A Sustainable Regional Economic Growth Strategy for Ireland’s Mid West: Targets and Policies

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ABSTRACT

The Mid West is considerably underdeveloped relative to other Irish regions and international economies, largely due to the region’s low value added service sector and a leakage of highly skilled labour, including graduates and female labour, from the region. The objective of this research is to establish the factors that drive regional economic growth in terms of pursuing a long term growth model for the Mid West and determining the key government policies required in order to stimulate this. The theoretical and empirical findings of this research show that a confluence of various factors drives regional economic growth, including physical and human capital, an exporting service sector, labour supply, trade, innovation, technological progress, clusters of economic activity and entrepreneurship. This research investigates key economic performance data for the Mid West Region.

Policy prescriptions for the Mid West, based on ex-ante literature and case studies of best practice, are presented. Specific emphasis is placed on the service sector and labour market dynamics, including female labour force participation, in recent years. The policy discussion illustrates that supportive and tailored regional development policies have the potential to drive a virtuous circle of regional economic growth in the Mid West.

The findings show that the current regional growth model in Ireland is unbalanced, biased towards Dublin and the East, and is not sufficient in realising the full potential of the Mid West. The Irish government’s approach to regional development is largely aspirational as it lacks detailed policy targets for each of the regions.
Declaration

The author hereby declares, that except where duly acknowledged, this thesis is entirely her work and has not been submitted for any other degree in the University of Limerick or any other university.

Melissa Buckley

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- Thanks to my family and friends.
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<td>Brazil, Russia, India and China</td>
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<td>CSO</td>
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<td>DEHLG</td>
<td>Department of the Environment, Heritage and Local Government</td>
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<td>DES</td>
<td>Department of Education and Skills</td>
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<td>DETI</td>
<td>Department of Enterprise, Trade and Innovation</td>
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<td>ESRI</td>
<td>Economic and Social Research Institute</td>
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<td>FDI</td>
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<td>GDP</td>
<td>Gross Domestic Product</td>
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<td>GEM</td>
<td>Global Entrepreneurship Monitor</td>
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<td>GNP</td>
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<td>OECD</td>
<td>Organisation for Economic Cooperation and Development</td>
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<td>PPSN</td>
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<td>QNHS</td>
<td>Quarterly National Household Survey</td>
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Introduction
Research Objectives
The Mid West is considerably underdeveloped relative to other Irish regions and international economies, largely due to the region’s low value added service sector and a leakage of highly skilled labour, including graduates and female labour, from the region. Historically, most funding and development targets by the Irish government have been directed towards the Dublin and the East, and therefore the entire West, including the Mid West Region, is comparatively neglected. Regional development and growth issues in Ireland have not received the level of attention relative to international economies, and there is a lack of an explicit regional development policy in Ireland which is contributing towards the unbalanced model of regional economic growth.

The objective of this research is to establish the factors that drive regional economic growth in terms of pursuing a long term growth model for the Mid West and determining the key government policies required in order to stimulate this. Particular emphasis is placed on the service sector, education, skills and female labour supply. This will be achieved through a comprehensive review of the literature on regional economic growth, and the relationship between services and regional economic growth. The theoretical findings will then be combined with regional economic data for the Mid West, as well as the Irish government’s approach to regional development which is benchmarked against international best practice.

Two research hypotheses are investigated in this research:

Research Question 1: What factors will promote regional economic growth in the Mid West Region?

Research Question 2: Given the underperformance of the region, what are the policy targets and instruments required in order to facilitate sustainable economic growth, with particular emphasis on services, education and female labour force participation?

Rationale for this Research
The need for a New Growth Model in Ireland
Ireland is currently in an economic recession, and questions are emerging pertaining to the structure and policy agenda in place in order for the economy to recover from the recession. There is an unbalanced growth model, banking and fiscal problems, and issues with growth
policy in general in Ireland. The Irish economy experienced two very different economic booms over the period from 1993 to 2006, and when construction is subtracted from the second economic boom of the 2000s, the Irish economy has actually been in a recession for the last 10 years (Dineen and Lenihan 2011). Therefore, the Irish economy requires a policy to be put in place that facilitates sustainable growth rates both nationally and regionally. A ‘bottom-up’ approach to policy would be effective, while also maintaining various national policies as well. Aside from the twin crisis of the banking sector and fiscal situation, there needs to be a more structured approach to growth policy in Ireland. Correcting the banking and fiscal situation is only one side of the Irish economy and it is outside of any growth model for the economy.

**A Surge in Interest in Regional Growth Theory and Policy**

In recent years there has been a surge of interest in regional economic growth which is evident in both the theoretical literature (Krugman 1991a; Martin and Sunley 1998; Dawkins 2003; Kennedy 2008) and government policies (OECD 2011; 2010a; 2010b). This is largely due to the fact that national growth is increasingly considered to be determined by the performance of its regions.

> “…Whatever the contribution national economic policy made to growth in Ireland’s regions in the past what happens – or fails to happen – at the level of the regions in the coming years will increasingly account for the success of the national economy in the first place.”

(NESC 2008, p.177)

Regional growth issues are much more prominent than heretofore. In particular regional competitiveness, which is a key feature of the ‘new paradigm’ of regional policy emerging in many OECD countries, has received increased attention as governments seek ways to restore and promote economic growth in the current economic recession. “This new approach suggests an important role for regional policies in the context of economic recovery and the search for sustainable growth paths” (OECD 2009a, p.12). However, Ireland appears to be slow in moving towards this new concept of regional policy and the Irish government has failed to develop an explicit regional development policy in the manner of OECD countries such as Sweden, Finland and France. “Ireland has a weak tradition of regional policy and regional governance, due to its long-standing policy focus on national growth…” (OECD 2010b, p.146). O’Leary (2003a) also argues that regional policy is not given much priority in Ireland. This has resulted in an unbalanced growth model and the emergence of the ‘regional problem’ with growth occurring largely in Dublin and the East. Consequently, the Mid West
Region is significantly underdeveloped, particularly in terms of its service sector, which has left the region vulnerable in the recent economic downturn as the region is relatively more reliant on construction and ‘footloose’ manufacturing. Moreover, the Mid West is suffering from the classic regional case of a leakage of productivity factors, particularly in relation to skilled female labour, which is linked to the underperformance of the region’s service sector. Even during the boom period from 1993 to 2006, the region did not realise its full potential and did not attract high value service enterprise and skilled labour to same extent as other Irish regions.

**Regional Development Policy in the context of Economic Recovery**

Regional development policy has evidently moved to the forefront of the policy agenda in many OECD countries. In the context of the current economic recession Ireland has adopted a ‘national’ approach to economic recovery, with other OECD countries, including Norway and the US, increasingly adopting a ‘regional’ approach to stimulating long term economic growth. This has major implications for the regional growth performance of Irish regions including the Mid West. While Ireland is a small country its regions are very heterogeneous displaying different sectoral structures, labour market characteristics and various levels of human capital and innovation, which suggests that the current ‘one size fits all’ or ‘national’ policy approach will not realise the full potential of Irish regions. Therefore, this is likely to significantly hinder the sustainability of future national economic recovery. O’Leary argues (2003b, p.34) that “…Irish regions should focus on developing policies tailored to their own particular circumstances, rather than adopting a more general simplistic top down strategy.” Sustainable Irish economic growth depends on developing the potential of *all* Irish regions, which highlights the importance of tailored regional growth models. Therefore, this research investigates the model that is required for the Mid West based on the region’s potential, determinants of regional economic growth and key requirements for moving towards the knowledge-based economy.

**The Underperformance of the Mid West Region**

Being able to identify the ‘engine of growth’ in a region is as important as, or even more so, than in a national context, to foster development.

(Faggian and McCann 2009, p.136)

The performance of the Mid West Region has lacked detailed economic analysis, particularly in relation to the service sector, skills and the female labour force, which is addressed in this research. This is largely due to the fact that there is a considerable amount of economic data
in relation to the region that remains unpublished and has not been considered in light of the recent developments in regional growth theory. This research will show the importance of the service sector, education and female labour force participation for the future Mid West economic growth. “In particular, there is a major research gap with regard to our understanding of the effectiveness of different types of services in promotion the efficiency of regional economies” (Mas-Verdu et al 2010, p.633). Failure to understand the performance of the Mid West Region’s service sector is impacting on the region’s level of economic growth, as services are undoubtedly linked to regional performance and crucial for future economic growth.

In the economically developed world, the majority of all jobs, often more than 75 per cent, involve some form of service work…[f]urthermore, some 9 in 10 of all new jobs are also in services…

(Bryson and Daniels 2007, p.1)

There is evidently a regional problem in Ireland that is impacting on the development of the Mid West, and the aspirational approach of the Irish government to regional development policy is fuelling this. In order to be successful, it is crucial that policies are informed by detailed regional economic data, regional growth theory and key lessons that can be learned from international best practice case studies.

**Thesis Structure**

This study is broken down into three sections: Literature Review and Methodology, Economic Performance, and Regional Development Policy and Economic Growth.

**Section 1: Literature Review and Methodology**

The purpose of the literature review is to provide an insight into some of the major theories, studies and arguments to date in relation to the factors that determine regional economic growth. Chapter 1 provides a brief overview of the literature of regional economic growth with particular emphasis on the more recent theories of Endogenous Growth Theory and New Economic Geography. Empirical findings from the literature are presented pertaining to the major theories of regional economic growth. A literature review of services and regional economic growth is presented. This chapter focuses on the theoretical literature and empirical evidence regarding the relationship between education, female labour force participation and service sector productivity.
Having determined the drivers of regional economic growth, and established a strong relationship between education, female labour force participation and the service sector, Chapter 3 presents the research methodology and a regional growth model for the Mid West. From the foregoing literature review interesting research questions emerge in relation to the Mid West, and the method of approach for investigating these questions is outlined.

Section 2: Economic Performance
Following the literature review, this section analyses the recent economic performance of the Mid West. The purpose of this section is to validate the research hypotheses and determine why the Mid West Region has underperformed. An overview of recent Irish macroeconomic performance is presented in Chapter 4 which considers the two inherently different Irish economic booms over the period from 1993 to 2006. On the surface it appeared that Ireland experienced two economic booms, however, the first boom was sustainable as it was based on an export-led growth model, while the second boom was based on net borrowings financed from abroad, to fuel a construction bubble that was always going to collapse. Chapters 5 and 6 analyse the economic performance of the Mid West with key emphasis on sectoral performance, labour demand and labour supply. Human capital and female labour supply are analysed in Chapter 6, as the performance of these factors has significant implications for the service sector’s productivity in the region. When combined with the theoretical overview, the empirical findings from this section have considerable implications for the Irish government’s approach to regional development policy, industrial/enterprise policies, and sectoral and labour supply policies.

Section 3: Regional Development Policy and Economic Growth
The purpose of Section 3 is to consider regional development policy, industrial/enterprise policy, and sectoral and labour supply policies in Ireland as these have a major role in determining the performance of the Mid West Region, which operates within this framework. Chapter 7 focuses on regional development policy in Ireland, in the context of the new paradigm of regional policy emerging in many OECD countries and, in comparison to international best practice, while Chapter 8 discusses key policies for fostering long term Mid West economic growth. Recommendations are presented in both chapters in order to enhance the Irish government’s approach to regional development, as well as the suggested policies required for stimulating the recommended growth model for the Mid West Region. This study concludes by summarising the key findings, the implications of these for Irish policymakers, and suggesting possibilities for future research.

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Findings

• The theoretical and empirical findings of this research show that a confluence of various factors drives regional economic growth, including physical and human capital, an exporting service sector, trade, labour supply, innovation, technological progress, clusters of economic activity and entrepreneurship. The ability of a region to retain and attract productivity factors is argued to be particularly important by various theories, including New Economic Geography. This research establishes the positive relationship between education and female labour force in fostering service sector productivity.

• The empirical analysis illustrates that the Mid West is considerably underdeveloped relative to other Irish regions and international economies, largely due to the region’s low value added service sector and a leakage of highly skilled labour, including graduates and female labour, from the region. The region is displaying an inability to develop and attract high value added service enterprise relative to other Irish regions which is linked to its low skills base. The Mid West is lagging behind national trends regarding various economic performance indicators including educational attainment, female labour force participation, innovation, entrepreneurship and the formation of clusters of economic activity. The findings illustrate that the current regional growth model in Ireland is unbalanced and is not capable of realising the full potential of the Mid West.

• The Irish government’s approach to regional development is largely aspirational as it lacks detailed policy targets for each of the regions. The findings demonstrate that insufficient government regional development policy is hindering the Mid West Region in realising its full potential. Moreover, Irish industrial/enterprise, services, education and female labour supply policies are lacking an effective regional dimension and integrated approach.

• This research shows that an export-led economic growth model will be key for sustaining growth in the Mid West, as this was the growth model for economic recovery in the 1990s. However, indigenous industry will be particularly important for fostering long term economic growth in the Mid West as the region can no longer rely on being an outsourcing centre for FDI with the increasingly competitive landscape.
with the new EU member states and the BRIC economies. Within industrial/enterprise policies, innovation and entrepreneurship policies will be crucial.

• The policy discussion illustrates that supportive and tailored regional policies have the potential to drive a virtuous circle of regional economic growth in the Mid West. The findings have significant implications for Irish policymakers as this research contributes to understanding regional growth particularly in terms of the policies required in order to achieve Mid West regional growth on a sustained basis. While this research is specific to the Mid West Region, it can be applied to other Irish regions and various regional policy recommendations presented impact all Irish regions.

• The findings show that an explicit regional development policy is required, that filters down into industrial/enterprise, services, education, skills and labour market policies. A ‘whole of government’ approach is necessary to make this effective and ideally one government department should be responsible for regional development in Ireland, and a regional minister should be appointed. In particular tailored industrial/enterprise policies, and regional innovation and entrepreneurship policies will be crucial for future growth in the Mid West. It is important to ensure that the region has a strong sectoral and industry mix, with indigenous enterprise and FDI, as well as high value added services and manufacturing. Region-specific and integrated policies are also required in the areas of education, female labour force participation and the services sector in order to foster sustainable regional economic growth in the Mid West.
Section 1

Literature Review and Methodology
Chapter 1

Regional Economic Growth Theory
1.1 Introduction
The aim of this chapter is to provide a review of the recent contributions of the theories of economic growth, specifically regional economic growth. In attempting to understand the causes of regional growth, a brief review of the literature on the topic is essential. In recent years there has been a surge of interest in regional growth theory as economists have sought to identify the factors that determine growth, and as the role of regions in the overall performance of nations has increasingly been recognised as crucial by academics, economists and policymakers (Porter 2003; OECD 2009a; OECD 2011). This chapter briefly considers the traditional theories of regional economic growth as these paved the way for the development of more recent theories. Emphasis is placed on the Neoclassical Theory and the regional growth dimension, as criticisms of this theory resulted in the emergence of Endogenous Growth Theory. The theories of regional economic divergence are presented as these theories also arose out of criticism of the Neoclassical Theory. The more recent theories, Endogenous Growth Theory and New Economic Geography, are considered as these are particularly important contributions to the literature. To conclude this chapter empirical evidence from the literature is outlined in relation to the key growth determinants as emphasised in the theories.

1.2 Traditional and Neoclassical Theories of Regional Economic Growth
This section provides a brief overview of the traditional regional growth theories, namely Location Theory and Central Place Theory, and the industrial structure theories, specifically Stages and Export Base theories. It is important to consider these theories as they laid the foundations for the development of the more recent growth theories including, New Economic Geography. Furthermore, the industrial structure theories have an explicit regional dimension. The Neoclassical Model of economic growth is the main focus of this section as it was the predominant model of economic growth up until the late 1980s and, most importantly, it paved the way for the newer theories of regional economic growth, namely Endogenous Growth Theory.

1.2.1 Traditional and Industrial Structure Theories
Location Theory, which was originally developed by Weber (1929), was later extended by Hoover (1937), Greenhut (1956) and Isard (1956), in response to the lack of a spatial element in traditional economic analysis (Dawkins, 2003). The theory focuses on the geographic location of economic activity and aims to determine why some production activities choose to establish in particular areas of a given space (Ottaviano and Thisse 2004a). Location
Theory argues that industry aims to locate where costs are minimised, which is determined by transport costs, labour costs and agglomeration economies, which result in savings that firms make by clustering together and the benefits of external economies (Breathnach 2009).

Central Place Theory was originally proposed by Christaller (1933), and later refined by Losch (1954), in attempt to develop a more general theory in relation to the spatial location of firms. This theory focuses on the interaction of economies of scale and transport costs to produce the spatial economy (Fujita et al 2001). Central Place Theory suggests that central places, or agglomerations, will emerge in locations where market areas for various products overlap (Dawkins 2003). The ‘central place’, where goods and services are located, supplies to its hinterland. However, despite their contributions to the theory of regional economic growth, Location Theory and Central Place Theory display various shortcomings. A frequent criticism of these theories is their static nature (Dawkins 2003), and as a result the determinants of regional growth and decline cannot be incorporated into the models. The models fail to take into account labour migration, which is particularly important in terms of regions, as labour tends to be more mobile across regions within nations (Dawkins 2003).

Hoover and Fisher (1949) were among the first proponents of Stages Theory of regional economic growth, which argues that a region’s growth is a “path-dependent evolution” (Dawkins 2003, p.140) which occurs through different stages, during which different sectors (agriculture, industry and services) are more predominant in terms of economic growth. Overall, this theory argues that an exporting service sector will be the key driver of growth in advanced economies. While Stages Theory is useful in terms of identifying a path of economic growth that regions often follow, North (1955) argues that this theory fails to provide any insight into the dynamics of regional growth and decline, and it is not a normative model of how regions should grow in order to analyse the causes of development or decay. Subsequently, the criticisms of Stages Theory resulted in the emergence of Export Base Theory in the mid 1950s.

Export Base Theory, in which regions are influenced by exogenous factors and are open to external trade, has been one of the most influential theories in regional economic growth as it is a relatively easy model to implement (Kraybill 2003). This theory was specifically developed to study local and regional economic growth (Kennedy 2008), and emerged in the 1950s, as a result of the infamous debate between North (1955; 1956) and Tiebout (1956a; 1956b) in the Journal of Political Economy. Export Base Theory argues that:
The income from export sales will lead to the development of residentiary activities, capital and labour movements, the development of external economies and future regional growth. 

(Glasson and Marshall 2007, p.64)

North (1956) argued that the key determinant of a region’s long run growth potential is its ability to attract capital and labour from other regions, which is determined by the high returns that are offered by high exporting regions.\(^1\) Despite its contribution to the theory of economic growth, Export Base Theory displays some limitations, including that the model assumes that regional growth is determined exogenously, and driven entirely by demand. It ignores supply side factors such as human capital and technology. Furthermore, it is not a prescriptive model as it does not suggest how regions should begin exporting in the first instance. However, despite its shortcomings, Kennedy (2008) argues that this model continues to be the most widely used model for analysing regional economic growth.

### 1.2.2 Neoclassical Growth Theory

This section briefly presents mainstream Neoclassical Growth Theory, proposed by Solow (1956) and Swan (1956), which is based heavily on the national economic growth theories developed by Harrod (1939) and Domar (1946).\(^2\) This theory differs from the demand-side view of earlier theories discussed as it incorporates a supply-side element.\(^3\)

**The Basic Neoclassical Model**

The Neoclassical model extends the Harrod-Domar Model by adding labour as a factor of production. The Neoclassical production function applies diminishing returns to capital and labour separately, and constant returns when both factors are combined.

\[
Y_t = F(K_t, T_t \cdot L_t)
\]

- \(Y\) = output
- \(K\) = capital
- \(T\) = technology
- \(L\) = labour

The capital accumulation equation then presents the relationship between investment in capital stock, \(S\), and tangible assets, \(I\).

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\(^1\) Appendix A presents the workings of the regional Export Base Model and key underlining assumptions.  
\(^2\) Kennedy (2008) provides a detailed overview of the Harrod-Domar Growth Model. This model suggests that economic growth depends on the level of savings and the productivity of capital (Kennedy 2008).  
\(^3\) Kennedy (2008) provides further analysis of the Neoclassical Growth Model.
\[ St = (1 - \delta) \cdot St - 1 + It \]

\( \delta = \) depreciation

**The Fundamental Equation of the Solow-Swan Model**

The fundamental equation of the Solow-Swan growth model is:

\[ K = s \cdot f(k) - (n + \delta) \cdot k \]

(See Figure 1.1 for the workings of the equation).

\( n + \delta = \) the effective depreciation rate for the capital/labour ratio.

\( k = K/L \)

If \( s \) is zero then capital per person would decline due to depreciation of capital at the rate of \( \delta \), and also due to an increased in population at the rate of \( n \) (Barro and Sala-i-Martin 2004).

\( k^* = \) the steady state of capital.

**Figure 1.1: The Solow-Swan Model**

![Figure 1.1: The Solow-Swan Model](source: Barro and Sala-i-Martin 2004)

**Key Underlining Assumptions:**

1. **Capital Accumulation**
   
   In its simplest form the Solow’s (1956) growth model argues that accumulation of physical capital drives economic growth. Solow’s (1956) model assumes homogeneity of workers, and consequently there is no role for the formation of human capital through education and
training. Later versions recognise the importance of exogenous technological progress for driving economic growth.4

2. Savings and Investment
The rate at which capital is accumulated is determined by savings. This theory argues that increasing the savings rate will increase the funds for investment in physical capital which in turn will increase output and savings. However, any increases are temporary as the economy will revert back to a steady state.

3. Convergence
In its purest form Solow’s (1956) model assumes that absolute convergence occurs in relation to economies with no trade barriers, as labour will migrate to regions with higher wages and capital will flow to regions where there are higher profit opportunities (Dornbusch et al 1998; Armstrong and Taylor 2006). According to this model economies will always converge towards a steady state of growth or equilibrium because less developed economies will grow at a faster rate than advanced economies, as they have more scope for growth. The model was later extended to assume conditional convergence, which suggests that similar economies will experience convergence of growth rates. The rate at which diminishing returns sets in determines how quickly economies converge to a steady state. If diminishing returns is slow to set in the convergence period can be considerably long (Barro and Sala-i-Martin 2004).

The dynamics of convergence in relation to the Solow-Swan Model is presented in Figure 1.2. In the model the growth rate k is the distance between the savings curve and the linear depreciation line. If k is less than k* the growth rate is positive and k will increase towards k*. However, if k is greater than k*, k will fall towards k*. Therefore, k*, which is the steady state of capital per person, is stable (Barro and Sala-i-Martin 2004).

4 Appendix A presents the Neoclassical growth equations with and without technical change.
4. Population Growth

Population growth, as a determinant of sustained economic growth, is incorporated into an extended version of the Solow Growth Model. It is assumed that as population grows the accumulation of capital per worker is reduced, as the stock of capital is dispersed across a larger group of workers (Kennedy 2008). The model suggests that there is a convergence of growth rates over time with a constant level of technological progress and no population growth.

Adapting the Neoclassical Growth Model to Explain Regional Growth

Borts and Stein (1964), who studied US metropolitan areas, were the first to adapt the Neoclassical Model to explain regional economic growth. They incorporate open regional economies with exogenous capital and labour flows. Borts and Stein (1964) found that regional economic growth is predominantly driven by labour supply and that regional variations exist due to differences in the regional labour market.

The following is the aggregate single-sector Neoclassical model presented by Borts (1960):

\[ Y_r = f(K_r, L_r; T_r) \]

\( r = r^{th} \) region, with capital (K), labour (L) in region r.

Regional growth occurs as movement along the production function through the accumulation of more labour and capital, as time moves from t to t+1.
The relationship between the regional factors and output can be illustrated using the Cobb-Douglas production function:

\[ Y = TK^\alpha L^{1-\alpha} \]

\( T \) = a technology parameter that shifts the production function.
\( \alpha \) = capital’s share of value added
\( 1- \alpha \) = labour’s share of value added.

Unlike the traditional Neoclassical models, the Borts-Stein Model takes into account interregional factor mobility (Dawkins 2003). Regional growth in this model is determined by the flows of productivity factors (Kennedy 2008). This theory argues that factor movements across regions will cause regional per capital incomes to converge (Kraybill 2003). However, this model displays limitations including that it fails to take into account the role of human capital in regional economic growth.

**Policy Implications**

At the equilibrium state, the Neoclassical Growth Model suggests that in order to increase growth in the long run an exogenous population expansion or exogenous technical progress are required, therefore there is practically no role for government in this model (Shaw 1992). This theory holds that government intervention either crowds out private investment or boosts one economy at the expense of another (Edwards 2007). It is assumed that market
forces will eventually lead to convergence of income across regions and this model does not advocate a strong role for government.

**Shortcomings of the Neoclassical Growth Theory**

- The theory argues that the growth rate is determined outside the model, usually by an assumed rate of labour force growth and technological progress. Therefore, the actual rate of economic growth that is “explained” by the model is exogenous (Arestis et al 2007, p.17). It is short in providing any insight into the origin of economic growth, and one of the main shortcomings of the model is that it fails to identify the causes of technological progress and, therefore, it ignores the underlying cause of growth in income per capita.

- It is argued that those who migrate from poor to rich regions are likely to be highly skilled or educated and seeking employment to match their skills. Therefore, this drains the weak region of the more productive resources and goes against the regional convergence assumption (Kennedy 2008). Furthermore, Kennedy (2008) argues that capital tends to stay in rich regions because of the process of cumulative causation.5

- It fails to explain why growth differentials exist across countries (Grossman and Helpman, 1994). It does not support the empirical reality of growth patterns worldwide. Kennedy (2008) argues that as growth rates have not converged across regions this suggests that there are obstacles to migrationary flows including economic costs.

- In the Neoclassical Model changes in the savings rate and the accumulation of capital are considered to have no effect on the long-run growth rate, and therefore, Barro and Sala-i-Martin (2004, p.18) argue that “[w]e end up with a model of growth that explains everything but long run growth”.

- The Solow Paradox of Thrift argues that a permanent change in an economy’s savings rate will not permanently increase the economy’s growth rate through a rise in national savings. When individuals try to save more, consumption falls and incomes decline, resulting in people saving less. Krugman (2009a) argues that this paradox is clearly evident in the current economic recession.

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5 Cumulative Causation Theory is considered in more detail in section 1.3.1.
1.2.3 Summary
This section briefly considered the traditional and industrial structure theories of regional economic growth. It shows that agglomerations, clusters and an exporting service sector are particularly important for regional growth. The shortcomings of these theories resulted in the emergence of the Neoclassical theory of economic growth which incorporates a supply side element and argues that increasing the savings rate, which in turn increases investment in physical capital, is key for economic growth. However, dissatisfaction with the Neoclassical model resulted in the emergence of specific theories of regional economic divergence which are considered in the following section.

1.3 Theories of Regional Economic Divergence
The theories of regional economic divergence emerged as a critique of the Neoclassical Model of regional economic growth in order to explain why the growth rates of economies had not converged. The key features of Cumulative Causation Theory, Growth Pole Theory and Centre-Periphery Theory all incorporate the assumption of divergence, and are briefly outlined in this section.

1.3.1 Cumulative Causation Theory
Cumulative Causation Theory is a more dynamic and realistic approach to regional economic growth, than what was previously presented by the Neoclassical economists, as it assumes divergence of income per capita across regions. This model concentrates on the interaction between supply and demand and how this relationship results in a virtuous circle of cumulative causation which ‘compels’ the region towards economic growth that is self-sustained and incremental (Kennedy 2008). Mydral (1957) and Kaldor (1970) were the major proponents of this theory which argues that increasing returns to scale resulted in the formation of clusters or agglomerations of economic activity in the regions that are among the first to industrialise. This theory also includes elements of Export Base Theory (Dawkins, 2003). Mydral (1957) argues against the Neoclassical theory as he suggests that capital is attracted to richer regions where as there is increasing returns to scale and labour is attracted to regions with higher wage opportunities, depleting the poor region of skills and resulting in a labour force in the poorer region that would not attract industry (Mydral 1957). In the strong region a virtuous circle of growth is created which generates agglomeration economies (Kennedy 2008).
However, a major limitation of the Mydral (1957) - Kaldor (1970; 1985) theory is that it fails to explain how prosperous regions initially become prosperous or why certain regions lag behind in the first instance. Furthermore, the model suggests that exports are the only source of a region’s growth (Armstrong and Taylor 2003). However, it does identify the importance of uneven economic growth across space (Kraybill 2003). Moreover regional growth and decline are more likely to be self-reinforcing than national growth and decline, due to the greater interregional mobility of the factors of production, as opposed to mobility across nations. Furthermore, the Cumulative Causation Model established the foundations for the development of regional endogenous models of economic growth (Martin and Sunley 1998).

1.3.2 Growth Pole Theory

Growth Pole Theory was one of the first specific theories of regional economic growth. This theory, which was proposed by Perroux (1955), focuses on the critical role of technological progress, and the interactions based on exchange of intermediate goods and services (Kraybill 2003). Instead of focusing his theory on individual households and firms, Perroux (1955) considered sets and subsets of economic agents. Sets include industries, government, cities and groups of entrepreneurs which drive regional economic growth. Perroux (1955) defined a growth pole as the linkages between industries and firms. He argued that some sets of industries are propulsive as they stimulate the establishment of other sets, which can occur either through linkages or technological progress (Kraybill 2003). This theory suggests that regional economic growth will occur around a growth pole within a region, which is capable of achieving self-sustained growth, which in turn can spread over the pole’s hinterland (Edwards 2007) and result in regional divergence.6

However, despite its contribution to the literature on regional growth, Growth Pole Theory fails to identify the essential minimum requirements for economic growth. In the 1980s dissatisfaction grew in relation to the theory and it is argued by Polèse (1999) that there is a lack of evidence between Growth Pole Theory and empirical reality. Polèse (1999) suggests that failure of growth pole inspired policies is evident in Southern Italy and Eastern Canada. Other criticisms of this theory include the lack of recognition of the importance of structural change in the growth poles, and failure of the theory to explain the different growth rate of the growth poles (Dawkins 2003). However, despite its shortcomings Growth Pole

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6 Spread effects, by which growth poles increased the demand for goods and services at the hinterland, and backwash effects, whereby growth poles drain labour and firms from the hinterland into the city, are key characteristics of the growth poles (Edwards 2007).
Theory has been a useful in laying the foundations for the development of the more recent regional growth theories.

1.3.3 Centre-Periphery Theory
Developed by Friedmann (1966), Centre-Periphery Theory contains ideas from Export Base Theory and Cumulative Causation Theory, and recognises the consequence of interregional migration of labour on convergence of regional incomes. The assumption behind this theory is that one region will grow faster than another, due to natural or man-made advantages, and that the economically disadvantaged peripheral region is dominated by the wealthier core. Glasson and Marshall (2007) argue that there may not be demand for the peripheral region’s goods if the goods have low income elasticity of demand, such as agriculture products. Dawkins (2003) suggests that supply in a region may impact the region’s capacity to respond to an increased demand for a region’s exports. Outward migration of capital and labour from the poorer to the richer region may impact the ability of the poor region to compete (Glasson and Marshall 2007).

1.3.4 Summary
The findings from the discussion in this section suggest that regional economic growth can be sustainable due to the process of cumulative causation. The theories also highlight the importance of attracting labour and capital for stimulating regional economic growth. In addition, the theories of regional economic divergence contributed to the emergence of the more recent theories of economic growth which are considered in the following section.

1.4 New Economic Growth Theories
This section considers the more recent growth theories, namely Endogenous Growth Theory and New Economic Geography, to emerge. Endogenous Growth Theory, which seeks to identify the long run sources of economic growth includes, a central role for human capital in the growth process, while New Economic Geography introduces a spatial dimension to endogenous regional growth.

1.4.1 Endogenous Growth Theory
Endogenous growth theories, which emerged in the 1980s, arose out of criticism of the Neoclassical growth theory, which failed to identify the long run sources of economic growth. Romer (1990; 1994), Grossman and Helpman (1991) and Aghion and Howitt (1992), who were the main proponents of this theory, argue that economic growth is the result of
elements from within the economic system, including human capital, knowledge and innovation, and not as a result of forces that impinge from the outside as argued by the Neoclassical model.\(^7\) Endogenous Growth theorists propose increasing returns to scale creates the possibility of a virtuous circle of economic growth. This theory argues that economic growth is path dependent, and shocks and temporary changes may stimulate economic growth or decline as they are “locked in” through the cumulative causation process (Martin and Sunley 1998, p.211) which suggests the possibility of economic divergence.

**Endogenous Growth Theory Model**
The essence of Endogenous Growth Theory is captured by the AK Model (Romer 1986; Lucas 1988; Rebelo 1991):

\[ Y = AK \]

\( Y = \) Output  
\( K = \) Capital Stock (physical and human capital).  
\( A = \) Fixed Coefficient / Constant / Reflects that factors that affect technology (Pack 1994).

The solution to both the theoretical and empirical problems with the Neoclassical Growth Theory was in modifying the production function to enable self-sustaining or long-run endogenous growth (Dornbusch *et al* 1998). The linearity of the production function makes unbounded growth possible (Romer 1990). Long run productivity is sustainable and technological progress or a change in the savings rate results in a long run change in output growth (Stiroh 2001). In this simple model the returns to capital are always constant. An increase in capital results in increased productivity (Pack 1994). This function suggests that output can be increased indefinitely resulting in sustainable economic growth, without diminishing returns, as capital, which includes both physical and human, accumulates (Salvadori 2003; Barro 1997).

Improving the level of technology (A), which alters the marginal and average productivity of capital and therefore, also increases the growth rate and the changes the savings rate (Barro and Sala-i-Martin 2004). Changes in government policies can result in a shift in ‘A’.

\(^7\) While the literature in relation to this theory predominantly focuses on nations, it is however very relevant to regional economic growth in order to determine how regions can grow endogenously.
**Key Underlining Assumptions:**

1. **Capital Accumulation**
   The Endogenous Growth Model includes human as well as physical capital, and assumes constant or increasing returns to scale.

2. **Human Capital**
   This theory was the first to formalise the importance of human capital for enhanced levels of innovation and productivity. It emphasises the formation of human capital through education and training, and investing in new knowledge to sustain growth (Cortright 2001).

3. **Population**
   Endogenous Growth Theory argues that the growth rate is not dependent on the size of the labour force or the population to increase economic growth, as argued in the Neoclassical Model (Romer, 1990).

4. **Savings and Investment**
   Endogenous Growth Theory suggests that an increase in savings can result in a permanent increase in the growth rate of output (McCain 2007). When output increases some of this is saved and some is invested, for example in human capital formation through education and technology, which in turn increases innovation and technological progress. As a result, the well educated labour force can work with new technology which leads to continuous higher output in the long run. Moreover a labour force with a higher educational attainment is likely to be more innovative, thereby enhancing technological progress and in turn increasing economic growth. Subsequently human capital and technological progress are stimulated again and the circle continues (McCain 2007). Therefore, with Endogenous Growth Theory the long-run impact of increased savings is much greater than originally suggested by Neoclassical growth theory (McCain 2007).

5. **Technological Progress**
   Endogenous Growth Theory focuses on describing how technological progress is determined, which the Neoclassical model failed to identify (Armstrong and Taylor 2006). Romer (1990, p.71) argues that technological progress occurs as a result of “…intentional investment decisions made by profit-maximising agents”. The model assumes that technological progress is an integrated part of economic activity and can occur through learning by doing or the
accumulation of new knowledge that was found as investment and production occurred (Arrow 1962).

6. Convergence
Endogenous Growth Theory suggests that it is unlikely that spatial economies will converge over time (Simme and Carpenter 2008), due to increasing returns to scale. It is argued that the different levels of investment in human capital and innovation can lead to high productivity, employment and income, which together form the foundation of competitive advantage (Simme and Carpenter 2008).

The focus of this section now turns to the two stands of Endogenous Growth Theory; the spillover models of Romer (1986) and Lucas (1988) which focus on externalities while assuming perfect competition, while the NeoSchumpeterian models incorporate monopolistic competitive markets.

The Spillover Model of Endogenous Growth
In Romer’s (1986) model growth is determined by the spillover of private research efforts that result in increased knowledge, which in turn results in further innovation. The spillover model suggests that if all other inputs are held constant knowledge will generate sustained endogenous economic growth.8 Lucas’s (1988) model also highlights the importance of investment in human capital for sustainable economic growth. The traditional Neoclassical Model which incorporates labour-augmenting technology can be illustrated as:

\[ Y_i = F(K_i, A_i, L_i) \]

\( A_i \) is the index of knowledge available to the firm.

\( L_i \) and \( K_i \) are conventional inputs

If learning by doing and knowledge spillovers are incorporated then \( A_i \) is replaced by \( K \) in the equation:

\[ Y_i = F(K_i, K, L_i) \]

If all producers expand \( K_i \) then \( K \) rises in accordance to this, and spillover benefits are provided that the raise the productivity levels of each firm. Endogenous growth results from

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8 The spillover of knowledge in the Romar-Lucas model suggests a role for entrepreneurship in a regional economy as Acs and Armington (2003) argue that entrepreneurship can promote knowledge spillovers.
the social returns to capital. In terms of Lucas’ (1988) version $K_i$ relates to human capital employed by a firm, while $K$ relates to the aggregate level of human capital either in an industry or a country (Barro and Sala-i-Martin 2004). However, while these models are more realistic, they rely on the assumption of perfect competition, which led to the emergence of the NeoSchumpeterian models in the 1990s, which incorporated monopolistic competition.

**The NeoSchumpeterian Models of Endogenous Growth**

Romer (1990) and Grossman and Helpman (1994) were the first proponents of this strand of New Growth Theory. This model argues that innovation and R&D are the predominant sources of economic growth (Martin and Sunley 1998). This theory suggests that the possibility of earning monopoly profits would incentivise firms to invest in R&D and industrial research, patent their idea, and be rewarded for investment in innovation. This innovation results in technological change, which in turn leads to long run sustainable economic growth. The rate of growth in the economy, which is parallel to the pace of innovation, is determined by the costs and benefits of the research. Regions that innovate in areas such as technology are more likely to be attractive to well-educated labour and capital from other regions. This theory suggests that regions with these assets in place are likely to accumulate more of these assets over time, which is the principal of circular and cumulative causation (Simme and Carpenter 2008).

**Endogenous Growth Theory and Regional Economic Growth**

Despite its contribution to the literature on economic growth, Endogenous Growth Theory lacks an explicit regional dimension. Martin and Sunley (1998) argue that Endogenous Growth Theory has not given sufficient attention to the spatial dimension of externalities such as technological progress. Bertola (1993), for example, proposed a model of localised growth in which capital and labour tend to migrate to prosperous regions, which results in increasing returns in these regions. Subsequently this leads to permanent interregional inequalities (Martin and Sunley 1998).

