



# ESRI Research Note

## *Two-Speed Recovery? Spatial Development in Ireland*

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# Two-Speed Recovery? Spatial Development in Ireland

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Over recent times there has been some suggestion that there is a two-speed recovery in the Irish Economy, with the recovery being concentrated in Dublin, while other parts of the country are still stuck in recession. This implies that the regional development pattern in the recovery is one of divergence and the focus on the recovery only might suggest that this pattern of divergence is different to that seen either during the downturn or the boom. This note considers the evidence on spatial development patterns in Ireland during the recent economic recovery and during the previous period.

## **1. Regional Output Growth**

Nationally, the economic downturn, which started late in 2007 and lasted until 2010, reduced real GDP by 9 per cent. Between 2010 and 2013, real GDP increased by just over 2.6 per cent, indicating a weak recovery.<sup>1</sup> In per capita terms real GDP declined by 12.6 per cent reflecting the fact that the population was still growing while the economy contracted. The recovery has also been more modest in per capita terms with real per capita GDP up by 1.8 per cent in 2013 compared to 2010.

The latest regional data on Gross Value Added (GVA)<sup>2</sup> are for 2011, so these are of limited use in considering the spatial development patterns during the recovery. Nevertheless the analysis of these data yields some interesting results. In order to account for the fact that population growth is not evenly distributed around the country this aspect of spatial development is accounted for by considering per capita output.

Firstly, the recession did not hit all regions at the same time. While Dublin, the Mid-East and the Mid-West regions peaked in terms of per capita real GVA in 2007, the Border, Midland and West regions peaked in 2006 indicating that the recession started earlier in these latter regions (see Figure 1). However, two

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<sup>1</sup> Calculations based on the CSO National Income and Expenditure Tables.

<sup>2</sup> CSO, County Incomes and Regional GDP.

regions, namely the South East and the South West experienced a reduction in per capita real GVA from 2002 onwards i.e. they were in recession while the rest of the country still boomed.

Secondly, there is significant heterogeneity with respect to the size of the decline. While nationally per capita real GVA declined by 12.8 per cent<sup>3</sup> between 2007 and 2010, regions such as the Border (-30 per cent), Midland (-31 per cent) and Mid-East (-28 per cent) experienced a significantly sharper recession. Other regions such as Dublin (-11 per cent), the West (-11 per cent) and the South West (-12 per cent) fared better than the national average, suggesting that the large urban centres (Dublin, Cork and Galway) have been less affected by the economic downturn.

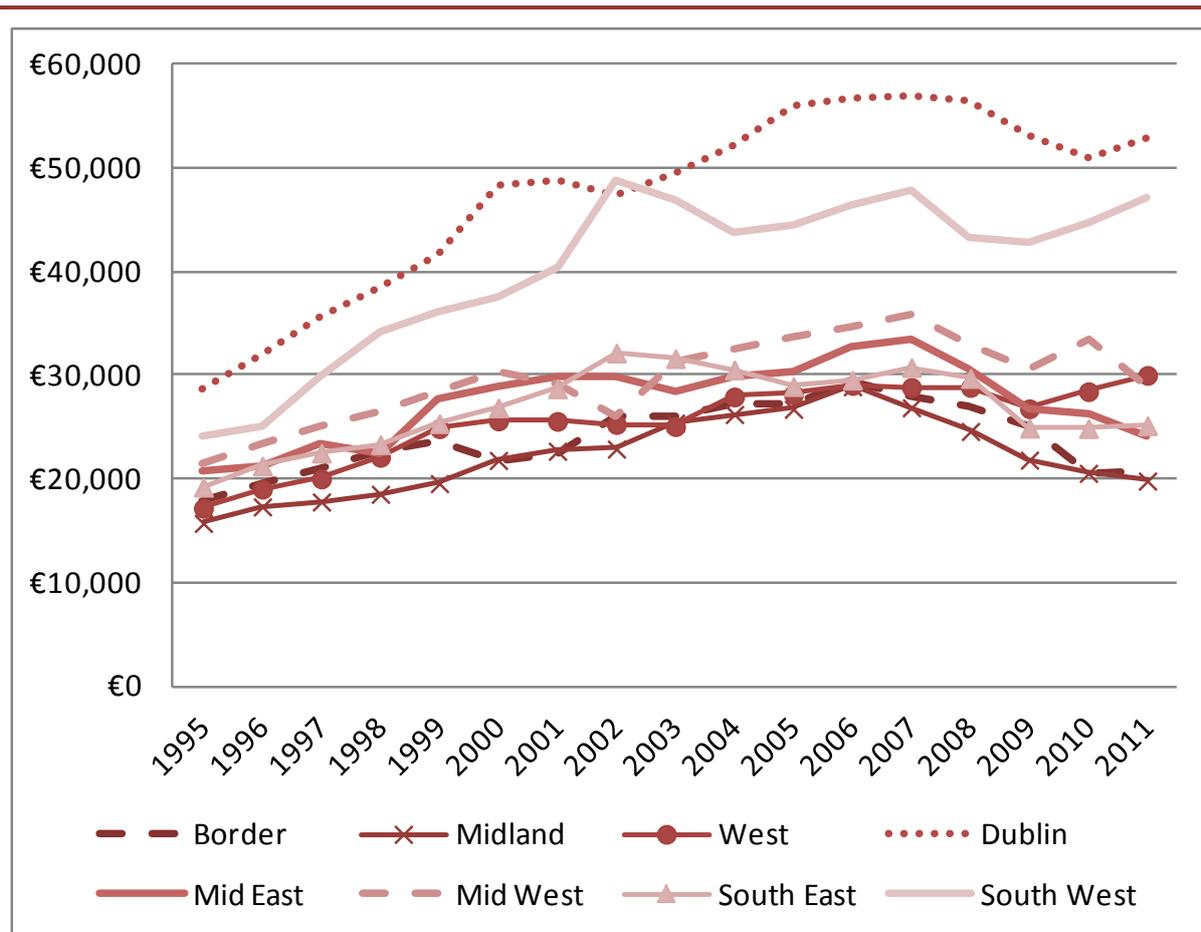
Thirdly, as of 2011 the Midland, Mid-East and Mid-West regions have not recorded real per capita GVA growth, so at least up to that point they had not emerged from recession. In contrast, the Border, Dublin, South East and South West regions have recorded growth and the West region has grown such that real per capita GVA in 2011 was higher than at any previous point i.e. that region more than recovered from the downturn. While growth in the Border (0.9 per cent) and South East (1.1 per cent) regions has been modest and both regions only started growing in the 2010 to 2011 period, strong growth has been recorded in the West (6 per cent), Dublin (3.9 per cent), and South West (5.2 per cent). Again the regions with the cities Dublin, Cork and Galway are seen to perform better.

