National Fiscal Policy and Local Government During the Economic Crisis[1]

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Preface

Funded by the German Marshall Fund of the United States, this report examines how national government policy, and particularly national grant systems, affected local governments during the "Great Recession" and its aftermath, which in many countries consisted of a period of fiscal consolidation designed to cope with a debt/deficit crisis. We term these two events occurring over a four year period from late 2007 through 2011 "the economic crisis." Our particular concerns are national government policy towards local governments and whether local government fiscal responses were counter- or pro-cyclical during the period of slow or negative economic growth. In other words, did national government policy promote additional local government spending during the recession (a counter-cyclical policy), or did it encourage reduced subnational government spending (a pro-cyclical policy)? We also examine whether local government fiscal policy was consistent with stated national government policy, and whether and how the imposition of fiscal austerity policy and fiscal consolidation programs at the national level affected local government spending. We conclude that

- Local government fiscal behavior is counter-cyclical in most countries during a recession, though in many cases less so than is national government fiscal behavior.
- Most national governments do attempt to affect local fiscal behavior during periods of recession and/or fiscal consolidation efforts. They do so through increasing grants to subnational governments during recessions and reducing them during fiscal consolidation. They also do so by strengthening fiscal rules and the enforcement of those rules during consolidation periods.
- In general, local fiscal behavior does support the goals of national fiscal policy.
- During recessionary periods national government behavior generally mitigates the effect of local government own-source revenue declines to some extent through increased grants. However, during periods of slow economic growth, when national governments pursue fiscal consolidation and austerity, grant reductions expose local governments to the full force of own-source revenue declines.

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The first part of the report provides information on all OECD countries for which appropriate data are available, while the second part focuses on six countries for which we present additional data and more intensive analysis (Germany, Italy, Poland, Spain, the United Kingdom, and the United States)[2].

I Introduction

According to conventionally accepted economic theory, management of fiscal policy in a multi-tiered system of governments is appropriately the function of the national government (Musgrave, 1959). This is the case with both stabilization policy (efforts to respond to economic cycles) and with fiscal consolidation policy (efforts to manage a country's budget deficits and debt[3]). The conventionally prescribed fiscal policy approach to economic cycles is that government policy should be counter-cyclical rather than pro-cyclical in that it should push against rather than re-enforce economic trends. For example, Clemens and Miran (2011, p. 2) summarize the conventional view when they state, "It is difficult to rationalize pro-cyclical spending… as serving any welfare-enhancing purpose." Thus, fiscal policy should be expansionary (counter-cyclical) during downturns and the opposite during upturns. Counter-cyclical economic policy during a recession consists of efforts to increase demand for goods and services through some combination of increased public spending financed through borrowing and tax reductions that leave consumers with more effective buying power.

Why does this matter? If a national government does not pursue a counter-cyclical economic policy during a recession, this implies continued slow or negative economic growth, persistent high levels of unemployment, an increase in the number of low-income households, and more people in poverty. For subnational governments (SNGs), this implies longer periods of fiscal stress as revenues reduced by the downturn are insufficient to finance needed services.

However, while national governments can take direct actions to affect these functions at the national level, subnational governments [4](state or their equivalent and/or local governments) at the intermediate and local levels also engage in activity that can affect both a nation's

[2] For each of these six countries there is also a separately published profile designed to provide the reader with information on the local and intergovernmental context structural and fiscal context.

[3] OECD (2012) defines fiscal consolidation as, "concrete policies aimed at reducing government deficits and debt accumulation."

[4] Throughout this paper, we refer to subnational governments to include both intermediate (states or their equivalents where they exist such as provinces, lander, etc) and local governments. While the paper's focus is on *local* governments, we note that the fiscal behavior of intermediate governments raises the same set of questions with respect to cyclical policy as we address to local governments. In addition, in most countries it is impossible to sort out national government grants to intermediate as opposed to local governments, so discussion of the effects of national government policies and grant behavior often is directed to all subnational governments rather than solely to local governments.

stabilization efforts and its debt. As Blochliger et al. (2010: 18) note, "Sub-central governments (in the OECD) represent 15% of GDP, 22% of public revenues, and are responsible for about 66% of public investment on average… Given sub-central governments' weight in the economy, their decisions will have a great impact on the chances of success of any recovery plan." However, Rodden and Wibbels (2010: 38) observe that there is relatively little research on the cyclical behavior of subnational governments and characterize it as "a large hole in the literature."

In this paper we address a set of concerns related to the intersection of national and local fiscal policies for OECD Countries[5].

- Did national governments attempt to affect local fiscal behavior during periods of recession and/or fiscal consolidation efforts, and, if so, through what means?
- What was the effect on local government of national policies to cope with recession and/or fiscal consolidation?
- How did the recession and economic crisis affect local government fiscal conditions?
- How did local government fiscal behavior respond to the recession and economic crisis?
- Was local fiscal behavior counter-cyclical during the recession?
- To what extent did local fiscal behavior support the goals of national fiscal policy?

There are some elements of fiscal systems that naturally have a cyclical effect, i.e., they are built into the design of existing programs. Examples of automatic counter-cyclical policies are unemployment benefits and other welfare or income support benefits which, in the aggregate amount, increase automatically as more individuals become unemployed or qualify for means-tested benefits. An example of an automatic *pro-cyclical* response is subnational government reduction in tax revenues resulting from economic downturns, which, if combined with a prohibition or limits on deficit spending, results in subnational expenditure reductions.

However, pursuit of a desired cyclical response in the face of a major economic shock usually requires explicit changes in existing policy (discretionary as opposed to automatic responses). Discretionary counter-cyclical policies are policy actions taken to stimulate the economy during economic downturns such as tax reductions, increases in capital spending or increases in grants to subnational governments. Discretionary pro-cyclical policy would include reduction in national government grants to subnational governments during a downturn if the national government seeks to protect its own budget in the face of declining revenues. Fiscal rules already in place (such as limitations on national or sub-national government taxes and/or

[5] OECD membership currently consists of 34 countries: Australia, Austria, Belgium, Canada, Chile, The Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Korea, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, The Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, The United Kingdom, and The United States. However, since data at the local level are generally not available in the OECD database for Australia, Chile, Japan, New Zealand, and Turkey, these countries are excluded from our analysis, leaving 29 of the OECD countries in our data set.

expenditures) may serve as automatic pro-cyclical mechanisms that limit even automatic spending increases (Baunsgaard and Symansky, 2009).

At the subnational level automatic policy features (or at least features that occur outside of the discretion of subnational governments) are likely to be more pro-cyclical than is the case at the national level (Stehn and Fedelino, 2009; Rodden and Wibbels, 2010; Ter-Minassian and Fedelino, 2010; Blochliger et al., 2010; Clemans and Miran, 2011). Empirical evidence confirms the pro-cyclical fiscal policy of subnational governments (Wibbels and Rodden, 2004). Though sub-national government pro-cyclicality tendencies vary from country to country as do their causes, the factors contributing to greater pro-cyclicality at the subnational level include:

- Subnational government own-source revenue in some countries may be more volatile than is the case at the national level, thus resulting in higher percentage reductions in subnational revenue as compared to national governments during economic downturns (see Blochliger et al., 2010: 10).
- If national governments respond to downturns through reduction in grants to subnational governments as a means of protecting their own budgets, state and local intergovernmental revenue (and consequently expenditures) will be reduced.
- Subnational governments with revenue consisting at least partially on tax sharing schemes from national governments will experience automatic reductions in revenue from these schemes during cyclical downturns and may respond through pro-cyclical actions such as cutting expenditures and/or raising local taxes.
- Fiscal limitations on sub-national government taxes and spending and restrictions on subnational government borrowing and deficit spending (particularly balanced budget requirements) may prevent sub-national counter-cyclical responses.
- Local governments with revenues consisting partially of grants and tax-sharing schemes from intermediate level (state, provincial, etc.) governments are particularly susceptible to revenue reductions as budgets at these intermediate levels tighten.

The greater pro-cyclicality of subnational governments creates the potential for national and sub-national government cyclical policy to be at odds with each other absent explicit efforts to bring them into alignment. As Ter-Minassian and Fedelino note (2010: 608), "The impact of counter-cyclical policies of CGs (central governments) can be significantly offset by pro-cyclical policies of SNGs (subnational governments)."

The clash between national government policy and subnational government may also occur when national governments turn to austerity (fiscal consolidation) policies, whether in response to specific EU requirements as is the case for European Union member countries (the European Union's Stability and Growth Pact sets a target that a member country's budget deficit not exceed 3% of GDP and its debt not exceed 60% of GDP), or by choice in response to borrowing costs on international markets or ideology. These policies are directed towards reducing total government debt through spending and borrowing cutbacks not only at the national but at the subnational level. As Pisauro (2001:3) explains:

> "The problem of fiscal coordination between different levels of government has become critical in the EU… The EMU fiscal targets, while addressing the coordination problem at the level of the relationship among countries, leave it unresolved within national governments. In fact, the EMU Stability and Growth Pact sets limits to the level of deficit (and debt) with reference to the general government (which includes lower tier governments). However, in each member country, regardless of the degree of fiscal decentralization, the central government has the sole responsibility for formulating the yearly stability and growth plans, for their implementation and for remedial action in cases where any sanctions are to be applied. In many countries, subnational governments enjoy enough fiscal autonomy to determine with their actions whether the EU rule is respected, but they are not accountable for the final outcome."

In the following section we examine how the great recession and the ensuing economic crisis affected the economy of OECD countries and whether countries adopted counter-cyclical policies as a response. We are particularly interested in how national government policies affected subnational governments through changes in intergovernmental grants and other means and whether local government fiscal behavior supported national government policy. In Section III we turn to a more intensive examination of the same set of questions in six specific countries: Germany, Italy, Poland, Spain, the United Kingdom, and the United States. We also focus on specific changes in the grant system and on national and local government fiscal behavior in these six countries.

II The Economic Crisis and National Government Policy

Although timing differed among countries, beginning in late 2007 or 2008 most developed western economies entered a period of economic slowdown and actual negative real economic growth (Cameron, 2012), characterized by declines in output and increases in unemployment. Most countries responded with counter-cyclical policies designed to reverse slow or declining growth, often including efforts to stimulate spending of subnational governments. Later many countries either chose or were required by external institutions (the IMF, the European Union) to engage in austerity practices as part of fiscal consolidation efforts to reduce their levels of debt and deficits and enable them to borrow at reasonable rates in international markets. These fiscal consolidation efforts often reversed prior counter-cyclical policies undertaken at the national level. We term the entire period from late 2007 through 2011, encompassing both the recession and austerity measures in response to sovereign debt concerns, as *the economic crisis.*

In this section we trace national government fiscal policy as countries first experienced a slowdown in their economies and then, in many cases, the real or perceived need to engage in fiscal consolidation efforts. In the following section we will examine whether local (and, more generally, subnational) governments engaged in counter-cyclical or pro-cyclical policy and whether their actions were consistent with or worked against national policy.[6]

The Economic Crisis: For most countries the economic slowdown began in 2008. While OECD countries had averaged an annual rate of GDP real output growth of 3.4% from 2000-2007, they grew by only 0.9% from 2007-2008. Between 2008-2009 growth actually declined by 3.7%. Growth rates did not begin to increase until 2010. From 2007-2011 the average growth rates for OECD countries was only 0.5% (the median growth rate was 0.8%), and 10 countries had negative growth rates during that period (see appendix table 1). For OECD countries as a whole, the unemployment rate rose from 5.6% in 2007 to 8.1% in 2009 and remained at a high level (8.0%) in 2011. In many cases these prolonged low or negative economic growth and high unemployment rates were at least partially a result of fiscal consolidation policies designed to bring the country's deficit and debt levels under control.

If we consider a real decline in national government expenditures from 2010-2011 as evidence of explicit adoption of austerity policy (i.e., in an effort to control government deficits), then 18 of the OECD countries engaged in austerity policy. The average OECD country had a real decline in national government expenditure of 2.4%, while the decline in the U.S. was 1.4% (see appendix Table 2).

National Government Policies During the Economic Crisis: Beginning in 2008, most countries responded to the recession by putting in place stimulus policies designed to increase output (OECD, 2009; Dewan and Ettlinger, 2009). OECD (2009: 109) estimates that on average stimulus packages amounted to approximately 2.5% of GDP from 2008-2010. While stimulus policies can consist of either tax cuts or expenditure increases (both of which are manifested in increases in borrowing and higher deficits[7]), most OECD countries gave priority to tax cuts over spending increases (OECD, 2012: 111), although the United States was an exception.

Beginning in around 2010, most OECD countries, driven by concern over their sovereign debt and particularly by the crisis in Greece, moved more aggressively to impose austerity policies, in some cases reversing prior stimulus efforts (OECD, 2011, 2012; Vammalle and Hulbert, 2013). Indeed Blochliger (2013) finds that general government deficits rose from 1.3% of GDP in 2007 to 8.2% in 2009 as borrowing increased to finance fiscal stimulus measures; deficits then fell to 6.5% of GDP in 20ll as a result of fiscal consolidation efforts. Unlike the earlier stimulus efforts, fiscal consolidation policy focused primarily on spending reductions and less on tax increases.

<u>National Government Policies towards Subnational Government During the Economic Crisis</u>.

[6] Note: All data are from OECD's Fiscal Decentralisation Database unless otherwise noted. Some fiscal data for United States local governments are from the U.S. Census of Government Finance. Currency units are in real 2007 values (i.e., adjusted for inflation) rather than nominal terms unless otherwise noted

[7] In the OECD the major exceptions were Hungary, Iceland, and Ireland, all of which reduced deficits during the initial period (OECD, 2009)

While the national government in all of the OECD countries is charged with managing the national economy, it constitutes only a portion (though the largest one) of the public sector. National macro-economic policies frequently attempt to affect subnational level fiscal behavior through discretionary changes in grant systems, tax sharing, and fiscal rules.

A portion of increases in national government expenditure resulted from increases in grants to subnational governments and discretionary changes in the mechanism through which national government taxes were shared with subnational governments. Local governments in all developed countries depend, to a varying extent, on grants from higher levels of government. In aggregate, this grants may be counter-cyclical (i.e., they may increase when local government revenues decline during an economic downturn), they may be pro-cyclical (they may decline during a downturn, thereby re-enforcing the fiscal problems of local governments by further reducing their revenues), or they may be neutral in their effect. This cyclicality not only affects the ability of local governments to finance their services during a recession (particularly since service needs are likely to increase); it also may affect national fiscal policy. If local (and state or intermediate) governments are forced to reduce expenditures and/or raise taxes at a time when national fiscal policy is aimed at economic stimulation, cutbacks in subnational government spending are likely to frustrate fiscal stimulus.

Grant systems vary across countries in the extent to which they rely on general grants to local governments (grants that can be used for any purpose) and conditional grants (grants that must be used for a specific purpose). If categorical (conditional) grants are increased (or reduced), sectoral effects may result from changes in grant funding for the various sectors (e.g., housing, education, environmental protection, transportation, etc.) for which categorical grants are available. Changes in general grants (or tax sharing) in principle allow local governments to change spending according to its own perceived priorities and needs.

In addition, some countries engage in tax sharing arrangements in which a specific portion of a national (or regional) government tax is set aside for sharing with local governments, usually on a point of origin basis (i.e., a specific portion of a national tax collected in a subnational government area is returned to that government). Tax sharing is akin to a general purpose grant in that the proceeds can be used by the recipient government for any purpose. Discretionary changes by the national government in the percentage of a national tax that is shared or in the type of national tax that is shared can affect local government fiscal condition and behavior. During times of economic downturn tax sharing arrangements will have an automatic pro-cyclical impact on subnational government behavior, since the lower tax receipts for most taxes at the national level will translate into a lower amount of tax revenue shared with subnational governments.

Blochliger et al. (2010: 21) state that in most OECD countries grants to subnational governments comprised a large percentage of national stimulus spending. Furthermore, they note that most of these grants were earmarked for specific (usually public investment[8]) purposes rather than for general support. From 2007-2009, national grants to subnational governments in OECD countries increased in 25 of the 29 countries in our data set. The average increase in grants from the national government to subnational governments for all OECD countries (including those in which grants decreased) was 10.6% (author's calculations from OECD database, see Appendix table 3).

