member state failure, is a prerequisite for the normal functioning of a sub-optimal currency zone. The sometimes necessary national debt restructurings cannot produce beneficial effects unless they are managed by experienced staff, and not by one-size-fits-all policies favored by the International Monetary Fund, that intervenes all over the world[46].

4. Conclusion

Many politicians and analysts use moral hazard, i.e. the risk of irresponsible fiscal behavior because of the belief that euro-wide instruments will always be there to rescue spendthrift national governments, as a justification for the slowing-down of the process leading towards a real and effective Fiscal and Banking Union. Moral hazard is, of course, to be taken very seriously. Still, in the difficult circumstances the euro area has been facing since 2008, it sounds more like a pretext to pursue national agendas to the detriment of sound governance tools at European level. It is about time for us Europeans to deconstitutionalize economic philosophies and to constitutionalize at least the fundamental elements of a true Fiscal Union by a far-reaching institutional reform.

Notes

1. TFEU, article 119, paragraph 3.

2. TFEU, articles 120-126.

3. The following analysis draws extensively on Ioannis Papadopoulos, "The Efficiency of Debt Crisis Management by EU Mechanisms: Lessons from the Greek Case", *in* Aristidis Bitzenis, Ioannis Papadopoulos, and Vasileios A. Vlachos eds., *Reflections on the Greek Sovereign Debt Crisis: The EU Institutional Framework, Economic Adjustment in an Extensive Shadow Economy* (Newcastle upon Tyne: Cambridge Scholars Publishing, 2013): 24-109.

4. According to Robert J. Barro, "Are Government Bonds Net Wealth?" *Journal of Political Economy* 82 (1974): 1095-1117, and "On the Determination of the Public Debt", *Journal of Political Economy* 87 (1979): 940-971, who provided a theoretical groundwork for an intuition by David Ricardo in his groundbreaking *Principles of Political Economy and Taxation* (1817), a government's choice of either raising tax revenue or issuing public debt has an equivalent effect on the economy, since in both cases an increase in public

expenditure is counterbalanced by a decrease in private spending (in Barro's words, "shifts between debt and tax finance for a given amount of public expenditure would have no first-order effect on the real interest rate, volume of private investment, etc.", Barro, "On the Determination", 940). Therefore, any increase in public spending and consequently of public deficit is necessarily inefficient, since any impact on economic growth it might have will be defeated by an equivalent decrease of private consumption and an increase of private savings.

5. John Maynard Keynes, *The General Theory of Employment, Interest and Money*, 2nd edition, eds., Geoffrey C. Harcourt and Peter A. Riach, 2 vols. (London: Routledge, 1997).

6. Formally, the Fiscal Compact is part of the new "Treaty on Stability, Coordination and Governance in the Economic and Monetary Union" (hereinafter TSCG), which was signed by all EU member states except the Czech Republic and the United Kingdom on March 2, 2012.

7. European Council Resolution on the Stability and Growth Pact, Amsterdam, 17 June 1997, ch. THE MEMBER STATES, pt. 1.

8. The ratio of 3% "of the planned or actual government deficit to GDP at market prices" is considered as "excessive" for Stability and Growth Pact purposes, according to the value references given in the Protocol No. 12 on the Excessive Deficit Procedure (EDP), article 1.

9. European Council Resolution on the Stability and Growth Pact, Amsterdam, 17 June 1997, ch. THE MEMBER STATES, pt. 4.

10. TFEU, article 126, paragraph 1. As Marco Buti, Daniele Franco and Hedwig Ongena, "Budgetary Policies during Recessions – Retrospective Applications of the "Stability and Growth Pact" to the Post-War Period", *European Economy Economic Papers* 121 (May 1997) [accessed on the internet at: http://ec.europa.eu/economy_finance/publications/pages/publication11240_en.pdf]: 3, write: "In practice, the Treaty prescribes that the original cause of the rise of the deficit above the 3% ceiling must be exceptional, that the deficit must not, in any case, exceed this threshold by too much, and must return promptly below it once the initial driving force is over. These three conditions need to apply simultaneously."

11. TFEU, articles 123-125.

12. Regulation (EU) No. 1175/2011 of the European Parliament and of the Council of 16 November 2011 amending Council Regulation (EC) No. 1466/97 on the strengthening of the surveillance of budgetary positions and the surveillance and coordination of economic policies, OJ L 306, 23.11.2011, 12, and Council Regulation (EU) No. 1177/2011 of 8 November 2011 amending

Regulation (EC) No. 1467/97 on speeding up and clarifying the implementation of the excessive deficit procedure, OJ L 306, 23.11.2011, 33, respectively.

13. See Jost Angerer, "The EU framework for fiscal policies", European Parliament Fact Sheets on the European Union, October 2018 [accessed on the internet at: http://www.europarl.europa.eu/factsheets/en/sheet/89/the-eu-framework-for-fiscal-policies].

14. TFEU, article 123.

15. TFEU, article 124.

16. TFEU, article 125.

17. Economists qualify this phenomenon as an "asymmetry"; see Jean-Pierre Vesperini, *Relancer la Croissance de l'Europe. Propositions pour une nouvelle gouvernance européenne* (Paris: Economica, 2005): 36. In New Classical macroeconomics, and particularly in the "optimal currency area" (OCA) theory (initiated by Robert A. Mundell, "A Theory of Optimal Currency Areas," *American Economic Review* 51 (1961): 657-665), the cost of a country's joining a monetary union is the loss of a major macroeconomic policy tool, namely that of independently manipulating its currency exchange rates; "asymmetric shocks" occur each time the economic cycles of two or more states are not synchronised, and exchange rates are supposed to protect economies against such state of affairs.

18. On this problem, see Marco Buti, Daniele Franco and Hedwig Ongena, "Budgetary Policies during Recessions – Retrospective Applications of the "Stability and Growth Pact" to the Post-War Period," *European Economy Economic Papers* 121 (May 1997): 1-33. Antonio Fatás and Ilian Mihov have found that "the euro area displays the most procyclical policy […], in contrast with the United States, that shows acyclicality or mild counter-cyclicality"; Antonio Fatás and Ilian Mihov, "The Euro and Fiscal Policy," *in* Alberto Alesina and Francesco Giavazzi eds., *Europe and the Euro* (Chicago: University of Chicago Press, 2010): 287-324, 299-302.

For a recent macroeconomic confirmation of the procyclical bias of the euro area fiscal policy, see Pierre Aldama, "Fiscal Sustainability and Fiscal Rules in a Monetary Union: Theory and Practice in Europe" *in* Raphael Douady, Clement Gouler, and Rierre-Charles Pradier eds., *Financial Regulation in the EU: From Resilience to Growth* (Cham: Palgrave Macmillan, 2017): 43-68.

19. Already in 2010, Jean-Paul Fitoussi and Jacques Le Cacheux made a compelling case for the irrationality of a situation in which "the European policy mix is badly adapted to the gloomier growth prospect of Europe" because of a passive or even more restrictive fiscal policy and of a more restrictive monetary policy acting as a "police" of wages; Jean-Paul Fitoussi and Jacques Le Cacheux, "Europe's

Economic Problem is Political After All!", *in* Jean-Paul Fitoussi and Jacques Le Cacheux eds., *Report on the State of the European Union, Volume 3: Crisis in the Economic Governance* (New York: Palgrave Macmillan, 2010): 1-10, 4.

20. TFEU, article 310, paragraph 1 unequivocally states: "The revenue and expenditure shown in the budget shall be in balance".

The need to reform the EU budget own resource system and the quest to widen the tax basis of the EU by enacting genuine tax instruments in order to pursue common policies and objectives is long recognized. For a thorough discussion, see Jacques Le Cacheux, "Funding the EU Budget with a Genuine Own Resource: The Case for a European Tax", *in* Jean-Paul Fitoussi and Jacques Le Cacheux eds., *Report on the State of the European Union, Volume 3: Crisis in the Economic Governance* (New York: Palgrave Macmillan, 2010): 132-159, specifically 144-149.

21. Budget Enforcement Act of 1990, Pub.L. N° 101-508, tit. XIII, 104 Stat. 1388-573 (1990), codified in scattered sections of 2 U.S.C., 15 U.S.C. § 1022, 31 U.S.C. § 1105, 1341, 1342 (Supp. IV 1992).

22. Louis Fisher has shown the actual failure of this new budget process enacted during the administration of Ronald Reagan. The Gramm-Rudman statutes have substantially reduced the President's accountability in providing needed leadership over budget aggregates, resulting in a loss of budget control by the Congress and a tripling of the national debt during Reagan's two terms of office (1980-1988); see Louis Fischer, "Presidential Fiscal Accountability Following the Budget Act of 1974", 67 *Maine Law Journal* (2015): 286-309.

23. For a helpful historical overview of the legal and ideological origins of the so-called "laissez-faire constitutionalism" that dominated in the USA in the late nineteenth and early twentieth century, also known as the "Lochner Era", see Matthew J. Lindsay, "In Search of 'Laissez-Faire Constitutionalism'", 123 *Harvard Law Review* (2010): 55-78.

24. Emphasis added.

25. Justice Holmes, dissenting opinion in *Lochner v. New York*, 198 U.S. 45, 75-76 (1905).

26. The following analysis draws extensively on Ioannis Papadopoulos, "Introduction: Multiple Systemic Crises in the European Union", *in* Despina Anagnostopoulou, Ioannis Papadopoulos, and Lina Papadopoulou eds., *The EU at a Crossroads: Challenges and Perspectives* (Newcastle upon Tyne: Cambridge Scholars Publishing, 2016): xxiv-xxxiv, particularly xxviii-xxix. From a vast literature on the so-called "EU democratic deficit", see the critical analysis of Giandomenico Majone, "Europe's Democratic Deficit: The Question of Standards", 4 *European Law Journal* (1998): 5-28.