Noticeable in Figure 1 is the increasing spread across the regions suggesting divergence. In particular, Dublin and the South West appear to be on distinct growth trajectory from other regions. However, rather than being a phenomenon that has occurred only since the recession, the figure clearly shows that there has been growing divergence since the onset of the “Celtic Tiger” in 1995. Formally, the coefficient of variation has increased from 0.19 to 0.32 between 1995 and 2011. Within that period the annual change in the coefficient of variation was positive in 11 out of the 16 years and the increase was on average larger than the decrease.

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<sup>3</sup> Note that the difference between GDP and GVA growth is due to the fact that there are slight definitional differences between the two measures.

FIGURE 1 Per Capita Real Gross Value Added (GVA) at Market Prices



Source: Own calculations based on CSO County Incomes and Regional GDP.

The increasing urban focus of development is also supported by analysis at the small area level. Significant locational preferences for different sectors were found in an analysis of the economic geography of Ireland using 2006 data.<sup>4</sup> Specifically, the more high value-added and high-tech sectors tend to prefer or require urban locations. An update of the analysis using 2011 data reveals that urban areas have increased their share in economic activity by 4.1 per cent overall and in 21 out of 30 sectors since 2006. This suggests that firms in urban locations have fared better during the economic crisis. Urban areas accounted for 72 per cent of all employment in 2011 compared to 68 per cent in 2006. Remote areas account for just 6.6 per cent of employment in 2011, down from 7.6 per cent, while economically central areas have increased their share of employment from 66.6 per cent to 68.2 per cent.

Nationally GDP per capita and GNP per capita started growing again in 2010 and 2011 respectively. Thus, the published data on regional GVA which cover the period up to 2011 cannot shed light on the recovery at the regional level. It is however possible to estimate the regional GVA up to 2013 since National Income

<sup>4</sup> Morgenroth E., (2009) "Exploring the Economic Geography of Ireland" *Journal of the Statistical and Social Inquiry Society of Ireland*, Vol. 38, pp.42-69.

and Expenditure (NIE) tables for the period up to 2013 are available.<sup>5</sup> These estimates suggest that Dublin and the South West have experienced per capita output growth from 2011. The West has also had some growth but that growth stalled in 2013. The Mid-East and the South East recorded an increase in GVA between 2011 and 2012 but have seen a reduction in per capita output in 2013. Per capita GVA declined in the Border and Midland regions until 2012 but grew in 2013. Finally, the Mid-West is estimated to have recorded a continued decline in per capita GVA.

This analysis shows that regions with a large urban centre, primarily Dublin, the South West and more recently the West, are on a different development trajectory compared to the other regions. The data show that this has been a long established pattern which implies that this two-speed development is not confined to the recent economic recovery.