However, as austerity policy set in national government policies towards subnational governments changed. National austerity policy often required subnational governments to participate in fiscal consolidation efforts. As OECD noted (2011: 94), "This can range from a simple reduction in central government transfers to lower levels of government (France, the United Kingdom) to requiring SNGs to reduce their deficits (Germany, Portugal) or even require SNGs to cut expenditure by given percentages." The shift from stimulus to austerity programs was sharp in many countries. In the European Union countries intergovernmental transfers fell by 1% on average from 2009-10 after having risen by 6.4% in the previous year, and more than half of the EU countries cut transfers compared to the previous year (Vammalle et al., 2011: 28). In the OECD 11 of the 29 countries for which data are available actually reduced grants in real terms between 2009- 2010 and the average change in national grants from 2009-2011 was 0.1% (see appendix table 3). An OECD Center for Tax Policy and Administration working paper (OECDb, 2012, p. 14) noted that in Finland, France, Greece, Hungary, Ireland, Italy, Portugal, Sweden, and the United Kingdom intergovernmental transfers were reduced as result of CG (central government) consolidation plans." Although not covered in the OECD survey, the same reduction in grants occurred in the United States.

During the recession several countries also relaxed their fiscal rules on subnational governments, allowing them to run higher deficits than previously permitted (Vammalle et al., 2011: 23). However, since 2010 fiscal rules, or at least the *enforcement* of these rules, have been tightened as part of some countries' fiscal consolidation efforts (OECDb, 2012). In some countries deficit targets (Austria, Belgium, Czech Republic, Poland, Portugal, Slovenia, Spain, and Germany) and/or expenditure limits (Belgium, Greece, the Slovak Republic, the United Kingdom) were placed or tightened on subnational governments as a part of fiscal consolidation efforts (OECDb, 2012; 15).

<u>Effect of national policies on local fiscal conditions</u>

What effect did national government fiscal policy during the crisis have on local government revenue? From 2007-2009 local government real revenue from national government grants in OECD countries increased by an average of 12.0% per country, and by more than 5.9% each year. However, local government grants fell drastically beginning in 2009 with the onset of austerity policy adopted by many countries. Grants increased by an average 1.3% from 2009-

[8] See Allain-Dupre, 2011: 13-14) for examples of national government measures adopted to support subnational public investment as part of fiscal stimulus efforts.

2010, nearly a five percentage point decline from the previous year. From 2010-2011 real grant received by local governments declined slightly from the prior year by -0.1%. Over the entire 2009-2011 period, national grants to local governments increased by an average of only 0.6%, and 11 of the 25 countries for which data are available for that period actually experienced real declines in grant revenue (see appendix table 4).

Paradoxically, tax reductions in national taxes as part of stimulus programs also served to reduce tax revenue to sub-national governments that received revenues through tax sharing arrangements. Increased national taxes as austerity measures had the opposite effect.

Local Government Fiscal Condition.

The recession had substantial impacts on local fiscal conditions, the severity of which varied by the type of local taxes levied and the specific services for which local governments were responsible. Local government responsibility for services differs substantially among OECD countries. For example, in the United States local governments are responsible for nearly 53% of all direct government spending on public order and safety services, while in Italy they are responsible for only 12% and in Greece only slightly more than 1%. In the United Kingdom local governments spend more than 67% of all public education expenditures, while in Spain they spend only slightly more than 5%. Social services and protection expenditure, which is likely to be particularly affected during economic downturns, varies substantially as well: local governments in the U.K. are responsible for nearly 23% of social protection spending, while those in Spain are responsible for 4%. Denmark is the major outlier with local governments accounting for more than 80% of direct general spending on social protection (see appendix table 8 for data on local government spending as a percentage of all government direct spending for major service categories).

Reductions in personal income resulted in immediate revenue reductions in local government systems with local income tax (or tax sharing based on personal income). Reduction in consumer demand and business output resulted in lower levels of consumer and business-based output revenues. Declines in the asset value of properties, particularly in those countries that suffered dramatic declines in property values, reduced property taxes, though usually with some delay as changes in assessment values lagged. Ter-Minassian and Fedelino (2010) also suggest that declines in tax compliance as a result of financial pressure on taxpayers also reduced local revenues. Moreover, to the extent local governments are responsible for financing a portion or all of social services, the need for which increases during a recession, local governments faced increased pressure on the expenditure side of their budgets.

On the other hand, these pressures on local fiscal conditions were initially mitigated in 2008 and 2009 through increases in grants from national levels of government as a result of stimulus packages. However, in most cases (Japan and the Scandinavian cases were exceptions, see Ter-Minassian and Fedelino, 2010) these grants were earmarked for specific purposes rather than made available for general support. While earmarked funds are generally agreed to be somewhat fungible (i.e., recipient governments can substitute some portion of them for existing local spending), earmarked funds limit local government fiscal responsibility and do not completely make up for the same amount of lost local general purpose revenue. Later declines in grant revenue as part of austerity packages clearly served to increase revenue pressure on local governments.

The consequences of these fiscal pressures are manifested in increases in subnational budget deficits as a percentage of revenues. Foremny and Von Hagen (2012) calculate that for OECD countries the average budget deficit as a percentage of subnational government revenue was 1.2% annually from 1995 to 2007 for countries with federal systems and 0.5% for unitary countries. During the 2008-2010 recession, these average deficits increased to 5.1% of subnational revenues for federal countries and 2.5% for countries with unitary systems of government. These increases in deficits were a product both of fiscal pressure as expenditures outran revenues and, in some cases, intentional efforts to provide local fiscal stimulus.

Local Government Fiscal Policy

Given the effect of the recession and national government action on local fiscal condition, what actions and policies did local governments pursue? Changes in local own-source revenue result from both local policy changes (increases or decreases in tax rates and changes in tax bases as well as changes in fees) and from changes in tax bases brought about by changing economic conditions[9]. Unfortunately, the data do not permit systematically sorting out changes in own-source revenue brought about solely through local policy change.

During the initial two year stimulus period (from 2007-2009), of the 29 OECD countries for which data are available, local government own-source revenue increased in 19 countries and declined in real terms in 10 (see appendix table 5). The average for all countries was a decline of 0.1% during this period. It is clear from OECD surveys that in some cases declines in own-source revenue during the recession were a result of discretionary local action. An OECD survey (2010) found that, of countries responding, local governments in Austria, Belgium, Canada, Germany, Japan, Norway, Portugal, Spain, and Switzerland decreased tax rates during the 2007-2009 recessionary period, perhaps taking advantage of the additional grant money received from the national government in most of these countries.

Local government real own-source revenue declined in the average OECD country by 0.4% from 2009-2010, but then increased by 2.7% from 2010-2011, presumably as a result of some economic recovery and thus automatic growth in local tax bases. For the 26 OECD countries for

[9] Since the OECD database includes tax sharing revenue as a component of own-source revenue, changes in the tax rate or base on which the tax is levied - e.g., a national personal income tax or VAT- affect own-source revenue totals, for example, in a country in which local governments automatically receive 15% of the national income tax, a recession induced decline in personal income would automatically translate into less revenue received by local governments

which data are available through 2011, own-source revenue declined by 1.2% from 2007-2009 and then increased by 1.7% from 2009-2011 (see appendix table 5). A 2012 OECD survey indicated that this was due at least partially to local government policy action. During the 2009-2011 austerity period, Australia, Belgium, Canada, the Czech Republic, Denmark, Estonia, Finland, Greece, Hungary, Italy, Poland, Spain, and the United Kingdom all increased the tax rate (or broadened the tax base) and/or increased fees (Austria, Greece, England) as a means of increasing local revenue. The increase in own-source revenue due to discretionary tax policy changes in these countries suggests efforts to limit service reductions in the face of reduced national government grants and increased service needs as a result of rising unemployment.

On the local government expenditure side, changes result both from local discretionary action (i.e., policy change) and from reductions in revenue, including grants, over which local governments have no control. For the 25 OECD countries for which data are available through 2011, real local government expenditure in OECD countries increased by 7.8% during the initial recessionary period of 2007-2009. Increases occurred in all countries except Hungary, Iceland, and Ireland. The increases were made possible by increases in grants received from higher levels of government (12.2% over the period) and increased local government borrowing.

However, local government real expenditures for these countries declined by 2.3% from 2009-2011 as national government austerity programs took effect. Of the 26 countries, local governments in 17 cut real expenditures during that period. (See appendix table 6)

Changes in local government debt result from both policy decisions to increase public investment through borrowing (net of current debt retired) and the need to make up any shortfall in revenues required to fund operating expenditures. Real local government debt in OECD countries for which data are available increased rapidly during the first two years of the recession. If we exclude four countries (Iceland, Korea, Mexico, and Slovenia), all of which had debt increases in excess of 50%, the average increase in real debt from 2007 to 2009 was 12.6%, while the median, a better indicator in this case, was 10.5%. For the 23 OECD countries for which data are available through 2011, median local government debt increased by 10.0% from 2007-2009, and increased by 7.6% (see appendix table 7).

Was Local Government Fiscal Policy Counter-cyclical?

During a recession, counter-cyclical policy is desirable since it puts money into the economy through additional spending and borrowing and takes less out through taxes. However, since local governments have some degree of local autonomy in all OECD countries, it is possible that local fiscal behavior might frustrate rather than support national economic policy. Counter-cyclical local government fiscal behavior during the long recession, whether through automatic changes or discretionary policy changes, would thus have meant some combination of increased local government expenditures, reduced local government taxes and fees and increases in budget deficits and net debt. During periods of rapid economic growth, counter-cyclical policy would be in the opposing direction of each of the above, in an attempt to dampen growth and to reduce inflationary pressures. Pro-cyclical policy, on the other hand, reinforces economic growth trends in an economic downturn by reducing expenditure, increasing taxes, and/or reducing borrowing during a recession and increasing expenditure. During an economic expansion, pro-cyclical policy would increase expenditures, reduce taxes, and/or increase borrowing.

Cyclicality of local government expenditures: A counter-cyclical local government expenditure policy during a national downturn would imply increases in local government expenditures. With the exception of Hungary, Iceland, and Ireland, local government in all of the OECD countries for which data are available increased real expenditure from 2007-2009 (see appendix table 6). All but three of these countries had annual increases in local government expenditures that exceeded the average annual increase from 2000-2007, a clear indication of counter-cyclical expenditure behavior.

Indeed, local government expenditure policy was, on average, nearly as counter-cyclical as national government policy during the 2007-2009 period. For OECD countries for which data are available, local government expenditures increased by an average of 8.6% during that period compared to an average of 10.3% for national government expenditures. Local government expenditure grew at a greater rate than national government expenditure in 16 of the 29 countries for which data are available.

However, even though most OECD countries continued to experience slow national economic growth during the 2009-2011 period (an average growth rate of 2.5% in 2010 and 2011 compared to an average annual rate of 3.4% from 2000-2007) local government expenditure policy in many turned decisively pro-cyclical during that period. During that period, characterized by national government austerity policy, local government spending in the 25 countries for which data are available declined by an average of 2.3%, while national government expenditures in those countries declined by 0.6%. Of the OECD countries for which data are available, 17 had declines in local government expenditure, and local government expenditures changes were lower than national government changes in 14 of the 25 countries.

Cyclicality of local government revenues: Counter-cyclical local government revenue behavior implies lower own-source revenue collections during an economic downturn, thus leaving more money available to taxpayers to spend and thereby cushioning the impact of the recession. Own-source revenue reductions, of course, would be expected to occur automatically as property values and personal and business income, the main sources of own-source local tax revenues in OECD countries, fall. Discretionary local tax policy would be counter-cyclical to the extent taxes were further reduced through, for example, decreases in tax rates, or it could be pro-cyclical to the extent local governments increased taxes in an effort to balance local budgets. Unfortunately, it is not possible to separate out local own-source revenue changes resulting from discretionary action from gross changes in revenue. The discussion below therefore focuses on local own-source revenue changes as a whole rather than solely those due to policy, although in some cases it is possible to infer that discretionary policy has had an impact.

From 2000-2007, the average annual increase in own-source local revenues for OECD countries was 4.1%. During the initial 2007-2009 period local government own-source revenue in the average OECD country for which data are available did not change, suggesting no cyclical impact, but a drastic decline from the major annual increases in prior years. However, since changes in property values and thus property taxed-based revenue frequently lag economic downturns, a focus on the last year of that period might be more instructive. In the one year period from 2008-2009, local government own-source revenue in the average OECD country declined by 1.1%, implying a slight counter-cyclical effect. It is possible to infer that countries with increases in real own-source revenue during this period of national economic decline probably engaged in discretionary efforts to increase taxes in order to continue to support service expenditures and/or to meet balanced budget requirements. Of the 29 OECD countries in our data set, local government systems in 11 countries recorded increases of greater than 0.5% in real own-source revenues. Several of these – Belgium, Canada, Greece, Mexico, and Norway – had increases in excess of 5%. Several countries, on the other hand, also had substantial reductions in real revenues, indicating either extremely severe reductions in the bases against which taxes are levied or discretionary (and counter-cyclical) tax reductions. Of the 29 countries, local government systems in 10 countries[10] had (counter-cyclical) reductions in local government own-source real revenues of more than 4%; five of these[11] had reductions of greater than 5% (see appendix table 5).

Despite the continuation of slow growth, local government revenue behavior turned pro-cyclical from 2009-2011, especially in those countries where national fiscal consolidation efforts were imposed on the local government sector. Real local government own-source revenue increased by 1.7% from 2009-2011 for the 26 OECD countries for which data are available compared to a decline of 1.2% for the same countries from 2007-2009. Of the 26 countries, local government systems in 19 had real own-source revenue increases from 2009-2011, and six of these[12] had increases of more than 5%. Only Greece, Iceland, Norway, and the United Kingdom continued to have major real declines in local own-source revenues. In the United States, own-source revenues fell by 1.6% over the two year period.

Cyclicality of local government debt: Counter-cyclical policy as it relates to local government debt during an economic turndown implies increases in debt above previous levels. Borrowing to finance investment project puts money into the economy now to be repaid by local government later. Local government increases in debt may also be due to borrowing to cover deficits in general fund or operating budgets (even in those countries where there are requirements for local governments to balance operating budgets, this generally applies to

[10] Estonia, Germany, Iceland, Ireland, Italy, Korea, Poland, Portugal, The Slovak Republic, and Spain.
[11] Estonia, Germany, Iceland, Ireland, and the Slovak Republic.
[12] Germany, Hungary, Israel, Italy, Poland, The Slovak Republic, and Slovenia.

budgets submitted at the beginning of a fiscal year rather than actual budget balances as they develop during the year). Local budget deficits, whether planned or not, are counter-cyclical during a recession.

During the 2007-2009 period local government real debt increased for the 25 OECD countries in our data set excluding Iceland, Korea, Mexico, and Slovenia, all of which were extreme outliers, increased by an annual average of 5.2% (4.5% from 2007-2008 and 7.7% from 2008-2009); this implies a strong counter-cyclical effect. Real local debt increased in all OECD countries where data are available with the exception of Belgium and Israel.

Since the primary purpose of national fiscal consolidation policy is to reduce deficits and debt, one would expect that those countries that adopted such a policy should also see declines – or at least declines in the rate of increase – in local government debt. Overall local government debt for all OECD countries for which data are available from 2009-2011 increased by 11.0%, a decrease in the rate of increase from the 13.3% increase for these same countries from 2007-2009. Clearly, however, despite this decline in the rate of debt increase, local government debt remained strongly counter-cyclical during this period.

Cyclicality of local government policy. Using the above data we classify local government systems as mostly counter-cyclical or mostly pro-cyclical with respect to the recession or economic slowdown in the first period of our study from 2007-2009 (see appendix A for description of classification criteria). From 2007-2009, local government systems in18 of the OECD countries engaged in counter-cyclical or mostly counter-cyclical fiscal behavior, while none engaged in pro-cyclical behavior. Classifying local government fiscal behavior as counter- or pro-cyclical during the 2009-2011 period is more complicated, since what is counter-cyclical and what is pro-cyclical behavior will vary according to whether the national economy was still in a growth slowdown period or whether it had recovered to at least its prior growth path. Focusing only on those 14 countries whose growth from 2009-2011 was still at least 0.5 percentage points below its annual average from 2000-2007[13], local government systems in only four (Norway, the Netherlands, Luxembourg, and the United States) engaged in counter-cyclical behavior during that time (countercyclical behavior would have consisted of efforts to expand the economy through additional spending and debt and/or reductions in tax receipts).

III. CASE STUDIES OF SIX COUNTRIES

We now turn to a more intensive examination of national governments and their local government systems during the economic crisis. The six countries are Germany, Italy, Poland, Spain, The United Kingdom (England), and the United States. The countries were selected after

[13] Czech Republic, Denmark, Greece, Italy, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Slovak Republic, Slovenia, Spain, United Kingdom, and United States.

discussion with the German Marshall Fund on the basis of their priorities as well as on the basis of data availability for more intensive analysis.