27. For an assessment of the Obama administration macroeconomic and

financial initiatives, see Gerald Epstein, "Obama's Economic Policy: Achievements, Problems and Prospects", 5 *Revue de la régulation,* n° *Crise du capitalisme financier* (2009): 2-14.

28. Cf. Fritz W. Scharpf, "De-Constitutionalization and Majority Rule: A Democratic Vision for Europe", *Max Planck Institute for the Study of Societies Discussion Paper* 16/14 (2016) [accessed on the internet at: http://www.mpifg.de/pu/mpifg_dp/dp16-14.pdf].

29. The influence of the European Parliament was surprisingly limited even when it was called, as a co-legislator with the Council of the EU, to amend the SGP via the Six- and Two-Pack legislation. See Edoardo Bressanelli and Nicola Chelotti, "The European Parliament and economic governance: Explaining a case of limited influence", 24 *The Journal of Legislative Studies* (2018): 72-89.

30. On the concept of the euro area fiscal stance that was introduced in the EMU by the Two-Pack regulations in 2013, and the perverse effects that it has induced in terms of the reductions in growth-friendly categories of expenditure, see Christophe Kamps, Jacopo Cimadomo, Sebastian Hauptmeier and Nadine Leiner-Killinger, "Reflections on the Euro Area Fiscal Stance", 52 *Intereconomics* 2017: 125-131.

31. For a very helpful reassessment of the role of discretionary countercyclical fiscal policy in an environment of strongly responsive monetary policy, and more generally on the everlasting debate "rules vs. discretion in fiscal policy", see John B. Taylor, "Reassessing Discretionary Fiscal Policy", 14 *Journal of Economic Perspectives* (2000): 21-36.

32. European Commission, Communication "Towards a positive fiscal stance for the euro area", COM(2016) 727, Brussels, 16.11.2016; ECB Economic Bulletin, Issue No 4 (June 2016).

33. Cf. John B. Taylor, "Reassessing Discretionary Fiscal Policy", *op.cit.*: 28-30.

34. European Commission, Communication "Towards a positive fiscal stance for the euro area", *op. cit.*: 5.

35. Eurogroup Statement on the Draft Budgetary Plans for 2017, Brussels, 5 December 2016: 1.

36. Jean-Claude Juncker, in close cooperation with Donald Tusk, Jeroen Dijsselbloem, Mario Draghi and Martin Schulz (Five Presidents), *Completing Europe's Economic and Monetary Union*, 22 June 2015: 14.

37. *Ibid.*: 18.

38. According to the praised theory of "constitutional moments" by American scholar Bruce Ackerman (*in* Bruce Ackerman, *We the People: Foundations*

(Cambridge, Mass.: The Belknap Press of Harvard University Press, 1991), the American "dualist democracy" is characterized by its continuing effort to distinguish between two kinds of politics: "normal politics", in which organized interest groups try to influence democratically elected representatives; and "constitutional politics", in which the mass of citizens mobilize to debate matters of fundamental principle. Although American history is dominated by normal politics, the American tradition places a higher value on mobilized efforts to gain the consent of the people to new governing principles. Periods of such mass civic mobilization in favor of informal constitutional changes via a political pact between the country's leadership and the people, such as the New Deal Era in the 1930's, are called "constitutional moments", and they have a lasting effect on the course of "normal politics".

39. As expounded in Ioannis Papadopoulos, "The Efficiency of Debt Crisis Management by EU Mechanisms: Lessons from the Greek Case", *op. cit.*: 68-77.

40. Theodoros S. Papaspyrou, "A new approach to governance and integration in EMU for an optimal use of economic policy framework - priority to financial union", Bank of Greece Working Paper 229 (June 2017) [accessed on the internet at: https://www.bankofgreece.gr/BogEkdoseis/Paper2017229.pdf], also advocates an institutional strengthening and democratic accountability as indispensable elements for a successful EMU that should be pursued by following the Community approach, based on the Treaties, in contrast to the intergovernmental approach increasingly used in recent years.

41. Cf. Magdalena Kąkol, "Designing a fiscal union for the euro area", 16 *Ekonomia I Prawo. Economics and Law*, (2017): 413-432.

42. Jörn Axel Kämmerer, "How Can Eurobonds Be Legally Implemented into European Law?", 12 *Review of Law & Economics* (2016): 585-604, examines the conditions under which the various proposals for Eurobonds may be considered to be in accordance with European law (especially Art. 125 TFEU) and the national (constitutional) law of the member states.

43. See the excellent article by Paul De Grauwe, "The European Central Bank as Lender of Last Resort in the Government Bond Markets", 59 *CESifo Economic Studies* (2013): 520-535.

44. "The central and defining concern of ordoliberalism was to establish 'order' as a set of legal rules for a society of essentially self-reliant decision makers whose actions are controlled and co-ordinated by market competition"; Manfred E. Streit and Michael Wohlgemuth, "The Market Economy and the State Hayekian and Ordoliberal Conceptions," *in* Peter Koslowski ed., *The Theory of Capitalism in the German Economic Tradition: Historism,*

Ordo-Liberalism, Critical Theory, Solidarism (Berlin - Heidelberg: Springer Verlag, 2000): 224-271, 230. According to the specialist of German politics Stephen Padgett, "A central tenet of ordo-liberalism is a clearly defined division of labor in economic management, with specific responsibilities assigned to particular institutions. Monetary policy should be the responsibility of a central bank committed to monetary stability and low inflation, and insulated from political pressure by independent status. Fiscal policy –balancing tax revenue against government expenditure– is the domain of the government, whilst macroeconomic policy is the preserve of employers and trade unions"; Stephen Padgett, "Political Economy: The German Model under Stress", *in* Stephen Padgett, William E. Paterson and Gordon Smith eds., *Developments in German Politics 3* (Durham, NC: Duke University Press, 2003): 121-141, 126-127.

45. For a comparison between fiscal federalism and fiscal decentralization, see Oprea Florin, "Fiscal Federalism And Fiscal Decentralization In An Enlarged European Union", 1 *Annals of the University of Oradea: Economic Science* (2010): 623-628.

46. In a renowned paper, Daniel Gros and Thomas Mayer, "How to deal with sovereign default in Europe: Create the European Monetary Fund now!" CEPS Policy Brief No. 202 (17 May 2010) [accessed on the internet at: https://www.ceps.eu/system/files/book/2010/02/No%20202%20EMF%20e-version%20update%2017%20May.pdf], called for the creation of a European Monetary Fund so as to avert the threat of a disorderly default in the euro area and of an ensuing systemic financial instability at European and global level.

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MANAGERIAL BIAS: BLESSING OR CURSE?

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Abstract

The motivation for this paper emanates from our curiosity of which are the consequences, when one of the basic assumptions which most fundamental financial models posit, namely people's rationality, is in reality violated. Recently, research in corporate finance has begun to recognize that the decisions of managers and investors may be affected by behavioral biases. One strand of this research has focused on the issue of investor irrationality in financial markets, taking managerial rationality as given. A second, less-investigated, area of research analyses the corporate finance decisions of irrational managers, taking the rationality of investors as given. The behavioral bias which we focus on in the paper has to do with the overconfidence phenomenon and how this affects managers' decisions.

JEL Classification: G11, G17, G32
Keywords: Managerial Overconfidence, Financial Decisions, Behavioral Finance

1. Introduction

"The economist may attempt to ignore psychology, but it is sheer impossibility for him to ignore human nature."

John Maurice Clark, "Economics and Modern Psychology", Journal of Political Economy, 1918, Vol.26, p.4

Rationalists assume that human behavior is driven by perfect rationality and people have as purpose to maximize their expected utility (Neumann, 1944). In contrast, behavioralists were the first who mentioned that people are not acting with perfect rationality and behavioral theories are based on the empirical observations of human being (Sapra and Zak 2008). The last twenty years there have been evidence pointing out that human behavior is not driven by perfect rationality. This cancels out most of the fundamental financial models; the emotion element plays a significant role in decision making. There are

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many psychological biases which may affect this behavior, such as *heuristic simplification* (Simon, 1956), *framing effects* (Tversky & Kahneman 1981) and *overconfidence* (Odean, 1998). For the scope of this project, we focus only on overconfidence bias.

The present paper poses questions that try to explain the relation between managerial overconfidence and managerial financial decisions. The answer to those research questions will be given making reference to the relevant literature, based on empirical evidence. Initially, we need to try answer: "What is the relationship between managerial overconfidence and the forecasting of earnings?" This question is highly related with the second question as it has to do with the investment decisions where forecasting is a mandatory process. Therefore, "how can managerial overconfidence affect investments decision making? Can an overconfident manager be beneficial for a firm?" Finally, last question has to cope with "what is the relationship between managerial overconfidence with the capital structure and the dividend policy of the firm?" Evidence of managerial overconfidence studied was found to be widespread. Some have argued that managerial overconfidence is beneficial in that it reduces agency costs by reducing conservatism and underinvestment. Others have argued that managerial overconfidence is detrimental, in a way that leads managers to believe that their firms are undervalued so that they prefer to use internal rather than external financing sources.

