ADJUSTMENT IN THE US AND EUROPEAN MONETARY UNIONS: THE CASES OF PUERTO RICO AND GREECE

By

António Leite

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ABSTRACT

Form an Optimum Currency Area perspective this thesis provides a comparative analyzes between the ongoing Puerto Rican and Greek debt crisis and between the United States and European monetary unions. More specifically, the thesis engages with two of OCA's criteria required to sustain monetary unions in the long run: the Insurance Principle and homogeneity of policies. The thesis aims to answer the following research question: how to share the cost of adjustment in a monetary union? It is argued that there are flaws in the institutional design of both the US and European monetary union, namely the lack of an OCA insurance principle, and that this has exacerbated the debt crisis of Puerto Rico, who is part of the US monetary union, and the debt crisis of Greece, who is part of the Eurozone. However, both Puerto Rico and Greece have also pursued policies that contributed to the root causes of their debt crisis, what confirms the homogeneity of policies criterion of OCA theory.

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Table of contents

1. Introduction

On 9 July 2015 the finance minister of Germany Wolfgang Schauble stated that “I offered my friend Jack Lew [U.S. Secretary of the Treasury] that we could take Puerto Rico into the euro zone if the U.S. were willing to take Greece into the dollar union”[1]. Back then both Puerto Rico and Greece defaulted on debt payments in July 2015. Nonetheless, the German finance minister seems to suggest that Puerto Rico’s problems were less problematic than those of Greece. Yet, ten months later, on 9 May 2016, the same U.S. Secretary of the Treasury that Wolfgang Schauble was talking to (Jack Lew) said the following: "What Puerto Rico needs is the ability to restructure its debt”[2].

This thesis compares both the Puero Rico, part of the US monetary union, and Greece, part of the Eurozone, debt crisis. It does so by employing a selective approach to the theory of Optimum Currency Areas. More specifically, the thesis engages with Robert Mundell’s Insurance Principle criteria of his OCA theory[3] and with one of OCA theory political criteria, namely homogeneity of policies. The reason for choosing this theoretical framework has no ambiguity. As Julius Horvath has noted, ‘this theory and its modifications form the intellectual foundation of any discussion on currency unions’[4].

The research question guiding the thesis is: how to share the cost of adjustment in a monetary union? In terms of design, the thesis requires the use of qualitative methods. The theoretical section require qualitative research methods for, as Clift[5] noted, one way where qualitative methods is particularly useful is when it comes ‘to developing or refining theory . . . with

[1] Cited in *Bloomberg* “Schaeuble Tells Lew He’d Gladly Swap Greece for Puerto Rico”, 9 July 2015.
[2] Cited in New York Times, “Treasury Secretary Jacob Lew Puts a Face on Puerto Rico Debt Crisis” 9 May 2016
[3] Mundell is the founding father of OCA theory
[4] Horvath, Julius. ‘Optimum currency area theory: A selective review’, Bank of Finland, Discussion Paper No 15, pp. 1-40. (2013: 30).
[5] Clift, Ben ‘The Comparative Method and Comparative Political Economy’, in Clift, B., Comparative Political Economy: states, markets and global capitalism. Basingstoke: Palgrave Macmillan, pp, 286-314. (2014: 294-5).

incrementally greater precision'. In addition, as observed by Bulmer[6], 'theoretical advances' in the social sciences comes from the 'political developments in the subject being studied'. Thus, the institutional changes in the US monetary union and in Eurozone also require qualitative research methods, for this is mainly an interpretative research task, and interpretative research require qualitative methods. As for the comparative section between the US monetary union/Puerto Rico and European Monetary union/Greece qualitative methods will be used again, for as Ragin put it, 'reciprocal clarification of empirical categories and theoretical concepts is one of the central concerns of qualitative research'[7].

The thesis is structured in four main chapters. Firstly, a critical review of Optimum Currency Area theory will be conducted. This will be followed by a chapter on the US monetary union and Puerto Rico's debt crisis and by another chapter on the European Monetary Union and Greece's debt crisis. before conclusion there will be a comparative chapter where the three preceding chapters will be analyzed.

2. Theory of Optimum Currency Areas

The theory of Optimum Currency Area (OCA) analysis the costs and benefits of joining a single currency union and 'is essentially an approach to thinking about exchange rate regimes'[8] that spells out the institutional framework required to '*sustain*'[9](Dyson 2000: 162; De Grauwe

[6] Bulmer, S. 'Understanding the New Intergovernmentalism: Pre- and Post-Maastricht EU Studies', in Bickerton, C., Hodson, D. and Puetter, U. (eds), The New Intergovernmentalism: States and Supranational Actors in the Post-Maastricht Era, Oxford: Oxford University Press, pp. 289-303. (2015).
[7] cited in Clift (2014: 295).
[8] Horvath, Julius. (2013:30)
[9] Dyson, Kenneth (2000) The politics of the Euro-zone: stability or breakdown?. Oxford: OUP. , pp. 162 (2000); De Grauwe, Paul 'The Political Economy of Monetary Union in Europe' The World Economy. 16(6), pp. 654 (1993).

1993: 654) a common monetary union in the long-run[10]. This institutional setting must be built upon both supply and demand-side elements[11]. The former contributes to the sustainability of currency unions by pursuing policies in conformity with sound money, fiscal discipline, and structural reforms[12]. The latter aims at creating an institutional structure that contains fiscal transfers, a lender of last resort, and a political union with central fiscal capacity[13]. As a result, members of a monetary union will have at their jointly disposal the necessary tools to mitigate the impact that the loss of monetary independence might have when economic shocks occur. In other words, OCA theory sets out risk-sharing and sovereignty pooling mechanisms that will enhance the long-term sustainability of a monetary union.

Further, and absolutely crucial to tackle the critics of this theory (as it will be demonstrated shortly), as long ago as 1970 at the Madrid Conference on Optimum Currency Areas, Robert Mundell, the founding father of OCA theory, outlined his 'Insurance Principle' based on the 'policy-coordination' and 'joint-management' of a 'reserve pool' in order to create a 'risk-sharing' mechanism where countries from a single currency area could 'cushion the impact of [asymmetric shocks], drawing on the resources of the other country until the cost of adjustment has been efficiently spread over the future'[14]. Yet, although most of the contemporary literature on the political economy of monetary integration highlight the need of a common insurance deposit to secure the sustainability of monetary unions in the long run they do not engage with Mundell's 'Insurance Principe'.

[10] The chapter builds up on the survey of OCA theory conducted by Julius Horvath (2013).
[11] Mundell, Robert. 'A Theory of Optimum Currency Areas'. *The American Economic Review* 51 (4): pp. 509–17 (1961); Mundell, Robert, 'Uncommon Arguments for Common Currencies' in H.G. Johnson and A.K. Swoboda, eds., The Economics of Common Currencies. London: Allen&Unwin (1973).
[12] McKinnon, Ronald 'Optimum Currency Areas'. American Economic Review 53(4): pp. 717–725. (1963).
[13] Kenen, Peter 'The Theory of Optimum Currency Areas: An Eclectic View', in R. Mundell and A. Swoboda (eds) Monetary Problems of the international Economy. Chicago: Chicago University Press, pp. 41–60 (1969).
[14] Mundell (1973: 115)

As such, this chapter will engage with recent work from influential political economists that claim are going beyond Optimum Currency Area theory (OCA) – namely, the 'Embedded Currency Area theory' (ECA) of Kathleen McNamara (2015) and the 'theory of Optimum Financial Areas' (OFA) of Erik Jones and Geoffrey Underhill (2014)[15]. In common they share the same premises: (i) demand-side and political criteria are absent in OCA theory, (ii) OCA is fragmented between traditional and endogenous OCA, and (iii) OCA theory does not represent a single theoretical framework. Because none of these academic work engage with the demand-side and the political criteria of OCA theory[16] it is appropriate to conduct a comprehensive survey on the literature on OCA theory in order to determine (1) the role demand-side and political criteria have in the theory, (2) to what extent, if any, is OCA fragmented between the traditional and endogenous school.

McNamara's 'Embedded Currency Area theory' (ECA)[17] is built upon the study of previous successful monetary unions, such as the United States, and unsuccessful monetary unions, such as the Scandinavian Monetary Union and the Austro-Hungarian Krone. In addition, McNanamra also notes that her ECA theory is also built upon Karl Polanyi's historical sociology and on the shortcomings of Robert Mundell's Optimum Currency Area theory. As such, MacNamara claims that the criteria for ECA are very different than the ones in the literature of OCA theory. McNamara's Embedded Currency Area has four key elements: '(1) a legitimated generator of market confidence and liquidity, (2) mechanisms for fiscal redistribution and economic adjustment, (3) regulation of financial risk and uncertainty, and (4) political solidarity'[18]. The first requires a central bank that goes beyond price stability and

[15] and, though briefly, with 'the Insurance Potential of a Non-Optimal Currency Area' of Waltraud Schelkle 'The Insurance Potentical of a Non-Optimal Currency Area', in Cramme, O. and Hobolt, S, Democratic Politics in a European Union Under Stress. Oxford: Oxford University Press, pp.137-154. (2015)
[16] Mundell (1961), Kenen (1969)
[17] McNamara, Katheleen. 'The Forgotten Problem of Embededness: History Lessons for the Euro', in Matthijs, M. and Blyth, M. (ed 2015) The Future of the Euro, pp.44-69 (2015).
[18] Ibidem, p.26.

act as a true lender of last resort. The second requires a federal type fully-fledged fiscal and economic union with powers in taxation, fiscal redistribution, and social welfare. In addition, a centralized debt mutualisation mechanism is also essential. The third, requires a strong and centralized authority (part of a banking union) with capacity to detect and regulate the financial system in order to prevent systemic risk in the banking sector. Finally, and pivotal in ECA theory, the fourth element requires a political union. Indeed, McNamara concludes that a lender of last resort, a fiscal and economic union, and a banking cannot be achieved without a legitimate and political union. Overall, as Mcnamara argues, 'these elements constitute a minimum, rather than an optimal, foundation for . . . a stable [and] sustainable monetary union'[19].