Endogenous Innovation Growth theories examine whether regional technological differences impact regional growth patterns (Martin and Sunley 1998). It is evident that Endogenous Growth Theory provides some possible explanations in relation to the dynamics of regional growth. However, this theory has limitations which, Martin and Sunley (1998) argue, originate from its reliance on formal models which fail to incorporate regional aspects. There is also a lack of empirical evidence at the regional level (Martin and Sunley 1998).
Faggian and McCann (2009) also attempt to apply a spatial perspective to endogenous growth models. However, similar to Martin and Sunley (1998), they argue that there is an evident lack of concrete applications of Endogenous Growth Theory at a regional level, with further work to be completed in this area. Human capital and regional growth is considered to be a complex area, as regional models of human capital are fundamentally different from national models as regions have a higher degree of openness. Well educated labour has high mobility and can flow relatively easy between regions (Faggian and McCann 2009).

**Policy Implications**

Endogenous Growth Theory provides a fertile ground for policy discussion, because it is somewhat prescriptive. In recent years there has been increased attention in relation to Endogenous Growth Theory and regional policy (Nijkamp and Stough 2000; Roberts and Setterfield 2007; Capello and Nijkamp 2009). This theory was among the first to highlight a strong role for Government policies in advancing growth on a long term basis (Barro 1990; Grossman and Helpman, 1990; Capello and Nijkamp 2009). In contrast to Neoclassical Growth Theory, Endogenous Growth Theory argues that government policy has a substantial role in influencing the long run growth rate through subsidies for R&D, incentives for technological progress, education, skills and training, knowledge spillovers such as entrepreneurship, and defining intellectual property rights (Kraybill 2003; Van Dijk 2009). An economy with a significant supply of these factors can grow faster than economies with a shortage of these factors. The possibility of a virtuous circle suggests that policies in the latter areas have the potential to generate sustainable economic growth. Furthermore, it implies that as a result of cumulative causation regions will always lag behind, with leading regions continuing to benefit. Therefore, government policy should encourage knowledge-based activities in regions that are lagging behind through investment in R&D (Simmer and Carpenter 2008).

**Shortcomings of Endogenous Growth Theory**

The major limitation of Endogenous Growth Theory is that it fails to take into account a spatial aspect or a regional dimension in the model (Kennedy 2008). Whether the model in applied regional or nationally there is no modification to the model. This limitation contributed to the emergence of New Economic Geography which has a specific spatial dimension.
1.4.2 New Economic Geography

...NEG models have renewed interest in trade (and hence the export-base), agglomeration and cumulative causation as key factors determining regional growth.

(Harris 2008, p.13)

Until the 1990s the study of economic geography, which is primarily concerned with explaining the formation of economic agglomeration in geographical space, had a marginal role in economic growth theory and, as suggested by Krugman (1991a), it remained largely dormant until his paper ‘Increasing Returns and Economic Geography’. Since then, New Economic Geography has become a fast-growing field (Fujita and Krugman 2003; Ottaviano and Thisse 2004a; Fujita and Mori 2005). This theory addresses the shortcomings of earlier models, including Endogenous Growth Theory, by providing an explicit spatial dimension (Cambridge Economics 2009).

The main purpose of this theory is to explain why regional economic activity is unevenly distributed across space and the factors that determine formation of agglomerations (Lafourcade and Thisse 2008). New Economic Geography, which is based on Cumulative Causation Theory, suggests that a self-sustaining concentration of production in space can occur, provided that large economies of scale and low transportation costs exist, and that some production is mobile. In terms of which area obtains the concentration of production is dependent upon either initial conditions or historical accident (Krugman 2009b). While previous economic growth theories explain income disparities as a result of technological progress and factor inputs, New Economic Geography argues that agglomeration is a key determinant of the location decisions. The Core-Periphery Model, proposed by Krugman (1991), is considered to be the starting point of New Economic Geography and in essence it is a model of agglomeration.

**Core-Periphery Model**

In contrast to the Neoclassical model, the Core-Periphery model argues that regional growth rates do not converge with agglomeration occurring at the core, at the expense of the periphery region. This model suggests that regional clusters are determined by centrifugal
and centripetal forces. The following are the key assumptions in relation to the Core-Periphery Model.

1. Two Regions, Two Sectors
The Core-Periphery Model assumes there are two regions, two sectors (agriculture and manufacturing) and two types of labour (workers and farmers). Agriculture is location-specific and manufacturing is footloose (workers are mobile). The agricultural sector produces a homogenous good under constant returns, and farmers are the only input (Fujita and Mori 2005). The manufacturing sector produces a variety of horizontally differentiated product. Each variety is produced by a separate firm, with economies of scale. Workers are the only input. While workers are freely mobile between regions, farmers are not. Workers are distributed evenly between the two regions (Fujita and Mori 2005). Consumers aim to maximise utility and producers aim to maximise profits. There are constant returns to scale. This model suggests that firms are attracted to regions with a larger market because economies of scale result in greater profits. Workers and consumers are attracted to regions with higher real wages, more producers and lower prices (Potter 2009). Skilled labour migration is the key driving force behind agglomeration, which is self-sustaining (Nicoud 2004). The combination of the latter effects is considered to be self-reinforcing and resulting in the agglomeration of all firms and workers in a single region.

2. Capital and Labour Mobility
When capital moves to a new region it brings with it the benefits of additional production capability. However, the returns from this capital do not have to be spent in the region (Fujita and Thisse 2008). In the case of labour migration to a new region, the region benefits from both production and consumption capabilities. Therefore, the movement of labour impacts the size of the labour and product markets in the region it is migrating to as well as the region it originated (Fujita and Thisse 2008). This is one of the fundamental differences between the mobility of capital and labour. Krugman (1991) suggests that the spatial economy displays pecuniary externalities as the movement of workers who choose to migrate impacts on the workers in the origin region who chose not to migrate.

The clustering or concentration of economic activity has a positive effect on productivity due to agglomeration economies and the subsequent location of innovative and knowledge

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9 Centripetal forces, such as linkages and knowledge spillovers, pull economic activity together, while centrifugal forces, including immobile factors, congestion and commuting, push economic activity apart (Krugman and Fujita, 2004).
intensive firms, as well as high skilled labour at the core and increases regional competitiveness (Porter 2003; Mills et al 2008). This results in different levels of regional development at the core and the periphery (Harris 2008). The Core-Periphery Model suggests that regional divergence occurs due to the additional gains that result from agglomeration of skilled workers at the core. Subsequently the welfare of the unskilled workers at the core increases even though their level of productivity is the same as unskilled workers in the periphery region (Fujita and Thisse 2008).

From the perspective of New Economic Geography, regional competitiveness is the relative capacity of regions to attract mobile factors, such as capital and labour, from each other and host economic activity which is predominantly determined by their productivity, returns offered by the region to capital and labour, and their share of economic activity (Krugman 2005). This model argues that the flow of capital and labour could lead to positive and negative externalities which stimulate circular causation process and therefore, significant persistent regional disparities could result (Potter 2009).

3. Decreasing Transportation Costs and Peripheral Regions

The Core-Periphery Model suggests that sufficiently higher transportation costs result in the dispersion of firms, and that sufficiently low transportation costs results in agglomeration and the concentration of manufacturing at the core due to increasing returns of the larger market (Lafourcade and Thisse 2008).

Previously, ceteris paribus, producers sought good access to both markets and suppliers of intermediate goods, which generally occurred when firms located centrally or at the core. As a result peripheral regions were at a major geographical disadvantage. However, recent changes in relation to the nature of trade have benefited peripheral regions considerably by reducing their marginalisation, and therefore, their distance from national and international markets has become increasingly irrelevant. Transportation costs are less important as exports of advanced economies are becomingly increasingly ‘lighter’ with the rise of services exports and lighter goods exports, for example computer chips. Krugman (1997, p.45) refers to this as the “growing weightlessness of international trade”. Barry (1996) and Argyris and Kostopoulous (2002) argue that advantage shifts to the peripheral location, as a result of lower labour costs which result it in being cheaper to produce in the low cost periphery and transport goods to the core market.
Krugman (1996) later augmented his Core-Periphery Model and factored agglomeration diseconomies, such as congestion costs. This model predicts that there is high concentration at the centre when transport costs are high, and that when costs fall below the critical level that concentration falls (Argyris and Kostopoulous 2002).¹⁰

**Policy Implications**

In recent years there has been increased focus placed on the implications of New Economic Geography for government policy (Puga, 2002; Ottaviano 2003; Brakman et al 2005; Potter 2009). Policies that influence regional competitiveness, in terms of a region’s capacity of a region to attract and retain mobile factors of production and economic activity, are associated with this theory (Potter 2009). New Economic Geography suggests a role for government in influencing centripetal and centrifugal forces (Kraybill, 2003). Potter (2009) argues that dynamic New Economic Geography models provide a theoretical basis in order to identify how regional policy may promote sustainable growth at national level. This is significant, as Neoclassical theory focused on the redistributional role of regional policy, or one-off efficiency gains at national level at the very most, through bringing unused resources to lagging regions for use (Potter 2009).

**Shortcomings of New Economic Geography**

- Dawkins (2003) suggests that while New Economic Geography has introduced a spatial dimension to regional growth and trade, there are restrictive assumptions in the models in relation to worker mobility, regional dynamics and use of land. Fan et al (2000) have developed a more generalised version of new economic geography which allows for worker mobility and for multiple regions in one or two dimensions.

- In terms of the Core-Periphery Model, Brülhart (2009) argues that this theory is not relevant in today’s economy, due to manufacturing unravelling in US and EU economies. According to Brülhart (2009), it was long established manufacturing in the EU and US that provided the empirical justification for the development of New Economic Geography, however these concentrations are disbanding.

¹⁰ Later extensions to the core-periphery model incorporate land rent for urban housing (Murata and Thisse, 2005; Helpman 1998; Tabuchi 1998) as the determinant of dispersion and have shown that industry disperses to the periphery when transportation costs reduce, unlike the original model proposed by Krugman (Fujita and Mori 2005). Murata and Thisse (2005) argue that dispersion of workers is more efficient as agglomeration can result in higher costs such as urban costs and a limited range of varieties.
Albeit Paul Krugman’s (1991a) theory of New Economic Geography is not necessarily a prescriptive theory of regional economic growth of how regions should grow, it does however provide predictions in relation to the determinants of clusters, which in turn foster regional growth (Dawkins 2003).

1.4.3 Summary
A major concern of policymakers is how to nurture productivity and this was a key contribution of Endogenous Growth Theory. This theoretical overview shows that productivity increases are considered to be determined by endogenous innovation and technological progress and investment in workers’ education and skills. New Economic Geography addresses the shortcomings in Endogenous Growth Theory by providing a clear spatial dimension. This theory emphasises the relative capacity of regions to attract mobile factors, such as capital, enterprise and labour, from each other and host economic activity. Due to the decreasing importance of transportation costs, peripheral regions can experience economic growth and are often considered to be more attractive to locate in. Similar to New Economic Geography, Endogenous Growth Theory assumes divergence of economies and that economic growth can occur on a long run basis. Importantly, this overview of the recent theories highlights a role for government in the regional growth process. The following section considers empirical evidence in relation to the key growth theories.

1.5 Regional Growth Theories - Empirical Evidence
This section outlines empirical evidence from the literature pertaining to the major theories of regional economic growth. Particular emphasis is placed on establishing the importance of the service sector, exports, human capital, clusters, entrepreneurship, innovation and technological progress in determining economic growth.

The service sector has been found to be important for productivity growth as identified in the industrial structure theories. Maroto-Sánchez and Cuadrado-Roura (2009) studied the relationship between economic structure and productivity growth, particularly in relation to the service sector, using a sample of 27 OECD countries over the period 1980 and 2005. They found that many tertiary activities display dynamic productivity growth while their contribution to aggregate productivity growth is much greater than what was previously thought.
Exports have been found to be important for regional economic growth, as argued by the industrial structure theories. Martín and Herranz (2006), who tested the impact of exports on regional economic growth in the Spanish regions, found that exports have a key role in fostering regional economic growth. Lego et al (2000) examined the export base model and analysed the relationship between intersectoral exports, local employment and regional economic growth in the long run. Their empirical findings show that service sector exports have a more significant role in determining regional growth patterns than previously thought. Beyers (2005), who examined the contribution of services to the economic base of regional economies in the US over the period 1995 to 2009, found that services had strong contribution to the expansion of the economic base of the regions studied.

Education has been shown to be vital for regional economic growth as argued by the Endogenous growth theorists. The OECD (2009b) empirically tested the key determinants of regional growth as outlined in the Neoclassical, Endogenous and New Economic Geography growth theories, based on the period from 1995 to 2005. The empirical findings from this study show that third level education only has a positive effect on regional growth after three years, and in the short run it has a negative effect (as people in education stay out of the labour force). Furthermore, the OECD (2009b) study finds that regions with insufficient levels of human capital will not prosper. Manca (2009), who empirically tested the correlation between human capital and growth in the Spanish regions from 1960 to 1997, found that high skilled regional workforce is correlated with higher growth rates and reduced the cost of adapting to technology. Furthermore, Manca (2009) found that lower educational attainment contributes to lower growth in the long term.

Various studies have found evidence suggesting the positive role of innovation in economic growth. The OECD (2009b) empirical validations found that innovation (in terms of patenting) positively impacts economic growth as suggested by Endogenous Growth Theory. However, this takes five years to have a positive impact on regional economic growth (OECD 2009b). The OECD (2009b) study found that R&D expenditures do not positively impact economic growth as it is considered to be one of many inputs in the growth process. Therefore, the OECD (2009b) argues that this should be linked directly to patenting and not economic growth, and that this indirect relationship would result in economic growth. Moreover, the OECD (2009b) study shows that the existence of knowledge-intensive services and high technological manufacturing in a region stimulates innovative activity in relation to patent applications.
Acs et al (2005), who tested 18 countries, found that in addition to R&D and human capital, entrepreneurship serves to promote economic growth as it can act as a conduit for knowledge spillovers. Acs and Armington (2002) used data that tracks all employers in the US private sector economy in order to examine the impact of entrepreneurial activity on employment growth in local markets. They found that regions with higher levels of entrepreneurship activity have higher growth rates and more innovation.

Empirical evidence highlights the importance of clusters for regional economic growth as emphasised by New Economic Geography and the theories of regional economic divergence. Delgado and Porter (2010) developed a systematic empirical framework to test the impact of regional clusters on regional economic development in the US. They found that industries located within a strong cluster are correlated with higher growth in employment and higher wages. Strong clusters impact the number of establishments and the level of patenting (Delgado and Porter 2010). Most importantly Delgado and Porter’s (2010, p.29) framework shows that clusters are important for the growth of existing industries as well as the creation of new industries in a region. Porter (2003), who examined the role of clusters in the US economy over the period 1990 to 2000, found that traded clusters and innovation in the US are strongly correlated with regional economic performance. Audrestch and Feldman’s (1996) model, which tested the theory of New Economic Geography, found that industries in which there is a higher existence of knowledge spillovers such skilled labour, R&D and university research, and are therefore more innovative, have a greater propensity to cluster when compared with industries where these factors are less important. Porter (1990; 1998), who examined the role of clusters in regional economic growth, found that spatial clustering of rivals has a positive effect on regional innovation and competition.

In summary, the empirical evidence from the literature pertaining to the regional growth theories confirms that regional growth is dependent on endogenous growth factors including levels of human capital and innovation. Furthermore, it highlights the importance of exports, the services sector, clusters, agglomeration economies and entrepreneurship for regional economic growth. These findings have important implications for policymakers as they highlight the significance of an integrated approach to regional development which is considered in further detail in Section 3. Moreover, as empirical evidence validates various arguments of the regional growth theories, it suggests that these theories should have a role in regional policy formation and implementation.
1.6 Conclusion
The findings in this chapter suggest that there is no widely accepted theory of regional economic growth and that regional growth is determined by various, often overlapping, factors. The more recent theories argue that governments have an important role in influencing regional economic growth. The discussion highlights the importance of human capital, innovation, services, entrepreneurship and the ability of a regional to retain and attract productivity factors, which was validated by empirical evidence presented. This has important implications for Irish policymakers in terms of the government’s approach to regional development and future growth of the Mid West Region. It suggests that regional policies should integrate various factors in order to be effective, and that policymakers should focus on enabling regions to grow through realising the full potential of their endogenous assets. The findings imply that with the correct policies in place regional growth can be long term and sustainable. This literature review and empirical findings from the literature will lay the foundations for the development of the research hypotheses in Chapter 3. The following chapter considers the relationship between the service sector and regional economic growth, as the foregoing consideration of the regional growth theories and empirical evidence from the literature has highlighted the importance of this sector for economic growth of advanced regions.
Chapter 2
Services and Economic Growth Theory
2.1 Introduction

Over recent decades most advanced economies have experienced a substantial change in their occupational structure, namely a transition from an industry-dominated to a services-dominated employment structure. The workforce employed in services continued to grow in developed economies during the second half of the 1980s and the 1990s; by the beginning of 2000 in several OECD countries about three quarters of employees were working in services. Furthermore, job creation nowadays takes place almost exclusively in this sector.

(DeAgostino et al 2006, p7)

The aim of this chapter is to consider the relationship between services and regional economic growth. Employment in services now accounts for over 70 per cent of employment in many OECD countries, and service sector output and employment can be considered the barometer of the development (Evans, 2010; NESC, 2008) of a region and it results in more balanced growth, particularly in terms of female and male labour force participation. “The rise of services is a hallmark of contemporary economic development in every high income country…” (NESC 2008, p.xvi).

The nature, scope and classification of services are presented in this chapter. In particular the various ‘myths’ that have been built up about the merits of services sector output and employment will be addressed. This is considered vis-à-vis manufacturing. The literature on the relationship between services and regional economic growth is considered. The factors that have the potential to foster enhanced service sector productivity outcomes are discussed, particularly the interaction of education and female labour force participation. A circular relationship exists between service sector employment and female labour force participation with feedback effects. The measurement issue of services productivity and data is also examined in this section.

2.2 The Nature of Services

The purpose of this section is to provide a clear understanding of what constitutes services. Services are defined and classified, and the various ‘myths’ that persist around the sector are dispelled.

2.2.1 Definition of Services

While there is considerable literature available on services, there is no widely accepted definition of services. The traditional attempt to describe services was to determine services by what they are not, and therefore as those activities that do not include manufactured goods, mining or agriculture, that is the ‘residual’ activities in an economy (McLachlan et al
However, technological progress has resulted in changing the nature of services, and therefore, the distinction between manufactured goods and services is no longer as straightforward as in previous decades (Miles and Boden 2000). McLachlan et al (2002) suggest that the ‘residual’ definition of services is generally applied for analysing the sector. Accordingly, for the purpose of this research, the service sector is defined as comprising all industries excluding agriculture, forestry, fishing, manufacturing and construction.

2.2.2 Classifying Services

The extremely varied nature of services suggests that the service sector comprises a diverse range of industries. Bryson and Daniels (1998, p.xv, cited in McLachlan et al 2002, p.9) maintain that “...the very heterogeneity of service activities has been a nightmare for analysts interested in classifying them.”

The European Union has classified services, under NACE Rev. 2, which is the European statistical classification of economic activities. This has been adopted by the Central Statistics Office (CSO) in their analysis of economic sectors since 2004. Table 2.1 presents the industries in the classification of services by the CSO, which will be used in this research.

<table>
<thead>
<tr>
<th>G</th>
<th>Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycles</th>
</tr>
</thead>
<tbody>
<tr>
<td>H</td>
<td>Transportation and Storage</td>
</tr>
<tr>
<td>I</td>
<td>Accommodation and Food Service Activities</td>
</tr>
<tr>
<td>J</td>
<td>Information and Communication</td>
</tr>
<tr>
<td>K-L</td>
<td>Financial, Insurance and Real Estate Activities</td>
</tr>
<tr>
<td>M</td>
<td>Professional, Scientific and Technical Activities</td>
</tr>
<tr>
<td>N</td>
<td>Administrative and Support Service Activities</td>
</tr>
<tr>
<td>O</td>
<td>Public Administration and Defence; Compulsory Social Security</td>
</tr>
<tr>
<td>P</td>
<td>Education</td>
</tr>
<tr>
<td>Q</td>
<td>Human Health and Social Work Activities</td>
</tr>
<tr>
<td>R-U</td>
<td>Other NACE Activities</td>
</tr>
</tbody>
</table>

Source: CSO

However, the CSO Classification of sectors prior to 2004 (NACE Rev. 1.1) is used in some of the analysis in Chapters 5 and 6 for comparative purposes prior to 2004 (Table 2.2).

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11 Appendix B contains more detailed information in relation to the definition of services.

12 Forfás (2008) argues that 35 per cent of manufacturing workers in Ireland are engaged in service type activities, such as marketing or accounting for example. Bryson and Daniels (2010) in the Handbook of Service Science provide an interesting consideration of the rise of the ‘manuservice’ economy. They argue that most manufacturing firms have been transformed into service firms. However, a key distinguishing characteristic of services is the sector’s reliance on human capital.
Table 2.2: CSO Classification NACE Rev.1.1

<table>
<thead>
<tr>
<th>Code</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>G</td>
<td>Wholesale and Retail Trade</td>
</tr>
<tr>
<td>H</td>
<td>Hotels and Restaurants</td>
</tr>
<tr>
<td>I</td>
<td>Transport, Storage and Communications</td>
</tr>
<tr>
<td>J - K</td>
<td>Financial and Other Business Services</td>
</tr>
<tr>
<td>L</td>
<td>Public Administration and Defence</td>
</tr>
<tr>
<td>M</td>
<td>Education</td>
</tr>
<tr>
<td>N</td>
<td>Health</td>
</tr>
<tr>
<td>O - Q</td>
<td>Other Services</td>
</tr>
</tbody>
</table>

Source: CSO

2.2.3 Myths and Misconceptions

Services are myth-making stuff, it seems. The lantern that has shed light on our economies has left services residing in the dark of the economy. It is a world of myths and legends: a residual world…of the intangible and inexpressible.


While it has been over a decade since Hauknes’ (1998) paper, misperceptions continue to persist in relation to the service sector, due to a lack of appreciation regarding the diverse range of industries that comprise the sector.

…[D]espite its dominance, the sector is not well understood. Indeed, it has been described as the ‘Cinderella sector’ – largely because it has not attracted the research and policy attention given to agriculture and manufacturing.

(McLachlan et al 2002, p.xii)

The lack of research in relation to services is likely to be due to the paucity of services data. It can be very difficult to measure productivity and output in the sector, which can result in underestimation of the sector’s contribution to economic growth. In general, research on services, especially in terms of Irish research, is comparatively neglected, although this is beginning to change. It is interesting to note that Mid West regional level research on services is considerably underdeveloped and that the sector itself is significantly lagging behind national and international trends in terms of contribution to employment and GVA in the region. This suggests that there is a strong correlation between research and performance. This relationship works both ways, and as the sector is underdeveloped in the Mid West this could have resulted in neglecting this research area. Miles and Boden (2000) argue that with the growth of employment and productivity within the sector, and moreover the extension of the linkages with the service sector and other sectors, it has become less acceptable to overlook services.
In advanced economies including those in the OECD, such as the US, Canada and Australia, services account for over 70 per cent of total employment and value added (OECD 2005a). Between 1997 and 2007 GVA in Ireland nearly trebled from €60 billion to €170 billion and two thirds of this growth was in the service sector (Forfás 2008). Albeit services today dominate economic activity in advanced economies, Farrell et al (2007, p.60) argue that there is a persistence of ‘myths’ in relation to the service sector productivity which they suggest have been “demotivational” in terms of economies focusing on improving service sector productivity. The following misconceptions are often associated with services.

**Myth 1: The Service Sector is a ‘Productivity Laggard’**

Even though it is widely accepted that services have contributed significantly to Irish economic growth in the 1990s and early 2000s it is “…less widely accepted that growth based on services is sustainable” (Forfás 2008, p.17). While there is limited potential for productivity growth in some services such as in restaurants, other service industries, for example communications, have experienced significant growth in recent years. The intermediary role of services in relation to economic growth is often not considered and the majority of industries rely on inputs from the service sector, including transport, energy and communication, for producing products (McLachlan et al 2002). The difficulty in measuring service inputs and outputs is undoubtedly resulting in a significant distortion of their actual contribution to economic growth.

**Myth 2: Service Sector Jobs are ‘low skill’ and ‘low wage’**

The major growth of services, in particular in the last two decades, has resulted in concerns in relation to the nature and quality of service jobs. “The debate about the implications of the growth of service jobs…is often couched in terms of a shift away from ‘good’ to ‘bad’ jobs” (McLachlan et al 2002, p.35). However, the reality of the service sector is different with service industries actually creating more high skilled occupations than manufacturing, including engineers, researchers and managers (Farrell et al 2007). Knowledge and information related services, such as education, research and development, modern communications and business services, are the fastest growing part of the sector (Soubbotina, 2004). In terms of the Irish context, data show that the majority of service sector jobs’ hourly earnings are higher than those in industry (CSO 2009a). Almost 40 percent of service sector workers are classified as high-skill, compared with 35 percent in the aggregate of sectors in the Irish economy (Forfás 2008).
**Myth 3: Manufacturing Jobs are more stable than Jobs in Services**

Farrell *et al* (2007, p.61) argue manufacturing jobs are not more stable than service jobs as manufacturing is “shrinking worldwide”. While service jobs have a higher turnover than manufacturing jobs, they are a more reliable source of overall employment (Farrell *et al* 2007). Many of the service jobs are located in the public sector in areas such as health, education, public administration. Therefore, the government has a role in these service industries which creates more employment stability. It is evident that service sector is more stable in an economic downturn than manufacturing and construction. When analysing employment data from the CSO’s QNHS it shows the stronger resilience of the service sector to the current recession. From Q3 2008 to Q3 2010 employment in industry declined by 17.8 per cent, construction fell by 50.6 per cent and agriculture decreased by close to 20 per cent. However, the service sector experienced the lowest decline during this period of 4.7 per cent which highlights the resilience of the sector. The average decline in employment across all the sectors was 12.1 per cent. Moreover, it is unlikely that the manufacturing jobs lost in the recession will return.

The service sector can often offer a counterbalance to MNEs as companies in this sector often have higher indigenous ownership relative to manufacturing, and therefore are more embedded in the local economy. Service firms use knowledge that is not easily divisible and may not be as flexible as ‘footloose’ manufacturing firms (Mas-Verdu *et al* 2010). Aiginger (2009) argues that having a large service sector makes an economy more resilient to an economic crisis.

**Myth 4: Services are Non-Tradeable**

Service trade has increased substantially in recent years, and the growth has surpassed that of goods with the range of internationally traded services also increasing rapidly. There are many services, such as communications and insurance services, that are highly tradeable, and “[i]n fact, services are the fastest growing component of international trade” (McLachlan *et al* 2002, p.x). 13 The service sector has accounted for a significant proportion of growth in exports in recent years as a result of advances communications and technology which has influenced the way that services are traded. NESC (2008) argues that the prices of services

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13 Fournier and Axelsson (1993) argue that “[r]ecent evidence indicates that export base theory may hold not only for manufacturing industries but also for a variety of service outputs and industries”. Empirical evidence from the literature presented in Chapter 1 also validates this.
hold up better than exported manufactured goods. The low import content of services also means that service exports provide a larger injection into the domestic economy than the exports of goods (NESC 2008).\textsuperscript{14}

**Myth 5: Reforming Domestic Services will not Improve Productivity Significantly Because They Offer So Little Scope for Innovation**

Farrell \textit{et al} (2007, p.56) argue that “[d]omestic services suffer from an economic image problem”.\textsuperscript{15} However, productivity improvements in electricity supply and telecommunications have been significant drivers of aggregate productivity growth in developed economies. The size alone of domestic services in the Irish economy makes them significant drivers of overall GDP growth. Efficient and reasonable valued domestic services are also a major determinant of attracting FDI, and the majority of enterprises depend on services (Farrell \textit{et al} 2007).

**2.2.4 Summary**

The discussion in this section shows that the service sector has considerable potential to enhance productivity as the sector provides high skill, high wage jobs and is more resilient to economic shocks. The empirical evidence in this section shows that the common ‘myths’ often associated with services do not hold up against reality. This suggests that services have the potential to significantly drive Mid West regional economic growth. There is undoubtedly a positive correlation between the underperformance of the service sector in the Mid West and a lack of research, which is a two-way relationship. This highlights the importance of research in relation to services in the region for enhancing the performance of the sector. The following section briefly considers the theoretical literature on the relationship of services and regional economic growth.

**2.3 A Literature Review of Services and Regional Economic Growth**

The topic of structural change is frequently neglected in economic research, despite its high relevance for growth theory, business cycle theory and labour market theory as well as for economic policy.

(Krüger 2008, p.331)

It is only in recent decades that the services sector has begun to receive more attention in economic theory as generally low priority was given to the sector in theoretical literature on

\textsuperscript{14} The contribution of services to Irish exports is analysed in Chapter 8.

\textsuperscript{15} Domestic services include high wage and high skill jobs such as research and education.
regional economic growth. This section briefly considers the relationship between services and economic growth, specifically regional growth. Previously service industries were regarded as passive and unproductive and, it is partly due to this that, traditionally regional economists did not pay the sector the attention it deserved (Moyat 2005). However, in recent years this view came into question as the role of producer services in terms of regional employment and the economic base of many regions, including lagging regions was identified (Moyat, 2005). The progression of services from the ‘residual’ to being considered a key feature of the post-industrial society is considered in this section. The relationship between services and regional economic growth is also outlined in relation to a region’s internal and external development.

2.3.1 Services as ‘Residual’ to Post-Industrial Society

Originally, 18th Century Classical economists, including Smith (1776) viewed the service sector as the residual in an economy with little or no role in economic growth, with goods-producing industries having the predominant role. The key notion behind this view is that of a ‘stagnant’ or productivity laggard service sector (Fisher 1933; Clark 1949; Fourastié 1949; Baumol 1967; Fuchs 1968), with a dependent relationship existing among services and manufacturing. However, this theory has been heavily criticised with recent empirical evidence (Baumol, 2002; Maroto and Rubalcada 2008; Maroto-Sánchez and Cuadrado-Roura 2009; O’Mahoney and Van Ark 2003; Van Ark et al 2002; Triplett and Bosworth 2004) showing that the service sector has a positive effect on productivity growth, particularly in relation to intermediary services (Oulton 1999).

The debate in relation to the role of services in economic growth was once again questioned in the 1980s, with the economic crisis during that decade. De-industrialisation in the 1970s and 1980s resulted in a declining share of manufacturing employment and productivity. The original debate in relation to de-industrialisation emphasised the fall in incomes associated with the shift from the ‘high wage’ manufacturing sector to the ‘low wage’ services sector employment (Bluestone and Harrison 1982). Kaldor (1967) who argues that “manufacturing matters” was one of the key contributors to this debate and considered manufacturing to be the main impetus behind economic growth.

In recent years a new perspective has emerged in relation to the growth of the services sector, with the manufacturing sector displaying signs of saturation (Bryson and Daniels 2007). The post-industrial society theory suggests that a service economy will develop, including sectors
such as research, finance, real estate, education and transport, as a result of the decline in manufacturing (Bell 1973). In this ‘knowledge-based’ society services are the key sector for economic growth. The emergence of the knowledge-based economy has implications for the service sector, which is particularly affected by the changing requirements of human capital. In this economy capital stock is embodied in human rather than physical capital at a much greater level than previously (Lipsey 2006). The changing nature of the economy towards this knowledge-intensive learning economy has resulted in an increased demand for human capital in services (Lundquist et al 2008). Table 2.3 presents the main characteristics of the post-industrial knowledge-based economy, in comparison to the pre-industrial and industrial economies.

Table 2.3: Stages of Economic Development

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Preindustrial, agrarian</th>
<th>Industrial</th>
<th>Postindustrial, knowledge-based</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leading economic sector</td>
<td>Agriculture</td>
<td>Industry</td>
<td>Services</td>
</tr>
<tr>
<td>Nature of dominant technologies</td>
<td>Labor- and natural resource-intensive</td>
<td>Capital-intensive</td>
<td>Knowledge-intensive</td>
</tr>
<tr>
<td>Major type of consumer products</td>
<td>Food and hand-made clothes</td>
<td>Industrial goods</td>
<td>Information and knowledge services</td>
</tr>
<tr>
<td>Nature of most production processes</td>
<td>Human-nature interaction</td>
<td>Human-machine interaction</td>
<td>Human-human interaction</td>
</tr>
<tr>
<td>Major factor of economic wealth/growth</td>
<td>Nature's productivity (soil fertility, climate, biological resources)</td>
<td>Labor productivity</td>
<td>Innovation/ intellectual productivity</td>
</tr>
</tbody>
</table>

Source: Soubbotina 2004, p. 67

2.3.2 Services and a Region’s Internal Development

From a regional perspective, the quality of a region's service sector is a key determinant of its economic development. The ability of a region to create new businesses and foster the growth of existing firms depends in the long run on its service infrastructure… (Kirn 1987, p.355)

Kirn (1987) argues that regional productivity can be enhanced by investments in service sector activities, including education, training, social services and health care. Services are central in the improvement and transfer of knowledge, as well as having a vital role in the education and training of the labour force, research and development, as well as the distribution of technology and information. Professional service firms provide a variety of services to other firms that increase their competitiveness and productivity (Kirns 1987). Harpel (2009), the OECD (2009b), Manca (2009) and Denison (1985) all found empirical evidence of the importance of skills and education for regional economic growth.
Hirschhorn (1979) suggests that the ability of a region to foster growth of existing firms and to create new businesses in the long term is dependent upon the quality of its service infrastructure. Kay et al (2007) maintain that local services, such as transport, retail and childcare, are critical for regional growth. Furthermore, Noyelle (1987) argues that centres with good producer services are likely to experience more favourable growth prospects as producer services will be the key source of future employment, and because regions with an advanced services sector have significant influence on investment flows and the diffusion of innovation. 16

Lundquist et al (2008), who analysed the Swedish economy, found that producer services were particularly important for economic growth. Moyat (2005) argues that producer services have the capacity to create a higher multiplier effect on a regional economy than that of industry. It is evident that regions require a strong concentration of producer services as well as business, professional and financial services for fostering economic growth.

2.3.3 Services and a Region’s External Ties
Melvin (1987, as cited in Coffey and McRae 1989), was one of the few to attempt modelling services and regional economic growth, and presents a model in relation to the role that the service sector could have in a regional economy. His formal general equilibrium model allows services to be traded either inter-regionally or internationally which suggests that services can be a significant contributor to regional income (Coffey and McRae 1989). The role of services in regional exports is also evident in recent literature. Bryson and Daniels (2007, p.6.) argue that “[e]conomic base theory seriously understates the contribution that services make to a local economy”. However, Kay et al (2007) argue that the marginalisation of services in Export Base Theory has diminished to some extent in recent years as there has been growing evidence that economic base theory can also be applied to services. Services significantly contribute to regional economies and can be traded regionally, nationally and internationally.

2.3.4 Summary
It is clear from the discussion in this section that the economic thought on services has experienced a considerable shift, from services being considered as productivity laggards, to

---

16 Producer services consist of business and professional sectors including law, accounting, marketing and research (Bryson and Daniels 2007).
the more recent theories which argue that the service sector is crucial for regional economic growth. In particular the literature argues that producer services are considered as having a significant role in enhancing regional economic growth. Education is also considered to be one of the key services which is vital for a region’s internal development. As services are increasing their share of exports globally, their contribution to the economic base of regions is being enhanced. The following section considers service sector productivity, and the role of education and female labour force participation in fostering this.

2.4 Service Sector Productivity

Productivity isn’t everything, but in the long run it is almost everything. A country’s ability to improve its standard of living over time depends almost entirely on its ability to raise output per worker.

(Krugman 1997b, p.11)

As evident from the discussion in Chapter 1, in the long run, productivity is the key determinant of economic growth.17,18 The aim of this section is to consider the measurement of services productivity and the impact that education on this. Particular emphasis is placed on the interaction of education and female labour force participation as key determinants of future productivity growth in the services sector.

2.4.1 Measuring Service Sector Productivity

“Productivity in services is central to maintaining economic competitiveness and improving living standards” (NESC 2008, p. 6). Farrell et al (2007) argue that economies have been significantly held back by failure to promote productivity in the service sector. Furthermore, they maintain that the global shift from manufacturing to services is set to continue and that failure to act to stimulate services productivity could result in the Irish economy failing to grow. This section considers the difficulties in measuring service sector productivity which is resulting in an underestimation of the sector’s contribution to economic growth.

Measuring output and productivity growth in many services is not straightforward. What exactly does a lawyer or an economist produce? How can the rapidly changing pricing schemes of telecommunications providers be compared over time?

(OECD 2006a, p46)

17 Productivity is generally defined as the ratio of output to the ratio of input, and is a measure of how efficiently inputs, such as labour and capital, are being used in relation to outputs (OECD 2006a). It is measured in terms of GVA or GDP.
18 Increased productivity growth occurs when fewer inputs, such as labour and raw materials, are used to produce the same amount of output, or when the same amount of inputs yields more output (Camus, 2007).
The difficulty in measuring productivity in the services sector has received considerable attention in recent years (Maroto and Rubalcada 2008; Farrell et al 2007; Triplett and Bosworth 2003; McLachlan et al 2002; Pilat 2001), as the contribution of services to economic growth has increased beyond that of agriculture and manufacturing combined for many advanced economies. Defining the productivity output is challenging for many of the industries within the service sector (McLachlan et al 2002). This is due to the output of services is generally intangible and there is difficulty in measuring the input of labour, and accounting for the quality of services. Furthermore, there is a lack of consensus pertaining to how services output should be measured, and there is no single indicator of output in the service sector. Triplett and Bosworth (2003) argue that the difficulties in measuring service sector productivity may have actually made the sector seem less robust than it actually was in the past, while Pilat (2001) also argues that it may distort productivity increases.

It is particularly difficult to measure the contribution of producer services to economic growth. Bryson and Daniels (2007, p.4) argue that “[i]t is usually assumed that producer service firms perform an important role in knowledge creation, as well as shaping regional competitiveness”. However, while this relationship can be argued, it is nearly impossible to measure the impact of producer services to overall regional competitiveness, as it is very difficult to determine the exact input provided (Bryson and Daniels 2007). Overall, significant research is required to improve the measurement of both productivity and quality of services.

The following sections discuss two causal relationships which will form the basis of the hypotheses for this research. Firstly, the link between services and education is presented, and secondly the relationship between education, female labour force participation and services is considered.

2.4.2 Education and Service Sector Productivity

Human capital is of particular importance to growth and competitiveness since this type of capital can be viewed as an essential prerequisite to the adoptions of change induced by globalisation and new technologies and, therefore, is a key determinant of productivity.