## **2. Regional Employment and Unemployment**

In addition to output, employment and unemployment are also important business cycle indicator and published data on these are more up to date. However, as this relates to where employed and unemployed persons reside rather than where the economic activity takes place, it is important to be mindful of commuting patterns which particularly affect the data for Dublin and the neighbouring Mid-East regions.

Unemployment and employment at the regional level during the recent economic crisis were analysed in Morgenroth (2013),<sup>6</sup> which also found significant heterogeneity and divergence across the regions. That study also found that unemployment rates would have reached much higher levels if there had not been a significant decline in labour force participation. This dampening effect was found to be most significant in the Border region. Here the focus is not on decomposing the changes in the unemployment rate but to consider whether different regions follow different development paths that are reflected in employment.

Nationally, employment peaked in the third quarter of 2007 and reached its lowest point in the first quarter of 2012 having fallen by 15.9 per cent. As in the case of GVA, across the regions both the timing of the peak number employed and the lowest point differ. The Border, Midland, Dublin, Mid-East and South

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<sup>5</sup> This is achieved by assuming that the productivity differences across regions in the three broad sectors Agriculture, Forestry and Fishing, Industry and Services remain unchanged and applying these to the productivity for the period up to 2013 as implied by the NIE, and multiplying the productivity by the numbers employed which are published as part of the Quarterly National Household Survey (QNHS). This method also relies on an implicit assumption that commuting patterns are fixed.

<sup>6</sup> See Morgenroth, E. (2013) "The Regional Dimension of the Unemployment Crisis". ESRI *Research Note 2012/4/3*.

West all saw peak employment in the third quarter of 2007, while the peak for the West was recorded one quarter earlier and the Mid-East and South East peaked three quarters later. Employment in the South East and South West increased during the period leading up to the economic crash in 2007 while GVA was falling post-2002, which implies falling labour productivity.

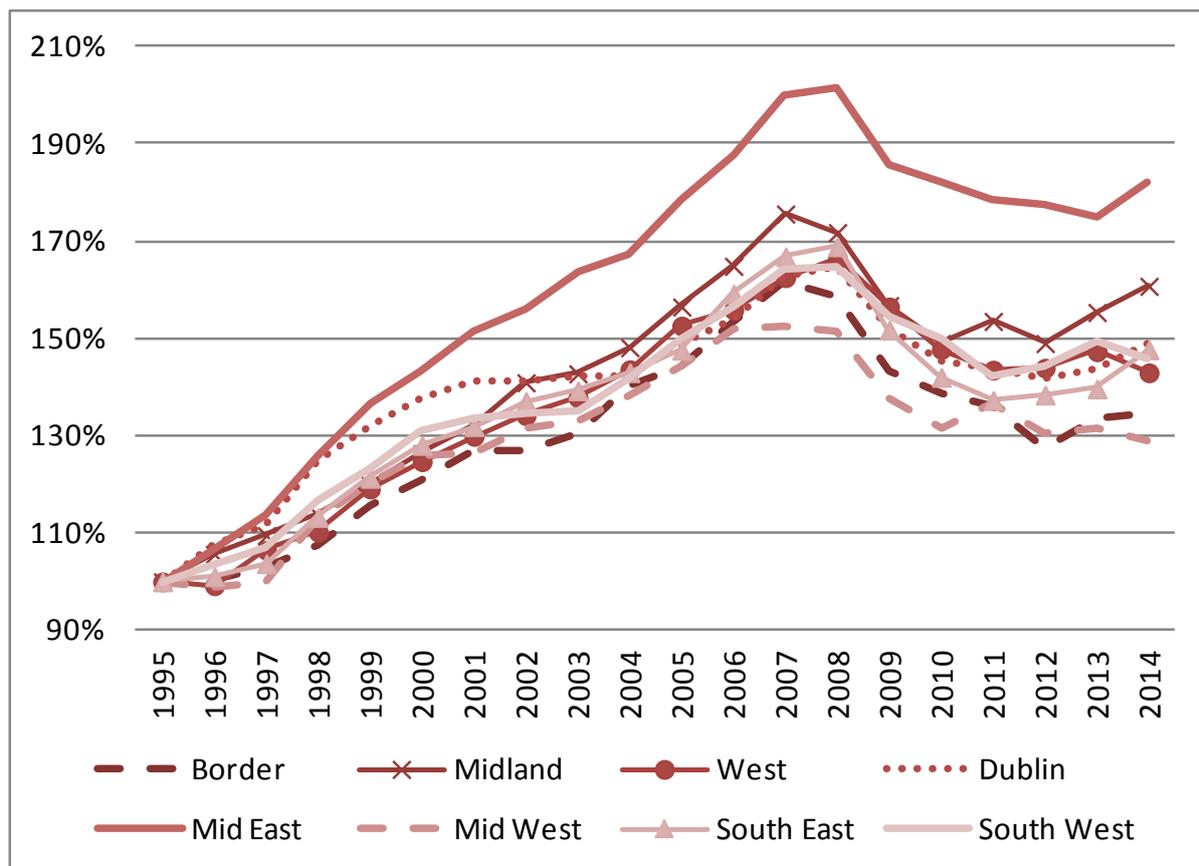
The first region to reach the lowest point of employment was the South West (first quarter 2011) while the Mid-West recorded its lowest number of employed persons in the first quarter of 2014. The reduction in employment between peak and trough varied between 14.6 per cent (West) and 22.7 per cent (Border). All regions have recorded at least some employment growth at some point since the crisis but for both the West and the Mid-West, employment in 2014 is at its lowest level since the crisis started. This implies that in terms of employment the recovery has not started in either of these regions.<sup>7</sup> There is a negative correlation between the regional contraction in employment and the subsequent recovery, which indicates that some regions with a more significant reduction in employment during the crash are experiencing a stronger recovery although they also tend to have a more delayed recovery. These include the Border, Midland and South East.