2. Defining overconfidence in Financial Markets

Moore and Healy (2007) recognized three different subtypes of "overconfidence". Under the first subtype, which they call *"overestimation"*, is when someone overestimates his actual ability and believes that can perform better than he actually can, or when he thinks that the chance of success is higher than in reality. The second subtype of overconfidence is *"over placement"* and appears when someone believes that he is better than the others; more specifically they assess themselves better than the average. In many empirical studies the phenomenon of "over placement" is also defined as "better-than-average" (Alicke and Govorun, 2005). Last subtype of overconfidence is *"overprecision",* which measures the unreasonable confidence about the accuracy of one's beliefs.

Despite the obvious answer that people may act naturally overconfident, there are other reasons which lead them to overconfident behavior. According to Odean (1998) security markets are a difficult place to measure one's overconfidence and if there is such a bias it is difficult to reverse it by learning from

their own mistakes. One possible way for someone to learn from his mistakes is when he gets feedback about his behavior. The securities markets are giving feedback slowly, as the short-term traders are getting their feedback faster than a long-term trader. But their feedback is noisier than those of the long-term traders. Here comes the previous theory which we mentioned before about holding loser and selling winners. Feedback from losses will be delayed compared to feedback from winners, and traders are being based on their winner's feedback which in turn contributes to their irrational self-evaluations.

Another bias according to Odean (1998) is the "*selection bias"* where people who believe that they have higher skills than others on selection stock processes tend to act overconfident, and will try to find jobs as traders or trade for themselves. As an immediate result, financial markets become full with those who overestimate their abilities.

"Survivorship bias" is another possible reason based on Odean (1998). The main concept under this bias is that unsuccessful traders may lose their jobs if they are doing well, but those who manage to keep their jobs after a series of bad results may control less wealth than successful traders. If these successful traders overestimate their ability for success then they will act overconfidently and as a result more wealth will be managed by overconfident traders.

Moreover, Odean (1998) found that overconfident traders trade more and appear to have lower expected utilities than rational traders (i.e. they face higher trading volume). In addition, he found that overconfident traders have a more aggressive trading style and as a result they underestimate their action's risk. An interesting question is, *can this higher trading volume influence market efficiency?* The answer is controversial as there are different types of participants in the financial market. On one hand trader's overconfidence is increasing market's volatility but on the other hand overconfident market makers can decrease it, (Odean, 1998). The author also found that when there are too many overconfident traders, the markets tend to under react to signals by rational traders. Also, he found that this under reaction is consistent with statistical and highly relevant information about a specific event but there is an overreaction to silent and not so relevant information.

Barber and Odean (1999) found that overconfidence bias may be an element which leads to investors to trade irrationally, but it is not adequate to explain their findings, nor for other explanatory purposes such as for liquidity demands, tax benefits or portfolio rebalance. What do they find? That stocks irrational investors buy underperform the ones they sell after the transaction costs. But more importantly they find that, on average, these stocks are still underperforming those they sell even if zero transaction costs are assumed.

Moreover, Barber and Odean (2000) found that when investors are trading with high frequency then they tend to perform worse than those who do not trade so much. In addition, Barber and Odean (2001) found that men have higher probabilities to act overconfidently than women, but if both are overconfident then men are performing worse.

An interesting find regarding how overconfident investors react to information signals has been observed by Daniel et al. (1998). They developed a theory which is based on investor overconfidence and on biased self-attribution. Overconfident investors believe that their predictions and forecasting for a security value is more reliable than what other investors say, and as a result they underestimate their forecasting errors. The point here is that these investors overestimate their abilities about the signals they may get from this forecasting, they give more weight to private information and underestimate public information. Investor's overconfidence increases when his predictions and forecasting are proven correct (past success) but his convictions about his ability do not fall in case when this forecasting is wrong, as he uses external factors as an excuse.

De Long et al. (1990b, 1991) relate trader's risk aversion to risk underestimation. They found that such traders, who underestimate risk, give more of their wealth to risky securities and get higher expected returns. In the case these investors are overconfident about information's accuracy -which is consistent with the Daniel et al. (1998) model- they found that such psychological bias helps traders exploit information more effectively. As a result, this leads to higher profits than those of a rational investor.

Daniel et al. (1998) mention that the overconfidence effect is higher in less liquid securities and assets; which leads to less efficiency for small stock in contrast to large and liquid stocks. Moreover, they found that the return predictability is stronger for firms with high information asymmetries. Their main problem according to their model is that they cannot identify the type of investor, as it is important if the overconfident investor is an institution or an individual.

In general terms, most of the evidence according to the literature indicates that overestimation and the better-than-average elements of overconfidence seem to mostly influence investor's trading behavior.

3. Managerial overconfidence

In this part we discuss how personal characteristics, and more specifically overconfidence, can affect manager's decisions. Three research questions were posed about how managerial overconfidence influences different financial

policies and decisions which a manager has to take. We tried to answer these questions by searching the literature and what researchers have found based on empirical evidence.

3.1. Managerial overconfidence and Earnings Forecasts

The first question is *"What is the relationship between managerial overconfidence and the forecasting of earnings?"*

It is obvious that since the manager is a human being he/she cannot be exempt from behaving overconfidently. Furthermore, overconfidence is more likely to appear in top managers for promotion reasons (Ben-David et al. 2007; Goel and Thakor 2008). This is where risk underestimation comes in, as to get a promotion a significant past performance is generally required. As a result they are more prone to overestimating their abilities based on their past success and they take risks which are deviated from the actual figures.

The main role of the manager is to estimate future unknowns such as cash flows from investment i.e. the future earnings. If manager's beliefs are biased then their forecast estimations will also be biased which in turn may lead to unknown consequences. It is not assured that this bias will lead to firm's value distortion as there are examples for the opposite (Gervais et al., 2007). By disclosing managerial forecasts, managers are sending a signal about the company's future prospects. As a result, managerial forecasts play a significant role in the financial markets. Moreover, managers have to decide when they should disclose such information to the potential investors as there is trade-off between costs and benefits by such actions. The benefits are that the company will face higher liquidity and lower capital costs but on the other hand there are the proprietary and litigation costs. Evidence show that managers are willing to announce their earnings forecasts when they expect growth or higher earnings, (Core, 2001) and (Miller, 2002) respectively.

Libby and Rennekamp (2012) provide a different aspect of why managers provide such information to markets by adding the overconfidence bias. Once again, they mention that self-attribution bias is a significant reason for a manager to act overconfidently. Their difference with other empirical research is that they conducted a survey asking financial managers about their beliefs on earnings forecasts issuance. The results show that participating managers believe that, in general, the overconfidence bias exists in financial markets and can influence the forecasting process. In particular, their survey shows that these managers agree that past performance is an element which influences manager's belief about his/her ability on forecasting.

Libby and Rennekamp (2012) findings have implications on areas such as market participants and regulators. They mention that when managers voluntarily disclosure their forecasts, because they believe that they can keep improving the firm's performance in the future, there is a possibility that these managers use earnings management and possible fraud in order to match their expectations. The reason behind this action is their concern of facing a negative market reaction when they announce that they were not able to keep up with their expectations (Graham et al., 2005).

A work which investigates if there is any relation between overconfidence bias and the misstate earnings has been made by Schrand and Zechman (2011). They tried to discover whether overconfident managers intentionally misreport (i.e. manage earnings) or not. They found that when overconfident managers are not able to cover their forecasting expectations, they misreport in order to cover the gap between the actual figures and their expectations. The reason for such misreporting is that this type of managers are overestimating their firm's performance, and as a result believe that in the future they will be able to cover this gap.

An interesting research about how past accurate earnings forecasts can lead managers to act overconfidently has been made by Hilary and Hsu (2011). They found that biased self-attribution characteristics play a significant role in forecasting procedure. When an overconfident manager has a series of accurate forecasts, they impute too much of their success to their superior ability and too little of it to luck. Consequently, if there are two managers with identical skills; and one of them has made a series of high-quality earnings forecasts, then investors and analysts will rely more on the less accurate manager.

They found that managers who have done accurate forecasts in the previous four quarters tend to be less accurate on their next earnings predictions. Moreover, they found that financial analysts downplay the magnitude of the importance of such disclosure when they realize that they have been made by an overconfident manager.

Ben-David et al. (2007) found that overconfident CFO's predictions about the stock market returns are more accurate than the rational CFO; but this accuracy is not highly correlated with their confidence intervals, meaning that they are too narrow despite their precision. Moreover, Hribar and Yang (2006) found that overconfident CEOs, who are driven by the bias *"better-than-average",* are more prone to estimating the deviation of their forecasts on points rather than on range. In addition, if they set a range for their estimates it is too narrow, and if they cannot meet these forecasts they are more prone to managing their earnings.

3.2. Managerial Overconfidence related with Investment Decisions

The second question is *"How can managerial overconfidence affect investments decision making? Can an overconfident manager be beneficial for a firm?"* This question is highly related to the first question as the forecasting procedure it is mandatory for investment decisions.

To begin with the first part of this question, there are two traditional explanations for investment distortions. The first one and according to Jensen and Meckling (1976) and Jensen (1986) is the misalignment between managers' and shareholders' interests. Under this explanation, managers are investing the firm's excess cash in "perk" projects in order to benefit themselves. The second traditional explanation and based on Myers and Majluf (1984) is the asymmetric information between the management of the firm and the capital market. In this case, the management (which is acting in the interest of shareholders) is reluctant to accept external financing and prefers internal funding by using the firm's cash flow, which reduces investment distortion.