(Morgenroth 2003, p.11)

Education can contribute to growth in two ways. Firstly, education can increase levels of human capital and makes workers more productive (Lucas 1988). Therefore, in this model, education has a positive impact on productivity, is the key driver of growth and should be on
the agenda of policymakers (Morgenroth 2003). Secondly it can indirectly impact economic growth by stimulating the creation of new ideas, knowledge and technological innovation (Kerr 2001).

In recent years there has been emphasis placed on the importance of educational attainment of a region’s workforce for underlining interregional and interurban differences in productivity (Lucas 1988; Mullen and Williams 1990; Ke and Bergman 1995). The theories of endogenous growth have developed a model which supports the importance of human capital for economic growth, either in terms of an additional input (Lucas 1988), as a contribution to advances in technology through increases in innovation (Nelson and Phelps 1966; Romar 1990; Aghion and Howitt 1992), or as both (Mankiw et al 1992). New technologies and innovation enable economies to become more competitive through increased productivity, and education enables workers to create as well as adapt to new technologies. A more skilled labour supply can enable workers to become engaged in R&D, and subsequently, new ideas are generated or implemented, which positively impacts the long run rate of economic growth (Temple 2000). A lack of educational attainment is a major explanatory factor as to why some economies might fail to adopt best practice technologies, and therefore, produce inefficiently (Stevens and Weale 2003).

It is interesting to note that the impact of human capital on national economic growth may differ from its impact on regional economic growth. Human capital has two separate impacts on regions (Faggian and McCann 2009). Similar to the impact on national economies human capital impacts the economy’s level of aggregate productivity through the externalities related to it. However, increases in regional human capital can also result in a significant spatial relocation of factors (Faggian and McCann 2009). The two impacts can operate in different directions, as a result of externalities spilling into a nearby region, and the factors determining labour mobility are not harmonised with this. Subsequently, when these two impacts do not coincide regions will “struggle” and when they are congruent that regions will “flourish” (Faggian and McCann 2009, p.133). Therefore, the impact of human capital on regional growth actually depends on the relationship between these two impacts (Faggian and McCann 2009).

Kavanagh and Doyle (2007) have stated that there is compelling international research which shows that investment in education has a positive effect on growth and productivity. Increasing average education in an economy’s population by one year has between a 3-6 per cent impact on increasing productivity, and moreover some new growth theories even suggest a 7 per cent impact (Kavanagh and Doyle 2007). Other studies have found that increases in educational attainment account for approximately 20 per cent of growth in output per capita (Kerr 2001).
McCann 2009). Education is particularly important in terms of the regional growth dimension for both developing and growing indigenous enterprise in the region as well as attracting physical capital to locate in a region.

“A skilled labour force is a particularly important factor for the service sector, where intellectual capital is crucial” (The Central Chamber of Commerce of Finland 2006, p.8). This importance of an educated and skilled labour force has increased with the onset of the knowledge-based economy. The service sector is more reliant on human capital than manufacturing and agriculture. Education is particularly important for service sector productivity (Lodde 2007; Razzak and Timmins 2010). Becker (1993) argues that education is crucial for adapting to changing technologies and productivity advances in the service sector. This is clearly evident in the Irish Government’s strategy regarding the development of the ‘Smart Economy’ with education being considered to be a key factor in fostering this ‘ideas’ economy (Government of Ireland 2008).

**Empirical Evidence**

Lodde (2007), who studied the impact of human capital on the growth rate of productivity in industry and the service sector in the Italian regions, found that the accumulation and the stock of human capital have a considerable effect on productivity in the service sector. Moreover, Lodde (2007) found that they did not have a significant effect on the growth rate of productivity in the manufacturing industry.

Camacho and Rodríguez (2005), who analysed the service sector in Spanish regions, found that the educational attainment of workers employed in the service sector has a major impact on regional economic growth. Camacho and Rodríguez (2005) argue that the service industry has the highest level of educational attainment among its workers. At the regional level they found a strong relationship between specialisation in services, particularly high-skilled services and the level of human capital in the regions.

Razzak and Timmins (2010), who studied the impact of education on GDP per capita in New Zealand over the period from 1986 to 2005, found a strong positive correlation between education and productivity. Their model suggests that a 10 per cent increase in the share of university educated workers results in a 0.5 to 1.0 per cent increase in GDP per capita. Razzak and Timmins (2010) empirical findings show that the demand for skills was relatively higher in service industries, such as business services, finance, insurance and real estate, as
they are more dependent on information technology. Therefore, it can be argued that an increase in human capital in the service sector is likely to have a more profound impact on productivity than in the manufacturing or agriculture sectors.

Higher productivity levels are considered to be reflected in higher wage level, because higher levels of education are assumed to increased productivity. There is significant evidence that education and earnings are positively linked (Kavanagh and Doyle 2007; Mincer 1974). The impact of education on earnings is often used as a proxy for the effect of educational attainment on productivity which suggests that workers are compensated more for increased productivity. There is a higher wage level in general in the service sector than the manufacturing sector (McLachlan et al 2002) reflecting the importance of education.

2.4.3 The Interaction of Education and Female Labour Force Participation for Enhancing Service Sector Productivity

While education alone can increase both productivity and employment growth in the service sector, it is also a determinant of female labour force participation, which is predominantly employed in the service sector. The growth potential of well-educated female workers is ‘unlocked’ through the service sector which provides an outlet for their skills. Even if females were more educated they may not find an outlet for their skills if manufacturing and agriculture were the dominant sectors in a region, as an avenue into the labour force is not generally there for females in these predominantly male-dominated sectors. It is generally easier for female participation to feed into productivity in services with education. The interaction of education and female labour force participation has the potential to drive considerable productivity improvements in the service sector as female labour force participation can be considered to be a ‘byproduct’ of increases in education. Increases in female participation alone may not drive service sector productivity.

Human Capital theory maintains that educational attainment has significant effects on participation decisions; women’s labour force participation will increase with education (because more educated women can expect higher wages) and decreases as family size growth (due to the increased time that must be allocated to childcare).

(Fahey et al 2000, p.257)

According to Fahey et al (2000), the Irish situation proves to be consistent with this theory. Fahey et al (1998) estimate that one third of the increase in female participation during the period 1981 to 1997 was due an increase in educational attainment. There is a strong link between educational attainment and labour market outcomes, and it is argued that better
Educated females are more likely to participate in the labour force (Callan and Farrell 1991; O’Connell 1999; Fahey et al 2000; OECD 2004). Although participation in education delays entry into the labour force, it increases female participation overall.

More highly educated females have higher participation rates, reflecting the higher wages which can be earned as a result of higher levels of educational attainment (Callan and Farrell 1991; Barrett et al 2000). There is a perfect correlation between educational attainment and income (Wittenberg-Cox and Maitland, 2008). The wage elasticity of female labour supply is higher than that of males (Callan and Farrell 1991). Higher educational attainment results in enhanced access to greater employment opportunities and higher incomes than those less educated reflecting the higher opportunity cost of remaining outside the labour market (OECD 2002). Elhorts and Zeilstra (2007) argue that individuals with a higher educational attainment have more positive labour market characteristics and are generally in greater demand. They also argue that those individuals are likely to be more efficient in their job search and more successful. Higher wages increase the affordability of childcare and paid help (Elhorts and Zeilstra 2007). Furthermore, education and training are often perceived as the ‘intermediate stage’ for women moving from the home to the labour market (Russell and O’Connell, 2004). Table 2.4 shows that in terms of the national context, Irish female labour force participation is positively correlated with higher levels educational attainment. In 2007, the participation rate for females with a post-leaving or third level qualification was 82 per cent compared to 34.6 per cent for females with a primary education.

Table 2.4: Female Participation Rates by Level of Education

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary</td>
<td>28.9</td>
<td>34.6</td>
<td>5.7</td>
<td>70.4</td>
<td>67.9</td>
</tr>
<tr>
<td>Inter/Group</td>
<td>48.4</td>
<td>51.4</td>
<td>3.0</td>
<td>90.3</td>
<td>87.6</td>
</tr>
<tr>
<td>Leaving Certificate</td>
<td>63.0</td>
<td>65.3</td>
<td>2.3</td>
<td>86.4</td>
<td>88.0</td>
</tr>
<tr>
<td>Post-leaving and Third Level</td>
<td>80.2</td>
<td>82.0</td>
<td>1.8</td>
<td>91.7</td>
<td>92.9</td>
</tr>
<tr>
<td>All</td>
<td>56.7</td>
<td>66.9</td>
<td>10.2</td>
<td>85.2</td>
<td>86.8</td>
</tr>
</tbody>
</table>

Source: Russell et al 2009

The importance of educated female labour for economic recovery has increasingly been recognised internationally.

Over the last year, the world has seen the biggest recession in almost a century. It is clear that recovery will require, among other things, the best of talent, ideas and innovation. It is therefore more important now than ever before for countries and companies to pay heed to
one of the fundamental cornerstones of economic growth available to them – the skills and talent of their female human resource pool.

(Schwab 2009, p.v)

Furthermore, the Economist (2006a) argues that “[a]rguably, women are now the most powerful engine of global growth”. It has been found that over the last decade increased female participation in the labour force contributed more to growth in the global economy than either new technology or than ‘booming China’ (Freeland 2006). Females achieve higher educational attainment that males, specifically at third level, and are filling most new jobs (The Economist 2006a). However, The Economist (2006a) argues that “[w]omen remain perhaps the world’s most under-utilised resource” which can impact economic growth.

The link between increased education and female labour force participation is clear from the theoretical literature and empirical evidence presented. This research argues that the interaction of these two factors is particularly important for enhancing service sector productivity. Russell et al (2009) argue that the increase in female participation in the Irish labour market recent decades has been in part due to the expansion of service sector jobs. In the Celtic Tiger Era of the 1990s increasing female labour force participation enabled and was led by an increase in services. It is widely recognised that the expansion of the service sector in recent decades facilitated the entry of females into the labour force (Becker 1985; Goldin 1990; Fuchs 2007; Akbulut 2007). As well as participation of females with high levels of education determining productivity in the services sector, the service sector can determine female labour force participation through the creation of employment opportunities (Figure 2.1). The rise in demand for labour, particularly services, and the rise in demand for skills have been two demand side determinants of female labour force participation (Jacobsen 2007). While an example of an exogenous factor influencing the performance of the service sector includes advances in technology.
The level of total employment in the service sector in OECD countries is positively correlated to the levels of female labour force participation (Stadelmann-Steffen 2008). This is evident when considering the international data in relation to female labour force participation. For example, the US has a female labour force participation rate of over 68 per cent and close to 80 per cent of its workforce (16-64 years) is employed in services (Table 2.5). This further emphasises the importance of the service sector for fostering increases in female labour force participation as well as female labour force participation being particularly important for growing the service sector within a region.

### Table 2.5: Female Participation Rates and Employment in Services in OECD Countries 2008

<table>
<thead>
<tr>
<th>Country</th>
<th>Female Labour Force Participation Rate (15-64 years) 2008</th>
<th>Those employed in the Service Sector as a % of Total Employment 2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denmark</td>
<td>76.8</td>
<td>74.4</td>
</tr>
<tr>
<td>Finland</td>
<td>73.7</td>
<td>69.9</td>
</tr>
<tr>
<td>Netherlands</td>
<td>72.0</td>
<td>79.8</td>
</tr>
<tr>
<td>Australia</td>
<td>71.4</td>
<td>75.2</td>
</tr>
<tr>
<td>UK*</td>
<td>68.2</td>
<td>77</td>
</tr>
<tr>
<td>US*</td>
<td>68.1</td>
<td>79.5</td>
</tr>
<tr>
<td>Canada</td>
<td>73.3</td>
<td>76.1</td>
</tr>
<tr>
<td>Sweden</td>
<td>77.2</td>
<td>76.2</td>
</tr>
</tbody>
</table>

Source: OECD Database, Country Statistics Profiles; ILO Labour Statistics: 1A - Total and economically active population by age group.
Note: US and UK participation rates refer to 16-64 years

There is latent and unexploited female labour force participation in the Mid West (participation rate of 52.4% for 15 years and over) and there is considerable growth potential that needs to be ‘unlocked’ through the service sector. This sector is a useful platform for female labour that is not being utilised in the region. Furthermore, the Mid West is lagging behind in terms of educational attainment (26.5% in 2006 compared with 29.1% nationally and 35.9% in Dublin). This suggests that there is considerable scope for increasing the educational attainment and female labour force participation in order to drive service sector...
productivity within the region. The following section considers female migration from the Mid West Region which is arguably linked to the underperformance of the region’s service sector.

**Female Migration from the Mid West 2008-2010**

As the service sector in the Mid West is underdeveloped there are high levels of outward migration of skilled and educated females from the region, as empirical evidence presented shows that female labour force participation is strongly correlated with the performance of a region’s service sector. The inability of the Mid West Region to sustain and grow its population, particularly its female population, is a major issue that could significantly limit future economic growth. It is important to consider changes in the 15 to 29 age cohort in the Mid West since 2008 when the recession began to take effect on outward migration trends in Ireland.²⁰ During the period 2008 to 2010 all Irish regions experienced a decline in the 15 to 29 age cohort, which the group which is most likely to emigrate (WDC 2010). Based on the CSO’s (2010a) *Population and Migration Estimates* the decline in the Mid West (-6.9%) was lower than the national average decline of 9 per cent from 2008 to 2010 (Table 2.6).

<table>
<thead>
<tr>
<th>Region</th>
<th>2008</th>
<th>2010</th>
<th>% Change 2008-2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Border</td>
<td>106.5</td>
<td>102</td>
<td>-4.2</td>
</tr>
<tr>
<td>Dublin</td>
<td>320.6</td>
<td>276.5</td>
<td>-13.8</td>
</tr>
<tr>
<td>Mid-East</td>
<td>115.6</td>
<td>107.2</td>
<td>-7.3</td>
</tr>
<tr>
<td>Midland</td>
<td>58.0</td>
<td>53.3</td>
<td>-8.1</td>
</tr>
<tr>
<td><strong>Mid-West</strong></td>
<td><strong>84.2</strong></td>
<td><strong>78.4</strong></td>
<td><strong>-6.9</strong></td>
</tr>
<tr>
<td>South-East</td>
<td>106.7</td>
<td>101</td>
<td>-5.3</td>
</tr>
<tr>
<td>South-West</td>
<td>147.6</td>
<td>134.7</td>
<td>-8.7</td>
</tr>
<tr>
<td>West</td>
<td>95.4</td>
<td>87.9</td>
<td>-7.9</td>
</tr>
<tr>
<td><strong>State</strong></td>
<td><strong>1034.6</strong></td>
<td><strong>941.2</strong></td>
<td><strong>-9.0</strong></td>
</tr>
</tbody>
</table>

Source: CSO Population and Migration Estimates 2010

When considering this age group over the period 2008 to 2010, the Mid West was the only region in Ireland to experience a higher number of females than males migrating from the region. While explanations for this higher trend in female migration from the Mid West are not available, is likely that the females migrating from the region are recent graduates or those with a third level qualification as these females have higher mobility. This has major implications for the Mid West Region which is displaying an inability to retain its female

²⁰ While population change consists of births, deaths and migration, a change in the population of this age cohort would predominantly be driven by migration.
population relative to other Irish regions.\textsuperscript{21} As the service sector is underdeveloped, the region is unable to provide the employment opportunities for the region’s females who are migrating to other Irish regions and abroad to avail of greater employment opportunities.

<table>
<thead>
<tr>
<th>Region</th>
<th>Females 2008 (000s)</th>
<th>Females 2010 (000s)</th>
<th>% Change in Female 15-29 cohort</th>
<th>Males 2008 (000s)</th>
<th>Males 2010 (000s)</th>
<th>% Change in Male 15-29 cohort</th>
</tr>
</thead>
<tbody>
<tr>
<td>Border</td>
<td>52.8</td>
<td>51.0</td>
<td>-3.4</td>
<td>53.8</td>
<td>51.2</td>
<td>-4.8</td>
</tr>
<tr>
<td>Dublin</td>
<td>160.6</td>
<td>140.8</td>
<td>-12.3</td>
<td>160</td>
<td>135.6</td>
<td>-15.3</td>
</tr>
<tr>
<td>Mid-East</td>
<td>57.2</td>
<td>55.1</td>
<td>-3.7</td>
<td>58.4</td>
<td>52.2</td>
<td>-10.6</td>
</tr>
<tr>
<td>Midland</td>
<td>29.2</td>
<td>28</td>
<td>-4.1</td>
<td>28.8</td>
<td>25.4</td>
<td>-11.8</td>
</tr>
<tr>
<td>Mid-West</td>
<td>41.3</td>
<td>38.4</td>
<td>-7.0</td>
<td>43.0</td>
<td>40.1</td>
<td>-6.7</td>
</tr>
<tr>
<td>South-East</td>
<td>52.7</td>
<td>50.8</td>
<td>-3.6</td>
<td>53.9</td>
<td>50.3</td>
<td>-6.7</td>
</tr>
<tr>
<td>South-West</td>
<td>73.5</td>
<td>69.2</td>
<td>-5.9</td>
<td>74.1</td>
<td>65.7</td>
<td>-11.3</td>
</tr>
<tr>
<td>West</td>
<td>47.7</td>
<td>44.4</td>
<td>-6.9</td>
<td>47.8</td>
<td>43.4</td>
<td>-9.2</td>
</tr>
<tr>
<td>State</td>
<td>514.9</td>
<td>477.4</td>
<td>-7.3</td>
<td>519.7</td>
<td>463.9</td>
<td>-10.7</td>
</tr>
</tbody>
</table>

\textit{Source: CSO Population and Migration Estimates 2010}

\subsection*{2.4.4 Summary}

The discussion in this section shows that there is positive correlation between education and service sector productivity which is relatively more reliant on human capital when compared to manufacturing and agriculture. Furthermore, the findings indicate that education can also indirectly impact service sector productivity through increasing female labour force participation which is particularly important in relation to Ireland and the Mid West Region. Education makes entry into the labour force easier for females, and females are more likely to be employed in the service sector which provides an avenue for their skills and educational attainment. However, empirical evidence shows that the service sector in the Mid West is underperforming which is linked to educational attainment and female labour force participation in the region. Moreover, the region is currently losing its female population to other regions which is draining the region of educated and skilled labour. This is significantly hindering the ability of the region to create economic growth on a long term basis.

\textsuperscript{21} It is a general assumption that males are often considered to be more attached to their careers than females, with females assumed to be more attached to their locality than males (Faggian \textit{et al} 2007). Ravenstein (1885) was the first to suggest that female labour is actually more mobile than male labour with regards to short distances (which would imply across regions within nations). Faggian \textit{et al}’s (2007) empirical work supports Ravenstein’s (1885) hypothesis. While in general males are more likely to be migrants than females, women with third level qualifications have a higher mobility, and are more migrationary than males. This is important for attracting highly-skilled well-educated service workers to a Mid West Region as females are generally employed in services.
2.5 Conclusion

The discussion in this chapter shows that the service sector has a crucial role in regional economic growth. Various ‘myths’ pertaining to the service sector are not valid when empirical evidence is presented, as services contribute to productivity growth, provide high skill and high wage jobs, are more resilient in the current economic recession, and can be traded internationally. However, measuring productivity in the sector is difficult due to the nature of services, and this often results in an underestimation of the contribution of the sector to regional economic performance. Furthermore, there is evidently a lack of research pertaining to service sector in Ireland, particularly at a regional level. This lagging research is influencing the performance of the Mid West’s service sector as there is a lack of understanding of how to enhance this sector. However, this is a two way process and the underdeveloped service sector in the region is undoubtedly contributing to a neglect of research in this area.

Based on the theoretical literature and empirical findings in this Chapter, a relationship between education and services, as well as the interaction of education and female labour force participation in determining service sector productivity has been established for this research. This has considerable implications Irish government policy and for the development of a regional growth model for the Mid West, which has an underdeveloped service sector, is lagging behind the national average in terms of education, skills and female labour force participation. Moreover the region is displaying an inability to retain its female labour force which is linked to its service sector. The discussion has paved the way for the development of the research hypotheses which are presented the following chapter.
Chapter 3
Methodology
3.1 Introduction
From the foregoing literature review some interesting research questions emerge. The Mid West Region is underperforming in terms the service sector, education and female labour force participation. Moreover, there is a lack of an explicit regional growth policy in Ireland which is undoubtedly impacting the performance of the region. Therefore, the objective of this research is to determine the regional policies required in order to facilitate sustainable economic growth in the Mid West, with particular emphasis on labour market dynamics. This section presents the emergent research questions and the method of approach for addressing these questions.

3.2 Research Hypotheses and Questions
This section presents the research questions to emerge from the literature review.

Research Question 1: What factors will promote regional economic growth in the Mid West?

A confluence of the regional growth theories is linked to this research question as it provides the most comprehensive picture of regional economic growth, as economic growth is determined by various factors. One growth theory alone cannot fully explain the dynamics of regional economic growth. While all the theories contribute to our understanding of regional economic growth, they all display limitations as evident from the literature review. The underperformance of the Mid West was briefly considered in Chapter 2, and Irish policymakers should be able to address the issues in the region through the application of a regional growth theory. However, the existing theories vary in relation to their views of the determinants of regional economic growth, and there is no widely accepted theory of regional growth that can be applied to solve the problem in the Mid West, and individually the theories fail to provide a full picture of regional economic growth.

There is currently no explicit regional development policy in Ireland, in the manner of OECD countries such as Sweden, Finland and France. Subsequently, there is an unbalanced growth model that favours Dublin and the East, and is hindering the performance of the Mid West. Therefore, the application of a confluence of the theories by policymakers could provide a dynamic engine of sustainable long term regional growth for region. Empirical evidence supports this, as the OECD (2009b) has found that an integrated approach to regional economic growth has a more profound impact than focusing on one key area for growth.
Technological change has led to a rapid growth of service industries and the knowledge-based economy. As a result, regions that produce information and knowledge are better equipped to compete in that economy. Nonetheless, a region’s capacity to innovate is not its only source of growth. Equally important is its ability to create a well-educated population, to attract and retain talented people, to be well connected to global markets…and a well-functioning labour market.

(OECD 2009b, p.2)

Furthermore, there has been a lack of application of regional growth theory to the Irish government’s approach to regional development, which is considered in this research. Table 3.1 presents the key theories of regional economic growth and the related determinants of economic growth. It is evident that these determinants overlap and therefore, the theories should be viewed as complementary set, particularly in terms of regional policy development.
### Table 3.1: A Confluence of the Regional Growth Theories

<table>
<thead>
<tr>
<th>Regional Growth Theory</th>
<th>Key Growth Determinant</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Economic Geography</td>
<td>Retaining and attracting labour and capital in a region</td>
</tr>
<tr>
<td>Cumulative Causation Theory</td>
<td></td>
</tr>
<tr>
<td>Endogenous Growth Theory</td>
<td>Human Capital / education / skills / knowledge</td>
</tr>
<tr>
<td>Exogenous Growth Theory</td>
<td>Labour supply</td>
</tr>
<tr>
<td>Endogenous Growth Theory</td>
<td></td>
</tr>
<tr>
<td>New Economic Geography</td>
<td></td>
</tr>
<tr>
<td>Stages Theory</td>
<td>An (exporting) service sector</td>
</tr>
<tr>
<td>Exogenous Growth Theory</td>
<td>Innovation and technological progress</td>
</tr>
<tr>
<td>Endogenous Growth Theory</td>
<td></td>
</tr>
<tr>
<td>New Economic Geography</td>
<td></td>
</tr>
<tr>
<td>Export Base Theory</td>
<td>Physical capital investment (enterprise, infrastructure)</td>
</tr>
<tr>
<td>Cumulative Causation Theory</td>
<td></td>
</tr>
<tr>
<td>Centre Periphery Theory</td>
<td></td>
</tr>
<tr>
<td>New Economic Geography</td>
<td></td>
</tr>
<tr>
<td>Endogenous Growth Theory</td>
<td>Exports / trade</td>
</tr>
<tr>
<td>New Economic Geography</td>
<td></td>
</tr>
<tr>
<td>Export Base Theory</td>
<td>Virtuous circle of growth / sustainable long run growth due to increasing returns to scale</td>
</tr>
<tr>
<td>Cumulative Causation Theory</td>
<td></td>
</tr>
<tr>
<td>Centre Periphery Theory</td>
<td></td>
</tr>
<tr>
<td>New Economic Geography</td>
<td></td>
</tr>
<tr>
<td>New Economic Growth Theory</td>
<td>Role for government in influencing economic growth</td>
</tr>
<tr>
<td>Growth Pole Theory</td>
<td></td>
</tr>
<tr>
<td>Endogenous Growth Theory</td>
<td>Entrepreneurship</td>
</tr>
<tr>
<td>New Economic Geography</td>
<td></td>
</tr>
<tr>
<td>Growth Pole Theory</td>
<td></td>
</tr>
<tr>
<td>Exogenous Growth Theory</td>
<td>Population growth</td>
</tr>
<tr>
<td>New Economic Geography</td>
<td>Regional clusters / agglomeration of economic activity / agglomeration economies</td>
</tr>
<tr>
<td>Location Theory</td>
<td></td>
</tr>
<tr>
<td>Central Place Theory</td>
<td></td>
</tr>
<tr>
<td>Cumulative Causation Theory</td>
<td></td>
</tr>
<tr>
<td>Growth Pole Theory</td>
<td></td>
</tr>
<tr>
<td>Exogenous Growth Theory</td>
<td></td>
</tr>
</tbody>
</table>
Research Question 2: Given the underperformance of the region and what are the policy targets and instruments required in order to facilitate sustainable economic growth, with particular emphasis on services, education and female labour force participation?

This relationship between services, education and female labour force participation was established in Chapter 2, and the Mid West is considerably underperforming in terms of these economic indicators, when compared to national and international trends.\(^{22}\)

- Services account for 61 per cent of regional employment compared with 68.5 per cent nationally and 80 per cent in Dublin. The manufacturing share of employment in the Mid West Region, at 18 per cent in Q2 2007, was one of the highest across Irish regions. The stage average was 13.9 per cent for the same period. Construction also accounts for a significant share of regional employment (13.9% in Q2 2007). Forfás (2009a p.6) argues that “[t]his economic structure renders the region particularly vulnerable to current global and national challenges”.

- The Mid West female labour force participation (15 years+) (52.4 per cent in Q2 2009) lags behind the stage average of 54.3 per cent and advanced international economies, including Nordic countries which have female participation rates of over 70 per cent. The productive capacity of the regional economy is not being realised if potential female workers are not participating in the labour force.

- The Mid West (26.5%) is lagging behind the Dublin, Mid East, West and South West regions in relation to the numbers with a 3rd level degree or higher (the state average is 29.1%). This is linked to the ‘brain drain’ from the region. The region is suffering from outward migration, particularly among recent graduates, and skilled female labour, which is reflective of that the type of sectors in the region are not adequately meeting the needs of educated, skilled, and therefore mobile labour.

- The region is the only Irish region to experience higher levels of female migration than male migration of the 25 to 29 year old cohort over the period from 2008 to 2010, which is reflective of the performance of the region’s service sector.

\(^{22}\) Section 2 provides a more detailed analysis of the recent economic performance of the Mid West Region.
There is a strong link between overall economic progress of a region and the extent to which the service sector is developed as it impacts on the ability of the region to retain and attract skilled labour. There is a major growth challenge in the Mid West Region as the unexploited growth potential in services in the region is positively correlated with the underperformance of the region. In the future employment growth in agriculture and manufacturing is not going to be spectacular as less labour is required in these sectors relative to the service sector. Services by their nature are more labour intensive relative to agriculture and manufacturing, and therefore, this is the sector where future employment increases will reside.

Based on theoretical considerations and empirical evidence presented, a sustainable regional growth model can be proposed for the Mid West. Figure 3.1 presents the relationship between education, female labour force participation and the service sector. Both research questions are linked to this model as it incorporates various factors for regional economic growth. The interaction of education and female labour force participation has considerable potential to drive service sector productivity and employment, which in turn influences regional exports, innovation, technological progress, standard of living and the formation of agglomeration economies through retention and attraction of skilled labour, the development of indigenous enterprise and entrepreneurship and attraction of FDI in the Mid West. However, this model requires effective, tailored and integrated regional government policies to stimulate it.
Figure 3.1: Long Term Model of Mid West Regional Growth

Tailored Regional Government Policies

Education
Increase tertiary level educational attainment and high level skills within a region

Increased Female Labour Force Participation

Service Sector Employment & Productivity
(high value added)
Increase in exports, innovation, R&D, technological progress, and knowledge within the region’s service sector

- Educated/skilled labour and enterprise retained in the region
- Growth of indigenous enterprises / SMEs
- Stimulate entrepreneurship in the region and attract entrepreneurs
- FDI / physical capital attracted to the region
- Educated/skilled labour attracted to the region
- Formation of agglomeration economies in a peripheral region and development of a regional cluster
- Increase in regional population / critical mass
- Overall increase regional economic growth on a long term sustainable basis and a move towards the knowledge-based/ ‘smart’ economy

Virtuous Circle of Regional Economic Growth
3.3 Method of Approach

This section provides an overview of the approach to this research. In Section 2 the recent macroeconomic performance of the national economy is examined in order to provide a context for the recent performance of the Mid West Region. In particular, the two inherently different Irish economic booms of the mid to late 1990s and early 2000s are considered in order to determine the factors that will foster sustainable economic growth. There are key lessons to be learned for Irish policymakers from the more recent boom. The recent economic performance of the Mid West Region is presented in this section with particular emphasis on sectors, labour demand and supply.

The majority of the Irish data contained in this study has been obtained from the Central Statistics Office (CSO) sources. The main sources include the 1996, 2002 and 2006 Census of population for demographics and migration data, the National Accounts database for regional GVA, the Quarterly National Household Survey (QNHS) and Labour Force Survey 1988-1997 for employment and labour supply data. A significant proportion of the regional data analysed in Section 2 is unpublished by the CSO and therefore, has lacked detailed analysis until now. This data has considerable implications for enhancing the performance of the Mid West Region, as well as national economic growth, which is dependent on the performance of Irish regions. Throughout this research the Mid West is placed in a regional comparative context. However, one of the limitations of this study is the availability of regional level data. The Organisation for Economic Cooperation and Development’s (OECD) labour and general statistics databases is the main source of international statistics for comparative purposes, particularly in relation to sectors and labour market performance. Data has also been obtained from the International Labour Organisation’s (ILO) labour statistics database. Secondary research for this study is based on a wide range of national and international publications available on the topic. All major theoretical, empirical and case study contributions were consulted.

This research is the first to recommend a growth model for the Mid West. There is also a lack of research on services at the regional level and the relationship between educated female labour in enhancing service sector productivity which is investigated in this study. The

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23 There are 8 administrative regions at NUTS III level in Ireland which are: Border Region, West Region, Midlands Region, Mid East Region, Mid West Region, South East Region, Dublin Region and the South West Region. In 2000 Ireland was designated into two NUTs II level regions for EU Structural Funds; the Border, Midlands and West Region, and the Southern and Eastern Region. The two NUTs II regions comprise the 8 regional authority areas. The Mid West is part of the Southern and Eastern Region.
service sector is arguably underdeveloped in the Mid West Region because of the lack of research and understanding in terms of scope for improvement. This research sheds light on the performance of the region’s sector and provides recommendations for enhancing this. This level of detailed empirical regional evidence is particularly important for Irish policymakers in understanding, designing and implementing tailored regional development policies that are likely to generate the most impact.

Following the economic performance analysis in Section 2, Section 3 considers policy instruments and targets which will address enhancing the performance of the Mid West Region. There is a lack of consideration by Irish policymakers in relation to regional development, especially in the context of the current economic recession at the approach to economic recovery has been undoubtedly ‘national’ or ‘one size fits all’. This is evident in comparison to best practice international case study countries, particularly Sweden, Finland and France, which are presented in this study. Furthermore, there is a lack of application of the regional growth theory to the Irish government’s approach to regional economic development. The policy recommendations are informed by the foregoing recent theoretical developments, the conceptual framework, regional empirical data, and key lessons that can be learned from case study countries. While this research focuses on the Mid West Region, various policy recommendations have implications for all Irish regions.

3.4 Conclusion
From the foregoing discussion the key research questions investigated in this research are as follows:

1. **What factors will promote regional economic growth in the Mid West?**

2. **Given the underperformance of the region and what are the policy targets and instruments required in order to facilitate sustainable economic recovery, with particular emphasis on services, education and female labour force participation?**

Section 2 analyses empirical data in relation to the key research questions, while Section 3 contains a detailed policy analysis and presents key recommendations for creating long run, economic growth in the Mid West.
Section 2

Economic Performance
Introduction

The previous section provided an overview of the literature on regional economic growth and presented some interesting research questions in relation to the Mid West Region. This section analyses the recent economic performance of the Mid West in order to determine the policies required to foster economic recovery on a sustainable basis. Specific emphases is placed on sectoral changes, labour market dynamics and changes in the human capital profile at regional level. The analysis will look at the dynamic changes in these factors, in a regional comparative context, over the period since the late 1980s. As discussed in Section 1 the service sector is imperative for growth of advanced regions, and the Mid West is underperforming in terms of this sector’s contribution to employment and productivity. The performance of the sector is determined by levels of regional human capital and female labour force participation, which are lagging behind in the Mid West. Therefore, this section questions why these growth determinants are underperforming in order to seek the policy responses required to address this. The findings in this section have important implications for Irish policymakers.

In order to provide context for the performance of the Mid West, a brief overview of recent Irish macroeconomic performance is presented. Irish gross national product (GNP) grew spectacularly by 5 per cent to 15 per cent every year from 1991 to 2006. However, this growth stemmed from two very different booms. The strong export-led growth of the Celtic Tiger era from 1993 to 2000 was followed by the second boom in the housing market which was based on credit-led consumer spending, which was financed by net external borrowing. However, it became evident that the second boom was unsustainable and the Irish economy experienced a sharp contraction in 2008. This has important lessons for Irish policymakers.
Chapter 4

An Overview of Recent Irish Macroeconomic Performance
4.1 Introduction

Whatever happened to Ireland?...From basket case to superstar and back again – or almost.

(Kelly 2010, para.1)

The economic growth performance of the Irish economy in the past two decades has been characterised by a sequence of transitions. After all, this is an economy where employment doubled and GNP quadrupled from 1990 to 2007, but by late 2009 GNP had contracted by 17 per cent (Kelly, 2010). Following a major recession in the 1980s, from 1993 to 2006 the economy experienced a remarkable period of economic growth, but this was followed by one of the deepest and fastest contractions experienced by a western economy since the Great Depression. The key to understanding the cause of this downfall was due to Irish economic growth during this period stemming from two very different economic booms. The export-led growth from 1993 to 2000 was followed by a second boom in housing in the early 2000s which was based on credit-led consumer spending that was financed by foreign borrowings (Dineen and Lenihan 2011). The Mid West Region, similar to the Irish economy is faced with severe challenges as very few countries entered into the current recession as poorly as Ireland did. Therefore the following sections consider Ireland’s two inherently different booms and the factors that resulted in the country’s current economic recession. This discussion paves the way for seeking policy changes required for creating long run sustainable economic growth in the Mid West Region. The focus now turns to the first economic boom, as the broad policy stance which helped to foster the initial recovery, in the Irish economy and the Mid West, is particularly important given the current recession.

4.2 The Celtic Tiger Era 1993-2000

Ireland’s transformation is so dazzling…one of the most remarkable economic transformations of recent times: from basket case to ‘emerald tiger’ in ten years.

(The Economist 1997 p.15)

The factors that fuelled the first boom in the 1990s are of particular significance for this research as the economy was rapidly transformed from a failed economic entity in the 1980s. This was evident in both domestic and international economic commentary, and was reinforced by the 1988 Economist survey on Ireland ‘Poorest of the Rich’ which presented a gloomy domestic prognosis for the economy. The Irish economy in the mid to late 1980s was in crisis with stagnant GDP growth, falling employment, rapidly rising unemployment (17% in 1986), low labour force participation rate and outward migration at its highest level since the 1950s. Moreover, at 15 per cent, inflation was extremely high and public finances were in
a state of emergency. However, the government resumed control over the public finances and imposed substantial cuts in current public spending from the period 1987 to 1989 (Tansey 1998). This contributed to the exceptional performance of the Irish economy in the 1990s, which far surpassed growth levels in the OECD. Less than a decade after its analysis of the Irish economy, *The Economist* (1997, p.15) presented the Irish economic transformation as a good example or “Europe’s Shining Light”.

Ireland’s economic transformation during the 1990’s constituted something of a macroeconomist’s ‘vision of utopia’, characterised as it was by high and sustained economic growth, low inflation, a current account balance of payments surplus, falling unemployment, net immigration and a growing budget surplus.

(Dineen and Lenihan 2011, p.3)

Table 4.1 presents the significant progress in the Irish economy over the period 1988-1999.
Table 4.1: Key Indicators of Macroeconomic Performance, 1987-1999

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>GNP (1995 prices) % change</td>
<td>4.4</td>
<td>6.3</td>
<td>7.8</td>
</tr>
<tr>
<td>GDP (1995 prices) % change</td>
<td>4.9</td>
<td>6.4</td>
<td>9.2</td>
</tr>
<tr>
<td>Average GNP per capita (1995 prices) % change</td>
<td>4.5</td>
<td>5.8</td>
<td>6.6</td>
</tr>
<tr>
<td>Population % change</td>
<td>-0.1</td>
<td>0.5</td>
<td>1.1</td>
</tr>
<tr>
<td>Labour Force % change</td>
<td>0.3</td>
<td>2.4</td>
<td>4.7</td>
</tr>
<tr>
<td>Employment % change</td>
<td>1.0</td>
<td>3.3</td>
<td>7.4</td>
</tr>
<tr>
<td>Unemployment rate % change</td>
<td>-3.5</td>
<td>-5.8</td>
<td>-25.5</td>
</tr>
<tr>
<td>Average GNP per person employed (1995 prices) % change</td>
<td>4.0</td>
<td>3.8</td>
<td>3.0</td>
</tr>
<tr>
<td>Economic Dependency ratio</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current Budget Balance/GNP</td>
<td>-5.9</td>
<td>-1.6</td>
<td>5.8</td>
</tr>
<tr>
<td>Exchequer Balance/GNP</td>
<td>-8.9</td>
<td>-2.5</td>
<td>2.0</td>
</tr>
<tr>
<td>National Debt/GDP</td>
<td>106.9</td>
<td>83.6</td>
<td>45.4</td>
</tr>
<tr>
<td>National Debt Service/GDP</td>
<td>8.7</td>
<td>6.8</td>
<td>3.1</td>
</tr>
<tr>
<td>Labour Force Participation rate:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Male</td>
<td>82.1</td>
<td>79.2</td>
<td>80.4</td>
</tr>
<tr>
<td>- Female</td>
<td>42.3</td>
<td>44.5</td>
<td>54.8</td>
</tr>
<tr>
<td>Unemployment rate</td>
<td>16.9</td>
<td>15.1</td>
<td>5.7</td>
</tr>
<tr>
<td>Economic Dependency ratio</td>
<td>2.2</td>
<td>2.1</td>
<td>1.4</td>
</tr>
<tr>
<td>Exports of Goods and Services/GNP (1995 prices)</td>
<td>52.3</td>
<td>67.7</td>
<td>113.7</td>
</tr>
<tr>
<td>Imports of Goods and Services/GNP (1995 prices)</td>
<td>52.9</td>
<td>60.3</td>
<td>96.5</td>
</tr>
</tbody>
</table>

Sources:
- GDP and GNP: CSO National Income and Expenditure - Table 2 - Items 28 and 30 respectively.
- GDP and GNP (1995 prices): CSO National Income and Expenditure - Table 4 - Items 52 and 54 respectively.
- Labour force, employment and unemployment: CSO Quarterly National Household Survey - Table 1 - 2nd Qrt.
- Exports and imports of goods and services (1995 prices): CSO National Income and Expenditure - Table 6 - Items 68 and 69 respectively.