As such, in developing her theoretical framework McNamara's key research question is, as she put it, what are the 'minimal conditions' required to 'sustain' a monetary union? In other words, behind McNamara's ECA theory lies OCA's research question itself. Indeed, as she acknowledges, 'despite its innovations, the euro can be analyzed with two more general theories of what makes a currency area hang together. One, Optimum Currency Area (OCA) theory, dominates how most prominent economic commentators understand the euro today. I argue, however, that this approach is incomplete, as it is missing an account of the various political institutions and conditions that allow for a successful single currency. Instead, I propose a theory of what I call Embedded Currency Areas (ECA), which better captures the necessary foundations for managing the slings and arrows of macroeconomic fortune in a single currency zone'[20] McNanamra's theoretical contribution is that she combines the work of Karl Polanyi with monetary integration theory. Specifically, she puts forward the fusion between Polanyi's socio-political 'embeddedness' with the (shortcomings) of Robert Mundell's

[19] Ibidem, p. 29
[20] McNamara (2015: 22)

Optimum Currency Area theory. Thus, the fusion between Polanyi's Embeddedness with Optimum Currency Area theory opens the way to a powerful theoretical framework because pivotal in her Embedded Currency Area theory (ECA) is the proposition that a successful monetary union requires 'one political authority'[21]. But this is also a key criterion of OCA theory itself. Indeed, in Mundell words, 'the concept of an optimum currency area therefore has direct practical applicability only in areas where political organization is in a state of flux'[22].

In fact, as Ambrosoe noted, OCA theory has three sub-sets of political criteria. As he explains, 'the three political criteria involve Fiscal Transfers, Homogenous Preferences and the conflict of Solidarity and Nationalism'[23]. Homogeneity of policies were in fact incorporated in OCA theory back in 1970. As Mongelli observed, 'Haberler (1970) stresses that a similarity of policy attitudes among partner countries is relevant in turning a group of countries into a successful currency area'[24]. Indeed, in one of the first surveys on OCA theory Ishiyama noted that 'the persistence of significant differences in policy attitudes among nations' is an OCA criterion[25]. And in one of the most recent surveys on OCA theory, Julius Horvath has also noted that OCA theorists have claimed that 'what matters is a government's commitment; to monetary union and that for instance 'Mintz (1970) also emphasizes the political willingness of the central authorities to pursue monetary unions as the most important factor for forming currency areas'[26]. Nonetheless, McNamara's ECA does not "embed" these political criteria in her critique of OCA theory. Rather, she feels the need to bring in the political embeddedness of Karl Polanyi to claim the uniqueness of her Embedded Currency Area theory.

[21] Ibidem, p. 37
[22] Mundell (1961: 661)
[23] Ambrose, Simon, Should Britain join the Euro? – A Discussion based on the Theory of Optimum Currency Areas (2006).
[24] Mongelli, F. European economic and monetary integration and the optimum currency area theory. European Economy. Economic Papers 302, February 2008.
[25] Ishiyama, I. 'The Theory of Optimum Currency Areas: A Survey', Staff Papers (International Monetary Fund) 22 (2), pp. 344-383 (1975)
[26] Horvath (2013: 18).

Similarly, Jones and Underhill's Theory of Optimum Financial Areas delineates the elements of the Financial Union[27]. They argue that the Eurozone crisis stemmed from highly capital market liberalization without a common supranational institution with financial oversight powers. As a result, because EMU was built with no common collateral rules, with no common deposit insurance, and with no common risk-free assets, the crisis led to contagion and triggered the collapse of the European banking system. According to Jones and Underhill, although these are core elements of a banking union, a complete financial union would also require the mutualisation of debt and a permanent bailout mechanism, and a common resolution authority that could act as a true lender of last resort. Whereas in the latter Jones and Underhill argue that it should be the role of the European Central Bank, the permanent bailout mechanisms (the European Stability Mechanism already exerts this function) and debt mutualisation (Eurobonds) could lead to the creation of new institutions[28].

Similarly to Jones and Underhill, Nicolas Jabko[29], who developed McNamara's Fiscal Union, argues that it is not enough to secure the sustainability of the Eurozone. Indeed, Jabko's argument is that fiscal redistribution mechanisms and sovereign debt pooling are absolutely necessary. Because he argues that the Eurozone crisis came about not because monetary policy was centralized at EU level (by the ECB) but, rather, because economic and fiscal policy were concentrated at the national level, Jabko suggests that member states should transfer their sovereignty to the supranational level. In other words, Jabko argues for a collective fiscal and economic governance at the EU level. Therefore, the core elements of his Fiscal Union are the centralization of fiscal policy with countercyclical fiscal redistribution capacity and with a

[27] Erik Jones contribution to Mcnamara's ECA theory in chapter 3 of the book *The Future of the Euro* builds upon his work with Geoffrey underhill and their article 'Theory of Optimum Financial Areas'. Jones, Erik. and Underhill, Geoffrey, 'Theory of Optimum Financial Areas: Retooling the Debate on the Governance of Global Finance' Swift Institute Working Paper No. 2013-001, pp1-46, November (2014).
[28] Ibidem
[29] Jabko, Nicolas 'The Elusive Economic Government and the Forgotten Fiscal Union'. in Matthijs, M. and Blyth, M. (ed) *The Future of the Euro*, Oxford: Oxford University press (2015).

common budget, and the mutualisation of debt instruments. According to Jabko, this (centralized) ‘federal system’ is necessary to both solving the ‘dilemma of divided sovereignty’ (p. 89), and to correct asymmetric shocks in the Eurozone[30].

The last of Mcnamara’s ‘forgotten unions’, is Political Union and was elaborated by Vivien Schmidt[31]. Whereas for Jones and Underhill and for Jabko it was the forgotten financial and economic unions that led to the crisis, for Schmidt the main component was political. Schmidt argues that EU institutions suffer from what she terms as (the lack of) ‘output legitimacy’, that is, they are ineffective. This is the case because the ECB acts with “one size fits none” rules, the European Council with “one size fits one” style of governance, the European Commission with “one size fits all” approach, and because the European Parliament is largely ignored it has “no size [influence] at all”[32]. In other words, according to Schmidt, the Eurozone crisis came about because EMU did not have a legitimate and political union in place. Thus, it is not just the economics of monetary union that matters, but also the politics. And this politics requires ‘a more balanced political union’[33] with less emphasis on intergovernmental and technocratic methods, and more participatory democracy.

Yet, McNamara’s ‘Fiscal Redistribution’ and ‘Sovereign Debt Pooling’[34] criteria of her ‘Embedded Currency Area’ theory nor Jones and Underhill’s ‘common risk free asset that serves counterparties as collateral for liquidity access and clearing and as a safe haven in times of distress’, and ‘a central system for sovereign debt management’[35] criteria of their ‘Optimum Financial Area’ theory engage with Mundell’s ‘portfolio insurance’[36], his ‘new OCA

[30] Ibidem
[31] Schmidt, Vivien ‘The Forgotten Problem of Democratic Legitimacy: “Governing by the Rules” and “Ruling by the Numbers”, in Matthijs, M. and Blyth, M. (ed) The Future of the Euro, Oxford: Oxford University press (2015).
[32] Ibidem, p. 111
[33] Ibidem, p113
[34] McNamara’s (2015: 29)
[35] Jones and Underhill’s (2014: 15)
[36] Masini, Fabio (2014) ‘A history of the theories on Optimum Currency Areas’. The European Journal of the History of Economic Thought, 21 (6): pp. 1023 (2014).

property'[37]. As such, although McNamara' 'Embedded Currency Area theory (ECA)', Jones and Underhill's 'Theory of Optimum Financial Areas (OFA)'[38], provide strong, persuasive and valuable arguments of the causes of the Eurozone crisis as well as on the mechanisms that the Eurozone needs to secure its sustainability in the long-run they are, nonetheless, built upon simplistic accounts of Optimum Currency Areas theory. To put it bluntly, one can claim that rather than going beyond OCA these authors are contributing for the refinement of OCA criteria. Table 1 illustrates how McNamara's ECA resembles OCA theory.