A different approach to this investment cash-flow sensitivity has been made by Malmendier and Tate (2005). They focused on the personal characteristics of a CEO, and how these characteristics can influence corporate investment decisions. They mention that often CEOs overestimate the returns of their investment projects and this frequency is more than systematic. They rationalize such behavior because a CEO that has a significant excess of cash for investment and is not disciplined by capital market, overinvests these cash flows in accordance with the first-best theory. In the case where they do not have a satisfactory amount of cash, they are reluctant to issue new equity because they believe that markets undervalue the stock. The outcome of such behavior is to restrain their investment and ignore positive investment opportunities which can increase the firm's value. They build their research on the overconfidence phenomenon as the only personal characteristic bias and more specifically on the *"better-than-average"* effect.

We would like to mention here that the initial intention for this project was to not describe any model present in research papers, but we decided to make an exception only for the Malmendier and Tate (2005) model. The reason is that their way of measuring CEO overconfidence seems reliable and many researchers have based their work on their methodology such as Hribar and Yang (2006); Ahmed and Duellman (2013); Malmendier et al. (2011); Deshmukh et al. (2012); Cordeiro (2009).

Their approach to measuring managerial overconfidence is based on the following logic. They used CEO's stocks and options compensation as a proxy

for their measurement. Due to the restrictions from their board of directors, they are not allowed to exercise and hedge their options by short-selling until a specific date. They assumed that a rational CEO should exercise his options when they are in-the-money in a given year immediately after the vesting period. Their idea is that if a CEO does not exercise such in-the-money options on the earliest date allowed and exercises them later, then this means that he is overconfident about the stock price prospects under his leadership and he believes that firm's stock price will be increased and gain higher personal profits. The second approach by Malmendier and Tate (2005) to measure overconfidence is to check when CEOs hold their options till the end of their duration. Under this case, overconfident CEOs are optimistic enough about the firm's performance and they hold their options till the end.

The evidences which Malmendier and Tate (2005) found is that overconfident CEOs invest more when they have excess cash in hand, and this phenomenon is more significant for firms which are mostly equity-based. Moreover, they found that their results are not driven by industry effects or firm size and elements such as financial constraints. In addition, they found that even CEOs perfectly aligned with the shareholders' interests, can still act overconfidently. Also, they mention that a CEO can also be overconfident about the value of existing assets in the company, and as a result he expects higher returns (in terms of cash flows) from these assets than they can actually contribute.

Another significant evidence about how overconfidence can influence CEOs decisions, as we mentioned before, is that this type of CEOs are reluctant to issue equity to finance their needs if they do not have enough cash. But, they found that overconfident CEOs are more prone to raising debt than equity, in contrast to other CEOs, to cover their financing needs.

Ben-David et al. (2007) found that CFOs (and not CEO) are more confident about their beliefs and underestimate the deviations of risky processes in periods where markets give high returns, and are less confident in low returns periods. Moreover, they found that overconfident CFOs are using lower discount rates for their investments and as a result expect a lower IRR for their firm's projects. The lower discount rates indicate their underestimation of project's risk, consequently they believe that their investment's project is safer and they evaluate it with lower discount rates. This leads to the possibility actually negative NPV projects are considered positive, and in turn to firm's value distortion driven by the overinvestment. What is next, they found that this type of executives are more prone to acquiring firms and invest more on capital expenditure than any the others CFOs. In addition, they found that merger announcements, leading by an overconfident CFO, are getting a negative signal from the markets.

A significant research about the relation between overconfident CEO and mergers & acquisitions has been made by Malmendier and Tate (2008) and they tried to identify if CEO overconfidence can explain the losses of acquirers. Once again overconfident CEOs overestimate their ability to create value, which leads to overestimation of future returns from his company but also from the acquiring firm. Due to this overestimation, these CEOs are more willing to acquire other firms. On the one hand, Malmendier and Tate (2008) found that overconfident CEOs are reluctant to use external funds for mergers as they believe that this financing is too costly and they forgo value creating mergers even if the markets correctly value its synergy. On the other hand, they found overconfident CEOs are more prone to conducting mergers when they have enough internal funds. In addition, they found that mergers conducted by overconfident CEOs do not justify their premium, which leads to firm's value distortion value as they overpay for a firm's acquisition. Next and consistent with Ben-David et al. (2007) findings, the market responds negatively to bids announcements from overconfident managers by 90 basis points compared to 12 basis points from rational CEOs. In our opinion, what Malmendier and Tate (2008) find and as they mention, is that overconfidence does not lead CEOs to acquire more firms, but to lower-quality acquisitions when they are using the excess internal funds.

An interesting approach about how overconfidence is related to accounting policies has been made by Ahmed and Duellman (2013). The main subject under investigation was how accounting conservatism is influenced by overconfident CEOs. The authors state the following; *"Conservatism is viewed as requiring higher verification standards for recognizing good news than bad news",* Ahmed and Duellman (2013, p.5). Conservative accounting is playing a significant role in the companies, for example it is important to understand how a manager values the company's inventory, or how trade receivables and payables are treated. If a manager is overconfident then he will underestimate the account payables as he underestimates the risk; on the other end he will overestimate the amount that the company receives from account receivables. Their findings show that there is a negative relationship between CEO overconfidence and conservatism. Moreover, they found that this negative relationship does not change even if there is change of CEO. In addition, they tried to determine if external monitoring mechanism may constrain this negative relationship, but they find that it does not affect it.

Goel and Thakor (2008) explore whether an overconfident CEO can be beneficial for a firm. They found that when the board of directors has to choose who will be the next CEO; they have a pool of top executives (employed by the

firm). These executives are the contestants of an internal tournament with the promotion as a prize. As a result, these managers are acting with the purpose of maximizing value in the shareholders interest. They found that the manager who underestimates projects risk is the one who will get the promotion to CEO, that is, the overconfident manager. This is the reason why most of the CEOs in firms are overconfident as the process is biased from the beginning.

But when comes the question whether the board of directors is reluctant to fire an overconfident CEO, Goel and Thakor (2008) found that the answer in on the relation between CEO and his compensation contract. If a CEO is rational and risk-averse, he will invest only in projects with risks that he is satisfied with, from his compensation contract, as a result there is a chance for underinvestment. Still, the risk limit the shareholders set can be even higher and to motivate a rational CEO is more costly as he will demand a higher compensation contract. This is when an overconfident CEO can be beneficial for the company. An overconfident CEO underestimates a project's risk and he is the solution to the underinvestment problem the board of directors faces with the rational CEO. This means that the moderately overconfident CEO does not realize the magnitude of the risks and does not demand higher compensation contract and more importantly he helps increase the firm's value. Overconfident CEOs are beneficial only when their overconfidence exists in moderation, because overly high overconfidence generates overinvestments which destroy firm value. Their findings are consistent with Gervais et al. (2011) and Campbell et al. (2011) who mention that it is less costly to motivate overconfidence managers to take risks than rational managers.

3.3. Managerial Overconfidence, Capital Structure Decisions and Dividend Policy

The third and last question has to cope with *"What is the relationship between managerial overconfidence with the capital structure and the dividend policy of the firm?"*

Managerial Overconfidence and Capital Structure Decisions

Many different theories have been proposed to describe the financing decisions of firms. The most prominent traditional theories of capital structure are the trade-off and pecking order theories. The former theory indicates that there is a trade-off between the tax advantages of borrowing and the costs of financial distress, (Miller, 1977). The latter theory, based on Myers (1984), says that the adverse selection problem appears with declining intensity in

equity, debt and retained earnings, with the last having no problem at all. As a result financing preferences follow the reverse ordering, so as to minimize the adverse selection problem.

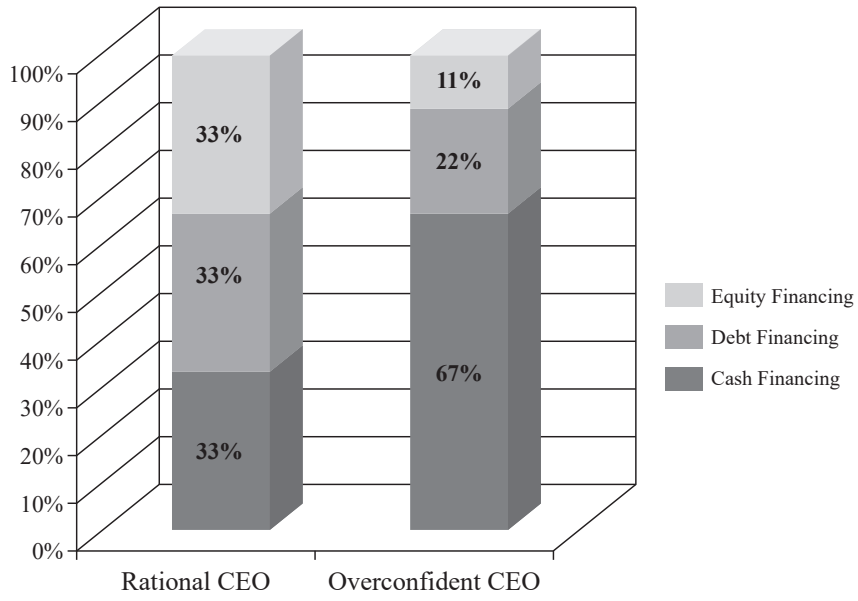
A lot of research and tests have been conducted about which of these two theories better explains the capital structure of firms (Shyam-Sunder and Myers 1999; Chirinko and Singha 2000; Huang et al. 2009; Frank and Goyal 2003; Lemmon and Zender 2010; Jong et al. 2011). Still this issue remains controversial; there is no answer to which capital structure is the optimum. A common place is that most of the models which test these two theories are assuming that investors and managers are acting rationally. Here comes one of our motivations about this project; which are the consequences on capital structure decisions when the managers are acting irrationally?