Ireland is a small open economy that has progressively ceded policy-making autonomy to supranational organisations and therefore, Krugman’s (1997) distinction between ‘national’ and ‘regional’ economies is particularly relevant. Krugman (1997) argues that national economies are characterised by their large size, relatively closed nature and relatively fixed endowments of labour, and aggregate demand is predominantly composed of domestic demand. However, the regional economy is characterised by its small size, a high degree of dependence on international trade and, most importantly, by a high degree of labour mobility, that is a labour supply that can readily be augmented with changes in economic growth. If exports collapse regional income will fall and labour will migrate (Barry 1999). The ‘regional boom’ perspective argues that Ireland is a regional economy and the performance of the export base is crucial for economic growth (Barry 2002; Krugman 1997; O’Leary 2003b).
The movements of productivity factors, including labour and capital, have considerable impact on the level of regional GVA (Kraybill 2003). Kraybill (2003) argues that during times of economic upturns, regions in general grow through the attraction of labour, capital and enterprise from other regions. The key determinant of long run output growth in the regional economy is the size of its export base with domestic demand exerting a relatively limited role. Typically, the regional economy will be a location for direct investment from the rest of the world. Ireland’s openness to trade and factor flows with the global economy considerably increased during the 1990s. As illustrated in Figure 4.1, Irish exports amounted to the equivalent of 102 per cent of GNP in 1999. Moreover, when combined Irish imports and exports represented the equivalent of almost 190 per cent of GNP.

**Figure 4.1: Exports and Imports of Goods and Services as a % of GNP at Current Market Prices**

![Chart showing exports and imports as a percentage of GNP from 1985 to 1999.](chart)

*Note: Exports and Imports of Goods and Services exclude factor income flows.*

*Source: CSO*

**Contributors towards Ireland’s Economic Take-Off**

Ireland’s accelerated growth was a result of domestic and external factors. The domestic contributors towards the first economic boom of the 1990s include the growth of human capital, sustained investment in education and training, social partnership agreements and moderate wage increases, improved management of public finances, lower tax rates and lower inflation (O’Connell 1999). The external factors behind the boom include Ireland’s membership of the EU, access to the Single Market and a large multinational presence (O’Connell 1999). Overall, the various policy changes, both domestic and at the EU-level, as well as Irish demographic trends, were superimposed on each other and were self-reinforcing.
It is undoubted that while the latter factors were vital in facilitating an increase in domestic productivity and competitiveness, the rapidity of economic growth could not have been maintained without an increase of the labour supply. The increase in the labour supply was predominantly due to an increase in the female labour force participation (O’Connell 1999), which increased from 34.4 per cent in 1988 to 46.7 per cent in 1999.

The boom in the Irish economy owes a lot to women, who have entered the labour market in large numbers…and the Celtic Tiger has been described as the Celtic Tigress. (Cournède 2006, p.5)

It is increasingly recognised that the policies that first fostered the Irish economic growth performance of the 1990s will be particularly important in the current economic recession. The Economist (2011) article “Irish mist” argues that the Irish government needs to pursue pro-growth policies similar to those of the 1990s. The article states that the main responsibility of policymakers will be “…to sustain the policies that first fostered Ireland’s strong growth” in the Celtic Tiger era which the article states include encouraging higher levels of female labour force participation, attracting FDI and investing in education..

**Exports**

The contribution of exports to Irish GDP increased during the Celtic Tiger era with the volume of Irish exports growing at a rate of 16.5 per cent per annum from 1993 to 2000 (Dineen and Lenihan 2011). The buoyancy of the US economy has a large role to play in this from both the demand and the supply side. In terms of the supply side there was a growing share of US FDI locating in Ireland. On the demand side the strong growth in US imports supported the buoyancy of world trade and provided a large market for Irish exports (Dineen and Lenihan 2011). In the early 2000s the US overtook the UK as Ireland’s main export market. The growth in Irish exports to the EU was important during this period with the area accounting for two-thirds of Irish exports (Dineen and Lenihan, 2011).

**Principal Labour Market Developments**

A remarkable feature of the Irish economic boom during the 1990s was the economy’s thus far undiscovered capacity for creating employment on a sustained basis (Figure 4.2). While the labour force has risen sharply, the acceleration in jobs growth has been even more profound. Estimated total persons at work increased from 1,183,100 in April, 1993 to 1,670,700 in Q2 2000, an increment of 41.2 per cent. Unemployment fell to historically low levels of 3.7 per cent in Q1 2001 which has manifested itself in a consistent narrowing of the gap between the labour force and total employment achieving ‘full employment’. Part-time
employment grew substantially in the 1990s, and almost doubled its share of total employment from 1983 to 1993. Full-time employment also grew at exceptional levels and the incidence of underemployment decreased from 18 per cent in 1992 to 13 per cent in 1997 (O’Connell 1999). The rapid growth in employment transformed the Irish economy from one with major labour surplus to one with major labour shortages. Figure 4.2 presents the rapid rise in labour force and total employed over the period from 1985 to 2000.

**Figure 4.2: Labour force and total employed in Ireland (1985-2000)**

![Graph showing the rapid rise in labour force and total employed from 1985 to 2000](image)

*Note:* ‘International Labour Office’ (ILO) series, there was a discontinuity between April 1997 and Q1 1998 due to the introduction of the *Quarterly National Household Survey*. The broad trends shown though are likely to hold.

*Source:* Labour Market and Social Statistics Division, CSO.

However, during this period the rate of overall labour productivity (GDP per worker) did not increase (Dineen and Lenihan 2011). It was growth in employment rather than growth in the quality of labour that accounted for the rapid rise in productivity. Table 4.2, abbreviated from Kennedy (2001), illustrates the annual average growth rate in employment and the relatively steadfast growth rate of productivity.

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24 Underemployment refers to when part-time workers would prefer a full-time job (O’Connell 1999).
Table 4.2: Average Annual Growth Rates of Real GDP, Population and Employment, Various Periods from 1960 (%)

<table>
<thead>
<tr>
<th>Period</th>
<th>(i) GDP</th>
<th>(ii) Population</th>
<th>(iii) GDP /Cap</th>
<th>(iv) Employment</th>
<th>(v) GDP /Worker</th>
<th>(vi) Employment-Population ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960-1980</td>
<td>4.1</td>
<td>0.9</td>
<td>3.1</td>
<td>0.5</td>
<td>3.5</td>
<td>-0.4</td>
</tr>
<tr>
<td>1980-1993</td>
<td>3.3</td>
<td>0.4</td>
<td>2.9</td>
<td>0.0</td>
<td>3.3</td>
<td>-0.4</td>
</tr>
<tr>
<td>1993-2000</td>
<td>8.3</td>
<td>0.8</td>
<td>7.4</td>
<td>4.7</td>
<td>3.5</td>
<td>3.8</td>
</tr>
</tbody>
</table>


While labour productivity did not increase from 1993 to 1999, capital productivity experienced a substantial acceleration in the growth rate of physical capital productivity when compared to previous periods (Kennedy 2001). However, this improvement in capital productivity was confined to industry. Therefore, industry accounted for the acceleration of growth of total factor productivity which is output per unit of labour or capital input (Dineen and Lenihan 2011).

**Human Capital**

During the 1990s the average annual growth rates of education per worker and its (weighted) contribution to growth in output decreased (Fitzgerald and Kearney 2000). During the first Irish economic boom there was no acceleration in the growth of overall labour productivity as measured by GDP per worker. The increase in the growth in output was due to an acceleration in the growth of employment as capital productivity increased from 1993 to 2000 (Kennedy 2001). Dineen and Lenihan (2011, p.9) highlight that “…the outstanding feature of the Celtic Tiger was the increased utilization of labour rather than the increase in its quality”. However, human capital has a much greater role than portrayed in the growth accounting framework as in addition to having a supply side contribution human capital can also have a role in attracting foreign direct investment to a country (Dineen and Lenihan 2011).

**Sectoral Contribution**

Figure 4.3 outlines trends in the composition of employment in Ireland for the period 1985-2000. The declining contribution of agriculture is as notable as the significant rise in services employment. Service sector was the largest contributor to overall employment increases (absolute change) from 1993 and 2000. Of the 488,000 net jobs created between 1993 and 2000, 346,000 were in the service sector (Dineen and Lenihan 2011). One of the major
factors behind the first boom was the significant rise of the service sector which was a major contributor to the overall increase in employment during the period 1993 to 2000 as it created the largest number of jobs.

Figure 4.3: Decomposition of the total employed in Ireland (1985-2000)

Table 4.3 (abbreviated from Kennedy 2001) shows that there was no acceleration in the growth of labour productivity in agriculture, industry or services during the Celtic Tiger era.

Table 4.3: Sectoral Growth Rates (% p.a), 1980-2000

<table>
<thead>
<tr>
<th></th>
<th>GDP</th>
<th>Employment</th>
<th>GDP/Worker</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Agriculture</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1980-1993</td>
<td>2.8</td>
<td>-2.8</td>
<td>5.7</td>
</tr>
<tr>
<td>1993-2000</td>
<td>0.3</td>
<td>-2.1</td>
<td>2.5</td>
</tr>
<tr>
<td><strong>Industry</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1980-1993</td>
<td>4.7</td>
<td>-1.3</td>
<td>6.1</td>
</tr>
<tr>
<td>1993-2000</td>
<td>11.9</td>
<td>5.9</td>
<td>5.6</td>
</tr>
<tr>
<td><strong>Services</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1980-1993</td>
<td>2.3</td>
<td>1.5</td>
<td>0.8</td>
</tr>
<tr>
<td>1993-2000</td>
<td>6.9</td>
<td>5.3</td>
<td>1.6</td>
</tr>
</tbody>
</table>


While the service sector was a major contributor to employment during this boom, in terms of relative growth, industry was the leader in terms of output and employment. However, as
discussed in Chapter 2 the data for services are problematic because of the difficulties of measuring real output growth in the sector, and as the distinction between services and industry is increasingly ‘blurring’. The following section considers the second Irish economic boom from 2001 to 2006 and the factors that fuelled this growth.

4.3 The Second Irish Economic Boom 2001-2006

Until about 2000, the growth had been on a secure export-led basis, underpinned by wage restraint. However, from about 2000 the character of the growth changed: a property price and construction bubble took hold.

(Honohan 2009, abstract)

The Irish economy continued to grow in the early 2000s. From 1988 to 2007, real GDP grew on average by 6 per cent per annum (Dineen and Lenihan, 2011). “After almost two decades of rapid growth, Ireland was at the frontier of economic prosperity” (Dineen and Lenihan 2011, p.12). However, from 2001 the sources of Irish economic growth changed dramatically (Honohan, 2009). The export-driven growth of the 1990s had been replaced by an unsustainable property price and construction boom. This was based on credit-driven consumer led growth which was supported by foreign borrowings from the banks that provided loans to households. The root of the problem was that the property bubble relied on the international inter-bank market, and foreign borrowings by Irish banks increased from 10 per cent in 2003 to over 60 per cent in early 2008 (Dineen and Lenihan, 2011).

Ireland went from getting about 5% of its national income from house building in the 1990s – the usual level for a developed economy – to 15% at the peak of the boom in 2006–2007, with another 6% coming from other construction.

Kelly (2010, para.3)

During this period Ireland experienced a steep decline in competitiveness as the domestic-led demand ‘drove up’ wages and prices in the economy. Furthermore, the consumer boom resulted in a deteriorating trade balance with imports rising significantly. These negative impacts were not reflected on the level of aggregate unemployment while the boom continued (Dineen and Lenihan, 2011). Dineen and Lenihan (2011) argue that between the period 2001 and 2006 that the growth of the property market disguised problems in the export sector, and furthermore, they argue that if the construction sector is subtracted from national output then Ireland was actually in recession from 2001. Figure 4.4 presents the percentage change year on year in the volume of Irish GDP from 1987 to 2009.
By 2007 Ireland was in an extremely unfavourable position heading into the global downturn. However, Dineen and Lenihan (2011) argue that the collapse of the construction and property boom, which resulted in the sharp decline in property prices, a loss of competitiveness in terms of wages and a near collapse of the Irish banking system, would have led to a recession even if the global recession did not occur. However, the banking system would have been better positioned to survive this (Dineen and Lenihan, 2011). Overall, “[t]he second boom offers little by way of positive guidance to policymakers, except as hard lessons to be learned” (Dineen and Lenihan 2011, p.2).

By Q4 2010 the national unemployment rate was over 14 per cent, substantially higher than the ‘full employment’ rate of 4 per cent experienced in 2000. Currently, the Irish economy is faced with severe challenges including ongoing fiscal and banking problems. This has considerable consequences for the Irish regions, as in the future there will be no great dispersion of funds for infrastructure or other investments. Therefore, it is a particularly bleak landscape in terms of regional funding from government. The overall lesson in terms of this chapter is that while on the surface Ireland had phenomenal growth from 1990 to 2007, it was based on two very different growth models. Therefore, the overriding lesson is the efficacy of the export-led growth model which is sustainable as it is based on competitiveness, education, productivity, FDI, innovation and entrepreneurship. The second boom was based on net borrowings financed from abroad, to fuel a construction bubble that was always going to collapse.
4.4 Conclusion

It is evident from the discussion in this chapter that Ireland experienced two very different economic booms over the period from 1993 to 2006. The first boom of the Celtic Tiger era in the 1990s was predominantly export-led. Data analysed shows that growth in productivity during this era was driven by increases in employment rather than increases in the quality of labour. However, it is important that future labour productivity growth is driven by quality as well as increases in employment in order to facilitate sustainable economic growth. The second Irish economic boom, which was reliant on a domestic-led property bubble that was fuelled by foreign borrowings, was clearly unsustainable as the Irish economy had entered into a recession by 2008. The discussion shows that as Ireland is considered to be a ‘regional economy’ it is particularly reliant on its export base rather than the domestic economy for economic growth. Therefore, the basic policy recommendation is quite straightforward - to promote a model of export-led growth as the only means for long run sustainable economic growth in Ireland and the Mid West Region. This has significant implications for the policy discussion in Section 3 which considers industrial/enterprise policy in terms of facilitating export-led growth. The following chapters analyse empirical evidence in relation to the economic performance of the Mid West Region with particular emphasis on sectoral performance and labour market dynamics.
Chapter 5

Mid West Regional Economic Performance and Labour Demand
5.1 Introduction
This chapter presents evidence that the Mid West is underperforming as a region, particularly in terms of the service sector’s contribution to employment and productivity relative to other Irish regions and international trends. The aim of this chapter is to consider the performance of the service sector in recent years and to explore why the sector is underdeveloped in the region. The levels of skills within the Mid West service sector is considered as this has considerable implications for the sector’s productivity.

Entrepreneurship in the Mid West Region is analysed as with the fall off of the multinational sector, indigenous enterprise will be increasingly important for future regional economic growth, and entrepreneurship forms a key part of this. It is particularly important for providing an alternative employment option in the current economic recession while *inter alia* creating employment. Entrepreneurship by gender at the regional level is considered, as this is another means of encouraging female labour force participation.

Mid West employment and unemployment trends in recent years are presented and female employment in the region is characterised. The increase in female employment was particularly important in driving economic growth during the 1990s as it ensured that any increases in demand were not limited by labour supply. However, it is evident that its full potential in the Mid West was never realised even during the recent economic booms. The sectoral composition and nature of female employment is explored in order to determine the sectors that females are employed in. The nature of female employment is the region is also presented with specific emphasis on part-time employment as this facilitates female participation in the labour force. There is significant latent potential in the female labour supply in the Mid West Region which could have significant implications for the future performance of the region if this is realised.

5.2 Economic Sectors
In this section the recent employment and productivity contributions of various sectors, namely agriculture, manufacturing and services, to Mid West economic growth are analysed. The dynamics of these contributions since the mid-1990s and their potential contribution to future long term growth is examined. Similar to international and national trends, the sectoral contributions to the Mid West economy have changed significantly since the 1990s. Agriculture has been in continuous decline in recent decades. The growth of manufacturing was a significant source of employment and productivity in the 1990s, however the
contribution of this sector has declined in recent years. Subsequently, economic growth in recent years has predominantly been a result of growth in the services and construction sectors. The Mid West reflects the wider national trends of the two very different economic booms as discussed in the previous chapter. The trends in the construction sector were not sustainable due to a predominant reliance on credit-led domestic demand, and consequently the region’s construction sector has experienced a major decline in recent years.

5.2.1 Sectoral Employment

Structural changes in the Mid West economy over recent decades are reflected in changes in the composition of employment by sector, which is a useful indicator of the importance of various sectors for the economy. As expected of a more advanced economy, it is the services sector where an unprecedented level of employment was created in the late 1990s and early 2000s, reaching a peak in 2007.\(^{25}\) Subsequently, the contribution of agriculture and manufacturing to employment has declined in recent years.

The deterioration of various sectors has had a considerable impact on the contribution of the different sectors to the region’s employment. Agriculture’s contribution to Mid West employment declined from 14.8 per cent in 1994 to 7.6 per cent in 2008. The employment contribution of the regions’ manufacturing sector declined slightly from 32.2 per cent in 1994 to 31.3 per cent in 2008. The small decline in the manufacturing sector is largely due to the boom in the construction industry until 2007 which is included in this sector. Despite these trends, the region continues to have a higher proportion of employment in manufacturing and agriculture than the national average. This has considerable implications for future employment growth potential in the region as these sectors are not experiencing major employment growth either nationally or internationally. The service sector was the only sector in the Mid West to experience an increase in its contribution to employment, which increased from 53 per cent in 1994 to 61 per cent in 2008. Figure 5.1 shows the changing contribution of the various sectors to region’s employment over the period 1994 to 2008. The diminishing agricultural sector is as noticeable as the inexorable rise in services sector employment.

\(^{25}\) There are a number of reasons for the growth of services including: the higher income elasticity for services than goods; changes in technology; new tradability of services; the growth of services as intermediate industries; outsourcing of services; the requirements for human capital; and the resilience of the sector to cyclical fluctuations.
The QNHS shows that in 2009 the Mid West Region had a higher proportion employed (25%) in the manufacturing sector than the national average (21.3%). Consequently, the service sector in the region, though growing, represents a smaller proportion of the Mid West’s economic activity when compared to the national average. As the manufacturing sector is facing increasing levels of competition from lower cost countries in recent years (Forfás, 2009a), the region is more vulnerable to economic shocks, as the region is relatively more reliant on ‘footloose’ manufacturing.

When examining a breakdown of the sectors, close to a third of the increase in employment in the Mid West over the period 1998 to 2007 is due to public sector services activity, which accounts for a considerable proportion of non-market services. While non-market services employment now represents a reasonable proportion of the labour market, the growth has lagged behind the phenomenal growth of the market services sector.\(^{26}\) This is a key growth sector that needs to be enhanced in the region.

The construction sector accounted for 29 per cent of the increase during 1998 to 2007. The remainder of growth in employment is predominantly due to growth in the broader local and

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\(^{26}\) This sector includes, for example, real estate and intermediary business services such as marketing, HR and accounting.
internationally traded services activity. During this period, retail and distribution trade increased by 16 per cent. Employment in financial and other business services, such as accountants, solicitors, auctioneers and internationally traded services experienced an increase of 15 per cent (Forfás, 2009a). In comparison to national trends, construction, wholesale, retail and transport, storage and communications sectors contributed more to employment growth in the Mid West Region. The financial, business and other services, and the hotel and restaurant trade contributed to more growth nationally than in the region (Forfás, 2009a). Figure 5.2 illustrates how varying rates of employment have changed the sectoral composition of the Mid West Region’s employment over the period 1998 to 2007.

**Figure 5.2: Distribution of Employment in the Mid-West by Sector, 1998 & 2007 (%)**

![Figure 5.2 showing sectoral employment distribution](image)

Source: CSO, QNHS, Q2 1998 – Q2 2007

However, since 2007 there has been a steep decline in the construction sector in the region, which has followed in line with national trends. Similar to this, manufacturing has recorded a decline since 2007 and currently accounts for 16.9 per cent of employment in the region. Overall, the service sector has absorbed considerable employment in the region and it is anticipated that this will continue.

**Comparative Regional and International Trends**

While Ireland experienced rapid growth in the service sector employment which far surpassed the OECD average in previous years, Ireland continues to lag slightly behind the OECD average and considerably behind the best performing OECD countries in terms of employment created by the services sector. The level services sector employment nationally is
lower than what would be expected considering the level of Ireland’s economic development until recent years. Employment in the Irish service sector is 72.6 per cent which is slightly lower than the OECD average of 73 per cent (Table 5.1). Moreover, in counties such as the UK (79.3%), US (80.9%), the Netherlands (80.9%) and Sweden (77.7%) the service sector accounts for a considerably larger proportion of employment than in Ireland (Table 5.1). These findings show that there is latent potential for Ireland to enhance the contribution of services to employment.

Table 5.1: Sectoral Employment (%) in Selected OECD Countries 2009

<table>
<thead>
<tr>
<th>Country</th>
<th>Services</th>
<th>Industry</th>
<th>Agriculture</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>80.9</td>
<td>17.6</td>
<td>1.5</td>
</tr>
<tr>
<td>Netherlands</td>
<td>80.9</td>
<td>16.6</td>
<td>2.5</td>
</tr>
<tr>
<td>UK</td>
<td>79.3</td>
<td>19.6</td>
<td>1.1</td>
</tr>
<tr>
<td>Sweden</td>
<td>77.7</td>
<td>20.1</td>
<td>2.2</td>
</tr>
<tr>
<td>Canada</td>
<td>77.4</td>
<td>20.3</td>
<td>2.3</td>
</tr>
<tr>
<td>Norway</td>
<td>77.1</td>
<td>20.2</td>
<td>2.7</td>
</tr>
<tr>
<td>Australia</td>
<td>75.6</td>
<td>21.0</td>
<td>3.3</td>
</tr>
<tr>
<td>OECD Average</td>
<td>73.0</td>
<td>22.8</td>
<td>4.3</td>
</tr>
<tr>
<td>Ireland</td>
<td>72.6</td>
<td>22.1</td>
<td>5.3</td>
</tr>
<tr>
<td>New Zealand</td>
<td>72.4</td>
<td>20.8</td>
<td>6.8</td>
</tr>
<tr>
<td>Finland</td>
<td>71.5</td>
<td>23.9</td>
<td>4.6</td>
</tr>
</tbody>
</table>

*Source: OECD Labour Force Statistics Database*

While Ireland has unrealised potential in terms of the service’s sector contribution to employment, the Mid West (61%) has considerable scope for increase. Dublin (80%), Mid East (67%), South West (66%) and West (63%) are all outperforming the Mid West in terms of service sector employment. Although services employment in the region has grown from a level of 53 per cent in 1994, the region has the second lowest percentage employed in services, after the South East (60%), across the Irish regions (Figure 5.4). Other Irish regions, namely the West, Border, Midlands and South East, have surpassed the Mid West in terms of the contribution of services to employment over the period 1994 to 2008. Figure 5.3 places the Mid West in a regional comparative perspective, and shows the region’s services employment growth from 1994 to 2008.
These findings indicate that services policy in the Mid West is likely to have been comparatively neglected when compared to industrial policy. Data in relation to agency-supported employment in the Mid West show that industrial policy in the region has been predisposed to manufacturing. For example ICT services as a percentage of ICT sector employment in the region has grown from 19 per cent in 1998 to 30 per cent in 2008. This compares to 69 percent nationally, and is the second lowest share of ICT services as a proportion of total ICT sector employment for any region except the Mid East. Agency-assisted employment in business, ICT and financial services in the region it is extremely low relative to manufacturing (Figure 5.4).\[^{27}\] As illustrated in Figure 5.4 there is a high dependence on manufacturing in terms of agency-assisted employment in the region in particular ICT hardware. While service companies have been attracted to the region, it is not the predominant focus of government industrial policy for the Mid West.\[^{28}\]

\[^{27}\] The Forfás Annual Employment Survey captures all those companies receiving agency assistance from IDA, Enterprise Ireland, Údarás na Gaeltachta and Shannon Development, and includes both manufacturing and services.

\[^{28}\] Section 3 provides a detailed policy discussion in relation to industrial/enterprise policy.
5.2.2 Service Sector Skills

This section considers the skills levels in the region’s service sector as this has significant implications for the contribution of the sector to sustainable regional economic recovery. The skills level within the service sector in the Mid West in comparison to Dublin and the national average presents an interesting picture.\(^{29}\) Although the service sector is a significant source of employment in the Mid West, the region is falling behind Dublin and the national average in terms of the level of skills within this sector (Table 5.2). Despite the growth in services in the Mid West, there has not been considerable growth in high skilled services in the region in the last decade. Over the period 2004 to 2009 the percentage share of Managers and Administrators accounting for total services employment in the Mid West declined considerably from 14.8 per cent to 11.7 per cent, while Dublin and the national average actually experienced increases of 1.7 and 0.4 percentage points respectively for the same period. The proportion of Managers and Administrations has declined in the Mid West. However, the percentage share of the Professional category increased by 2.2 percentage points during the same period which was higher than both the increases in Dublin and the state which were 1.0 and 1.6 percentage points respectively (Table 5.2). The Clerical and Secretarial skills category increased in the Mid West from 13.6 per cent of total services employment in 2004 to 15.2 per cent in 2009, whereas this category experienced a decline

\(^{29}\) Dublin is considered in this analysis as the service sector is the largest contributor to employment in Dublin and it is the best performing Irish region.
both nationally and in Dublin. These findings emphasise that jobs created in the Mid West’s service sector during the 5 year period were largely lower skilled occupations.

The Mid West has a much higher proportion of people employed in final demand services such as sales and personal services, which are considered to be less productive than intermediate services. This category experienced the highest percentage (3.9 percentage points) increase when compared with other categories in the region over the period 2004 to 2009. Dublin and the State experienced increases of 1.0 and 1.5 percentage points respectively (Table 5.2). These findings show that as the Mid West is lagging behind in terms of employment in high-skill services, which indicates that there is considerable scope for improvement. It is crucial to increase the skills level within the service sector as the empirical evidence presented in the literature review shows that the level of human capital significantly influences productivity within this sector. It will be high-skilled, quality service sector jobs, such as R&D and business services, that will be a crucial factor in driving future knowledge-based economy.

Table 5.2: Skills of Persons in Services Employment 2009 (%)

<table>
<thead>
<tr>
<th>Services</th>
<th>Mid West</th>
<th></th>
<th>Dublin</th>
<th></th>
<th>State</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Managers and Administrators</td>
<td>14.8</td>
<td>11.7</td>
<td>15.0</td>
<td>16.7</td>
<td>13.8</td>
<td>14.2</td>
</tr>
<tr>
<td>Professional</td>
<td>13.2</td>
<td>15.4</td>
<td>15.8</td>
<td>16.8</td>
<td>14.2</td>
<td>15.8</td>
</tr>
<tr>
<td>Associate Professional and Technical</td>
<td>10.4</td>
<td>11.3</td>
<td>12.1</td>
<td>12</td>
<td>11.3</td>
<td>12.1</td>
</tr>
<tr>
<td>Clerical and Secretarial</td>
<td>13.6</td>
<td>15.2</td>
<td>17.2</td>
<td>16.8</td>
<td>15.4</td>
<td>15.2</td>
</tr>
<tr>
<td>Craft and Related</td>
<td>5.0</td>
<td>3.9</td>
<td>3.5</td>
<td>3.3</td>
<td>4.6</td>
<td>3.9</td>
</tr>
<tr>
<td>Personal and Protective Service</td>
<td>14.5</td>
<td>18.4</td>
<td>12.6</td>
<td>13.6</td>
<td>15.1</td>
<td>16.6</td>
</tr>
<tr>
<td>Sales</td>
<td>12.5</td>
<td>12.1</td>
<td>10.1</td>
<td>9.8</td>
<td>11.5</td>
<td>10.9</td>
</tr>
<tr>
<td>Plant and Machine Operatives</td>
<td>6.6</td>
<td>4.1</td>
<td>5.2</td>
<td>4.8</td>
<td>5.6</td>
<td>4.6</td>
</tr>
<tr>
<td>Other</td>
<td>9.3</td>
<td>7.9</td>
<td>8.5</td>
<td>6.2</td>
<td>8.5</td>
<td>6.8</td>
</tr>
</tbody>
</table>

Source: Derived from CSO QNHS special data run for Q4 2004 and Q4 2009

The key finding of the analysis in this section is that Mid West services employment is concentrated in relatively in low skills occupations. Furthermore, the share of lower skills occupations in the service sector has experienced a considerable increase in the region in recent years, while the Managerial and Administrators category has declined significantly. This has major implications for the contribution of the service sector to regional GVA which is discussed in the following section.
5.2.3 Sectoral Contributions to Productivity

In line with its increasing contribution to Mid West employment, the services sector contribution to GVA increased substantially over the period 1997 to 2007 with the service sector accounting for 58.2 per cent of GVA in 2007, compared with 39.3 per cent and 2.5 per cent for manufacturing, building and construction combined, and agriculture, forestry and fishing respectively (CSO 2010b). This compares with the national average of 65 per cent for services, 33.4 per cent for manufacturing, building and construction, and 1.5 per cent for agriculture, forestry and fishing. Figure 5.5 presents the changing contributions of the different economic sectors to Mid West GVA over the period from 2000 to 2007. The contribution of services to the region’s GVA is strongly correlated with the low skilled services occupations in the region and as a result, the GVA contribution of services, which is determined by skills, is negatively affected.

Figure 5.5: Mid West Sectoral Proportions of GVA 2000-2007 (%)

The Mid West accounts for 6.4 per cent of services productivity in Ireland. This is the second lowest across the Irish regions. Consequently, the region’s contribution to agriculture (11.3%) and manufacturing (8.4%) accounts for a higher percentage of the national totals in each of the sectors (Table 5.3).

“Gross Value Added (GVA) is a key economic measure of the value added generated by the production of goods and services within a region” (CSO 2008b, p.88). GVA is the most appropriate output indicator available at a regional level. GVA (at basic prices) is Gross Domestic Product (GDP) less taxes plus product subsidies. Distributing product taxes, such as VAT and excise duties, between regions can distort the comparisons of the amount of value added that is generated in each region (CSO 2008b). Therefore, GVA is the standard measure used for regions instead of GDP.
Table 5.3: GVA by Year, Region and Statistic, across regions, 2007

<table>
<thead>
<tr>
<th>Region</th>
<th>Agriculture, Forestry and Fishing (%)</th>
<th>Manufacturing, Building and Construction (%)</th>
<th>Market and Non Market Services (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Border</td>
<td>15.1</td>
<td>8.3</td>
<td>7.3</td>
</tr>
<tr>
<td>Midland</td>
<td>6.4</td>
<td>3.8</td>
<td>3.9</td>
</tr>
<tr>
<td>West</td>
<td>9.5</td>
<td>6.9</td>
<td>6.7</td>
</tr>
<tr>
<td>Dublin</td>
<td>3.3</td>
<td>25.6</td>
<td>47.3</td>
</tr>
<tr>
<td>Mid-East</td>
<td>10.0</td>
<td>11.5</td>
<td>7.6</td>
</tr>
<tr>
<td>Mid-West</td>
<td>11.3</td>
<td>8.4</td>
<td>6.4</td>
</tr>
<tr>
<td>South-East</td>
<td>20.5</td>
<td>9.1</td>
<td>7.2</td>
</tr>
<tr>
<td>South-West</td>
<td>23.8</td>
<td>26.4</td>
<td>13.6</td>
</tr>
<tr>
<td>State</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: CSO Regional Accounts 2007

Figure 5.6 shows the changing contributions of the services sector to GVA across the Irish regions for 2000 and 2007, and clearly illustrates that the Mid West (58.2%) is currently lagging behind the national average. Moreover, Ireland (65%) is falling behind the OECD average as the services sector now accounts for approximately 70 per cent of value added in OECD economies and furthermore, it is continuing to grow (Wölfli, 2005). In the US (76.9%), UK (76.1%), the Netherlands (72.8%) and Sweden (70.4%) the services sector share of GVA is considerably higher than Ireland and the Mid West. These data show that the service sector is the dominant sector in terms of GVA in advanced economies internationally.

In order for the Mid West to facilitate long term economic recovery and participate in the knowledge-based economy the region needs to increase skills and high value-added employment within the service sector to enhance productivity. If policymakers fail to address this, the underperformance of the region’s service sector will significantly hinder the ability of the region to compete in the future.
5.2.4 Summary
The analysis in this section shows that the contribution of the services sector to employment and GVA, which has increased since the 1990s, paralleled the decline in the contribution of agriculture and manufacturing to employment and GVA. However, the findings also illustrate that the Mid West’s services sector contributes to relatively less employment and GVA. This is predominantly due to government policy being predisposed to manufacturing in the region, the concentration of low skills within the region’s service sector, and the growth of low value added service occupations in the region. There is a strong correlation between the low skills in the region and the low contribution of services to regional GVA, as the concentration in the lower end of the production process diminishes the contribution of the service sector to GVA. The analysis highlights that the region is relatively more reliant on manufacturing and construction sectors. Overall, the findings in this section show that advanced regions and countries have a large proportion of employment accounted for by services, and that there is considerable scope for enhancing the performance of the service sector to stimulate economic growth both at national level and in the Mid West Region. This has major implications and highlights that Irish policymakers should promote the region’s service sector to facilitate sustainable economic recovery in the Mid West. Moreover, it illustrates the need for tailored regional policies in order to address the underperformance of the region’s service sector.

5.3 Entrepreneurship
This section analyses entrepreneurial activity in the Mid West Region relative to other Irish regions as entrepreneurship is considered to have a key role in regional development and is a
considerable factor for enhancing regional productivity and reducing regional disadvantage (Fitzsimons and O’Gorman 2008; Acs and Szerb 2007; Audrestch 2005; Audrestch and Keilback 2004; Wenekers and Thurik 1999; Acs and Audretsch 1988).\textsuperscript{31} As many economies internationally are currently in recession, governments are looking to entrepreneurship to act as an engine for future economic growth (Dineen and Lenihan, 2011). Moreover, entrepreneurship is increasingly seen as an alternative employment option in the current economic recession while it also generates further employment (GEM, 2009). Indigenous industry is becoming increasingly important for employment creation, as FDI employment has been shown to be particularly uncertain in the current economic downturn, and entrepreneurship forms a key part of this. In addition Bogenhold and Fachinger (2008) found that the increase in entrepreneurship or self-employed ‘knowledge-workers’ strongly correlates with the rise of the service sector. Acs (2007, p.7) argues that “service firms provide more opportunities for entrepreneurship”. However, entrepreneurship, in relation to a number of key indicators, is underperforming in the Mid West. The Global Entrepreneurship Monitor (GEM) 2008 for Ireland presents a regional breakdown which shows that:\textsuperscript{32}

The rate of nascent (4.3%) and new firm entrepreneurs (3.5%) in the Mid West are both below the average across all regions (GEM 2009, p.47)

The report emphasises that the rate of total early stage entrepreneurial action in the region is especially low at 7.2 per cent (GEM 2009). The GEM (2009) found that the regions with higher population have greater numbers of entrepreneurs. Therefore the inability of the Mid West to retain and grow its population relative to other Irish regions is therefore considerably impacting the levels of regional entrepreneurship. Furthermore, the region is underperforming in terms of tertiary level education and innovation capacity and performance which are undoubtedly impacting the region’s entrepreneurship performance.\textsuperscript{33} It was also found that the level of informal investment was lowest in the Mid West (1.4%) compared to levels of 3.2 per cent and 3.1 per cent in the West and South West respectively (GEM 2009).\textsuperscript{34} This also impacts the level of entrepreneurship in the region. As entrepreneurship and the performance of the service sector have been found to be positively correlated (Bogenhold and Fachinger 2008; Acs 2007) the underperformance of the region’s

\textsuperscript{31} The Global Entrepreneurship Monitor 2008 emphasises that entrepreneurship has many benefits for the economy including stimulating competitiveness, employment creation and levels of innovation.

\textsuperscript{32} From 2004 to 2008 the rate at which entrepreneurs were starting businesses in Ireland was 4.3 per cent, which was significantly above the OECD (3.3%) and EU (2.7%) averages (GEM 2009).

\textsuperscript{33} This underperformance of these growth indicators is considered in detail in Chapter 6.

\textsuperscript{34} Informal investors are those who have invested another person’s business within the previous three years (GEM, 2009).
service sector is another factor which is contributing to the low levels of entrepreneurship in the region, particularly among females, as the service sector is an avenue for their skills.

Table 5.4 presents a breakdown of entrepreneurial activity by region.

**Table 5.4: Entrepreneurial Activity by Region, 2004-2008**

<table>
<thead>
<tr>
<th>Region</th>
<th>Nascent Entrepreneurs % of all adults</th>
<th>New Firm Entrepreneurs % of all adults</th>
<th>Early Stage Entrepreneurs % of all adults</th>
<th>Informal investment activity % of all adults</th>
</tr>
</thead>
<tbody>
<tr>
<td>Border</td>
<td>5.0</td>
<td>3.1</td>
<td>7.9</td>
<td>2.0</td>
</tr>
<tr>
<td>Dublin</td>
<td>3.8</td>
<td>3.6</td>
<td>7.2</td>
<td>2.3</td>
</tr>
<tr>
<td>Mid East</td>
<td>5.8</td>
<td>4.0</td>
<td>9.5</td>
<td>2.4</td>
</tr>
<tr>
<td>Midlands</td>
<td>5.7</td>
<td>3.9</td>
<td>9.1</td>
<td>2.7</td>
</tr>
<tr>
<td><strong>Mid West</strong></td>
<td><strong>4.3</strong></td>
<td><strong>3.5</strong></td>
<td><strong>7.2</strong></td>
<td><strong>1.4</strong></td>
</tr>
<tr>
<td>South East</td>
<td>5.1</td>
<td>6.1</td>
<td>10.7</td>
<td>2.0</td>
</tr>
<tr>
<td>South West</td>
<td>4.1</td>
<td>3.3</td>
<td>7.2</td>
<td>3.1</td>
</tr>
<tr>
<td>West</td>
<td>5.4</td>
<td>4.9</td>
<td>10.0</td>
<td>3.2</td>
</tr>
<tr>
<td><strong>State (2008)</strong></td>
<td><strong>4.4</strong></td>
<td><strong>3.9</strong></td>
<td><strong>8.1</strong></td>
<td><strong>2.8</strong></td>
</tr>
</tbody>
</table>

*Source: GEM 2009*

5.3.1 Entrepreneurship by Gender

This section considers entrepreneurship in the Mid West region relative to other Irish regions. The GEM (2009) shows that similar to other countries internationally Ireland has a higher level of male than female entrepreneurs. The regional gender breakdown is of concern for the Mid West Region.