Table 1: (left column: author compilation. Right column: McNamara (2015)

Optimum Currency Area Theory (OCA) (Mundell, McKinnin, Kenen)	Embedded Currency Area Theory (ECA) (McNamara)
LOLR (McKinon 1963; Kenen 1969; Mundell 1973)	A "True" Lender of Last Resort function (**LOLR**) (*Chapters 3 and 4*, Jones & Jabko)
Fiscal Union (Kenen 1969)	Fiscal Redistribution, Sovereign Debt Pooling (**Fiscal Union**) (*Chapter 4*, Jabko)
Risk-sharing Union (Mundell 1973)	Financial Market Regulation, Bailouts, Resolution Mechanisms, Deposit Guarantees (**Banking Union**) (*Chapter 3*, Jones)
Political Union (Mundell 1961, 1973; Kenen 1969)	Legitimate and Democratic Institutions of Governance (**Political Union**) (*Chapter 5*, Schmidt)

[37] Geerom, H. and Karbownik, P.'A Monetary Union requires a Banking Union', College of Europe, Bruges European Economic Policy Briefings 33 / 2014, pp. 13. (2014). Neither Schelkl (2015) 'Insurance Potential' engage with Mundell's 'Insurance Principe'.
[38] and Schelkle's (2015)

In fact McNamara' 'Embedded Currency Area theory (ECA)', Jones and Underhill's 'Theory of Optimum Financial Areas (OFA)' are not the only academics that misunderstand OCA theory[39]. It is argued that OCA theory it does not have predictive or explanatory power because it does not address the politics of monetary union[40]. In addition, due to both the Washington Consesus environment and the revival of the prospect of European monetary unification in the 1980's as well as in response to what become known as the Lucas Critique –that it's irrelevant assessing the criteria of OCA before the creation of monetary union because economic structures will change once monetary union is established[41]– the (supply-side) criteria of OCA were updated and the '"new" theory of Optimum Currency Areas' was born. A few years later the Endogenous OCA theory[42] directly addressing the Lucas Critique. As Frankel and Rose put it, 'the endogenous nature of the relationship between various OCA criteria is a straightforward application of the celebrated Lucas Critique . . . a country is more likely to satisfy the criteria for entry into a currency union ex post than ex ante!'[43].

As any theory, OCA may not fully explain the mechanics of political process, but this does not render OCA obsolete. But as Snaith noted 'if OCA is indeed dead, it is perhaps worth considering why the predictions of its theorists and its governance implications are still causing problems in EMU'[44]. Indeed, this is why Paul Krugman states that by omitting Kenen's OCA

[39] Shelkle's Insurance Potential of a Non-Optimal Currency Area' also misunderstands OCA theory
[40] Cohen, B. 'Beyond EMU: the problem of sustainability' Economics and Politics, 5(2), pp. 187-203. (1993); Goodhart, C. 'The two concepts of money: implications for the analysis of optimal currency areas', European Journal of Political Economy, 14, pp. 407-432. (1998); Otero-Igesias, M. 'Stateless Euro: The Euro Crisis and the Revenge of the Chartalist Theory of Money', Journal of Common Market Studies, 53(2), pp. 349-364. (2015); Pomfret, R. 'Currency Areas in Theory and Practice' The Economic Record, 81 (253), pp. 166-176. (2005); Cesarano, P. 'The Puzzle of Metallism: Searching for the Nature of Money', History of Political Economy, 46(2), pp. 177-210. (2014).
[41] Lucas, Robert E., Jr. 'Econometric Policy Evaluation: A Critique', in Brunner, K. and Meltzer, A. (eds), The Phillips Curve and Labor Markets. Carnegie-Rochester Conference Series on Public Policy. Amsterdam: North-Holland, pp. 19–46; Snaith (2014: 6).
[42] Frankel, J. and Rose, A. 'Is EMU more justifiable ex post than ex ante?' European Economic Review, 41, pp. 753- 760. (1997); Frankel, J. and Rose, A.K. 'The Endogeneity of the Optimum Currency Area Criteria'. The Economic Journal, Royal Economic Society, 108 (449), pp. 1009–1025 (1998)
[43] Frankel and Rose 1997: 760.
[44] Snaith, Holly, 'Narratives of Optimum Currency Area Theory and Eurozone Governance'. *New Political Economy*, pp. 15 (2013).

criterion, fiscal federalism, 'it turned out that optimum currency area theory was essentially right (…) and now that theory is taking its revenge'[45]. This is why De Grauwe, writes that 'OCA theory remains the essential framework to understand the design failures of the Eurozone' (De Grauwe 2013: viii)[46]. Indeed, if OCA does not have any explanatory power why isn't it 'dead' as several critics have proclaimed? Why is it for instance that critical political economists such Magnus Ryner (2012: 658-9, 672) places OCA theory as one of the 'promising and notable exceptions' (p. 672) for shaking up scholarly work on regional integration? As it will be demonstrated in the following chapters, the case study of Puerto Rico within the framework of the US monetary union and the case study of Greece within the European monetary union will shade light on the relevance of OCA theory for analyzing the debt crisis that both Puerto and Greece are facing within the currency union they are part of.

3. The Puerto Rican Debt Crisis and the US Monetary Union

On the 29 June 2015 Puerto Rico's Governor Garcia Padilla declared the island's debt to unpayable[47]. What has led to this situation? Why Puerto Rico, a territory of the United States and part of the US monetary union, reached this level in its public finances? This chapter explores the root causes and ongoing fiscal and economic crisis in Puerto Rico as well as the role of the US monetary union in fueling the Puerto Rican debt crisis.

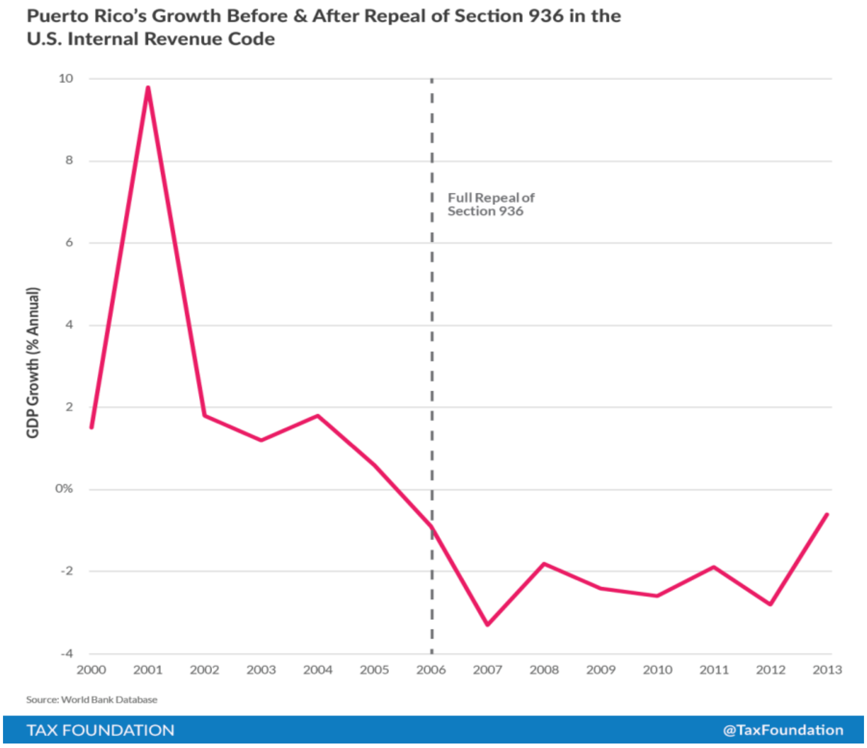
[45] Krugman, Paul, 'Revenge of the Optimum Currency Area'. NBER Macroeconomics Annual, 27(1), pp. 447, (2012).
[46] Grauwe, Paul De Grauwe, 'Forward', in Marco, M. The Economics of the Monetary Union and the Eurozone Crisis. London: Springer, pp. vii-viii. (2013). Paul de Grauwe's words were written in 2013. Interestingly they resemble the words that of Bayoumi and Eichengreen have used back in 1997 – 'like it or not, OCA remains the workhorse for analysis of European monetary unification', Bayoumi, T. and Eichengreen, B. 'Ever closer to heaven?An optimum-currency-area index for European countries'. European Economic Review, 41(3-5) (1997).
[47] Austin 2016

The crisis in Puerto Rico are directly linked to the 1996 Congress decision to end many of the benefits that Puerto Rico has enjoyed in the United States tax code since 1917[48] in order to facilitate economic growth and the industrialization of the island[49]. Among these tax benefits lies corporate tax incentives that exempted corporations from having to pay taxes on income and profits originating in the island[50]. Indeed, Puerto Rico's corporate tax incentives, enacted under Section 936 of the 1976 US tax code[51], meant that it was particularly attractive to set up subsidiaries on the island and as the Economist notes, this tax exemption was particularly attractive to Pharmaceutical, textile and IT companies who have 'flocked to the island to spark a manufacturing boom that lasted for around two decades'[52].

As such Congress decision under the Clinton administration to abolish these tax incentives (in order to balance the federal budget[53]) led to a contraction in investment in the island from 1996 and 2006 and coincided with the beginning of Puerto Rico's economic decline[54]. This is the case because the abolishment of these tax incentives, gradually implemented from 1996 and 2006, drove out corporations from the island and with this foreign direct investment declined[55], and as Joffe and Martinez argue 'Congress's repeal of Section 936 was one of a number of federal legislative actions that had the unintended consequence of exacerbating Puerto Rico's current debt crisis'[56]. By 2006 Puerto Rico had lost 80,000 jobs and was in economic recession, a situation that lasts until today[57], as Figure 1 illustrates.