A significant work has been presented by Malmendier et al. (2011) who consider that overconfident managers overestimate their firms' future cash flows and hence they believe that their firms are undervalued by the market. They found that if an overconfident CEO has to choose between debt and equity he will choose debt. The reason they do not prefer to issue equity is this action will attenuate their existing shareholders claims. Moreover, they are also reluctant to use external financing through risky debt as they believe that their creditors, even if they are rational, are demanding higher returns than what an overconfident CEO is willing to accept. But as an overconfident CEO overestimates his financing needs, due to the overestimation of project investments, they have to use external financing. As a result, he has to choose between debt and equity. They found that overconfident CEOs are choosing debt because it does not change the proportion of the shareholders claims on firm's future cash flows. Also, they found that overconfident managers consider that equity financing is more mispriced than risky debt, which further explains their preference for debt over equity.

As can be seen from figure 1, which represents an example Malmendier et al. (2011) illustrate with their models, overconfident CEOs are following a pecking order on financing decisions as they choose first to use internal financing, then debt and last equity financing choices.

Malmendier et al. (2011) also found that overconfidence not only results to a preference between debt and equity, but also between internal and external financing. If the external financing through debt exceed investment returns, then overconfident CEOs are using only riskless debt finance. The consequence of such a choice is to not maximize their tax benefits due to their debt conservative. Moreover, they found that overconfident CEOs are using higher leverage than previous predecessors or successors in their firms. What they

Figure 1: Rational vs. Overconfident CEO preferences



Source: Malmendier U., Tate G. and Yan J., (2011) p.1695

found, is that managerial bias may be the answer to why similar firms have different capital structures.

Hackbarth (2008) connects the managerial traits and the capital structure decisions under cross-sectional differences in firm's capital structure. He divided managerial traits into two categories, those who overestimate the growth rate of their company's earnings and those that underestimate the riskiness of earnings. He found that the former category of managers, believe that the external financing is overwhelmingly costly and they judge that the market undervalued their risky securities. As a result they will not issue equity and will follow the pecking order theory as they believe that issuing equity will be more costly. On the other hand, the latter category of managers, believe that the market undervalued the debt financing of their firm and their firm's equity is overvalued. As a result they will benefit mostly by issuing equity thus following a reverse pecking order. They found also that the low biased manager's capital structure decisions are more in favor of the interest of the shareholders, while extreme biased managers are harmful for the firm.

We would like to mention here Fairchild's (2009) work as we find it very interesting, in the sense that he considered two different cases based on financing decisions and found opposite results. Firstly, he developed a model in which he combined the managerial overconfidence with the moral hazard phenomenon. The results from the first case, are consistent with the existing literature in that overconfidence bias is positive related with debt. On the other hand in accordance with his second case, there is a negative relation with debt. The results of the second case are based on the fact that a rational manager knows that a current opportunity project is value-reducing and as a result he prefers to use higher debt in order to not invest in it. While overconfident managers believe that this project is value-increasing, and he reduces debt in order to make the investment. Moreover, he investigates the life-cycle of the firm and how it is connected with debt financing. He found that in early stages and when investments opportunities exists, an overconfident manager will choose lower debt as firms needs flexibility for new projects. In later stages, as investment opportunities have declined, an overconfident manager will choose a higher level of debt.

Managerial Overconfidence and Dividend Policy

The second part of the third question has to do with the relation between managerial overconfidence and dividend policy. It is a fact that there have not been many empirical researches about this relation, (Corderio, 2009).

A recent paper by DeAngelo et al. (2008) mentions that most of the traditional explanations about the dividend policy, such as signaling motives, clientele demands, tax benefits, are playing only a minor role in the explanation of payout policy. In contrast, they find that managerial bias has the biggest impact on the dividend decision.

The most cited papers about the payout policy and managerial overconfidence are those of Ben-David et al. (2007) and Deshmukh et al. (2013). Under the former authors, they find that as overconfident managers regard external financing as expensive; and they prefer to use internal funds such as cash to finance firm's investments, they not prone to paying out cash dividends. But what Ben-David et al. (2007) did not study is the determinants of the dividend payout ratio, they examine only when a firm pays dividends.

Regarding Deshmukh et al. (2013), they found that an overconfident CEO pays lower level of dividend than a rational one. Moreover, they found that the announcement response on stock prices is related to how much the markets are uncertain about CEO overconfidence. Next, they mentioned that there is a strong positive relation between dividend paid and cash flows in firms where CEO overconfidence is in charge.

Cordeiro (2009) developed a model by which he divided overconfident managers into two categories. Those with pride bias, and those with egotism. He found that for the former category of managers they pay lower level of dividends while for the latter category he found that they pay higher dividends.

4. Conclusion

The current paper attempts to identify through the literature and empirical evidence what happens when managers are not acting rationally. Three questions were set about how managerial overconfidence can affect different manager's decisions.

The first question was, "What is the relationship between managerial overconfidence and the forecasting of earnings?" Evidence shows that managers overestimate their abilities on forecasting and that leads to overinvestment, indicating that overconfidence indeed has a significant role in decision-making processes. In general overconfidence plays a significant role in the forecasting procedure, but what makes us more vigilant now is the possibility of earnings management in order to fill the gap between wrong forecasts. We believe this should be taken into consideration by every investor who is willing to buy stocks after judging firm's disclosures.

The second question is "How managerial overconfidence can affect investments decision making? And can an overconfident manager be beneficial for a firm?" Obviously this question is highly related to the forecasting procedure. But the main point here is that if these investments are value-distorting or value-increasing for a firm. Evidence seems to be controversial. The case when evidence point out the same is the decrease of a firm's value on merger and acquisition processes. Evidence shows that a moderately overconfident manager is an asset to the firm. But in our opinion the difficulty is in accurately measuring overconfidence levels, and the question remains as to what should happen in case a manager exceeds some overconfidence limit.

The third question is "What is the relationship between managerial overconfidence with the capital structure and the dividend policy of the firm?" We believe that managerial overconfidence may help solve the capital structure puzzle. We mention in the project a lot of evidences which are based on traditional theories and still the capital structure puzzle is unsolved as most of the models assume that managers and investors are rational. By adding the overconfidence characteristic to manager's behavior, most of the evidence show that a manager is reluctant to issue equity and more prone to using internal funds. It is logical as a biased manager does not have the same idea about his

firm as the investors. The consequences are that they do not exploit their debt capacity. We cannot say if managerial overconfidence is the answer to that puzzle but we believe that it is a significant part and needs to be further researched.

The second part about the influence on payout policy, as DeAngelo et al. (2008) mention, the traditional explanations are not enough to justify manager's behavior on dividend policy. Moreover, it is also an area which requires further investigation as evidence from empirical research is not conclusive. In our opinion the reason is that dividend policy is highly related to investors' behavior, and with a high chance to meet overconfident managers and overconfident investors, then the things become very complicating and we cannot even imagine how it is possible to empirically test such an issue.

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A SYSTEM EQUATION MODEL FOR UK

A. ADAMOPOULOS*

Abstract

This study investigates the main determinants of economic growth applying a system equation model for United Kingdom for the period 1970-2017. Two-stage least squares method is used in order to examine the direct and indirect relationships between the examined variables of the model.

JEL Classification: O11, C22

Keywords: Investments, Trade of Openness, System Equation Model, TSLS Method

1. Introduction

The main objective of this paper is to examine the direct and indirect effect of investments, trade of openness and consumption on economic growth taking into account the negative effect of inflation rate in a developed country such as United Kingdom. It is well known that a well functioning economic system facilitates investments and exports growth taking into account the lower inflation rates and a healthy banking system.

Furthermore, technological progress and innovation facilitate investments growth, increase the entrepreneurship and consequently lead to productivity growth. The increase of products demand causes an increase of consumption of goods and services based on consumer's preferences and selections. Endogenous growth theory predicts that trade liberalization promotes economic growth facilitating the transactions of goods and services, the efficiency of investments and causing positive externalities for firms (Rivera-Batiz and Romer, 1991).

The main issue is not only concentrated on analyzing some theoretical determinants of economic growth, but also is referred to the statistical analysis of a system equation model based on basic econometric methodology. Surely, this paper examines a very powerful economy which is characterized by higher rates of economic growth facilitating the investment and exports growth. UK's economy is regarded as one of the most rich and widely developed countries

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worldly. The model hypothesis predicts that investments, trade of openness and consumption promote economic growth taking into account the negative effect of inflation rate.

This empirical study has the following objectives:

- To examine the interrelation among investments, trade of openness, consumption and inflation.
- To estimate a system equation model with tsls method in order to find out the interrelation between examined variables

The remainder of the paper proceeds as follows: Section 2 describes the methodology of empirical study, while section 3 analyses the empirical results. Finally, section 4 provides the conclusions of this paper.