The rate at which women in the Mid-West engage in early stage entrepreneurial activity (3.2%) is the lowest across all the regions, with men in the region more than three and a half times (3.6:1) more likely to be nascent or new firm entrepreneurs (GEM 2009, p.47)

The Mid West is experiencing the largest gender divide for early stage entrepreneurs among all Irish regions (GEM 2009). In comparison the South West and the Midland regions have ratios of 1.5:1 in terms of male to female entrepreneurs (Table 5.5). This is interesting as the Mid West is the only region to have more females than males (aged 15-29) migrating in over the period from 2008 to 2010, as discussed in Chapter 2. Those females emigrating from the Mid West Region are likely to be those with high levels of educational attainment and skills and therefore higher mobility. Subsequently, the Mid West Region is losing its potential female entrepreneurs through interregional and international migration.
### Table 5.5: Ireland’s Early Stage Entrepreneurial Activity by Gender by Region, 2004-2008

<table>
<thead>
<tr>
<th>Region</th>
<th>Early stage entrepreneurs % of all adults</th>
<th>Male early stage entrepreneurs % of all adults</th>
<th>Women early stage entrepreneurs % of all adults</th>
<th>Rates as a ratio (males: females)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Border</td>
<td>7.9</td>
<td>10.3</td>
<td>5.4</td>
<td>1.9:1</td>
</tr>
<tr>
<td>Dublin</td>
<td>7.2</td>
<td>11.4</td>
<td>3.3</td>
<td>3.5:1</td>
</tr>
<tr>
<td>Mid East</td>
<td>9.5</td>
<td>14.4</td>
<td>4.7</td>
<td>3.1:1</td>
</tr>
<tr>
<td>Midlands</td>
<td>9.1</td>
<td>11.0</td>
<td>7.2</td>
<td>1.5:1</td>
</tr>
<tr>
<td><strong>Mid West</strong></td>
<td><strong>7.2</strong></td>
<td><strong>11.6</strong></td>
<td><strong>3.2</strong></td>
<td><strong>3.6:1</strong></td>
</tr>
<tr>
<td>South East</td>
<td>10.7</td>
<td>15.5</td>
<td>6.1</td>
<td>2.5:1</td>
</tr>
<tr>
<td>South West</td>
<td>7.2</td>
<td>8.6</td>
<td>5.7</td>
<td>1.5:1</td>
</tr>
<tr>
<td>West</td>
<td>10.0</td>
<td>13.2</td>
<td>6.5</td>
<td>2.0:1</td>
</tr>
</tbody>
</table>

Source: GEM 2009

The ratio of male to female established entrepreneurs nationally has increased from 2004 (1.7:1) to 2008 (2.4:1). Therefore, the effectiveness of government policy in promoting female entrepreneurship in recent years is questionable. There is a need to maintain the level of male entrepreneurship while at the same time increasing the level of female entrepreneurship in the region. The GEM (2009) argues that the focus should not only be on increasing female entrepreneurs but rather increasing the number than are innovative and on those that will focus on international markets in the medium term.

With regards to internationalisation, female entrepreneurs in Ireland had a higher export orientation their male counterparts over the period 2004 to 2008 (Table 5.6). This highlights the importance of promoting female entrepreneurship as one of the key factors for stimulating export-led economic growth.

### Table 5.6: Export Orientation of Male and Female Entrepreneurs, 2004-2008

<table>
<thead>
<tr>
<th>Customers in Overseas Markets</th>
<th>% Male Entrepreneurs</th>
<th>% Female Entrepreneurs</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>46</td>
<td>42</td>
</tr>
<tr>
<td>1% to 24%</td>
<td>31</td>
<td>37</td>
</tr>
<tr>
<td>25% to 74%</td>
<td>12</td>
<td>14</td>
</tr>
<tr>
<td>75% to 100%</td>
<td>11</td>
<td>7</td>
</tr>
</tbody>
</table>

Source: GEM 2009

5.3.2 Summary

The findings in this section show that the Mid West is significantly underperforming in terms of various entrepreneurship indicators. The percentage of nascent and new firm entrepreneurs in the region is well below the national average. Informal investment activity is considerably

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35 Section 3 outlines the Irish government’s policy approach to entrepreneurship in Ireland.
behind in the Mid West, which is clearly impacting the level of regional entrepreneurship. Moreover, the region is experiencing the lowest ratio of male to female early stage entrepreneurial activity across all Irish regions. This is undoubtedly linked to the underperformance of the region’s service sector as these two indicators are positively correlated. It is also positively correlated with the outward migration of females from the Mid West. Interestingly the analysis illustrates that females have a higher export orientation than males in Ireland which highlights the important role that female entrepreneurship should have in contributing to export-led economic growth. Overall, the findings in this section suggest that policymakers should facilitate entrepreneurship with specific regional targets and instruments due to varying levels of regional performance particularly in relation to the gender divide.

5.4 Employment
The main purpose of this section is to characterise female employment in the Mid West Region, and to determine the reasons for its underperformance. Regional employment and unemployment trends in recent years are considered. A remarkable feature of the economic growth period from 1993 to 2007 was the ability of the region to create employment on a sustained basis. However, the current unfavourable economic climate has resulted in a reversal of trends. The structure of employment is presented as this indicates the level to which those in employment are employed in knowledge-based sectors which are crucial for future economic growth. This section analyses the sectors where female employment is concentrated in order to consider the overall benefit to the regional economy. The nature of female employment is considered as more females than males are employed part-time in the region. Female unemployment in the Mid West is discussed, however this is often ambiguous as many inactive females classify themselves outside of the labour force.

5.4.1 Employment and Unemployment Trends
This section presents an overview of Mid West employment and unemployment trends in recent years, as these are generally indicative of how successful the underlying regional economy is performing. Similar to national trends, in recent years there has been considerable employment growth in the Mid West Region. Figure 5.7 illustrates the steep rise in the numbers in employment in the Mid West from 100,900 to 172,925 over the period from the late 1980s until 2006. However, from 2006 to 2009 onwards it is evident that there was a fall in the numbers employed in the region which was 155,500 in Q2 2010. Furthermore, growth in employment in the Mid West over the period Q4 1997 to Q3 2007 (3.3%) was the second
lowest among all Irish regions (below the national average of 3.8 per cent) with the best performing Irish regions experiencing 5 per cent growth for the same period. The regional share of total national employment declined in the Mid West, the only region besides Dublin to experience a loss (Ireland, Department of the Environment Heritage and Local Government (DEHLG), 2009). This highlights that during the period of substantial economic growth, the Mid West has a lower growth in employment than the majority of other Irish regions and experienced a loss in some of its national employment share. This indicates that labour and capital are not being retained or attracted to the region which has significant implications for future economic growth.

The numbers unemployed in the Mid West Region experienced a considerable decline in the early 2000s. However, with current economic recession the numbers unemployed in the region increased considerably to 23,375 in 2009. The region’s unemployment rate has increased dramatically from a low of 3.6 per cent or ‘full employment’ in Q2 2002. With the current unfavourable economic conditions, all Irish regions are experiencing extremely high unemployment rates. Despite this, at 16.3 per cent in Q2 2010, the Mid West has the second highest unemployment rate across Irish regions, behind only the South East. This highlights that the Mid West was particularly vulnerable to the current economic recession. The industrial structure in the region and the educational attainment and skills of the workforce determine the level to which the unemployment rate could rise to in an economic downturn. If the region had a larger and more dynamic service sector, and highly skilled labour force, the region would have been less vulnerable to the current economic recession, which is likely to have resulted in a lower unemployment rate.  

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36 The DEHLG (2009) suggests that the decline in Dublin in the share of the employment market relates to a balancing of regional economic growth among the regions, but this is clearly not the case for the Mid West which is lagging behind other Irish regions.

37 Aiginger (2009) argues that a large service sector and investment in education are two key factors for strengthening the resilience of an economy to an economic crisis.
Structure of Employment

The structure of employment in the region differs from the national average with high shares employed in sectors that tend to be lower skilled, lower value-added and more vulnerable to the recent economic downturn. In Q2 2009 close to 17 per cent of the region’s employment was in industry compared to 13.3 per cent nationally, and 7.3 per cent of the region’s workforce is employed in agriculture in comparison to 5 per cent nationally. While the West (9.4%) and the South East (8%) are more reliant on agriculture than the West, the region is only second to the Midlands (17.8%) in terms highest employment in industry.

The broad picture of services presents a much more favourable picture a breakdown of the sector illustrates that the region is underperforming in terms of market services which are crucial in the knowledge-based economy. These include Professional, Scientific and Technical, Information and Communication, and Financial, Insurance and Real Estate. 4.1 per cent and 5.3 per cent of the workforce in the Mid West and State are employed in the Professional, Scientific and Technical sector. In relation to Information and Communication sector only 2.9 per cent of those employed in the Mid West work in this sector compared with 3.8 per cent nationally. In addition the Financial, Insurance and Real Estate sector presents a similar picture for the Mid West with 3.4 per cent employed in this sector in comparison to 5.6 per cent nationally. This undoubtedly shows that the broad picture of
services is more favourable, as the region is currently lagging behind in relation to the service sectors that are vital for future economic growth in the knowledge-based economy.

However, the Mid West is not the worst performing in relation to the latter categories, with the South East and West for example also underperforming in these knowledge-based sectors. In comparison to the Mid West, the Dublin Region has only 9 per cent employment in industry, 0.2 per cent employment in agriculture, with almost 10 per cent employment in financial, insurance and real estate, 7.4 per cent employment in profession, scientific and technical activities, and 6.8 per cent employment in ICT. Figure 5.8 illustrates the distribution of employment in the Mid West in comparison to the national average and Dublin. The national framework for economic recovery is particularly focused on the Irish Government’s ‘Smart Economy’ (Government of Ireland 2008), and the Mid West is currently not well placed to move towards this knowledge-based economy.

**Figure 5.8: Structure of Mid West, State & Dublin Employment, Q2 2009**

<table>
<thead>
<tr>
<th>Other NACE Activities</th>
<th>Human Health and Social Work Activities</th>
<th>Education</th>
<th>Public Administration and Defence; Compulsory Social Security</th>
<th>Administrative and Support Service Activities</th>
<th>Professional, Scientific and Technical Activities</th>
<th>Financial, Insurance and Real Estate Activities</th>
<th>Information and Communication</th>
<th>Accommodation and Food Service Activities</th>
<th>Transportation and Storage</th>
<th>Wholesale and Retail Trade; Repair of motor vehicles and motorcycles</th>
<th>Construction</th>
<th>Industry</th>
<th>Agriculture, Forestry and Fishing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mid West Q2 2009</td>
<td>4.0%</td>
<td>5.1%</td>
<td>6.0%</td>
<td>9.0%</td>
<td>8.1%</td>
<td>7.8%</td>
<td>7.9%</td>
<td>5.9%</td>
<td>4.0%</td>
<td>7.4%</td>
<td>4.0%</td>
<td>3.4%</td>
<td>4.1%</td>
</tr>
<tr>
<td>State Q2 2009</td>
<td>10.0%</td>
<td>11.8%</td>
<td>12.1%</td>
<td>3.1%</td>
<td>5.7%</td>
<td>5.6%</td>
<td>7.9%</td>
<td>5.9%</td>
<td>4.0%</td>
<td>7.4%</td>
<td>4.0%</td>
<td>3.4%</td>
<td>4.1%</td>
</tr>
<tr>
<td>Dublin Q2 2009</td>
<td>8.1%</td>
<td>7.8%</td>
<td>7.9%</td>
<td>5.7%</td>
<td>5.6%</td>
<td>5.9%</td>
<td>4.0%</td>
<td>7.4%</td>
<td>4.0%</td>
<td>7.4%</td>
<td>4.0%</td>
<td>3.4%</td>
<td>4.1%</td>
</tr>
</tbody>
</table>

*Source: Derived from CSO QNHS special data run for Q2 2009*
Forecasts for Employment by Sector

Structural change is a natural and inevitable feature of economic development. Market and industry structures will continue to change in the future. (Forfás 2009b, p.60)

As shown in Figure 5.9 the contribution of manufacturing and agriculture to national employment is forecasted to fall over the 10 year period to 2020, while the contribution of the services sector is expected to increase significantly. McKinsey and Company (2010, p.11) argue that “…service sectors will continue to be critical for job creation.” Therefore, it is undoubted that the future employment growth in the Mid West Region will increasingly depend on the performance of the region’s service sector.

Figure 5.9: Forecasts for employment by Sector in Ireland 2020 (000s)

Source: ESRI analysis for Expert Group on Future Skills Needs (EGFSN) National Skills Strategy

5.4.2 Female Labour Force

This section considers recent trends in female employment as the increase in female employment contributed considerably to economic growth in the Mid West in recent years. The dynamic changes in the sectoral composition of female employment are presented in order to consider the extent to which females in the Mid West are employed in knowledge-intensive sectors which are crucial for future economic growth. In recent years females are generally more reliant on atypical forms of employment, in particular part-time employment, which analysed in this section as it is an important factor in facilitating female labour force participation. Female unemployment in the region is presented, however as mentioned this is often very ambiguous as females have a tendency to classify themselves as economically inactive.
Female Employment

Growth in female employment increased substantially from 32,000 in 1989 to 70,100 in 2009, an increase of 119 per cent in the Mid West. However, the region actually experienced the second lowest percentage increase over this period after Dublin. The increase in female employment has been far more buoyant than for males in the Mid West, which grew by 33 per cent over the same period. The region’s share of female employment relative to male employment has increased from 33 per cent in 1989, to close to 45 per cent in 2009, which is similar to the national average. However, as female employment in the Mid West grew from very a low base in the 1980s, it continues to lag behind other Irish regions. In 1989 the Mid East was below the Mid West in terms of female employment, now the region is considerably ahead (Table 5.7). The underperformance of female employment in the region is undoubtedly linked to the underdeveloped services sector which is failing to provide an appropriate avenue for entry into the labour force.

Table 5.7: Female Employment in the Irish Regions (000s), 1989 & 2009

<table>
<thead>
<tr>
<th>Region</th>
<th>1989 (000s)</th>
<th>2009 (000s)</th>
<th>% Change 1989-2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Border</td>
<td>36.7</td>
<td>88.6</td>
<td>141</td>
</tr>
<tr>
<td>Midland</td>
<td>16.4</td>
<td>48.1</td>
<td>193</td>
</tr>
<tr>
<td>West</td>
<td>35.5</td>
<td>87.1</td>
<td>145</td>
</tr>
<tr>
<td>Dublin</td>
<td>138.3</td>
<td>266.1</td>
<td>92</td>
</tr>
<tr>
<td>Mid-East</td>
<td>28.8</td>
<td>104.4</td>
<td>263</td>
</tr>
<tr>
<td><strong>Mid-West</strong></td>
<td><strong>32</strong></td>
<td><strong>70.1</strong></td>
<td><strong>119</strong></td>
</tr>
<tr>
<td>South-East</td>
<td>35.9</td>
<td>92.1</td>
<td>157</td>
</tr>
<tr>
<td>South-West</td>
<td>51.9</td>
<td>130.0</td>
<td>150</td>
</tr>
<tr>
<td><strong>Total Females</strong></td>
<td><strong>375.4</strong></td>
<td><strong>886.5</strong></td>
<td><strong>136</strong></td>
</tr>
</tbody>
</table>

Source: CSO, QNHS special data run for Q2; Labour Force Survey 1988-1997

Fás/ESRI (2010) in their occupational forecasts suggest that the number of females employed nationally is expected to exceed its pre-recession level in 2015, in comparison to male employment which is not expected to recover to its pre-recession level. Furthermore, it is argued that females are gaining in their share in many occupations, in particular high skilled occupations, and females are expected to account for over half of business service professions and close to 50 per cent of all managers by 2015 (Fás and ESRI 2010). It is important that the Mid West follows in line with this anticipated national trend for future economic growth and government policy has a key role to play in facilitating this.
Sectoral Composition of Female Employment

This section analyses the sectoral composition of Mid West female employment. The strengthening of the Irish services sector during the 1990s was facilitated by increased female participation rates, and moreover, the economic shift from agriculture to services resulted in a rapid expansion in the demand for female labour (Fahey et al. 2000). In recent years female employment in agriculture has declined and now accounts for approximately 2.3 per cent of female employment in the Mid West. Industry accounts for 11.7 per cent of the region’s female employment, while the service sector accounts for over 85.3 per cent of female employment (Q2 2008). This highlights the importance of the service sector for female employment in the region. Figure 5.10 illustrates the changing distribution of female employment in the Mid West Region over the period 1998 to 2008.

Figure 5.10: Mid West Female Employment by Economic Sector 1998-2008

Table 5.8 presents the percentage changes in the contribution of different sectors to female employment in the Mid West Region from 1998 to 2008. During this period there was a major increase in the contribution of services, including health, education, public
administration and financial and business, while agriculture and production industries experienced a major decline in their contribution to female employment. It is evident that the service sector has been important in providing an avenue for female entry into the labour force, and any future increases in female employment are likely to be resident in the service sector.

**Table 5.8: Percentage Change in Mid West Female Employment by Economic Sector, 1998-2008**

<table>
<thead>
<tr>
<th>Mid West</th>
<th>% Change 1998 - 2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture, Forestry and Fishing</td>
<td>-26.1</td>
</tr>
<tr>
<td>Other Production Industries</td>
<td>-10.4</td>
</tr>
<tr>
<td>Construction*</td>
<td>-</td>
</tr>
<tr>
<td>Wholesale and Retail Trade</td>
<td>53.1</td>
</tr>
<tr>
<td>Hotels and Restaurants</td>
<td>25.0</td>
</tr>
<tr>
<td>Transport, Storage and Communications</td>
<td>62.5</td>
</tr>
<tr>
<td>Financial and Other Business Services</td>
<td>58.8</td>
</tr>
<tr>
<td>Public Administration and Defence</td>
<td>90.0</td>
</tr>
<tr>
<td>Education</td>
<td>93.9</td>
</tr>
<tr>
<td>Health</td>
<td>130.2</td>
</tr>
<tr>
<td>Other Services</td>
<td>26.2</td>
</tr>
</tbody>
</table>

*Population estimates of less than 1,000 are deemed too small for publication purposes due to reliability concerns. Sampling or other survey errors are greater in respect of smaller estimates.*

Knowledge-intensive international services are considered to be one of the major sectors to drive future economic growth (WDC, 2009a). However, the Mid West has a lower share of female employment in such knowledge-intensive services. Information and communications, professional, technical and scientific, and financial, insurance and real estate services combined accounted for 12 per cent of female employment in the Mid West Region compared with 13.7 per cent for the national average (Figure 5.11). The region’s capacity to increase the share of employment in knowledge-intensive services will be important, as it will create high quality employment opportunities, and facilitate innovation and growth across other sectors (WDC 2009a).

38 Knowledge-intensive services include R&D, management consulting, information and communications services, human resource management and employment services, legal services, accounting, financing, and marketing-related service activities. These services influence and improve the performance of individual organisations, value chains and industry clusters across all sectors of a region (WDC 2009a).
Figure 5.11: Mid West and State distribution of Female Employment by Economic Sector, Q2 2009

![Bar Chart of Female Employment by Economic Sector]

Source: Derived from CSO QNHS special data run for Q2 2009

Figure 5.12 presents a comparison in relation the distribution of male and female employment in the Mid West Region in Q2 2009. It is evident that there is a higher proportion of females employed in services sector activities including education, health, public administration, wholesale and retail, while there is a higher proportion of males employed in sectors including agriculture, production industries, construction, transport and storage. The national trend presents a similar picture with more females employed in service activities than males, who account for a higher proportion of those in agriculture, industry, construction, and transportation and storage. This illustrates the importance of the service sector for female employment in the region as well as the role of females in enhancing the sector’s future potential.
The Nature of Female Employment

This section considers the nature of female employment, particularly part-time employment as this facilitates female participation in the labour force. Female employment consists of full-time and part-time employment and females are more likely than males to take up flexible working opportunities. It is clear that what may be considered atypical employment is actually very typical for women in the Mid West, Ireland and many OECD countries.

Part-time employment is a form of ‘non-traditional’ or ‘atypical’ work has increased in Ireland and the Mid West in line with the overall rapid increase in employment until recent years. During the 1990s growth in part-time employment has been a significant factor in

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39 Part time employment is considered to be those working less than 30 hours per week (CSO).
40 Flexible work practices include part-time employment, temporary work, job-sharing, home working and self-employment.
influencing female participation rates as part-time work is predominantly a female activity (Fahey et al. 2000). Furthermore, Daly (2007, p.9) argues that flexibility of working hours is an important factor in boosting female participation after childbirth.

In 1989, 19 per cent of females employed worked part-time in the Mid West. This had grown to 27 per cent in Q4 1999 and to 33 per cent in Q4 2009 and is currently slightly lower the national average of 35 per cent in Q4 2009. Average hours worked per week for females in the region is 31.2 compared to 40.6 for males. In 2009 females accounted for 79 per cent of those in part-time employment compared to 21 per cent of males in the region. A third of women in employment in the Mid West work part time compared to just 7.6 for the male counterparts. In comparison to 2009 OECD trends, the average rate of female part-time employment is 26.1 per cent, with the Netherlands (59.9%) and Sweden (46.1%) being among the highest. Part-time employment is relatively high in Ireland when compared with other OECD countries, which illustrates its importance for facilitating female employment. Figure 5.13 presents the change in the region’s male and female part-time employment since 1999.

Figure 5.13: Female and Male % Share of Total Part-Time Employment in the Mid West, 1999-2009

Source: CSO QNHS special data run for Q2 1999-2009

41 The availability of part-time jobs, which can help females to reconcile family life and work, is found to have a positive influence on the participation of prime-age females. Genre et al. (2010) who researched EU countries, found that this was particularly the case for Ireland. Similar to Lemaitre et al. (1999), Genre et al. (2010) found that part-time jobs are mainly concentrated in the service sector.
It is evident from Figure 5.14 that there has been an increase in the numbers of males employed part-time in the Mid West since 2007. This is likely to be due to the impact of the economic downturn with some firms choosing to reduce working hours rather than to reduce employee numbers.

Figure 5.14: Percentage of Total Females and Total Males Employed Part-Time in the Mid West, 1999-2009

Source: CSO QNHS special data run for Q2 1999-2009

Female unemployment

Women indeed form the largest group from which to draw additional resources as they gather about two-thirds of the inactive population. This fraction is even larger among the high skill ‘inactives’: 75% of inactives aged 25-49 years and holding a university degree are women. (Genre et al 2010, p.1500)

There is a level of ambiguity when female unemployment is taken into consideration as women in caring or domestic duties may not classify themselves as unemployed. Rates of inactivity, where females leave unemployment to re-enter education and training or engage in caring duties, are high in Ireland when compared to the EU. In Ireland the gender disparity in relation to this indicator is approximately 22 percentage points, compared to 16 percentage points for the EU-25 (Eurofound, 2007). This indicates that female unemployment rate in Ireland and the Mid West would actually be much higher only for the large cohort of women classifying themselves as economically inactive, as they take themselves out of the labour

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42 O’Connell (1999) suggests that it is possible that female unemployment is underestimated in Ireland.
market. Therefore, in the context of this research female unemployment will be considered in relation to female who are actively seeking work. Female unemployment in the Mid West was 8.7 per cent in 2009, compared to 16.4 per cent for males. This is similar to national trend as female unemployment in 2009 was recorded at 8.1 per cent while male unemployment was 14.8 per cent.

5.4.3 Summary
The empirical evidence presented in this section shows that, similar to national trends the Mid West, is experiencing a decline in employment with rising unemployment due to the current economic recession. However, the findings show that the percentage change in the level of female employment in the Mid West was the second lowest across all Irish regions from the period 1989 to 2009. This links to region’s low level of female participation and it emphasises the underdeveloped service sector which is an avenue for female entry into the labour force. The discussion on the sectoral composition of female employment again reinforces the correlation between the service sector and female employment. However, the percentage of females employed in some of the knowledge-intensive services is lower in the Mid West. Lastly, the consideration of the nature of female employment highlights the importance of part-time employment in facilitating female participation in the region’s labour force.

5.5 Conclusion
The key findings in this chapter suggest that government policy and the low skills base have a major role to play in the underperformance of the service sector in the region. Furthermore, this analysis illustrates that entrepreneurship in the region is low, particularly in relation to early stage start ups and female entrepreneurship. This is evidently linked to the region’s outward migration trends and underdeveloped service sector. In relation to female employment females in the Mid West are increasingly employed in services. However, the Mid West has a lower share of females employed in services that are crucial for participating in the knowledge-based economy. The analysis has significant implications for Irish policymakers as it illustrates where the Mid West is lagging behind. The following chapter considers recent trends in labour supply with particular emphasis on female labour force participation, education and skills as these have the potential to foster enhanced service sector productivity.
Chapter 6

Mid West Labour Supply
6.1 Introduction
The aim of this chapter is to consider recent trends in the Mid West labour supply, in particular female labour supply, and to analyse recent changes in the profile of the region’s human capital, in order to identify policies required to stimulate Mid West economic growth. Labour supply and regional levels of human capital are two key factors for boosting service sector productivity through increasing both the quantity and quality of labour. Therefore, this chapter considers performance of these determinants and questions why they are underperforming in the Mid West. As labour supply growth in the Mid West is a necessary factor for fulfilling the region’s future output potential, considering where the region’s future labour supply is likely to come from is important. Labour supply is determined by three factors, demographics, migration and participation, which are analysed in this section. With the return to net outward migration in Ireland and the Mid West, since the current economic recession, the demographic effect and participation effect, in particular female participation will be important for growth in future labour supply. The educational attainment of the region’s labour force is presented, as this has implications for future service sector productivity. In particular graduate migration or the ‘brain drain’ from the region is considered as graduates are migrating to other Irish regions with more developed service sector. This has important implications for the skills level of the region’s labour force. The skills and occupation profile of the region’s labour force is analysed as this has important implications for the development of the region’s service sector and the enhancing the overall performance of the region.

6.2 Labour Supply
This section analyses recent trends in the Mid West’s labour supply, in particular female labour supply. Labour supply was a key factor that enabled long run growth in the Mid West Region during the 1990s and into early the 2000s as it was able to meet demands for labour and therefore, it did not limit the growth potential of the economy. There are essentially three sources of additional labour supply; annual natural increase, inward migration and participation rate increase which is predominantly driven by females.\(^{43}\) The demographic effect on the labour supply is discussed and the region’s demographic profile is considered as this is an indicator of the current and future performance of the region. The migration effect on the region’s labour supply which is presented, has significantly diminished since the current economic recession. Therefore, the participation effect and the demographic effect,

\(^{43}\) The natural increase consists of those in education and training who do not emigrate from the region and it is determined predominantly by the birth rate 15 to 25 years previously.
on the region’s labour supply as this will be increasingly important for fostering growth in the services sector. Female labour force participation is a key factor that contributes towards potential growth of the region’s labour force.

6.2.1 Recent Trends in Labour Supply

Labour force growth and increasing participation rates are an indicator of a more dynamic labour market with more people availing of and wishing to avail of employment opportunities.

(WDC 2007a, p.12)

Mid West labour force trends have been erratic over recent decades, with periods of sluggish growth in the 1980s to rapid acceleration in the 1990s. 44,45 In recent years, the Mid West’s buoyant economy facilitated a rapid expansion in the size of the labour force. Furthermore, the Mid West continued to have a very high birth rate until the early 1980s. Therefore, the supply of young people coming onto the labour market has, until recent years, continued to rise rapidly. The Mid West’s total labour force as a proportion of total working-age population grew from 61 per cent in 1996 to nearly 71 per cent in 2009. The numbers in the region’s labour force grew from 110,600 in 1989 to a peak of 182,675 in 2008 (Figure 6.1). During the period 1995 to 2000 the predominant factor underlying the rise in labour supply was an increase in female participation, whereas from 2000 onwards inward migration had a large role.46

44 The labour supply refers to the total number of workers willing and able to work in a given occupation or industry for a given wage.
45 “The labour force measures the numbers employed and unemployed and is a key measure of labour supply.” (WDC 2007, p.12)
46 This accounted for 1.5 percentage points a year of the growth in the potential output of the Irish economy (Fitzgerald 2002).
…[A] highly skilled labour force that is being continually replenished is the single-most critical asset for a region’s economic viability.

(Kennedy 2008, p.2)

However, as discussed in Chapter 2 the Mid West not retaining its human capital, which would potentially provide a stock of labour if they participate in the labour force. As the ‘pull’ of other regions appears to be stronger, the Mid West Region is merely growing and supplying labour for other regions.

While the labour force has risen sharply, the acceleration in jobs growth has been even more profound. Estimated total persons at work in the Mid West increased from 97,100 in 1989 to a peak of 172,925 in 2007, an increment of 78.1 per cent. Since 2008 the numbers in the labour force began to decline in 2008, which paralleled the decline in the numbers employed in region. However, as a result of the current recession, there has been a decline in the numbers employed in the region to 150,000 in Q2 2010. The region’s unemployment rate fell to historically low levels of 4 per cent in the early 2000s, however, with the current economic climate there has been a substantial increase in unemployment to 16.3 per cent in Q2 2010, higher than the national average of 13.6 per cent for the same period. Another characteristic of the boom was the rise in part-time employment grew substantially in the 1990s from 8.5 per cent of total Mid West employment in 1998 to 19.5 per cent in 2009.
6.2.2 Female Labour Supply

In recent years the Mid West labour force participation rate has risen steadily, particularly as a result of increasing female participation in addition to net inward migration until 2008. The labour force participation rate in the Mid West increased from 52.3 per cent in 1988 to 61.8 per cent in 2008, which is slightly behind the national average of 63.6 for 2008.

Lower labour force participation rates can reflect for example, fewer opportunities, higher educational participation, a weaker skills base, and an aging population. (WDC 2007a, p.12)

In the case of the Mid West Region the lower participation rate, which is an indicator of regional economic activity, is likely to be reflective of fewer employment opportunities and to a certain extent a weaker skills base. Specific emphasis is placed on female participation in this research as male participation in the labour force has been somewhat uninteresting in Ireland and the Mid West in recent decades and furthermore, there is limited scope for increase. The current rate of male participation in the region is similar to the early 2000s (70%), and it is likely that with the forecasted economic upturn that male participation will increase its previous level of over 70 per cent. However, the full potential of Mid West female labour force participation was never realised, even during the first Irish economic boom. Therefore, it is female labour force participation that the most capacity to create long term economic growth in the Mid West. Moreover, the potential for females to enhance labour market performance is currently a popular topic in European discourse.

More than ever European women are attracting a lot of attention in the context of labour markets performance, because they appear to be an ideal target group to increase labour market participation rates, and therefore, labour supply. (Genre et al 2010, p.1499)

Despite the considerable growth in female labour force participation in the Mid West it started from such a low base (33.6% in the Mid West in 1988) that there continues to be considerable unrealised potential in relation to female labour in the region. There is also evidence of unbalanced growth internationally. Female labour force participation in the Mid West is 52.4 per cent (15 years+), and is 55 per cent nationally, compared to participation rates of over 70 per cent in Norway and Denmark. The participation rate for the 15 to 64 year old female cohort in Finland, Canada and New Zealand is over 70 per cent.47 It is evident

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47 In August 2009 Canada was one of the first of the advanced economies to record female participation levels (81.5% for 25-54 year old) higher than that of males (Statistics Canada, 2009). Rising female employment is considered one of the major influencing factors in this. It is interesting to note that, in 2010, females outnumbered males in the US workforce, as in January 2010 over 800,000 more females than males were employed in the US.
from the analysis that while female labour force participation was considered to be one of the key success stories of the 1990s, its full potential was never realised. This is undoubtedly linked to the underperformance of the region’s service sector. The Mid West should draw from its supply of females outside the labour force in the region to boost future labour supply rather than being overly reliant on migration for future increases.

Third level education, one of the major determinants of female participation, has a much greater impact on female participation than male participation in the Mid West (Table 6.1).\textsuperscript{48} Of the total number of females in the labour force in the region 40.7 per cent have a third level qualification or above compared with 23.1 per cent for males. Females have been slightly more educated than males since the 1980s in the Mid West, which is similar to national and international trends (CSO 2006). While participation in education delays entry into the labour force, it increases female participation overall.\textsuperscript{49}

\textsuperscript{48} As 3\textsuperscript{rd} level education has a more profound effect of driving females into the labour force than males in the Mid West this suggests that tailored regional policies in this area could be particularly effective. \textsuperscript{49} As well as the increases in educational attainment, the rapid expansion in female labour force participation has been attributed to the increased demand in the services sector and the availability of flexible working arrangements in particular part-time employment (O’Connell, 1999).
Table 6.1: ILO Status by Educational Attainment, by Gender, Mid West 2008 (%)

<table>
<thead>
<tr>
<th>Males aged 15 to 64</th>
<th>In Employment</th>
<th>Unemployed</th>
<th>In Labour Force</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary or below</td>
<td>7.8</td>
<td>12.4</td>
<td>8.3</td>
</tr>
<tr>
<td>Lower secondary</td>
<td>18.2</td>
<td>27.6</td>
<td>19.2</td>
</tr>
<tr>
<td>Higher secondary</td>
<td>34.6</td>
<td>31.4</td>
<td>34.4</td>
</tr>
<tr>
<td>Post leaving cert</td>
<td>9.8</td>
<td>-</td>
<td>9.5</td>
</tr>
<tr>
<td>Third level non degree</td>
<td>8.1</td>
<td>-</td>
<td>7.7</td>
</tr>
<tr>
<td>Third level degree or above</td>
<td>16.1</td>
<td>9.5</td>
<td>15.4</td>
</tr>
<tr>
<td>Other</td>
<td>5.4</td>
<td>-</td>
<td>5.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Females aged 15 to 64</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary or below</td>
<td>5.6</td>
<td>-</td>
<td>6.1</td>
</tr>
<tr>
<td>Lower secondary</td>
<td>11.5</td>
<td>-</td>
<td>11.7</td>
</tr>
<tr>
<td>Higher secondary</td>
<td>29.4</td>
<td>28.3</td>
<td>29.3</td>
</tr>
<tr>
<td>Post leaving cert</td>
<td>8.2</td>
<td>-</td>
<td>8.3</td>
</tr>
<tr>
<td>Third level non degree</td>
<td>13.3</td>
<td>-</td>
<td>13.3</td>
</tr>
<tr>
<td>Third level degree or above</td>
<td>28.4</td>
<td>-</td>
<td>27.4</td>
</tr>
<tr>
<td>Other</td>
<td>3.7</td>
<td>-</td>
<td>3.9</td>
</tr>
</tbody>
</table>

Source: CSO QNHS special data run for Q4 2008
- Based on population estimate less than 1,000 which is deemed too small for publication by the CSO due to reliability concerns. Sampling or other survey errors are greater in respect of smaller estimates.

6.2.3 Demographic Dynamics

The section considers the impact of the demographic effect on the Mid West labour supply in recent years. The demographic effect for this research refers to the changing fertility rates and the ageing population. Demographics are important as they provide potential labour supply. “Population is also important in determining labour force growth, which is turn determines future economic growth” (WDC 2007a, p.8). Population is a key indicator of the performance of a region as labour will be retained in and attracted to prosperous regions with employment opportunities. However, there is currently a leakage of skilled labour from the Mid West which is resulting in unbalanced growth in Ireland. The analysis of the changes in the working age cohort since the mid-1980s and the implications of these changes on the labour supply are also presented in this section. The discussion will conclude with the Mid West Region’s future labour force participants.

50 The demographic effect and participation effect are not mutually exclusive as demographics ‘feed’ into female labour supply. Without an increase in the birth rate a shortage of labour resources may occur and subsequently, lead to a slowdown of future Mid West productivity and the region performing below its optimum level.
Demographic Profile

Total population is dependent upon the numbers of births, deaths and migrationary flows (O’Hagan, 2000). The Mid West experienced a natural increase in the population of 16.6 per cent during the last intercensal period 2002 to 2006 compared to 19.8 per cent for the state average (Figure 6.2). The birth rate in the Mid West was one of the highest among Irish regions during the period from 1996 to 2006. However, the population increase has not been as substantial in the Mid West as in other regions, which further illustrates the inability of the region to retain its population as well as attracting labour. In the majority of countries the natural increase has a tendency to directly translate into a population increase (O’Hagan, 2000). However, in the Mid West Region’s case migrant levels have considerably influenced population trends, albeit to a lesser extent than nationally.

With a population of 361,028 recorded Census 2006 the Mid West had the second lowest regional population in Ireland. Population growth in the region has been significantly below national rates over the period 2002 to 2006, during which the region recorded the second lowest percentage increase in population (6.3%) after Dublin (5.7%). The national average population change for this period was 8.2 per cent (Table 6.2).