Background

We begin with a brief comparative background for the six countries and their local government systems[14]. Within these six countries local government systems tend to differ with regards to five key characteristics: the structure of local governments within the intergovernmental system and particularly whether there is an intermediate level of government (i.e. state, provincial or regional) with important functions between the local government system and the national government; the importance of the local government system relative to other levels of government; the degree of local autonomy or dependence the local government system possesses; the range of specific functions and services provided by the local government system, and the units that comprise the local government system and their relationship to each other. We briefly consider each of these for the six countries.

Existence of intermediate levels of government: Germany and the United States are explicitly federal systems with strong intermediary governments (lander and states) between local government and the federal government. While Spain and Italy are nominally unitary systems of government, each of them – and Spain in particular – has a regional level of government (autonomous communities in Spain and regions in Italy) that possesses important powers. By contrast, Poland and the United Kingdom are unitary systems without an important level of intermediate government.

Importance of local government in country: Local government varies dramatically in the importance of its role relative to other governmental levels across the OECD countries. We describe the importance of local government through use of two measures: local government tax revenue as a percentage of tax revenue raised by all levels of government (national, state, and local in federal systems; national and local in unitary systems) and local government direct general expenditure as a percentage of all levels of government direct general expenditure, excluding defense expenditures (direct general expenditure excludes grants provided to another level of government). Italy and the United States are both in the group of countries with high local government importance, while Germany, Poland, Spain, and the United Kingdom are in the middle group with average local government importance.

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[14] Note: All data for Germany, Italy, Poland, and Spain are from OECD's Fiscal Decentralisation Database unless otherwise noted. Fiscal data for the United Kingdom as a whole are also from the OECD database, while fiscal data for England are from Local Government Financial Statistics England series. Fiscal data for United States local governments are from the U.S. Census of Government Finance. Currency units are in real 2007 values (i.e., adjusted for inflation) rather than nominal terms unless otherwise noted.

Local Autonomy and fiscal dependence. A country's local government system has local autonomy if it has a substantial amount of resources available that can be used in any manner it wishes, i.e., subject to local government discretion. In general, revenue raised from local sources (taxes and fees and charges) is available for the local government to use for any legal purpose. Grant revenue available from other levels of government is constrained either by legal use, if it is a categorical or conditional grant, or, more generally, by the possibility of future reductions if it is a general grant. Thus, percentage of local government revenue resulting from grants from higher level of governments is generally viewed as a primary indicator of local autonomy/dependence, with a low percentage indicating relatively high local discretion and a high percentage indicating relatively low local discretion. The local government system in the United States has a high level of local autonomy, while local governments in Germany, Italy, Spain, and Poland have medium levels, and that of the United Kingdom has low autonomy (high grant dependence) (See Table 1)

Table 1
Local Autonomy (dependence): Grants as a % of total Local Revenue, 2010

Country	Grants as a % of total Local Revenue
United States	26.1
Germany	35.5
Spain	39.6
Italy	47.2
Poland	50.7
United Kingdom	71.4

Service responsibility. Local government systems perform different functions across the six countries. These differences are due to national government assignment of service responsibilities to different levels of government, to the amount of "home rule" local governments have to undertake activities not assigned to them, to the amount of local autonomy they have (see prior section), and to differences in local preferences across countries.

We use the International Monetary Fund's public service categories and data from their *Government Statistics Yearbook, 2011* to compare local government systems across countries. Appendix table 8 presents local government direct general spending as a percentage of all government direct general spending (i.e., exclusive of grants provided to other levels of government) for each of the IMF categories. Those functions for which the local government system is responsible for more than 25% of all government direct general spending we designate as functions for which the local government system plays an important role and are bolded.

The functions for which the six countries in our study play an important role (i.e., account for more than 25% of all government spending) are listed below:

Germany:	economic affairs, environmental protection, housing and community amenities, recreation, and education.
Italy[15]:	general public services, economic affairs, environmental protection, housing and community amenities, health, recreation, and education.
Poland:	economic affairs, environmental protection, housing and community amenities, health, recreation, and education.
Spain:	general public services, environmental protection, housing and community amenities, and recreation.
United Kingdom:	public order and safety, economic affairs, environmental protection, housing and community amenities, recreation, and education.
United States:	public order and safety, recreation, and education

Thus, the local government system has a strong role in housing and community amenities and in environmental protection in all of the six countries except the United States. It has a strong role in recreation and in education in all six of the countries with the exception of Spain. However, only in the United States and the United Kingdom does the local government system have a major role in public order and safety (that is, in police and fire protection).

Organization of the local government system. Local government systems may consist of both general purpose governments (governments that are responsible for providing a variety of services) and single purpose governments. While general purpose governments are almost always governed by elected officials, special purpose governments frequently have an appointed board or administrator. There may also be several types of local governments nested within one another. In the United States, for example, the typical arrangement is for municipal governments to be nested within counties and school districts (a form of elected local public district) to be coterminous with municipal governments. In some cases these tiers of local governments have overlapping services (e.g., municipalities and counties in the U.S.), while in other cases they are assigned separate and distinct responsibilities (districts and counties in non-unitary authorities in England). The most important form of local government in all six countries is the general purpose municipal government: municipalities (cities) in the United States; gminy in Poland; gemeinde in Germany; communi in Italy; municipios in Spain, and districts or boroughs (and in some cases unitary counties) in England. Note that the fiscal data that is used in the following analysis relates to all local governments within the local government system and not just to municipal governments.

[15] This is somewhat misleading since the IMF treats Italian intermediary levels of government as local government.

The six countries and the economic crisis

The six countries had varying experiences during the economic crisis (see Table 2). Spain, the United Kingdom, and the United States all experienced recessions in 2008 and 2009, followed by a period of slow growth from 2009-2011 that was well below their annual growth rate from 2000-2007. The United States responded with a very aggressive fiscal stimulus program in the first two year period, while the stimulus response of Spain and the UK were both more modest. All three countries adopted fiscal consolidation programs in the 2010 and 2011 period.

Spain's unemployment rate rose from 8.3% in 2007 to 18.0% in 2009, eventually reaching 21.6% in 2011 (see table 3). The unemployment rate in the United States more than doubled from 4.6% in 2007 to 9.3% in 2009, increased slightly in 2010 and remained at 9.0% in 2011. The UK unemployment rate increased less dramatically from 5.3% in 2007 to 7.6% in 2009, but then continued to rise to 8.0% in 2011.

Germany, whose average annual growth rate from 2000-2007 was only 1.6%, had a growth slowdown to 1.1% in 2008 and then a one year recession in which GDP declined by 5.5% in 2009. The unemployment rate rose slightly, from 7.5% in 2008 to 7.8% in 2009. However, in 2010 and 2011 German GDP grew rapidly, at a rate more than double its annual average from 2000-2007. Germany attacked its recessionary period with a major stimulus program. The German unemployment rate fell to 6.0% by 2011.

Italy experienced two years of recession in 2008 and 2009, followed by a recovery in 2010 to approximately its average annual growth rate between 2000-2007 and then another slowdown that reduced GDP growth to 2.4% in 2011. Italy did not engage in a major stimulus program and then embarked on fiscal consolidation in 2010. Its unemployment rate rose steadily, from 6.1% in 2007 to 8.4% in 2011.

Unlike the other five countries, Poland did not experience a recession, although GDP growth did decline from its 2000-2007 annual average of 4.1% to 1.6% in 2008. It did not enact a stimulus program. All six of the countries turned to a fiscal consolidation program in 2010 or 2011 involving varying degrees of austerity policies. These efforts had differing effects on national economies and on local government fiscal condition depending upon whether fiscal consolidation accompanied continued economic downturn or followed it.

Table 2
Annual National Economic Growth (GDP)

Country	Ave. Ann 2000-2007	2008	2009	2010	2011
Germany	1.63%	1.08%	-5.15%	4.01%	3.33%
Italy	1.56	-1.16%	-5.5%	1.72	0.37%
Poland	4.09%	5.13%	1.63%	3.87%	4.52%
Spain	3.61%	0.89%	-3.74%	-0.32%	0.42%
UK	3.16%	-0.97%	-3.97%	1.80%	0.99%
US	2.60%	-0.36%	-3.11%	2.38%	1.80%

Table 3

Harmonized National Unemployment Rates (%)

Country	2007	2008	2009	2010	2011
Germany	8.66	7.54	7.76	7.08	5.95
Italy	6.10	6.73	7.80	8.43	8.38
Poland	9.61	7.04	8.12	9.67	9.65
Spain	8.27	11.33	18.03	20.08	21.64
UK	5.30	5.65	7.58	7.78	8.03
US	4.62	5.78	9.27	9.62	8.95

United States[16]

The United States experienced two years of recession and two additional years of slow growth (relative to its prior growth path) from 2008-2011. It responded by putting in place an aggressive fiscal stimulus program and then ending it in favor of an austerity approach beginning in 2010.

National government fiscal behavior during the economic crisis:

From 2000-2007, the U.S. economy grew at an average annual real rate of 2.5%. However, in 2008 it grew by less than 0.3% from its 2007 level, and in 2009 it fell by 3.1%% from its 2008 level. This was accompanied by a rapid increase in unemployment from 4.6% in 2007 to 9.3%

[16] The author would like to thank Paul Posner, Director of the Public Administration Program, George Mason University, for his advice on this section of the paper.

by 2009. The national economy then experienced a recovery in 2010 (real GDP growth of 2.4%), followed by a reduced rate of growth of 1.8% in 2011. Over the entire four year period from 2008-2011 it averaged a small annual increase of 0.9%.

The federal government responded to this downturn by enacting a substantial stimulus program, the American Recovery and Re-Investment Act (ARRA). The Act provided $787 billion, about 5.5% of GDP in 2008 (OECD, 2011d). ARRA was designed to provide a temporary counter-cyclical stimulus through a variety of means. About 37% of the stimulus was in the form of tax cuts, while 63% was for increases in expenditure programs. Of the latter, approximately 56% provided additional funding to state and local governments mostly through a vast variety of existing programs[17] (including). The remaining 44%% went directly to individuals (additional funding for the supplemental assistance (food stamp) program and the unemployment insurance programs. (Ebel and Peterson, 2013).

As a result of the stimulus (and the Tarp Program – Troubled Asset Relief Program), and reduction in tax revenues, the US budget deficit increased to more than 10% of GDP in 2010. Since that time, the President has engaged in a prolonged battle with Congress (particularly the Republican-controlled House of Representatives) to continue to enact additional stimulus initiatives (the President's predilection) or to undertake substantial efforts to reduce the deficit, primarily through expenditure reductions (the Republican's approach). In general the President has been unable to push additional stimulus issues through Congress, and the venue of stimulus policy passed to the Federal Reserve and its "quantitative easing" policy.

The Republican controlled House has been successful in reducing federal expenditures. Altogether, measures adopted since 2010 constitute a fiscal consolidation policy and include a freeze in discretionary federal government spending, a requirement that government agencies trim budgets by 5%, a pay freeze on federal employee wages, and a "pay as you go" rule that requires any new spending to be offset by equivalent expenditure reductions elsewhere or through revenue increases. In addition, the Budget Control Act of 2011 placed overall caps on federal government discretionary spending through 2021, with a separate cap on domestic and another on security spending. These caps reduce spending by$895 billion over ten years[18].).

National Government Policies Towards Subnational Government During the Economic Crisis:

[17] including for highway construction, support for the increased demand for medical services under the federal-state Medicaid program and for federal-state cash assistance and social services programs, the need for which was expected to increase during the recession, and education aid to protect school districts from forced layoffs of teachers as school district revenues fell

[18] The act also specified that Congress find an additional $1.2 trillion in deficit reduction measures over ten years, with a provision that, if it was unable to do so, funds be cut ("sequestered") through a process that reduced every program on a pro-rata basis necessary to reach the $1.2 billion savings. Since an agreement on where to find the $1.0 Trillion did not occur, sequestration has taken effect, bringing about additional expenditure reductions of approximately $50 billion per year over each of the next ten years (Auerbach and Gale, 2012

As a result of the stimulus, federal government grants to subnational government increased by 19.3% in 2009 and by 9.0% in 2010, compared to a modest 1.9 % increase from 2007 to 2008. Indeed, in 2010 ARRA grants amounted to one-fourth of total federal grants in 2008, the year prior to ARRA's enactment (Posner et al., 2013). Grants then declined by 8.0 % in 2011 as the last ARRA payments faded out and the fiscal cutbacks described in the prior section began to occur.

Although most of the federal grants are provided to state governments, it is important to note that a good portion of these are in turn sent by state governments to their local governments. Federal grants to state governments helped to cushion the precipitous decline of state revenues during the recession, particularly in those states dependent on state income taxes. Altogether state real own-source revenues declined by 7.2% from 2008-2009. Despite the fact that some portion of the federal grants to states were then passed on by states to their local governments as grants, state grants to local governments essentially did not increase from 2008 to 2009 (0.39%).

Approximately one-third of the ARRA funds were delivered through state and local governments, about equally divided between funds for fiscal relief and funds for investment support (OECDd, 2011). While the former were meant to reduce the burden of increased demand during the downturn on state and local (particularly school district) resources, the most important feature of the stimulus affecting general purpose local government was the infrastructure investment component. The stimulus investment funding was generally sent through existing programs in the form of additional amounts available, in particular for highway repair and construction, education, Medicaid, public transport, and water resources (Inman, 2010). ARRA required maintenance of effort (i.e., the funds could not be substituted for already planned expenditures on existing projects). Most of the aid to subnational governments went to the state governments, which, in turn, distributed a portion of them to their local governments, usually through existing allocation procedures.

The fiscal contraction that began in 2010 resulted in an 8.1% decline in federal grants to subnational governments in 2011 compared to 2010. While direct federal grants to local governments actually increased, state grants to local governments (which account for nearly 800% more than direct grants from the federal government) declined and the overall result was a slight reduction in local government grant revenues.

Effects on Local Government and change in local government policies

Local government revenue in the United States consists largely of local taxes (40%), local fees and charges (17%) and grants from federal and state governments (39%). About 75% of local tax revenues come from the property tax. State government revenue, which is raised primarily from income and sales taxes, declined much quicker that did local government revenue. The property tax base (assessed value) does not adjust automatically to economic cycles, since re-assessment is an administrative task that occurs with a lag, sometimes a significant one. Thus, state government revenues declined by 1.9% in 2009 compared to 2008 while local government revenues increased by 0.7% in 2009 and then declined by 0.6% in 2010 while state revenues increased by 3.2%. Local own-source revenues followed much the same pattern, increasing for the first two years and then declining by 1.9% in 2010. Total grant revenue increased by 3.9% from 2007-2008, but then increased by a much lower rate of between 1.8 and 1.9% for the next three years. This consisted of an increase in federal grant funds and a decline in state grant funds. Local government expenditures increased by between 3.5% and 4.0% from 2007-2009, but then declined by 0.8% in 2010 and 2.3% in 2011 as own-source revenue began its delayed decline and grants from the federal government also fell.

Counter-cyclical or pro-cyclical

In the first two years, local (and state) government fiscal policy was counter-cyclical with expenditures increasing at a faster rate than revenue. From 2009-2011 declines in local government expenditure exceeded small declines in revenue, leading to a slightly pro-cyclical response.

Consistency of National Government Fiscal Policy with Local Government Fiscal Behavior

The United States economy declined by 0.4% in 2008 and by 3.1% in 2009, a substantial reduction from an average annual growth rate of 2.6% from 2000-2007. The federal government responded by enacting a major stimulus program in 2008. The program was one of the largest of the OECD countries, amounting to 5.5% of GDP in the first year. Federal expenditures increased by 20.0% from 2007-2009 and revenues declined by 18.6%, suggesting a quite substantial counter-cyclical impact. Local government fiscal behavior was much less expansionary. Local expenditures increased by 7.4%, a little more than one-third the rate of increase of federal expenditures, and local own-source revenues actually increased by 2.6%

In 2010, the U.S. economy began growing, but at 2.4%, a rate still below its 2000-2007 annual average. GDP then slowed again in 2011, increasing by only 1.8%. Despite this slow growth, the United States embarked on a fiscal austerity policy. From 2010-2011, federal expenditures declined by 3.9% and federal revenues rose by 3.1%. Local fiscal behavior mirrored this essentially pro-cyclical policy. Local expenditures fell by 2.3% from 2010-2011 and own-source revenues declined very slightly (by 0.4%).