[48] 1917 was the year that Congress established the government of Puerto Rico. Although many tax benefits were created right from the start the 1970s were a period where tax exemptions were created. For a review see GAO, *Report to the Chairman, Committee on Finance, U.S. Senate, TAX POLICY Puerto Rico and the Section 936 Tax Credit*, 1993.
[49] Scott Greenberg, Gavin Ekins, Tax Foundation, *Tax Policy Helped Create Puerto Rico's Fiscal Crisis,* (2015).
[50] Ibidem.
[51] Scott Greenberg, Gavin Ekins (2015).
[52] Economist, Why Puerto Rico is in trouble, 2016.
[53] Ibidem.
[54] Scott Greenberg, Gavin Ekins (2015); Economist (2016); Austin (2016).
[55] Ibidem.
[56] Marc Joffe and Jesse Martinez '*Origins of the Puerto Rico Fiscal Crisis', Mercatus Research*, (2016: 15).
[57] Michelle Kaske and Martin Braun, Puerto Rico's Slide, Bloomberg, (2014).

Figure 1[58]



Faced with an economic slump, with raising number of unemployment rate[59], successive Puerto Rican governments began to pile up ever increasing amounts of debt, which amounts to $72 billion in May 2016, in order to balance its budget[60]. Interestingly, unlike to what happen with the bonds issued by the US States and cities with powers to issue debt, Puerto Rico's bonds are exempt from local, state and federal income taxes, what makes Puerto Rican bonds particularly attractive to US mainland investors[61]. To be sure, interest on bonds issued by the US states and cities in the municipal bond market are (like in the case of Puerto Rico's bonds) exempt from federal income tax. Furthermore, as Joffe and Martinez note, bonds issued within the same state are also exempt from both local state income tax. As such, 'Puerto Rico bonds are unique in that they are exempt from *all* state and local income taxes nationwide'[62]. Put

[58] Graphic extracted from Scott Greenberg, Gavin Ekins (2015).
[59] Puerto Rico Unemployment rate is 12% in May 2016, more than twice the US average. Economist (2016).
[60] Ibidem.
[61] Marc Joffe and Jesse Martinez, (2016: 6).
[62] Ibidem

differently, whereas for example a US investor of Illinois would have to pay income tax on bonds that were issued by the California municipal bond market (or any other state apart from Illinois), the same US investor would have to pay *no* income tax on bonds issued by Puerto Rico's municipal bond market. This means that there is a triple tax exempt status on Puerto Rico's bonds and, as the Economist noted, 'Investors lapped them up'[63]. In other words, because 'that "triple-tax-free" status made the territory's bonds incredibly popular to investors, from 2000 to 2012, the government's public debt nearly tripled from $24 billion to $70 billion'[64].

In addition, the Puerto Rican (and the US subprime crisis) debt crisis that originated the 2008 global recession, started in the late 1960s when uninterrupted economic growth started to falter due to accelerated rates of inflation. As Streeck's notes, inflation was the 'formula' found after the Second World War to settle conflict between labour and capital[65]. That is, the creation of the welfare state and the commitment of governments to full employment and democracy led the working class to tolerate, at least temporarily, capitalist markets. The same applied in Puerto Rico. However, because inflationary policies led to distortions in wages and relative prices, economic growth will, sooner or later, begin to falter and unemployment will be the outcome. Thus, the end of the inflationary business cycle, came to an end in the late 1970s – And this explains why the US tried to revitalize the Puerto Rican economy by granting it with tax benefits.

However, another crisis came about precisely by the implementation of the opposite of inflationary policies – namely, deflationary monetary policy. This came about with the Reagan administration and the beginning of neoliberalism. To overcome the inflationary crisis the

[63] Economist (2016).
[64] Alan Gomez, *Puerto Rico facing historic default on its $72 billion debt*, USA Today, (2015).
[65] Streeck, Wolfgang. "The Crises of Democratic Capitalism." New Left Review, no. 71, pp. 5–29. (2011)

American model of capitalism implemented not only restrictive monetary policy. It was also accompanied by legislation that aimed at diminishing the power of trade unions. In other words, the US government were committed to dismantling the balanced distributional formula between labour and capital in favor of capital. By ignoring the 'wisdom of post-war democratic capitalism'[66], the outcome of the Reagen era was a steady increase in unemployment rates what led to increase spending in welfare and increase in public debt. As Streeck notes, whereas in the previous decades inflation was used to achieve 'social peace' (p. 14), now the burden fell on the state. Consequently, instead of inflation, public (government) borrowing was now a practice used to (re-)address the 'distributional conflict' of the United States (p. 14). And this was what led Clinton administration to phase out the tax advantages of Puerto Rico. However, as in the case of inflation, increase in public debt is only a temporary solution - it's another business cycle that will come to an end. And this was what led Clinton administration to phase out the tax advantages of Puerto Rico.

Indeed, When US public debt started to be deemed as unsustainable rather than keeping up with public borrowing, the US Clinton administration policy was conducted to incentivize private debt. That is, rather than being the state that spends on education or welfare, such as healthcare, pensions or social housing, it was now up to the citizen to pay for it. In the case of Puerto Rico this became even more difficult due to the repeal of Section 936 of the US tax code. Indeed, due to low wages most of the people could not actually finance its costs, thus capital markets deregulation and cheap credit meant households could borrow relatively easier. As such, although temporarily both the higher and lower classes seemed to prosper, since the economic recession in Puerto Rico in 2006 and since the outbreak of the

[66] Ibidem

subprime crisis in 2007, Puerto Rico was in particular difficulties and became dependent on borrowing.

The US and consequently Puerto Rico's embracement of financial deregulation can be traced back to the collapse of the Bretton Woods in the 1970s which gave rise to the Washington Consensus in the 1980's. Neoliberalism was born and with it also an economic system based on deregulation and privatization. Following the Big Bang introduced by Thatcher's government in the City of London combined with the prospect of a European single currency threatened the dollar as the dominant world currency, the Reagan administration began a global race to the bottom in the financial services "forcing" Wall Street to embrace further deregulation in order to keep New York fit to compete with London and other European capitals for the status of world's financial capital. As it will be briefly explained below, the causes of the 2007/08 global financial and economic crisis can be traced back to the financial competition that neoliberal economics so much encourages.

In order to respond to the rapid expansion and increased power of the City of London in the 1980s and the creation of the euro in the 1990s, the United States embraced the economic strategy of deregulation – of which Puerto Rico was also part of not least because it was already then a US territory and part of the US monetary union. This economic policy brought about the too big to fail culture and liquidity risks. However, The so-called too big to fail culture can be traced back to the Clinton administration. In 1994, the United States introduced The Riegle-Neal Interstate Banking and Branching Efficiency Act abolishing the statutory prohibitions on interstate banking. Additionally, in 1999, The Gramm-Leach-Bliley Act (also known as The Financial Services Modernization Act) also abolished the Glass-Steagall Act of 1933 (also known as the Banking Act)- A law that helped to restore confidence in banking practices during the Great Depression of the 1920s[67].

This was done with the intention to allow financial institutions to merge, and not merely to work separately from each other as it was happening in the past. The result was the creation of good bank and bad bank, financial speculation and toxic financial products to increase profits. Because banks were allowed to merge, the banking system became dominated by powerful bankers. In short, those banks become too big to fail, for in the event of a financial collapse, the government had no solution but to step in. This was a conscious risk. More, this was a risk that was embedded with the ideological belief that the financial markets should work as free as possible, the belief that the less the state is involved, the better the financial system will work[68].

In addition, a liquidity risk was in the making when in 2002, the Treasury Department and other federal bank regulatory agencies altered the way capital reserves were calculated for banks, allowing them to hold less capital in reserve, and in 2004 The Securities and Exchange Commission relaxed the net capital requirements for broker-dealers. What is more significant is that all this was done in a period when it was known since 2000 that the Commodity Futures Modernization Act barred U.S. federal regulation from one trillion-dollar swap markets[69]. For these reasons, what was to happen in 2007, another crisis of capitalism, shouldn't really come as a surprise. Although the reforms had kept Wall Street status of world's financial capital at the top of the financial markets, the United States response to European competition created a race to the bottom that led to the outbreak of the most severe financial and economic crisis for almost a century. Despite the evidence that deregulated financial markets do not work, create

[67] U. S. Senate Report, 'Wall Street and the Financial Crisis: Anatomy of a Financial Collapse'. New York: Cosmos Report. (2011)
[68] US Senate Report, (2011).
[69] Ibidim.

monopolies and subversive competition, the followers of the minimum state and neoliberalism still argue that the financial crisis originated from too much regulation or fiscal profligacy.

How did then the US react to the sub-prime and financial crisis of 2007 and mores specifically after the collapse of the Lehmam Brothers in 2008? What policies were pursued to overcome the crisis and was there an in-built mechanism in the US monetary union to deal with the most severe crisis since the 1920s? Scholarly literature has dedicated much time analyzing these questions and regarding the guiding principle pursued by the US the answer is quite short and straightforward – the US decided to bail out its banking system. As for whether the instruments were available to deal with the crisis, Arturo Estrella, a former member of the federal Reserve Bank of New York, observes that in fact 'only a handful of the policy tools that were employed by [the Federal Reserve] in the financial upheavals of 2008 were previously available'[70]. Further, as a study from the US Congress recently concluded 'the Fed justified its special assistance to too big to fail firms during the crisis on the grounds that these firms could not be wound down without causing financial instability under existing law because of perceived shortcomings of the bankruptcy process'[71]. These observations lead to an important question regarding Puerto Rico. Does the US monetary union have an anti-crisis mechanism to deal with the debt problems of Puerto Rico? This even more pressing now as Puerto Rico defaulted on most of a $422 million debt payment on 2 May 2016[72].