Figure 6.2: Rate of Natural Increase in Population, 1981-2006

![Figure 6.2: Rate of Natural Increase in Population, 1981-2006](image)

Source: CSO Database Direct, Population Change Components by County, Year and Statistic

During the period of Ireland’s economic transformation there were high levels of net inward migration nationally and the Mid West shared in this to a certain extent. From the period

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51 Birth and death rates are determined by long term trends while migrationary patterns tend to fluctuate over shorter periods and are particularly “sensitive” to economic growth rates. The difference between the births and deaths is the ‘natural increase’ in the population.
2002 to 2006 net migration contributed towards 11,398 of the region’s population change compared to the natural increase which contributed to an increase of 10,048 (CSO 2006). However, while inward migration had an important role in enhancing the growth potential of the Irish and Mid West economy from the mid 1990s to the early 2000s, the role of immigration in enhancing the growth potential of the region’s economy has experienced a significant shift with the return to net outward migration, for the first time since the mid-1990s.\textsuperscript{52}

Table 6.2: Population by Region and Percentage Change, 1996-2006

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Border</td>
<td>407,295</td>
<td>432,534</td>
<td>468,375</td>
<td>8.3</td>
<td>15.0</td>
</tr>
<tr>
<td>Dublin</td>
<td>1,058,264</td>
<td>1,122,821</td>
<td>1,187,176</td>
<td>5.7</td>
<td>12.2</td>
</tr>
<tr>
<td>Mid-East</td>
<td>347,407</td>
<td>412,625</td>
<td>475,360</td>
<td>15.2</td>
<td>36.8</td>
</tr>
<tr>
<td>Midland</td>
<td>205,542</td>
<td>225,363</td>
<td>251,664</td>
<td>11.7</td>
<td>22.4</td>
</tr>
<tr>
<td>Mid-West</td>
<td>317,069</td>
<td>339,591</td>
<td>361,028</td>
<td>6.3</td>
<td>13.9</td>
</tr>
<tr>
<td>South-East</td>
<td>391,517</td>
<td>423,616</td>
<td>460,838</td>
<td>8.8</td>
<td>17.7</td>
</tr>
<tr>
<td>South-West</td>
<td>546,640</td>
<td>580,356</td>
<td>621,130</td>
<td>7.0</td>
<td>13.6</td>
</tr>
<tr>
<td>West</td>
<td>352,353</td>
<td>380,297</td>
<td>414,277</td>
<td>8.9</td>
<td>17.6</td>
</tr>
<tr>
<td>State</td>
<td>3,626,087</td>
<td>3,917,203</td>
<td>4,239,848</td>
<td>8.2</td>
<td>16.9</td>
</tr>
</tbody>
</table>


Figure 6.3 illustrates the change in internal migration patterns during the three most recent Census years. The chart examines a person’s usual residence at the time of a census and one year previously in order to determine inter-regional migration patterns. During the 1980s and until 1996 internal migration between regions was fairly stable with the Dublin and Mid-East Regions experiencing positive net migration flows while flows in all other Irish regions were negative (CSO 2008a). This was considered to the ‘traditional’ pattern of migration by the CSO. However, over the period from 2002 to 2006 there was a substantially different pattern of internal migration among the regions with many regions experiencing internal migration with negative flows from the Dublin region during 2006 and 2006.

Figure 6.3 shows that the population declined in the Mid West during each of the 3 years due to internal migration flows, the only Irish region to experience a decline in each of the three years.

\textsuperscript{52} In relation to interregional and overseas migration, the CSO, which provides information for movements in the year directly prior to the Census of Population 2006, shows that 95.2 per cent of the population had been living in the Mid West Region in 2006. Of the 4.8 per cent that emigrated from the region 2.58 per cent had moved outside of the State while 2.19 per cent had migrated to other Irish regions (CSO 2006).
census years. This emphasises the inability of the Mid West to retain its population relative to more prosperous Irish regions.

**Figure 6.3: Internal Migration Flows in Ireland, 1996, 2002 & 2006**

![Diagram showing internal migration flows in Ireland for 1996, 2002, and 2006.](image)

*Source: Dignan 2009, p.166*

While there is limited data currently available on internal migration during the recession, the CSO’s (2008) regional population projections suggests that the ‘traditional’ pattern of internal migration, such as that experienced until the mid 1990s, will prevail during the recession whereby all regions, apart from Dublin and the Mid East, are expected to lose population to internal migration by 2026. Under this scenario annual population growth rates for the Mid West are expected to be the lowest, at 1.1 per cent, compared to a high of 2.3 per cent for the Mid East.

Table 6.3 presents a regional comparison of population change from the last intercensal period, 2002 to 2006. Both the migration rate (7.9%) and the national increase rate (7.2%) are lower in the Mid West than the national average increase for the same period. The annual average increase in the Mid West’s population over the period 2002 to 2006 was 15 per cent, which considerably lower than the national average of 19.5 per cent. The main component of population change in the region over the intercensal period was net migration which accounted for just over 52 per cent of the increase, compared to 58.7 per cent nationally. This was the second lowest among all Irish regions in percentage terms and highlights the inability of the region to successfully attract migrants even during a boom period. However, the actual increase in migrants in the Mid West was the lowest among all Irish regions, with most regions experiencing nearly double the Mid West increase for the same period with other.
Irish regions were evidently more attractive to migrants. However, even if people are leaving the Mid West, the region can still have a returning population if opportunities exist. This will increasingly be the case in the future with the current levels of outward migration from Ireland as a result of the current economic climate.

Table 6.3: Components of Population Change, by Region, 2002-2006

<table>
<thead>
<tr>
<th>Regional Area</th>
<th>Population 2002</th>
<th>Population 2006</th>
<th>Increase in Population</th>
<th>Natural increase</th>
<th>Estimated net migration</th>
<th>Average annual increase rate per 1,000 of average population</th>
<th>Average annual natural increase rate per 1,000 of average population</th>
<th>Average annual estimate net migration rate per 1,000 of average population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Border</td>
<td>432,534</td>
<td>467,327</td>
<td>34,793</td>
<td>10,666</td>
<td>24,127</td>
<td>19.3</td>
<td>5.9</td>
<td>13.4</td>
</tr>
<tr>
<td>Dublin</td>
<td>1,122,821</td>
<td>1,186,159</td>
<td>63,338</td>
<td>41,704</td>
<td>21,634</td>
<td>13.7</td>
<td>9</td>
<td>4.7</td>
</tr>
<tr>
<td>Mid-East</td>
<td>412,625</td>
<td>475,026</td>
<td>62,401</td>
<td>21,882</td>
<td>40,519</td>
<td>35.1</td>
<td>12.3</td>
<td>22.8</td>
</tr>
<tr>
<td>Midland</td>
<td>225,363</td>
<td>251,380</td>
<td>26,017</td>
<td>7,827</td>
<td>18,190</td>
<td>27.3</td>
<td>8.2</td>
<td>19.1</td>
</tr>
<tr>
<td>Mid-West</td>
<td>339,591</td>
<td>360,651</td>
<td>21,060</td>
<td>10,048</td>
<td>11,012</td>
<td>15.0</td>
<td>7.2</td>
<td>7.9</td>
</tr>
<tr>
<td>South-East</td>
<td>423,616</td>
<td>460,474</td>
<td>36,858</td>
<td>13,760</td>
<td>23,098</td>
<td>20.8</td>
<td>7.8</td>
<td>13.1</td>
</tr>
<tr>
<td>South-West</td>
<td>580,356</td>
<td>620,525</td>
<td>40,169</td>
<td>16,011</td>
<td>24,158</td>
<td>16.7</td>
<td>6.7</td>
<td>10.1</td>
</tr>
<tr>
<td>West</td>
<td>380,297</td>
<td>413,383</td>
<td>33,086</td>
<td>9,416</td>
<td>23,670</td>
<td>20.8</td>
<td>5.9</td>
<td>14.9</td>
</tr>
<tr>
<td>State</td>
<td>3,917,203</td>
<td>4,234,925</td>
<td>317,722</td>
<td>131,314</td>
<td>186,408</td>
<td>19.5</td>
<td>8.1</td>
<td>11.4</td>
</tr>
</tbody>
</table>


Dependency Ratios and the Working Age Cohort

The region’s dependency ratio and working age cohort are considered in this section these factors are indicative of the performance of the region.

A higher proportion of population of working age is indicative of economically stronger regions where the economically active migrate to in search of employment. This can further facilitate development by providing an available supply of labour and a market for goods and services.

(WDC 2007, p.10)

The dependency ratio in the Mid West is above the national average, which suggests that there is a smaller cohort of working age population in the region (Table 6.4). The age structure of a region is generally determined by economic growth and migration. Therefore, it is a useful indicator of the performance of the region in terms of attracting and retaining a large working age population. Lower labour force participation are reflective of higher

---

53 The total dependency ratio is the sum of the young and old ratios. The young and old dependency ratios are derived by expressing the young population (aged 0-14 years) and the old population (65 years and over) as percentages of the population aged 15-64.
dependency ratios (WDC 2007a), which is evidently the case in terms of the Mid West Region. The percentage of the 0 to 14 years cohort in the Mid West as a percentage of total population has increased by 6.3 percentage points over the period 1996 to 2006, which is a favourable trend in terms of the future labour force participants. However, it has impacted the region’s current dependency ratios which have increased from 35.8 per cent in 1996 to 47.2 per cent in 2006 (Table 6.4). The 65 years and over cohort also experienced an increase over the 10 year period to 2006. As with all Irish regions the proportion of those aged 65 years and over will continue to increase in the Mid West Region in the long term.

Table 6.4: Population Structure by Region, 1996 & 2006

<table>
<thead>
<tr>
<th>Region</th>
<th>0-14 years</th>
<th>65 years &amp; over</th>
<th>Total % of 15-64 Age Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Border</td>
<td>24.8</td>
<td>33.0</td>
<td>13.2</td>
</tr>
<tr>
<td>Dublin</td>
<td>22.0</td>
<td>25.7</td>
<td>9.9</td>
</tr>
<tr>
<td>Mid-East</td>
<td>25.9</td>
<td>32.9</td>
<td>8.8</td>
</tr>
<tr>
<td>Midland</td>
<td>25.2</td>
<td>33.5</td>
<td>12.2</td>
</tr>
<tr>
<td>Mid-West</td>
<td>23.9</td>
<td>30.2</td>
<td><strong>11.8</strong></td>
</tr>
<tr>
<td>South-East</td>
<td>24.4</td>
<td>32.0</td>
<td>11.9</td>
</tr>
<tr>
<td>South-West</td>
<td>23.4</td>
<td>29.4</td>
<td>12.1</td>
</tr>
<tr>
<td>West</td>
<td>23.9</td>
<td>29.9</td>
<td>14.0</td>
</tr>
<tr>
<td>State</td>
<td><strong>23.7</strong></td>
<td><strong>29.7</strong></td>
<td><strong>11.4</strong></td>
</tr>
</tbody>
</table>

Source: Derived from Census of Population 1996 & 2006, Volume 2 Table 5

The working age population (15 to 64 years), as a percentage of the total population, increased from 64.2 per cent in 1996 to 68 per cent in 2006, which is similar to the national average of 68.6 per cent.\textsuperscript{54} Demographic trends have previously ensured that labour supply did not limit the region’s growth potential. The numbers at work in the Mid West increased from 100,900 in 1988 to a peak of 174,000 in 2007. Individuals within the working age cohort who are not working is where the domestic labour supply will be obtained.

**Fertility**

From the mid 1990s until recently, the total period fertility rate (TPFR) in the Mid West Region has remained at a constant rate of 2.1 which is the level at which the population would replace itself in the long run ignoring migration.\textsuperscript{55} However, since 2006 this has

\textsuperscript{54} The working age cohort consists of those aged between 15 and 64 years.

\textsuperscript{55} The Total Period fertility Rate (TPFR) is derived from the age-specific fertility rates in the current year. It represents the projected number of children a woman would have if she experienced the current age-specific fertility rates while progressing from age 15 to 49 years (CSO).
increased, and the Mid West (2.24) currently has the second highest TPFR across the Irish regions (Table 6.5). Moreover, Ireland has one of the highest TPFRs in the OECD, with the US (2.12) being one of the few countries to exceed this rate (2007 data). The EU-27 average TPFR was 1.55 in 2007.

Table 6.5: Total Period Fertility Rate by Region, 1996-2009

<table>
<thead>
<tr>
<th>Region</th>
<th>1996</th>
<th>2002</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Border</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2.05</td>
<td>2.14</td>
<td>2.04</td>
</tr>
<tr>
<td>Midland</td>
<td>2.1</td>
<td>2.3</td>
<td>2.2</td>
<td>2.24</td>
<td>2.35</td>
<td>2.29</td>
</tr>
<tr>
<td>West</td>
<td>2</td>
<td>2</td>
<td>1.9</td>
<td>2.06</td>
<td>2.14</td>
<td>2.06</td>
</tr>
<tr>
<td>Dublin</td>
<td>1.7</td>
<td>1.8</td>
<td>1.7</td>
<td>1.87</td>
<td>1.92</td>
<td>1.92</td>
</tr>
<tr>
<td>Mid-East</td>
<td>2</td>
<td>2.3</td>
<td>2.1</td>
<td>2.32</td>
<td>2.31</td>
<td>2.22</td>
</tr>
<tr>
<td><strong>Mid-West</strong></td>
<td>2.1</td>
<td>2.1</td>
<td>2.1</td>
<td>2.19</td>
<td>2.20</td>
<td>2.24</td>
</tr>
<tr>
<td>South-East</td>
<td>2</td>
<td>2.1</td>
<td>2.1</td>
<td>2.17</td>
<td>2.25</td>
<td>2.16</td>
</tr>
<tr>
<td>South-West</td>
<td>1.9</td>
<td>2</td>
<td>1.9</td>
<td>2.03</td>
<td>2.07</td>
<td>2.10</td>
</tr>
<tr>
<td>State</td>
<td>1.9</td>
<td>2</td>
<td>1.9</td>
<td>2.05</td>
<td>2.10</td>
<td>2.07</td>
</tr>
</tbody>
</table>


Note: 1. ASFR and TPFR for 2007 are calculated using year of occurrence data, whereas those for 2008 and 2009 are calculated using year of registration data and are subject to change.

2. Populations for 2007 to 2009 are estimates as at April of those years.

This presents a positive demographic picture for the region, as the current fertility rates have the potential to influence the Mid West population structure for a considerable length of time. However, the high birth rate is not beneficial if the Mid West is unable to retain its population. The Mid West and Ireland have always had high fertility rates but this did not translate into a population increase due to emigration which resulted in a leakage of people to the UK and the US.

In 2009 there were 16.6 births in the Mid West per 1,000 population in 2009, which increased from 14.6 births per 1,000 in 1991 and is similar to the national trend (16.7 births per 1,000 population in 2009). In 1995 the number of births in the Mid West went to a low of 4,168 compared to 2009 when 6,224 births were recoded (Figure 6.4).56 If the very recent uplift in the region’s birth rate is to become a trend then this would act in the same manner as the ‘baby boomers’ of the 1970s and 1980s with similar positive consequences, including the potential to influence the future labour supply, provided that labour remains in the region.

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56 Irish fertility rates remain high as fertility rates of women in the thirties are substantially higher in Ireland than the rest of the EU (Fitzgerald 2004).
The Future Labour Force Participants

The future labour force participants are school leavers. The number of school leavers nationally is decreasing steadily since the peak in 2000 and is expected to continue decreasing in 2011. “The proportion of students relative to the overall labour force is beginning to fall due to unfavourable demographic trends” (EGFSN 2002, p.27). The fall in the birth rate in the 1980s and early 1990s is only beginning to impact the economy in recent years as there are less school leavers. However, as discussed there has been an increase in the Mid West Region’s birth rate in recent years, and this turnaround presents a long term window of opportunity and potential increases in the labour force participants. Enrolment in schools has continued to increase, and the Ireland’s Department of Education and Science (2010) has predicted that this will continue nationally for the next decade. The Mid West is likely to follow in this trend given that the region has a higher than national average birth rate.

6.2.4 Migration Effect

The section analyses the migration effect on the Mid West’s labour supply in recent years. In particular recent migration trends are considered as well as the profile of immigrants to
Ireland and returning migrants. The recent return to net outward migration in Ireland and the Mid West is discussed as this has significant consequences for the labour supply and economic growth in the region. In addition to external migration, Ireland has high levels of internal migration, which is presented as this is impacting the performance of the Mid West which is displaying an inability to retain its population. As evident the literature review on regional economic growth, migration is a particularly important issue for regions as the labour has higher mobility across regions within nations. This section concludes with a consideration of the profile of immigrants to Ireland and returning migrants to Ireland.

**Migration Trends**

The Mid West economy, similar to the state, has historically experienced large-scale emigration and this led to demographic weakness. The economy experienced the fundamental problem of an inability to sustain its population. The Mid West did not perform as well as some other Irish regions in attracting inward migration during the boom years which is a further indicator of the economic performance of the region and the attractiveness of the region’s sectors for migrant labour (Table 6.6). The Mid West population average annual net migration rates per 1,000 of population was 9.2 compared to 11.4 per cent for the state during the period 2002 to 2006 (Table 6.6). The Mid West considerably lagged behind all other regions except for Dublin in the average annual rate of net migration during the last intercensal period. It is evident that there were very high levels

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57 To place in context of the wider study demographics and migration are not mutually exclusive as they both ‘feed’ into a stock of population (aged 15 to 64). This is evident in the case of the Mid West as even though the region experienced high birth rates in the past, population growth was very weak due to a drain in terms of outward migration from the region.
58 O’Hagan (2000) maintains that population change in Ireland has ‘tracked’ much closer to migration levels rather than the natural increase in the population.
59 However, Fitzgerald and Kearney (1999, p.1) suggest that “[m]igration in Ireland has been a two way process with periods of net emigration being followed by periods of extensive net immigration”. There was a reversal of emigration trends in the 1970s when many of those who left in the 1950s returned (Barrett and O’Connell 2001). However, emigration increased again and remained high throughout much of the 1980s. This was followed by net inward migration in the late 1990s and early 2000s due to improved economic conditions. Since 2009 the Irish economy and the Mid West Region have returned to net outward migration.
60 The wage rate multiplied by the employment rate added to social welfare entitlements multiplied by the unemployment rate are the factors that influence Irish migration trends. Sexton and O’Connell (1996) and Fahey et al (1998) argue that Irish migration is strongly linked to UK labour market conditions and differentials in employment rates. Interregional migration in Ireland is determined by employment opportunities. Inward migration of non-Irish citizens is influenced by economic motivation and perceived differences in standard of living, as well as social welfare entitlements and asylum. Softer government policies in terms of access and criteria also have a role. For example in 2003, similar to the UK and Sweden, Ireland granted the accession state nationals unrestricted access to its labour market immediately upon EU enlargement (NESC 2006).
of net inward migration to Ireland during this period and that the Mid West failed to capture a significant proportion of this potential labour supply.

Table 6.6: Average annual rate of estimated net migration per 1,000 of average population in each intercensal period, 1986-2006, by Region

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mid West</td>
<td>-9.0</td>
<td>-0.8</td>
<td>6.2</td>
<td>9.2</td>
</tr>
<tr>
<td>West</td>
<td>-8.9</td>
<td>2.2</td>
<td>8.8</td>
<td>15.1</td>
</tr>
<tr>
<td>South West</td>
<td>-6.7</td>
<td>3.1</td>
<td>5.75</td>
<td>9.65</td>
</tr>
<tr>
<td>South East</td>
<td>-8.06</td>
<td>-0.5</td>
<td>7.54</td>
<td>12.54</td>
</tr>
<tr>
<td>Border</td>
<td>-9.3</td>
<td>-0.9</td>
<td>5.7</td>
<td>15.2</td>
</tr>
<tr>
<td>Midlands</td>
<td>-11.00</td>
<td>-1.87</td>
<td>10.93</td>
<td>19.33</td>
</tr>
<tr>
<td>Dublin</td>
<td>-7.4</td>
<td>-0.7</td>
<td>2.1</td>
<td>4.7</td>
</tr>
<tr>
<td>Mid East</td>
<td>-5.8</td>
<td>4.7</td>
<td>18.3</td>
<td>22.6</td>
</tr>
<tr>
<td>State</td>
<td>-7.6</td>
<td>0.5</td>
<td>6.8</td>
<td>11.4</td>
</tr>
</tbody>
</table>

Source: Derived from CSO Census 2006 Preliminary Report Table 7

Migration can be detrimental to lagging regions, as the propensity to migrate is much higher among the highly skilled, depriving the region of their skills and leaving the low-skilled more dependent on local employment opportunities.

(OECD 2009a, p.27)

Foreign nationals are less disposed to coming to the Mid West and moreover labour is not being retained in the region. Table 6.7 presents migration effects on key economically active cohorts of the population across each Irish region. Although it is not a perfect measure, it does provide an indication of the extent to which a region is able to maintain or attract (or attract back) people in the key age group 25 to 29 year olds. At 93.6 per cent the Mid West is the second weakest performing region in Ireland in this regard. This was during the second boom period (2002-2006) that the Mid West had difficulties in retaining the population aged 25 to 29 years, while Dublin and the Mid East significantly expanded this age cohort during the same period (Table 6.7). Other Irish regions including the West, South West and Midlands retained more of their population than the Mid West. This has major implications for the region as highly skilled labour has a higher propensity to migrate, which can impact on regional productivity and the ability of the region to compete in the knowledge-based economy.
Table 6.7: Migration Effects on Key Economically Active Cohorts by Region, 1996-2006

<table>
<thead>
<tr>
<th>Region</th>
<th>Population in age group</th>
<th>% of 1996 Age Cohort Remaining</th>
</tr>
</thead>
<tbody>
<tr>
<td>Border</td>
<td>38,448</td>
<td>30,929</td>
</tr>
<tr>
<td>Midland</td>
<td>20,108</td>
<td>16,109</td>
</tr>
<tr>
<td>West</td>
<td>33,381</td>
<td>29,268</td>
</tr>
<tr>
<td>South East</td>
<td>37,259</td>
<td>30,885</td>
</tr>
<tr>
<td>South West</td>
<td>50,856</td>
<td>46,397</td>
</tr>
<tr>
<td>Mid-West</td>
<td>30,613</td>
<td>28,048</td>
</tr>
<tr>
<td>Mid East</td>
<td>33,870</td>
<td>31,874</td>
</tr>
<tr>
<td>Dublin</td>
<td>95,001</td>
<td>114,824</td>
</tr>
<tr>
<td>State</td>
<td>339,536</td>
<td>328,334</td>
</tr>
</tbody>
</table>

Source: Forfás 2009

Albeit regional migration estimates are not available for 2010, national figures estimate that emigration from Ireland in the year to April 2010 was at 65,300 while the number of immigrants into Ireland declined substantially from 57,300 to 30,800 over the same period (CSO 2010a). While the number of emigrants remained at the same level in 2010 as in 2009, the composition of these emigrants changed, with Irish emigrants accounting for 42 per cent of the outflow, compared to 28 per cent in 2009. The number of emigrants from the EU Accession States declined from 30,000 to 19,000. These combined changes have resulted in an increase in net outward migration to 34,500 in April 2010.

While there is currently limited data available in relation to the impact of the recession on migration at the regional level in Ireland, anecdotal evidence from the Mid West suggests that there is a growing level of emigration particularly among new graduates, recent immigrants and those previously employed in the construction sector. However, if following on from recent trends it is likely that this period of emigration has the potential to be followed by a period of net inward migration in the long term. Today, the experience of emigration has changed, and while the Mid West is experiencing net outward migration, emigrants are considered as ‘homing pigeons’ as there are high expectations that migrants will return. The increase in the number of non-Irish nationals emigrating since the downturn in the economy is likely to have long lasting effects on the Mid West population, unless this cohort can be attracted back.
Profile of Immigrants to Ireland

While regional level data is unavailable in relation to the educational attainment, skills and employment sectors of immigrants to Ireland it is worth considering the national trends to provide an indication of these factors in the Mid West. In 2006, 38.3 per cent of non-Irish nationals in Ireland had a third level qualification compared to 28.2 per cent of Irish nationals. Non-Irish female nationals have a very high educational attainment of 43.2 per cent compared to 34.3 per cent for their male counterparts. This compares to 25.6 per cent and 30.7 per cent for Irish males and females respectively (CSO Census 2006). In relation to the skills of non-Irish nationals, only 9.9 per cent are Employers and Managers compared to 16.2 per cent for Irish nationals. However, there is a higher percentage of non-Irish nationals in the Higher Professionals (6.4%) category than among Irish nationals (5.8%). In relation to unskilled workers non-Irish nationals account for a larger percentage (5.6%) when compared to 3.6 per cent for Irish nationals (Census 2006).61 NESC (2006) suggests that while migrants may have high educational attainment, language barriers and a lack of appropriate employment opportunities may be instrumental in those with high educational attainment engaging in lower skilled employment.

Profile of Returning Migrants

In 1999 it was found that more Irish-born female migrants returned than males. The surplus of females returning is interesting considering that there were excess male emigrants in the 1980s. Punch and Finneran (1999) also found that the female ratio for returned Irish-born migrants in 1996 was higher than males, yet 11 per cent more males than females emigrated over the previous 10 year period. This suggests that women have a greater propensity to return (Walter 2002). With the increasing stock of young, well educated Irish population abroad, this cohort remains important for creating long term economic growth in the Mid West Region. Barrett and O’Connell (2001) found that returning migrants in the 1990s were more likely to be more educated than non-Irish migrants. As those with a higher education are more likely to emigrate, it is important for the Mid West to attract these migrants back.

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61 With regards to occupation groups during the period 2002-2008 425,600 foreign nationals were assigned PPSNs, of which 249,700 were male and 175,900 female. During this period they were predominantly employed in five broad economic activities: real estate, renting and business activities (94,900), hotels and restaurants (76,800), wholesale and retail trade (75,300), manufacturing (49,500), and construction (37,400) (CSO 2009b).
6.2.5 Participation Effect

This section considers the participation effect on the Mid West’s labour supply with particular emphasis on female labour force participation which has considerable scope for further increase. This is particularly important with the decline of the migration effect on the region’s labour supply.

To increase labour market participation is a major challenge currently faced by the EU, and attracting women into the labour force appears as a promising avenue to do so. (Genre et al 2010, p.1499)

While the economy stagnated in the 1980s, female participation, unlike male participation which declined and fluctuated, continued to increase steadily. Female participation was the main impetus behind the increased labour force participation during the boom years (Collins and Wickham, 2004). Figure 6.5 highlights the significant, however narrowing since the 1980s, gap that persists in relation to male and female labour force participation in the Mid West Region. There is currently a gap of close to 20 percentage points between male and female participation. Closing this gap through raising female labour force participation has the potential to be a major source of creating sustainable long run regional economic growth. Male participation in the labour force generally remains stable. Figure 6.5 highlights that female labour force participation is clearly the interesting dynamic of the two.

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62 Participation refers to the proportion of people of working age who are working or seeking work, that is, in the labour force.

63 The increase in participation of married females was key contributory factor. An analysis by Russell and O’Connell (2004) revealed that one quarter of females who were engaged in home duties in 1994 had transitioned to paid employment between the period 1994 to 1999.
“The labour force participation rate is an important measure of the dynamism of an economy” (WDC 2007b, p.21). Female participation rates remain low in Ireland. The national average rate is 54.3 per cent (15 years and over) and the Mid West is falling behind this at 52.4 per cent in 2009 (Table 6.8). It is interesting to note that while there were major increases in Mid West female labour force participation from the late 1990s and the 2000s, the growth in female participation has narrowed since 2005. However, “…as this recession abates women…will be an important force in spurring a recovery and generating new prosperity” (Silverstein and Sayre 2009, p.3). The Mid West has a major reserve of un-mobilised labour which is indicated by the low female participation rate, which requires effective government policies to facilitate this in contributing to future economic growth.
Table 6.8: Female Labour Force Participation Rates, 1989-2009

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Dublin</td>
<td>40.4</td>
<td>44.1</td>
<td>53.7</td>
<td>55.6</td>
<td>56.6</td>
</tr>
<tr>
<td>South East</td>
<td>31.7</td>
<td>37.6</td>
<td>45.5</td>
<td>48.9</td>
<td>52.3</td>
</tr>
<tr>
<td>Mid East</td>
<td>31.2</td>
<td>40.4</td>
<td>50.9</td>
<td>54.0</td>
<td>55.8</td>
</tr>
<tr>
<td>Midlands</td>
<td>28.9</td>
<td>36.2</td>
<td>43.8</td>
<td>50.7</td>
<td>50.2</td>
</tr>
<tr>
<td>South West</td>
<td>31.8</td>
<td>36.6</td>
<td>44.7</td>
<td>50.4</td>
<td>53.9</td>
</tr>
<tr>
<td><strong>Mid West</strong></td>
<td><strong>33.8</strong></td>
<td><strong>39.4</strong></td>
<td><strong>45.0</strong></td>
<td><strong>52.0</strong></td>
<td><strong>52.5</strong></td>
</tr>
<tr>
<td>West</td>
<td>32.6</td>
<td>37.5</td>
<td>45.4</td>
<td>49.7</td>
<td>56.0</td>
</tr>
<tr>
<td>Border</td>
<td>30.6</td>
<td>36.6</td>
<td>44.1</td>
<td>47.3</td>
<td>48.5</td>
</tr>
<tr>
<td><strong>State</strong></td>
<td><strong>34.4</strong></td>
<td><strong>39.7</strong></td>
<td><strong>48.1</strong></td>
<td><strong>51.9</strong></td>
<td><strong>54.0</strong></td>
</tr>
</tbody>
</table>


Note 1998 refers to Q3, and 1999-2009 refers to Q2

Although the increase has been very rapid by international standards, female participation in Ireland is only marginally above the OECD average and well below those in other English-speaking and Nordic countries.

(OECD 2009c, p.105)

As considered in Chapter 2 the female labour force participation of 15 to 64 years olds in the US, the Netherlands, the UK and, Sweden is substantially higher than in Ireland and the Mid West Region. “Increasing the workforce participation of women is the key to faster growth…” (OECD 2008a, p.20). Female labour force participation has the potential to be an engine of growth for the region, which would ensure that the Mid West would not have to rely on external labour if the region facilitated increases in the female labour force. Migration trends are likely to be more erratic going forward but the Mid West can rely more on its cohort of working age females by facilitating an increase in female participation rates.

Table 6.9 presents the female labour force participation rates of female both 15 years and over, and the 15 to 64 age cohort. It is evident that Ireland has one of the lowest rates of female labour force participation rates for the 15-64 age cohorts which suggests that there is significant potential in Ireland and moreover the Mid West for improvement.

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64 Increasing female labour force participation rates in the region does not necessarily entail falling birth rates (Daly, 2007). Developed countries such as the US and Sweden with high birth rates also have significantly higher levels of females participating in the labour force when compared to the Mid West. In 2008 the US had a TPFR of 2.12 and a female labour force participation rate of 79.5 per cent.
Table 6.9: International Female Labour Force Participation Rates, 2008

<table>
<thead>
<tr>
<th>County</th>
<th>Female Labour Force Participation Rate (15 years and over)</th>
<th>Female Labour Force Participation Rate (15-64 years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sweden</td>
<td>68.4</td>
<td>77.2</td>
</tr>
<tr>
<td>Norway</td>
<td>70.7</td>
<td>76.9</td>
</tr>
<tr>
<td>Denmark</td>
<td>74.6</td>
<td>76.8</td>
</tr>
<tr>
<td>Switzerland</td>
<td>61.3</td>
<td>75.7</td>
</tr>
<tr>
<td>Finland</td>
<td>67.6</td>
<td>73.7</td>
</tr>
<tr>
<td>Canada</td>
<td>62.8</td>
<td>73.3</td>
</tr>
<tr>
<td>Netherlands</td>
<td>59.2</td>
<td>72.0</td>
</tr>
<tr>
<td>New Zealand</td>
<td>61.3</td>
<td>71.2</td>
</tr>
<tr>
<td>Australia</td>
<td>58.3</td>
<td>68.8</td>
</tr>
<tr>
<td>UK</td>
<td>53.8</td>
<td>68.2</td>
</tr>
<tr>
<td>US</td>
<td>55.9</td>
<td>68.1</td>
</tr>
<tr>
<td>Germany</td>
<td>51.9</td>
<td>67.5</td>
</tr>
<tr>
<td>France</td>
<td>51.4</td>
<td>64.0</td>
</tr>
<tr>
<td><strong>Ireland</strong></td>
<td><strong>54.2</strong></td>
<td><strong>60.4</strong></td>
</tr>
</tbody>
</table>

Source: ILO Labour Statistics – IA Total and Economically Active Population by Age Group

6.2.6 Summary

The findings in this section show that while female labour force participation was a major driver of past economic growth in the Mid West, its full potential was never realised. The migration effect on the region’s labour supply has reduced considerably in recent years with the return to net outward migration in the region. Therefore, the demographic effect and participation effect on labour supply will be particularly important for enhancing future economic growth in the region. The demographic effect ‘feeds’ into the participation effect and the positive fertility rates in the region have the potential to translate into future labour supply, provided that the region is able to retain its population. Importantly the findings illustrate that the Mid West Region is experiencing a fundamental regional problem of an inability to sustain its population. The analysis in this section has important implications for government policy in terms of promoting female labour supply, ensuring that the Mid West retains its population, and realising the full potential of the regions positive TPFRs. The following section presents the educational attainment and skills level of the labour force, which have a role in fostering increased female participation rates, and therefore significant implications for future productivity growth in the service sector.

6.3 Labour Supply and Education

The section discusses the changing profile of the Mid West Region’s human capital in recent years. Future growth of the Mid West economy depends on having a dynamic labour force
which is determined by a number of key factors which include an educated population, the ability to retain and attract graduates, and the production of new degrees. As discussed in the literature review, human capital is central to the growth process of a region as it can raise productivity and increase the ability of a region to create and adapt to new technologies. A labour force with a higher educational attainment is likely to produce higher value goods and services and moreover, are likely to be more innovative (EGFSN 2007). Furthermore, it influences the level to which females participate in the region’s labour force. The rising educational attainment in Ireland and the Mid West Region has resulted in more females entering into the labour force (NESC 2008). This section also considers graduate migration particularly in relation to the distribution of the University of Limerick graduates, and the issue of the ‘brain drain’.

6.3.1 Education Trends

Educational qualifications are an important indicator of the skill level and quality of the labour force which in turn is a key consideration in the location requirements of mobile investment and associated employment opportunities. As noted, government policy is to position Ireland as a ‘knowledge economy’. High levels of education, particularly at third and higher levels are important inputs into the knowledge economy and are innovation drivers.

(WDC 2007a, p.25)

This section considers the changes of tertiary level educational attainment of the Mid West population since the 1990s in an Irish regional comparative context, as tertiary level education is considered to be a key determinant of future economic growth and the level of regional innovation. The educational attainment of the population in the Mid West has increased significantly since the 1990s. The percentage of people with a third level qualification of higher grew from 17.2 per cent in 1996 to 26.5 per cent in 2006 in the Mid West. Despite this increase however, the region lags behind the national average of 29.1 per cent. This has implications in relation to the Mid West Region realising its full potential as it impacts the ability of the region to develop indigenous enterprise and attract FDI. Table 6.10 presents a regional comparison of educational attainment in 2006.
Table 6.10: Highest Level of Education completed by Region, 2006

<table>
<thead>
<tr>
<th>Region</th>
<th>Primary or no formal</th>
<th>Lower</th>
<th>Upper</th>
<th>3rd level</th>
<th>Not stated % of cohort</th>
<th>Persons (000s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Border</td>
<td>24.1</td>
<td>22.9</td>
<td>25.7</td>
<td>23.4</td>
<td>4.0</td>
<td>314.9</td>
</tr>
<tr>
<td>Midland</td>
<td>19.9</td>
<td>22.3</td>
<td>29.7</td>
<td>22.7</td>
<td>5.4</td>
<td>167.7</td>
</tr>
<tr>
<td>West</td>
<td>20.4</td>
<td>19.3</td>
<td>28.9</td>
<td>27.5</td>
<td>3.8</td>
<td>278.2</td>
</tr>
<tr>
<td>Dublin</td>
<td>15.8</td>
<td>16.4</td>
<td>26.4</td>
<td>35.9</td>
<td>5.5</td>
<td>799.0</td>
</tr>
<tr>
<td>Mid-East</td>
<td>14.7</td>
<td>20.1</td>
<td>30.3</td>
<td>30.8</td>
<td>4.1</td>
<td>312.9</td>
</tr>
<tr>
<td>Mid-West</td>
<td>17.7</td>
<td>21.3</td>
<td>30.1</td>
<td>26.5</td>
<td>4.4</td>
<td>242.3</td>
</tr>
<tr>
<td>South-East</td>
<td>19.5</td>
<td>24.2</td>
<td>29.4</td>
<td>23.0</td>
<td>3.8</td>
<td>313.6</td>
</tr>
<tr>
<td>South-West</td>
<td>17.1</td>
<td>21.0</td>
<td>28.8</td>
<td>28.6</td>
<td>4.5</td>
<td>421.7</td>
</tr>
<tr>
<td>State</td>
<td>18.0</td>
<td>20.1</td>
<td>28.2</td>
<td>29.1</td>
<td>4.6</td>
<td>2,850.3</td>
</tr>
</tbody>
</table>

Source: CSO Census of Population 2006

1 Persons aged 15 & over, whose full-time education has ceased.

Educational attainment levels are reflected in the regional occupational structure as regions with a higher proportion engaged in agriculture, construction and traditional manufacturing, are in general, more likely to experience lower educational attainment levels. Therefore, regions with a considerable presence of high-skill services and manufacturing employment are more likely to retain and attract labour with relatively high levels of educational attainment (WDC 2007a). This is evident in the case of the Mid West which has a lower percentage of population with tertiary level educational attainment than the national average and is more reliant than other regions on manufacturing, construction and agriculture in terms of employment.

Educational Attainment by Gender

This section analyses the educational attainment by gender as the level of female education is important for determining their participation in the Mid West labour force. The proportion of females to males with a third level degree or higher in the region has continually increased over the ten year period 1996 to 2006. This is similar to national trends where the percentage of females with a third level degree or higher (16.4%) has surpassed that of males (14.9%) (CSO 2006). Figure 6.6 presents the changes in the proportion of males and females with a third level degree in the Mid West Region, in comparison to the national average, over the 10 year period.
Females are outperforming males in school and more women than men graduate from universities, however evidently their skills are not being used effectively to progress regional economic growth as females are generally employed in lower skills occupations which is discussed in the following section. There is a clear disparity between educational out-performance and the under-use of female qualifications, skills and expertise by firms in the Mid West Region. Even though female educational attainment has surpassed that of males, and girls outperform boys in school, that female labour force participation rates in the Mid West are lower than males. Therefore, similar to the state, the region is not making full use of its population of working age. Low levels of female participation in the Mid West could be due to a mismatch of supply and demand as the services sector is not providing employment opportunities and subsequently, there is no market for female skills.