Conclusion:

The United States made a vigorous initial response to the recession through a counter-cyclical fiscal stimulus program that amounted to 5.5% of GDP. Increases in grants to state and local governments comprised a major part of the stimulus program. These increases resulted from additional funding to existing programs rather than from the creation of new grant programs. Local governments also pursued a counter-cyclical course, though at a much more modest pace. However, starting in 2010, the United States reversed course. Despite continued slow economic growth, it embarked on a pro-cyclical austerity program that reduced federal government expenditures, including grants to local governments. Local government expenditures fell (and did so by more than own-source revenues) from 2009-2011, indicating that local government fiscal behavior was also pro-cyclical. The national unemployment rate, which stood at 4.6% in 2007, remained at 9.0% in 2011.

Table 4

United States

	% Change 2007-2008	2008-2009	2009-2010	2010-2011	2007-2009	2009-2011
National						
National GDP	-0.36%	-3.11%	2.38%	1.80%	-3.46%	4.22%
Federal Government Expenditures	-7.53%	-11.91%	3.87%	-1.42%	19.94	2.40
Federal Government Grants to Subnational Governments	1.91%	19.30%	9.04%	-8.00%	21.58%	0.32%
Federal Government Deficit as a % of GDP						
Local						
Total Local Government Revenue	1.94%	0.67%	-0.55%	-0.33%	2.63%	-0.89%
Own-Source	2.12%	0.47%	-1.18%	-0.38%	2.60%	-1.55%
Grants	3.91%	1.89%	1.83%	1.86%	5.87%	3.72%
Local Government Debt						
Local Government expenditure	3.80%	3.51%	-0.76%	-2.27%	7.44%	-3.02%

Spain[19]

Like the United States, Spain experienced four years of recession and slow growth. It responded with an initial fiscal stimulus program, though on a more modest level (1.1% of GDP) than the U.S., followed by fiscal consolidation.

Central government fiscal behavior during the economic crisis:

From 2000-2007, the Spanish economy grew at an average annual real rate of 3.6%. However, in 2008 it grew by less than 1.0% from its 2007 level, and in 2009 it fell by 3.7% from its 2008 level. The national economy then experienced two years of less than 0.5% annual growth. Over the entire four year period from 2008-2011 it averaged an annual decline of 0.7%. Between December 2007 and June 2009, Spain's unemployment rate rose from 8.8% to 18.1% (OECD, 2011b). In 2011, the unemployment rate was 21.6%.

[19] The author would like to thank Isabel Rodríguez Tejedo, Department of Economics, University of Navarre, for her advice on this section of the paper.

The central government responded with a stimulus plan in late 2008 (“Plan E”) that amounted to €11 billion and accounted for about 1.1% of GDP in 2008, a modest stimulus plan relative to those of other OECD countries (OECD, 2011b). While the plan included tax cuts as well as expenditure increases, it primarily focused on infrastructure investment. Central government real expenditures, which had declined by an annual average of 1.0% from 2000-2007, increased by 5.9% in 2008 and by 22.2% in 2009 over prior year spending and the general budget deficit reached 11.2% in 2009. Most of the expenditure increases consisted of funding for local investment through the State Fund for Local Investment (OECD 2011b).

However, beginning in May 2011with the *Real Decreto Ley,* the government changed course and embarked on a fiscal consolidation effort in an effort to reduce its budget deficit from 9.3% of GDP in 2010, far above the EU’s permitted target rate of 3.0%. Austerity measures included a reduction of public sector pay by 5% in 2010 and a freeze for 2011, the freezing of pension payments, and an increase in the value added tax (OECD, 2012b). Central government spending fell by 4.5% in real terms in 2010 and by an additional 10.9% in 2011.

Central Government Policies Towards subnational Government During the Economic Crisis:

Central government grants to subnational governments increased by 6.3% in 2008 and by 20.7% in 2009 in real terms. The major focus of the government’s stimulus plan was increased local government capital spending through the State Fund for Local Investment. The fund was designed to provide money to municipal governments to engage in short-term construction projects. Funds were distributed on a per capita basis and could be used only for projects that had not already been included in municipal government budgets for that year, i.e., the purpose was to create additional jobs in the construction industry. Applications for projects by municipal governments had to be submitted in December, 2008 and January, 2009, and funding for any one project was limited to €5 million. The projects funded were primarily for renovation and improvement of public spaces, basic infrastructure and facilities, and cultural, education, and sporting facilities and buildings. The projects were supposed to be completed by December, 2009 (i.e., within one year), a deadline that was extended into the first half of 2010. Of the 8 million € of projects funded, 99% were spent by the end of that period (OECD, 2012b), a substantial achievement in light of the common criticism that public works projects are an ineffective response to downturns given the time it takes to get even “shovel-ready” projects off the ground. In 2010, the Fund for Local Investment was replaced by the State Fund for Local Investment, a program again implemented through municipal governments but designed for longer-term investment expenditures.

However, with the advent of the fiscal consolidation program in 2010, grant funding for local governments dropped precipitously. The State Fund for Local Investment was eliminated, and total central government grants to subnational governments declined by 40.9% over the 2009-2011 period.

The fiscal consolidation program explicitly applied to subnational governments as well as the central government (OECD, 2012a). Local governments as a system were required to achieve balanced budgets by 2012 (local budget deficits amounted to 0.6% of GDP in 2010) (Ahrend et al., 2013). The targets were agreed to by the Spanish Association of Local Governments. In most cases, individual local governments were given deficit reduction targets that required both expenditure cuts and revenue raising measures (one provision was a temporary increase in the local property tax). In addition, debt service costs were not to exceed 25% of revenues.

The reduction and then freezing in public sector pay noted above applied to all government employees including local government employees. Another requirement that nine out of ten public employee vacancies not be replaced from 2011-2013, and that savings from reduced staff costs be applied to further reduction of deficits or reductions of long-term debt, also applied to local governments. (Kingdom of Spain, 2011)

Effects on Local Government and change in local government policies

Total real local government (municipalities and provinces) revenue increased in real terms by 3.7% from 2007-2009. The increase was fueled by the substantial rise in grants, which account for approximately 35% of local government revenue. Local government grants increased in real terms by 30.4% from 2007-2009, while local own-source revenue, of which the largest portion is derived from municipal property taxes, fell by 9.7% during the same period. Total local expenditures increased by 12.4%. Local government debt to finance both short-term borrowing and longer term capital investment increased by 7.0% in 2008 and by 8.3% in 2009.

The turn to fiscal consolidation policies stripped away the protection local governments received in the first part of the economic crisis, and local government fiscal conditions from 2009-2011 were almost a reverse of the prior two years. Total local government revenue fell by 10.6% in real terms, led by a 26.3% fall in revenue from grants. Own-source revenue stabilized as a result of tax rate increases, the removal of some tax exemptions and tax relief provisions (Kingdom of Spain, 2012), and mild economic recovery in 2010, increasing by 2.6% in 2010 and then declining by 1.8% in 2011. Total local expenditures dropped by 13.4% over the two year period.

Counter-cyclical or pro-cyclical

Largely as a result of substantial increases in grant aid and shortfalls in own-source revenue, Spanish local governments engaged in counter-cyclical spending behavior during the first part of the recession. Over the two year period from 2007-2009, local government spending increased by 12.4% even as own-source local revenue declined by 9.7%. Local government debt increased by over 15% in the same two year period. However, the precipitous drop in central government grants over the following two years led to a 13.4% decline in real local government spending despite a small increase in own-source revenues. The combination of a decline in spending and a small increase in own-source revenues indicates a pro-cyclical local government response from 2009-2011, even though local government debt continued to increase at about the same pace as in earlier years. However, local government policy in both phases was consistent with central government policy and with the latter's explicit expectations for local government behavior.

<u>Consistency of Central Government Fiscal Policy with Local Government Fiscal Behavior</u>

Spain engaged in an explicit counter-cyclical fiscal stimulus effort from 2007-2009 and its local government system followed suit, though its behavior was not as counter-cyclical as that of the national government. Central government spending increased by 5.9% in 2008 and by 22.2% in 2009 over prior year spending, revenues declined by 35.8% over the two year period, and the general budget deficit reached 7.6% of GDP in 2009 compared to a surplus of nearly 1% of GDP in 2007. Local government spending increased by 12.4% from 2007-2009, even as own-source local revenue declined by 9.7%. Local government debt increased by over 15% in the two year period and deficits as a percentage of GDP nearly doubled from 0.25% to 0.46%.

In the following period, the Spanish government embarked on an explicit fiscal consolidation (austerity) policy. Local government fiscal behavior consistent with this turn-around of fiscal policy, but was not as strongly pro-cyclical as was national government. National government spending fell by 14.9% over the two year period, while local spending fell by nearly as much, 13.4%. National government revenues increased by 27.2%, while local government own-source revenues increased by 0.8%. The national government deficit fell from 7.6% of GDP in 2009 to 2.8% in 2011, while local government deficits actually rose by more than 50% as a percentage of GDP, a reflection of the continued difficulty Spanish local governments had in funding essential services even with the substantial reductions in local spending.

<u>Conclusion:</u>

As did the United States, Spain responded to the recession with a major counter-cyclical stimulus program, although at a much lower level than the U.S. program. The stimulus program involved a major increase in grants to local governments, but through a newly created and temporary construction program. Local governments also engaged in counter-cyclical expansionary behavior.

However, as a result of a deteriorating debt situation caused by the breaking of the housing bubble and the recession, Spain abruptly adopted a fiscal consolidation program, even as the national economy continued to grow slowly in 2010 and 2011. In order to meet the 3% general budget deficit as a percentage of GDP prescribed by the EU, the fiscal consolidation program applied directly to local as well as central government through requirements that local governments move to balanced budgets by 2012. Central government expenditures declined, including grants to subnational governments. As a consequence, the austerity program can be considered pro-cyclical. Local government fiscal behavior was also pro-cyclical as expenditures declined, own-source revenue remained stable and deficits decreased. The national unemployment rate continued to climb and stood at 21.6% in 2011.

Table 5

Spain	2007-2008	2008-2009	% Change 2009-2010	2010-2011	2007-2009	2009-2011
National						
National GDP	0.89%	-3.74%	-0.32%	0.42%	-2.90%	-.2.4%
Central government Expenditures	5.86%	22.20%	-4.50%	-10.88%	29.37	-14.90%
Central Government Grants to Subnational Governments	6.34%	20.70%	-7.53%	-36.13%	28.35%	-40.94%
Central Government Deficit as a % of GDP	0.94%	-2.46%	-7.61%	-4.10%		
Local						
Total Local Government Revenue	-1.84%	5.59%	-1.75%	-8.97%	3.66%	-10.56%
Own-Source	-5.03%	-4.95%	2.61%	-1.77%	-9.73%	0.79%
Grants	4.55%	24.74%	-7.78%	-20.05%	30.42%	-26.26%
Local Government Debt	7.02%	8.33%	8.13%	8.25%	15.93%	17.05%
Local Government Deficit as a % of GDP	-0.40%	-0.46%	-0.55%	-0.69%		
Local Government Expenditure	2.61%	9.52%	-2.56%	-11.14%	12.37%	-13.42%

The United Kingdom (England)[20][21]

The UK experienced a recession and then slow growth throughout the entire four year period from 2008-2011. Like Spain, it responded with a modest fiscal stimulus program (1.4% of GDP), followed by fiscal consolidation and austerity.

Central government fiscal behavior[22] during the economic crisis:

[20] The United Kingdom consists of England, Scotland, Wales, and Northern Ireland. Each of these has its own separate local government fiscal system. Since England is, by far, the largest constituent part of the UK, we focus on England's system of local government. Economic policy at the national level is conducted by the United Kingdom government, and, therefore, when discussing national policy, we refer to the United Kingdom and use UK data. When discussing local government and local fiscal systems, our analysis is confined to England and does not include the other three units.

[21] The author would like to thank Michael Goldsmith, Professor Emeritus, Department of Politics, Salford University, for his advice on this section.

[22] Data for national economic performance refers to the performance of the UK central government. Data for local government fiscal behavior refers to English local governments only and is drawn from *Local Government*

From 2000-2007, the UK economy grew at an average annual real rate of 3.2%. However, in 2008 it declined by 1.0% from its 2007 level, and in 2009 it fell by 4.0% from its 2008 level. The national economy expanded slowly during the next two years (1.8% in 2010 and 1.0% in 2011), but over the entire four year period from 2008-2011 its average annual change was still negative. The UK unemployment rate increased from 5.3% in 2007 to 7.6% in 2009, but then continued to rise to 8.0% in 2011.

The initial response of the central government was to take action through discretionary policy choices to stimulate the economy. From 2008-2010 discretionary central government policies amounted to about 1.4% of GDP (OECD, 2009:110). This counter-cyclical policy was particularly noticeable with respect to central government spending. While the average annual real change in central government spending was 5.7% from 2000-2007, central government spending increased in real terms by 8.1% from 2007-2008 and by an additional 3.4% the next year over its prior year level.

However, in response to rising concern about budget deficits (which had reached 9.5% of GDP by 2010), the Government adopted a fiscal consolidation plan in June 2010, consisting of plans for both expenditure cuts and tax increases to be undertaken over the next several years. This austerity oriented policy resulted in drastically reduced spending over the next two years. Real central government expenditure fell by 0.7%% in 2010 and by 3.0% in 20ll.

Central Government Policies Towards Local Government During the Economic Crisis.

From 2007 to 2009, central government grants to local governments in the UK increased by 6.7% (6.0% to local governments in England). This increase reflected an expansion in line with the government's stimulus program. However, in its 2010 spending review the UK central government announced a major fiscal consolidation plan that included plans to reduce local government spending. As part of the consolidation plan, the local government system in England was issued annual expenditure reduction targets. Expressed as a percentage of local government revenue, these amounted to 1.2% in 20ll and 0.9% in 2012 (Ahrend et al., 2013: 25). The newly elected (2010) coalition Government also enacted legislation that would reduce central government funding to local governments by 26% in real terms over the four years from 2010-11 to 2014-15 (United Kingdom HM Treasury, 2010) From 2009-2011 central government grants to local governments in England fell by 6.0% in real terms.

These aggregate expenditure targets for the local government system and reduction in grant were accompanied by a variety of changes in national government policy designed to implement these targets. In the *Localism Act 2011*, the Government stipulated that local governments that exceeded the central government's set tax increase targets (for 2012, 3.5% above the previous year's council tax revenue) were required to gain approval for that increase through a local

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Financial Statistics England, various years. However, data in the appendix tables, drawn from OECD, are for all local governments in the UK.

referendum. Local councils that agreed to not increase their local council tax rate over the previous year would be rewarded with a "council tax freeze grant," which for 2012 amounted to 2.5% of their prior year council tax revenues.

Effects on Local Government and change in local government policies

During the first two years of the recession, real grant revenue to local governments (both for operating and for capital purposes) increased by 6.0%. However, with the onset of the fiscal consolidation program, grant revenue to local governments fell by 6.0% during the following two years. Since grants account for upward of 60% of local government revenue, these changes in grant revenue received had a major impact on local fiscal condition, particularly in the context of the new limitations on local taxes.

Primarily as a result of increases in grant revenue, English local government revenue continued to increase modestly during the first two years of the recession. Total real local revenue increased by 2.4% from 2007 to 2009[23]. However, from 2009-2011 total local revenue fell by 5.3% in real terms.

The recession had an immediate adverse effect on local government own source revenue. From 2007-2009, total own-source local revenue declined by 5.4% in real terms. Most of the decline resulted from reductions in capital receipts and interest income received as interest rates fell in the economy. Council tax (a form of property tax, see profile for a description), the sole source of local tax revenue, actually increased by 4.1% in real terms over the period. Own-source revenue continued to decline over the next two years (2009-2011) by a total of 3.1%, including a 1.9% real decline in council tax revenue.

Total local government spending, operating and capital combined, increased by 5.1% in real terms from 2007-2009, but then declined by 8.5% over the next two years. Local government capital spending took a particularly large hit, falling by 15.4% in real terms between 2010-11.

Change in English local government borrowing and net change in investments (the total of these two termed "net cash requirement") was minor in 2006 and 2007, amounting to just 0.3% of total revenues in 2007. However, in both 2008 and 2009 changes in borrowing and net investment amounted to over 3% or local revenues, indicating local governments were facing budgetary stress as a result of the recession. The net change in 2010 was only 0.8%, but in 2011 the change in net cash requirement as a percentage of total local revenues was 7.5%.