This question is pertinent because unlike US municipalities, Puerto Rico does not have access to bankruptcy law, the so-called Chapter 9 of the US bankruptcy code[73]. That is, although the US states themselves are also not allowed to file for bankruptcy, their cities (municipalities)

70 Estrella, Arturo. *Puerto Rico Government Debt and the U.S. Federal Government: Potential Assistance Tools and Policy Practice.* Discussion Paper Fundación Carvajal (2014).
71 Labonte, Mark. *Federal Reserve: Emergency Lending,* Congressional research Service (2016)
72 Walsh, Mary. *As Puerto Rico Defaults, Eyes Turn to Washington,* The New York Times, 2 May (2016).
73 Anne O. Krueger, Ranjit Teja, And Andrew Wolfe. *Puerto Rico – A Way Forward*, Commonwealth of Puerto Rico, p21 (2015).

can. Therefore, unlike US municipalities, one can observe that the US does not have a legal framework that could allow Puerto Rico to restructure its debts, just as Detroit did in 2013. In fact, as the U.S. Securities and Exchange Commission documented in their report on the US Municipal Securities Market, 'as of December 31, 2011, there were over one million different municipal bonds outstanding, in the total aggregate principal amount of more than $3.7 trillion'[74]. Further, in 2007 alone, when the sub-prime crisis emerged, 'a total of $226 million in municipal bonds defaulted [and] municipal bond default rates spiked in 2008 as 162 issuers defaulted on $8.2 billion in municipal bonds'[75].

As such, from here it follows that Puerto Rico's debt problems are not unique in the US. The difference, however, is that unlike US municipalities Puerto Rico cannot file for bankruptcy. A 'prohibition [that] has had the effect of increasing the cost of bankruptcy for Puerto Rico', as Daniel Gros has argued [76]. A further observation can be taken from the institutional framework of the US bankruptcy code – that comparisons between the amount of debt of Puerto Rico and other US states are inappropriate because while all Puerto Rico's debt issuers falls all under the public debt of the Commonwealth of Puerto Rico, the US states do not include the debt issued by their cities. In other words, while Puerto Rico's public debt 'includes all debt issued for underlying municipalities and schools, Illinois' total debt does not'.[77] To put it even more straightforwardly, while the US monetary union provides a legal framework for their cities to restructure their debts, Puerto Rico's cities (also members of the same US monetary union and whose citizens are also American citizens) cannot – that's a key reason why Puerto Rico debt crisis is still unfolding.

[74] U.S. Securities and Exchange Commission, *Report on the Municipal Securities Market*, p. I (2012).
[75] Ibidem, p.23.
[76] Gros, Daniel. *The Fate of Greece in a 'Genuine Economic and Monetary Union': Lessons from a small island state*, CEPS, p.12 (2015).
[77] Miller, John. *Discussion draft of the "Puerto Rico Oversight, Management, and Economic Stability Act."*, Nuveen Asset Management, (2016).

Indeed, with credit rating agencies and investors demanding an ever increasing interest rate for Puerto Rico bonds, the commonwealth had no alternative than to implement emergency cash management measures since 2015. Indeed, as Sergio Marxuach, the Policy Director of the influential Puerto Rican think tank as noted, 'those [emergency cash management] measures include postponing the payment of tax refunds, suspending the effectiveness of collective bargaining agreements, withholding the disbursement of appropriations for government entities such as the University of Puerto Rico, and delaying payment to various suppliers'[78].

In order to deal with the Puerto Rican debt crisis the US House of Representatives introduced a new legislation (H.R. 5278 also known as PROMESA) on 18 May 2016[79]. At the time of writing this legislation still needs to face the vote in Congress and then signed by the president of the United States. As such, the bill is unlikely to be in place by 1 July 2016 when Puerto Rico faces a debt payment of 2 billion dollars (four times higher than the amount of the 2 May 2016 default). Although the bill does not grant Puerto Rico access to Chapter 9 of the US bankruptcy code, it will allow Puerto Rico to restructure its debts. Although the precise way debt restructuring will happen is still unknown what is certain is that as Pedro Pierluisi, Resident Commissioner of Puerto Rico in the US House of Representatives, has noted, 'it is inevitable that any federal legislation that provides Puerto Rico with debt restructuring authority will also establish a temporary and independent oversight board to assist the Puerto Rico government so that it can better manage its public finances, balance its budget, become more efficient and transparent, and regain access to the credit markets'[80].

Although Pedro Pierluisi sides himself with the bill, of a different opinion is US Senator and Democratic presidential candidate Bernard Sanders, who has become one of the most active

[78] Marxuach, Sergio. *Policy Brief: Possible Consequences of a Default on Puerto Rico General Obligation Bonds*, Center for a New Economy, p.5 (2016)
[79] The Bill has entered in the 2016 US presidential debate.
[80] Pierluisi, Pedro. *Pierluisi Statement on Introduction of New Puerto Rico Legislation,* 18 May 2016.

voices in arguing that Puerto Rico should be given not access to Chapter 9 and not to an oversight board. As he put it, 'among other efforts, what Congress should do is to act immediately to give Puerto Rico the same authority granted to every municipality in this country to restructure its debt under the supervision of a bankruptcy court'[81] rather than to 'require the governor of Puerto Rico to submit a fiscal plan to an unelected and undemocratic oversight board'[82]. Where both agree however is on the need to provide Puerto Rico with US statehood.[83]

4. The Greek Debt Crisis and the European Monetary Union

Due to the interconnectedness between the US and Eurozone economies, especially in the banking and financial, the US 2007 sub-prime crisis and 2008 financial crisis spread to the Eurozone. However, what was an exogenous crisis become an endogenous one and almost self-fulfilling crisis of the Eurozone due to the flaws in the architecture of EMU.

The Eurozone was perceived since its inception as being one single country. That is, the financial markets did not believe the no bailout clause and therefore did not place a differentiated risk in weaker countries within the Eurozone[84]. As such, government bonds' interest rates were equalized among all Eurozone members. However, with the beginning of the crisis, rating agencies[85] started increasing the price on peripheral Eurozone members, starting with Greece in 2010 and then Ireland also in 2010 and Portugal at the end of 2010 and

[81] BernieSanders.com. *PRESS RELEASE Sanders Sides with People of Puerto Rico,* 20 May 2016.
[82] Sanders, Bernard. *We Must Stop treating Puerto Rico Like a Colony',* United States congress, 23 May 2016
[83] Pierluisi, Pedro. *Pierluisi Introduces Puerto Rico Statehood Admission Bill*, Feb 24, 2015. Sanders, Bernard. *We Must Stop treating Puerto Rico Like a Colony',* United States congress, 23 May 2016.
[84] Whelan, Karl. 'Sovereign Default and the Euro', Oxford Review of Economic Policy, 29(3): 478–501. (2014).
[85] The same ones that classified United States subprime mortgages as triple A

beginning 2011, as well as Spain and Italy after at the end 2011 and more vigorously in the first half of 2012.

However while in 2000 the Eurozone was perceived to be one country, by 2010 there was difference between peripheral and the core members of the Eurozone[86]. As such, even though northern European countries, such as Germany had (and still has) debt levels above the Maastricht ceiling of 60% their government bonds did not increase as much as those of Greece (and those of the other southern European countries), even though Germany's debt levels were in fact higher than Spain and Ireland and very close to the debt levels of Portugal[87].

In other words, the change in interest rates had nothing to do with public debt levels or state profligacy due to cheap credit. In fact, this also apply to Spain and Ireland. In addition, the revision of the Stability and Growth Pact (SGP) in 2005, which gave more flexibility in respect to keep up within the convergence criteria, came about because Germany and France breached the deficit criteria and put their weight in changing the fiscal rules of the SGP[88].

Thus the following question arises: Had Germany and France experienced a sharp rise on its borrowing costs in 2003 (or even in 2010) wouldn't this force Germany and France to follow the same path as those of Greece, Ireland and Portugal? That is, had the borrowing costs of Germany increased to 6 or 7% wouldn't Germany and France have to request a financial assistance program? After all, borrowing costs hinder growth. Nevertheless, it's true Greece's growth model was deemed unsustainable because it was based on private consumption low interest rates (as well as on creative accounting). To put it simply, the economic model in

[86] Brazys, Samuel, and Niamh Hardiman. "From 'Tiger'to 'PIIGS': Ireland and the Use of Heuristics in Comparative Political Economy." European Journal of Political Research 54 (1): 23–42. (2015).
[87] Indeed, every single year since the introduction of the euro Germany and Portugal had always debt levels very close to (although most of the time slightly above) 60%GDP. Furthermore, Belgium and Italy were also highly indebted, thus the argument that Greece (and Ireland and Portugal) requested an international bailout due to fiscal profligacy alone does not hold.
[88] Whelan, Karl (2014).

Greece (and other southern European countries) was unsustainable. What is more, rather than using the favorable credit conditions to restructure their economies in a more export-led growth, the money was used in the non-tradable sector. Thus, when the credit line was tightened the weaknesses of their economy came to the spotlight. In other words, growth was only possible in Greece due to the credit bubble that low interest rates created. That is, growth was achieved not by structural reforms but by systematic borrowing.