In terms of a regional breakdown, 3rd level female educational attainment in the Mid West is 29.7 per cent, slightly lower the national average of 31.7 per cent (Table 6.11). Male 3rd level education attainment in the Mid West and other Irish regions is likely to be lower due to increased employment opportunities in the boom, particularly in the construction sector, which would have resulted in males foregoing third level education in favour of employment.
### Table 6.11: Third Level Educational Attainment (%), 2006

<table>
<thead>
<tr>
<th>Region</th>
<th>Females</th>
<th>Males</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Border</td>
<td>27.6</td>
<td>19.4</td>
<td>23.4</td>
</tr>
<tr>
<td>Dublin</td>
<td>36.3</td>
<td>35.6</td>
<td>35.9</td>
</tr>
<tr>
<td>Mid-East</td>
<td>33.2</td>
<td>28.5</td>
<td>30.8</td>
</tr>
<tr>
<td>Midland</td>
<td>26.6</td>
<td>19.0</td>
<td>22.7</td>
</tr>
<tr>
<td>Mid-West</td>
<td>29.7</td>
<td>23.3</td>
<td>26.5</td>
</tr>
<tr>
<td>South-East</td>
<td>26.4</td>
<td>19.8</td>
<td>23.0</td>
</tr>
<tr>
<td>South-West</td>
<td>31.8</td>
<td>25.5</td>
<td>28.6</td>
</tr>
<tr>
<td>West</td>
<td>31.7</td>
<td>23.5</td>
<td>27.5</td>
</tr>
<tr>
<td>State</td>
<td>31.7</td>
<td>26.5</td>
<td>29.1</td>
</tr>
</tbody>
</table>

*Source: Derived from Census of Population 2006, Volume 10 Table 3*

In terms of future female skills requirements, female workers with a science and technology background are a key resource in knowledge-based economies. Even though job growth in recent years in this area has been driven by increases in female employment, females remain considerably underrepresented in science and technology studies at both secondary and tertiary levels of education and also in the technical workforce in the OECD (OECD 2008a). Encouraging greater female participation in computer science and technology-oriented jobs would drive innovation and economic advances in the Mid West Region. Overall, investment in education is essential so that regions can respond to changing technologies and demographics that are re-shaping labour markets (OECD 2010c).

### Regional Innovation Capacity and Performance

Innovation is increasingly important as the role of indigenous firms becomes more important as a result of the current economic recession, as Ireland and the Mid West region cannot rely predominantly on FDI.\(^{65}\) This is largely due to the increasingly competitive FDI landscape with the new EU member states and the BRIC (Brazil, Russia, India and China) economies. Dineen and Lenihan (2011, p.21) argue that “[i]nnovation is hailed as key to firm/economy growth and development”. It is crucial for developing the indigenous sector. Innovation is also linked to entrepreneurship as an innovative economy is key for stimulating this (Dineen and Lenihan, 2011). One of the most important factors underlying Mid West economic progress is innovation capacity as innovation is a key driver of the Irish Government’s ‘Smart Economy’. As discussed in Section 1 innovation is crucial for regional competitiveness and productivity, and the region’s higher education infrastructure is fundamental for facilitating innovation in the region.

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\(^{65}\) At the economy level innovation refers to a change in existing activities that improves economic performance. At the firm level innovation refers to new or improved products or processes resulting in increased productivity.
At 11.9 per cent of total national business expenditure on R&D in 2005, the Mid West Region, is performing similar to the West (12.5%) and South West (11.4%) in this regard. Dublin is significantly ahead of all regions accounting for 41.8 per cent of all business expenditure on R&D. While the level of business expenditure on R&D is relatively high in the Mid West, it is limited to a small number of large companies. However, this suggests that there is potential for improving the higher education institutes and industry cooperation to increase the innovative capacity. However, overall, Forfás (2009) argues that the region is underperforming in terms of its innovation capacity. For the Mid West to achieve economic recovery on a sustainable basis, strengthening its research and innovation capacity will be a crucial.

6.3.2 Graduate Migration

Failure to attract educated migrants and retain the locally educated labour force can imply substantial costs for regional competitiveness.

(OECD 2010a, p.83)

The extent to which graduates in the region have been able to find employment in the Mid West influences the education and skill level of the region’s labour force. Therefore, this section considers the distribution of 2008 UL graduates across Irish regions as well as the sectors that these graduates find employment in.

Distribution of UL Graduates

Since 2007 there has been a significant shift in the geographical distribution of UL graduate jobs as the Mid West Region has surpassed the Dublin Region as the preferred location of UL graduates. In 2008, 38 per cent of UL graduates found employment in the region. The East is the second choice of UL graduates, accounting for 29 per cent of employment (Figure 6.7). However, despite this, there continues to be a movement of Mid West graduates to better performing regions with more developed service sectors, particularly the East and South West, with a significant ‘brain drain’ to other Irish regions and internationally. It is evident that graduates are increasingly dependent on knowledge-based sectors and jobs, and the Mid West is failing to provide adequate employment opportunities, and therefore has difficulty in retaining highly educated labour. The Mid West can only retain or attract highly skilled graduates by building the knowledge base, attracting knowledge intensive industries and supporting enterprise development. Future growth of the regional economy will be dependent
on the level to which policymakers can improve the skills base which can be addressed through an effective skills/jobs match policy.

**Figure 6.7: Region of Employment for 2008 UL Graduates**

![Region Of Employment (Ireland)](image)

**UL Graduate Employment by Sector**

In relation to employment sectors, UL graduates predominantly find employment in the service sector including business, finance, insurance, education and health. Figure 6.8 presents the employment sectors of 2008 UL graduates. However, there is platform for these graduates in the Mid West if they are migrating to Dublin and the South West, which is impacting the ability of the region to obtain its share of the knowledge-based economy.
Forfás (2006a) argues that the ‘brain drain’ of graduates to Dublin and abroad from other Irish regions is likely to continue if a wider variety of career structures and job opportunities are not provided in the regional labour markets. A highly educated and skilled labour supply is very elastic and those with high levels of education generally have higher mobility (Barrett et al 2005). This is even more so the case for female labour which, as discussed, generally has a higher educational attainment than males.

Return of the ‘Brain Drain’

The Mid West is currently experiencing a ‘brain drain’ to other Irish regions with better employment opportunities as well as abroad due to the current economic recession. This pattern has both diminished the human capital available to the Mid West Region and also enhanced the quality of the workforce available in other Irish regions including Dublin, improving the growth of their economies. The underperformance of the region’s service sector contributes to this as there is a lack of employment opportunities for recent graduates.

The term ‘brain drain’ refers to “the loss of human capital from an area, notably people with higher education, technical skills and knowledge” (WDC 2009, p.33). Therefore, it is a good indicator of a region’s performance.
The loss of educated and skilled young people from a region can make it less attractive for inward investment in high value and high skill sectors. In addition to this it can affect the level of indigenous business start-ups. Therefore, it contributes to an older economic structure which is more dependent on traditional activities and less on knowledge-based sectors. A brain drain also represents a loss of the investment made in the education and training of the region’s younger cohort (WDC 2009a). It impacts the standard of living in a region as educated workers are generally more productive and it can increase the price of services that require higher skills (OECD 2008b).

6.3.3 Summary
The findings in this section show that the Mid West is underperforming in terms of the percentage of the labour force with a third level qualification when compared to the national average. Outward migration of skilled labour from the region, due to an underperforming service sector, is impacting this. The findings illustrate that in recent years females have been more educated than males in the region however the full potential of the region’s human capital is underutilised. Empirical evidence in this section exemplifies that that there is an outflow of graduates from the Mid West, to Dublin in particular which is a highly service based region in terms of employment. This illustrates a lack of adequate employment opportunities and skills mismatch in the Mid West.

6.4 Skills and Occupations

…[T]he economic success of a region in the new economy hinges on whether its economy has the right mix of workers to produce and disseminate knowledge. (Koo 2005, p.358)

The purpose of this section is to discuss the skills base of the Mid West in comparison to national trends and to identify the future skills needs of the region. As well as educational attainment, occupations are also an important measure of the human capital in a region (Koo 2005; Florida 2002). “…[T]he availability of skilled workers is one of the most important determinants of firm location decisions” (Koo 2005, p.358). Having high level skills enables a region to seek out new opportunities and attract industries outside their general cluster (Currid and Stolarick 2010). In order for the Mid West Region to sustain future long run economic growth, it is imperative that the skills base of the region is understood and that the profile of skills required for regional growth are identified. “Skills will be the key determinant of future competitiveness in the context of accelerating technological change” (Forfás 2000a, p.6).
Over the period 1996 to 2006 there has been a considerable change in the socio-economic group of the region’s workforce with the number of professions increasing, and unskilled and agricultural workers decreasing significantly. In relation to the skills profile the Mid West has a lower percentage of *Employers and Managers* (13.5%) and *Higher Professionals* (5.1%) than the national average and Dublin (Table 6.12). This has implications for innovation, productivity and economic growth in the region which is reliant on high skilled employees. Again it emphasises that the Mid West is unable to retain or attract highly skilled labour to the region.

### Table 6.12: Occupational Groups by Percentage Share of Total Occupations, 2006

<table>
<thead>
<tr>
<th>Occupation Group</th>
<th>Mid West</th>
<th>State</th>
<th>Dublin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employers and managers</td>
<td>13.5</td>
<td>15.3</td>
<td>17.2</td>
</tr>
<tr>
<td>Higher professional</td>
<td>5.1</td>
<td>5.8</td>
<td>7.9</td>
</tr>
<tr>
<td>Lower professional</td>
<td>10.6</td>
<td>10.7</td>
<td>11.0</td>
</tr>
<tr>
<td>Non-manual</td>
<td>18.3</td>
<td>19.3</td>
<td>21.4</td>
</tr>
<tr>
<td>Manual skilled</td>
<td>10.8</td>
<td>10.1</td>
<td>8.2</td>
</tr>
<tr>
<td>Semi-skilled</td>
<td>9.5</td>
<td>8.4</td>
<td>6.9</td>
</tr>
<tr>
<td>Unskilled</td>
<td>3.8</td>
<td>3.8</td>
<td>3.3</td>
</tr>
<tr>
<td>Own account workers</td>
<td>4.1</td>
<td>4.3</td>
<td>3.7</td>
</tr>
<tr>
<td>Farmers</td>
<td>5.6</td>
<td>3.9</td>
<td>0.2</td>
</tr>
<tr>
<td>Agricultural workers</td>
<td>0.6</td>
<td>0.6</td>
<td>0.1</td>
</tr>
</tbody>
</table>

*Source: Derived from CSO Census of Population 2006, Volume 8 Table 15*

#### 6.4.1 Skills Profile by Gender

This section analysis the Mid West skills profile by gender in recent years, with particular emphasis on female skills within the service sector. Albeit females have entered the labour force significantly since the 1990s, they remain largely excluded from certain sectors and senior ranks in firms (Wittenberg-Cox and Maitland 2008).

Women’s representation in management positions in both the private and public sectors is markedly low and evidences another failure to make full use of available human capital. (OECD 2008a, p.29)

It is evident that this is the case in the Mid West Region where males constitute a larger proportion of *Employers and Managers* and *Higher Professionals*, with females surpassing males in two of the categories, *Lower Professionals* and *Non-Manual* workers (Figure 6.9). This is similar to OECD trends in countries where women are 40 to 50 per cent of the labour force and only account for less than 8 per cent of senior managers. Ireland however, is one of the better performing countries in terms of the share of women in management (OECD
2008a). However, even though it is reducing, the ‘glass ceiling’ phenomenon still persists in Ireland and the Mid West. The OECD (2008a, p.29) highlights that “[t]he result of this managerial gender gap is the reduced performance, innovation and effectiveness of firms and governments.” Including more females in managerial level has been found to increase the innovation capacity of firms (London Business School 2007).

Figure 6.9: Gender Breakdown of the Skill Profile in the Mid West Region, 2006

Source: CSO Census of Population 2006, Volume 8 Table 16D

The Mid West Region is not utilising its human capital to its full extent, as females are outperforming males in terms of education, yet less women are in managerial positions in the region. The managerial gender gap persists despite empirical evidence (OECD 2008a) that female managers can improve the performance of firms. Fostering a gender balance within a region has the potential to enhance the economic performance of firms within the region.

Sustainable economic growth at national and global level depends on women joining the labour force and fuller use being made of their skills and qualifications. (OECD 2008a, p.11)

In relation to the skill level of females employed in the service sector, there is a lower percentage of females as Managers and Administrators. Of females employed in services in the Mid West a higher proportion are engaged in Personal and Protective Services and Sales.

67 An international study of large corporations with a higher proportion of females in top management has shown that these firms demonstrate the best performance in terms of work (OECD 2008a).
which would be less productive than higher value added services (Table 6.13).\(^{68}\) This suggests that a potential skills mismatch exists in the region. Furthermore, interregional migration, which is occurring in the case of the Mid West Region, is an evident indicator of education and skills mismatches in the regional labour market.\(^{69}\) This should be of particular concern for Irish policymakers as international policymakers are increasingly recognising the added-value of anticipating skills trends.

### Table 6.13: Skills Level of Females Employed in Services, Mid West, State & Dublin, Q4 2009 (%)

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Mid West</th>
<th>State</th>
<th>Dublin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managers and Administrators</td>
<td>9.7</td>
<td>11.1</td>
<td>13.6</td>
</tr>
<tr>
<td>Professional</td>
<td>15.4</td>
<td>15.2</td>
<td>15.6</td>
</tr>
<tr>
<td>Associate Professional and Technical</td>
<td>12.2</td>
<td>13.4</td>
<td>13.0</td>
</tr>
<tr>
<td>Clerical and Secretarial</td>
<td>21.5</td>
<td>20.7</td>
<td>22.3</td>
</tr>
<tr>
<td>Craft and Related</td>
<td>*</td>
<td>0.4</td>
<td>*</td>
</tr>
<tr>
<td>Personal and Protective Service</td>
<td>20.0</td>
<td>19.2</td>
<td>16.5</td>
</tr>
<tr>
<td>Sales</td>
<td>13.4</td>
<td>12.5</td>
<td>11.6</td>
</tr>
<tr>
<td>Plant and Machine Operatives</td>
<td>*</td>
<td>0.6</td>
<td>0.6</td>
</tr>
<tr>
<td>Other</td>
<td>6.5</td>
<td>6.8</td>
<td>6.6</td>
</tr>
</tbody>
</table>

*Source: Derived from CSO QNHS special data run for Q4 2009*

*Based on population estimates less than 1,000 that are deemed too small to produce reliable results*

### 6.4.2 Summary

The findings in this section show that the Mid West has a relatively low skills base and is significantly falling behind national trends in relation to the level of *Employers and Managers* and *Higher Professionals*. The skills level in the Mid West is lagging behind the national average which is impacting the region’s productivity and future economic growth potential. In relation to skills by gender, males are outperforming females in relation to the number of *Employers and Managers* and *Higher Professionals*. Therefore, the Mid West is currently not making full use of its human capital as females are more educated than males. Increasing the skill levels of females in the region would ensure that the region has adequate labour force to meet demand in the increasingly knowledge-based and services economy. The analysis also illustrated that a skills mismatch affects females in the Mid West.

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\(^{68}\) This suggests that changes in government policy to increase the number of females at higher occupational levels have the potential to increase productivity.

\(^{69}\) “The term skills mismatch can describe situations in which workers’ skills exceed or lag behind those employers seek” (Handel 2003, p136). Appendix C provides a brief overview of skills mismatch theory. There is evidence that a significant number of employees in Ireland are mismatched in terms of the skills and qualifications required for their job (Mavromaras and McGuinness, 2007).
6.5 Conclusion

This analysis in this chapter shows that the migration effect on the Mid West’s labour supply has diminished with the recent downturn and therefore, the demographic effect and participation effect will be important for future regional growth. The Mid West is experiencing an extremely favourable TPFR, but this will only have a positive impact on the region’s future labour supply provided that this labour remains in the region. It is evident that with the levels of outward migration from the Mid West to other Irish regions, that the region is currently growing and supplying labour for these regions, and therefore, enhancing their economic performance. The region’s low levels of female participation can be linked to the underperformance of the service sector, as a developed service sector enhances female participation by providing employment opportunities. The region is more reliant on manufacturing and construction which are not providing an avenue for females to enter the labour force. The educational attainment and skills levels are low in the Mid West, with the region currently experiencing a ‘brain drain’, particularly in relation to recent UL graduates, which is linked to service employment opportunities in other Irish regions. Overall, it is evident that there are strong correlations between the low levels of human capital and female participation, and the underperformance of the region’s service sector. These empirical findings suggest that government policy is not effective in realising the full potential of the region and that a ‘whole of government’ approach will be particularly important in this regard. Government measures to improve the quality of both labour supply and demand will be critical for future economic growth in the Mid West. The following section considers the Irish government’s approach to regional development as well as key policy instruments and targets required to facilitate sustainable economic growth in the Mid West.
Section 3

Regional Development Policy and Economic Growth
Chapter 7

Regional Development Policy in Ireland
7.1 Introduction
Clearly, the economic performance of the Mid West, which has lagged behind most other regions in Ireland, leaves considerable scope for improvement. This section seeks to identify policy responses to facilitate long term economic growth in the region. This chapter considers the Irish government’s approach to regional development policy both on its own and relative to some OECD regional growth policy case studies. The Irish government does not have an explicit regional economic growth policy in the manner of case study countries, Sweden, Finland and France, which are considered. The new paradigm of regional policy emerging in OECD countries is presented as this new concept strongly reflects the recent theoretical developments in the regional growth literature and has important implications for Irish policymakers. In recent years the National Spatial Strategy 2002-2020 was launched by the government after the ‘regional problem’ of unbalanced growth in Ireland became more evident. This is considered, as well as the current National Development Plan 2007-2013 which has a key ‘horizontal theme’ of regional development, in the context of the new paradigm of regional policy. The contribution of EU regional policy to Mid West economic growth is outlined. Three best practice international policy case studies are presented as these have important lessons for Irish policymakers. The impact of the current economic crisis on national and international regional policies is discussed as it is stimulating a move towards a ‘regional’ response to economic recovery internationally in comparison to the increasingly ‘national’ approach of the Irish government. This chapter concludes with recommendations for Irish policymakers in order to stimulate regional economic growth. The challenge for Irish policymakers is not just to initiate growth, but to sustain it in the long run.

7.2 A New Paradigm of Regional Policy
This section considers the recent paradigm shift in regional policy which is currently taking place in many OECD countries. The main elements of the new concept are analysed in this section as the conceptual change in regional policy involves new objectives, new policy instruments and new governance. However, firstly it is important to define regional policy. Regional policy comprises all actions on the part of Government to impact the spatial distribution of economic and social activity, including income, population, revenue, production of goods and service, transport and social infrastructure (Hansen et al 1990). This definition suggests that various policies, such as education, services, trade and labour market policies, may be ‘regional’ and even though they are not necessarily intended to be. Therefore “[r]egional policy is relevant to all policy” (WDC 2010b, p.1).
7.2.1 Paradigm Shift in Regional Policy

Regional policy has evolved from a top-down subsidy-based group of interventions designed to reduce regional disparities, into much broader policies designed to improve “regional competitiveness”. National governments are increasingly favouring regional growth over redistribution in pursuit of national or regional competitiveness and balanced national development.

(OECD 2010b, p.12)

This section discusses the recent conceptual changes in regional policy, particularly in relation to the causes of this shift, the rationale for regional policy and the key characteristics of the old and new paradigms of regional growth. Paradoxically, one of the most important justifications for regional development policy is the need to promote national economic growth. Despite government subsidies to lagging regions, regional disparities continue to persist within OECD countries reflecting the failure of previous policies and under-used regional economic potential. Subsequently, in recent years the rationale for regional policy has moved from government subsidies for employment and firms in lagging regions, aimed at promoting regional convergence, to a focus which aims to mobilise regional assets and foster growth and competitiveness in all regions (OECD 2009a). The new approach of regional development policy focuses on enhancing the competitiveness of domestic firms which has resulted in an interest in cluster policies and sharing knowledge among firms and the importance of ‘soft’ factors (OECD 2010b; OECD 2006b). This builds on a region’s capabilities and potential with emphasis on activities that foster innovation (OECD 2010b) and facilitates “…endogenous growth by identifying untapped potential source of growth” (OECD 2009a, p.27).

…OECD studies find evidence that sustainable growth rates only occur when regions mobilise their endogenous assets instead of depending on transfers and subsidies.

(OECD 2010b, p.54)

The emergence of more complex regional challenges, including globalisation and increased competition, has contributed to the new concept of regional policy. Furthermore, one of the major causes of the renewed regional policy relates to the concentration of resources which does not directly translate into higher growth rates or economies of agglomeration (OECD 2009a). The market does not necessarily maximise the potential of this alone and therefore, government intervention is required. In general regional development policies in countries have both equity (reduce regional disparities) and efficiency objectives (foster growth and competitiveness) (OECD 2010b).
The new policies reflect elements of Endogeneity Growth Theory and New Economic Geography as they are long term, tailor made and focus on a region’s internal factors for economic growth. Furthermore, this new policy concept reflects the move in the theoretical literature from regional convergence (redistribution) to regional divergence (growth and competitiveness). Regional competitiveness is dependent on the ability of the region to attract and retain successful enterprise as well as maintaining or raising the standard of living within the region, reflecting elements of New Economic Geography (OECD 2006b).

In the past regional policies traditionally had a sectoral approach which could be operated by various levels of government in a segregated manner (OECD 2010b). However, regional policy has now begun to focus on a more coordinated approach, as regional challenges are broad and cross-sectoral (OECD 2010b). The OECD (2010b) argues that the role of central governments has evolved to providing an over-arching framework for the policies. As part of this a regional minister exerts an important role for vertical governance and connecting local and national interests. It is multi-level governance that now is of most benefit to regional policies, which involves every level of government (national, regional and local) with all actors contributing equally to the policy design and implementation. This approach can address various areas including the provision of infrastructure and public goods, human capital formation and mobility, innovation and the business environment (OECD 2009a).70

Canada, Finland, Sweden, the US and France all have regional competitiveness on the policy agenda (OECD 2010b). For example regional policy in France focuses on the attractiveness and competitiveness through local regional development, while the US concentrates on regional competitiveness through clusters and innovation (OECD 2010b). In Ireland the focus is on balanced regional development, regional disparities and gateways in particular. Elements of the new concept of regional policy are evident with the current National Development Plan 2007-2013 emphasising the importance of realising the potential of all Irish regions. Table 7.1 presents the main characteristics of the old and new paradigms of regional policy.

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70 For example in Sweden regional policy has grown from ‘narrow’ regional policies such as regional aid instruments to much broader policies where the regionalisation of sectoral policies has occurred in areas including education, labour market, trade and industry, transport and innovation (OECD 2010b).
Table 7.1: Paradigm Shift in Regional Development Policy

<table>
<thead>
<tr>
<th>Old Paradigm</th>
<th>New Paradigm</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Problem Recognition</strong></td>
<td><strong>New Paradigm</strong></td>
</tr>
<tr>
<td>Regional disparities in income, infrastructure stock and employment</td>
<td>Lack of regional competitiveness, underused regional potential</td>
</tr>
<tr>
<td><strong>Objectives</strong></td>
<td></td>
</tr>
<tr>
<td>Equity though balanced regional development</td>
<td>Competitiveness and equity</td>
</tr>
<tr>
<td><strong>General policy framework</strong></td>
<td></td>
</tr>
<tr>
<td>Compensating temporarily for location disadvantages of lagging regions, responding to shocks (e.g industrial decline) (Reactive to problems)</td>
<td>Tapping under-utilised regional potential through regional programming (Proactive for potential)</td>
</tr>
<tr>
<td><strong>- theme coverage</strong></td>
<td></td>
</tr>
<tr>
<td>Sectoral approach with a limited set of sectors</td>
<td>Integrated and comprehensive development projects with wider policy area coverage</td>
</tr>
<tr>
<td><strong>- spatial orientation</strong></td>
<td></td>
</tr>
<tr>
<td>Targeted at lagging regions</td>
<td>All-region focus</td>
</tr>
<tr>
<td><strong>- unit for policy intervention</strong></td>
<td></td>
</tr>
<tr>
<td>Administrative area</td>
<td>Functional area</td>
</tr>
<tr>
<td><strong>- time dimension</strong></td>
<td></td>
</tr>
<tr>
<td>Short term</td>
<td>Long term</td>
</tr>
<tr>
<td><strong>- approach</strong></td>
<td></td>
</tr>
<tr>
<td>One-size-fits-all approach</td>
<td>Context-specific approach (place-based approach)</td>
</tr>
<tr>
<td><strong>- focus</strong></td>
<td></td>
</tr>
<tr>
<td>Exogenous investments and transfers</td>
<td>Endogenous local assets and knowledge</td>
</tr>
<tr>
<td><strong>Instruments</strong></td>
<td></td>
</tr>
<tr>
<td>Subsidies and state aids (often to individual firms)</td>
<td>Mixed investment for soft and hard capital</td>
</tr>
<tr>
<td>(business environment, labour market, infrastructure)</td>
<td>(business environment, labour market, infrastructure)</td>
</tr>
<tr>
<td><strong>Actors</strong></td>
<td></td>
</tr>
<tr>
<td>Central government</td>
<td>Different levels of government, various stakeholders (public, private, NGOs)</td>
</tr>
</tbody>
</table>

Source: OECD 2010b

This change in regional policy is ongoing, challenging, and will take time to implement, with the co-existence of the old and new concepts being observed in many OECD countries (OECD 2010b) including Sweden, Canada, France, the US and Finland. The OECD (2010b) argues that often the changes in policy statements do not coincide with changes in policy instruments. “In these cases, the change is mostly rhetorical without any impacts in the real world” (OECD 2010b, p.13).

This new approach suggests an important role for regional policies in the context of economic recovery and the search for sustainable growth paths.

(OECD 2009a, p.12)

The new concept of regional policy has received increased attention in the current economic crisis. The OECD (2009a, p.2) argues that “[t]he crisis has confirmed the need for a change in the paradigm of regional policy”. Furthermore, the OECD (2009a, p.7) states that:

The temptation to fight the economic crisis with economic nationalism, protectionism and a return to old regional policies based on subsidies to enterprises must be avoided.
In order to meet the new challenges presented by the current economic crisis regional policy needs to evolve and should be at the centre of how nations respond to this (OECD 2009c). This highlights the importance of tailored regional growth models to foster economic recovery in the Irish regions and stimulate national economic growth.

7.2.2 Summary
This discussion in this section shows that the recent developments in the regional growth literature, particularly Endogenous Growth Theory and New Economic Geography, are having a profound effect on the new paradigm of regional policy emerging in many OECD countries. The findings illustrate that the new concept of regional policy emphasises fostering long term, endogenous regional growth, tailored regional policies, and realising the potential of all regions. This new concept of regional policy has implications for the Irish government’s approach to regional development which is considered in the following section.

7.3 Regional Development Policy in Ireland
There is no explicit regional development policy in Ireland in the manner of OECD countries such as Finland, Sweden or France which represent case studies in section 7.4. However, this section considers the National Spatial Strategy 2002-2020 which was the first time that the Irish government began to focus on regional development. Balanced regional development is considered by the government to be one of the key themes in the current National Development Plan 2007-2013 which is examined. Particular emphasis is placed on how these policy documents relate to regional growth theory and the new paradigm of regional policy.

EU regional policy is considered in terms of measuring its impact on the Mid West Region and how it relates to the new concept of regional policy.

7.3.1 National Spatial Strategy 2002-2020

…[I]t was only during the 1990s that it became evident that for the first time in its history, the Irish economy was faced with serious regional problems which have the potential of undermining future national prosperity.

(O’Leary 2003a, p.7)

It is only since 2000 onwards that a regional focus has been on the policy agenda as ‘the regional problem’ emerged as the Dublin/Mid East and South West regions began to progress ahead of all other Irish regions. In 2002 the Irish Government published the National Spatial Strategy 2002-2020 (NSS), which is a 20 year strategic planning and development framework
with the aim of providing balanced regional development based on regional comparative advantages, geographic nature, resource endowments and the potential economic, social and environmental development (Ireland, DEHLG, 2010). The NSS (Ireland, DEHLG 2002, p.11) defines balanced regional development as:

Developing the full potential of each area to contribute to the optimal performance of the State as a whole — economically, socially and environmentally.

The strategy places emphasis on places that have the critical mass required to attract investment, which is supported by New Economic Geography theories (Morgenroth 2006). It emphasises regional dynamism which it considers to be dependent upon the presence of infrastructure, innovation and agglomeration economies, which reflects the new paradigm of regional policy.

This requires an integrated policy response with investment in both ‘hard’ (transport, water, broadband etc) and ‘soft’ (enterprise, employment, education etc) infrastructure to develop human capital and support innovation.

(Ireland, DEHLG 2010, p.12)

One of the major contributions of the NSS is that the report highlighted the importance of gateways and hubs which are considered to be major drivers of their respective regions. The 9 gateways were identified as the engine for stimulating growth in their respective regions while the hubs are responsible for driving development in their catchments and supporting gateway activities. The Limerick-Shannon Gateway was identified for the Mid West Region, while Ennis was identified as the major hub in the region (Figure 7.1). This reflects the current trend in OECD countries to promote innovation and competitiveness, focusing on urban areas and growth centres (OECD 2010b). Under this new approach cities are considered to be important drivers of regional competitiveness and national prosperity (OECD 2009a).
Under the NSS monitoring system a ‘Gateway Development Index’ was developed. The Gateway Development Index Report (Fitzpatrick Associates 2009) reports on the development of the NSS gateways and the extent to which the gateways are progressing in relation to a number of key drivers of economic growth. This index consists of various domains including population, enterprise and employment, learning and innovation, and transport and connectivity. The Limerick-Shannon Gateway in the Mid West, achieved a score of 4.7, which is below the national average of 5, and lags behind Cork (5.8), Galway (5.6) and Dublin (5.4). “A defining feature of the region has been the relatively slow growth of the Limerick/Shannon Gateway” (Ireland, DEHLG 2009, p.110). While the 2009 NSS update (DEHLG 2009) suggests that creative and sustainable initiatives are required for the Mid West there are no specific recommendations for the region to address the underperformance of the Limerick-Shannon Gateway.

In both demographic and economic terms the Mid West region faces significant challenges. The overall picture which emerges is of a region which has experienced less than its share of national population and economic growth.

(Ireland, DEHLG, 2009, p.110)
The NSS update for 2010 suggests that the current economic challenges create the opportunity to place the concept of sustainable development more firmly into both policy making and implementation (DEHLG 2010).

**Mid West Regional Planning Guidelines 2010-2022**

Following the publication of the NSS, the regional authorities in Ireland were mandated to prepare regional planning guidelines (RPGs) which were adopted in 2004. The RPGs, which provide a link between national and local frameworks, set out the regional development strategy within the framework of the NSS and other national, regional and local strategies. The majority of the draft development plans prepared at local level contain RPG objectives predominantly in relation to the urban settlement hierarchy, the likely scale and distribution of population growth and housing demand within the area of the planning authority, and the identification of strategic infrastructural priorities, particularly transport and water infrastructure. However, the RPGs are planning documents and not regional growth strategies and therefore they do not focus on enterprise development, or the ‘softer’ side such as human capital, innovation and knowledge.

**Shortcomings of the NSS**

- The NSS failed to incorporate tailored investment plans for the regions, with it relying on government plans including the NDP (Morgenroth 2006). Morgenroth (2003, p.78) argues that “…indeed the Irish National Spatial Strategy (NSS) could have been considerably improved if it has drawn on this large research literature”. Drawing upon the recent developments in regional growth theory is vital for successful policy design and implementation as empirical evidence validates these. The lack of regional economic research which “…has severely constrained attempts to develop meaningful strategies for regional competitiveness” (O’Leary 2003b, p.28).

- The NSS is not prescriptive as it does not outline how the Mid West or other Irish regions should address their specific challenges.

- There is a lack of empirical analysis of the regions in the NSS. This is crucial for identifying potential areas for growth and a developing a strong gateway in the Mid West. The NSS is “weak on implementation as it does not contain specific measures but rather requires government departments to integrate the NSS into their policies”
This has resulted in the NSS failing to identify the factors that underline regional economic growth in Ireland.

### 7.3.2 National Development Plan 2007 -2013

Balanced regional development, which is considered to be one the key themes in the National Development Plan, 2007-2013, is defined as “…supporting the economic and social development of all regions in their efforts to achieve their full potential” (NDP 2007, p.57). The plan aims to achieve this through investment in infrastructure, human capital, implementation of spatial planning frameworks at the gateway/Regional Authority level and the establishment of a Gateway Innovation fund. The NDP suggests that one of the major regional development objectives of the plan is:

> …to support the creation of conditions necessary to extend the process of employment and productivity growth in higher value added functions to all the regions.  
>  
> (NDP 2007, p.61)

In line with the NSS the plan emphasises the importance of gateways as drivers of the wider respective regions. However, the focus of the NDP is predominantly on infrastructure at regional level, while other regional growth determinants such as skills and education are generally examined from a national context. Nine out of twelve of the plan’s key development and investment priorities for the Limerick/Shannon Gateway refer to ‘hard’ infrastructure. The remaining three priority actions relate to R&D, innovation strategy, and a cultural, recreational and amenity strategy. These ‘soft’ factors as critical for the region’s future economic growth and the plan should have had a much wider focus in the regional priority actions sections on developing enterprise, human capital and the labour market.

The OECD (2009b) has found from empirical evidence that infrastructure alone cannot influence regional economic growth, rather it needs to be part of an integrated regional framework. Infrastructure is necessary but without sufficient levels of human capital and innovation, is insufficient for regional economic growth (OECD 2009a). Brakman et al (2005, p.52) argue that “[r]egional policy is biased towards infrastructure”.71 This is evidently the case in the Mid West as developing the region’s infrastructure is high on the

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71 The WDC (2010) have highlighted that while transport and other infrastructure developments are essential for regional development they are not enough by themselves. Investment in infrastructure must be maintained and combined with investment in the ‘3Es’ of enterprise, employment and education, along with a drive to increase innovation as these key drivers can create regional economic growth and therefore national economic growth (WDC 2010).
government’s policy agenda in the NDP. While that it is undoubted that infrastructure development is crucial for regional growth, particularly in relation to peripheral regions such as the Mid West, if regional policy only concentrates on infrastructure it could result in unfavourable and unanticipated consequences such as a loss of human capital and enterprise from the region, that is, the “leaking by linking” phenomenon (OECD 2009a, p.57). Improving transport can make it more efficient for firms to locate at the core and just supply to the periphery (OECD 2009a). Therefore, investment in infrastructure needs to coincide with policy changes in areas such as human capital, innovation, enterprise, and entrepreneurship.

Similarly, a partial policy relating to human capital could result in a leakage of workers from the region. If these policies are not combined with polices for improving the quality of jobs in the region it could result in an unanticipated ‘brain drain’ as those with high skills and education (and therefore higher mobility) move to more prosperous regions to avail of better employment opportunities and higher wages. This highlights the importance of an integrated approach to regional policy, which is not evident in the current NDP.

**Shortcomings of the National Development Plan**

- One of the major shortcomings of the NDP is the strong focus on infrastructure at a regional level. Investing in hard infrastructure is generally a key policy response in times of economic recession. However, more countries are reconsidering their regional investment policies, especially in relation to human capital and innovation (OECD 2009a) and this should be a key focus of the Irish policymakers.

- It is evident that while regional development is on the Irish government’s agenda is not translated across all areas of government Policy. The ‘horizontal’ theme of regional development in the NDP is not translated across the areas of economic growth and detailed regional goals are not outlined in areas including enterprise, human capital, labour market. This is even reflected in the layout of the strategy as regional development is treated in a separate chapter and not integrated into the other chapters. While a ‘whole-of-government’ approach is mentioned in the report it does not follow through in relation to the regional context.
7.3.3 EU Regional Policy

In recent years EU Structural and Cohesion funds have contributed to regional development in Ireland. There was a highly centralised approach to Structural Funds and regional policy in Ireland until 1999 as the country was designated as one NUTS II region. However, the OECD (2010b) still argues that the Irish governance system is one of the most centralised in Europe. However, since then regional participation in policy development and the level of decentralisation has ‘slowly’ started to grow particularly with the designation of the country into two NUTS II regions.\(^\text{72}\)

The Southern and Eastern Region, of which the Mid West is part of, is considered to be a ‘competitiveness and employment region’ while the BMW region is a ‘phasing-in region’ and will receive more funding from the EU over the period 2007-2013. Of the €367 million allocated by the European Commission in 2007, the Southern and Eastern Region will receive €146 million through the European Regional Development Fund. The main objective is to enhance productivity and competitiveness of the Southern and Eastern Region through investment in the innovation and the knowledge economy, environment and accessibility and sustainable and urban development.\(^\text{73}\) These objectives are reflective of the new concept of regional policy. However, EU policy is generally based on exogenous transfers to lagging regions.

Despite the allocation of investment there is no detail in relation to the allocation of funding to the Mid West Region (NUTS III level) and no evaluation of the economic impact of the allocation at the NUTS II or NUTS III level. There is a major issue in relation to the ex-post evaluation of the funding (Barca 2009). The impact of the funding is very vague in terms of funding allocated at NUTS III level and it is an area that requires further research. There is a lack of empirical evidence in relation to the impact of EU investment in the Mid West Region, which is generally in infrastructure investment. Barca (2009, p.xv) argues that empirical evidence on the performance of EU cohesion policy is “very unsatisfactory”. Furthermore, Barca (2009) suggests various recommendations including that each member state should prepare a “Strategic Report on Results” which would outline the progress in achieving results. Overall, EU regional policy is not prescriptive as it does not outline what regions should do to grow.

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\(^{72}\) Ireland consists of two NUTS II level regions: the Southern and Eastern Region, and the Border, Midlands and Western Region.

\(^{73}\) For further information on the three development funds and the objectives of the funds see the European Union Committee (2008) document ‘The Future of EU Regional Policy’.
Despite the articulation of European regional funds under different objectives, it is not always clear what the aims are. The first and fundamental issue for a good design of regional policies is to define objectives clearly. 

(Puga 2002 p.20)

Barca (2009) argues that EU regional policy should be based on the new paradigm of regional policy in that it should ‘place-based’ with long term, tailored policies.

7.3.4 Summary
From the discussion in this section it is evident that while ‘balanced regional development’ is one of the Irish government’s objectives, there is no explicit regional development policy in Ireland. Ireland is relatively new to this in comparison to other OECD countries. The NSS and current NDP are not sufficient in realising the full potential of Irish regions as they lack detailed regional targets and are not prescriptive. Moreover, the NDP targets for the Mid West are largely based on ‘hard’ infrastructure improvements. As this is not equally combined with other policies, it is resulting in the ‘leakage’ of productivity factors, especially labour, from the region. In Ireland regional policy is more aspirational than been given effect by relevant targets and instruments and subsequent evaluation. The discussion shows that EU regional policy lacks detailed targets at NUTS III level which is required. Overall, there is a largely centralised approach by policymakers to regional development in Ireland, and moreover there is lack of a ‘whole of government approach’ which is contributing to an unbalanced regional growth model in Ireland. The following section presents case studies of best practice as these reflect the new paradigm of regional policy and have key lessons for Irish policymakers.

7.4 Regional Growth and Development Policy Case Studies
This section considers international approaches to regional growth policy and lessons that can be learned for Ireland. Sweden, Finland and France are considered in detail as these countries are displaying elements of the new paradigm of regional policy and have increasingly decentralised policy in recent years.