Counter-cyclical or pro-cyclical

English local governments engaged in modest counter-cyclical spending behavior during the first part of the recession. This counter-cyclical behavior resulted primarily from an increase in

[23] All calculations from Department for Communities and Local Government England, *Local Government Financial Statistics* series 2010 through 2013.

central government grant revenue that more than made up for declines in own source local government revenue. However, with the advent of central government consolidation policy and the consequent reduction of grants to local government, along with the continued decline in own-source revenue, local government spending policy was decidedly pro-cyclical, falling by 15.4% in real terms between 2010-2011. This pro-cyclical policy was clearly in line with the national government's overall fiscal policy from 2010 on.

Consistency of National Government Fiscal Policy with Local Government Fiscal Behavior

The UK central government engaged in an explicit counter-cyclical fiscal policy in 2008 and 2009 in response to the national economic turndown caused by the recession. English local government fiscal policy was consistent with national government policy counter-cyclical policy, but lagged behind it. Central government spending increased in real terms by 11.5% from 2007-2009, compared to 5.1% for local government expenditure. Over the two year period central government revenues fell by 8.2%, while local government own-source revenues declined by only 5.4% and total revenues (including grants) actually rose by 2.4%. The government deficit as a percentage of GDP increased from 2.41% in 2007 to 4.16% in 2008 and then more than doubled to 9.82% in 2009.

From 2009-2011 government policy was avowedly one of fiscal consolidation, implying a pro-cyclical response to an economy still in the throes of an economic slowdown. Local government spending behavior was even more pro-cyclical. During that period central government expenditure declined by 2.3%, while local government spending declined by 8.5%. However, while central government revenue was also pro-cyclical, increasing by 5.8%, local government own-source revenue continued to be counter-cyclical, falling by 3.1% and revenues including grants declining by 5.3%. Central government debt as a percentage of GDP fell from 9.8% in 2009 to 6.9% in 2011, while local government debt as a percentage of GDP declined from 0.4% in 2009 to 0.1% in 2011, an indication that local government successfully participated in the national fiscal consolidation effort, even though local government own-source revenues continued to decline.

Conclusion

The UK government pursued a modest counter-cyclical fiscal stimulus program from 2007-2009 that consisted of increased spending, including increases in grant levels to local governments, and increases in budget deficits. Increases in grants occurred largely through the existing system. English local government fiscal behavior was also counter-cyclical and thus supportive of national policy.

The UK government, like the other governments in our study, turned to fiscal consolidation and austerity in 2010, a pro-cyclical policy in the context of continued slow growth. Central government expenditure and grants declined and the budget deficit was reduced. The policy applied directly to local governments, which were given annual expenditure reduction targets.

As a result of central government limitations on local government spending and grant reductions, local governments also pursued a pro-cyclical policy in the latter part of the four year period. Economic growth increased by only 1.0% in 2011 and the unemployment rate continued its steady climb to 8.0%.

Table 6

UK (England)

	% Change					
	2007-2008	2008-2009	2009-2010	2010-2011	2007-2009	2009-2011
National						
National GDP	-0.97%	-3.97%	1.80%	0.99%	-4.40%	2.81%
Central Government Expenditures	8.09%	3.39%	0.69%	-2.97%	11.75%	-2.30%
Central Government Grants to Local Governments*	3.40%	3.14%	2.29%	-5.79%	6.65%	-3.63%
Central Government Deficit as a Percentage of GDP	-4.16%	-9.82%	-9.04%	-6.90%		
Local						
Total Local Government (England only)						
Revenue	-1.66%	4.13%	0.41%	-5.66%	2.40%	-5.27%
Own-Source	-4.51%	-0.89%	-2.08%	-1.07%	-5.36%	-3.12%
Grants	0.08%	5.90%	1.41%	-7.29%	5.98%	-5.98%
Local Government deficit as a Percentage of GDP	-0.28%	-0.37%	-0.07%	-0.06%		
Local Government Debt	1.82%	-1.53%	2.72%	0.84%	0.27%	3.58%
Local Government Expenditure	0.58%	4.45%	-0.06%	-8.43%	5.06%	-8.49%

* To all local governments within the UK.

Germany[24]

Unlike the United States, Spain, and the United Kingdom, Germany experienced a severe recession that lasted only one year and was then followed by renewed growth at even higher than prior levels. It responded to the recession with a counter-cyclical fiscal stimulus program, but adopted a fiscal consolidation program in 2010 as growth resumed that was counter-cyclical in effect.

From 2000-2007, the German economy grew at an average annual real rate of 1.6%. However, in 2008 it grew by less than 1.1% from its 2007 level, and in 2009 it fell by 5.1% from its 2008 level. The national economy then experienced a rapid recovery in 2010 (real GDP growth of 4.0), followed by a further growth of 3.3% in 2011. Over the entire four year period from 2008-2011 it averaged a small annual increase of 0.82%. The national unemployment rate rose from 7.5% in 2008 to 7.7% in 2009, and then fell to 6.0% in 2011.

[24] The author would like to thank Angelika Vetter, Department of Social Science, University of Stuttgart, for her advice on this section of the paper.

In response to the decline in GDP, Germany enacted a series of stimulus packages between October 2008 and December 2009. The measures included increased public investment, income tax reductions, reductions in the rate of contribution to the national health insurance system, and an increase in transfer payments mainly through a one-time bonus to the child allowance (Hamburg et. al., 2010). Altogether these measures resulted in 3% of GDP, with tax and social contribution cuts accounting for 78% and expenditure increases for 22% (OECDc, 2011).

As a result of the stimulus packages budget deficits as a percentage of GDP rose to 3.0% in 2009 and 3.5% in 2010, compared to small surpluses in 2007 and 2008 (OECDc, 2011). It then undertook fiscal consolidation measures to reduce the budget deficit. The most important of these was a constitutional amendment passed in 2009 that set a deficit ceiling of 0.35% of GDP to be phased in by 2016. Lander budgets must be balanced by 2020. Strong economic growth resumed in 2010 and budget deficits declined to less than 1% of GDP in 2011 and 2012, thus reducing the need for more aggressive fiscal consolidation measures.

National Government Policies Towards Subnational Government During the Economic Crisis:

Federal government grants to subnational government declined in 2008 from 2007 levels by nearly 5%. However, as a result of the stimulus programs adopted, grants increased by 12.8% in 2009 and an additional 13.3% in 2010. Ass the stimulus program came to an end in 2011, federal grants increased by only 4.1% over their 2010 level.

More than half of the expenditure stimulus, approximately 10€ million, was for subnational investments, mostly for educational facilities and infrastructure investment (funding could not be used for waste water systems or public transport projects). Recipient sub-national governments were required to match these funds with one Euro for each three Euros received. The funds were provided to the lander on a formula basis that included variables such as population. The program required that 70% of the funds in each lander be provided to municipalities for investment and that the funds be used for projects that were not previously in the 2009 budget (the “additionality” requirement). Each lander decided on the allocation procedures to its municipalities. (OECDc, 2011 is the source for the information in this paragraph.)

Subnational government (both lander and local) revenue was also affected by the discretionary cuts in the personal income tax as part of the stimulus packages. These cuts resulted in lower amounts of tax sharing to these governments. In addition, automatic reductions in tax sharing resulting from lower personal income as a result of the recession further reduced subnational government tax sharing revenues.

Effects on Local Government and change in local government policies

German local government revenue is derived mostly from a complex system of grants (38%), taxes and tax sharing (38%), and fees (18%). Total local government revenue declined in 2009 as a result of the recession and the decline in tax sharing revenues. Own-source revenue declined substantially (in excess of 6%) from 2008-2009 as a result of reductions in tax sharing, both discretionary due to federal government tax cuts and automatic as the tax bases supporting tax sharing contracted with the recession. Revenue from grants grew slowly from 2007-2009 and then declined slightly in 2010. However, it increased by more than 5% in 2011 as the federal stimulus program funds began flowing to local governments from the lander. Local expenditure continued to increase every year.

Counter-cyclical or pro-cyclical

Local government fiscal behavior can be classified as counter-cyclical from 2008-2010: expenditures increased, own-source revenues declined in 2009 and rose at a slower rate than expenditures in 2010, and local government debt increased. After 2010 local government fiscal behavior was essentially neutral as national growth resumed.

Consistency of National Government Fiscal Policy with Local Government Fiscal Behavior

Germany experienced slow economic growth in 2008, followed by a year of serious decline in 2009 and then rapid recovery in 2010 and 2011. The federal government enacted a stimulus program in late 2008 and 2009 that had a counter-cyclical effect on the economy. Federal government real expenditures rose by 6.9% from 2007-2009, and revenue growth, which had been increasing at about 1.3% per year from 2000-2007, remained steady at that level. The extra spending was financed out of debt as central government budget deficits grew from 0.6% of GDP in 2007 to 1.5% in 2009 and 3.2% in 2010. Local government fiscal behavior was also counter-cyclical; expenditures increased by 6.6% (about the same rate as the federal government), own-source revenues declined by 4.4%, and local government budgets moved from a slight surplus in 2007 to a slight deficit (0.2% of GDP) in 2010.

In 2009 the federal government phased in a fiscal consolidation program that resulted in a decline in federal spending by 8.4% in 2011 compared to its 2010 level, an increase in revenue of 7.1%, and a reduction in the federal budget deficit as a percentage of GDP from 3.2% in 2010 to 1.0% in 2011. Local government fiscal behavior reflected the same pattern, but at a more moderate pace: expenditures increased by 1.2% in 2011 compared to annual increases of 2-3% in the prior three years, own-source revenues increased by 4.8%, and the small local government budget deficits in 2009 and 2010 turned into a small surplus in 2011. Given Germany's relatively rapid rate of GDP growth in 2010 (4.0%) and 2011 (3.3%), the fiscal behavior of both the federal and local governments can be considered counter-cyclical; its fiscal austerity program pushed back against relatively strong national economic growth.

Conclusion

Germany experienced a severe recession in 2009 and responded with a counter-cyclical fiscal stimulus program that amounted to 3.0% of GDP and included a major program of matching grants to subnational governments for public facility investment. Local government fiscal behavior was likewise counter-cyclical: expenditures rose, own-source revenues fell, and budget deficits increased.

In 2010 the federal government embarked on a consolidation program that consisted of lower central government expenditures, including an end to the fiscal stimulus grant program to subnational governments, and a requirement that subnational governments move, albeit over a lengthy period of time, towards balanced budgets. However, despite the end of the fiscal stimulus grant program, Germany provided some protection to local governments through continuing grant increases. Since Germany had resumed vigorous economic growth in 2010, the federal government's fiscal behavior can be considered counter-cyclical in that its effect was to slow down strong economic growth. In contrast, local government did not engage in fiscal cutbacks undertaken by the federal government or seen in the other countries we have thus far examined. Though local governments did reduce their deficit as a percentage of GDP, owing to increases in both own-source revenues and grants they were able to increase their spending, although at a lower rate than in prior years.

Table 7

Germany

	2007-2008	2008-2009	% Change 2009-2010	2010-2011	2007-2009	2009-2011
National						
National GDP	1.08%	-5.45%	4.01%	3.33%	-4.10%	7.50%
Federal Government Expenditures	1.93%	4.92%	12.66%	-8.36%	6.94%	3.24
Federal Government Grants to Subnational Governments	-4.94%	12.84%	13.33%	4.06%	7.27%	17.93%
Federal Deficit as a Percentage of GDP	-0.63%	-1.53%	-3.15%	-0.96%		
Local						
Total Local Government Revenue	1.83%	-3.01%	1.29%	4.91%	-1.23%	6.26%
Own-Source	1.76%	-6.01%	2.09%	4.81%	-4.36%	7.00%
Grants	1.97%	2.87%	-0.14%	5.09%	4.89%	4.94%
Local Government Deficit as a Percentage of GDP	0.35%	-0.09%	-0.20%	0.07%		
Local Government Debt	-0.91%	3.49%	1.46%	3.25%	2.55%	4.76%
Local Government Expenditure	2.90%	3.56%	2.68%	1.17%	6.56%	3.87%

Italy[25]

Italy experienced two years of recession, followed by a year of recovery to its prior level of growth and then another year of slow growth. Unlike the other countries we have examined, it did not institute a specific fiscal stimulus package. As a result of debt/deficit problems and under pressure from the EU, it embarked on a major fiscal consolidation effort towards the end of the period.

Central government fiscal behavior during the economic crisis:

From 2000-2007, the Italian economy grew at an average annual real rate of 1.6%. However, in 2008 it grew by less than 1.2% from its 2007 level, and in 2009 it fell by 5.5% from its 2008 level. The national economy then experienced a modest recovery in 2010 (real GDP growth of 1.7), followed by a slight decline of 0.4% in 2011. Over the entire four year period from 2008-2011 it averaged an annual decline of 1.1%. The unemployment rate increased steadily from 6.1% in 2007 to 8.4% in 2011.

[25] The author would like to thank Stefano Piperno, Institute for Economic and Social Research, Piedmonte, for his advice on this section.

Unlike many other countries, Italy did not engage in an explicit stimulus package with counter-cyclical effects. In November, 2008 the Government enacted a package that included transfer payments to low-income households and some relief measures for businesses. However, they were fully financed by tax increases and thus were budget neutral. A second fiscal package was passed in February 2009, including payments for scrapping automobiles, presumably as an incentive to purchase new cars, but again this was accompanied by revenue increases. Hamburg et al. (2010) estimate that these discretionary measures reduced the Italian budget deficit by 0.3% of GDP in 2009 and 1.0% in 2010, i.e., they were actually pro-cyclical.

In December, 2011 Italy adopted a fiscal consolidation package and another in early 2012, both of which were more aggressively pro-cyclical. The measures were designed to reduce budget deficits from 4.6% of GDP in 2010 to 3.9% in 2011 and 1.7% of GDP in 2012 (OECD, 2012a) in order to bring the country into conformance with the EU's 3% of GDP deficit target. The plans included both spending cuts and revenue enhancements. The spending cuts included a target spending reduction for each ministry and a cut in central government grants to subnational governments. Revenue enhancements consisted of increases in the rate of the value added tax, a huge increase in the assessed values of immovable property for the municipal property tax (IMU), accompanied by a sharing of these additional revenues between the state and the municipalities, an increase of the regional personal income tax surcharge and a new tax on financial wealth.

Central Government Policies Towards subnational[26] Government During the Economic Crisis:

During the first two years of the economic crisis, central government grants to subnational (regional and local) governments increased substantially, rising by 26.4% between 2007-2009. However, the switch to a more aggressive fiscal consolidation policy was accompanied by a decline in central government grants, which decreased by 9.9% in 2010 and 10.4% in 2011. Central government grants to local government (excluding regional government) fell by 7.7% in 2010 and 6.7% in 2011.

Changes in Italy's Domestic Stability Pact (DSP) also applied to subnational governments and had an impact on subnational governments that probably exceeded that of the grant reduction. The pact requires sub-national governments to improve their total balance with respect to the preceding year by a percentage of their previous total expenditure. The outcome can imply that even local governments with a budget surplus must increase that surplus[27]. As part of the consolidation effort, subnational government employee wages were frozen. In addition, the pact was more strictly enforced and violations of pact agreements were more severely sanctioned.

[26] OECD's Fiscal Decentalization data base does not distinguish between regional and local governments, and it is, therefore, not possible to separate data for these two entities. Therefore, unless otherwise specified, data presented for Italy is for combined regional and local governments, for which the term subnational governments is used.

[27] Stephen Piperno, personal communication, 11/27/2013.

Piperno estimates that approximately two thirds of the reduction of sub-national government expenditures was due to the peculiar mechanism of the DSP.

Effects on Local Government and change in local government policies

Italian local government revenue consists of grants (43%), taxes and tax sharing (43%), and fees and charges (6%). Total subnational government revenue increased slightly in real terms (0.5%) from 2007-2008 and modestly (2.7%) from 2008-2009. These increases resulted primarily from increases in grants and tax sharing (the increase in the VAT rate increased the amount of revenue to regional and local governments from their share of that tax), which together constitute nearly 45% of total local government revenue. Own-source revenue actually declined by 3.9% from 2007-2008 and 9.6% from 2008-2009. This was due in part to the elimination of the municipal property tax for owner-occupied homes in the 2007-2008 fiscal year[28] (Piperno, 2012), and in part due to a decline in revenues from tax sharing receipts from the national personal income tax. Subnational government expenditures increased in real terms by 1.8% during the first year, but then remained nearly stable (an increase of 0.2%) in the next year despite increased total local revenue, suggesting efforts by subnational governments to reduce deficits as part of the Internal Stability Pact arrangements. Indeed, local government debt rose by less than 1.5% over the two year period.

