Regional Dimensions of the Financial and Economic Crisis

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Preface

This paper has been prepared by the European Policies Research Centre (EPRC) under the aegis of EoRPA (European Regional Policy Research Consortium), which is a grouping of national government authorities from countries across Europe. The Consortium provides sponsorship for the EPRC to undertake regular monitoring and comparative analysis of the regional policies of European countries and the inter-relationships with EU Cohesion and Competition policies. EoRPA members currently comprise the following partners:

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REGIONAL DEVELOPMENT AND POLICY IN THE CRISIS

The international economy has experienced significant difficulties in the past year, with a crisis in the financial sector, initially in the United States, spilling over to all countries and regions and triggering a serious economic recession. All regions have been affected, although to varying degrees, depending on their initial situation, their sectoral exposure to the crisis, and the response of national and regional authorities. There is considerable uncertainty over the path of recovery, despite better economic data in recent weeks, but a period of relatively low growth rates and economic adjustment seems likely.

From a policy perspective, the financial crisis and recession have demonstrated the importance of macroeconomic and regulatory policies, both nationally and, perhaps particularly, in terms of coordinated international action, both at EU level and more widely. Many European governments have included a regional dimension in their response the crisis, either by channelling additional funds through existing regional policy instruments or through other policies that explicitly target all or selected regions, or by targeting geographically concentrated sectors or activities.

THE EVOLUTION OF THE CRISIS

While the crisis began in the financial sector in the United States, it quickly developed into a wider economic recession as credit dried up, confidence deteriorated, asset prices fell and demand declined when firms and households retrenched. The European Commission estimates that world GDP will fall by -1.4 percent in 2009 (compared to an increase of 4.9 percent in 2005-07) and that the EU's GDP will fall by -4.0 percent in 2009 (compared to a rise of 2.6 percent in 2005-07). Although growth is forecast to become positive again by the third quarter of 2009, employment rates are continuing to fall, damping recovery. While the financial sector and housing market of some countries has been affected directly, in many European countries the main channel of impact has been the dramatic fall in international demand for goods and services, which has led to a significant fall in exports and private investment. Consumption has cushioned the reduction in economic activity in many countries, largely due to government intervention, but consumption has fallen in some countries which had seen credit-fuelled asset bubbles in recent years, or which have been particularly badly affected by the flight of capital from countries perceived as riskier.

INDIVIDUAL COUNTRIES' MACROECONOMIC RESPONSES

Countries' responses have varied, depending on the specific impact of the crisis and the macroeconomic situation before the crisis. However, some common elements in the governmental response can be discerned.

First, governments have provided support for the financial system, for example by injecting capital into troubled banks, by providing large-scale guarantees for bank lending, by enhancing deposit guarantees for savers and by raising capital reserve requirements. Even where banks were not directly involved in riskier borrowing and lending practices before the crisis, they have been affected by constraints on inter-bank lending and in turn have become more cautious in lending to businesses and households.

Second, central banks have loosened monetary policy, mainly by cutting nominal interest rates but in some cases also via 'quantitative easing' or the direct injection of liquidity into the financial system with the aim of raising levels of bank lending. However, in some countries outside the Euro area, central banks have been reluctant to cut nominal interest rates too hard for fear of triggering further currency depreciations.

Third, governments have allowed the 'automatic stabilisers' to work via the tax and benefit system. As the level of tax revenues falls and the level of social benefits automatically increases in a recession, these mechanisms increase demand at the level of the economy as a whole.

Last, many governments have introduced packages of discretionary fiscal measures in the form of tax cuts and additional spending aimed supporting household consumption, maintaining employment, stimulating business investment and raising public investment. However, in the countries worst affected by the crisis, the scale of such fiscal policy interventions are small and often based on the reallocation of existing resources. Indeed, some governments have already had to shift to a contractionary fiscal stance, raising taxes and cutting spending.

THE INTERNATIONAL RESPONSE IN EUROPE

There have also been significant international responses to the crisis, involving co-ordinated action between central banks and governments, for example via G20 summits, as well as the allocation of assistance to individual countries by the International Monetary Fund, the European Union, the European Bank for Reconstruction and Development and the World Bank. The European Union has also agreed the European Economic Recovery Plan, which involves a range of actions, including steps to increase the flexibility of rules, for example governing State aid, public procurement and Cohesion policy, as well as the allocation of additional funding, notably to the European Investment Bank to support SME loans and investment in green technology and infrastructure projects.

THE CRISIS AND REGIONAL DEVELOPMENT

Data on the regional impact of the crisis are limited; in most countries, up-to-date monthly or quarterly data on a regional basis are only available for unemployment rates. In many countries, these data show that the dispersion of regional unemployment rates (estimated via coefficients of variation) fell between June 2008 and June 2009, indicating that regional disparities in unemployment rates have narrowed, generally because unemployment rates have risen faster in some regions which previously had lower unemployment rates. In other countries, there has been little change in the aggregate level of regional unemployment disparities, even though there have usually been changes in the ranking of regions in terms of unemployment rates in this period.

One set of factors that is shaping the impact of the crisis on the economic development of different regions is their initial strengths and weaknesses. This includes the size of their internal market and their access to larger external markets, as well as endowments in natural resources and in physical, human and knowledge capital. The situation of individual regions is also conditioned by the broader national context. In a number of countries, structurally weaker regions are among those which have been most seriously affected by the crisis. There are also concerns that the longer-term impact of the crisis could be more serious in these regions, where the loss of even relatively small numbers of firms and jobs could have significant effects, particularly if these losses lead to reduced demand for goods and services from other local firms.

A further dimension that is shaping the impact of the crisis on specific regions is their sectoral structure. In general, a region’s vulnerability to adverse economic shocks is seen to be correlated with its sectoral specialisation, although the degree of regional specialisation has decreased in Europe since the 1950s, not least due to the expansion of public and some private services in all regions. In 2008-09, some sectors have been directly affected by the first stages of the downturn, notably financial services, export-oriented manufacturing and the construction industry, while other sectors have mainly experienced second-wave falls in demand. Regions which specialise in a narrow range of sectors are particularly vulnerable to sectoral shocks; a key concern in such regions is that the recession could permanently reduce the number of firms and jobs in core sectors, leading to a structurally lower level of output and employment even after the downturn has passed.

REGIONAL DIMENSIONS OF GOVERNMENT INTERVENTION

Although the main focus of all governments’ response to the crisis has been national rather than regional, the discretionary fiscal policies introduced by most governments include some explicit or implicit regional dimension.

In some countries, the crisis has led to the allocation of additional funding or to changes in eligibility rules in core regional policy instruments. The scale of new measures varies, with only Germany using existing regional policy instruments as a core component of central State fiscal stimulus packages. In other countries, changes are more limited, and take the form of small rises in funding allocations or shifts in eligibility requirements. A number of countries have also introduced changes in Cohesion policy programmes and have taken advantage of the changes introduced by the Commission in response to the crisis. Some countries are also taking steps to improve cooperation and to mobilise all available resources and information in order to increase the effectiveness of policy responses to local and regional difficulties. In a minority of countries, the need to release funds to address the crisis has led to a reallocation of resources away from regional policy and towards other policy instruments. Lastly, governmental authorities in some countries argue that the recession should not be allowed to stimulate shifts in regional policy because it is a long-term structural policy which should not be used to address cyclical problems.

Many countries are channelling additional fiscal resources through the regional or local level outside the sphere of active regional policy. In some cases, funds are being targeted at particular locations that are strongly affected by the crisis, for example due to the closure of large businesses or plants. In others, new central State resources are being allocated to all regions, often in the form of new funding for local authorities, particularly for investment in local infrastructure. Moreover, some regional or local authorities are developing their own responses to the crisis, usually by drawing on new resources from the central State or by reorienting existing funding.

Other interventions have an implicit regional dimension, as they focus on sectors or activities that are more prevalent in some regions than in others (but aim primarily to support national economic growth and employment). Most countries have introduced some measures which target particular sectors (notably the financial services, automotives, construction and renewable energies sectors) and in many countries these sectors are regionally concentrated. Governments have also allocated additional funding to activities such as investment in public infrastructure and R&D, which are likely benefit some regions more than others. However, some governments are already cutting some components of public infrastructure spending, which is likely to have a negative effect on the development of individual regions or localities.

LOOKING TO THE FUTURE

There remains significant uncertainty over the shape of economic recovery. Although the EU as a whole is estimated to have moved out of recession by the third quarter in 2009, it is not yet clear whether this recovery can be sustained, particularly as it is at present driven by expansionary fiscal and monetary policies. There remain questions over the functioning of financial markets and some individual banks, leading to ongoing constraints on bank lending to businesses and households. Persistently weak demand also means that further bankruptcies and job losses are likely, and this may continue to mute household spending. International discussions are underway on exit strategies from existing expansionary macroeconomic policies. There are concerns that fiscal and monetary policies should not be tightened too soon, nor in all countries at once, and also that measures are in place to address the imbalances generated by these expansionary policies.

A further issue is whether the crisis will stimulate longer-term structural changes in the international economy. In particular, without a significant recovery in private sector activity and associated tax revenues, the level of public indebtedness is likely to lead to higher taxes and/or lower public spending in many countries, with potential knock-on effects on private sector activity. Moreover, it remains to be seen whether significant changes will be seen in the financial sector, whether in the form of stricter regulation, shifts in the strategies of financial institutions, or increased risk aversion on the part of businesses and households. Where economic growth has been fuelled by the rapid expansion of credit in recent years, such changes could have long-term effects on growth rates. Further uncertainties relate to the possible effects of the crisis on EU integration, as well as on the broader international rebalancing between net creditor and net debtor countries at a global level.

The impact of the crisis on different regions is likely to vary significantly, depending on the national economic situation, on the regions' initial economic situation and on their sectoral structure. Although the crisis has been rooted in innovation and internationalisation in the financial services sector, there is as yet no evidence that the (mainly metropolitan) regions specialising in this sector have been particularly badly affected, nor that the economic importance of these regions is diminishing. Instead, the strongest impact has so far been seen mainly in structurally weaker regions and in manufacturing regions.

The impact of the crisis on regional policy is also likely to vary between countries. While regional policy has been an element of the response to the crisis in some countries, funding for regional policy instruments has been cut in others. It is likely that funding for regional development will be constrained in many countries in the medium-term, along with other public spending categories, as governments endeavour to reduce public indebtedness. In such a context, policy-makers may need to find ways of increasing the effectiveness and value-for-money of regional policy, for example by further emphasising collaborative, bottom-up approaches that mobilise existing actors and resources.

REGIONAL DIMENSIONS OF THE FINANCIAL AND ECONOMIC CRISIS

1. INTRODUCTION

Significant shifts have occurred in the international economy in the past year, as deep-rooted problems have emerged in the financial system, spilling over into all countries and economic sectors. Although all European regions have been affected to some degree by the financial crisis and subsequent economic recession, the most severe difficulties have been seen where there were existing vulnerabilities, either because of structural economic weaknesses or because of strong sectoral specialisation. The crisis has raised many questions about the functioning of the financial and economic system, but has also demonstrated the importance of the role of government and of coordinated international action, both at EU level and more widely. The responses of European governments illustrate the varied ways in which the regional dimensions of economic difficulty can be addressed, either through active regional policy, or through other policies that explicitly target all or selected regions, or through the indirect regional effects of sectoral or thematic policies. Although brighter economic data has emerged in recent weeks, there remains considerable uncertainty over the path of recovery and over the strategies that governments will need to pursue in order to facilitate a return to sustained growth and employment creation.

Section 2 provides an overview of the evolution of the crisis, focusing particularly on European countries. Section 3 examines the macroeconomic responses of European countries to the crisis, including support for the financial sector, monetary policy and fiscal policy. Section 4 considers the international response to the crisis, particularly the interventions of European Union (EU) authorities, as well as international financial institutions such as the International Monetary Fund (IMF). Section 5 then turns to the regional dimension and explores the impact of the crisis on regional economic development. Section 6 examines how government responses to the crisis are affecting regions, while Section 7 concludes the paper.

2. THE EVOLUTION OF THE CRISIS

2.1 The roots of the crisis

The economic recession of 2008-09 began with a financial crisis, which resulted from the bursting of a property bubble in the United States (US), with difficulties already emerging as early as 2006. The bubble had been boosted by the issuing of so-called ‘sub prime’ mortgages at low interest rates to less credit-worthy customers on lower quality properties. These mortgages were then securitised through different financial derivatives and sold on to a range of financial institutions. The securitisation was intended to spread the risk involved in sub prime mortgages, and the ratings agencies often gave the securities very high scores. While house prices continued to rise, significant profits were made in the development and trading of these products. However, when prices began to fall, as defaults on sub prime mortgages grew and housing supply overtook demand, the whole system began to unravel.

Many financial institutions found themselves overexposed to the consequences of the collapse as a result of the rapid growth in the development and trading of complex, mortgage-backed financial instruments and the high levels of borrowing taken on to finance trading in these products . The complex nature of these instruments also made it difficult to make a clear assessment of the true exposure of financial institutions. Those institutions that were heavily reliant on raising funds in wholesale money markets were particularly vulnerable as liquidity began to dry up when confidence fell.

The real and perceived weaknesses of many financial institutions led to a rapid loss of confidence (which was exacerbated by domino effects in integrated global financial markets); a severe contraction in liquidity (as lenders became very risk averse - this was a particular problem in the inter-bank market); and the insolvency or near-insolvency of a number of institutions at the core of the financial system (as asset valuations were marked down sharply). The default of the investment bank Lehman Brothers and the rescue of the insurance company AIG by the US government in September 2008 marked a watershed in the crisis.

2.2 From financial to economic crisis

The financial crisis quickly developed into a wider economic recession as credit dried up, confidence deteriorated, asset prices fell (and with them the value of savings and pension funds), and demand declined when firms and households retrenched, cutting spending and raising saving levels. This was particularly pronounced in countries, such as the US and United Kingdom (UK), where household debt had increased significantly in the previous decade as rising house prices helped to fuel consumption.

In this environment, one firm’s cost-cutting and stock reduction quickly became another firm’s lost revenue as a vicious cycle of decline developed. The crisis rapidly transformed economic expectations, leading to further impacts on confidence as firms and households struggled to adapt and plan for the future.

The European Commission estimates that world GDP will fall by -1.4 percent in 2009, compared to an increase of 4.9 percent in 2005-07 (see Table 1). Similarly, the volume of world trade is estimated to fall by -11.5 percent in 2009, compared to an increase of 8.3 percent in 2005-07. Despite differences between countries, none has been completely immune from the crisis as the global nature of the problem is one of the most significant features of the crisis. In the past some countries have avoided cyclical downturns that have afflicted others and have helped to stimulate economic recovery. Nevertheless, the transmission mechanisms have varied between countries. In ‘debtor countries’ with large current account deficits (particularly the US but also, for example, the UK), the initial impact occurred through the drying up of credit, which led to falls in consumption and investment, whereas in ‘creditor countries’ with large current account surpluses (especially China and other emerging markets, but also, for example, Germany) saw a contraction in output as export demand fell.

Table 1: World GDP, unemployment, trade and current accounts, 2005-07 and 2009

	GDP at constant prices, average annual % change		Exports of goods and services, average annual % change		Current account balance (in billion US dollars)P	
	2005-07	2009	2005-07	2009	2005-07	2009
Industrialised countries	2.7	-3.6	6.5	-12.8	-754.8	-760.6
EU	2.6	-4.0	6.5	-12.7	-62.4	-146.7
USA	2.5	-2.9	8.1	-14.0	-818.8	-640.2
Japan	2.1	-5.3	8.3	-18.4	93.3	85.6
CIS	7.8	-3.8	8.7	-7.8	131.2	59.9
Middle East & North Africa	6.7	1.5	5.7	-8.3	333.3	52.3
Asia (excluding Japan & Middle East)	9.0	3.3	14.3	-9.6	305.7	489.0
Latin America	5.2	-1.6	7.4	-11.0	83.7	-3.4
Sub-Saharan Africa	3.7	-3.7	2.2	-9.2	39.2	24.4
World	4.9	-1.4	8.3	-11.5	138.1	-138.4

Source: DG Economic and Financial Affairs (2009b).

2.3 The recession in Europe

Although all countries have been affected by the crisis, the extent of the downturn and its economic impact are partly shaped by their initial situation. In general, difficulties are more severe in countries with existing imbalances, such as overvalued asset markets, low domestic savings rates, high government indebtedness or high external deficits.[1] Countries with more robust economies before the crisis, characterised by solid economic growth, low unemployment levels, as well as current account and government surpluses, should be better able to weather the storm, although they are far from immune.

The European Commission's May 2009 forecast showed significant falls in economic growth in the second half of 2008 and in 2009 (see Table 2).[2] The strongest declines in 2009 were forecast for Latvia (-13.1 percent), Lithuania (-11.0 percent) and Estonia (-10.3 percent) but negative growth was forecast for all countries except Cyprus, with the EU as a whole forecast to see a fall of -4.0 percent in GDP. The European Commission published a revised economic forecast for the EU in mid September 2009, based on an analysis of the seven major Member State economies (France, Germany, Italy, Netherlands, Poland, Spain, UK), but did not significantly change its forecast compared to its more comprehensive analysis of May 2009 (see Table 3).[3] Although the figures for the second and third quarter of 2009 are

[1] DG Economic and Financial Affairs (2009a) Public Finances in EMU, *European Economy 5*.