Furthermore, the fact that real exchange rate appreciation was a key factor in the loss of competiveness in Greece[89]. In other words, Greek exports became more expensive it allowed for the new emerging countries in the global economy to have cheaper prices, thus Greece's products and tourism become more expensive what resulted in the drop of their market share and further exacerbated the lack of competiveness of the Greek economy.But Germany did not grow either[90]. Indeed, real exchange rate appreciation in Greece came about not only due to the introduction of the euro but also due to the appreciation of the euro against the dollar between 2001 and 2008[91]. In addition, Greece's wages and labor compensation were increasing faster in Greece due to the fact that the Greek economy was a still a catching up[92].

In short, several factors contributed to Greece's request for international assistance in March 2011. The design failures of the Eurozone certainly contributed for the weakening of the Greek economy. In particular, when financial markets and more specifically rating agencies have the power to discriminate with Eurozone member states. But Greece has more concrete responsibility in the crisis too. First of all, it accepted being a member of the Eurozone knowing that there wasn't a bailout clause or even any anti-crisis mechanism with it. As such, the

[89] Appreciation of the real exchange rates was also a problem for both Portugal and Italy. See Mamede, Ricardo Paes 'Financiiall (in)stabillitty and industrial growth: The cases of Italy and Portugal' ISCTE, Lisbon, (2014).
[90] Sinn, H-B. 'The ECB's stealth bailout' Vox online 1 June Available at: http://www.voxeu.org/article/ecb-s-stealth-bailout.
[91] Scharpf, fritz (2011): "Monetary Union: Fiscal Crisis and the Pre-emption of Democracy." LSE Europe in Question Discussion Paper Series, LEQS Paper 36/2011 (2011).
[92] Ibidem

increase in wages and in private (families and companies) borrowing increased dramatically due from the late 1990s to the early 200os due to low interest rates. This led to an unsustainable boom since it became a member of the Eurozone in 2001 and ultimately led to its request for bailout assistance. However, the lack of growth since 2010 has mostly to do with the failure of austerity program imposed prescribed by the Troika program[93].

In fact, as Jonathan Hopkin argues the adjustment programs in Greece and in southern Europe are eroding the pro-European feelings in that region and may lead to EMU exit, even though southern Europe have benefited from Euro membership[94]. This is the case because manufacturing declined and that the wages of unionized workers stagnated while in non-unionized private sector workers this was not the case. However, when the Eurozone crisis took its toll and internal devaluation had kick started, Hopkin argues that trade union workers 'the so-called "insiders" often blamed for the crisis—stably employed and unionized industrial and public sector workers—have been handed the bill'. As such, one can argue that the European project is falling out of favour in southern Europe due to wage and welfare cuts and several other austerity measures in a scale with no historical precedents. In other words, 'this constitutes a major natural experiment with very high stakes'[95].

Nonetheless, due to the intergovernmental character of the Eurozone 'domestic constrains' and preferences need to be addressed as it may lead to a reduced autonomy of national governments[96]. This is the case because the pooling of sovereignty at the EU level are made through interest groups at the national level who are strong enough to influence the positions

[93] Lapovitsas et al, *Crisis in the Eurozone*. London: Verso (2012).
[94] Hopkin, Jonathan. *The Troubled Southern Periphery: The Euro Experience in Italy and Spain*, in *The Future of the Euro*. Oxford: Oxford University Press. (2015).
[95] Ibidem, p.183
[96] Niemann, Arne. "Expalining Decisions in the European Union". Cambridge: Cambridge Univerisy Press. P, 48 (2006). These stem from interest groups as well as media and other internal actors but also from the people (national citizens themselves, for as Niemann argues dissatisfaction with the European Union further exacerbates both domestic constraints and 'sovereignty-consciousness' what undermines national governments at home.

that national governments take to the negotiation table, thus the negotiation agreements that comes from Eurozone summits and the wider EU decision making-process reflect the rational choices and interests of those powerful interest groups[97].

Indeed, as Abraham Newman presents an historical narrative to explain why Angela Merkel, portrayed as 'the reluctant leader', pursued austerity politics during the Eurozone crisis[98]. Newman argues that because the costs of reunification and because a rules based approach still plays an important role in German politics, because the labor market reforms were implemented right after the introduction of the Euro and coincided with German economic growth, and because of the rapid increase of government debt in the southern countries of the Eurozone after the financial and economic crisis of 2008, Germany was led to pursue a narrative of the Eurozone crisis built upon moral hazard. This, in turn, prevented Germany from taking bold steps to rebuild EMU on a more sustainable basis. Indeed, according to Newman, the success of Germany's painful structural reforms combined with the narrative of southern profligacy were used as a role model and as a justification for the politics of austerity. As Newman puts it, for Germany 'the call for austerity and structural adjustment is simply the externalization of their own lived experience'[99].

Like Newman, Mark Vail also builds up a historical narrative of the Eurozone crisis, but this time applied to France[100]. Vail argues that similarly to what happened in other occasions in history, because France seeks political leadership in the European Union it sided with Germany's moral hazard and fiscal profligacy in order to foster its own reputation and obtain political influence in the governance of EMU. The result is a 'statist liberalism' model in which

[97] Moravcsik, Andrew. 'Preferences and Power in the European Community: A Liberal Intergovernmentalist Approach', Journal of Common Market Studies, 31(4), p. 474 (1993).
[98] Newman, Abraham. 'The Reluctant Leader: Germany's Euro Experience and the Long Shadow of Reunification', in *The Future of the Euro*. Oxford: Oxford University Press (2015)
[99] Ibidem, p. 119.
[100] Vail, Mark. 'Europe's Middle Child: France's Statist Liberalism and the Conflicted Politics of the Euro'. in *The Future of the Euro*. Oxford: Oxford University Press. (2015)

France embraces both statist and liberal ideas of the economy which, in turn, leads to inconsistent policy choices. As such, Newman argues that because of this internal inconsistence, France can neither lead nor be a joint leader with Germany – France is just the 'muddle-child', the mediator. However, as Newman argues that the sustainability of the Euro can only be achieved if Germany accepts higher inflation and consumption levels, which are more in line with France's statist vision of EMU, the incapacity of France to influence and shape the designing of EMU is seen as a rather problematic issue. Indeed, Newman concludes that as it is unlikely that Germany will change its preferences, 'it seems likely that the euro can survive only with a smaller and more economically homogenous membership'[101]

Further highlighting the domestic constrains in the governance of the Eurozone, Wade Jacoby builds upon Newman's moral hazard problem but unlike Newman, Jacoby's article does not aim at providing an historical narrative for Germany's position in the Eurozone crisis[102]. Rather, he expands on Vail's conclusions that because France cannot decisively influence the decision-making process at EU level Germany will have a prominent role in shaping the future architecture of the Euro. He distinguishes between 'the timing of politics' and 'the politics of timing'. These terms deal with the fact that although Germany is aware that is in a leading position and although it accepts that further integration is needed to secure the sustainability of EMU in the long-term, Germany also wants to pick the right time for acting. This is the case for two reasons. Firstly, to bring consensus across all governmental and non-governmental actors, and secondly, to avoid moral hazard that new institutions and new risk-sharing mechanisms may lead to across less disciplined member states. As a result, and similar to what

[101] Ibidem, p. 160.
[102] Jacoby, Wade. 'Europe's New German Problem: The Timing of Politics and the Politics of Timing'. in *The Future of the Euro*. Oxford: Oxford University Press. (2015)

Vail concluded to be the dual vision of France, Germany also has a dual vision (or rather 'timing') dilemma, what may also lead to paralyses and crisis[103].

Thus the question arises whether it is really the case that European integration has always moved forward from crisis and whether this has been the case during the (current) European sovereign debt crisis. Regarding the first question, Craig Parsons and Matthias Matthijs[104] argue that in fact there isn't historical evidence demonstrating that European integration has been taken forward through crisis. On the contrary, 'the EU was built around a forward-looking organizational project, never as a quick fix to pressing problems'[105]. In other words, Parsons and Matthijs argue that only when leaders have a 'positive vision' European integration advances. As regarding the second, they first point out that the Eurozone crisis can be considered to be different from any other crisis and that as a result, similarly to what Hopkin concluded, these are testing times for the entire European project. In particular, because they argue that despite some progress the Eurozone crisis hasn't been fixed yet because it still has a problem of institutional embeddedness.

The European sovereign debt crisis is also closely linked to current account deficits within the Eurozone. Indeed, current account imbalances in the Eurozone arrived not only because of wrong model of economic growth in southern Europe but also because, as De Garawue and Ji note, 'before the debt crisis, German banks had been willing to lend massive amounts to the rest of the Eurozone'[106]. As a result, the conflict that came about in the Eurozone due to the fact that some countries systematically have current account surpluses while others have continually registered current account deficits came about due to reckless borrowing form the

[103] Ibidem
[104] Parsons, Craig and Matthijs, Mathias. 'European Integration Past, Present, and Future: Moving Forward Through Crisis?' in *The Future of the Euro*. Oxford: Oxford University Press. (2015)
[105] Ibidem, p. 211
[106] De Grauwe, Paul and Yuemi, Ji, 'TARGET2 as a scapegoat for German errors', VOX (2012)

southern members of the Eurozone but also due to the reckless lending from the north. In other words, both had wrong economic growth models. Thus when the sovereign debt crisis came about in the Eurozone, mainly because the financial markets (or more specifically rating agencies) have exposed the weaknesses of the (southern European) growth model no alternative was left than to correct the current account deficits that the introduction of the Euro has led to[107].