The 2009-2011 period was a near complete reversal of the 2007-2009 period in terms of regional and local government fiscal condition and behavior. From 2009-2011 total real subnational government revenue declined by 6.0%, a turnaround from the 2007-2009 period when total revenue increased. The decline resulted from the substantial cuts in grants (9.9% in 2010 and an additional 10.4% in 2011), even while, unlike the previous two years, own-source revenues increased by 2.7% in 2010 and 4.5% in 2011. Local governments also suffered a decline in grant revenue from regional governments (Vamalle et al., 2011). The increase in own-source revenues was a result of increases in local tax rates as well as discretionary action by the central government to raise the share local and regional governments received from the tax sharing system. In addition, the imposition of new restrictions contained in the domestic Stability Pact, described above, required further retrenchment. Subnational government expenditures declined in real terms by 1.4% in 2010 and by 2.5% in 2011. In general sub-national governments (in particular municipalities) hugely reduced capital expenditures with a huge pro-cyclical effect.

Counter-cyclical or pro-cyclical

Declines in own-source revenue accompanied by slight increases in real expenditure indicate that the fiscal behavior of Italian subnational government was somewhat counter-cyclical during the

[28] However, the revenue municipalities lost from the elimination of this tax was replaced by a central government grant of the same amount.

2007-2009 period, even though this behavior was not consistent with national government policy. However, increases in own-source revenue and declines in expenditure from 2009-2011 suggest a pro-cyclical effect on a national economy still recovering from the national downturn.

Consistency of Central Government Fiscal Policy with Local Government Fiscal Behavior

Unlike many of the OECD countries, Italy did not adopt an explicit aggressive fiscal stimulus policy. Nonetheless, national fiscal behavior was mildly counter-cyclical; government expenditures increased by 5.4% from 2007-2009, revenues fell by 4.2%, and the national budget deficit rose from 1.7% of GDP in 2007 to 4.2% in 2009. Local government fiscal behavior was also counter-cyclical, though less so than the national government. Local expenditures increased by 1.6%, own-source revenues declined by 13.1% and local budget deficits as a percentage of GDP increased from 0.15% in 2007 to 0.32% in 2009.

Italy adopted a stringent fiscal consolidation austerity policy in the latter part of the 2009-2011 period that resulted in a 4.8% decline in expenditure from 2009-2011. While revenue fell by 1.8% over that period (a modest and probably automatic counter-cyclical effect), the national government budget deficit declined from 4.2% of GDP in 2009 to 3.3% of GDP in 2011. Local government fiscal behavior was in line with the national consolidation effort. Local spending fell by 3.9% from 2009-2011, own-source revenues rose by 7.4%, and local budget deficits fell from 0.42% of GDP in 2010 to 0.17% of GDP in 20ll.

Conclusion

Italy experienced a recession, but unlike the other countries so far examined, did not respond with a significant stimulus package. Despite that, its fiscal behavior was mildly counter-cyclical as was that of its local government system. Despite its continued slow growth over the 2009-2011 period, the central government, under pressure from the EU to reduce its general budget deficit to below 3% of GDP, embarked on a fiscal consolidation austerity program that was clearly pro-cyclical in effect. The effect of the consolidation program was extended to local governments through stricter provisions adopted in the Domestic Stability Pact. Central government expenditures and grants to local governments also fell. Local government expenditures and deficits as a percentage of GDP both declined. While grants received by local governments also fell sharply, the central government provided some protection to local governments by increasing its share of tax sharing. Nonetheless, local fiscal behavior was also pro-cyclical during fiscal consolidation. The national unemployment rate, which had stood at 6.1% in 2007, rose to 8.4% in 2010 and remained at that level in 2011.

Table 8

Italy

	% Change					
	2007-2008	2008-2009	2009-2010	2010-2011	2007-2009	2009-2011
National						
National GDP	-1.16%	-5.5%	1.72	0.37%	-6.60%	2.10%
Central Government Expenditure	-0.66%	6.09%	-2.27%	-2.57%	5.39%	-4.78%
Central Government Grants to Local Governments	6.63%	18.51%	-9.92%	-10.35%	26.36%	-19.24%
Central Government Deficit as a Percentage of GDP	-2.24%	-4.18%	-3.65%	-3.25%		
Local						
Total Local Government Revenue	0.46%	2.65%	-3.63%	-2.48%	3.12%	-6.02%
Own-Source	-3.83%	-9.58%	2.74%	4.49%	-13.05%	7.35%
Grants	6.63%	18.51%	-9.92%	-10.35%	26.36%	-19.24%
Local Government Deficit as a Percentage of GDP	-0.34%	-0.32%	-0.42%	-0.17%		
Local Government Debt	0.14%	1.33%	1.98%	1.56%	1.47%	3.56%
Local Government Expenditure	1.78%	-0.15%	-1.43%	-2.54%	1.63%	-3.94%

Poland[29]

Unlike the other five countries, Poland experienced continuous economic growth, although there was a growth slowdown in 2009. However, in order to reduce its general budget deficit to the prescribed 3% of GDP level, it embarked on a major fiscal consolidation program in 2010.

National government fiscal behavior during the economic crisis:

From 2000-2007, the Polish economy grew at an average annual real rate of 4.1%. Unlike the other five countries in the study, Poland did not experience a recession, though after 2008 (when it had a growth rate of 5.1%), it did experience a slowdown in its rate of growth. In response to the growth slowdown, the Government engaged in counter-cyclical policy, increasing its deficit from about 2% of GDP prior to the slowdown to 8% by 2011. Its economy then grew by 1.6% in 2009 and 3.9% and 4.5% in the next two years. Over the entire four year period from 2008-2011, it averaged an annual growth rate of 3.8% compared to an annual average for all OECD countries for that period of 0.5%.

[29] The author would like to thank Paweł Swianiewicz, Department of Local Government and Policy, University of Warsaw, for his advice on this section of the report.

Despite its positive growth, Poland's financial condition worsened over the first part of the period with general government deficit increasing as a portion of GDP to 7.9% in 2010, substantially above the EU's deficit target of 3.0% (OECD, 2012a). In 2011 the Government announced a new fiscal consolidation effort that included a wage freeze, a temporary limit on all discretionary spending to 1% real increases, and a rise in the rate of value added tax. In all, expenditure reductions accounted for about 20% of the consolidation plan for 2011 and revenue enhancements for the remaining 80%.

National Government Policies Towards Local Government During the Economic Crisis:

Central government grants to local government increased by 22% from 2007-2009, an average of 11% annually, and rose by an additional 5.1% in 2010. However, with the advent of the adoption of the fiscal consolidation plan in 2011, grants to local governments fell by 2.1% during that year. The Government's fiscal consolidation plan also extended to local governments the temporary 1% limit on spending increases for discretionary programs and introduced limits for local government deficits and sanctions for exceeding these limits. From 2011 local governments were required to balance their revenues and current expenditures (Rae, 2012).

Effects on Local Governmentand change in local government policies

Nearly 50% of local government revenue for Polish local governments is derived from grants, 30% comes from taxes and tax sharing, and 9% comes from fees. Total local government revenue increased by 9.5% from 2007 to 2008 but then did not grow at all in 2009, primarily as a result of the slowdown in economic growth. Central government policy changes that introduced new tax relief and exemptions for the personal and corporate income tax[30], as well as the slowdown in growth which caused a reduction in the rate of increase in these tax bases, resulted in lower amounts of tax sharing revenues received from central government taxes on these bases. Tax sharing accounts for more than 20% of local government own-source revenue, while local taxes, primarily a property tax on land area, accounts for about 16%. Own-source revenues rose by 6.6% in 2008 but then declined by 7.0% in 2009, largely as a result of the reduction in tax sharing revenue (which is classified by OECD as own-source tax revenue) and reductions in the base of local taxes. However, total local expenditures rose by 10.9% in 2008 and 6.2% in 2009, fueled by central government grants, which increased by 22.0% over the 2007-2009 period, and massive increases in local debt, which increased by over 35%.

Renewed economic growth in 2010 resulted in an increase in total revenues of 4.9%. Own-source revenues rose by 4.6%, grant revenue increased by 5.1%, and local expenditures grew by 6.2%. However, as a result of adoption of the fiscal consolidation policy in 2011, total local revenues increased by only 1.3%, largely as a result of a 2.1% decline in grant from the central government. Own-source revenue increased by 4.7% as renewed economic growth increased tax sharing revenues and local governments increased local taxes (Vammalle and Hulbert, 2013).

[30] Personal communication from Pawel Swianiewicz, University of Warsaw, October 16, 2013.

Local expenditures fell by 2.0% between 2010 and 2011 despite continued increases in local government net borrowing.

Counter-cyclical or pro-cyclical

Unlike the other five countries we have examined in depth, Poland did not experience a recession, although it did experience a growth slowdown. Local government fiscal behavior was counter-cyclical with respect to that slowdown from 2007 to 2010, since real local expenditures increased by a greater rate than did local revenues in each of the three years. Fiscal consolidation reversed this situation, and local expenditure declined by 2.9% and total revenues increased by 1.3%. However, since national GDP grew by 4.5% during the same period, the slight drag on the economy exerted by local government fiscal behavior might well still be considered counter-cyclical.

Consistency of National Government Fiscal Policy with Local Government Fiscal Behavior

Unlike the other five countries in our more intensive study, Poland did not suffer a recession, although it did experience a slowdown in growth. While it did not announce and undertake an explicit stimulus program, the central government nonetheless engaged in fiscal behavior from 2007 through 2010 that was counter-cyclical in effect. All three of the fiscal Central government fiscal elements were counter-cyclical: expenditure increased by 9.7% from 2007-2009, revenues declined by 2.1%., and the budget deficit as a percentage of GDP rose from 3.4% in 2007 to 4.8% in 2009 and 5.6% in 2010.

Local government fiscal behavior more or less tracked that of the central government. Local spending increased by 17.8% from 2007-2009, nearly double the rate of central government spending, own-source revenues fell slightly (0.8%), and local government budgets, which had a slight surplus in 2007, increased to nearly 1.0% of GDP in 2009 and 1.1% of GDP in 2010.

Beginning in 20010, the national economy ended its growth slowdown. GDP, which had risen by only 1.6% in 2009, increased by 3.9% in 2010 and by 4.5% in 2011 (although it fell back from that level in 2012). In 2011the central government announced and then pursued a fiscal consolidation policy. As a result, central government expenditures fell by 2.3, revenues increased by 6.8% and the deficit as a percentage of GDP fell from 5.6% to 3.7% in the 2011 fiscal year. Given that the economy had resumed its rapid growth, these three fiscal elements, all designed as a means of bringing about fiscal consolidation, are also consistent with counter-cyclical fiscal behavior that would dampen economic growth. All three local government fiscal elements followed the same pattern. Local expenditure fell by 2.0% in 2011 compared to 2010, local own-source revenues increased by 4.7%, and local budget deficits as a percentage of GDP declined from 1.1% to 0.6%.

Conclusion

Despite growth throughout the period, Poland's fiscal behavior from 2008 through 2010 was expansionary, i.e., pro-cyclical. Central government expenditures, including grants to local governments, increased substantially as did the central government deficit as a percentage of GDP. Local government fiscal behavior followed the same pattern.

However, in 2011 the fiscal consolidation program resulted in counter-cyclical policy. Central government expenditure and grants to local government declined, and the budget deficit fell from 5.1% of GDP to 3.7%. Since restrictions on discretionary spending programs applied to local as well as central government and since grants to local governments declined, local government expenditure fell as did local government deficits as a percentage of GDP. In pushing back against rapid economic growth, local government fiscal behavior was also counter-cyclical. The national unemployment rate, which in 2008 was only 7.0%, increased to 9.7% in 2011.

Table 9

Poland						
	% Change					
	2007-2008	2008-2009	2009-2010	2010-2011	2007-2009	2009-2011
National						
National GDP	5.13%	1.63%	3.87%	4.52%	6.80%	8.60%
Central Government Expenditure	7.50%	2.06%	10.60%	-2.28%	9.71%	8.08%
Central Government Grants to local Governments	12.92%	8.06%	5.13%	-2.11%	22.03%	2.92%
Central Government Deficit as a Percentage of GDP	-3.44%	-4.80%	-5.64%	-3.70%		
Local						
Total Local Government Revenue	9.46%	0.07%	4.88%	1.25%	9.53%	6.19%
Own-Source	6.60%	-6.90%	4.62%	4.67%	-0.76%	9.50%
Grants	12.92%	8.06%	5.13%	-2.11%	22.03%	2.92%
Local Government Deficit as a Percentage of GDP	-0.16%	-0.94%	-1.08%	-0.62%		
Local Government Debt	1.50%	35.18%	31.24%	17.65%	37.21%	
Local Government Expenditure	10.89%	6.21%	6.21%	-1.96%	17.78%	4.13%

Summary and Conclusion

Beginning in late 2007, a global economic downturn affected nearly all national economies in OECD countries. Of the 31 OECD countries for which we have data for this study, 28 experienced negative growth in either one or both of 2008 and 2009. Of the six countries included for more intensive study, only Poland did not suffer an actual recession, although it did have a substantial growth slowdown in 2009 relative to 2008. Beginning in 2010, many of the OECD countries were affected by an increase in public sector debt/deficit that they perceived as a threat to the financial stability of their economies.

Our study is concerned with the response of both the national government and subnational, particularly local, government to the economic crisis that ensued. Did countries experiencing recession engage in counter-cyclical fiscal stimulus programs? Did national governments attempt to affect subnational (local) government fiscal behavior so that it was consistent with national policy? Did the subnational (local) public sector support them in that endeavor, i.e., was their fiscal behavior counter-cyclical or pro-cyclical during the recession? Was it consistent with national government fiscal policy during the following period of fiscal consolidation?

To answer these questions, we divided the four year period from 2008 through 2011 into two separate periods and used 2007, the year prior to the recession, as the base year. Thus, we examine fiscal behavior from 2007-2009 as the recession impact occurred, and then from 2009-2011 as the debt/deficit concern rose, in many cases even as slow national economic growth continued. We conclude as follows and elaborate below:

- Nearly all OECD countries responded initially to the recession by adopting counter-cyclical fiscal stimulus programs.
- Local government fiscal behavior was counter-cyclical in most countries during a recession, though in many cases less so than is national government fiscal behavior.
- Most national governments did attempt to affect local fiscal behavior during periods of recession and/or fiscal consolidation efforts. They did so through increasing grants to subnational governments during recessions and reducing them during fiscal consolidation. They also did so by strengthening fiscal rules and the enforcement of those rules during consolidation periods.
- In general, local fiscal behavior did support the goals of national fiscal policy.
- During recessionary periods national government behavior generally mitigated the effect of local government own-source revenue declines to some extent through increased grants. However, during periods of slow economic growth, when national governments pursued fiscal consolidation and austerity, grant reductions exposed local governments to the full force of own-source revenue declines.

<u>2007-2009: the recession, fiscal stimulus, and cyclical policy.</u>

Many of the countries affected by the recession adopted explicit fiscal stimulus programs designed to have a counter-cyclical effect on the economy; the fiscal behavior of others appeared to be counter-cyclical even in the absence of an announced fiscal stimulus program. Of the five countries that we examined intensively and that experienced at least one year of recession, four adopted an explicit stimulus program, and the fifth (Italy) engaged in counter-cyclical economic behavior, even in the absence of a major announced stimulus program.

In most cases local government fiscal behavior was also counter-cyclical. Only in Hungary, Iceland, and Ireland did local spending decline in real terms from 2007-2009, and only in Belgium, Israel, and Switzerland did local government debt decline (although in the UK it remained essentially stable).

However, was local fiscal behavior *as* counter-cyclical as was national government fiscal behavior, or did it, even while being counter-cyclical, exert a drag on the national economy? In 13 of the 28 countries for which we have data, local government expenditures, while in most cases increasing, did so at less than the rate of national government expenditures. The average national government real increase in spending was 10.4% from 2007-2009 compared to 8.3% for the local governments in the same set of countries, a difference, but not a large one. However, in the six countries we examined more intensively, the increase in local government expenditure lagged national government ones in Italy, Spain, the UK, and the US. The difference was particularly large in Spain and the US, where national government spending increases were substantial. In Spain, central government spending increased by 29.4% from 2007-2009, while local government spending increased by 12.4%. In the United States, federal spending grew by 19.9%, while local spending increased by 7.4%. In general, we conclude that local government fiscal behavior was consistent with national policy; it was in nearly all cases counter-cyclical, although sometimes less so than that of the national government.