[2] DG Economic and Financial Affairs (2009b) Economic forecast: spring 2009, *European Economy* 3.

[3] DG Economic and Financial Affairs (2009c) Interim forecast: September 2009, *European Economy*.

better than expected, the figures for the first quarter are worse, so that there is little change in the forecast for the year 2009 as a whole.

Table 2: Economic growth, investment, unemployment and saving, 2005-07 and 2009

	GDP at constant prices (average annual change)		GFCF (average annual change)		Unemployment rate		Private saving as % of GDP	
	2005-07	2009	2005-07	2009	2005-07	2009	2005-07	2009
Austria	3.1	-4.0	3.1	-11.6	4.8	6.0	23.6	25.8
Belgium	2.5	-3.5	5.9	-6.2	8.1	8.5	22.6	23.4
Bulgaria	6.2	-1.6	19.5	-12.7	8.7	7.3	7.4	8.9
Cyprus	4.1	0.3	7.1	1.7	4.6	4.7	9.6	7.1
Czech Rep	6.4	-2.7	4.3	-5.1	6.8	6.1	20.4	18.9
Denmark	2.3	-3.3	5.8	-9.1	4.2	5.2	18.3	20.9
Estonia	8.4	-10.3	10.8	-20.7	6.2	11.3	15.3	19.1
Finland	3.9	-4.7	5.2	-8.5	7.7	8.9	20.1	20.0
France	2.1	-3.0	4.7	-5.9	8.9	9.6	18.1	18.6
Germany	1.8	-5.4	3.3	-10.3	9.6	8.6	23.3	22.6
Greece	3.7	-0.9	4.5	-5.6	9.0	9.1	11.7	10.1
Hungary	2.6	-6.3	1.3	-10.6	7.4	9.5	19.5	17.2
Ireland	6.0	-9.0	4.2	-29.2	4.5	13.3	18.2	22.8
Italy	1.3	-4.4	1.7	-12.3	6.9	8.8	18.7	16.6
Latvia	10.9	-13.1	14.3	-24.0	7.2	15.7	14.1	32.7
Lithuania	8.2	-11.0	16.5	-22.1	6.1	13.8	13.0	21.4
Luxembourg	5.6	-3.0	3.4	-2.3	4.5	7.0	24.4	20.8
Malta	3.5	-0.9	3.4	3.4	6.9	7.1	14.8	15.1
Netherlands	2.9	-3.5	5.1	-7.6	3.9	3.9	25.1	24.6
Poland	5.3	-1.4	11.9	-6.2	13.8	9.9	17.5	19.2
Portugal	1.3	-3.7	0.5	-14.4	7.9	9.1	14.0	13.7
Romania	5.9	-4.0	20.7	-6.5	7.0	8.0	12.0	20.1
Slovakia	8.3	-2.6	11.3	-5.2	13.6	12.0	20.8	21.9
Slovenia	5.6	-3.4	7.8	-13.9	5.8	6.6	23.0	24.1
Spain	3.7	-3.2	6.4	-14.7	8.7	17.3	15.5	21.6
Sweden	3.3	-4.0	8.5	-14.6	6.8	8.4	20.4	23.3
UK	2.9	-3.8	4.5	-12.3	5.2	8.2	15.3	19.4
Euro area	2.4	-4.0	4.3	-10.4	8.3	9.9	19.9	20.3
EU-27	2.6	-4.0	4.9	-10.5	8.1	9.4	19.0	20.2
Norway	2.7	-3.4	10.9	-9.8	3.6	3.1	18.6	14.6

Source: DG Economic and Financial Affairs (2009b) and own calculations using DG Economic and Financial Affairs' AMECO database.

Although labour market indicators typically lag other demand-related indicators, many countries were seeing falling employment by early or mid 2009. The impact on employment has been muted in some countries by the extensive use of short-time working and similar measures (e.g. Austria, Finland, France, Germany, Italy, Netherlands). In the longer term, fiscal constraints in a number of countries are likely to act as a further obstacle to employment creation. According to the European Commission's May 2009 forecast, the fall in employment will be most severe in Estonia, Ireland, Latvia and Lithuania (over -10 percent in 2009-10 each case). The impact of the crisis on the labour market in Spain has been particularly strong, with the unemployment rate forecast to rise from 8.7 percent in 2005-07 to 17.3 percent in 2009. This is partly due to the continued rise in the number of the economically active population in Spain, largely due to high levels of immigration in recent years. In addition, a large percentage of workers are on temporary contracts, which allows employers to lay off staff easily. Moreover, Spain's economic growth in recent years has been based on a boom in construction and related sectors, but demand has now collapsed due to the direct effects of the credit crunch, so that the construction sector accounts for over 60 percent of the fall in employment.

Table 3: Real GDP growth in 2009, forecasts of May 2009 and September 2009

	Quarterly GDP forecast 2009 (% change, quarter-on-quarter)				Annual GDP forecast 2009 (% change, year-on-year)	
	2009/1	**2009/2**	**2009/3**	**2009/4**	**May 2009**	**September 2009**
France	-1.3	0.3	0.4	0.4	-3.0	-2.1
Germany	-3.5	0.3	0.7	0.1	-5.4	-5.1
Italy	-2.7	-0.5	0.2	0.1	-4.4	-5.0
Netherlands	-2.7	-0.9	-0.4	0.0	-3.5	-4.5
Poland	0.3	0.5	0.1	0.0	-1.4	1.0
Spain	-1.6	-1.1	-0.4	-0.2	-3.2	-3.7
UK	-2.4	-0.7	0.2	0.5	-3.8	-4.3
Euro area	-2.5	-0.1	0.1	0.1	-4.0	-4.0
EU-27	-2.4	-0.2	0.2	0.1	-4.0	-4.0

Source: DG Economic and Financial Affairs (2009c)

The financial sector in all countries has been affected by the crisis, although to varying degrees. Differences are partly due to the scale of the financial sector in different countries (with Eurostat data showing that the financial and property services sector accounts for over 10 percent of employment in Luxembourg and around five percent in Cyprus and Ireland, but less than 1.5 percent of employment in Lithuania and Romania) but also due to the extent to which banks were directly involved in riskier lending and borrowing practices. Banks in a number of countries (e.g. Belgium, France, Germany, Ireland, Latvia, Netherlands and UK) have needed State intervention to survive, often leading to a degree of restructuring and job losses. In the UK, for example, the Confederation of British Industry estimates that over 40,000 jobs will be lost in the sector between October 2008 and June 2009. In other countries (e.g. Austria and Sweden), domestic difficulties are limited but banks are facing a degree of risk due to their activities in central European and Baltic markets, where economic problems imply a greater risk of default on household and business loans.[4] Lastly, the financial sector of some countries has experienced spillover effects as international inter-bank lending has been squeezed but there have been no severe difficulties in individual banks. Banking problems have been more limited in countries which had already introduced stringent regulatory frameworks following earlier crises (Finland, Norway), or where banks did not engage in higher risk lending (Italy, Poland). A degree of normality was seen to have returned to the international financial system by September 2009 but there were ongoing uncertainties over the longer-term losses in individual banks.[5]

The decrease in bank liquidity, linked to the tightening of rules on bank reserve ratios and concerns over debt defaults, has led to constraints on bank lending to businesses and households. The knock-on effects of the credit shock have been limited to an extent in countries with lower business and household debt ratios, without asset price bubbles, and with more conservative lending practices (e.g. Finland, Norway, Sweden). However, effects can be serious even in countries with these characteristics if firms depend strongly on bank credit rather than other sources of financing (e.g. Italy).

[4] OECD (2008) *Economic Surveys: Sweden*, Paris; OECD (2009a) *Economic Surveys: Austria*.

[5] European Commission (2009c) *Op. Cit*.

Table 4: Inflation, public indebtedness and current account balance, 2005-07 and 2009

	Harmonised index of consumer prices (average annual change)		General government balance as % of GDP		General government gross debt as % of GDP		Current account balance as % of GDP	
	2005-07	2009	2005-07	2009	2005-07	2009	2005-07	2009
Austria	2.0	0.5	-1.2	-4.2	61.7	70.4	2.6	2.7
Belgium	2.2	0.3	-0.9	-4.5	88.0	95.7	2.6	-2.0
Bulgaria	7.0	3.9	1.7	-0.5	23.4	16.0	-17.5	-18.8
Cyprus	2.1	1.1	-0.1	-1.9	64.4	47.5	-8.2	-13.9
Czech Rep	2.2	1.1	-2.3	-4.3	29.4	33.7	-1.8	-3.2
Denmark	1.8	0.9	5.0	-1.5	31.7	32.5	2.6	0.4
Estonia	4.9	0.6	2.4	-3.0	4.1	6.8	-15.0	-1.1
Finland	1.2	1.3	4.0	-0.8	38.6	39.7	4.3	1.4
France	1.8	0.2	-2.6	-6.6	64.6	79.7	-2.2	-4.3
Germany	2.0	0.3	-1.7	-3.9	66.8	73.4	6.4	3.6
Greece	3.3	1.8	-3.8	-5.1	96.5	103.4	-12.0	-11.5
Hungary	4.8	4.4	-7.3	-3.4	64.4	80.8	-7.1	-5.0
Ireland	2.6	-1.3	1.6	-12.0	25.8	61.2	-4.0	-1.8
Italy	2.1	0.8	-3.0	-4.5	105.3	113.0	-1.7	-2.6
Latvia	7.7	4.6	-0.4	-11.1	10.7	34.1	-19.2	-1.5
Lithuania	3.9	3.6	-0.6	-5.4	17.8	22.6	-10.9	-1.9
Luxembourg	3.1	-0.6	1.7	-1.5	6.6	16.0	10.4	6.1
Malta	1.7	1.0	-2.6	-3.6	65.2	67.0	-8.0	-7.6
Netherlands	1.6	1.4	0.2	-3.4	48.3	57.0	9.0	5.7
Poland	2.0	2.6	-3.4	-6.6	46.6	53.6	-3.1	-4.7
Portugal	2.5	-0.3	-4.2	-6.5	63.9	75.4	-10.0	-9.8
Romania	6.7	5.8	-2.0	-5.1	13.6	18.2	-11.0	-7.4
Slovakia	2.8	2.0	-2.7	-4.7	31.3	32.2	-7.0	-7.5
Slovenia	2.9	0.7	-0.7	-5.5	25.7	29.3	-2.7	-4.6
Spain	3.2	-0.1	1.7	-8.6	39.6	50.8	-8.9	-6.9
Sweden	1.3	1.6	2.9	-2.6	45.8	44.0	7.9	7.0
UK	2.2	1.0	-2.9	-11.5	43.3	68.4	-3.0	-2.8
Euro area	2.2	0.4	-1.5	-5.3	68.1	77.7	0.2	-1.4
EU-27	2.3	0.9	-1.5	-6.0	60.9	72.6	-0.4	-1.6
Norway	1.4	1.4	17.1	13.6	50.7	n/a	16.5	7.0

Source: DG Economic and Financial Affairs (2009b) and AMECO database.

Policy-makers in various countries (e.g. France, Germany, Norway) report increased business demand for public loans and grants as banks have tightened business lending and have raised interest rates on business loans. Business investment has fallen in all partner countries, with the reduction in investment seen most strongly in relation to gross fixed capital formation in equipment,[6] partly due to tighter credit conditions but also due to the fall in demand for goods and services from other businesses and from households. The reduction in private investment has been particularly strong in Sweden, as well as in Austria, Germany, Finland, Italy, the Netherlands and Poland.[7]

All countries have been strongly affected by the negative impact of the downturn on demand for exports, not least in countries where net exports have played an important part in overall economic growth in recent years (e.g. Germany, Finland, Italy and Poland). The downturn in export demand has had negative knock-on effects, as exporters have cut their demand for inputs and services, leading to further falls in employment and investment. Ongoing difficulties are likely to be seen in countries (e.g. Austria, Sweden, Finland) with strong trade links with those central European countries undergoing very severe recessions. Countries outside the Euro area have generally seen their currencies depreciate relative to the Euro (see Table 5), leading to greater export competitiveness but also more expensive imports. In contrast, exporters in those Euro area countries which also serve external export markets have experienced difficulties; for example, Ireland has seen a loss of export competitiveness in UK markets as Sterling has depreciated relative to the Euro.

Table 5: Exchange rates relative to the Euro, July 2008- July 2009

	July 2008	October 2008	January 2009	April 2009	July 2009
Czech Rep.	23.95	24.22	27.88	26.70	25.57
Hungary	231.26	261.43	299.08	289.73	266.53
Poland	3.21	3.60	4.46	4.40	4.16
Romania	3.51	3.68	4.31	4.19	4.22
Sweden	9.46	9.91	10.61	10.69	10.34
UK	0.79	0.79	0.90	0.89	0.86
Norway	8.02	8.53	8.89	8.72	8.72

Note: Through their membership of ERM II, the exchange rates of Bulgaria, Denmark, Estonia, Latvia and Lithuania are effectively fixed to the Euro and have not fluctuated during this period.
Source: European Central Bank.

Further external factors have affected specific countries. The transport and logistics sector is of particular importance in the Dutch economy, for example, with significant transit traffic via Schiphol airport and Rotterdam's port, and these have been affected by the overall decline in cargo and passenger transport. The impact of the recession on Europe's tourism sector in summer 2009 is as yet unclear but results for the second quarter of 2009 show a fall of around 10 percent in international arrivals in western and southern Europe, and a fall of around 13 percent in central and eastern Europe.[8] Figures, however, vary

[6] European Commission (2009c) *Op. Cit.*

[7] DG Economic and Financial Affairs (2009d) *The EU's response to support the real economy during the economic crisis: an overview of Member States' recovery measures*, European Economy Occasional Papers 51.

[8] European Travel Commission (2009) *European Tourism 2009 – Trends & Prospects, Quarterly report Q2 2009,* Brussels.

across countries, with a much lower fall in the second quarter seen for example in Austria. Moreover, increases in oil and gas prices in 2009 have had positive effects in Norway, not only by ensuring ongoing demand for oil exploration, but also by providing resources which reduce concerns over future budgetary constraints.

Overall, the impact on EU-wide consumption has been relatively limited (with consumption estimated to have fallen by -0.75 percent in the last quarter of 2008 and the first quarter of 2009) due to disinflation and to government support via automatic stabilisers and discretionary fiscal measures including support for short-time working.[9] However, the picture varies across countries, depending not least on the extent of credit-fuelled booms in recent years. Consumption has fallen most strongly in some central European countries (notably Hungary, Latvia and Lithuania), as well as in Ireland.[10] In contrast, consumption has fallen very little in countries such as Austria, Germany and Italy, where households have a strong saving propensity and where consumption was already constrained before the crisis. However, consumption in all countries has been affected by precautionary saving in the face of economic uncertainty and concerns over future job losses. The impact of the fall in consumption is generally more serious in the case of lower income households and those in precarious employment, especially in countries (e.g. Italy) where welfare and income support systems are less generous or do not cover workers on more flexible employment contracts.

Falls on previously overvalued housing markets have led to a significant reduction in activity in the construction sector and have contributed to lower consumption in some countries (e.g. Estonia, Ireland, Latvia, Spain, UK). The impact on aggregate demand has been particularly strong where housing booms were fuelled by high levels of household debt in recent years. In a number of central European countries, difficulties have emerged as the depreciation of domestic currencies has had a severe effect on the many households which took out mortgages in foreign currencies (notably Euros, U.S. dollars or Swiss francs) due to the pre-crisis availability of loans at lower interest rates. Other countries (e.g. Finland, France) have also seen strong rises in house prices in recent years but only a limited impact on household consumption, not least because of stricter lending conditions on mortgages and household credit.[11] In these countries, the main effect of constraints on mortgage lending has been reduced activity in the construction sector.

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[9] European Commission (2009c) *Op. Cit.*

[10] European Commission (2009b) *Op. Cit.*

[11] OECD (2009b) *Economic Surveys: France*.

Box 1: Central Europe and the Baltic countries

The impact of the recession has varied considerably across the ten central European and Baltic States which joined the EU in 2004 and 2007. Effects have been limited in Poland, where the main impact has been felt in terms of constraints on bank lending to firms and households. In the Czech Republic, Slovakia and Slovenia, difficulties have mainly been due to the fall in demand for manufacturing exports and the reduction in private investment including foreign direct investment. Other countries, however, have been affected more seriously (Bulgaria, Estonia, Latvia, Lithuania, Hungary, Romania). All have seen solid real economic growth in recent years, fuelled by access to EU markets and inflows of foreign capital, which led to the expansion of investment and consumption, often based on credit denominated in foreign currencies, and in some countries leading to a credit-fuelled property boom. However, the financial crisis saw a 'flight to safety', with foreign capital pulling out of countries perceived as riskier, and the emergence of liquidity constraints as foreign banks instituted restrictions on cross-border lending.

In countries with flexible exchange rates (Czech Republic, Hungary, Poland, Romania), the flight of foreign capital led to currency depreciations relative to the Euro. While this has helped countries' export competitiveness, as well as their attractiveness to foreign investors, it has also raised the price of imports, fuelling inflation, and, even more importantly, has increased the level of business, household and aggregate debt where this is denominated in foreign currencies. Some countries (e.g. Czech Republic, Poland) have been concerned that monetary loosening could lead to further depreciations and so have aimed mainly to respond to the crisis via expansionary fiscal policy. However, Hungary and Romania have been more seriously affected and have had to request international assistance, while also introducing contractionary fiscal policies.