A simple way to measure the long term evolution of regional employment is to show the level of employment in every year relative to employment in a starting period. Figure 2 shows how regional employment has evolved relative to the level of employment in 1995. The figure shows that the employment growth performance of the regions has differed significantly. The Mid-East in particular recorded the strongest employment growth in the period after 1995, with employment doubling by 2008. The second fastest employment growth was recorded in the Midland while the lowest growth rates were recorded in the Mid-West and Border regions. Thus, while there is divergence across regions, some regions like the Midland that perform poorly with respect to output growth have fared relatively well with respect to employment while others such as the West and Dublin, which have done well with respect to output have not done as well in terms of employment. This is at least partly explained by the substantial cross-regional commuting, where workers commute from their place of residence for example in the Mid-East and Midland to Dublin where the output is produced.

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<sup>7</sup> Both regions recorded some increase in employment followed by further declines in employment.

FIGURE 2 Regional Employment Relative to Employment in 1995.

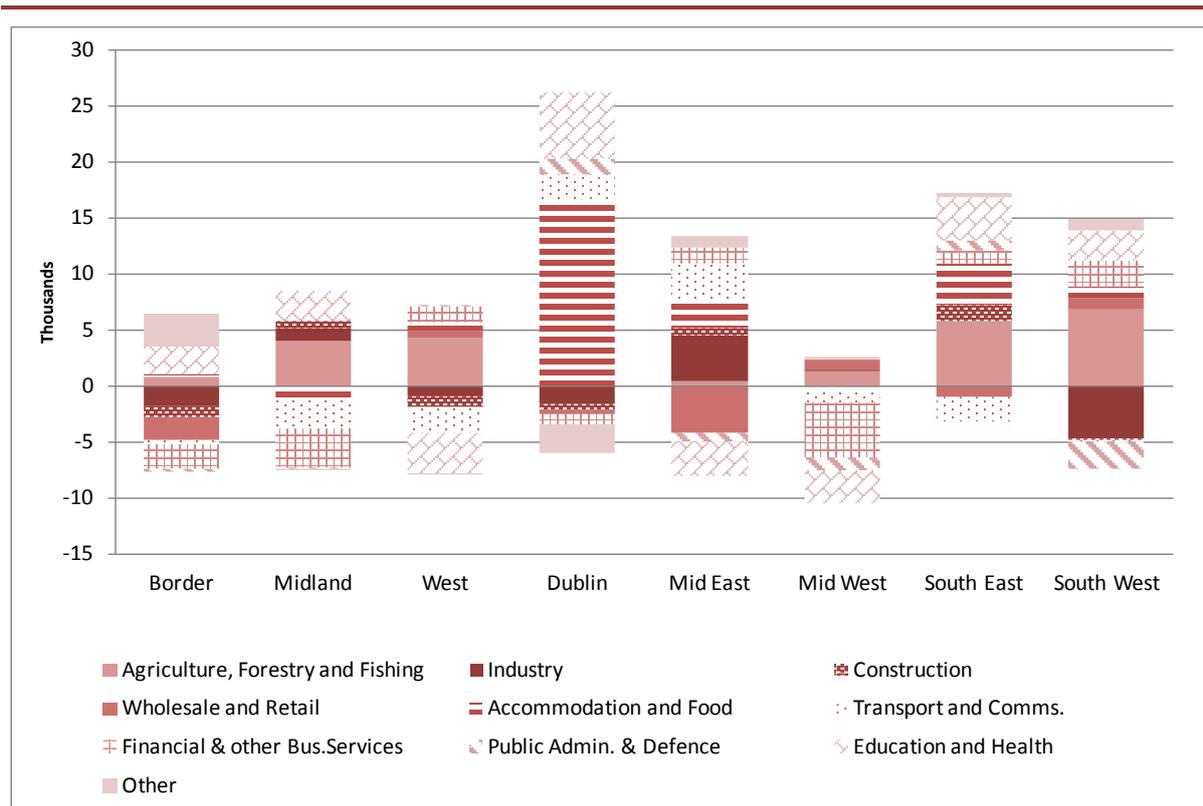


Source: Own calculations based on CSO Labour Force Survey and CSO Quarterly National Household Survey. The data from 1998 onwards are for the second quarter of each year.

Overall, employment growth has been largely concentrated in Agriculture, Forestry and Fishing and in Accommodation and Food Services.<sup>8</sup> Figure 3 below shows that there are some differences in terms of sectoral employment growth across regions. The growth in the Accommodation and Food Services sector was particularly pronounced in the Dublin and South East regions. Construction employment increased in the Midland, Mid-East and South East regions. Financial and other business service employment increased in the West, Mid-East, South East and South West regions. Employment in Industry grew in the Mid-East and Midland regions but declined in the Border, West, Dublin and South West regions. Growth in employment in Industry is negatively related to total employment growth in regions.

<sup>8</sup> It should be noted that the numbers relating to Agriculture, Forestry and Fishing have been affected by changes in the sampling frame and may thus not give an accurate measure of the rate of change.

Figure 3 Sectoral Contributions to Employment Growth between 2011 and 2014 by Region.



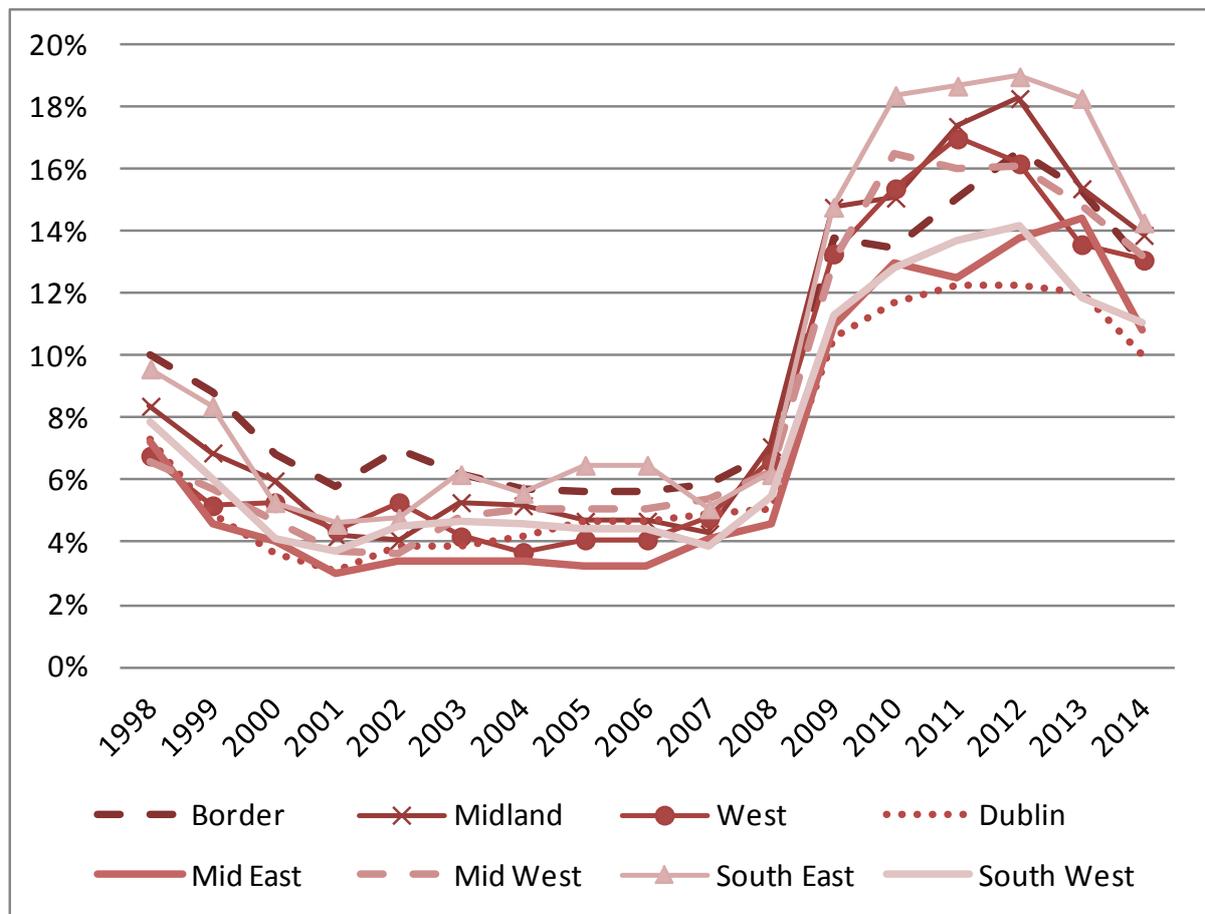
Source: Based on CSO Quarterly National Household Survey.