While national fiscal stimulus policy in most countries depended more upon tax cuts than expenditure increases, spending increases were, as discussed above, substantial. In most cases these spending increases occurred primarily through increases in grants to subnational governments. In Germany and Spain new programs were established to provide subnational governments with funds for construction projects, while in the United States and the United Kingdom additional funds were channeled through existing grant programs.

<u>2009-2011: Fiscal consolidation and cyclical policy.</u>

The 2009 to 2011 period is considerably more complex. By 2010 nearly all OECD countries were technically no longer in recession (i.e., their economies were not experiencing negative rates of growth); among the six countries in our study, Spain was the only exception. Nonetheless, many countries were still experiencing quite slow economic growth. In 22 of the 30 countries for which data are available, the average annual growth of GDP in 2010 and 2011 was still less than the average annual rate of growth from 2000-2007. Six of the OECD countries had average annual growth rates of less than 1.0% (including Spain), an additional four had rates of less than 1.5% (including Italy and the United Kingdom), and four more countries (including Spain) had growth rates 2.0 percentage points below their 2000-2007 annual average. On the other hand, 10 countries (including Germany) were, by 2011, experiencing rapid growth at a rate at or above their 2000-2007 annual average.

However, beginning in 2010 many countries began to adopt fiscal consolidation programs designed to rein in national debt and budget deficits. In Europe, the European Monetary Union, which set debt targets of 60% of GDP and deficit targets of 3% of GDP, began to move more aggressively to enforce these. In all six of the countries we examined intensively national government budget deficits in 2011 were lower as a percentage of GDP than they were in 2010.

Fiscal consolidation meant not only reduced deficits, but also reductions in national government spending in many countries. In 18 or the 23 OECD countries for which data are available (including all six of the countries in our study), real expenditures declined in 2011 compared to 2010 and in 11 of these (including Italy, Spain, and the UK) overall expenditures declined from 2009 to 2011.

Public finance theory, as noted in the introduction, prescribes counter-cyclical economic policy when the national economy is stagnant of slow-growing. However, fiscal consolidation, because it emphasized debt/deficit reduction, reduced spending, and increased revenue-raising, is a pro-cyclical, not a counter-cyclical approach. Of the 10 countries whose economic growth rate averaged below 1.5% in 2010 and 2011, national government spending fell in six, including Italy, Spain, and the United Kingdom. In the United States, whose 2011 rate of growth was only 1.8%, real spending fell by 1.4% between 2010 and 2011. In other words, even during a time of slow economic growth, these countries adopted pro-cyclical national economic policies.

Declines in national government spending were reflected in reduced national government grants to subnational governments. National government spending on grants declined in 2011 compared to 2010 in four of our six study countries: Italy, Spain, the United Kingdom, and the United States, despite the fact that all four were experiencing slow national growth.

These grant declines thus encouraged pro-cyclical local government fiscal behavior. Local government expenditure declined from 2009 to 2011 in all four of the study countries experiencing slow growth. In Italy and Spain, local governments, partly as result of discretionary policy changes (and, in the former case, partly due to changes in tax sharing), were able to increase own-source revenue in order to moderate spending and service cuts. However, in the United Kingdom and the United States, own-source revenue declined. All four of these local government systems engaged in pro-cyclical fiscal behavior that, while consistent with national policy, nonetheless placed great stress on local governments.

Turning to the two countries in our study that experienced rapid economic growth in 2010 and 2011 (Germany and Poland), both adopted major fiscal consolidation programs. As a consequence German federal government spending declined by 15.8% from 2009 to 2011, almost exactly the rate at which it had increased from 2007to 2009. Poland’s consolidation program started later; its central government spending fell by 2.3% from 2010 to 2011. In the case of both Germany and Poland, government expenditure policy was counter-cyclical in that it worked to moderate strong economic growth.

In Germany, fiscal consolidation policy applied to local governments as well, and local government deficits moved from a modest deficit in 2010 to a slight surplus position in 2011. However, despite the decline in federal government spending, federal government grants to subnational governments continued to increase from 2009 to 2011, thus protecting sub-national governments from the effects of fiscal consolidation policy. Local government revenue from grants rose by 4.9% from 2009 to 2011. Local government expenditure increased by 3.90% from 2009 to 2011, including by 1.2% in 2011, even while local government budget deficits declined. Thus, while local government fiscal behavior was slightly expansionary (pro-cyclical during a period of national economic growth), it also met the fiscal consolidation requirements of national economic policy by producing a budgetary surplus and reducing debt. In that sense, it was consistent with national economic policy.

In Poland, local government deficits also declined, from 1.1% of GDP in 2010 to 0.6% in 2011. However, unlike in Germany, central government grants to local government fell by 2.1% between 2010 and 2011, and local government spending declined by 2.0%. Local government fiscal behavior was thus pro-cyclical and consistent with that of national government.

We conclude that local government fiscal behavior was mostly counter-cyclical during the recession, in large part because of grant provided by national (and intermediate level) governments. However, in many countries adoption of austerity (fiscal consolidation) policies in the immediate aftermath of the recession while economic growth was still weak resulted in pro-cyclical local government fiscal behavior, largely brought upon by grant reductions from national governments. These spending cuts averaged 2.3% in real terms between 2009-2011. The impact of these cuts on local services and the well-being of local residents, while not the subject of this research, undoubtedly must have varied both among and within the various countries, but in many of them it almost certainly must have been serious.

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Appendix A

Counter-cyclical

Expenditure increases of greater than 0.5% (0.25% per year)
Revenue declines of greater than 0.5% (0.25% per year)
Debt increases of greater than 0.5% (0.25% per year)

Pro-cyclical:

Expenditure increases of less than 0.5% (0.25% per year)
Revenue declines of greater than 0.5% (0.25% per year)
Debt increases of less than 0.5% (0.25% per year)

We classify countries whose local government systems were counter-cyclical in all three of these fiscal behaviors as *consistently counter-cyclical* and those that were counter-cyclical in two of the three with the other registering as neutral as *virtually counter-cyclical.* Systems that were counter-cyclical in two of the three fiscal behaviors and pro-cyclical with respect to one (usually revenues in the 2007-2009 period and debt in the fiscal consolidation period of 2011-2013) we term *mostly counter-cyclical* (see appendix 8).

Using this rough shorthand local government systems in seven OECD countries pursued counter-cyclical policies in all three measures from 2007-2009 during the initial recessionary period.

In four additional countries local governments behaved virtually counter-cyclically in that two of the three fiscal measures, with the third measure behaving neutrally.

In six other countries local government systems were counter-cyclical in expenditure and debt behavior, but pro-cyclical with respect to revenue, suggesting local government efforts to increase own-source revenue in order to cope with deficits.

Countries whose local government systems behaved consistently counter-cyclically 2007-2009:

Germany
Italy
Luxembourg
Poland
Portugal
Spain
Sweden

<u>Countries whose local government systems behaved virtually counter-cyclically 2007-2009</u>:

The Czech Republic
Denmark
Estonia
Finland

<u>Countries whose local government systems behaved mostly counter-cyclically 2007-2009</u>:

Austria
Canada
France
Greece
The Netherlands
Norway
United States

From 2009-2011, no system of local government in OECD countries for which data are available behaved in a consistently counter-cyclical manner, while only one, Norway, was virtually counter-cyclical. An additional five countries were mostly counter-cyclical in that their expenditure and debt both registered increases, while another five were also mostly counter-cyclical but with declines in revenues and increases in debt. However, local government systems in nine countries were mostly pro-cyclical, with both declines in expenditure and increases in local revenue, behavior consistent with national government consolidation plans.

<u>Countries whose local government systems behaved consistently counter-cyclically 2009-2011</u>:

None

<u>Countries whose local government systems behaved virtually counter-cyclically 2009-2011</u>:

Norway

<u>Countries whose local government systems behaved mostly counter-cyclically 2009-2011</u>:

Increases in expenditure and debt

Belgium
Finland
France
Germany
Sweden

Decreases in revenues and increases in debt

Hungary
Iceland
Luxembourg
Netherlands
United States

<u>Countries whose local government systems behaved mostly pro-cyclically 2009-2011</u>:

Austria
Czech Republic
Estonia
Italy
Portugal
The Slovak Republic
Slovenia
Spain
United Kingdom

Appendix Table 1

% Change in GDP from Prior year

Time	2008	2009	2010	2011
Country				
Australia	1.65	2.09	2.43	3.36
Austria	1.44	-3.82	1.77	2.83
Belgium	0.99	-2.79	2.42	1.84
Canada	0.69	-2.77	3.21	..
Chile	3.29	-1.04	6.10	5.99
Czech Republic	3.10	-4.51	2.49	1.89
Denmark	-0.78	-5.67	1.58	1.10
Estonia	-4.15	-14.07	3.33	8.28
Finland	0.29	-8.54	3.36	2.73
France	-0.08	-3.15	1.72	2.03
Germany	1.08	-5.15	4.01	3.33
Greece	-0.21	-3.14	-4.94	-7.10
Hungary	0.89	-6.77	1.32	1.65
Iceland	..	..	..	..
Ireland	..	..	..	..
Israel	4.04	1.16	4.62	4.23
Italy	-1.16	-5.49	1.72	0.37
Japan	-1.04	-5.53	4.65	-0.57
Korea	2.30	0.32	6.32	3.68
Luxembourg	-0.73	-4.08	2.91	1.66
Mexico	1.22	-6.00	5.32	3.92
Netherlands	1.80	-3.67	1.53	0.94
New Zealand	-1.85	0.94	0.24	1.08
Norway	0.07	-1.63	0.48	1.22
Poland	5.13	1.63	3.87	4.52
Portugal	-0.01	-2.91	1.94	-1.55
Slovak Republic	5.75	-4.94	4.38	3.23
Slovenia	3.38	-7.84	1.24	0.60
Spain	0.89	-3.74	-0.32	0.42
Sweden	-0.61	-5.03	6.56	3.71
Switzerland	2.16	-1.94	2.95	1.79
Turkey	0.66	-4.83	9.16	8.77
United Kingdom	-0.97	-3.97	1.80	0.99
United States	-0.36	-3.11	2.38	1.80
Median				
Average	0.90	-3.75	2.83	2.22

Source: OECD StatExtracts

Appendix Table 2

	Percent real change in National Government Expenditures					
	2007-2008	2008-2009	2009-2010	2010-2011	2007-09	2009-2011
Austria	1.40%	-1.44%	2.80%	-1.52%	-0.06%	1.24%
Belgium	4.63%	1.17%	1.43%	4.39%	5.86%	5.88%
Canada	2.64%	7.11%	2.45%		9.94%	
Czech Republic	1.94%	2.37%	0.04%	-0.08%	4.36%	-0.04%
Denmark	0.94%	8.62%	2.14%	2.45%	9.64%	4.64%
Estonia	10.98%	-3.22%	-4.43%	2.12%	7.41%	-2.41%
Finland	4.10%	4.92%	4.73%	-0.88%	9.22%	3.80%
France	1.09%	1.62%	7.53%	-6.94%	2.73%	0.07%
Germany	1.93%	4.92%	12.66%	-8.36%	6.94%	3.24%
Greece	8.07%	6.85%	-8.12%	-8.38%	15.47%	-15.82%
Hungary	-0.24%	-2.97%	-0.84%	3.08%	-3.20%	2.21%
Iceland	48.15%	-20.92%	0.66%	-7.55%	17.16%	-6.94%
Ireland	15.21%	8.06%	46.55%	-29.39%	24.50%	3.47%
Israel	2.65%	0.05%	2.48%	4.04%	2.70%	6.62%
Italy	-0.66%	6.09%	-2.27%	-2.57%	5.39%	-4.78%
Korea	10.52%	4.76%	-2.03%	3.96%	15.77%	1.85%
Luxembourg	8.51%	7.59%	-0.22%	-1.45%	16.75%	-1.66%
Mexico	33.31%	-17.39%	4.63%	2.38%	10.12%	7.12%
Netherlands	3.49%	8.72%	3.88%	-6.82%	12.51%	-3.21%
Norway	-2.09%	17.13%	-2.22%	-0.11%	14.69%	-2.33%
Poland	7.50%	2.06%	10.60%	-2.43%	9.71%	7.91%
Portugal	-0.23%	8.68%	7.25%	-7.89%	8.43%	-1.21%
Slovak Republic	4.67%	21.33%	2.47%	-0.73%	27.00%	1.72%
Slovenia	7.53%	4.46%	3.05%	4.46%	12.33%	7.65%
Spain	5.86%	22.20%	-4.50%	-10.88%	29.37%	-14.90%
Sweden	-2.59%	1.04%	3.42%	0.49%	-1.58%	3.92%
Switzerland	-5.50%	-0.03%	2.00%	6.23%	-5.53%	8.35%
United Kingdom	8.09%	3.39%	0.69%	-2.97%	11.75%	-2.30%
United States	7.35%	11.73%	3.87%	-1.42%	19.94%	2.40%
Average	6.53%	4.10%	3.47%	-2.39%	10.32%	0.59%
Average countries with 2011 data					10.34	0.59%

Source: OECD.StatExtracts.

Appendix Table 3

National government grants 2007-2011. Real prices (2007=100) (Inter-governmental transfer expenditure)

	Percent change					
	2007-2008	2008-2009	2009-2010	2010-2011	2007-2009	2009-11
Austria	-4.04%	-22.96%	0.61%	1.47%	-26.07%	2.09%
Belgium	4.74%	-1.56%	-1.51%	6.35%	3.11%	4.74%
Canada	6.88%	5.82%	10.84%		13.11%	
Czech Rep.	-2.77%	3.65%	2.28%	-5.76%	0.77%	-3.61%
Denmark	3.95%	9.78%	2.07%	2.35%	14.12%	4.47%
Estonia	6.61%	-11.87%	-3.17%	1.55%	-6.04%	-1.67%
Finland	6.63%	3.55%	5.43%	0.93%	10.42%	6.41%
France	0.04%	9.16%	43.78%	-28.28%	9.20%	3.12%
Germany	-4.94%	12.84%	13.33%	4.06%	7.27%	17.93%
Greece	7.16%	18.99%	-34.51%	44.05%	27.52%	-5.66%
Hungary	35.15%	-10.15%	1.56%	2.58%	21.43%	4.18%
Iceland	-3.59%	-7.75%	7.19%	11.78%	-11.06%	19.82%
Ireland	7.38%	-4.59%	-8.75%	-16.57%	2.45%	-23.87%
Israel	5.06%	-5.02%	7.37%	12.24%	-0.22%	20.51%
Italy	6.63%	18.51%	-9.92%	-10.35%	26.36%	-19.24%
Korea	13.11%	4.14%	-3.81%		17.78%	
Luxembourg	14.63%	-1.33%	-0.42%	2.97%	13.11%	2.54%
Mexico	15.63%	3.82%	1.04%		20.06%	
Netherlands	3.54%	8.55%	-1.53%	-1.66%	12.39%	-3.16%
Norway	-0.88%	24.00%	1.02%	7.38%	22.90%	8.47%
Poland	12.92%	8.06%	5.13%	-2.11%	22.03%	2.92%
Portugal	-2.02%	8.35%	-1.20%	-4.43%	6.16%	-5.57%
Slovak Rep.	-23.48%	53.72%	19.25%	-6.40%	17.63%	11.61%
Slovenia	7.85%	10.79%	-4.51%	-3.61%	19.49%	-7.95%
Spain	6.34%	20.70%	-7.53%	-36.13%	28.35%	-40.94%
Sweden	-6.64%	9.35%	13.29%	4.36%	2.09%	18.23%
Switzerland	3.09%	2.74%	2.01%	3.15%	5.92%	5.22%
U.K.	3.40%	3.14%	2.29%	-5.79%	6.65%	-3.63%
United States	1.91%	19.30%	9.04%	-8.00%	21.58%	0.32%
						0.66%
Average	4.29	6.68	2.44	-0.92	10.64%	
ave 2009-11 only					9.91%	6.80%