In contrast, Slovakia and Slovenia have enjoyed a degree of protection from uncertainty by their membership of the Euro area (which was in any case enabled by a lack of external and internal imbalances). However, these countries must now maintain their international competitiveness via ongoing real productivity gains rather than currency depreciations.

A number of other countries had previously pegged their exchange rates to the Euro through membership of ERM II (Bulgaria, Estonia, Latvia, Lithuania). All have been strongly affected by the recession, which has ended the credit-based booms of recent years and led to a fall in exports. Governments have been determined to maintain fixed exchange rates with the Euro (partly due to high domestic borrowing in foreign currencies) and are also endeavouring to keep public indebtedness low with a view to entering the Euro area as soon as possible. This means that adjustment is occurring through falling costs and wages, as well as productivity gains. Fiscal policy has contracted, with governments cutting public sector salaries, pensions and welfare benefits, and raising taxes.

3. INDIVIDUAL COUNTRIES' MACROECONOMIC RESPONSES

3.1 Common policy responses

The policy response across the world has had two main goals:

- to stabilise the banking sector and the financial system in order to prevent collapse, to rebuild confidence and to ensure sufficient liquidity to finance recovery;

- to rebuild business and consumer confidence and to stimulate consumption and investment in order to prevent recession from turning into depression.

The responses of individual governments to the crisis have been shaped in part by the degree and character of the downturn's impact on individual countries, but also by the macroeconomic situation of each country before the crisis. Countries with low levels of government indebtedness and effective regulatory frameworks before the crisis have been better placed to respond effectively. Most governments have introduced a series of measures or packages as the downturn has progressed, sometimes over a period of months from late 2008 to mid 2009. The active responses of governments can be divided into three main categories: support for the financial sector and financial system; monetary policy intervention; and discretionary fiscal policy targeted on the real economy. In addition, governments have allowed the so-called 'automatic stabilisers' to operate, whereby tax receipts fall and welfare payments rise in a downturn, thus providing further government support for aggregate demand.

3.2 Support for the financial system

Government action to stabilise financial markets and build confidence has included a range of measures, which have varied across countries, depending on the severity of the impact on the financial sector. Some governments have allocated public grants or loans to banks (sometimes involving part or full public ownership on a temporary basis), while many more have provided large-scale guarantees for the credit of banks and other lenders. The aim has been to increase liquidity by facilitating inter-bank lending and also bank lending to firms and households. In addition, governments have increased the level and scope of deposit guarantees for savers in order to ensure confidence in the banking system and protect households. In some countries, stricter bank regulation has been introduced and banks' capital reserve requirements have been raised. Some governments have also created so-called 'bad banks' to take on the impaired assets of banks in difficulty. By mid 2009, attention had shifted to the potential need for structural reforms and regulatory changes in the financial sector, with the Group of 20 aiming to reach international agreement on bank regulation.[12]

[12] Financial Times (2009) *Hurdles remain for G20 pact*, 6 September 2009.

Table 6: Public intervention in the banking sector, percentage of GDP

	Capital injections	Guarantees	Impaired assets relief	Liquidity and bank funding	Total
Austria	5.0	25.7	0.4	1.6	32.8
Belgium	5.3	76.6	10.1	n/a	92.0
Bulgaria					
Cyprus					
Czech Rep					
Denmark	6.1	253.0		0.3	259.4
Estonia					
Finland		27.7			27.7
France	1.2	16.6	0.2		18.1
Germany	4.4	18.6	1.4		24.4
Greece	2.0	6.1			11.4
Hungary	1.1	5.9		3.3	7.1
Ireland	6.6	225.2			231.8
Italy	1.3	n/a			n/a
Latvia	1.4	25.7		10.9	37.9
Lithuania					
Luxembourg	6.9	12.4		0.9	20.2
Malta					
Netherlands	6.4	34.3	3.9	7.5	52.0
Poland					
Portugal	2.4	10.0			12.5
Romania					
Slovakia					
Slovenia		32.8			32.8
Spain		9.3		2.8	12.1
Sweden	1.6	48.5		0.1	50.2
UK	3.5	21.7		16.4	41.6
EU27	2.6	24.8	0.8	2.9	31.2
Norway	6.5				

Note: Approved measures cut-off date 17 July 2009; effective total is provisional, cut-off date mid-May.
Source: DG Competition (2009) DG Competition's review of guarantee and recapitalisation schemes in the financial sector in the current crisis, 7 August. Available at: http://ec.europa.eu/competition/state_aid/legislation/review_of_schemes_en.pdf; Own calculations for Norway based on EFTA Surveillance Authority decision no 205/09/COL and Eurostat data.

The level of State support for the financial sector varies significantly between countries. The highest figures (well over 200 percent of GDP) are seen in Denmark and Ireland, where State assistance almost exclusively taking the form of bank guarantees (see Table 6). The scale and focus of government funding for the sector depends in part on the extent of difficulties faced by domestic banks, with high levels of capital injections for example often seen where public resources have been needed to recapitalise individual banks.

However, some countries, particularly those with small open economies, have had to allocate significant public funding even when domestic banks are fundamentally sound. A further important factor affecting the level and focus of intervention has been the state of public finances before the crisis; where public indebtedness was already high, governments have had less room for manoeuvre in responding to the crisis.

3.3 Monetary policy

The European Central Bank (ECB) and the central banks of countries outside the Euro area have used monetary policy instruments with the aim of stimulating bank lending and economic activity. Intervention has included reductions in nominal interest rates (as shown in Table 7). In addition, the UK's central bank (Bank of England) has undertaken 'quantitative easing' with the aim of injecting liquidity into the financial system. This involves the purchase of government and corporate bonds from financial institutions via open market operations; by providing banks with additional funds, quantitative easing should in principle raise levels of bank lending.

Although all central banks in the EU and Norway have introduced some interest rate cuts since autumn 2008, rates remain higher in Hungary and Romania than in, for example the Euro area. This is largely because of concerns that further interest rate cuts could add to existing downward pressure on the currencies of these countries, which have already seen significant currency depreciations since mid 2008. Although a fall in the exchange rate could raise their export competitiveness, there are concerns over the effects of currency volatility, as well as the potential impact on firms and households with debt denominated in foreign currencies, and possibly also on inflation in countries with strong openness to imports (although inflation rates are generally muted due to the broader effects of the recession).

Table 7: Central Bank policy (repo or base) interest rates, July 2008-July 2009

	July 2008	October 2008	January 2009	April 2009	July 2009
ECB	4.25	3.75	2.00	1.25	1.00
Czech Rep.	3.75	3.50	2.25	1.75	1.50
Denmark	4.60	5.50	3.00	2.00	1.55
Hungary	8.50	11.50	9.50	9.50	8.50
Poland	6.0	5.90	4.80	2.80	3.10
Romania	10.00	10.25	10.25	10.00	9.00
Sweden	4.50	3.75	2.00	0.50	0.25
UK	5.00	4.50	1.50	0.50	0.50
Norway	5.75	5.45	3.00	2.00	1.25

Source: Central Banks' websites.

3.4 Fiscal policy

The fiscal response to the crisis has had two main components: first, the so-called automatic stabilisers and, second, discretionary fiscal policy. Automatic stabilisers operate through the tax and benefit system, as the level of tax revenues falls and the level of social benefits increases in a recession (and vice versa in an economic upturn). The stabilisers should therefore act counter-cyclically and smooth aggregate demand over the business cycle. Difficulties can emerge, however, if governments do not build up a surplus during the good times which can subsequently be run down in the bad times. Discretionary fiscal measures in response to the crisis include support for household consumption, private investment, labour market adjustment and public investment.

There are significant international differences in the scale of the fiscal policy response and, in particular, in the extent to which countries rely on automatic stabilisers or different components of discretionary fiscal policy.[13] In general, countries with larger automatic stabilisers have less need for large discretionary responses; this partly explains why the discretionary fiscal stimulus is smaller in the EU (1.1 percent of GDP in 2009 and 0.7 percent in 2010) than in the United States (2.1 percent of GDP in 2009 and 2.4 percent in 2010).[14] In the EU and Norway, the strongest response in terms of discretionary fiscal policy is seen in Austria, Finland, Germany, Spain and Sweden (see Table 8).

The scale of the discretionary fiscal policy response also reflects differences in the impact of the crisis on individual countries, as well as their capacity to loosen fiscal policy given existing levels of public indebtedness.[15] In the EU, gross government debt as a share of GDP is forecast to rise from around 61 percent in 2005-07 to over 72 percent in 2009 (see Table 4), with debt levels over 100 percent of GDP in Greece and Italy, and over 70 percent of GDP in Austria, Belgium, France, Germany, Hungary and Portugal. Increases in general government deficits have led the European Commission to institute Excessive Deficit Procedures (under Article 104 of the EU Treaty) in relation the UK (June 2008), France, Latvia, Ireland, Greece and Spain (all February 2009), and Poland, Romania, Lithuania and Malta (all May 2009).

While most European countries are pursuing expansionary fiscal policies, constraints are already apparent in a number of countries. The discretionary fiscal stimulus in countries such as Bulgaria, Hungary, Lithuania and Romania is very low due to the severity of economic difficulties, so that governments are reorienting existing resources to support business and household demand, rather than allocating additional new resources. In Hungary, for example, its initial response in November 2008 was based on the restructuring of Cohesion policy and EU Rural development programme funding, while its second package in February 2008 released funds for public infrastructure spending and income tax cuts by raising VAT rates and cutting pensions and social welfare programmes.

Constraints are also evident in some countries which have introduced relatively large fiscal stimulus packages. Ireland, for example, is raising income tax rates on high earners, as well as social insurance contributions, VAT rates and capital gains tax rates, while also cutting public sector salaries and pensions. The government is considering further significant cuts

[13] A. Fatas (2009) *The effectiveness of automatic stabilizers*, IMF Workshop on Fiscal Policy, 2 June.

[14] DG Economic and Financial Affairs (2009b) *Op. Cit.*, p.45.

[15] IMF (2009a) *Global economic policies and prospects*, IMF Staff Note to the G20 Meeting of the Ministers and Central Bank Governors, March 13–14 2009, London.

in public employment and social welfare payments[16] but is also trying to increase its comparative advantage for innovative enterprise, by focusing public investment on the most productive projects, retaining low corporate taxes, increasing R&D tax credits, and raising tax relief.

Similarly, both Italy and the UK have taken steps to offset the fiscal impact of some measures by cutting other public spending categories or increasing other revenue sources. Italy has introduced new taxes, an increase in the minimum retirement age for women, measures relating to fiscal evasion, and a reduction in funding for domestic regional policy. The UK has announced a reduction in the personal income tax allowance for people with incomes over £100,000 from April 2010, as well as a new higher rate of income tax of 45 percent for those with incomes above £150,000 from April 2011.

Given the overall uncertainty of the economic situation, it is not surprising that there have been debates over the appropriateness and effectiveness of government responses to the crisis in most countries. In some cases, questions focus on the scale of the stimulus or the types of measure introduced. In Germany, one issue relate to the practical difficulties of ensuring that the additional public funding is spent both well and quickly.[17] There are, for example, concerns that funding could go to poorer quality projects which would not otherwise have received funding, and that the funding boost, plus the introduction of simpler public procurement rules, could reduce value-for-money. Other criticisms focus on particular measures, such as car scrapping subsidies, which are seen to distort economic incentives inappropriately.[18] In Italy, critics question the limited support for poorer households and public investment, as well as the lack of measures to control the growth of primary current expenditure despite high levels of public indebtedness, while also arguing that the fiscal package could encourage tax evasion.[19]

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[16] RTÉ (2009) *Cut public numbers by 17,300 - 'Snip'*, 16 July 2009, Dublin.

[17] M. Rosenfeld (2009) *Die Kommunen in der Finanzkrise: kurzfristig Gewinner, langfristig Verlierer*, Institut für Wirtschaftsforschung Halle, Wirtschaft im Wandel.

[18] U. Blum and S. Freye (2009) *Die Abwrackprämie - wer zahlt die Zeche?* Halle Institute for Economic Research, Press release May 2009. A. Boss and H. Klodt (2009) *Mit dem Konjunkturpaket aus der Krise?* Kiel Institute for the World Economy Policy Brief 2, February 2009.

[19] R. Prodi (2009) *Crisi globale e italia: tornare a investire, non aspettiamo l'autunno*, Il Messaggero, 22 July 2009.

Table 8: Discretionary fiscal stimulus packages, as a percentage of GDP

	Fiscal stimulus 2009-10	Measures aimed at households	Labour market spending	Measures aimed at businesses	Increased public investment
Austria	3.5	2.6	0.2	0.2	0.5
Belgium	1.8	0.9	0.5	0.1	0.3
Bulgaria	0.1				0.1
Cyprus	1.8				1.8
Czech Rep.	2.2	0.1	1.1	0.5	0.5
Denmark	1.5		1.0		0.4
Estonia	0.6		0.5		0.1
Finland	3.8	2.6		0.7	0.4
France	1.0	0.2	0.1	0.4	0.3
Germany	3.6	1.5	0.5	0.8	0.9
Greece	0.3	0.3			
Hungary	0.0				
Ireland	1.4	0.8	0.2	0.4	
Italy	1.2	0.2	0.4	0.5	0.1
Latvia	0.9	0.6		0.3	0.1
Lithuania	0.0				
Luxembourg					1.7
Malta	1.2	0.4		0.2	0.6
Netherlands	1.6	0.4	0.2	0.5	0.5
Poland	2.8	1.2		0.4	1.2
Portugal	1.3	0.4	0.2	0.4	0.3
Romania	0.3	0.1		0.2	
Slovakia	1.2	0.6	0.2	0.2	0.2
Slovenia	2.2		0.8	0.2	1.2
Spain	4.0	1.6	0.1	1.4	0.9
Sweden	3.2	0.4	1.8	0.4	0.6
UK	2.6	1.7	0.3	0.4	0.2
Norway[2)]	1.1			0.3	0.8

Note: 1) Data refer to measures announced between November 2008 and the end of April 2009 i.e. does not include further measures announced since then e.g. in Italy.
2) Data for Norway are drawn from a separate source and may not be consistent with EU data.
Source: DG Economic and Financial Affairs (2009d) p.16 and (for Norway) authors' calculations based on Norway's Ministry of Finance Press release 08/2009.

3.4.1 Support for household consumption

Intervention has focused particularly strongly on household consumption in Greece (total funding), in Austria, Finland, Ireland, Latvia, Slovakia and the UK (at least half of total funding), as well as in Germany and Poland (over one third). In contrast, no additional funds have been allocated to supporting household consumption in Bulgaria, Cyprus, Denmark, Estonia, Hungary, Lithuania, Slovenia or Norway.

In a number of countries (Austria, Finland, Poland, Germany, UK), measures have mainly involved changes in tax rates and thresholds or broader reforms of income tax systems. In Austria, for example, the most expensive single measure in the crisis package is the bringing forward of the agreed personal income tax reform from 2010 to 2009, including reductions in lower marginal tax rates, and increases in the thresholds of the bottom and top income brackets.[20] In Poland, a new system of personal income tax has been introduced with two tiers of tax rates, while in Germany income tax rates have been reduced. Other tax changes include tax cuts on pension income (Finland), VAT reform (Poland), a temporary cut in the VAT rate (UK), increased tax credits for children and tax deductible childcare (Austria), increased tax exemptions on profits for entrepreneurs and freelancers (Austria), an increase in the lowest tax threshold (UK), and a suspension on car tax for new cars for two years (Germany). Although some of these measures target low income households (e.g. Austria's increase in tax thresholds), many benefit both poorer and richer tax-payers.

In addition, some countries have introduced additional benefits or allowances, often focused on children (Austria, Finland, Germany, UK) or pensioners (UK), but also additional State funding for statutory health insurance (Germany). Some countries have targeted additional support on low income households (Finland, Italy), with Italy in particular providing a number of relatively small one-off subsidies to poorer households, such as family allowances, rent subsidies and discounts on utility bills.

Other types of support include subsidies for certain types of expenditure. In Italy, for example, the government has capped variable interest rate mortgages in 2009, and introduced a freeze on rail fares and motorway fees. Many countries have introduced subsidies on the purchase of more energy efficient cars (Austria, Germany, Netherlands, Italy, UK) and other durable goods (Italy), as well as tax relief on house repairs and extensions (Germany), and support for mortgage payments in the case of job loss (UK). Some of these measures are discussed further in Section 3.4.3 because they not only support household consumption but are primarily aimed at supporting the automotive and construction industries.

3.4.2 Labour market support

Labour market measures are likely to benefit both businesses and individual workers, and have accounted for at least one half of additional spending in the Czech Republic, Denmark, Estonia, Sweden, and at least one third of crisis spending in Italy and Slovenia. However, no additional funding has been allocated for labour market support in Bulgaria, Cyprus, Greece, Hungary, Latvia, Lithuania, Malta, Norway, Poland or Romania.