The numbers unemployed and the unemployment rate are also important labour market indicators. Figure 4 shows the evolution of the unemployment rate. The lowest unemployment rates are found in Dublin and the South West and the Mid-East, while the highest rates are in the South East, Midland and Border regions. The fact that the Midland region has a high unemployment rate but also a higher than average rate of employment growth appears to be contradictory. However closer analysis reveals that the labour force in the Midland has expanded faster than employment.

During the period 1998 to 2007 the differences in unemployment rates appear to be relatively stable, but they increased significantly during the crisis. More recently these differences appear to have reduced again, which implies that the recovery is benefitting those regions with higher unemployment more. More formal analysis indicates that regional unemployment rates converged up to 2007, then diverged until 2011 and converged again since then. Of course the reduction in the unemployment rate may also be due to higher emigration or reductions in the labour force participation rate,<sup>9</sup> resulting in a smaller labour force. While changes to the labour force participation rate have been found to be dampening the unemployment crisis in some regions (notably the Border), given the lack of published data it is difficult to establish to what extent emigration is reducing unemployment rates in some regions.

<sup>9</sup> See Morgenroth, E. (2013) "The Regional Dimension of the Unemployment Crisis". ESRI Research Note 2012/4/3.

Figure 4 Regional Unemployment Rates between 1998 and 2014

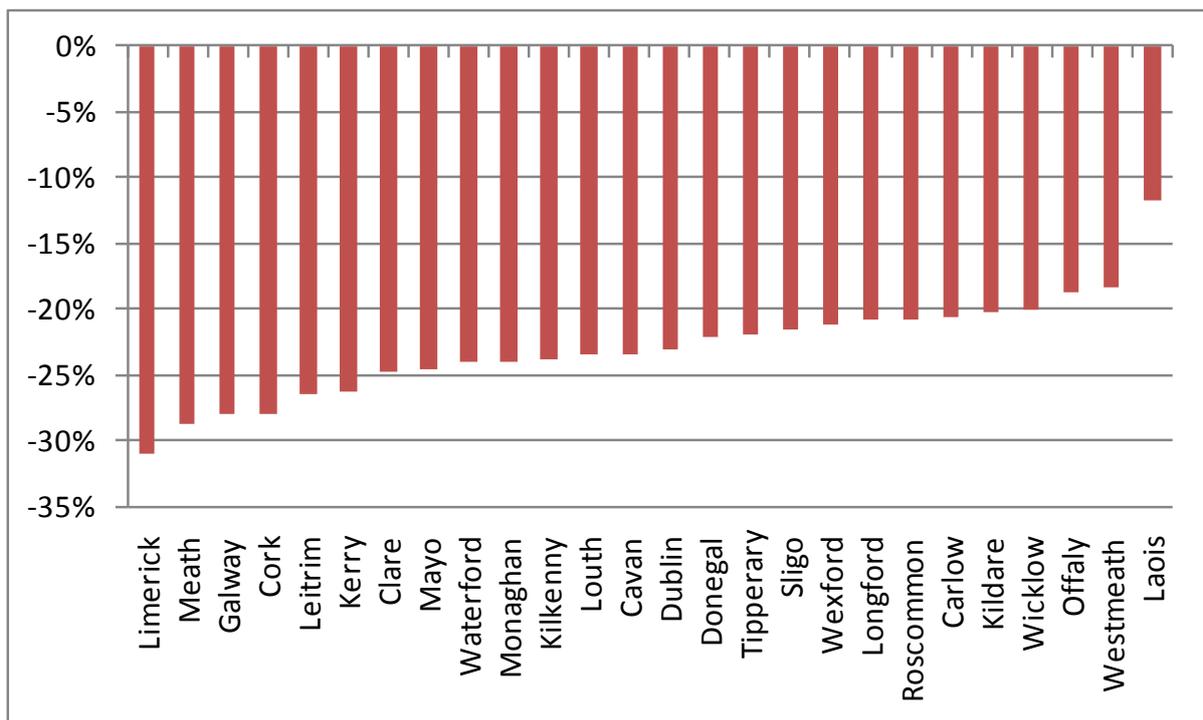


Source: CSO Quarterly National Household Survey.