2. Data and Methodology

2.1. Data analysis

In this study a structural system equation model is adopted to estimate the effect of investments, consumption and trade of openness on economic growth. For this reason a two-stage least squares model is applied in order to find out the interrelation between the examined variables based on economic theory. Basic diagnostic econometric tests are examined for their reliability and validity such as autocorrelation test for each equation relatively in order to obtain better statistical estimations. The general form of the structural system equation model is the following one:

$$GDP_t = c_1 + c_2 I_t, + c_3 OP_t + c_4 CS_t + [ar_1=c_5] + u_{1t} \quad (1)$$

$$I_t = c_6 + c_7 GDP_t + c_8 I_{t-1} + c_9 CPI_t + u_{2t} \quad (2)$$

$$OP_t = c_{10} + c_{11} GDP_{t-1} + c_{12} OP_{t-1} + u_{3t} \quad (3)$$

$$CS_t = c_{13} + c_{14} GDP_{t-2}, + c_{15} CPI_{t-2} + [ar_1=c_{16}] + u_{4t} \quad (4)$$

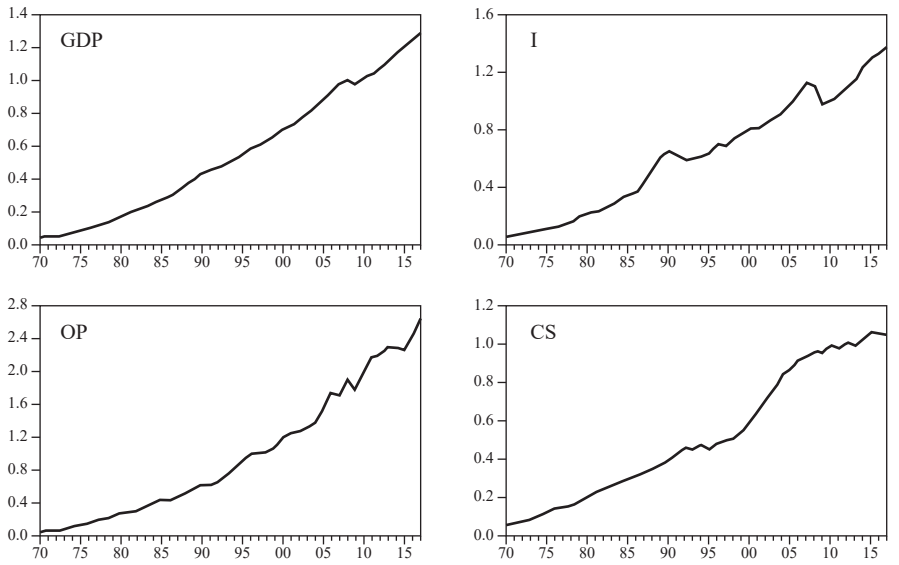
regarding each variable as a dependent one with other independent variables respectively

where:

GDP = gross domestic product

I = investments

Figure 1: Graphs of dependent variables

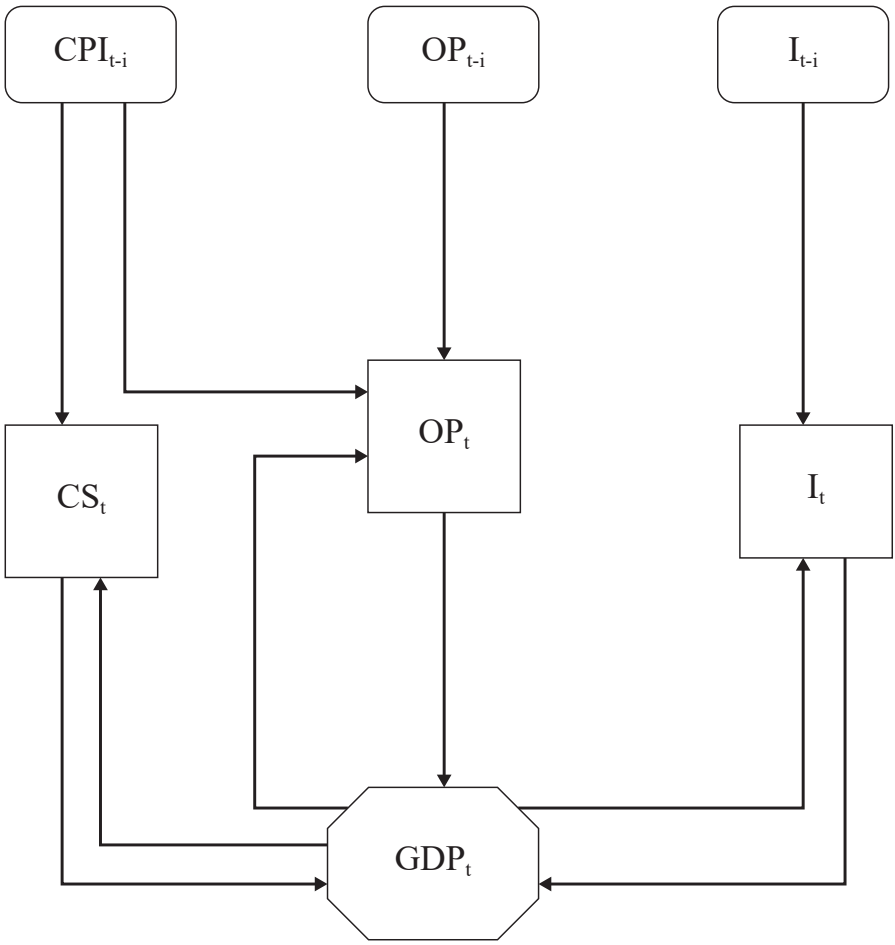


OP = trade of openness
CPI = inflation rate
CS = consumption
t = time trend
t-i = lagged time trend

Following the empirical studies of Adamopoulos (2010a), Adamopoulos (2010b), Vazakidis and Adamopoulos (2011a), the variable of economic growth (GDP) is measured by the rate of change of real GDP, investments (I) are expressed by the gross fixed capital formation, inflation rate is expressed by consumer price index (CPI), while trade openness (OP) denotes the sum of imports and exports to gross domestic product and finally consumption of goods and services (CS) expresses the consumption demand.

In this empirical study annual data are used for UK and the time period ranges from 1970 to 2017, regarding 2010 as a base year. The statistical data are obtained from statistical database of European Commission (AMECO, 2018). The graphs of examined variables are presented as follows (Figure 1).

Diagram 1: The structure of system equation model



The basic hypotheses of system equations model are summarized as follows:

- Hypothesis H 1: $\uparrow I_t \Rightarrow \uparrow GDP_t$

- Hypothesis H 2: $\uparrow OP_t \Rightarrow \uparrow GDP_t$ since $\downarrow CPI_t$

- Hypothesis H 3: $\uparrow CS_t \Rightarrow \uparrow GDP_t$ since $\downarrow CPI_t$

namely an increase of investments growth causes an increase of economic growth, (according to hypothesis one, H_1), an increase of trade of openness growth causes a relative increase of economic growth based on low inflation rate (according to hypothesis two, H_2), and finally an increase of consumption causes a relative increase of economic growth based on low inflation rate (according to hypothesis three, H_3).

The structure of the system equation model is presented in Diagram 1.

2.2. Methodology

The structural system equation model is consisted by four equations. The dependent variables are (GDP_t, I, OP_t, CS_t,) and the independent variables are (GDP_{t-1}, GDP_{t-2}, I_{t-1}, OP_{t-1}, CPI_t, CPI_{t-2}). Each equation is examined for statistical significance based on the statistical diagnostic tests such as possible existence of autocorrelation problem. The Eviews 9.0 (2015) software package is used to conduct these tests.

2.2.1. Two-stage least squares method

Initially, two-stage least squares method is applied to estimate a linear regression model. for statistical significance. This method defines that the regression line is fitted to the estimated values by minimizing the sum of squared residuals which indicates the sum of the vertical distances among each point and the relative point on the regression line. The smallest distances the better regression line is fitted. A regression model has a general form as follows:

$$Y_t = a + bX_t$$

Estimating a regression model with two-stage least squares method, mainly we have to find the estimations of constant term ($\hat{a}$) and the slope of equation model ($\hat{b}$), namely to solve the following patterns (Seddighi et al, 2000, Katos, 2004)

$$\hat{b} = \frac{n\sum X_t Y_t - \sum X_t \sum Y_t}{n\sum X_t^2 - (\sum X_t)^2} \text{ and } \hat{a} = \overline{Y}_t - \hat{b}\overline{X}_t ,$$

where $\overline{Y}$ is average of values of Y (dependent variable) and $\overline{X}$ average of values of X (independent variable).

The final estimated model has the general form as follows (Katos, 2004)

$$\widehat{Y}_t = \widehat{a} + \widehat{b}X_t\mathrm{T}$$

3. Empirical Results

The significance of the empirical results is dependent on the variables under estimation. The number of fitted time lags and the usage of first order autoregressive term was selected for the best estimations results and for existence of statistical significance in each equation model. Based on Vazakidis and Adamopoulos (2011a), Adamopoulos (2018) studies, the model of economic growth is mainly characterized by the direct effect of trade of openness, investments and consumption, while there is an indirect effect of inflation rate.

Estimating the system equation model with two-stage least squares method we can infer that there is statistical significance in coefficients of independent variables based on probabilities and t-student distribution test statistics. Their estimated values have the expected statistical sign based on economic theory. The coefficient of determination in each equation is very high (0,99) and is close to unity, so the model is very well adjusted (Table 1).

The same conclusion is easily confirmed by studying probabilities and F-distribution test statistics. All probabilities values are lower than 5% and t-student and F-student test statistics are greater than critical values obtained by statistical tables of t-student and F-distributions for 5% level of significance. Durbin Watson test statistic indicates that there is a possible problem of autocorrelation, while there is a possible existence of multicollinearity problem due to the highest values of coefficients of determination (Table 1).

Examining the economic interrelation between dependent and independent variables we can infer that investments, trade of openness and consumption have a positive effect on economic growth (equation 1), economic growth has a positive effect on investments (equation 2), on trade of openness (equation 3), and on consumption (equation 4), while inflation rate has a negative effect on trade of openness (equation 3) and on consumption (equation 4). The results of two-stage least squares method appear in Table 1.