A number of countries focus resources on enhancing active labour market policies with the aim of assisting unemployed people or workers at risk of losing their jobs to find new work (Italy, Norway). Interventions include funding for public employment services that support job-matching (Germany, Netherlands, Sweden); work placement schemes and coaching

[20] OECD (2009a) *Op. Cit.*

(Sweden) and training schemes for unemployed people (Finland, Germany, UK); additional support to address youth unemployment (Netherlands); increased advisory and training support for people at risk of redundancy (UK); and increased funding for employers who recruit a long-term unemployed person (Germany, Sweden). Other resources target human capital, whether in the form of training schemes for job seekers (Germany), apprenticeships (Norway) or broader vocational education (Finland, Netherlands, Sweden). In Finland, additional funding has been allocated to the 'change security' programme, which brings together local stakeholders to cooperate in providing support for workers when firms are making large-scale redundancies, including temporary employment, re-training and support with job seeking.

Other measures aim to reduce the costs to businesses of maintaining staff in employment, despite the fall in aggregate demand. Social security contributions have been reduced in Germany (employee), Finland (employer) and the UK (employee, employer and self-employed). A number of countries have introduced or extended support for short-time working (Austria, Finland, France, Germany, Italy, Netherlands, Spain, Wales in UK), generally in the form of State subsidies to firms to retain workers even if the fall in demand means that there is no work. In some countries, additional funding is provided to firms that provide training for workers during the downturn (Finland, Germany). In Italy, additional funding has been provided to support employment in small firms and firms in sectors which are not eligible under the mainstream scheme (*Cassa Integrazione Guadagni*, CIG), and there have also been increases in flexibility in the CIG scheme, for example by allowing workers to receive up to a full salary if undertaking vocational training. In Sweden, additional State transfers have been allocated to regional and local authorities in order to limit employment cuts.[21]

In the Netherlands, an additional form of support has been introduced to subsidise the secondment of researchers and other knowledge workers from a firm to a university or research institute, if they would otherwise be laid off temporarily. Funding is allocated for up to 18 months, both to the institute and to the firm. The aim is to allow firms to retain knowledge workers who might otherwise be lost to the sector and/or region when the economy recovers.

3.4.3 Business support

There a particularly strong focus on providing some form of additional support to businesses in Romania (over half of additional funding) and in France, Ireland, Italy, Latvia, Norway and Spain (over one third of funding). Measures include new public resources for business aid, changes in the tax system, and other steps, such as the introduction of new procedures to accelerate the payment of invoices by public authorities. However, some countries have not introduced any additional funding for business support (Bulgaria, Cyprus, Denmark, Estonia, Greece, Hungary, Lithuania).

[21] DG Economic and Financial Affairs (2009a) *Op. Cit.*

Government funding has focused on the provision of loans or loan guarantees to businesses, primarily SMEs (Austria, Finland, France, Germany, Italy, Netherlands, Poland, UK), as well as venture capital (Finland, France, UK) and investment grants (Austria, Germany). Funding is sometimes targeted on entrepreneurship (Finland) or on R&D and innovation (Austria, Finland, Germany, Italy, Netherlands, Norway). An important focus is support for exporting (Austria, Finland, Germany, Netherlands, Norway, UK), such as enhanced guarantees for existing export credit guarantee schemes. In Finland, additional funding has been provided to Finnvera, the State's financing company, which provides loans, guarantees, venture capital and export credit guarantees to firms with resources temporarily extended to firms with up to 1,000 employees (up from 250 employees).

Some tax changes aim specifically to support business investment, for example via more favourable depreciation allowances to purchase capital equipment (Austria, Germany, Netherlands), a reduced tax rate on the purchase of equipment (Italy), or more generous allowances for reinvesting profits (Austria). Other measures are more general, in the form of cuts in business tax rates (Italy) or in other tax rates (e.g. VAT rate in the UK, and Germany's income tax rate which covers some SMEs). Other changes include more favourable rules on the allocation of losses for tax purposes (Norway), higher tax thresholds on profits for SMEs (Germany), and a shift from monthly to quarterly VAT payments (Netherlands), a reduction in the taxation of foreign profits (UK), as well as more generous tax relief for loss-making businesses (UK).

Some measures focus on particular sectors. The automotive sector is subject to rescue loans (Sweden) and R&D aid (Germany, Sweden, UK), as well as grants to households to buy more energy efficient cars (Austria, Germany, Netherlands, Italy, UK), a temporary suspension of taxes on new cars (Germany), loan guarantees to support investment in low carbon plant (UK), and a loan fund of €6.5 billion for Peugeot, Renault and Renault (trucks) (France). Further funding is earmarked for renewable energies and low-carbon business activities (Netherlands, UK). Assistance is also provided to the construction sector, through relief for household works (Germany, Sweden), support for housing association lending (Netherlands), and funding for the construction of rental housing (Finland), energy efficient construction (Austria, Germany, Netherlands) and public infrastructure (see Section 3.4.4). Lastly, the removal of the passenger air transport tax at Schiphol makes the airport more attractive but also reduces the costs of travelling for business people (Netherlands).

3.4.4 Public investment

There is a particularly strong focus on allocating funds for public investment in Bulgaria and Cyprus (all new funding), as well as in Malta, Norway, Poland and Slovenia (over half of all new funding). Most other countries (except Greece and Ireland) also direct some additional resources to this heading. This focus is partly due to the short-to-medium term multiplier effects in terms of demand and employment that are created by infrastructure projects, but in some countries is also aimed at compensating for the downturn in the housing market which has reduced employment demand in the construction industry.

Some funding is focused on building or renewing large national infrastructure, particularly transport networks and hubs, as well as waste water treatment plant and broadband infrastructure (Austria, Finland, France, Germany, Italy, Netherlands, Norway, Sweden, UK). In Poland, additional domestic funding has been allocated to co-finance the acceleration of Cohesion policy spending which has a strong focus on large transport networks. In the Netherlands, various infrastructure projects are being brought forward, including those financed by the Economic Structure Enhancing Fund, as well as preparations for a new Delta programme to strengthen coastal defences.

Other national funding is focused on constructing or renovating public infrastructure or buildings for which the central State is responsible, such as universities, colleges and hospitals (Norway). Some funding is targeted on the fields of renewable energy and energy efficiency (Finland, Netherlands, Norway, Poland, UK), as well as on coastal defences and national parks (Norway). Further central State resources are being allocated for the construction or renovation of local infrastructure, such as schools, care homes and urban renewal, with funds often being channelled through regional or local authority budgets (Austria, Germany, Netherlands, Norway).

4. THE INTERNATIONAL RESPONSE IN EUROPE

As well as action by national governments, there has been a significant response at a multi-national level. In part, this has involved co-ordinated action between central banks (e.g. on interest rate policy) and governments (e.g. based on discussions at G20 summits in April and September 2009). In addition, steps have been taken through multi-national institutions such as the European Union (EU), European Bank for Reconstruction and Development (EBRD), World Bank and International Monetary Fund (IMF). The EU has also agreed the European Economic Recovery Plan, which involves a range of actions, including steps to increase the flexibility of rules, for example governing State aid, public procurement and Cohesion policy, as well as the allocation of additional funding, notably to the European Investment Bank (EIB) to support SME loans and investment in green technology and infrastructure projects.

4.1 International financial assistance

International assistance to countries facing severe difficulties has been led by the IMF, in cooperation with the World Bank, and, in Europe, also with the EU, the EBRD and sometimes individual donor countries, notably the Nordic countries. The aim has been to restore confidence and stability in the financial and economic systems of individual countries experiencing short-term balance-of-payments problems. In return for funding, the IMF has required countries to implement policies to ensure balanced budgets, appropriate exchange rate policies and bank restructuring and recapitalisation.[22]

The provision of IMF funding has been facilitated by the agreement reached at the April 2009 meeting of the G20 industrialised and emerging market economies to allocate around $1.1 trillion for stabilisation programmes, trade support and loans to poorer countries.[23] In Europe, IMF funding has mainly been channelled through Stand-By Arrangements or loans that aim to help countries to address short-term balance-of-payments problems; Hungary, Latvia and Romania have all received assistance via this instrument. In addition, Poland has gained access to the IMF Flexible Credit Line which provides precautionary support for countries with very strong fundamentals and track records and is aimed at crisis prevention.

EU funding to Member States (Hungary, Latvia and Romania) has been channelled through an instrument set up in 1988 to provide medium-term financial assistance for Member States' balances of payments.[24] In the course of the crisis, EU funds for this instrument have been increased from €12 billion to €50 billion. It enables the EU to provide loans to Member States outside the Euro area which face external financing constraints. The EU finances the loans through borrowing on world markets at more favourable rates than are available to countries in difficulty.

[22] A. Åslund (2009) Implications of the global financial crisis for Eastern Europe, *Development & Transition* 13, July 2009.

[23] G20 (2009) Leaders' statement: *The global plan for recovery and reform*, London, 2 April 2009.

[24] European Council (2002) Regulation (EC) No 332/2002, *Official Journal of the European Communities* L 53/1.

Table 9: International support in response to the financial crisis, in billion Euro

	Date	IMF	European Union	World Bank, EIB, EBRD	Individual donor countries	Total
Poland	April 2009	15.4				15.4
Hungary	Nov. 2008	12.5	6.5	1.0		20.0
Latvia	Dec. 2008	1.7	3.1	0.5	2.2	7.5
Romania	March 2009	12.95	5.0	€2.0		19.95
Belarus	January 2009	2.0				2.0
Bosnia & Herzegovina	July 2009	1.1	0.039			1.139
Iceland	Dec. 2008	1.7				1.7
Serbia	January 2009	0.39	0.1			0.49
Ukraine	Nov. 2008	12.9				12.9
Western Balkans and Turkey	July 2009		0.15	0.6		0.75

Notes: 1) Most country funding for Latvia is provided by Denmark, Finland, Norway and Sweden (€1.8 billion), plus additional funding from the Czech Republic, Estonia and Poland (€0.4 billion).
2) IMF funding for Poland is equivalent to $20.5 billion, for Belarus $2.5 billion, for Bosnia and Herzegovina $1.57 billion, for Iceland $2.1 billion, for Serbia $0.5 billion, and for Ukraine $16.4 billion.
Source: Own calculations based on IMF (2009) *Regional Economic Outlook: Europe: Addressing the Crisis*, Washington DC, and European Commission press releases.

In contrast, EU funding to the Western Balkans, including Serbia, mainly involves the reorientation of existing funding for candidate and potential candidate countries through the Instrument for Pre-accession Assistance (IPA).[25] The EU can also provide medium- or long-term loans or grants through its Macro-Financial Assistance (MFA) instrument to external countries facing balance-of-payments difficulties, usually in cooperation with IMF funding. Such funding is mainly allocated to the Western Balkans, some low-income New Independent States, and Mediterranean countries.

4.2 European Economic Recovery Plan

Following the European Council's statement on 15 October 2008,[26] the European Commission published a Communication on 29 October 2008 entitled 'From financial crisis to recovery: a European framework for action'. This identified three dimensions that would subsequently be developed into an EU-wide recovery action plan, relating to the perceived

[25] European Commission (2009a) *EU approves €100 million in budget support for Serbia and a €85 million financial crisis package for the Western Balkans and Turkey*, Press release 31 July 2009.

[26] European Council (2008a) *Presidency conclusions*, 15-16 October 2008.

need for a new financial market architecture at EU level; action to manage the impact of the crisis on the real economy; and a collaborative global response to the crisis.[27]

On this basis, the Commission Communication on 26 November 2008 set out a European Economic Recovery Plan,[28] which was subsequently agreed by the Member States at the European Council of 11-12 December 2008.[29] The Plan described monetary and fiscal policy measures aimed at supporting the real economy and boosting confidence, notably the mobilisation of around 1.5 percent of EU GDP or €200 billion, mainly in the form of measures already approved by Member State governments. The Plan also outlined ten action areas of support for the real economy that aimed to reinforce EU competitiveness in the longer term: (i) launch a major European employment support initiative; (ii) create demand for labour; (iii) enhance access to financing for business; (iv) reduce administrative burdens and promote entrepreneurship; (v) step up investments to modernise Europe's infrastructure; (vi) improve energy efficiency in buildings; (vii) promote the rapid take-up of ‘green products’; (viii) increase investment in R&D, innovation and education; (ix) develop clean technologies for cars and construction; (x) high-speed Internet for all. Other action followed, such as the introduction of accelerated public procurement procedures for all major public projects.[30] One important measure was an increase in funding for the European Investment Bank (€30 billion) in 2009-10, especially for SME loans, as well as the creation of a European Fund for Energy, Climate Change and Infrastructure.

A further Commission Communication was published on 4 March 2009,[31] calling for effective coordination to support recovery and for Member State agreement on a new package of financial sector reform measures, including a new supervisory framework for the EU's financial sector. It also invited Member States to take the necessary action to ensure long-term financial stability as soon as economic conditions allowed, and to ensure the implementation of their national recovery plans and structural reform programmes.

In June 2009, the Commission published an additional Communication[32] that emphasised the EU’s shared commitment to employment and calling on Member States and other actors to ensure appropriate support for employment in the recession, not least by facilitating the appropriate use of Community funds, including Cohesion policy resources.

4.3 State aid

Since autumn 2008 the European Commission has reframed State aid rules to take account of the economic and financial crisis, based on Article 87(3)(b) of the Treaty, which states

[27] European Commission (2008a) *From financial crisis to recovery: A European framework for action*, COM(2008) 706 final, 2 October 2008.

[28] European Commission (2008b) *A European Economic Recovery Plan*, 800 final, 26 November 2008.

[29] European Council (2009) *Presidency Conclusions of European Council 11-12 December 2008*, 17271/1/08, 13 February 2009.

[30] European Commission (2008c) *Public procurement: Commission recognises need for accelerated procurement procedure*, Press release 19 December 2008.

[31] European Commission (2009b) *Driving European Recovery*, 114 final, 4 March 2009.

[32] European Commission (2009c) *A shared commitment for employment*, 257 final, 3 June 2009.

that: "Aid to promote the execution of an important project of common European interest or remedy a serious disturbance in the economy of a Member State" [may be compatible with the common market]. The Commission has introduced four Communications setting out its approach to State aid for the financial sector in the crisis, as well as a fifth Communication relating to State aid for the real economy. Further discussion of the EU approach can be found in EoRPA Paper 09/5.

The Commission's Communications on aid to the financial sector followed the agreement between Member States in October 2008 to implement national rescue packages aimed at safeguarding the stability of the banking sector, restoring the normal functioning of wholesale credit markets and sustaining the supply of credit to the economy.[33] The four Communications are applicable until the end of 2010 and include guidance on:

- Member State support for the banking sector, ensuring compatibility with the State aid rules and swift authorisation of support such as guarantees or recapitalisation;[34]
- Member State recapitalisation of financially sound banks facing temporary difficulties;[35]
- Member State treatment of impaired assets such as underperforming loans and US sub-prime mortgage backed securities;[36]
- Member State aid for bank restructuring.[37]

The Commission Communication on State aid for the real economy in December 2008 allowed the Commission to authorise measures that facilitated access to finance.[38] The Temporary Framework allows measures that unblock bank lending to firms and thereby guarantee continuity in access to finance, and also facilitates aid schemes that encourage continued investment. Proposed measures must be notified and approved by the Commission prior to implementation, but thereafter individual aid within the terms of the approved scheme can be offered immediately and without further notification. The framework comprises both new instruments and the (temporary) modification of existing

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[33] European Council (2008b) *Immediate responses to financial turmoil*, Council Conclusions - Ecofin Council of 7 October 2008, Press release 13930/08, Luxembourg.

[34] European Commission (2008d) *Communication on the application of State aid rules to measures taken in relation to financial institutions in the context of the current global financial crisis,* OJEU No. C270/8 of 25 October 2008.

[35] European Commission (2009d) *Communication on the recapitalisation of financial institutions in the current financial crisis: limitation of aid to the minimum necessary and safeguards against undue distortions of competition,* OJEU C10/2 of 15 January 2009.

[36] European Commission (2009e) *Communication on the treatment of impaired assets in the Community banking sector,* OJEU C72/1 of 26 March 2009.

[37] European Commission (2009f) *Communication on the return to viability and the assessment of restructuring measures in the financial sector in the current crisis under the State aid rules*, OJEU C195/9 of 19 August 2009.

[38] The consolidated version including the February 2009 amendments is published as: European Commission (2009g) *Temporary Community framework for State aid measures to support access to finance in the current financial and economic crisis*, OJEU C83/1 of 7 April 2009.

instruments. The key forms of aid which can be authorised under the framework include: (i) a lump sum of up to €500,000 per undertaking; (ii) State guarantees for loans at a reduced premium; (iii) subsidised interest rates; (iv) soft loans for 'green' products; (v) risk capital; and (vi) export credit insurance.

4.4 Cohesion policy

The Commission introduced a series of measures between November 2008 and July 2009 with the aim of accelerating the implementation of Cohesion policy and providing additional flexibility to Member States in using Cohesion policy resources to address the crisis. The European Economic Recovery Plan of 26 November 2009 stated that, among other measures, the Commission would propose changes in the regulations governing the 2007-09 Structural Funds programmes with the aim of enhancing the flow of funds to appropriate projects. These changes would increase advance payments; encourage the front-loading of programmes with EU funds; facilitate the implementation of major projects and financial engineering funds; simplify the treatment of advances paid to beneficiaries; increase the use of flat-rate payments; and allow funds to be shifted toward energy-efficiency investments, including in social housing.[39] This Communication was followed by a series of Commission proposals to the Parliament and Council to amend the Structural Funds regulations in order to allow these changes to be introduced.