Appendix Table 4

Grant Revenue received by Local Governments

	Percent change					
	2007-2008	2008-2009	2009-2010	2010-2011	2007-2009	2009-2011
Austria	6.74%	-13.80%	0.81%	-0.95%	-7.99%	-0.15%
Belgium	11.39%	-4.88%	1.14%	1.19%	5.95%	2.35%
Canada	2.22%	8.38%	1.07%		10.79%	
Czech Rep.	-2.77%	3.65%	2.28%	-5.76%	0.77%	-3.61%
Denmark	3.95%	9.78%	2.07%	2.35%	14.12%	4.47%
Estonia	6.61%	-11.87%	-3.17%	1.55%	-6.04%	-1.67%
Finland	6.63%	3.55%	5.43%	0.93%	10.42%	6.41%
France	0.04%	9.16%	43.78%	-28.28%	9.20%	3.12%
Germany	1.97%	2.87%	-0.14%	5.09%	4.89%	4.94%
Greece	7.16%	18.99%	-34.51%	44.05%	27.52%	-5.66%
Hungary	35.15%	-10.15%	1.56%	2.58%	21.43%	4.18%
Iceland	-3.59%	-7.75%	7.19%	11.78%	-11.06%	19.82%
Ireland	7.38%	-4.59%	-8.75%	-16.57%	2.45%	-23.87%
Israel	5.06%	-5.02%	7.37%	12.24%	-0.22%	20.51%
Italy	6.63%	18.51%	-9.92%	-10.35%	26.36%	-19.24%
Korea	13.11%	4.14%	-3.81%		17.78%	
Luxembourg	14.63%	-1.33%	-0.42%	2.97%	13.11%	2.54%
Mexico	15.76%	-4.18%	0.44%		10.92%	
Netherlands	3.54%	8.55%	-1.53%	-1.66%	12.39%	-3.16%
Norway	-0.88%	24.00%	1.02%	7.38%	22.90%	8.47%
Poland	12.92%	8.06%	5.13%	-2.11%	22.03%	2.92%
Portugal	-2.02%	8.35%	-1.20%	-4.43%	6.16%	-5.57%
Slovak Rep.	-23.48%	53.72%	19.25%	-6.40%	17.63%	11.61%
Slovenia	7.85%	10.79%	-4.51%	-3.61%	19.49%	-7.95%
Spain	4.55%	24.74%	-7.78%	-20.05%	30.42%	-26.26%
Sweden	-6.64%	9.35%	13.29%	4.36%	2.09%	18.23%
Switzerland	48.52%	3.15%	-1.23%	4.42%	53.19%	3.14%
U.K.	3.40%	3.14%	2.29%	-5.79%	6.65%	-3.63%
United States	3.91%	1.89%	1.83%	1.86%	5.87%	3.72%
OECD average	6.54%	5.90%	1.34%	-0.12%	12.04%	0.60%
OECD Average countries with 2011 data only					11.91	
Median					10.79%	2.73

Source: OECD Fiscal Decentralisation Database

Appendix Table 5

Local Government Own-Source Revenue

	Percent change 2007-2008	2008-2009	2009-2010	2010-2011	2007-2009	2009-2011
Austria	2.94%	2.05%	-0.35%	3.39%	5.05%	3.02%
Belgium	-5.21%	7.61%	-2.34%	3.35%	2.01%	0.92%
Canada	0.87%	6.54%	1.96%		7.46%	
Czech Rep.	0.77%	0.07%	0.20%	1.79%	0.84%	1.99%
Denmark	-1.41%	-0.24%	3.06%	0.90%	-1.65%	3.99%
Estonia	10.68%	-5.25%	-4.04%	5.44%	4.86%	1.19%
Finland	5.04%	-0.07%	4.88%	-0.09%	4.97%	4.78%
France	1.66%	2.56%	-16.73%	21.64%	4.25%	1.30%
Germany	1.76%	-6.01%	2.09%	4.81%	-4.36%	7.00%
Greece	3.50%	5.44%	-2.98%	-16.75%	9.13%	-19.23%
Hungary	-30.70%	4.22%	1.03%	4.68%	-27.78%	5.76%
Iceland	-7.07%	-9.55%	-6.13%	7.18%	-15.95%	0.62%
Ireland	-2.20%	-18.18%	-9.69%	0.41%	-19.98%	-9.32%
Israel	4.24%	1.12%	6.20%	3.89%	5.41%	10.34%
Italy	-3.83%	-9.58%	2.74%	4.49%	-13.05%	7.35%
Korea	3.18%	-4.12%	0.73%		-1.07%	
Luxembourg	4.37%	-2.62%	-1.69%	0.86%	1.64%	-0.85%
Mexico	9.45%	11.36%	6.92%		21.88%	
Netherlands	-0.03%	0.52%	-1.58%	-0.01%	0.50%	-1.59%
Norway	-6.70%	13.45%	-1.10%	-2.28%	5.85%	-3.35%
Poland	6.60%	-6.90%	4.62%	4.67%	-0.76%	9.50%
Portugal	3.63%	-4.76%	-3.62%	5.50%	-1.30%	1.68%
Slovak Rep.	20.91%	-12.67%	-8.06%	16.26%	5.59%	6.88%
Slovenia	3.24%	-1.03%	9.83%	2.15%	2.18%	12.19%
Spain	-5.03%	-4.95%	2.61%	-1.77%	-9.73%	0.79%
Sweden	3.89%	-2.32%	0.43%	1.40%	1.49%	1.83%
Switzerland	4.02%	1.96%	0.14%	0.97%	6.06%	1.11%
U.K.	0.59%	0.10%	-0.86%	-2.37%	0.69%	-3.21%
United States	2.12%	0.47%	-1.18%	-0.38%	2.60%	-1.55%
Average all	1.08%	-1.12%	-0.42%	2.70%	-0.11%	1.66%
Ave countries with 2011 data					-1.21%	1.66

Source: OECD Fiscal Decentralisation Database

Appendix Table 6

% Change Real Local Expenditure

	2007-2008	2008-2009	2009-2010	2010-2011	2007-2009	2009-2011
Austria	4.17%	3.09%	1.44%	-2.34%	7.38%	-0.93%
Belgium	2.43%	2.81%	0.96%	2.86%	5.30%	3.85%
Canada	3.50%	9.86%	2.75%		13.71%	
Czech Rep.	4.20%	5.08%	0.60%	-1.89%	9.50%	-1.30%
Denmark	1.99%	5.70%	0.23%	0.20%	7.80%	0.43%
Estonia	10.61%	-9.54%	-9.91%	4.62%	0.06%	-5.75%
Finland	6.96%	1.87%	2.90%	1.46%	8.96%	4.40%
France	1.84%	2.28%	-0.77%	1.52%	4.16%	0.74%
Germany	2.90%	3.56%	2.68%	1.17%	6.56%	3.87%
Greece	6.33%	12.33%	-15.74%	-2.28%	19.44%	-17.66%
Hungary	-1.82%	-1.00%	5.31%	-8.57%	-2.80%	-3.71%
Iceland	3.93%	-8.38%	-5.87%	1.89%	-4.78%	-4.09%
Ireland	4.63%	-14.34%	-10.33%	-8.99%	-10.38%	-18.39%
Israel	5.31%	-2.46%	4.33%	5.61%	2.72%	10.19%
Italy	1.78%	-0.15%	-1.43%	-2.54%	1.63%	-3.94%
Korea	8.88%	11.40%	-8.67%		21.29%	
Luxembourg	7.92%	8.60%	-6.83%	4.43%	17.21%	-2.71%
Mexico	8.20%	5.43%	6.08%		14.07%	
Netherlands	3.79%	6.72%	-0.59%	-3.29%	10.76%	-3.86%
Norway	0.55%	14.62%	0.23%	-0.34%	15.26%	-0.11%
Poland	10.89%	6.21%	6.21%	-1.96%	17.78%	4.13%
Portugal	5.25%	3.38%	-2.47%	-4.15%	8.80%	-6.51%
Slovak Rep.	5.21%	13.47%	5.79%	-6.67%	19.39%	-1.27%
Slovenia	12.21%	1.50%	2.71%	-4.02%	13.90%	-1.42%
Spain	2.61%	9.52%	-2.56%	-11.14%	12.37%	-13.42%
Sweden	2.56%	0.58%	1.33%	4.12%	3.16%	5.51%
Switzerland	6.42%	5.61%	-0.37%	1.40%	12.40%	1.03%
U.K.	4.52%	2.94%	-0.98%	-4.76%	7.59%	-5.70%
United States	3.80%	3.51%	-0.76%	-2.27%	7.44%	-3.02%
Average	4.88%	3.60%	-0.82%	-1.38%	8.64%	-2.27%
Ave countries with 2011 data					7.75%	-2.27

Source: OECD Fiscal Decentralisation Database

Appendix Table 7

% change Real Local Government Debt

	Percent change 2007-2008	2008-2009	2009-2010	2010-2011	2007-2009	2009-2011
Austria	3.60%	25.72%	23.10%	10.48%	30.25%	35.99%
Belgium	-5.08%	-2.51%	7.52%	1.32%	-7.46%	8.94%
Canada	3.96%	6.31%	7.48%	3.85%	10.52%	11.62%
Czech Republic	1.92%	3.44%	8.15%	4.14%	5.42%	12.62%
Denmark	1.09%	5.04%	-0.14%	2.58%	6.19%	2.44%
Estonia	12.41%	5.60%	-0.41%		18.70%	
Finland	3.18%	7.21%	7.04%	3.87%	10.62%	11.18%
France	3.50%	4.33%	1.30%	1.87%	7.98%	3.20%
Germany	-0.91%	3.49%	1.46%	3.25%	2.55%	4.76%
Greece	6.14%	17.80%	9.82%	-9.47%	25.04%	-0.57%
Hungary	14.29%	2.90%	11.44%	-4.73%	17.61%	6.17%
Iceland						
Ireland	21.88%	4.76%	5.38%	-5.24%	27.68%	-0.15%
Israel	0.30%	-2.60%	-2.55%		-2.31%	
Italy	0.14%	1.33%	1.98%	1.56%	1.47%	3.56%
Korea						
Luxembourg	4.61%	4.00%	2.68%	0.81%	8.80%	3.51%
Mexico						
Netherlands	7.29%	2.02%	7.10%	3.47%	9.46%	10.82%
Norway	0.55%	18.91%	5.43%	0.40%	19.57%	5.85%
Poland	1.50%	35.18%	31.24%	17.65%	37.21%	54.41%
Portugal	5.91%	12.07%	15.66%	32.98%	18.70%	
Slovak Republic	14.50%	15.79%	0.35%	19.40%	32.58%	19.81%
Slovenia						
Spain	7.02%	8.33%	8.13%	8.25%	15.93%	17.05%
Sweden	-0.99%	7.88%	0.75%	13.63%	6.81%	14.49%
Switzerland	-1.24%	1.04%	0.64%		-0.21%	
United Kingdom	1.82%	-1.53%	2.72%	0.84%	0.27%	3.58%
United States	3.78%	6.53%	1.77%	0.65%	10.56%	2.44%
Average overall	4.45%	7.72%	6.32%	5.07%	12.56%	11.03%
Average countries with 2011 data					13.29%	11.03

Median	10.52	7.56
Median countries with 2011 data	9.99	6.17

Source: OECD Fiscal Decentralisation Database

Appendix Table 8

Local expenditures on key public services as a percentage of all general government spending on that service, 2010

	General Public services	Public Order and safety	Economic affairs	Environment protection	Housing and community amenities	Health	Recreation, culture, and religion	Education	Social Protection
Australia	15.8%	2.6%	13.9%	**48.9%**	23.1%	0.3%	**43.9%**	0.2%	1.3%
Austria	20.1%	10.3%	17.1%	**60.1%**	**34.9%**	19.1%	**52.5%**	**25.0%**	7.4%
Belgium*	18.8%	**48.1%**	11.8%	**55.5%**	**51.9%**	2.4%	**49.3%**	22.2%	6.3%
Canada**	13.0%	**35.0%**	**28.5%**	**69.0%**	**69.7%**	1.5%	**53.9%**	**47.7%**	3.3%
Czech Republic	**35.0%**	10.4%	**34.0%**	**65.6%**	**67.6%**	4.4%	**72.0%**	**74.3%**	7.5%
Denmark	19.7%	9.0%	**41.5%**	**50.9%**	**41.1%**	**98.3%**	**54.2%**	**49.0%**	**81.2%**
Estonia	**25.9%**	1.6%	24.0%	**97.7%**	**94.9%**	**30.5%**	**44.4%**	**58.0%**	5.6%
Finland*	**45.1%**	18.7%	**28.3%**	**40.3%**	**54.7%**	**83.8%**	**73.0%**	**64.6%**	23.4%
France	**31.7%**	21.1%	**44.5%**	**88.7%**	**95.6%**	1.1%	**73.4%**	**31.3%**	8.3%
Germany	23.5%	16.0%	22.8%	**60.5%**	**56.3%**	2.0%	**64.9%**	**27.1%**	12.6%
Greece*	12.4%	1.3%	12.4%	**81.3%**	**38.5%**	n/a	20.8%	1.7%	1.9%
Hungary*	20.5%	8.1%	17.6%	**52.5%**	**99.6%**	**32.4%**	**41.6%**	**64.3%**	8.7%
Iceland	17.7%	9.5%	13.8%	**46.3%**	12.4%	1.1%	**67.5%**	**58.5%**	23.6%
Ireland*	7.5%	7.3%	**27.9%**	**72.8%**	**94.7%**	0.0%	**49.7%**	22.5%	4.4%
Israel	15.6%	8.5%	17.6%	**85.7%**	**38.1%**	0.4%	**47.3%**	**28.4%**	9.5%
Italy*	**30.3%**	12.2%	**52.5%**	**85.4%**	**82.9%**	**98.5%**	**56.5%**	**28.1%**	3.8%
Korea	**57.1%**	0.0%	**47.5%**	n/a	**93.1%**	**49.2%**	**77.5%**	**109.4%**	**39.1%**
Luxembourg	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Mexico	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Netherlands	23.3%	**56.2%**	**52.2%**	**92.7%**	**85.1%**	3.3%	**84.5%**	**78.3%**	15.1%
Norway	**33.1%**	15.0%	**31.0%**	**82.0%**	**92.3%**	**27.5%**	**65.6%**	**67.4%**	22.8%
Poland	23.1%	15.8%	**45.1%**	**88.3%**	**95.8%**	**45.8%**	**82.8%**	**73.0%**	10.8%
Portugal	**27.0%**	3.5%	**27.3%**	**68.5%**	**97.8%**	5.0%	**69.6%**	10.9%	2.7%
Slovak Republic	**27.6%**	0.7%	17.9%	**58.5%**	**85.0%**	0.3%	**51.3%**	**66.3%**	4.0%
Slovenia	17.6%	7.7%	**29.8%**	**69.8%**	**72.2%**	15.2%	**55.8%**	**55.6%**	2.4%
Spain	**43.7%**	20.2%	20.5%	**69.7%**	**75.7%**	1.8%	**52.3%**	5.2%	4.0%
Sweden	**39.9%**	14.6%	**33.2%**	**61.9%**	**89.3%**	**97.2%**	**78.1%**	**76.9%**	**30.7%**
Switzerland	30.1%	26.6%	26.9%	70.2%	83.8%	12.8%	61.1%	36.5%	10.3%
United Kingdom*	18.5%	**49.2%**	**28.5%**	**55.9%**	**67.0%**	0.0%	**49.4%**	**67.4%**	22.8%
United States***	20.9%	**52.6%**	21.6%	n/a	23.7%	10.2%	**69.4%**	**51.5%**	8.2%
Mean	25.5%	17.2%	28.2%	68.4%	68.5%	23.9%	59.4%	46.5%	13.6%

Median	23.2%	11.3%	27.6%	68.8%	74.0%	5.0%	56.1%	50.2%	8.3%

Source: IMF Government Statistics Yearbook 2011.

*2009. **2007. ***From IMF Government Statistics Yearbook 2001.

Note 1: Bolded data means local government sector accounts for more than 25% of all government spending on function; i.e., it plays an important role.

Note 2: "General public services" include: executive and legislative organs, financial and fiscal affairs, external affairs; foreign economic aid; general services; basic research; R&D; others; public debt transactions; transfers of a general character between different levels of government. "Public order and safety" includes: police services; fire protection services; law courts; prisons; R&D; others. "Economic affairs" include: general economic, commercial and labor affairs; agriculture, forestry, fishing and hunting; fuel and energy; mining, manufacturing, and construction; transport; communication; other industries; R&D; others. "Environmental protection" includes: waste management; waster water management; pollution abatement; protection of biodiversity and landscape; R&D; others. "Housing and community amenities" include: housing development; community development; water supply; street lighting; R&D; others. "Health" includes: medical products, appliances and equipment; outpatient services; hospital services; public health services, R&D; others. "Recreation, culture and religion" includes: recreational and sporting services; cultural services; broadcasting and publishing services; religious and other community services; R&D; others. "Education" includes: pre-primary, primary, secondary, postsecondary, and tertiary education; education not definable by level; subsidiary services to education,; R&D, others. "Social protection" includes: sickness and disability; old age; survivors; family and children; unemployment; housing; social exclusion; R&D, others.

Note 3: Data for local government in Italy includes Italian municipalities, provinces and regions.