However, the amount of what was lent and borrowed was just too high. Four northern European countries (Germany, Finland, Netherlands and Luxembourg) had current account claims in the Eurozone payment system (TARGET2) of just above 1 trillion euros, while countries of southern Europe, mainly Spain, Italy, Ireland, Greece and Portugal, were liable of that amount[108]. This conflict had an impact not only between public officials but also in the academic literature with scholars from the countries affected disputing the implications of the current account imbalances, as the intellectual dispute between Hans-Werner Sinn from Germany and Karl Whelan from Ireland have exemplified.

In an article published on 9 June 2011 entitle 'Professor Sinn misses the target', Karl Whelan provides a powerful counter argument to Sinn -who had argued that the current account imbalances could be seen as a secret bailout of which represented a great risk to German taxpayers- by pointing out that the claims that the Bundesbank had (and still has) were on the European Central Bank and not on the bank of Ireland or on the national central bank of any other current account deficit country[109]. That led, although two years later, in an article published in August 2013 Project Syndicate, Hans-Werner Sinn to admit (although not directly

[107] Ibidem
[108] For a discussion see Buiter, W., Rahbari, E., and Michels, J. 'Making sense of Target imbalances', VOX (2011). Whelan, Karl 'Professor Sinn misses the target', VOX (2011), Sinn (2011), De Grauwe, Paul and Yuemi, Ji (2012).
[109] Whelan (2011)

and with no intention to do so) that he has wrongly interpreted the risks to German taxpayers associated with the current account imbalances in the Eurosystem[110]. If not a U-turn, this new positioning (even if not self-declared) is at least inconsistent with Sinn's previous writings.

Sinn’s old position[111] was that Germany would incur the totality of the losses in case a Eurozone country default on its debts and decide to leave the euro. In Sinn's words: 'Should Greece, Ireland, Italy, Portugal and Spain go bankrupt and repay nothing, while the euro survives, Germany would lose $899 billion'[112]. However, Sinn's new positioning is different. In the August 2013 article Sinn says that 'these write-offs would put huge strain on the Eurosystem (the ECB and the central banks of the eurozone member states) [and] would become apparent to everyone'[113]. Further, Sinn now argues that these imbalances are 'ECB’s risky credit maneuvers' and that the Eurozone countries 'will have no choice but to bail out the ECB', calling the European Central Bank 'the true hegemon of the Eurozone'[114]. As Buiter et al, De Grauwe and Ji, and Whelan have argued in the past, Germany's TARGET2 claims are on the ECB, not on the national central bank who defaults and leaves the Eurozone. Indeed, as Buiter et al have argued, rather than Sinn's peripheral secret bailout argument, Germany's TARGET2 credits represent instead shared liabilities of the rest of the Eurozone towards Germany's claims on the ECB[115].

Despite the tensions within EMU members, a turning point in the Greek debt crisis seems to have happened in the last Eurogroup meeting on 24 May 2016 where the Eurozone finance ministers (together with the International monetary Fund) committed themselves to restructure Greek debt. Indeed, after the Tsipras government have successfully completing the first review

[110] Sinn, H-W. ‘Saving Europe’s Real Hegemon’, Project Syndicate (2013)
[111] Sinn, H-W. ‘Why Berlin Is Balking on a Bailout’, The New York Times (2012)
[112] Ibidem
[113] Sinn, H-W. ‘Saving Europe’s Real Hegemon’, Project Syndicate (2013)
[114] Ibidem
[115] Buiter et al (2011)

of the third Greek bailout (initiated in 2015) the Eurogroup agreed on a debt sustainability analysis that will grant Greece debt relief in the short, medium and long term.[116] Table 2 summarizes the Eurogroup measures.

Table 2. Debt Relief Measures for Greece (source: Eurogroup Statement on Greece, 24 May 2016)[117]	
Short Term	* Smoothening the EFSF repayment profile under the current weighted average maturity. * Use EFSF/ESM diversified funding strategy to reduce interest rate risk without incurring any additional costs for former programme countries. * Waiver of the step-up interest rate margin related to the debt buy-back tranche of the 2nd Greek programme for the year 2017.
Medium Term	* Abolish the step-up interest rate margin related to the debt buy-back tranche of the 2nd Greek programme as of 2018 * Use of 2014 SMP profits from the ESM segregated account and the restoration of the transfer of ANFA and SMP profits to Greece (as of budget year 2017) to the ESM segregated account as an ESM internal buffer to reduce future gross financing needs. * Liability management - early partial repayment of existing official loans to Greece by utilizing unused resources within the ESM programme to reduce interest rate costs and to extend maturities. Due account will be taken of exceptionally high burden of some Member States. * If necessary, some targeted EFSF reprofiling (e.g. extension of the weighted average maturities, re-profiling of the EFSF amortization as well as capping and deferral of interest payments) to the extent needed to keep GFN under the agreed benchmark in order to give comfort to the IMF and without incurring any additional costs for former programme countries or to the EFSF.
Long Term	* The Eurogroup recognises that over the exceptionally long time horizon of assessing debt sustainability there can be no forecasts, only assumptions, given the sizable degree of uncertainty over macroeconomic developments. * Nonetheless, The Eurogroup would consider the activation of the mechanism provided additional debt measures are needed to meet the GFN benchmark and would be subject to a decision by the Eurogroup confirming that Greece complies with the requirements under the SGP. Such mechanism could entail measures such as a further EFSF reprofiling and capping and deferral of interest payments.

[116116] Eurogroup. *Eurogroup statement on Greece*, 24 may 2016
[117] Eurogroup. *Eurogroup statement on Greece*, 24 may 2016

5. Discussion

As the Puerto Rican and Greek debt crisis demonstrated, divergent views in economic policy are detrimental to the success of monetary union in the long-run. But here too, insights from the theory of Optimum Currency Areas are helpful and largely ignored by McNamara's in two main points. Firstly, as Csaba (2005: 916) noted, a key criterion in OCA theory is that countries should only be admitted to monetary union if 'they are structurally fit for EMU membership'. What clearly was not the case with Greece, as well as other southern European countries. One of the reasons for this is that, and secondly, as Ishiyama (1975: 344-5) noted a long-time ago, similar preferences in economic and fiscal policies are a key OCA criterion.

Kathleen McNamara's 'Embedded Currency Areas' central idea is that the Eurozone was created without 'embedded institutions' and that the Eurozone crisis came about because of what the authors term as the 'three forgotten unions': Banking Union, Fiscal Union, and Political Union. But she also studied (though briefly) other monetary unions, including the US monetary union. Her case studies were selected to explain the usefulness of their theoretical framework (ECA theory) for fixing the design flaws of the Eurozone[118]. The US dollar for being both a national and a successful case of monetary unification – labeled as the 'Most Embedded'[119]. Her case studies were used for a comparison with the Eurozone and as case studies for testing ECA theory.[120]

[118] In fact, McNamara's ECA theory and empirical evidence not only confirms but also resembles with previous studies on Optimal Currency Area theory (OCA), such as an article published as far back as 1991 by Sala-i-Martin and Sachs entitled 'Fiscal Federalism and Optimum Currency Areas: Evidence for Europe from the United States', where they concluded that fiscal policy was essential to sustain a monetary union in the long run.

[119] The Latin Monetary Union of 1865-1927, the Krone/Scandinavian Monetary Union of 1873–1914, and the Krone/Austro-Hungarian Empire of 1892–1918 for being currency unions that have collapsed. Although the case selection seem appropriate, the major weakness of the article lies in the fact that the proposed Embedded Currency Area theory claim to go beyond OCA theory when in fact it doesn't. This is the case because the author incorporates selective (supply-side) OCA criteria and neglects the demand and political criteria of OCA theory.

[120] In the case of the Krone/Austro-Hungarian Empire of 1892–1918 were used to demonstrate that a monetary union with a centralized monetary policy and a common central bank with a decentralized fiscal policy is tenuous and is prone to collapse. This was what happened to the Krone/Austro-Hungarian Empire and this is what may

A key similarity between Puerto Rico and Greece is that emphasis is given to the need to restructure their debts. But here there is a difference between the Unites States and the European Monetary Union. Whereas in EMU debt restructuring is not possible, in the US cities have the possibility to file for bankruptcy and activate Chapter 9 of the US bankruptcy code. True, US states cannot file for bankruptcy. But their cities can. Thus, Chapter 9 functions as an indirect stabilizing mechanism for a state of the US. Had municipal debt been added up to the public debt of a US state one could argue that public finances of the US states would be more difficult to deal with as it could be the possibility of rating agencies to price the risk. Interestingly, the cities of the Commonwealth of Puerto Rico do not have access to Chapter 9. This means Puerto Rico cannot deal with unsustainable debts and puts Puerto Rico exposed to the financial markets and in need of help from the US Congress.

By contrast, in the case of the European monetary union there is no formal mechanism to deal with debt restructuring, be it at European, national, or local level. That is, unlike to what happens in the US, European cities cannot file for bankruptcy and go ahead with debt restricting because there is no legal framework to do so at the European level. Furthermore, the debt of the cities or local government in Europe are part of the national public debt and not as a separate type of debt, as it happens in the US. As such, Greece does not have the legal framework to conduct debt restructuring as the US states have. Neither has Puerto Rico, as it is not a US state.