A Commission Communication on 16 December 2008 set out a more comprehensive view of the role of Cohesion policy in responding to the crisis.[40] It outlined a series of recommendations to the Member States, and noted the legislative changes proposed. It also stated that it would work with Member States to increase flexibility, notably by allowing domestic authorities to reallocate funds in the 2007-13 programmes in order to accelerate spending; to shift funds towards support for energy efficiency and renewable energy investment in housing; and to extend the final date for eligibility of expenditure for the 2000-06 period by six months.

A further proposed legislative change followed on 24 February 2009, which allowed Member States greater flexibility in closing the 2000-06 programmes.[41] According to the Structural Funds regulations, Member States are obliged to ensure that there is little divergence between the final financial tables and the actual funds declared for each programme, EU Fund and priority. Where the divergence is greater than the legal ceiling, the Commission does not pay out funds to the Member State. In February 2009 the ceiling was raised from two percent to ten percent of funds for the period 2000-06, thus allowing Member States to claim a larger amount of EU funds than would otherwise have been possible.

In addition, in June 2009, Commissioner Hübner announced that the Commission would introduce an exceptional change for 2009 only, namely to extend the n+2 rule on automatic

[39] European Commission (2008b) *Op. Cit*.

[40] European Commission (2008e) *Cohesion Policy: investing in the real economy*, COM(2008) 876 final.

[41] European Commission (2009h) *Commission increases flexibility of structural funds in response to financial crisis*, Press release February 24 2009.

decommitment (n+3 in poorer Member States) for an additional year, so that programmes would have three years (or four years in poorer Member States) in which to absorb funds committed.[42]

The third Commission Communication was published on 22 July 2009 and introduced various measures aimed at simplifying the implementation of Cohesion policy,[43] including the possibility for ESF projects to receive 100 percent finance from EU funds in 2009-10; the introduction of a single threshold of €50 million for projects to be defined as major projects; the simplification of rules relating to 'revenue-generating' projects; changes in rules on decommitment so that, for example, grants to major projects would be treated as having been paid out as soon as the Member State submitted the project to the Commission (rather than from the date of the Commission's approval); and the extension of eligibility rules on ERDF funding for housing to include support for communities faced with social exclusion, particularly Roma, in both rural and urban areas.

[42] Commissioner Hübner (2009) Meeting with the regional offices, 25 June 2009, Brussels, available at http://ec.europa.eu/commission_barroso/samecki/pdf/2009/25062009_regoff.pdf

[43] European Commission (2009i) *Proposal for a Council Regulation amending Regulation (EC) No 1083/2006 concerning general provisions on the European Regional Development Fund, the European Social Fund and the Cohesion Fund as regards simplification of certain requirements and as regards certain provisions relating to financial management,* 22 July 2009, COM(2009) 384 final.

5. THE CRISIS AND REGIONAL DEVELOPMENT

5.1 The impact of the crisis on regional unemployment rates

Although the crisis and recession are international, they are affecting regional economies in different ways, for example depending on the region's existing strengths or weaknesses, its sectoral structure and the response of national and regional governments. Studies have examined the effects of economic upturns and downturns in the past on regional economic convergence. In many countries, periods of economic growth are associated with regional convergence as business opportunities spread to less developed regions, while severe recessions can trigger regional divergence as more vulnerable regions are more seriously affected in downturns.[44] In some countries, however, downturns can lead to narrower interregional disparities, particularly where the economies of lagging regions depend on protected sectors such as public services or agriculture and thus are relatively unaffected.

The aim of this section is to provide an initial analysis of the regional impact of the crisis in the EU and Norway. This assessment is, however, constrained by the limited regional data available. Table 10 provides an overview of regional disparities in unemployment rates in June 2008 and June 2009. No other up-to-date regional data were found on a monthly (or quarterly) basis across a large sample of countries. However, an analysis based only on regional unemployment data has limitations. For example, unemployment rates may not fully reflect the extent of problems in some structurally weaker regions where a long-run lack of employment opportunities may mean that laid-off workers are more likely either to leave the formal labour market or to leave the region. Similarly, firms in some countries and regions have been slow to lay off workers despite the recession, particularly where public aid is available to support short-time working and similar practices. In addition, unemployment rates may not reflect the loss of jobs in countries and regions with large numbers of foreign workers on temporary contracts if those workers return to their home country or region when they become unemployed.

It should also be noted that the data in Table 10 can only be compared across time and not across countries. This is partly because data are drawn from national sources and, in particular, some refer to the number of registered unemployed while others are based on the Labour Force Survey methodology. In addition, the definition of a 'region' used varies across countries, for example NUTS 1, NUTS 2 or NUTS 3; in general, the index of regional disparities (coefficient of variation) is larger when more disaggregated data are used (e.g. NUTS 3) because such data include more extreme outliers. Lastly, some data were not available for June 2008 and 2009 and, in these cases, data for the nearest month or quarter are shown instead.

[44] A. Kangasharju and S. Pekkala (2004) Increasing regional disparities in the 1990s: the Finnish experience, *Regional Studies* 38, 255—267. R. Martin (1993) 'Remapping British Regional Policy: The End of the North-South Divide?' *Regional Studies* 27:8.

Table 10: The dispersion of regional unemployment rates, 2008 and 2009

	Regional level	National unemploy-ment rate, June 2008	National unemploy-ment rate, June 2009	Dispersion of regional unemployment rates, June 2008 (coefficient of variation)	Dispersion of regional unemployment rates, June 2009 (coefficient of variation)
Austria	NUTS 2	4.8	6.3	0.29	0.20
Belgium		6.5	7.8		
Bulgaria	NUTS 2	7.4	7.3	0.29	0.28
Cyprus		3.3	5.2		
Czech Rep.	NUTS 3	5.0	8.0	0.37	0.30
Denmark	NUTS 3	1.7	3.8	0.45	0.24
Estonia		4.0	13.5		
Finland	NUTS 2	7.1	9.6	0.26	0.21
France	NUTS 2	7.2	8.7	0.18	0.15
Germany	Land	7.5	8.1	0.38	0.33
Greece	NUTS 2	7.3	8.6	0.31	0.28
Hungary	NUTS 2	8.0	9.7	0.43	0.31
Ireland		5.9	11.9		
Italy	NUTS 2	7.1	7.9	0.56	0.46
Latvia		6.3	17.2		
Lithuania		4.6	15.1		
Luxembourg		4.4	5.4		
Malta		5.6	6.8		
Netherlands	NUTS 2	4.0	4.8	0.19	
Poland	NUTS 2	11.1	11.2	0.25	0.26
Portugal	NUTS 2	7.3	9.1	0.20	0.20
Romania	NUTS 3	3.8	5.8	0.41	0.33
Slovakia	NUTS 3	7.4	11.8	0.60	0.45
Slovenia	NUTS 3	6.4	9.1	0.35	0.27
Spain	NUTS 2	10.4	17.9	0.35	0.28
Sweden	NUTS 3	2.2	3.9	0.18	0.17
UK	NUTS 1	5.4	7.8	0.23	0.19
Norway	NUTS 3	1.5	2.7	0.35	0.19

Notes: 1) Data are not comparable between countries as they are based on national sources and different definitions.
2) Data for Finland, Hungary, Netherlands, Portugal, Spain and the UK refer to quarters 2/2008 and 2/2009; data for Italy refer to quarters 1/2008 and 1/2009; data for Poland refer to March 2008 and March 2009.
3) Data for Czech Republic, Norway, Slovakia, Slovenia and Sweden relate to registered unemployed and data for other countries are based on the Labour Force Survey methodology.
4) Data for France exclude overseas departments; data for Spain exclude Ceuta y Melilla.
Source: Own calculations based on national sources.

Regional disparities in unemployment rates in Table 10 are estimated on the basis of coefficients of variation. In most countries, the coefficient of variation is smaller in June 2009 than in June 2008, indicating that the dispersion of regional unemployment rates has narrowed, usually due to a larger rise in rates in stronger regions than in structurally weaker regions. However, the regional dispersion has changed very little in some countries (Bulgaria, France, Greece, Poland, Portugal and Sweden), indicating that there has been no real shift in the overall dispersion of regional unemployment rates in this period. Even in these countries, however, the impact of the crisis on individual regions has varied significantly, with specific regions rising or falling in regional unemployment rate rankings.

The scale and shape of the recession's impact on individual regions are driven by a number of different factors. The following sections examine how regional impact is conditioned by regions' initial economic situation, including regional fragility and the degree of regional sectoral specialisation. Other factors may also contribute to variations across regions but are not explored in this section as no clear evidence was found of their impact. For example, it is possible that the fall in bank lending to businesses or households could affect regions differently, or that certain types of households could be more seriously affected by the recession and that these could be disproportionately located in certain regions. Similarly, the extent to which government responses to the crisis benefit particular kinds of region (a theme explored in Section 6) may also shape the impact of the recession on individual regions.

5.2 The extent of regional fragility

One important set of factors that is shaping the impact of the crisis on the economic development of different regions is their initial strengths and weaknesses. This includes the size of their internal market and their access to larger external markets, as well as endowments in natural resources and in physical, human and knowledge capital. Similarly, the density of existing networks of firms matters, as well as the sectors in which they are concentrated (see Section 5.3). The region's situation is also shaped by broader national factors, notably the extent to which the country as whole was in a robust state before the crisis, with sustained growth, limited unemployment, a lack of external and internal imbalances, and sound institutional frameworks.

The extent of regional fragility can be assessed via indicators such as GDP per capita, unemployment and employment rates, and population density (see Table 11). Although regional data are not available on other important indicators at national and regional levels (e.g. investment, consumption, government spending and savings rates), the indicators in Table 11 indirectly reflect the impact of other factors on the regional economy.

The different indicators illustrate different aspects of vulnerability. The lower levels of GDP per capita in most central European regions, as well as in a significant number of regions in Greece, Italy and Portugal, reflects the lower productivity and employment levels in these regions. Productivity levels are in turn shaped by the availability of physical, human and knowledge capital, as well as broader factors such as market access and the functioning of institutions.

Table 11: The degree of regional fragility, 2007

	Total number of NUTS 2 regions	Number of NUTS 2 regions with GDP below 75% of the EU average in PPP	Number of NUTS 2 regions where the unemployment rate is above the EU average	Number of NUTS 2 regions where the employment rate is below the EU average	Number of NUTS 2 regions with population density below 30 per km^2
Austria	9	0	0	0	0
Belgium	11	0	5	9	0
Bulgaria	6	6	3	5	0
Cyprus	1	0	0	0	0
Czech Rep.	8	7	2	2	0
Denmark	5	0	0	0	0
Estonia	1	1	0	0	0
Finland	5	0	2	1	4
France	25	4	15	21	0
Germany	39	0	18	12	0
Greece	13	6	10	13	0
Hungary	7	6	4	7	0
Ireland	2	0	0	0	0
Italy	21	5	6	20	0
Latvia	1	1	1	0	0
Lithuania	1	1	0	1	0
Luxembourg	1	0	0	1	0
Malta	1	0	0	1	0
Netherlands	12	0	0	0	0
Poland	15	15	7	15	0
Portugal	7	4	3	1	1
Romania	8	7	2	7	0
Slovakia	4	3	3	2	0
Slovenia	2	1	0	0	0
Spain	18	1	17	12	0
Sweden	8	0	2	0	4
UK	37	0	7	4	0
Norway	7	0	0	0	6

Note: Data for population density in Norway are from 2006.
Source: Eurostat.

Unemployment data do not show such a clear divide between northern, central and southern Europe, as a majority of regions in a number of countries (Bulgaria, France, Greece, Hungary, Latvia, Slovakia, Spain) in different parts of Europe have unemployment rates that are above the EU average. Where high unemployment rates are associated with low levels of GDP per capita and low economic growth rates, there are likely to be weaknesses in labour demand. However, in regions with high unemployment rates despite high levels of GDP per capita, labour market institutions related, for example, to job-matching may function poorly.

The final indicator shown provides a different view of vulnerability. In terms of population density, only four countries (Finland, Portugal, Sweden, Norway) have any regions with fewer than 30 inhabitants per square kilometre. Although such regions may have high levels of GDP per capita and employment, there are often particular needs for public intervention to facilitate market access for firms and to ensure the viability of public services.

In some countries, structurally weaker regions have been particularly affected by the crisis. This is the case in a number of central European countries (Bulgaria, Czech Republic, Hungary, Poland, Romania, Slovakia); the recession is also affecting some manufacturing regions in these countries but the impact is more muted in metropolitan regions. In Poland, for example, there have been above-average increases in unemployment rates in a number of the structurally weaker eastern regions (Malopolskie, Podkarpackie, Podlaskie, Warminsko-Mazurskie), and in some south-western manufacturing regions, but only limited effects in metropolitan regions (e.g. Mazowieckie and Lodzkie).[45] Similarly, increases in unemployment rates have been significant in eastern regions in the Czech Republic (Moravskoslezský, Olomoucký and Zlínský regions), Hungary (North-East, Észak-Alföld) and Slovakia (Banská Bystrica, Prešov), but much lower in metropolitan regions (Prague region and the Central Bohemian region surrounding Prague; the Budapest region and Southern Transdanubia; and Bratislava and Trnava).

The impact on structurally weaker regions is also evident in wealthier countries. In Finland, for example, the highest increase in unemployment rates is in Eastern Finland, which already had the highest unemployment rate and lowest level of GDP per capita before the crisis, and has in recent months seen significant job cuts, for example in the forestry and paper sectors. In the UK, above-average increases in unemployment have been seen in the structurally weaker regions of Northern Ireland, Scotland, South West England and Wales, whereas the lowest rates of increase are in south-eastern England (East Midlands, East of England, South East and London). Structurally weaker regions in north-eastern France have high levels of industrial employment, and have thus been strongly affected by the downturn in international demand (Nord-Pas-de-Calais, Lorraine, Picardie, Champagne-Ardenne, Franche-Comté, Haute-Normandie). Some regions in southern Italy (e.g. Puglia) have also seen a significant rise in unemployment rates, due to falling demand in export sectors such as textiles, shoes and furniture, although in some southern regions, job losses seem to be leading to higher inactivity rates rather than always to higher unemployment rates. In addition, even though the use of temporary contracts is more prevalent in southern Italy than in the Centre-North, job losses here are affecting permanent employees as well as temporary workers, whereas it is mainly temporary workers that are becoming unemployed in the Centre-North.[46]

[45] Gorzelak (2009) *Op. Cit.*

[46] Consiglio Nazionale dell'Economia e del Lavoro (CNEL) (2009) *Rapporto sul mercato del lavoro 2008-2009*, Roma pp.140-146.

In a number of countries (Finland, Germany, Italy, Poland, Sweden), there are concerns over the longer term effects of the crisis on structurally weaker regions. The loss of even relatively small numbers of firms and jobs in such regions could have significant effects, particularly if these losses lead to reduced demand for goods and services from other local firms. In some countries (e.g. Finland, Germany, Sweden), these structurally weaker regions are in any case characterised by demographic decline, especially the out-migration of more educated, younger people, and this trend could be further fuelled by the recession.

There are also concerns over the impact of the recession on private investment in such regions. In Germany, private sector decisions to postpone or cancel investment projects are seen as likely to have a stronger effect in the new *Länder*, where such projects are more likely to be integrated into broader development strategies.[47] In Poland, eastern regions (notably Podlaskie, Warmińsko-mazurskie and Świętokrzyskie) are less attractive to business investors and could also be affected by the impact of the crisis on neighbouring Ukraine, not least because difficulties in the Ukraine are leading to questions over the Euro 2012 football tournament, with potentially negative effects on private investment in both the Ukraine and in Poland's eastern regions.[48]

Further issues relate to existing or future public spending cuts that are rooted in the need to reduce public sector indebtedness generated by the financial crisis and economic recession. On the one hand, regional and local authorities in structurally weaker regions in all countries tend to have weaker public finances, and are thus more likely to be affected by any reductions in central government compensation for such weakness. On the other hand, levels of public sector employment are often higher in structurally weaker regions, so that the impact of any future cuts in public employment could also have a stronger impact in such regions.

5.3 The degree of regional sectoral specialisation

A further dimension that is shaping the impact of the crisis on specific regions is their sectoral structure. In general, a region's vulnerability to adverse economic shocks is seen to be correlated with its sectoral specialisation, although the degree of regional specialisation has decreased in Europe since the 1950s, not least due to the expansion of public and some private services in all regions.[49]

In 2008-09, some sectors have been directly affected by the first stages of the downturn, notably financial services, export-oriented manufacturing and the construction industry, while other sectors have mainly experienced second-wave falls in demand. Regions which specialise in a narrow range of sectors are particularly vulnerable to sectoral shocks; a key

[47] M. Rosenfeld (2009) *Op. Cit.*

[48] Rzeczpospolita (2009) *Kryzys bije w biedne regiony*, 13 March.

[49] W. Molle (1996) The regional economic structure of the European Union: an analysis of long-term developments, in: K. Peschel (ed.) *Regional Growth and Regional Policy within the Framework of European Integration*, Heidelberg: Physica-Verlag: Heidelberg, pp.66-86. M. Hallet (2000) Regional specialisation and concentration in the EU, *Economic Papers* 141, Brussels: DG Economic and Financial Affairs. K. Aiginger and W. Leitner (2002) Regional concentration in the USA and Europe: who follows whom? *Weltwirtschaftliches Archiv* 138: 1-28.

concern in such regions is that the recession could permanently reduce the number of firms and jobs in core sectors, leading to a structurally lower level of output and employment even after the downturn has passed.