The empirical results of two-stage least squares method (based on Table 1) are summarized as follows:

$$GDP_t = -0.02 + 0.46I_t, + 0.17OP_t + 0.19\ CS_t + [ar(1)=0.59]+u_{1t} \quad (1)$$

$$I_t = 0.02 + 0.19\,GDP_t + 0.82\ I_{t-1} + u_{2t} \quad (2)$$

$$OP_t = 0.04 + 0.74GDP_{t-1} + 0.75OP_{t-1} - 0.22CPI_t + u_{3t} \quad (3)$$

$$CS_t = 3.09 + 0.41GDP_{t-2}, - 0.48\,CPI_{t-2} + [ar(1)=0.99] + u_{4t} \quad (4)$$

As we can see from the estimated results an increase of investments per 1% causes a relative increase of gross domestic product per 0.46, an increase of trade of openness per 1% causes a relative increase of gross domestic product per 0.17, an increase of consumption per 1% causes a relative increase of domestic product per 0.19 (Equation 1).

Table 1: System equation model based on tsls method

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	-0.0207	0.0156	-1.3223	0.1879
C(2)	0.4628	0.0665	6.9531	0.0000
C(3)	0.1770	0.0411	4.2993	0.0000
C(4)	0.1968	0.1031	1.9082	0.0581
C(5)	0.5955	0.1387	4.2936	0.0000
C(6)	0.0290	0.0110	2.6253	0.0095
C(7)	0.1930	0.1060	1.8202	0.0705
C(8)	0.8223	0.1051	7.8223	0.0000
C(9)	0.0440	0.0331	1.3259	0.1867
C(10)	0.7466	0.2762	2.7025	0.0076
C(11)	0.7490	0.1046	7.1579	0.0000
C(12)	-0.2209	0.1323	-1.6698	0.0968
C(13)	3.0973	3.9722	0.7797	0.4366
C(14)	0.4141	0.2394	1.7296	0.0855
C(15)	-0.4854	0.2472	-1.9628	0.0513
C(16)	0.9910	0.0119	83.0521	0.0000

Equation: GDP= C(1) + C(2)*I +C(3)*OP + C(4)*CS + [AR(1)=C(5)] Observations: 46			
R-squared	0.9987	Mean dependent var	0.5696
Adjusted R-squared	0.9986	S.D. dependent var	0.3806
S.E. of regression	0.0139	Sum squared resid	0.0079
Durbin-Watson stat	1.8192		
Equation: I = C(6) + C(7)*GDP + C(8)*I(-1) Observations: 46			
R-squared	0.9917	Mean dependent var	0.6491
Adjusted R-squared	0.9913	S.D. dependent var	0.3902
S.E. of regression	0.0362	Sum squared resid	0.0565
Durbin-Watson stat	1.2476		
Equation: OP = C(9) + C(10)*GDP(-1) + C(11)*OP(-1) + C(12)*CPI Observations: 46			
R-squared	0.9940	Mean dependent var	1.0266
Adjusted R-squared	0.9936	S.D. dependent var	0.7770
S.E. of regression	0.0618	Sum squared resid	0.1606
Durbin-Watson stat	2.2445		
Equation: CS = C(13) + C(14)*GDP(-2) + C(15)*CPI(-2) + [AR(1)=C(16)] Observations: 45			
R-squared	0.9969	Mean dependent var	0.5559
Adjusted R-squared	0.9967	S.D. dependent var	0.3289
S.E. of regression	0.0188	Sum squared resid	0.0145
Durbin-Watson stat	1.4655		

Also, an increase of gross domestic product per 1% causes a relative increase of investments per 0.19 (Equation 2). Furthermore, an increase of gross domestic product per 1% causes a relative increase of trade of openness per 0.74, while an increase of inflation rate per 1% causes a relative decrease of trade of openness per 0.75 (Equation 3). Finally, an increase of gross domestic product per 1% causes a relative increase of consumption per 0.41, while an

increase of inflation rate per 1% causes a relative decrease of consumption per 0.48% (Equation 4).

Estimating the system equation model with two-stage least squares method we can see that that there is statistical significance in coefficients of independent variables based on probabilities and t-student distribution test statistics. Their estimated values have the expected statistical sign based on economic theory. All probabilities values are lower than 5% level of significance. Durbin Watson test statistics indicates that there is a possible problem of autocorrelation which is corrected by using the autoregressive error term of first class ar(1) as we can see in Table 1.

4. Conclusions

This study examines the main determinants of economic growth for United Kingdom for the period 1970-2017. The purpose of this study is to estimate a linear regression model of economic growth examining a structural system equation model. Initially, the results of two-stage least squares method suggested that economic growth is mainly characterized by the direct effect of trade of openness, investments and consumption and by indirect effect of inflation rate.

Furthermore, the empirical results of two-stage least squares method indicated that the system equation model is very well adapted to reality and has reliable results due to statistical significance of coefficients of examined variables

Many empirical studies examining the main determinants of economic growth differ relatively to the sample period, the examined countries and the estimation methodology. The empirical results of this paper are agreed with the studies of Vazakidis (2006), Vazakidis and Adamopoulos (2011a), Adamopoulos (2018). However, more interest should be focused on the comparative analysis of empirical results for many other countries in future research.

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CRM AS A TOOL FOR REWARDING CUSTOMERS IN HOTELS AND BANKS: A FISRT SURVEY IN GREECE

K. SERGOPOULOS* M. KARAGIANNI**

Abstract

The article attempts a brief mapping of the CRM (Customer Relationship Management) area and outlines its route through the tertiary sector. It monitors the theoretical approaches of epistemological issues and its relationship to hotels and banks. The customer loyalty theory is being traced, which consists of the basis of "reward" programs in hotels and banks. At the same time, it provides indicative empirical examples of programs which compose a well-formed CRM system in these two sectors.

JEL Classification: M16, M39

Keywords: CRM, Hotels, Banks, Customers, Loyalty, Reward

1. Introduction

The investigative process starts with customers' strong interest for qualitative purchasing experience in the tertiary sector. Serving, as providing a service from a hotel or a bank is interwoven with the creation and maintenance of customer engagement. The modern marketing technique which had emerged in early 1960s after 20 years had included the CRM practice for the benefit of both business and customer. In recent years, consumers' engagement to products and services has been investigated by industry experts. At the same time, business-organizations show the value of brand loyalty which they display, with the parameters shown in the below Figure 1.

It is a fact that the strategic value of commitment is based on the brand name, from reduced marketing costs, from attracting new customers, from transaction's power to reaction time, in the face of intransigent competition (Wirtscafts-Kundliches,1985).

In the highly competitive markets of the service providing sector (which is already saturated), the development of mutual trust between customer and

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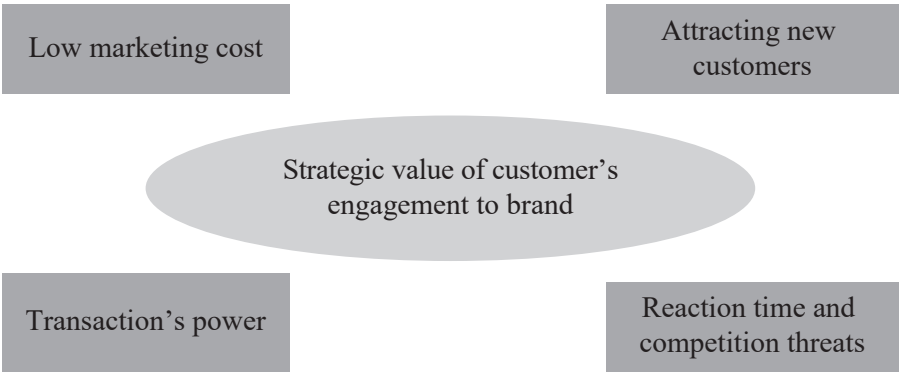
Figure 1: The strategic value of brand name commitment (Kotzakoliou, 2010)



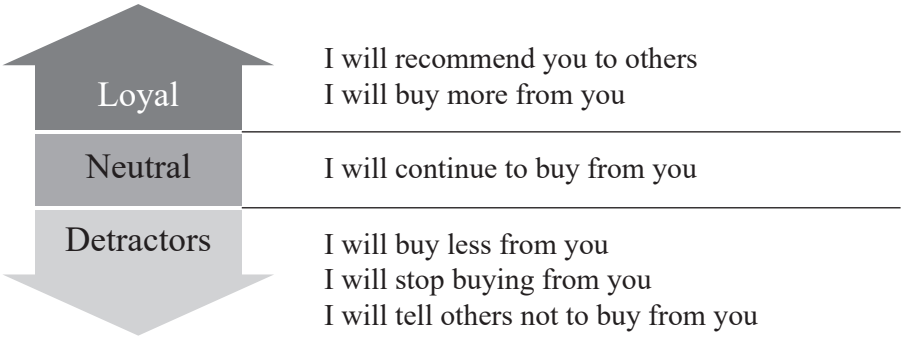
business is an important factor in making the best use of opportunities for all. It has been founded that customer satisfaction greatly improves engagement and business-to-business competitiveness, and its dissatisfaction has a negative impact especially on those who lead companies and organizations (Schanz, 1987).