Apart from the data from the CSO QNHS, the Live Register provides a useful alternative measure of unemployment. It differs from the QNHS as those employed on a part-time, seasonal or casual basis may sign on the Live Register, but would be deemed employed using the official International Labour Organization (ILO) definition of employment. Thus, the numbers of persons signing on the Live Register tends to be greater than the number of persons recorded as unemployed in the Quarterly National Household Survey (QNHS). One advantage of these data is that they are available at the county level and for individual local offices of registration. The number of persons signing on to the Live Register peaked in July 2011 when the number signing on reached over 470,000. In most counties the peak was also reached in 2011, except for Limerick, Longford and Waterford where the Live Register had already peaked in 2010. In Monaghan, Offaly the Live Register peaked in 2012, and Carlow, Kildare, Laois it peaked in 2013. However, the data show that since the peak in the summer of 2011, the number of persons signing on the Live Register has declined in every county (see Figure 5). The graph shows that the county with the largest reduction in the Live Register (Limerick) recorded more than double the percentage decline recorded in the county with the smallest reduction (Laois).

At the level of the 123 local registration offices, the peak number signing on was reached in the majority (61 per cent) in 2011, while 28 per cent reached the peak in 2010, 16 per cent in 2012 and just 14 (11 per cent) peaked in 2013. While the Live Register declined in each office significant variation in the percentage reduction across offices is shown in Map 1 for the period July 2011 to October 2014. The map shows that the registration offices in the Midland, most of the South East and some of the North West recorded a lower reduction in the Live Register than other offices.

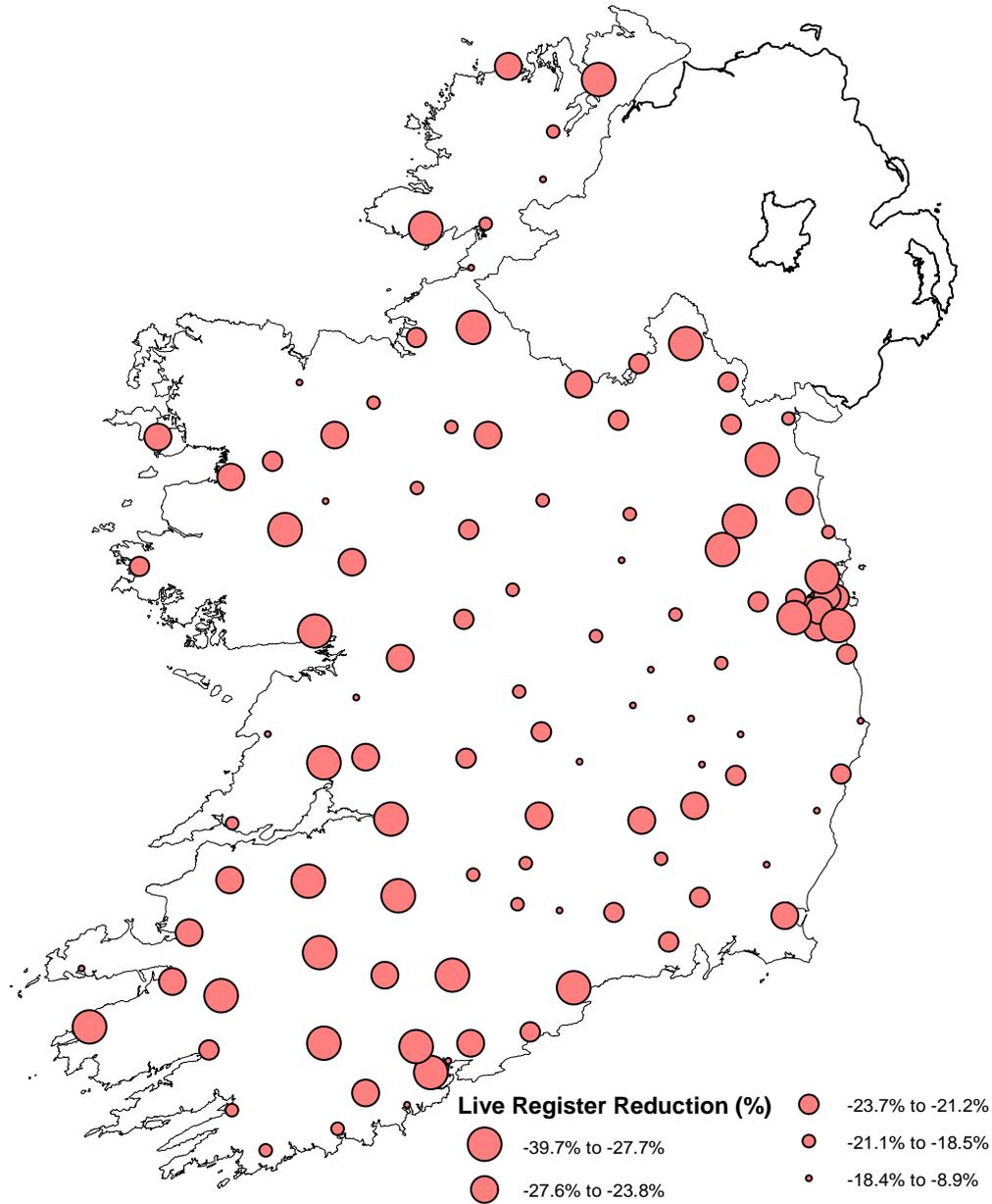
Figure 5 Percentage Change in the Live Register Between July 2011 and October 2014 by County