Table 12 provides a condensed overview of the extent of regional sectoral specialisation in EU Member States and Norway. It shows the percentage of national employment in four large sectors (Industry, Construction, Financial and business services, and Public services), as well as the dispersion of regional unemployment rates (calculated in terms of coefficients of variation).

There is a relatively strong degree of regional specialisation in the industrial sector in all countries but specialisation is particularly strong in Portugal (due to very low levels of industrial employment in the Algarve and Madeira, and high levels in Norte). Regional specialisation in industry is also relatively high in Finland (largely due to low levels of industrial employment in Åland and high levels in Western Finland); in Italy (with particularly low levels in Lazio, Calabria, Sicilia, Sardegna but also Liguria and Valle d'Aosta, and high levels in Marche, Veneto and Lombardia);and in Spain (with low levels of industrial employment in the Canarias, Illes Balears, Extremadura and Madrid, and high levels in Navarra, Pais Vasco and La Rioja).

In general, levels of regional specialisation in the construction sector are lower than for industry, with particularly low levels in Finland, the Czech Republic, Sweden and Norway, indicating that there is little difference in the extent of construction activity across the regions. In some countries, however, there is a degree of regional specialisation, especially in Belgium, Germany, Portugal and Italy. In Germany, for example, construction sector employment rates are particularly high in several regions in the new *Länder*, not least in the two Brandenburg regions surrounding Berlin and in other urban regions (Chemnitz, Thüringen, Leipzig) and is low in a number of western regions, often in metropolitan areas (e.g. Hamburg, Bremen, Köln). In Italy, the geographical pattern is unclear, with high rates in both northern and southern regions (Valle d'Aosta, Basilicata) and low rates in northern and central regions (Friuli-Venezia-Giulia, Marche, Piemonte).

Employment in financial and other business service sectors is quite concentrated in most countries, notably in the Czech Republic and Portugal (but also e.g. in Denmark, Norway and Sweden), with employment rates, as might be expected, particularly high in capital city regions. Specialisation is relatively low in Italy, with fairly robust employment in all regions but higher rates of employment not only in the capital city region (Lazio) but also in the northern region of Lombardia. In general, employment rates in this sector are higher in central and northern Italy than in southern regions.

Lastly, the degree of concentration in the public service sector is low in all countries, due to employment in all regions in sub-national government and sectors such as education and healthcare. Dispersion is slightly higher in Belgium, Italy and Portugal, where public employment rates are higher, both in capital city regions and in some structurally weaker regions (Luxembourg and Namur in Belgium; Sicilia, Sardegna and Campania in Italy; and the Azores region in Portugal).

Table 12: Sectoral specialisation in employment at the level of NUTS 2 regions, 2006

	Industry (NACE sectors C to E)		Construction (NACE sector F)		Financial and other business services (NACE sectors J and K)		Public services (NACE sectors L to P)	
	Percentage of national employment	Regional dispersion (coefficient of variation)	Percentage of national employment	Regional dispersion (coefficient of variation)	Percentage of national employment	Regional dispersion (coefficient of variation)	Percentage of national employment	Regional dispersion (coefficient of variation)
Austria	16.9	0.28	6.6	0.13	14.8	0.33	27.3	0.11
Belgium	14.6	0.31	5.8	0.27	19.3	0.28	34.1	0.16
Czech Rep.	29.6	0.28	8.6	0.06	12.3	0.56	20.9	0.06
Denmark	14.1	0.27	6.5	0.22	15.2	0.36	35.5	0.07
Finland	18.8	0.35	7.0	0.04	12.6	0.33	33.7	0.09
France	15.4	0.27	6.5	0.14	15.7	0.26	34.9	0.06
Germany	20.0	0.27	5.5	0.26	16.9	0.26	30.4	0.11
Italy	20.9	0.37	7.6	0.24	14.5	0.16	28.5	0.16
Netherlands	13.3	0.26	7.0	0.15	21.2	0.24	30.3	0.08
Portugal	18.5	0.52	10.2	0.26	8.0	0.50	24.1	0.19
Spain	16.2	0.37	12.8	0.14	11.2	0.27	27.3	0.09
Sweden	17.0	0.26	5.8	0.09	14.8	0.37	38.8	0.09
UK	11.4	0.26	4.7	0.20	n/a	n/a	32.1	0.09
Norway	13.6	0.34	6.7	0.09	13.4	0.39	37.5	0.12

Notes: Data exclude the overseas departments in France, as well as Ceuta y Melilla in Spain. Data for UK are from March 2007. Regional data were not available for Bulgaria, Cyprus, Estonia, Greece, Hungary, Ireland, Latvia, Lithuania, Luxembourg, Malta, Poland, Romania, Slovakia or Slovenia.
Source: Own calculations based on Eurostat data and, for UK, on Office for National Statistics (2009) *Labour Market Statistics*, August 2009

5.4 The regional effects of sectoral shocks

This section examines the extent to which regional sectoral specialisation can explain the varied impact of the crisis and recession on regional economic development. It examines the extent to which sectoral aspects of the crisis also have a regional dimension.

5.4.1 Export-oriented industries

Some of the most evident regional impacts of the crisis are rooted in the geographical concentration of export-oriented industrial firms which have suffered due to the fall in international demand (e.g. in Austria, Czech Republic, Finland, France, Germany, Italy, Netherlands, Norway, Poland, Slovakia, Sweden, UK). In some countries, these regions are among the most dynamic in economic terms (such as Kärnten, Steiermark and Vorarlberg in Austria, or the *Länder* of Baden-Württemberg, Bayern and Rheinland-Pfalz in Germany). Similarly in Sweden, the main regions affected have above-average levels of manufacturing employment, and are either located in the west (Värmland, Västra Götaland) where there are many automotive sector manufacturers, or in the south east (Blekinge, Jönköping, Kronoberg, Kalmar) or mid east (Södermanland, Västmanland), where there are many export-oriented manufacturing SME subcontractors which have been strongly hit by the downturn. In Poland, some of the strongest increases in unemployment rates are seen in south western manufacturing regions (especially Lubuskie but also Dolnoslaskie, Opolskie, Wielkopolskie). Dynamic manufacturing regions are also among those most affected by higher unemployment in the Czech Republic (Liberecký, Karlovarský and Vysočina regions), Hungary (Central and Western Transdanubia) and Slovakia (Trenčín region).

In other countries, export-oriented manufacturers are mainly located in areas affected by the restructuring of heavy industries in the 1970s and 1980s (France), or are located throughout the country in both core and peripheral regions (Finland, Netherlands, Norway). In some countries, such as Italy, the regional impact of the downturn in exports is complex. For example, it was initially expected that, as in past exogenous crises, the crisis would mainly affect Italy's more dynamic, export-oriented Centre-North regions, yet in fact the South saw stronger falls in employment and demand in the second half of 2008 and the first quarter of 2009.[50] One explanation may be that, when firms in the Centre-North experienced a fall in foreign demand in autumn 2008, they quickly cut demand for labour and inputs, thus transmitting the effects of the crisis to firms in the South.[51]

The manufacturing sector most evidently affected by the crisis in a number of countries is the automotive sector, as consumer and business demand has fallen strongly in the face of economic uncertainty, as well as constraints on credit. Regions particularly badly affected include western Sweden (Västra Götaland), some towns on the west coast of Norway, south-east Netherlands, the West Midlands and Yorkshire & the Humber in the UK, regions such as Wielkopolskie in Poland, various French regions, and a number of German *Länder* (especially Baden-Württemberg and Bayern but also Niedersachsen, Nordrhein-Westfalen

[50] SVIMEZ (2009) *Rapporto SVIMEZ 2009 sull'economia del Mezzogiorno*, Bologna: il Mulino.

[51] Banca d'Italia (2009) *Economie regionali. L'economia delle regioni italiane nell'anno 2008*, Roma.

and Rheinland-Pfalz, as well as Sachsen, Sachsen-Anhalt and Thüringen). The scale of impact is illustrated by the case of France, which is the second biggest car producer in Europe after Germany, employing 300,000 people directly and a further 400,000 people in supply and service sectors.[52] Employment is concentrated in the north, notably Nord-Pas de Calais, Ile-de-France and Franche-Comté, but is also spread across other regions, including further south. There have been extensive job losses since October 2008,[53] particularly among component manufacturers (Nord-Pas de Calais, Rhône-Alpes and Haute-Normandie),[54] as well as in large manufacturers, notably Renault and Peugeot (4900 and 3500 voluntary redundancies respectively).

The impact of the recession on other industrial sectors has also had significant regional effects. In Finland, eastern and central regions have been particularly affected by the downturn in the forestry sector, which accounts for around one fifth of Finland's exports and was already facing challenges before the crisis, notably higher input costs (e.g. energy, labour and raw materials), international overcapacity, a strong currency relative to the US dollar, and wood tariffs imposed by Russia. In Poland, the furniture industry in northern regions is experiencing difficulties, as are electronics and electrical manufacturers in a number of cities, for example in Wielkopolskie. In Ireland, both core and peripheral regions have seen the loss of significant numbers of manufacturing jobs, as multi-national firms, for example in electronics sectors, have shifted production to central Europe and Asia.

Despite the impact of the fall in global demand on many manufacturers, businesses in some sectors and regions are less negatively affected. In both Norway and Sweden, the fall in the exchange rate relative to the Euro has provided a better competitive basis for certain exporters. In Sweden, this has, for example, benefited the forestry and paper sectors which are largely concentrated in central and in some northern areas, as well as some automotive sectors in western regions (notably truck production which, unlike the passenger car sector, is not affected by global overcapacity). In Norway, important sectors, such as the shipbuilding and maritime industries, have been protected by long-term contracts, thus benefiting many coastal areas, while recent increases in the oil price has stimulated oil exploration, with knock-on benefits for regions specialising in oil and gas production, engineering and shipbuilding. Similarly, although old industrial regions in Poland (such as Łódźkie and Śląskie) are experiencing a reduction in international demand for manufactured goods, they are also seeing the emergence of new opportunities in a climate where many international firms are seeking to cut costs. Some Polish locations enjoy a combination of relatively low production and labour costs with good accessibility and workforce skills. For instance, the computer manufacturer Dell announced in early 2009 that it was moving production from Ireland to the Special Economic Zone in Łódź.

[52] http://www.invest-in-france.org/international/en/automotive-sector.html

[53] Les Echos (2008) *La crise atteint les équipementiers automobiles dans les régions,* 30 October.

[54] Les Echos (2008) *Les suppressions d'emplois en France*, 28 October.

5.4.2 Construction

The construction sector has been particularly affected in a number of countries, with the impacts often most strongly felt in urban areas, particularly larger cities where housing market demand has been particularly strong in recent years (Finland, Poland, UK). In Poland, constraints on bank lending to households, as well as the zloty's depreciation, have reduced demand for housing, so that many residential developments in large cities such as Poznań, Łódź, Warsaw and Kraków have either been suspended or postponed. Similarly, in the UK, the housing bubble was particularly inflated in London and the South East of England before the recession, and the effects of the bubble's bursting are also most evident here.

In contrast, the effects of the slump in Ireland's housing market are greatest in the less prosperous Border, Midland and West regions, at least in terms of job losses.[55] The number of jobs cut in the construction sector is highest in absolute terms in these regions and the impact of this fall in employment is also more serious due to the limited availability of other employment opportunities in manufacturing and service sectors in these regions.

5.4.3 Financial sector

Although the current recession is rooted in a crisis in the financial sector, some countries have not seen any significant bank restructuring or job losses (e.g. Austria, Finland, Italy, Norway, Poland, Sweden) and, even where such effects have been experienced, their broader economic impact depends on the size of the financial sector within the overall economy (with the industry accounting for a large share of employment in Luxembourg, Cyprus and Ireland, as well as the UK and Belgium).

As financial service sectors are usually located in a small number of agglomerations, the direct effects of the crisis on this sector are often regionally concentrated (France, Netherlands, UK). However, even in the concentrated financial sector of the UK, job losses are not only seen in London and South East England but also in other regions in northern England and Scotland. In some countries, such as Germany, the financial sector is less concentrated and there are a number of regional commercial and public banks, some of which have been strongly affected by the crisis, for example in Dresden, Düsseldorf, Frankfurt-am-Main, Hamburg, Kiel, München and Wiesbaden.

The crisis in the financial sector could potentially have wider effects. However, in most countries, there is little evidence that constraints on bank lending to businesses and households is affecting regions differently, even in countries such as Germany with more regionally structured banking systems. In Italy, however, there are concerns that the fall in bank lending is particularly affecting structurally weaker regions in the South, where firms are less capitalised and are typically characterised by shorter term borrowing.[56]

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[55] E. J. Dillion, T. Hennessy, J. Behan and D. Meredith. (2009) *An Analysis of the Rural Labour Market in Ireland*, Carlow: Teagasc.

[56] SVIMEZ (2009) *Op. Cit.* pp. 521-526.

Further regional effects could be seen in the medium- to longer-term, particularly through the impact of the financial sector on the finances of regional and local authorities. In Germany, a number of *Land* governments (e.g. Bayern, Hamburg and Schleswig-Holstein) have contributed to the rescue packages of banks and they will therefore have to absorb these costs into their budgets. In addition, some local authorities in Germany have been involved in cross-border leasing agreements with US investors (e.g. for funding urban transport systems or hospitals), many of whom are now pulling out, and this could potentially generate additional costs for these local authorities.[57] Moreover, if the crisis leads to stricter bank lending criteria, this could particularly affect local authorities with significant existing debt, which are generally in structurally weaker regions.[58]

5.4.4 Externally-oriented service sectors

Some regions with strengths in private sector services have also been affected by the fall in international demand. In some service sectors, demand is strongly linked to broader business activity and the volume of international trade. In the Netherlands, for example, a number of regions have strengths in trade and logistics and have seen a fall in demand due to the downturn in the volume of international goods trade, as well as passenger transport. The impact has been strongest in the area around Amsterdam Schiphol airport, as well as Rotterdam harbour, both of which have seen significant reductions in traffic as a result of the crisis.[59] However, other Dutch regions also have strengths in logistics (the South West) or the road haulage and transport sector (South East).[60]

Tourism is another important externally-oriented service sector which is often geographically concentrated, sometimes in regions with few other business activities. The impact of the crisis on individual regions is unclear, especially as figures on the results of the important summer season are still sparse. However, there is evidence of particularly strong increases in unemployment rates in some tourism-oriented Mediterranean regions in Greece and Spain. Similarly, the number of international arrivals in European countries was around ten percent lower in the second quarter of 2009 than in 2008.[61] In some countries (e.g. Netherlands, Norway), there are concerns over the potential effects of reduced tourism numbers, not least on the economies of structurally weaker, peripheral areas. In other countries, there were hopes that regions could benefit if people decided to take holidays closer to home rather than travelling abroad. In Austria, for example, tourism accounts for over 8 percent of GDP and 12 percent of employment[62] (and considerably higher in regions such as the Tyrol) and there was seen to be potential to benefit from the crisis, particularly if Austrian and German tourists decided to spend their holidays closer to

[57] M. Rosenfeld (2009) *Op. Cit.*

[58] Bundesamt für Bauwesen und Raumordnung (2009) Mögliche Auswirkungen der internationalen Finanzkrise auf die deutschen Regionen, *BBSR-Berichte KOMPAKT* Nr.2, May 2009, Bonn.

[59] CBS web magazine (2009) *Turnover transport sector dramatically down in first quarter of 2009*, 7 July 2009.

[60] Statistics Netherlands (2009) *Economic growth down in nearly all regions*, Press release, 2 July.

[61] European Travel Commission (2009) *Op. Cit*.

[62] OECD 2009a *Op. Cit*.

home. Countries which have seen exchange rate depreciations may also have attracted more tourists, including Sweden, where tourism is of particular importance in northern regions.

5.4.5 Public sector

In many regions, public employment has cushioned the effects of the crisis in 2008-09, although not in countries which are already introducing public spending cuts (e.g. Bulgaria, Estonia, Hungary, Ireland, Latvia, Lithuania and Romania). The capacity of the public sector to mute the short-term effects of the recession depends in part on the scale of this sector in the overall economy, as well as the geographical distribution of employment (see Table 12). Regions with relatively large public sectors are often structurally weaker areas where public services (such as health and education) play a particularly important role in employment because private sector jobs in such regions are generally poorly paid or precarious. However, public sector employment is also of importance in capital city regions and other large administrative centres, which are not only home to core State functions but also, for example, large research and education facilities.

In the medium- to long-term, many countries are likely to introduce public spending cuts in order to reduce the high levels of indebtedness currently being incurred via fiscal stimulus packages. The impact of such cuts is likely to be greater in regions with high levels of public employment, particularly if they affect health, education and social welfare bodies, as well as sub-national authorities, rather than simply central State ministries. In the UK, one report forecasts that public sector employment could shrink by 240,000 to 290,000 jobs between 2009 and 2014, with particular cities in northern England, Wales and Scotland, but also some southern English cities, seen as likely to be most affected.[63]

There are particular concerns over the potential impact of future spending cuts on the ability of local authorities in structurally weaker regions to provide adequate public services (Finland, Germany, Sweden). In Germany, for example, local authorities' finances typically deteriorate in recession, as they are responsible for paying the housing and heating costs of people on unemployment benefits but also see a fall in corporate and income tax revenues. In the short term, fiscally weaker local authorities may be less affected, as they receive compensation from *Land* authorities for structural shortfalls in their own tax base. In the medium term, however, poorer *Land* governments, particularly many of the new *Länder*, may be unable to maintain levels of transfers to local authorities, due to broader efforts to reduce public indebtedness.