That's the reason why more and more businesses-organizations in recent years have been adopting marketing relationships by understanding the importance of customer satisfaction. Philip Kotler says: "The customer is the one who decides what a business-organization is, what it produces and whether it will progress" (Philip Kotler, 1977). So many businesses focus their attention on satisfaction and above all on customer loyalty. The term "Customer Loyalty" has developed quite in the 21st century. The term focuses on acquiring the best customers and creating excellent relationships between customers and suppliers (Dimas, 2009)

On the basis of the above, customer's total loyalty to the business-organization is always sought, always assisted by a "high level" of engagement as in the following graph.

Indeed this is assured by those involved, meaning it is not possible to ensure a loyal-dedicated customer without a high degree of satisfaction. There is also the parameter that customers today are experienced and want quality in the service which they receive, depending on the price they pay (Athanasopoulos, 1996). Besides that, there is a model of customer satisfaction which is

Figure 2: The customer loyalty (Sergopoulos, 2017)



part of the qualitative efforts of businesses-organizations of service providers. Even the attitude of the staff plays a catalytic role in the quality of the provided service (Karagianni, 2017).

Because customers evaluate service quality, businesses-organizations are taking drastic improvement measures. So to get to the satisfied customer we focus on specific indicators such as: quality, value and service (Schaetzing, 1985). There is also the perspective that satisfied customers are buying more and are willing to pay even more expensive as long as they see problems resolved easily and quickly with respect for the resulting complaints (Laloumis, Sergopoulos, 2017).

2. Customer loyalty

Loyalty is a dominant concept in today's marketing economic relationship (Jacoby, Kyner, 1973). Hotels and banks today place customer loyalty as a prerequisite at a CRM program for the next step which is reward backed up by modern economic technologies (Sifneika News, 2018). What ultimately hotels and banks ask for is that the customer buys exclusively from the business-organization where he feels the absolute bond and as he usually says, My Hotel, My Bank, etc. Clearly price and quality are of primary importance in the purchase decision, but the value-recognition that the customer receives from the business organization is significant (Reicheld, Schefter, 2000).

Figure 3: The phases of customer loyalty (Kotzakoliou, 2010)

3. Indicative loyalty programs

We often see the phenomenon of collecting points. The customer credits a few units (points) at the time of the transaction. Of course the points have no value until they are redeemed. However, surveys have shown that they have a great psychological significance for loyal consumers (Van Osselaer, Alba, Manchanda, 2004). In addition, customer's sense of being important to the business-organization increases the depth of relationship and of course the relationship created also offers very significant psychological benefits, primarily with the fact that the loyal customer is actively involved in an effort of his supplier (Dowling, Uncles, 1997). Figure 3 below shows the pyramid of customer loyalty phases.

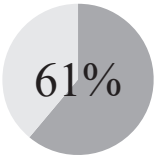
4. The customer's reward

Today, hotels and banks are in a position to develop methods, systems, procedures and principles in a way that they can predict customer's needs in a timely manner and of course when it is repetitive, this buying behavior enables rewarding it in various way (Karagiannis, 2000). Loyalty programs reinforce the loyal and committed customer, and this action becomes a necessary tool

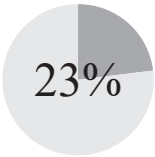
(Lewis, 2004). Therefore, reward programs are mechanisms that face price competition which create a database by offering personalized value to the customer.

Reward is a structural effort of the business-organization which provides incentives for customers (usually redeemable points) which lead to the acquisition of gifts or discounts, etc. The existence of even a simple reward program seems, at least statistically, to be affecting the consumer's behavior, since 6 out of 10 consumers are more likely to choose markets where they give them a reward, while 10% of customers declare that they only buy from business adopting reward programs. Following the findings, 61% said they were buying more often from rewarding businesses and organizations. 23% buy where they offer a reward, but that is not their main criterion of choice. Finally, 6% of the respondents state that their purchases are not affected at all by the existence of a reward program. Here is a simple graphical representation of the findings of the survey (cliQntlQ).

Claim that: I buy only from Businesses which offer me a reward



Declare that: I buy more often from Businesses which offer me a reward



I buy from businesses which offer me a reward but it's not the main criterion of my choice.

My purchases are not affected at all by the existence of a reward program

However, any healthy business-organization can use the above data either to better capture the profile of its customers or to form a more appropriate technical sales promotion. Thus, the structure of a good reward program for

example can have more positive results in order to stimulate demand in periods with low transaction mobility. These targeted actions enable the business-organization to monitor the success of any promotional action and determine which of the rewarding actions was the most successful.

5. The rewarding system in Hotels and Banking based on CRM

The hotel industry has grown alongside to the need of tourists to find accommodation on the way at, but also at places they visited. Some have begun to offer accommodation to tourist travelers, but historically it is ascertained that as soon as people began to travel, some kind of "boarding house" existed to meet this need –which is to find a traveler's accommodation– and references to such accommodation exist in ancient Greek literature, in the texts of the Old and New Testaments, in Latin texts of the Roman Empire, and from those sources we learn about the early inns of the street and about the inns in the cities where trade was taking place (Karagiannis, Exarchos, 2006).

Nowadays, hotels are no different in terms of expectations and goals than any other business-organization, following the global trend of international competition in terms of their policy. Today's modern hotel unit is trying to meet tourist's needs with the help of CRM principles (Tsukatos, Karagiannis, 2003), which among other things anticipate to: an excellent quality of provided products-services, a functional and wonderful atmosphere, a pleasant family environment, a fast and friendly service, cleanliness, happenings through all operating segments with best value (Regkoukos, 1992). If we take a look now at the rational strategy of the hotel, the CRM policy based on its characteristics, include actions such as: reward for specific customer segments (newlyweds, repeat customers, clients who have birthdays or anniversaries, public figures) and others.

This improves the quality of customer service and the visibility of the unit in terms of customer care and respect (Katarachias, 2002). Many big hotels are aware of the seriousness and effectiveness of CRM, organize systematic training, seminars, practical exercises and other training programs for employees, pointing out that each individual is unique and needs special treatment. Also, knowing that not all customers have the same expectations, needs, ideas, perceptions, desires, and employees should have the appropriate attitude and behavior, with sociability and special personality, e.g. employees of the hotel reception department (Regkoukos, 1992). Many hotels focus on technical issues of the client and give little time to the "Customer" (Katarachias, 2002) as they ignore the basic component of cultivating typical interpersonal relationships with the customer, as this is "unique" for every hotel-organization (Anfossi).

6. Personal experiences of customer loyalty programs in hotels

From personal experiences as a member of large hotel units, we record some of the methods that are currently applied based on the principles of CRM.

In general, customer loyalty programs in hotels are based on customer rating, depending on the frequency of visiting. For example, the Marriott hotel chain, which uses the excellent CRM application-program "Siebel", categorizes its clients to: Silver, Gold, Platinum, Platinum premiere. The collection of points is following, according to money consumed by the customer. The customer can redeem the collected points and earn various privileges. So, when you sign up, customers are part of the rewards program and usually the benefits are:

- Discount on rent
- Free room upgrade
- Free stays
- Discount on food and beverage departments
- Discount for holding a conference
- Free access to the executive floor
- Discount for car rental (the rental companies with which the hotel cooperates)
- Free car parking
- Free transfer to and from the airport, port etc.
- Welcome gift on arrival (eg basket with fruit, sweets etc)
- Free internet access
- Late c/out
- Early arrival
- Expressc/in

7. Customer Loyalty Programs in Banks

The history of the Greek Banking System begins in 1828 with the establishment of the National Bank of Greece, which was designed to solve the economic problems of the country. Since 1960, the internationalization of the banking system has led to a substantial increase in the number of foreign banks which have been established in Greece. This entry of foreign banks continued to be assisted by the accession of Greece to the European Union, since 1981.

From subjective experiences as an employee of a large Banking Organization, we list some of the methods that are currently applied by using CRM in banks.

At one point, the consolidation of all bank customer base data under a common platform creates the most important element for diagnosing customer

needs and customer service across all of bank's communication channels (Bouzouka, 2008).

This facilitates the main goal of CRM to look and diagnose customer's profile. This leads on the one hand to increasing customer's confidence to the bank and on the other to increasing bank's profits. Besides, it is known that satisfying customer's needs also leads to cover its most specialized needs.

It is noted that the proper functioning of a CRM does not only look at customer profiles, but also extends to segmentation, predictive models, and so on. The simplest in practice when needed is the direct communication of a bank via web, e-mail, etc. When e.g. a customer is idle for some time, the CRM system may give the order to send an e-mail with pre-formatted text. This happens because the bank has all available data that give a complete picture of the customer such as: when the customer purchased a product or service, the number of trading purchases he made in a given time period and the profitability for the bank during this period. That is the reason why customer service and support is considered as a "core" function when it is applied by CRM rules.

This means that based on the principles of CRM the bank understands the real needs of the customer and later on creates special packages and even offers for its loyal customers.

Afterwards there are effective bank marketing campaigns for existing and new customers based on use of incoming information about them (customers) (Bouzouka, 2008). Policies to promote new product-services, such as: servicing and approving loans to certain customers, great interest in deposit accounts and loans (business, consumer, mortgage, credit cards, etc.), e-banking consist of successful moves which are based on CRM methods.

8. Conclusions

Following these previous brief analyses, we think these provide all main and complementary information which is considered necessary to understand the application of a CRM system in hotels and banks.

At the same time, customer base analysis enables, with the analytical CRM tool, the use of statistical methods: segmentation, cluster analysis, etc., the use of data to efficiently design and deliver new product-services, the adequate response to existing customers and not only. The success of CRM cannot be considered as an individual act, but it expands to a broader circle that can add international value on the one hand to the hotel and on the other hand to the banks.

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