Source: Based on CSO Live Register.

Map 1. Percentage Reduction in the Live Register Between July 2011 And October 2014 by Local Office of Registration.

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Source: The data are from the CSO Live Register Statistics.

### 3. Summary and Conclusions

In summary, output has followed a long-run pattern of regional divergence with higher levels of output being recorded particularly in the Dublin and South West regions. Since 1995 employment has grown more in commuter regions such as the Mid-East, Midland and South East, which implies that there is some positive spillover into some other regions from the stronger economic performance of Dublin and Cork. The unemployment rate is lowest in Dublin and the Mid-East and highest in the South East and Midland regions. Overall the development patterns in the recovery are similar to those seen in the 1995 to 2007 period. Thus, while it is correct to refer to a two-speed recovery, focusing solely on the recovery ignores the fact that over the longer term there has been renewed divergence in terms of economic activity, which is due to structural differences that have not been addressed during the boom.

While most of the analysis in this paper focused at the regional level, as Map 1 showed, there is considerable heterogeneity within regions. This heterogeneity implies that it is likely that peripheral parts of strongly performing regions, such as the South West, are not as dynamic as the region overall.

The pattern of output growth is consistent with the international evidence of urban-led growth based on agglomeration economies. Agglomeration economies arise through cheaper production costs and a larger customer base in agglomerations. The international literature has also shown that productivity is higher in areas with higher employment densities. Related Irish research has found a strong preference of high value-added sectors for urban locations, which is important since high levels of output and income can only be maintained with high value-added activities.<sup>10</sup> An update of the analysis using 2011 data reveals that urban areas have increased their share in economic activity by 4.1 per cent overall and in all 21 out of 30 sectors since 2006. This suggests that enterprises in urban locations have fared better during the economic crisis. Urban areas now account for 72 per cent of all jobs compared to 68 per cent in 2006. Remote areas account for just 6.6 per cent of jobs in 2011, down from 7.6 per cent. Overall jobs are 11 per cent more spatially concentrated in 2011 compared to 2006.<sup>11</sup>

Agglomerations also have an advantage for workers as the likelihood of finding the right job increases with the number of firms. However, in contrast to firms which need to be located in the agglomeration to derive significant benefit, workers do not have to live in the agglomerations to benefit from them. Rather they can benefit by commuting into the agglomerations. Thus, the benefits of

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<sup>10</sup> Morgenroth E., (2009) "Exploring the Economic Geography of Ireland" *Journal of the Statistical and Social Inquiry Society of Ireland*, Vol. 38, pp.42-69

<sup>11</sup> The analysis uses data from a special tabulation of the travel to work data from the Census of Population. Details of the data and analysis are outlined in Morgenroth (2009).

agglomeration spill into neighbouring areas by reducing unemployment rates and increasing the numbers that are employed. There is significant international evidence that high-skilled individuals tend to choose larger urban areas to live in, and for Ireland there is also strong evidence that this is the case. For example 75 per cent of those holding a PhD reside in urban areas.<sup>12</sup> This results in a virtuous circle for the larger urban centres which are able to attract more employers due to the availability of highly skilled workers.

From a policy perspective the observed development patterns have important implications. The spatial pattern of both economic activity and population is driven by strong agglomeration forces that are self-reinforcing and that increase aggregate economic performance. Policies to counteract these forces should therefore be avoided as they are likely to be ineffective and damaging to national welfare. Efficiency enhancing agglomerations also imply that regional balance, i.e. equal levels of economic activity (output), is not going to be achieved. Rather, the focus of policy should be to ensure that the wider hinterland can benefit from the labour market benefits of the agglomerations. However, policy must also avoid increasing sprawl, which implies unsustainable transport patterns, and should therefore focus on measures that make urban areas and villages more attractive places to reside in.

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<sup>12</sup> Own calculations based on 2011 CSO Census data from the Small Area Population Statistics (SAPS).