The cases of Puerto Rico and Greece also share another factor – their growth model was unsustainable because it was not based on sound economic policies. Greece increased public spending due to the low interest rates that membership of the Euro has brought about. Puerto Rico took advantage of its triple tax exemption to increase borrowing when they were faced

happen to the Eurozone because the latter is also built in the same manner. Hence, accordingly to ECA theory the Krone/Austro-Hungarian Empire (and the Eurozone) was not sufficiently ‘Embedded’ because the core argument of ECA theory is that one currency requires a single political authority with centralized fiscal policy.

with the phasing out of the tax benefits of the island. In other words, an in-built advantage of monetary union (low interest rates) led to a moral hazard problem and contributed to the Puerto Rican and Greek debt crisis. Therefore, their national governments have a key role in the build-up and root cause of the crisis.

This validates a key Optimum Currency Area theory criterion – homogeneity of policies. That is, when countries have different policy preferences currency union may be deemed unsustainable, and even more so if the monetary union is not a fully-fledged monetary union. That is, it lacks political union. This is clear the case in EMU but interestingly this is also the case in the US monetary union in the specific case of Puerto Rico. It is clear that both Puerto Rico and Greece seem not to have a clear way out for their debt crisis because they are part of a monetary union that they do not fully control. By being small countries their bargaining power at the US and European level is reduced. In this respect, the case of Puerto Rico seems to be further constrained by the fact that the commonwealth is on an unequal foot with other US states as Puerto Rico does not statehood status and no representation or say in the decision-making process of the US monetary union[121].

In addition, both the US and European monetary unions also have flaws in their institutional design that exacerbate the Puerto Rican and Greek debt crisis. In the Eurozone, institutional innovations such as the Fiscal Compact are fundamentally transforming the governance of EMU since the Greek crisis but crucially these innovations are occurring because they were not set-up at the beginning of the Euro. As Clift and Ryner[122] argue in relation to the Fiscal Compact, 'in avoiding the nominal 3 per cent deficit target and deploying a structural balance target, [the Fiscal Compact] marks the evolution from Maastricht in terms of understanding the

[121] In fact Puerto Ricans do not even have a say on choosing the president of the United States. Indeed, Puerto Ricans who live in Puerto Rico cannot vote to elect their president.
[122] Clift, Ben and Ryner, Magnus 'Joined at the hip, but pulling apart? Franco-German relations, the Eurozone crisis and the politics of austerity' French Politics 12: 2 p136–163. (2012)

fiscal policy/growth Relationship' Indeed, there is an 'intelligent and flexible reading of the fiscal pact'[123] to be made that 'tempers anti-Keynesian bias at the heart of the SGP [for the] utilisation of a structural balance framework carves out a role for counter-cyclical fiscal policy'[124]. In other words, although the Fiscal Compact is normally defined in terms of tight fiscal discipline, in fact it can also be framed in terms of boosting domestic demand. In the case of Puerto Rico, the bill PROMESA clearly illustrates the need to elevate the debate at the political level in order to deal with the Puerto Rican crisis. But crucially, the fact that Puerto Rico non-state stauts in the US is being discussed so it could give Puerto Rican cities the right to file for bankruptcy highlights the fact that there was avoid in the US monetary union in the case of Puerto Rico. From a Mundell's Insurance principle perspective then both the US and EMU fail short in creating a common risk pool that would allow its members to adjust in times of crisis.

Nonetheless, although US policy makers (and US academics) are quite reluctant to comment on the flaws of the US monetary union, Eurozone policy makers on the contrary are quite active. Further, they seem to be aware of OCA theory and more specifically of Mundell's Insurance Principle. As the president of the European Central Bank, Mario Draghi, has put it, 'risk-sharing is thus essential to prevent recessions from leaving permanent scars and reinforcing economic divergence. A key part of the solution is to improve private risk-sharing by deepening financial integration. Indeed, the less public risk-sharing we want, the more private risk-sharing we need'[125]. In addition, several policy-makers comments and speeches highlight the need for this criterion of OCA theory. As Livio Stracca from the European Central Bank (quoting the 2012 Four Presidents Report) 'he establishment of a fiscal capacity to

123 Antonio Costa (Portuguese leader of the opposition then, prmie minister of Portugal today. Cited in Wise, P. 'Portuguese left parties near pro-euro coalition deal', Financial T, 13 Oct. (2015)
124 Clift and Ryner (2012: 152).
125 Draghi, M. 'Stability and Prosperity in Monetary Union', *European central Bank,* 2 January 2015

facilitate adjustment to economic shocks. This could take the form of an insurance-type mechanism between euro area countries to buffer large country-specific economic shocks. Such a function would ensure a form of fiscal solidarity exercised over economic cycles, improving the resilience of the euro area as a whole and reducing the financial and output costs associated with macroeconomic adjustments'[126]. The cases of Puerto Rico and Greece seem to suggest that both the US and European monetary unions lack a solid common risk-sharing mechanism. That is, an Insurance Principle – a key criterion of OCA theory.

6. Conclusion

Through the lenses of Optimum Currency Area theory, the thesis analyzed the United States and European monetary unions as well the cases of Puerto Rico, part of the US monetary union, and Greece, a member state of the Eurozone. As discussed in the theoretical framework section OCA theory has been highly criticized by contemporary scholars for not incorporating political and demand-side criteria to sustain a monetary union in the long run. However, the thesis finds that once a deeper research on the literature on OCA theory is conducted the criticisms towards this theory are unfounded. To be sure, it has not been argued here that OCA theory is a fully refined theoretical framework. Rather, it simply concludes that accusations of usefulness of OCA are misplaced and only came about due to simplification of the criteria of OCA. As the thesis demonstrated, MaCnamara's Embedded Currency Area theory (ECA) resembles that of OCA theory. The same is the case for Jones and Underhill' Optimal Financial Areas theory (OFA). In fact, their theoretical framework is part of a specific 'forgotten union' in McNamara's ECA theory, namely, the financial union. The central theme underpinning both ECA and OFA is that a common insurance mechanism is needed to sustain a monetary union in the long run. However, the thesis has found that this common insurance mechanism is spelled

[126] Livio Stracca, Fiscal union: Theoretical and empirical issues, *European central Bank*, 13 December 2012.

out in the literature on OCA theory since the publication, in 1973, of the paper that Robert Mundell presented at conference on Optimum Currency Areas in Madrid 1970. As such, the thesis concludes that ECA and OFA are in fact contributing to the refinement of OCA theory and not, as their authors claim, as a "new" theoretical framework that goes beyond Optimum Currency Area.

Mundell's Insurance Principle and OCA theory criterion of homogeneity of policies are currently, and very visible, at play in the Puerto Rican and Greek debt crisis. Indeed, the lack of an insurance principle in the US monetary union in what relates to Puerto Rico is visible in the fact that while the cities of US states have access to bankruptcy code, Puerto has not. In fact, the opposite of a common insurance principle is at play in the US. The attempt to create an oversight board that would impose further cuts in the Puerto Rican economy is testimony of that. The thesis has also found the lack of an insurance principle in the Eurozone. In fact, while in the US the lack of a common insurance mechanism can more clearly be found in the case of Puerto Rico, and Puerto Rico only, in the institutional setting of the Eurozone these wide spread. Put differently, the Eurozone was created without a common insurance mechanism that could facilitate adjustment in economic downturns. Despite this, the institutional framework of the Eurozone has been changing since the outbreak of the crisis and policy-makers in the Eurozone seem to be aware of the need for a common insurance mechanism.

However, as it was argued in the thesis domestic preferences in Europe were a key part of the root causes of the crisis and are still limiting the way out of it. The same applies to Puerto Rico. In short, both Puerto Rico and Greece pursued policies that could undermine the monetary union as whole. Thus, this has confirmed OCA theorists that claimed that homogeneity of policies is a key ingredient for a successful monetary union. Nonetheless, Puerto Rico and

Greece's debt crisis has been made worse by the lack of a common insurance instrument, what also confirmed Mundell's Insurance Principle.

Nonetheless, there is still further research to be done in OCA theory. For instance, there is literature that suggests the need to build synergies between OCA and Neofunctionalism[127]. Another would be to conduct research on the US states as whole through the lenses of OCA theory. And yet another suggestion would be to analyze all the new institutional setting of the Eurozone also form an OCA theory perspective.

[127] Chey stated that 'this argument of spillover effects in the integration process has strong analytic similarities with the endogenous OCA theory' (2009: 1701). More recently Srisorn And Willet (2009), and Willet at al (2010) argued in the same line and suggest the 'cross-fertilisation between the literature on endogenous OCA analysis and the rich literature on spillovers in the neofunctionalist literature on regional integration' (p. 870). This fusion is interesting because it combines 'the political science literature on neofunctionalist integration theory and its emphasis on spillovers with the economic literature on endogenous optimal currency area' (Srisorn And Willet 2009: 1). If one take Ernst Haas spillovers effects to be valid, and Mundell seems to suggest this for as he put it: 'the process of monetary union will itself be a catalyst for closer political union' (cited in Ryner 2012: 659). Thus, Ryner is probably right in pointing out to the 'Haasian spillover' (p. 659) in Mundell's thought.

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