6. REGIONAL DIMENSIONS OF GOVERNMENT INTERVENTION

6.1 Different kinds of regional intervention

The primary focus of all governments' response to the crisis has been national and international, rather than regional. This is not only the case for measures for the financial

[63] Centre for Cities (2009) *Public sector cities: trouble ahead,* London.

sector or monetary policy, but also most fiscal interventions, many of which are unlikely to have significantly different effects across regions. These include, for example, changes in personal income tax and business tax; the provision of additional business lending; and additional funding for local infrastructure in all local authorities.

Nevertheless, most countries have incorporated some kind of geographical dimension into their fiscal responses to the crisis. In some countries, elements of the fiscal stimulus packages are channelled through regional policy instruments. In many more, some fiscal measures explicitly target regions or localities, although funding does not flow through regional policy. In addition, certain fiscal measures may implicitly be biased towards certain regions because they focus on sectors or activities that are more prevalent in some regions than in others. Lastly, the stimulus packages in some countries include organisational changes, aimed at improving the monitoring of regional economies or at involving sub-national authorities in the policy response.

6.2 Changes in regional policy

6.2.1 Additional regional policy support for weaker regions

Governmental authorities in some countries argue that the recession should not be allowed to stimulate shifts in regional policy because it is a long-term structural policy which should not be used to address cyclical problems (Austria, Netherlands). However, changes have been made to regional policy in a number of countries, with additional support being channelled to structurally weaker regions. The scale of new measures varies, however, with only Germany using existing regional policy instruments as a core component of central State fiscal stimulus packages. In other countries, changes are more limited, and take the form of small rises in funding allocations or shifts in eligibility requirements.

In Germany, regional policy is centrally involved in the federal government's response to the crisis, with the allocation of an additional €0.2 billion to the Regional GA (Joint Task for the Improvement of Regional Economic Structures, *Gemeinschaftsaufgabe 'Verbesserung der regionalen Wirtschaftsstruktur')* in 2009-11. This funding is earmarked for existing designated structurally weaker areas but, unlike mainstream Regional GA funding (where the new *Länder* receive 6/7ths of resources), the additional funds are divided 50:50 between the old and new *Länder*. This funding division was introduced with a view to ensuring the rapid absorption of funds and the availability of co-financing at *Land* and local authority levels. In addition, the GA is one of the instruments which implements the federal government's regulation on small-scale aid (*Bundesregelung Kleinbeihilfen*) (under the EU's Temporary Framework for State aid measures in the financial and economic crisis). Under this regulation, the Regional GA's aid ceiling for large firms in designated areas of the old *Länder* in 2009-10 has been raised to €0.5 million (instead of the usual aid ceiling of €0.2 million). The new *Länder* do not benefit from this change as they are fully covered by Article 87(3)(a) and so already enjoyed higher aid ceilings before these changes.

In many countries, the crisis has only stimulated minor changes in regional policy. This approach is seen in Norway, for example, where a regional policy White Paper for the next four years was published in April 2009 and shows no significant shift in strategic direction due to the economic crisis.[64] Nevertheless, the Ministry of Local Government and Regional Development has allocated additional funding for sectors and areas facing economic problems. Similarly, in Sweden, no major changes have been introduced to regional policy expenditure or strategies but funding for regional transport aid has been increased by two percent in 2009, in order to compensate firms in the four northernmost regions for the transport costs associated with higher oil prices. Moreover, as the crisis is leading to changes in the pattern of demand for different types of support, the Swedish government has decided to amend eligibility requirements, so that funding can now be allocated for business training alone, and not only when training is linked to business investment projects. Minor changes in eligibility requirements have also been made to the main regional incentive scheme in France (the *prime d'amènagement du territoire*, PAT), notably in the case of extension or takeover projects.

6.2.2 Re-orientation of regional policy

In other countries, some of the changes introduced to regional policy do not benefit structurally weaker regions but instead either benefit relatively wealthier regions or all regions. Some of these changes are being generated in a bottom-up way, as regional actors endeavour to respond to the recession, but others are being imposed by central authorities.

In Denmark, for example, the regional growth fora, which have the task of monitoring and furthering economic development in the regions, have reacted to the crisis by establishing or extending support for venture or loan capital. In addition, some are increasing their focus on allocating grants to SMEs on small no-bridge islands. In the Netherlands, no changes have been made in regional policy funding or strategic goals but regional actors have introduced some revisions to individual *Peaks in the Delta* programmes. Similarly, in Finland, the level and geographical distribution of domestic central State funding for regional authorities is unchanged but it is being more strongly focused on creating businesses and jobs and on preventing unemployment.

In contrast, top-down changes have been made to regional aid schemes in England (the Grant for Business Investment) and Scotland (Regional Selective Assistance) in response to the downturn. In both cases, the lowest designation category (Tier 3), which provides grants to SMEs outside Article 87(3) areas, has been extended to cover the whole territory, and aid rates have been raised to 10 percent (from 7.5 percent) for medium-sized companies and to 20 percent (from 15 percent) for small companies. In addition, the previous aid ceiling of £0.1 billion per firm has been lifted. As there has been no significant increase in total funding for regional aid, the overall effect is likely to be that some of the funding previously earmarked for structurally weaker areas will now flow to wealthier areas.

[64] Ministry of Local Government and Regional Development (2009) *Local vekstkraft og framtidstru: Om districts og regionalpolittiken*, St.meld.nr.25 (2008-2009).

6.2.3 Reduced funding for regional policy

In some countries, efforts to raise resources to respond to the crisis have led governments to cut certain categories of spending, including for some regional policy instruments. Similar fiscal pressures are likely to emerge in other countries in coming years, possibly leading to further cuts in regional policy.

In Italy, the fiscal stimulus package includes a reduction in domestic regional policy funding, with resources being reallocated to other types of expenditure. In March 2009, around €18 billion (of a total of circa €63 billion in 2007-13) was cut from the Fund for Under-utilised Areas (*Fondo Aree Sottoutilizzate*, FAS), which finances economic development in the regions and focuses in particular on the South (for which 85 percent of FAS resources are reserved).[65] Although the regional programmes funded by the FAS are relatively untouched, the national component of FAS funding for regional development has effectively been abolished, namely the national FAS programmes for Education, research and competitiveness, Networks and mobility, and Governance, technical assistance and systemic actions. These funding cuts are expected to have a particular impact on southern regions which are not covered by Cohesion policy's Convergence Objective (Abruzzo, Molise and Sardegna) which receive much more limited support from Cohesion policy. The government has reallocated the resources cut from the FAS to three special national funds, one focused on employment and training, a second on infrastructure, and a third on the real economy in general.

Regional policy funds have also been cut in England. The central State's fiscal stimulus package is partly financed by a reduction of £34 million in the Regional Development Agencies' (RDA) budgets for 2008-09 and further cuts may be seen. These reductions follow earlier cuts in 2007 of 2.5 percent plus further efficiency savings, as well as a reduction in September 2008 of one percent for 2009-10 and 10 percent for 2010-11. However, the fiscal stimulus package also channels some additional funding through the RDA budgets, notably for small firms and for low-carbon businesses. Overall, it is likely that the fiscal stimulus package will mean that the RDAs focus more strongly on core activities, such as business support schemes, innovation centres and physical regeneration schemes, rather than social or community projects.

6.2.4 Organisational changes in regional policy

In a number of countries, the crisis has stimulated efforts to ensure effective cooperation and coordination between different actors in the field of regional policy. In general, the aim has been to mobilise all available resources and information, in order to increase the effectiveness of policy responses to local and regional difficulties, particularly in locations most affected by firm closures or restructuring and by job losses.

In Finland, this approach is seen to be based on lessons drawn from the 1990s recession, when policy responses relied on cooperation between central, regional and local

[65] SVIMEZ (2009) *Op. Cit.* p.251.

government and the creation of tailored solutions.[66] In the current crisis, the networking of regional actors is being extended. The central government has maintained a relatively strong role during the downturn, but at the same time has promoted more dialogue with the Regional Councils. Coordination has also improved among regional and local authorities.

In Sweden, regional coordinators have been appointed in 2008 and 2009, first in northern regions affected by the closure of saw mills, then in western automotive regions, and finally in all regions as the crisis spread across the country. Each region now has two coordinators (the county governor and the chair of the regional executive committee), who are responsible for reporting to central government on local developments and needs, and for coordinating the efforts of various local and regional actors. In addition, the central government has appointed a group of State Secretaries to facilitate dialogue with the regional coordinators. This approach is seen to have improved cooperation at regional level, and also between the regions and the central level.

A similar approach is being taken in France, where the regional and departmental *préfets* have the task of monitoring the crisis in the regions and of reporting back to central government on sectors affected and on support measures needed. This approach has been intensified in ten regions which are perceived to be most affected by the crisis, namely Bretagne, Champagne-Ardenne, Franche-Comté, Haute-Normandie, Lorraine, Midi-Pyrénées, Nord-Pas-de-Calais, Picardie, Poitou-Charentes, Rhône-Alpes. In each of these regions, a *commissaire à la réindustrialisation* (reindustrialisation commissioner) has been appointed to work alongside the regional *préfet* in coordinating the various policy instruments available.

In the UK, the government established a National Economic Council in October 2008 to coordinate the government's response to the crisis, as well as a Regional Economic Council (REC) made up of central State Ministers and representatives from the Regional Development Agencies, local authorities, businesses and trade unions. The REC meets on a quarterly basis to decide how regions should individually and collectively respond to economic pressures, and it also provides feedback on the economic situation of the regions to the National Economic Council.

6.2.5 The role of Cohesion policy

The reaction of Member States to the changes introduced by the Commission to rules governing Cohesion policy in response to the crisis (see Section 4.4) has been mixed.[67] Most managing authorities have broadly welcomed the Commission's interventions, although some note that the measures could generate implementation risks or raise questions over the longer-term goals of Cohesion policy. Other authorities argue that more could be done to simplify procedures, or that the measures are relatively unlikely to contribute

[66] M. Kiviniemi (2009) *Roundtable on regional policy: what governments are doing*, OECD Observer.

[67] This section draws partly on research undertaken in the context of the IQ-Net network in spring 2009 with 24 authorities involved in Structural Funds implementation from 15 Member States. For more information on IQ-Net see: http://www.eprc.strath.ac.uk/iqnet/

significantly to the country's response to the crisis, not least due to low level of EU funding in some countries.

Many managing authorities have taken advantage of the opportunity to extend the closure date of the 2000-06 period and of the increased EU advance payment for the 2007-13 period (e.g. Belgium, Finland, France, Germany, Greece, Italy, Netherlands, Portugal, Sweden), although some question the advisability of further prolonging the 2000-06 programmes (e.g. Austria, UK). The extent to which other measures have been taken up varies across Member States and programmes depending, for example, on the types of intervention funded (e.g. whether there are major projects or financial engineering projects), as well as on the role of Cohesion policy interventions in relation to broader public expenditure strategies.

Some Member States have responded positively to the opportunity to make thematic changes to the 2007-13 programmes, although others are making few or no revisions, generally because this is not seen to be necessary or appropriate (e.g. Austria, Germany, Netherlands, Poland). Significant revisions have been introduced, for example, in Hungary, where the government has had to delay tax cuts and reduce domestic public spending as a result of the crisis. The government and the European Commission have agreed to reallocate resources between the Hungarian Structural Funds programmes (as well as the Cohesion Fund), with an additional €0.4 billion being re-directed towards support for enterprise, especially SMEs, and financial instruments. A number of other Member States have introduced more limited changes, for example in order to expand funding for business credit (in Italy's Piemonte and Toscana), or to fund the introduction of short-time working measures (in UK's Wales). In Germany, one *Land* was considering using Structural Funds resources to provide rescue aid to firms in difficulty due to the crisis, but the European Commission advised that this was not an appropriate use of programme funds.

There have also been varied reactions to the Commission's proposal that eligibility criteria be extended to allow ERDF funding to be allocated for energy efficient housing, not only in urban areas in the new Member States but in all areas affected by social exclusion in all Member States. Some programmes have not taken up this option, either because it is not seen as an appropriate use of Cohesion policy funds or because there is already domestic funding for such interventions (Denmark, Germany, Netherlands). In others, managing authorities are either pursuing this option actively (Greece, some UK programmes) or have some interest in adjusting programmes in this direction in future (Czech Republic, France, Greece, Slovenia).

6.3 Other policy responses that target regions

In addition to changes introduced in the context of explicit regional policy, some countries are channelling other types of funding to specific regions or localities in the recession. Resources may be targeted on structurally weaker regions, on stronger regions or on all regions. However, as in the case of explicit regional policy, there are also situations where funding for broader regional interventions is being reduced.

6.3.1 Additional support for weaker regions

Some countries are allocating additional funding to local areas which are structurally weaker and so have particular difficulties in responding to the crisis. In Germany, for example, the federal government has earmarked €3 billion in 2009-10 for loans to structurally weak local authorities, primarily those in the two highest categories of designated area under the Regional GA. These loans can be up to 100 percent of costs, are interest-free for two years and enjoy a subsidised interest rate in the following two years.

In other countries, resources are being targeted on locations where firms are particularly badly affected by the crisis. In Finland, the government's recovery package includes measures to provide assistance to specific areas facing the sudden closure of plants or businesses. Eleven areas throughout the country have been identified as suffering from rapid structural change, mainly where major forestry plants have ceased operations during the downturn. These measures involve national, regional and local levels, as well as the businesses concerned, which are expected to support workers facing redundancy and to help fund alternative employment. The funding will help over 4000 people who have lost their jobs in the affected areas. Similarly, in Ireland, a task force has been set up to coordinate and report on action needed to assist recovery in the area of Limerick; however, due to fiscal constraints, no additional funds have been allocated to the task force.

In France, the main measures that focus directly on the worst-affected localities had already been agreed in principle before the crisis. First, the National Territorial Renewal Fund was set up in February 2008 but was not assigned funding (of €150 million) until 2009. The Fund provides non-guaranteed loans to firms which create between 10 and 500 new jobs in (to date) 17 areas affected by industrial restructuring and which are not eligible for other restructuring support such as regional aid. Second, under the EU Temporary State aid Framework, the ceiling on the tax exemption for firms in employment zones undergoing industrial restructuring has been raised from €0.2 to €0.5 billion. The tax exemption relates to a local business tax (*taxe professionnelle)* and benefits 67 of the 350 employment zones nationwide. Similar aid is available to 20 existing priority labour market areas, which are characterised by above-average unemployment and slow employment growth and are concentrated in northern regions.

6.3.2 Re-orientation of regional focus

Other measures taken to accelerate public and private investment may also have explicit regional dimensions. Some benefit stronger regions, either via the allocation of additional funding or via the extension of eligibility in their favour. Other measures involve the allocation of new central government resources for all sub-national authorities, or the re-orientation of local or regional authority budgets in response to the crisis.

One of the measures that mainly benefits stronger regions is the temporary extension of area eligibility under Germany's federal Central Innovation Programme for SMEs (*Zentrales Innovationsprogramms Mittelstand*, ZIM) from the new *Länder* to include all *Länder,* with firms with up to 1000 employees throughout Germany now enjoying funding eligibility. The federal government has allocated an additional €0.9 billion to the programme in 2009-10, with €0.1 billion of this amount being ring-fenced for the new *Länder*. Similarly, in the Netherlands, the crisis packages bring forward funding under the existing Economic Structure Enhancing Fund (FES) which finances national priority projects, including resources for the existing 'strong regions' programme. The acceleration of FES spending will assist four large projects which relate to the mainports in the Randstad (Schiphol airport and Rotterdam harbour); energy investment in Groningen in the North; the food sector in Wageningen in the East; and the R&D activities of Brainport Eindhoven in the South East. However, although these projects are focused on specific towns with existing economic strengths, they involve five out of the six *Peaks in the Delta* regions and are thus distributed fairly evenly throughout the country.

Other measures involve additional central government funding for all sub-national authorities. In Germany, for example, federal funding of €10 billion has been awarded in the form of investment grants for all local authorities. The funding is allocated to the *Länder*, largely on a per capita basis but with a slight bias towards the new *Länder.* Each *Land* is then responsible for dividing the funding between their local authorities, and may decide to retain a percentage of funds for supra-local projects. *Land* or local authorities must provide 25 percent co-financing. Similarly in Finland, the deterioration in the finances of municipalities in 2009 has led the central government to include an additional €760 million for municipalities in its budget proposal for 2010, partly through measures already decided (an increase in employers' pension contributions and property tax rates) but also through the allocation of additional central State transfers, including funds for refurbishing schools, health centres and nurseries, and IT investment in service provision.[68] In Spain, a key element of the central government's stimulus package is the Local Investment Fund (*Fondo de Inversión Local*) of €8 billion, which is allocating up to 70 percent of the costs of local infrastructure works to municipalities.

In some cases, such funding may have uneven geographical effects, depending on the capacity and desire of sub-national authorities to take up new resources. In France, the central government has amended existing rules on the reimbursement of VAT payments to sub-national authorities (*regions*, *départements* and *communes*). Funds are usually reimbursed two years in arrears but, in 2009, the central government will reimburse VAT payments for 2008 to any sub-national authority that commits to investing at least €1 more in 2009 than it did on average in 2004-2007. There has been strong take-up of this measure, with over 18,000 agreements reached by May 2009, amounting to an increase of 54 percent on 2004-2007 investment levels (or an additional €18.7 billion of investment). Most *regions* have opted to participate (except Lorraine, Champagne-Ardennes and Guadeloupe), as have all but six *départements*. However, fewer than half of the *communes* are participating, yet they account for over 40 percent of total investment.

Lastly, regional or local authorities in a number of Member States (e.g. Germany, Italy, Netherlands, Poland, UK) have produced their own plans for dealing with the effects of the crisis. In these cases, the scale of additional funding from the regional or local level varies,

[68] Finnish Government Communications Unit (2009) *Government budget proposal for 2010: Attention to people, employment and services in a severe economic situation*, Press release, 2 September 2009.

as does the scope of different kinds of new interventions. Many authorities lack the funding and borrowing flexibility to be able to allocate significant resources to anti-crisis packages. In some cases (e.g. some German *Länder*), the packages mainly include central State funding which is channelled through sub-national authorities, or the re-orientation of existing instruments. In others (e.g. Poland), regional plans largely occur in the context of regional Structural Funds programmes. However, some sub-national authorities are allocating additional funding, for example in the Dutch province of Noord-Brabant where interventions are funded from the proceeds of energy privatisation. Similarly, the Scottish government is accelerating capital spending programmes at Scottish and local levels, reducing taxes on business, and allocating new funding for social housing.

6.3.3 A reduction in public spending in the regions

Where public expenditure cuts are already being introduced, these measures may have an explicit regional component. In Ireland, for example, the government's spending cuts include a number of measures that are likely to affect regional development. First, capital expenditure under the National Development Plan, which has a strong regional dimension, has been cut by around 20 percent in 2009; this will result, for example, in more limited funding for regional and local roads. Second, a significant public sector reorganisation is under consideration, that would involve the closure of the central government Department of Community, Rural and Gaeltacht Affairs; the closure of the Western Development Commission which currently supports the economic and social development of the western region; the transfer of business support functions from the regional development agency, Shannon Development, to national agencies; the merger of the regional offices of three national development agencies (Enterprise Ireland, IDA and FÁS); and a reduction in the number of local authorities by over one third.

6.4 Policy responses that implicitly affect regional development

A final category of measures introduced in the crisis packages do not directly target particular types of region or locality but may indirectly affect some locations more than others, even though interventions primarily aim to support national economic growth and employment. This is particularly the case for interventions targeted on sectors that are concentrated in specific regions. Similarly, funding for certain types of activity, such as R&D or transport infrastructure, may in practice be biased towards certain locations.

Other indirect regional effects may be seen in the case of support for certain types of household if there are clear regional differences, for example in levels of personal disposable income or in property ownership rates. Where such regional disparities exist, grants and tax relief on household purchases are likely to benefit richer regions disproportionately, whereas welfare support and tax cuts for poorer households would more strongly benefit poorer regions. Nevertheless, many poorer (richer) households are also located in richer (poorer) regions; in particular, large cities often have higher levels of per capita personal disposable income but also large populations with very low disposable income levels. It is therefore difficult to establish the regional impact of measures targeted on households throughout an individual country.

6.4.1 Additional support for specific sectors

Most countries have introduced some measures which target particular sectors, notably financial services, automotives, construction and renewable energies. This support has a regional dimension in countries where these sectors are geographically concentrated. The characteristics of the regions where these industries are located vary between countries.

All countries have introduced some form of support for the financial sector but the effects of many measures (e.g. systemic banking liquidity, or safeguards for private savers) should be felt throughout the economy. A region-specific effect is most likely to be seen where State intervention has directly aimed to reduce the scale of potential job losses by recapitalising or (partly/fully) nationalising certain banks. In some countries, such intervention has mainly safeguarded jobs in core agglomerations, as this is where the financial services sector is concentrated (e.g. Amsterdam, Ile-de-France and London). However, in Germany, employment in the financial sector is more geographically spread, and the headquarters of the main banks affected by the crisis are located in different parts of Germany, with HSH Nordbank based in Hamburg and Kiel, Hypo Real Estate and Bayern LB in München, Aareal in Wiesbaden, Commerzbank in Frankfurt-am-Main, the Industriekreditbank in Düsseldorf, and Sachsen LB in Dresden.

Most countries have also introduced some support for the automotive sector, whether in the form of car scrappage schemes (Austria, Germany, Italy, Netherlands, UK) or other measures. These interventions will particularly benefit locations with many automotive manufacturing and supplier firms, such as northern France, the UK's West Midlands, South-East Netherlands and western Sweden. In Germany, the car industry is relatively concentrated in southern Germany (Baden-Württemberg and Bayern) but also has a strong presence in other old *Länder* (e.g. Niedersachsen and Nordrhein-Westfalen, as well as Rheinland-Pfalz) and some new *Länder* (e.g. Sachsen, Sachsen-Anhalt, Thüringen). Although the impact of government measures is often greatest if households buy domestically-produced cars, some regions may benefit from increased car imports. In the Netherlands, for example, it is anticipated that the car scrappage scheme should benefit the port of Rotterdam if it encourages increased flows of car imports and exports.

In addition, a number of countries have introduced specific assistance for the renewable energies sector (Germany, Netherlands, Norway), which is often geographically concentrated. In the Netherlands, for example, extra funding for wind energy at sea and the acceleration of spending on sustainable energy may be of particular benefit to the North, which has clear strengths in these sectors.

Other interventions are limited in EU countries due to strict EU rules on sectoral State aid. One exception, however, is the abolition of the passenger air transport tax in the Netherlands, which is likely to be of particular value to Schiphol airport and thus to the North Wing of the Randstad. In contrast, Norway has allocated support to other sectors, including the marine sector and the wood industry, which is likely to be of particular benefit to the west and north of the country. In addition, some horizontal schemes have earmarked support for individual sectors. The business guarantee programme includes both a general guarantee and a specific measure for the white fish industry, with implications once more mainly for the west and north. Similarly, a new equity fund was launched in January 2009, with one quarter of its NOK 2 billion funding being earmarked for the marine sector.

6.4.2 Additional support for specific activities

In many countries, additional funding has been allocated to activities such as investment in public infrastructure and R&D, and these resources may benefit some regions more than others. Nevertheless, funding is generally allocated on national policy grounds, rather than to support the development of individual regions. In other countries, governments are already cutting some components of public infrastructure spending; in Bulgaria and Ireland, the suspension or cancellation of transport infrastructure projects is seen as likely to have a negative effect on the development of individual regions or localities.

In most countries (e.g. Finland, France, Netherlands, Sweden, UK), the allocation (or acceleration) of funding for large infrastructure projects does not have an explicit regional dimension, with projects mainly being selected on the basis of their technical capacity to start quickly, as well as their socio-economic importance, rather than their location. The allocation of funding is therefore likely to be geographically uneven. In the Netherlands, for example, measures to prepare for a new Delta programme to strengthen sea defences are likely mainly to benefit the South-West, while funding under the Economic Structure Enhancing Fund is allocated to major projects of national importance. However, there is some attempt to ensure a degree of regional evenness in the allocation of infrastructure funding in some countries. In France, efforts have been made to ensure that at least one major transport project is selected in each region, although not to achieve a balanced distribution of funding, with significant funding being allocated, for example, to Ile-de-France.[69] Similarly, in Norway, the government has stressed that the additional funding for infrastructure at municipal and central State levels will have a 'good regional balance'.[70]

Further funding is allocated to R&D and innovation in a number of countries (e.g. France, Germany, Ireland, Netherlands, Norway, UK). Although this funding is not explicitly focused on any types of region, demand is likely to be geographically uneven, as the location of R&D activities is typically concentrated in a small number of agglomerations with good links to external markets and to R&D excellence in universities and public research centres. In the Netherlands, for example, central State support to employ business researchers temporarily in universities or public research centres was introduced in response to requests from the South-East region where many R&D jobs are located.[71] Other R&D and innovation measures are also likely to have a particular resonance in the South-East of the Netherlands.[72] Similarly, in the UK, funding for R&D is likely to be taken up in particular by firms and researchers in London and South East England which enjoy the highest

[69] Ministre auprès du Premier Ministre charge de la mise en œuvre du plan de relance (2009) *Rapport Au Parlement*, Premier Trimestre, Paris.

[70] Ministry of Finance (2009) *Norwegian Government presents measures to secure employment*, Pres release, 26 January 2009.

[71] Brainport Persbericht, *Crisispakket Kabinet antwoordt op Brainportwensen*, Eindhoven, 26 March.

[72] Brainport Persbericht, *Extra WBSO goede impuls voor regio Brainport*, Eindhoven, 9 April.

concentration of the UK's research-intensive universities and firms.[73] In addition, the creation of a new entrepreneurship scheme in Norway is in practice likely to focuses on the big cities (such as Oslo, Bergen and Stavanger) since funding was already available to support entrepreneurship elsewhere. In contrast, in Ireland, the Border, Midland and West region has in the past had difficulties in absorbing funds for R&D and innovation (notably from the Structural Funds) and so are less likely to benefit from the central government's decision to focus public resources more strongly on R&D and innovation than are other regions.

[73] NESTA (2008) *Innovation by Adoption: Measuring and mapping absorptive capacity in UK nations and regions,* London.

7. CONCLUSIONS: LOOKING TO THE FUTURE

7.1 How long will the recovery take?

There remains significant uncertainty over the shape of economic recovery. Although the EU as a whole is estimated to have moved out of recession by the third quarter in 2009 (see Table 3), it is not yet clear whether this recovery will spread throughout the international economy or whether it can be sustained. In particular, there is considerable uncertainty over the impact of ongoing increases in unemployment on consumption, as well as over the effect of continued weaknesses in credit provision on business investment.[74]

Various possible broad scenarios can be envisaged for the recovery. Although still possible, it now seems less likely that the recession will turn into depression, a deflationary cycle and an intensified downward spiral. Some observers suggest that a relatively fast (U-shaped) recovery is possible, based on effective fiscal and monetary stimuli, leading to increased confidence and an upturn in consumption and investment. Others argue that it is more likely that a volatile (W-shaped) period of uncertainty will ensue with fluctuating confidence and economic momentum. Scope for optimism is constrained by the perception that recessions associated with financial crises, and also recessions that are synchronised across countries, are more likely to be severe and long-lasting than other types of recession.[75] In any case, recovery is likely to be longer and more difficult in those countries which have been most seriously affected by the crisis.

The recovery is at present being sustained by expansionary fiscal and monetary policies, as well as by inventory adjustments, and significant economic weaknesses remain.[76] There remain questions over the functioning of financial markets and, in some countries, further work is needed to restructure banks and their balance sheets. As a consequence, bank lending to businesses and households remains constrained, acting as a brake on economic activity. Persistently weak demand means that further firms are likely to go bankrupt and more workers, also in surviving firms, are likely to lose their jobs, and this may continue to mute household spending and also lead to further falls in house prices in some countries. International discussions are now underway over the need to develop exit strategies from countries' existing expansionary macroeconomic policies. There are concerns that fiscal and monetary policies should not be tightened too soon, nor in all countries at once, and also that measures are in place to address the imbalances generated by these expansionary policies.

[74] DG Economic and Financial Affairs (2009c) *Op. Cit.*

[75] IMF (2009b) *World Economic Outlook*, Washington DC, April 2009, pp.103-138.

[76] IMF (2009c) *World Economic Outlook Update*, Washington DC, July 2009.

7.2 Will the crisis have structural effects?

An important question is whether the crisis will stimulate longer-term structural changes in the international economy. A number of potential structural effects could be envisaged at European or broader international scales.

First, the crisis-based deterioration in public finances in many countries is likely to shape public policy in the medium-term. Without a significant recovery in private sector activity and associated tax revenues, the level of outstanding public debt will place a major constraint on public sector activity in many countries as governments face higher interest payments and, particularly outside the Euro area, concerns over credit worthiness and currency speculation. Moreover, higher public sector indebtedness will have potentially significant knock-on effects on private sector activity through higher taxes, lower government spending and, particularly outside the Euro area, interest rate and exchange rate uncertainty. Governments will therefore need to find ways of reducing public indebtedness without endangering the economic recovery. Although some countries have already agreed clear plans for reducing the government deficit and gross public debt (e.g. Germany, Italy, Netherlands), it is likely that any public spending cuts or tax rises will be phased in, partly because many of the fiscal measures introduced by Member States are in any case scheduled to last until the end of 2010, but also because governments are aware of the need to take a gradual approach to shifts in fiscal and monetary policies. In any case, the need for fiscal constraints will be less acute if countries see sustained increases in GDP (as public indebtedness is measured relative to GDP), and also in those countries where government support for the financial sector has mainly been in the form of guarantees and where banks have not needed to draw significantly on these guarantees. Clearly, future constraints will also depend on the scale of countries' fiscal stimuli, as well as the degree of public indebtedness before the crisis.

Second, the crisis was triggered by product innovations in the financial sector and it spread due to process innovations in that sector in the form of extensive and close international linkages. It remains to be seen whether significant changes will be seen in the role of this sector, either due to stricter national and international regulation, or due to shifts in the strategies of financial institutions, or due to increased caution on the part of businesses and households. As economic growth in some countries has been facilitated by the rapid expansion of credit in recent years, any significant structural change in the availability or take-up of borrowing would have long-term effects on growth rates and also on the distribution of economic activity across sectors. It seems likely that the savings rate in these countries will rise in coming years, as businesses and households pay off existing debts and endeavour to build up financial cushions against further potential shocks.

Third, the crisis could have an effect on future patterns of EU integration, by influencing countries' attitudes towards the need for international coordination. Although countries have succeeded in cooperating during the crisis, the longer-term impact on governments' willingness to develop common solutions is as yet unclear. One dimension of this issue concerns the extension of Euro area membership. The crisis may not only make it more difficult for some central European and Baltic countries (e.g. Estonia, Hungary, Latvia, Lithuania) to meet the conditions of the EU's Stability and Growth Pact with a view to joining the Euro area, but could also reinforce questions about the advisability of Euro area constraints on countries undergoing rapid economic catching-up. However, it is also possible (particularly if Slovakia and Slovenia emerge well from the crisis) that the recession will increase the attractiveness of the stability offered by Euro area membership.

Fourth, the crisis may contribute to longer-term shifts in international economics. The present economic difficulties can be seen as part of a broader rebalancing in the pattern of global demand between net debtor countries (e.g. the United States) and creditor countries (e.g. China).[77] However, one potentially serious brake on medium-term economic growth is that, while demand is likely to remain low for some time in the United States and other countries where asset bubbles have burst (as governments, businesses and households increase their saving and pay off debt), it is hard to see which other countries will drive international demand.

Lastly, the crisis has raised questions over the sustainability of current patterns of international economic activity, and thus links to broader debates on the need for more radical shifts in economic relations and, particularly, on the desirability of finding ways of moving towards more environmentally and socially sustainable forms of economic behaviour.

7.3 Will the crisis have long term effects on regional development?

The impact of the crisis on different regions has varied, depending on the national economic situation, on the regions' initial economic situation and on their sectoral structure. Even though the crisis has been rooted in innovation and internationalisation in the financial services sector, there is as yet no evidence that (mainly metropolitan) regions specialising in this sector have been particularly badly affected, nor that the economic importance of these regions is diminishing.

Indeed, while all regions have been affected to some extent, the strongest impact has in general been seen in structurally weaker regions and in manufacturing regions. The longer term impact of the crisis on these regions is likely to vary. Although the past year has demonstrated the vulnerability of specialised manufacturing regions to external shocks, such regions should be well-placed to recover, once domestic and international demand rises again. Indeed, these regions are often key to broader national and European economic growth. In the case of structurally weaker regions, however, there is a risk that the loss of jobs and firms in the recession could lead to structurally lower levels of employment and economic activity, as other firms are less likely to set up or expand in these regions, even once the upturn comes. In addition, the importance of public employment and transfers in such regions means that they will be more vulnerable to future public spending cuts aimed at reducing debts incurred in recent months.

The impact of the crisis on regional policy is also likely to vary between countries. While regional policy has been an element of the response to the crisis in some countries, funding

[77] IMF (2009b) *Op. Cit.* pp.34-38.

for regional policy instruments has been cut in others. It is likely that funding for regional development will be constrained in many countries in the medium-term, along with other public spending categories, as governments endeavour to reduce public indebtedness. In such a context, policy-makers may need to find ways of increasing the effectiveness and value-for-money of regional policy, for example by further emphasising collaborative, bottom-up approaches that mobilise existing actors and resources. There may also be a need to emphasise the contribution of regional policy to national economic growth, for instance by further shifting resources towards R&D, innovation and human capital. Less certain is the effect of the temporary loosening of EU State aid rules to allow aid to firms in all regions. If these looser rules were extended for a longer period than envisaged at present, they would clearly weaken the advantage which regional State aid designation seeks to confer on structurally weaker regions.

Nevertheless, perhaps one of the key lessons of the crisis is the extent of economic interdependencies between regions and countries, and the need for international and interregional cooperation and coordination to address common problems. Similarly, the crisis emphasises the importance of government intervention – in the form of both monetary and fiscal policy - in mitigating economic weaknesses, whether at household, regional or international levels.