7.4.1 Case Study 1: Sweden
Similar to Denmark and Norway, Sweden combines a strong central government with very independent local governments (Niklasson and Tallberg 2010). Since 1995 regions were encouraged to rely on their strengths and build new partnerships, as power was granted to local and regional actors to determine the implementation of national policies in their own
area (OECD 2010d). While Sweden largely pursues a bottom up approach to regional development, public investment remains largely centralised.

In contrast with reforms driven by the central government in some other OECD countries, Sweden’s regionalisation reforms have adopted a bottom-up approach based on a conscious choice to take the time to experiment, to achieve consensus through in-depth consultation, and to learn from results.

(OECD 2010a, p.16)

It is interesting that the Swedish government pursued increased decentralisation following the economic recession of the early 1990s. A focus on regional policy is once again being pursued by Sweden in the current economic recession as the government introducing a system of ‘regional co-ordinators’ which had been in place in two regions in early 2008, and extended this to all counties by the end of 2008 (Yuill et al 2010). The overall aim of these coordinators it to strengthen the co-ordination of all levels of actors, polices and resources in order to deal with the current economic crisis.

To some extent, the crisis has helped reveal the need for appropriate co-ordination mechanisms to address growth challenges at the regional scale, building on already established regional partnerships and long-term strategies.

(OECD 2010a, p.22)

Sweden’s process of regionalisation is considered to be unusual as different options were proposed to different regions and the government has pursued asymmetric decentralisation (OECD 2010a). As a result of this Sweden has a very heterogeneous regional map. Since the late 1990s regional development responsibilities have been transferred to the county councils in two pilot regions, to the regional co-ordination bodies in two thirds of counties since the 2000s, and to the county administrative boards in a quarter of counties (OECD 2010a). The establishment of the pilot regions has highlighted that providing regional actors with enhanced responsibilities has positive results in relation to establishing an agreed vision for the region and the greater involvement of private actors in the developing of strategies, and enhancing the relations across all levels of government. In the 2010 Budget Bill the government announced that the pilot regions were to be made permanent and two additional counties were to receive the same competencies for regional development in order to address the demand for strengthening regionalisation (OECD 2010a). It is expected that new legislation in 2014 will make this an option available to all Swedish regions (Yuill et al 2010).

74 The OECD (2010a) provides a detailed overview of the three ‘waves’ of regionalisation in Sweden from the late 1990s to 2009.
In 2008 Budget Bill the ‘Regional Development Policy’ was renamed as the ‘Regional Growth Policy’ with a renewed focus on stimulating “dynamic development in all areas of the country with greater local and regional competitiveness” (Sweden, Ministry of Employment and the Economy 2007, p.1). The focus of regional policy in Sweden, similar to many OECD countries has moved from income redistribution to lagging regions, to enhancing regional economic development and growth prospects in all regions which is following the new paradigm of regional policy (OECD 2010a). This reflects aspects of the new paradigm of regional policy as it recognises that national competitiveness is dependent on how the regions utilise their strengths assets. It aims to strengthen local and regional influence over and responsibility for government funds (Sweden, Ministry of Entrepreneurship, Energy and Communications 2007). This promotes opportunities such as business development through entrepreneurship and innovation, increasing labour supply, cross-sectoral approaches, accessibility and the level of services, skills supply and so forth (OECD 2010d; Sweden, Ministry of Entrepreneurship, Energy and Communications 2007). As part of the Regional Growth Policy all Swedish counties are required to prepare Regional Development Programmes to develop a holistic, long term and sustainable strategy to regional development (OECD 2010a).

With the potential for labour-intensive jobs to relocate to low cost countries, the threat of unemployment becoming permanent in the Swedish regions has stimulated a recent policy debate in relation to policy tools to enlarge regional labour markets in order to increase the match between labour supply and demand. Policymakers are focused on two approaches making regional labour markets more ‘employable’ and more ‘entrepreneurial’ (OECD 2010a). Sweden has also developed specific national programmes for regional innovation such as the Regional Cluster Programme which focuses on strengthening regional competitive advantages and encouraging collaboration between private enterprise, academia and the public sector (2005-2010).

The Swedish model of regional policy has highlighted the importance and effectiveness of:

- Responding to an economic crisis with long term regional growth strategies.
- Creating pilot regions to examine various approaches to regional growth and decentralisation.
- Combining a strong ‘bottom-up’ approach to regional policy with a ‘top-down’ approach to government funding.
• An integrated approach to address regional problems.
• Endogenous regional growth with regions utilising their assets to contribute to national economic growth particularly in terms of enterprise, entrepreneurship, innovation, labour supply and skills.
• Ensuring that there is a jobs/skills match in the regional labour markets and ensuring that regional labour is ‘employable’ and ‘entrepreneurial’.
• Clusters between private enterprise, public sector and academia.
• Coordinating mechanisms at the regional level to address the current economic challenges.

7.4.2 Case Study 2: Finland

Finland, a country with a similar population (over 5.3 million) to Ireland, even though significantly larger in terms of land area, is one of the OECD countries with a strong regional development policy. Furthermore, it has a long standing tradition of local self-government and, similar to Sweden and France, it pursues a mix of a ‘top-down’ and ‘bottom-up’ approach. Finland has also recognised the importance of pursuing a regional development strategy in an economic recession to stimulate economic growth. In recent years Finnish regional and central level strategies were amended to be in line with the new objectives of strengthening competition in the regions and addressing region-specific challenges and reducing regional disparities (Yuill et al 2010).

Since the recession in the early 1990s Finnish regional policy has undergone a significant re-orientation which has reflected changing economic conditions and the need to move from regional equity objectives regarding regional income to promoting the competitiveness of all regions (OECD 2005b). The country’s regional governance system has evolved from a central governance system to one with significant levels of regional governance (Nordberg 2010). The evolution of the country’s regional policy (Regional Development Act 1994) is directly related to the recession of 1990 to 1993 and the accession of Finland into the EU (OECD 2005b). This act granted the Regional Councils a very central role. Regional policies can be implemented differently in different regions on the basis of their regional development programmes.

The more recent Regional Development Act (2003) aims to improve competitiveness in all Finnish regions reflecting the new paradigm. This focus on policies has emphasised the need for a more coherent governance structure, particularly in relation to two areas: increased
horizontal cooperation at central, regional and local levels and enhanced coordination between regional and sectoral policies (OECD 2005c). Revisions were made to the Regional Development Act (2007) which aims to improve policy delivery and enhance the coordination roles of the Finnish regional councils in regional programming and strengthen their influence on regional allocation of sectoral funding (OECD 2010d; Yuill et al 2008).

In 2008 the Ministry of Employment and the Economy was created in order to pursue a more simplified structure for supervising regional policy goals (OECD 2010d). The Ministry requires that sectoral policymakers outline their regional strategies and assess the regional impact of these (OECD 2010d). The various Ministries have their own regional policies which are funded by central government. Policy coordination at regional level is integrated approach such as the Regional Strategic Programmes which are prepared by the Regional Councils. In 2010 the Ministry of Employment and the Economy published ‘Finland’s Regional Development Strategy 2020’ which sets out policy for long term regional development and covers areas such as economic structure, innovation, education system, labour market and the role of regions in the national economy. As part of this, new legislation regarding regional development was introduced as the Regional Development Act which was updated in 2010 to “…reinforce the current system of regional government” (Yuill et al 2010, p.9). Furthermore, in 2010 there was a reform of regional governance whereby Regional Councils became coordination authorities for regional economic development (Yuill et al 2010).

Since the mid-1990s the Finland’s regional development strategy has been effective as the country became one of the most successful in the OECD. In the current economic recession the solutions sought by the Finnish government for stimulating economic growth as similar to those along the line of the previous recession of the 1990s such as public investments being directed at projects that are crucial for regional competitiveness including in R&D, education, regional innovation, networking of regional actors (OECD 2009e). The Finnish government

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75 This Act consists of four special programmes: Regional Centre Programme; The Centres of Expertise Programme; Rural Policy Programme; and the Island Development Programme, which is further evidence of spatial targeting in Finland.

76 For example in the early 2000s the Ministry of Labour launched regional strategies which aim to strengthen the two way interaction (top-down and bottom-up) in order to improve the focus of employment policy towards regional and local needs (OECD 2005b). There was a similar occurrence in Canada in the mid-1990s where the responsibility for active labour market policies was turned over to the provinces. In 2004 the Finnish Ministry for Education published its regional strategy for education and research with an overarching vision of the country’s standard of living and international competitiveness is determined on the level of innovation within regions (OECD 2005b).
is improving the ‘preconditions’ for regional development in the long term, however the impact of these measures will only be evident in the long run (OECD 2009e).

The new paradigm of regional policy is also evident in Finland which has a strong focus on endogenous regional growth, tailored regional development activities, long term and sectoral strategies and incorporates various levels of government. As this pursuit of regional objectives and increased decentralisation brought the economy out of a severe economic recession and enabled the economy to grow again, Finland is strengthening its regional policy as a means for sustainable economic recovery.

In summary the Finnish regional development policy illustrates:
• The importance of regional policy and a long term regional strategy, particularly in a recession, in order to stimulate economic growth.
• The effectiveness of establishing a Ministry that is responsible for the coordination of regional policy in particular in relation to integrated policies to ensure that each area has a clarified regional policy.
• That a mix of a ‘top-down’ (finance) and ‘bottom-up’ approach to regional policies is effective.
• That strengthening regional governance gives regions the opportunity to mobilise regional strengths and assets and is in line with the new paradigm of regional policy.

7.4.3 Case Study 3: France
At the beginning of the 1980s French policy was largely centralised. Since then the central government in France has devolved specific tasks to its three types of authorities, which are regions, departments and municipalities. It is interesting that France was in a recession in the early to mid 1980s when it introduced the Decentralisation Act (1982). Again, in 2003 the country was experiencing slow economic growth and a large increase in its budget deficit when the Constitution Amendment Act (2003) was introduced. The responsibilities that were transferred from central government to regions include economic development and vocational training, major infrastructure projects, roads, social services, and education and culture, with the financial autonomy of sub-national governments being reinforced (OECD 2006d). The hierarchal approach was replaced by a partnership approach to regional policy (OECD 2006d).
French regional policy has progressed from focusing predominantly on infrastructure and investment related interventions to focusing on enhancing regional potential (OECD 2010d). It has evolved in recent years by adapting responses to different situations in the various regions (OECD 2006d) which reflects the new concept of regional policy. This is evident in the operation of competitive poles in the country.

“...[I]n France the crisis has reinforced existing territorial development goals” (Yuill et al 2010, p.28). Regional policy instruments have been part of the government’s response to the current economic crisis in France (Yuill et al 2010) and in early 2009 the ‘Economic Recovery Plan’ accelerated the spending under the state-region contacts. A report was commissioned by the French president to develop a dynamic strategy for regional development which was published in June 2009 (OECD 2010b). This report highlights the importance of continuing to transform the economy into an entrepreneurial knowledge economy which emphasises the importance of local development strategies and providing favourable for conditions for long term economic growth (OECD 2010b). It emphasises the importance of innovation systems and the need to mobilise endogenous regional assets.

The French government’s regional policy has illustrated the importance of:

- Regional policy in responding to changing economic condition and reinforcing regional goals as a result of the current downturn.
- Mobilising endogenous regional assets including enterprise, innovation and entrepreneurship.
- Tailoring regional policies to local strengths and assets.
- Developing a long term strategy for regional growth.

7.4.4 Summary

Important lessons for Irish policymakers can be learned from the case studies presented. Regional policies should be tailored, integrated and focus on mobilising endogenous assets including education, innovation, entrepreneurship and indigenous enterprise. The discussion shows that regional policy is particularly important in terms of an economic recession as the case study countries are enhancing the regional policies and strategies in the current economic recession, as this was effective for these countries in previous recessions. The following section considers the general policy response of the Irish government to the current economic downturn relative to other OECD countries.
7.5 The Impact of the Current Economic Crisis on International Regional Policies

This section considers the impact of the current economic downturn on regional policy in OECD countries. The approach of the case study countries varies considerably to the ‘national’ approach of the Irish government to the current economic crisis. While regional development policy is a long term structural policy not an immediate reaction to the crisis Yuill *et al* (2010) argue that the crisis has major implications for regional policy as it may influence the context for future policy and have highlighted the impact of the crisis on policy instruments including:

- Increased focus on long term competitiveness (France);
- Region-specific intervention (Sweden, Finland);
- Enhanced policy cooperation and coordination (Sweden, Finland, France);
- Attention attached to regional challenges has increased (Finland);
- A focus on functional economic areas and creation of different area-based policies (France, Sweden); and
- Long term actions to enhance policy coordination have been made stronger by the crisis (France, Sweden).

To meet various challenges in the new territorial context governments are using regional policies (OECD 2009a). As a result of the crisis there are going to be changes to the fundamentals of regional policy (Yuill *et al* 2010) which is likely to follow more in line with the new paradigm as countries create tailored regional policies, promote endogenous regional economic growth and focus on competitiveness of all regions. The shift in the economic climate has promoted international governments to develop their regional development strategies (Yuill *et al* 2010) to foster long term economic recovery. However, the Irish government has taken a ‘national’ approach to the economic recovery with the aim of re-establishing national growth which is evident in the recently published government documents including the ‘National Recovery Plan 2011-2014’ and ‘Building Ireland’s Smart Economy’ which have no regional dimension. In other OECD countries regional policy has been a part of the policy response to the recession, and in addition to Sweden, Finland and France, other OECD countries have reacted to the economic crisis by amending their regional policies. For example since the crisis Norway, in its most recent White Paper, has emphasised ‘bottom-up’ community development, with more tasks been given to the regional level and policies are tailored to region-specific needs (Yuill *et al* 2010). In the US the government is investing in regional activities to stimulate jobs growth and economic development in the
current economic climate (OECD 2009e). The US Department of Commerce's Economic Development Administration (EDA) has provided grants to:

…support regional efforts to create higher skill, higher-wage jobs by promoting innovation and entrepreneurship and connecting regional economies with the worldwide marketplace.

(OECD 2009e, p.1)

In addition to this the US government is planning on investing $50 million in regional planning and grants to support regional innovation clusters and strengthening regional competitive strengths to accelerate employment creation and stimulate economic growth. The recent EDA (2007, p.4) report ‘Regionalism and Clusters for Local Development Needs Assessment Results’ states that “[r]egionalism and clustering are critical concepts for promoting and sustaining economic development and growth in the knowledge based economy.”

With the economic downturn, regional policy may not be prioritised, but it is a waste of talent and opportunity not to realise all regions’ potential.

(WDC 2010b, p.1)

While the direct application of another country’s regional policy is not necessarily the answer for Irish policymakers, it does highlight that these countries have pursued regional policies, particularly in response to the current economic crisis. Ireland is considerably lagging behind in terms of the new concept of regional policy. Neglecting regional policy in Ireland as a consequence of the recession, while other OECD countries with existing high levels of decentralisation are ‘stepping up’ even further and developing their regional strategies, programmes and introducing legislation, could severely hinder Ireland and the Mid West Region’s future economic growth potential relative to these countries. The Irish government’s ‘national’ approach to economic recovery suggests that it is irrelevant where growth occurs in Ireland as long as it does, which impedes regional growth, and therefore overall national growth. However, all Irish regions have a role to play in the national economic recovery. Therefore, the following section presents key recommendations in relation to developing a regional policy in Ireland.

7.6 Recommendations

The recommendations presented in this section are informed by the foregoing case studies, the new paradigm of regional policy, ex-ante literature and the broad theoretical framework. Key policy recommendations for the development of an explicit regional policy in Ireland, reflecting the new paradigm of regional policy are outlined. The future Irish national
economic growth depends on adequate policies being designed for the each of the regions (O’Leary 2003a). Not realising the prosperity of regions outside of Dublin will significantly limit national prosperity. The following are the key regional policy recommendations.

1. An Explicit Regional Growth/Development Policy

There is a need for an explicit and prescriptive regional development/growth policy in Ireland which contains tailored priority actions for each of the Irish regions in terms of enterprise, human capital, migration, labour market and so forth. This policy should filter down through the various departmental policies. There is a need for a mix of top-down, subsidy based interventions and bottom-up policies.

2. Tailored Regional Policies

Tailored regional growth programmes, which impact regional competitiveness, should be established to contribute to national economic growth. There is no single approach which will work for all regions as they are inherently different. Regional policy should take account of regional differences which would result in more prosperous regions (WDC 2010b). This highlights the importance of using detailed regional empirical data for guiding policy development.

3. A ‘Whole of Government’ Approach

As the determining factors of regional performance appear to be mutually reinforcing this underlines the importance of a cross-sectoral approach to policy formation and delivery, (OECD 2009a, p.46)

As evident from the discussion in relation to the regional growth theories various factors determine regional economic growth. “The ‘3Es’ of enterprise, employment and education policy must work together at both national and regional level to create dynamic regions” (WDC 2010b, p.6). “Realising the full potential of regions must be viewed as a guiding principle which influences decisions across all sectors including, for example, transport, education, enterprise, communications, and tourism” (WDC 2010b, p.1). Similarly, the OECD (2009c) recommends the combination of three broad policy issues: the capital stock dimension (investment in infrastructure including ICT); the labour market dimension (participation, labour mobility and human capital development) and; the business environment dimension (innovations, clusters, linking research and industry). The assumption of the new concept of regional policy is that the three key policy areas need to be integrated in the implementation of regional development policies (OECD 2009a).
OECD (2009b, p.14) argues that “[p]olicy makers should make more use of regional policies as a means of supporting synergies across policy families”. Integrated regional policies that link government departmental objectives are crucial for economic growth in order to create ‘linkages’ rather than ‘leakages’.

4. Regional Minister or Department

Regional policy needs to be co-ordinated by an identifiable single figure at the national level supported by a designated institution (for example a section of a government Department or Agency) with the mandate to co-ordinate and drive regional policy across sectors. (WDC 2010b, p.5)

Regional policy in Ireland should have a single ‘gatekeeper’, ideally a regional minister or a department specifically responsible for regional growth and development. Regional policies tend to be disadvantage by a lack of clear management at national level in Ireland (WDC 2010). This is illustrated through the management of the NSS and the NDP which are the responsibility of two separate departments, the Department of the Environment, Heritage and Local Government, and the Department of Finance respectively. The coordinator at national level should be responsible for ensuring that regional policy filters into other policies and to ensure that each of the departments present their regional strategies and state how their policies impact the regions.

5. Multi-Level Governance

Economic policy in Ireland is established by central government where the traditional priority has been national competitiveness. Subsequently, local and regional governments have had limited roles in the formation of economic policy (O’Leary 2003b). However, Collits (2004) argues that central governments are not well placed to establish regional policy objectives. There is a lack of involvement of locally elected representatives in designing strategies in Ireland and “[f]ailure to empower the key regional actors will hinder future competitiveness” (O’Leary 2003b, p.28). However, according to O’Leary (2003b, p.27) “[r]egional political representatives typically favour short term local interests at the expense of long-term regional growth”. It is vital that long term regional economic growth is a priority across all levels of government with regions become involved in policy making.
6. Regional Policies Informed by Regional Data

An understanding of how regional development policy can best support regional growth stems from an understanding of regional economic performance. (OECD 2009a, p.17)

It is imperative that future policies are informed by comprehensive regional level data. “Enhancing the impact of regional development policies is complicated because the factors that determine the competitiveness of each region are so diverse” (OECD 2009a, p.54). Understanding regional economic performance is crucial in the policy making process in order to ensure that the factors that have the potential to drive future regional growth are identified as well as identifying and addressing specific regional challenges.

7. Regional Policies Informed by Regional Growth Theory

Economic theory should play an important role in setting the regional policy agenda, designing regional policy instruments, as well as being prevalent in the regional goals of policymakers. Long run sustainable rates of regional economic growth can be guided by a confluence of growth theories including Endogenous Growth Theory and New Economic Geography which, as discussed, is evident in the new paradigm of regional policy emerging in various OECD countries.
Table 7.2: Summary of Key Policy Recommendations for the Development of an Irish Regional Policy

<table>
<thead>
<tr>
<th>Policy Recommendation</th>
<th>Key Elements</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. An Explicit Regional Growth/Development Policy</td>
<td>• Integrated focus on ‘soft’ and ‘hard’ areas of regional economic growth.</td>
</tr>
<tr>
<td></td>
<td>• Filter down into industrial/enterprise, services, education, skills and labour market policies etc.</td>
</tr>
<tr>
<td>2. Tailored Regional Policies</td>
<td>• Growth programmes for all the Irish regions that focus on regional competitiveness.</td>
</tr>
<tr>
<td>3. A ‘Whole of Government’ Approach</td>
<td>• Linkages created between enterprise/industrial, skills/education and labour market policies at the regional level.</td>
</tr>
<tr>
<td>4. Regional Minister or Department</td>
<td>• One department or minister responsible for overseeing regional policy and coordinating regional strategies of all Irish government departments.</td>
</tr>
<tr>
<td>5. Multi-Level Governance</td>
<td>• Long term regional economic growth as a priority of local, regional and national actors.</td>
</tr>
<tr>
<td>6. Regional Policies Informed by Regional Data</td>
<td>• Detailed regional performance analysis in order to identify areas with potential for future economic growth and address specific regional challenges.</td>
</tr>
<tr>
<td>7. Regional Policies Informed by Regional Growth Theory</td>
<td>• Utilisation of theory in the design and implementation of regional policy.</td>
</tr>
</tbody>
</table>

7.7 Conclusion
The discussion in this chapter shows that the relative to other OECD countries, the Irish government’s approach to regional policy is largely aspirational. There is a lack of detailed, specific targets in relation to the Irish regions, including the Mid West. The best practice case studies considered, pertaining to Sweden, Finland and France, show that regional policies in these countries is much more developed and, more importantly, that it part of the policy response to the current economic recession. This is in contrast to the Irish government which has pursued a ‘national’ approach to economic recovery. This ‘one size fits all’ approach will not enable the full potential of Irish regions, including the Mid West, to be realised on a long
term sustainable basis, and subsequently national economic growth will be hindered. Therefore, key recommendations for enhancing the Irish government’s approach to regional development include developing an explicit long term regional policy with detailed policy targets for each of the Irish regions. This requires a ‘whole of government’ approach that in particular links enterprise, human capital and the labour market at the regional level. Furthermore, one government department should be responsible for regional policy in Ireland and ideally a regional minister should be appointed to ensure that each department outlines how their policies impact all of the regions. Furthermore, there should multi-level governance in the regional development policy formation and delivery process. Lastly, it is crucial that Irish regional development policy formation and delivery is informed by both regional growth theory and detailed regional empirical data in order to enhance its effectiveness and impact on the regions.
Chapter 8

Key Policy Instruments and Targets for Mid West Economic Growth
8.1 Introduction
The aim of this chapter is to identify key policy targets and instruments that are required in order to stimulate long term sustainable economic growth in the Mid West. Lessons from the recent Irish growth experience, as discussed in Chapter 4, show that fostering export-led growth is the key path to sustaining Ireland on a long term growth path. Industrial/enterprise policy will be a key factor in driving this. Therefore, following the foregoing literature review, empirical evidence and research questions, Irish industrial/enterprise policies is considered with particular emphasis on regional dimension of these policies. Within industrial/enterprise policies are two key areas of innovation and entrepreneurship which are examined. Indigenous enterprise will be increasingly important for future economic growth in the Mid West as the FDI landscape is becoming increasingly competitive with the new EU member states and the BRIC economies. Policy recommendations are presented in order to stimulate long term export-led economic growth in the Mid West.

The first Irish economic boom was driven by increases in employment which were fuelled by female labour force participation, which was resident in the service sector. However, the analysis in the previous section shows that female labour force participation in the Mid West lags behind national trends. Education was shown to be an important driver of growth and enhanced productivity in services. However, there is a strong cohort of well educated females that are leaving the region. These factors are impacting on the development of the region’s service sector, which is the key sector for enhancing export-led growth. Therefore, based on the conceptual framework, data analysed and research questions, the key sectoral and labour supply policies with specific emphasis on the service sector, education and skills and female labour force participation are considered. The level to which these have are integrated and have a regional dimension is explored. The service sector should be a key part of industrial/enterprise policies, and education and female labour supply feeds into this performance. This will enable policy recommendations to be presented in order to drive the recommended regional growth model for the Mid West.

8.2 Policies for Export-Led Growth

Export driven growth delivers sustainable economic growth through the creation of a virtuous circle which impacts positively on all of the key drivers – generating jobs and growth.

(Forfás 2010a, p.ix)
Irish industrial/enterprise, innovation and entrepreneurship policies are considered in this section they are crucial for driving export-led growth. With the current economic recession, a review of industrial/enterprise policy is timely in order to reposition Ireland and the Mid West Region on the path to long term economic growth. Policy recommendations for stimulating export-led recovery in Ireland and the Mid West are presented as this was shown to be a key factor for stimulating Irish economic recovery after the recession of the 1980s.

8.2.1 Industrial / Enterprise Policy Overview

This section considers Irish industrial/enterprise policy in order to identify policy responses in these areas that would stimulate future economic growth in the Mid West. Industrial/enterprise policy has received increased national and international attention recent years (Dineen and Lenihan 2011; O’Gorman & Cooney 2007; European Commission 2004). Since the emergence of the current economic recession there has been a renewed interest by policymakers in this area as many countries and regions are turning their attention to the role of SMEs and entrepreneurs in stimulating economic growth (Dineen and Lenihan 2011).

In the 1980s the main emphasis of Irish industrial/enterprise policy was on attracting basic MNE software activity to locate in Ireland. In particular industrial strategy in the 1980s was concerned with creating sectoral and spatial clusters, with clusters occurring in two sectors namely chemicals/pharmaceuticals and electronics (Dineen and Lenihan 2011). In 1992 a significant policy document in relation to SMEs and indigenous firms was published. The Culliton Report (1992) critiqued the state of Irish industrial development and furthermore it stated the need for Irish policymakers to encompass a more holistic approach to industrial development (Andreosso-O’Callaghan and Lenihan 2010). The report suggested that there was minimal connection between indigenous and foreign-owned companies.

In 1994 the ‘Task Force on Small Business Report’ (Government of Ireland 1994) was published which was the first formal Irish government document which was predominantly focused on SMEs. Dineen and Lenihan (2011) suggest that as the majority of SMEs in Ireland are indigenous firms, it can be argued that the Irish government overlooked indigenous enterprise until the mid-1990s. Even though FDI investment had a significant role to play in Irish economic growth during the 1990s and early 2000s, it did however lead to neglect of the SME sector. The Enterprise Strategy Group report published in 2004

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Data from 2004 to 2006 show that 89 to 90 per cent of SME enterprises in Ireland are Irish firms (Dineen and Lenihan, 2011).
highlighted the weaknesses in the promotion of indigenous enterprise and the providing adequate support for initiatives to stimulate its growth (Cooney and Kidney 2008).

In December 2010 the Irish government published the ‘National Recovery Plan 2011-2014’ which emphasises the government’s pro-export strategy and pro-business strategy. The plan outlines various measures to provide assistance for indigenous and foreign-owned firms. However, Ireland and the Mid West Region now have to compete with the new EU member states and the BRIC economies, as a result of the changing FDI landscape. Furthermore, with the downturn in the US economy, the Mid West can no longer rely heavily on FDI. A key determinant of export-led growth will be promotion and scaling up of indigenous enterprise, through innovation and entrepreneurship.

Therefore, in recent years industrial/enterprise policy documents have began to emphasise the importance of a well performing indigenous/SME sector (Dineen and Lenihan 2011). The ‘Report of the Small Business Forum’ (2006) argues that as lower-valued added activities relocate in lower cost countries that indigenous enterprise (SMEs) will account for a larger proportion of GDP. The ‘Building Ireland’s Smart Economy’ (Government of Ireland 2008) also emphasises the importance of indigenous firms, entrepreneurship, innovation and R&D for building the ‘ideas’ or knowledge-based economy.

Ireland should not depend excessively on external investors for its economic future. We already have some notable indigenous enterprises that have become worldwide companies. Ireland must build on this success so that we develop a thriving indigenous enterprise sector. (Government of Ireland 2008, p.60)

Overall, Irish industrial policy has placed too much emphasis on FDI without taking into consideration its limitations which include the fact MNEs that located in Ireland and the Mid West Region were low value added manufacturing that failed to become embedded in their local economies and were predominantly at the destiny of decisions made by a parent company located in the US (Dineen and Lenihan 2011).

Importance of Promoting Enterprise and Export-Led Growth

Recent government policy documents have emphasised the importance of an export-led growth model for long run sustainable economic growth. The ‘National Recovery Plan 2011-2014’, (2010, p.20), states that “[l]ong-term sustainable growth in the Irish economy is export-led”. The ‘Trading and Investing in a Smart Economy: A Strategy and action plan for Irish Trade, Tourism and Investment to 2015’ (Government of Ireland 2010a) highlights that
at least 85 per cent of the value of total exports is from foreign-owned companies. Therefore, one of the government’s objectives is to increase the value of indigenous exports by 33 per cent to be achieved by 2015.

Ireland’s enterprise policy will continue to involve both the attraction and development of FDI and the establishment and development of indigenous companies. Accelerate and realise the potential of the indigenous base, building on its evolving capabilities and changing dynamic to realise a step-change in its contribution to growth and exports. 

(Forfás 2010a, p.xiv)

With the modern nature of Ireland’s export base the likelihood for a return to enterprise-led growth are favourable (Dineen and Lenihan 2011). A large proportion of Irish exports are in high-tech sectors, which suggests that this could be a good platform for achieving a period of knowledge-based economic growth (Figure 8.1).

**Figure 8.1: High-Tech Exports as a proportion of Total Exports, 2010**

![Figure 8.1: High-Tech Exports as a proportion of Total Exports, 2010](image)


In terms of the exporting potential of entrepreneurs, the Global Entrepreneurship Monitor for 2008 shows that 64 per cent of early-stage entrepreneurs in Ireland focus on international markets which is high relative to the OECD (54%) (GEM 2009). However, the report highlights that established entrepreneurs are more focused on the Irish market (51%). Therefore, the increasing the propensity of these entrepreneurs to export should be of concern to policymakers.

**Service Exports**

Services have a key role to play in export-led growth. Major companies that located in Ireland in the 1990s include IT hardware corporations including Dell and Intel. However, in
recent years, service companies, such as the e-business sector (Google, LinkedIn and e-Bay) have chosen to locate in Ireland. Irish service exports have increased significantly with Ireland being the 9th highest service exporter in the world in 2009. Services account for over 44 per cent of total Irish exports (Table 8.1) which increased from the 2009 to 2010 as services exports grew at a faster rate than manufacturing exports, which illustrates the growing importance of the service sector. In terms of the indigenous services export sector the Irish Exporters Association (2011) states that this is small, accounting for €1.5 billion of total services exports, which suggests that policymakers need to be more proactive in this area.

Table 8.1: Summary of Total Irish Exports, 2009 & 2010 (€ million)

<table>
<thead>
<tr>
<th>Million</th>
<th>2009 Jan-Dec</th>
<th>2010 Jan-Dec</th>
<th>Diff €</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Merchandise</td>
<td>84,289</td>
<td>89,592</td>
<td>+5,303</td>
<td>+6.3%</td>
</tr>
<tr>
<td>Services</td>
<td>66,634</td>
<td>71,417</td>
<td>+4,783</td>
<td>+7.2%</td>
</tr>
<tr>
<td>% Services of Total</td>
<td>44.2%</td>
<td>44.4%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>TOTAL</td>
<td>150,923</td>
<td>161,009</td>
<td>+10,086</td>
<td>+6.7%</td>
</tr>
</tbody>
</table>

Source: CSO and Irish Exporters Association (2011)

**Regional Dimension to Industrial/Enterprise Policies**

O’Leary (2007) argues that Irish regional policies and enterprise policies are not integrated, and minimal importance is attached to the spatial dimension of industrial/enterprise policies. An example of this is the Enterprise Strategy Group report (2004) which refers only once to the importance of implementing the National Spatial Strategy 2002-2020 and this is in the context of infrastructure deficits.

However, in recent years it is evident that regional development is being linked to the development of enterprise. Enterprise Ireland aims to encourage entrepreneurship in all Irish regions, drive innovate start-ups and develop existing clients in Irish regions for balanced economic development. The Enterprise Ireland Corporate Strategy 2008-2010 highlights the goal of increased national and regional prosperity. However, there are no specific regional targets in relation to this. For 2008 to 2010 the aim is for new High Potential Start Ups (HPSUs) to have a target of 50 per cent outside of Dublin. “Enterprise Ireland’s strategy is designed to ensure that opportunities for Irish enterprise and entrepreneurs are maximised throughout all regions…” (Enterprise Ireland 2007a, p.2). Overall, while there is a regional focus to Enterprise Ireland strategies there are no detailed regional targets for the Irish regions including the Mid West.
IDA Ireland (2010a) recently published ‘Horizon 2020’ which states that from 2010 to 2014, 50 per cent of FDI investments will be located outside of Dublin and Cork. Despite this statement the IDA record of investments in 2010 shows that of 79 investments, 40 were in Dublin, 9 in Cork, 10 in Galway and 4 in Limerick. IDA Ireland strategies do not contain specific regional targets for each of the Irish regions. O’Leary (2007) argues that national growth is now more than ever reliant on growth outside of Dublin. “If all Irish regions including Dublin, reach their full growth potential then our future prosperity will be assured” (O’Leary 2007, p.263).

High profile MNE jobs losses have occurred in Ireland and the Mid West Region as a result of the recession, and have contributed to the levels of high unemployment in the region. The Mid West was the worst affected region losing 3,000 MNC jobs in 2009 (Frawley 2010). The IDA Ireland Annual Report (2010b) shows that from 2008 to 2009 the average change in employment over the period was -10.3 per cent among Irish regions compared to -27 per cent in the Mid West, -10.2 per cent in the East, -8.5 per cent in the South West, -4.9 per cent in the South East and -7.9 per cent in the West. This highlights the importance of developing a strong indigenous base, particularly in relation to high value added services, in the Mid West which would be embedded in the region, rather than the region being reliant on ‘footloose’ manufacturing.

While industrial/enterprise policymakers pay little attention to the spatial dimension the importance of clusters and networks are advocated for national economic growth. The Culliton Report (1992) was the first to highlight the importance of local/regional clusters relating to internal competitive business for national competitiveness. However, unlike Dublin, Cork and Galway, the Mid West Region has not achieved a recognised cluster of activities in a specific sector that could drive the regional economy. As discussed in Section 2 the Mid West has been particularly reliant on construction and manufacturing while other Irish regions have attracted enterprises that are higher value added which has resulted in clustering. Examples include the financial services cluster in Dublin, the medical technologies cluster in Galway and pharmaceuticals cluster in Cork. This has become problematic for the region in the current downturn. In 2009, prior to the Dell redundancies, Dell employment (3,000) accounted for almost 2 per cent of total employment (159,100 employed in Q1 2009) in the Mid West Region. If sub-suppliers (10,000) are included, the company directly and indirectly accounted for over 8 per cent of total employment in the region. This example highlights the reliance of the region on low-skill manufacturing
employment when entering into the recession, which has been identified in numerous reports (Mid West Task Force Report 2009; Forfás Regional Competitiveness Agendas for the Mid West 2009). The Government’s ‘Smart Economy’ document (2008, p.36) states that:

A reliance on traditional manufacturing and low-skilled services will not be sufficient to allow developed countries like Ireland to remain at the forefront of economic and technological curves.

It is important to recognise that indigenous success is based on ‘comparative advantage’ while success in attracting FDI is based on ‘absolute advantage’. A region can lose its absolute advantage almost instantly, whereas comparative advantage can be changed but never be wiped out (Barry et al 1999, p.69). This has led to question Irish industrial strategy which has focused on FDI to the detriment of developing the indigenous sector (Andreosso-O’Callaghan and Lenihan 2010). It is imperative that Irish industrial/enterprise policy ensures that the regions are more resilient to any future economic shocks, and indigenous enterprise is particularly important in this regard. Overall, while there is a regional focus to industrial/enterprise policies there is a lack specific targets for the Mid West Region, which is a weakness that is evident overall in the government’s approach to regional development.

### 8.2.2 Innovation and Entrepreneurship Policies

This section discusses government policy in relation to innovation and entrepreneurship in recent years as these growth determinants are particularly important in the current economic recession to stimulate new sources of regional economic growth in the Mid West. Ireland and the Mid West Region will no longer be able to rely on FDI for future increases in economic growth as the landscape is changing and becoming increasingly competitive with the emerging BRIC economies. Therefore, it is crucial that the region grows its own indigenous enterprises. The Irish government recognises the increasing importance of innovation and the ‘ideas’ economy in its recent report on the Smart Economy (Government of Ireland 2008). “Innovation is hailed as key to firm/economy growth and development” (Dineen and Lenihan, p.21). Entrepreneurship provides an alternative employment option in the current economic climate and contributes to economic growth including *inter-alia* employment creation. Therefore, many governments in the OECD, including the UK, are looking at this

78 Absolute advantage refers to where a region is more efficient in producing the same good or service than another region using the same amount of inputs. Comparative advantage is based on a region that can produce a good or service at a lower opportunity cost than another region.
and small firm activity to become an engine of economic growth (Dineen and Lenihan, 2011).

Innovation Policies

Ultimately long term sustainable growth will depend on knowledge accumulation, embodies in smarter capital, a more efficient use of natural resources and a more educated labour force...

(OECD 2010e p.9)

Innovation policy is considered to be vital for creating sustainable economic growth (Metcalfe and Ramlogan 2008; OECD 2010e). Innovation is clearly on the Irish government’s policy agenda. In 2008 the Department of Enterprise Trade and Innovation (DETI) published the “Innovation in Ireland Report” which highlights the importance of collaboration and firm networking. In particular business networks and clusters are emphasised as on the key policy areas in the government’s approach to innovation. Furthermore, this is evident in the government’s (2008, p.7) ‘Building Ireland’s Smart Economy’ as “[t]he smart economy combines the successful elements of the enterprise economy and the innovation or ‘ideas’ economy…” Building on the ‘ideas’ economy involves creating R&D-intensive indigenous enterprise sector through the provision of supports for start-up companies and entrepreneurs who generate employment in their companies in the future. One of the major challenges is to increase innovation in indigenous enterprise (O’Leary 2007) which should be addressed by policymakers.

The key objective of Ireland’s Smart economic growth framework is to make Ireland the innovation and commercialisation capital of Europe - a country that combines the features of an attractive home for innovative multinationals while also being an incubation environment for the best entrepreneurs from Europe and further afield.

(Government of Ireland 2008, p.60)

Innovation systems and clusters are considered to be important policy frameworks (Dineen and Lenihan 2011). The new enterprise approach, which views knowledge as a key competitive asset, also suggests the importance of interdependencies between firms, development agencies and universities. Furthermore, this approach recognises a move in thinking away from direct government intervention towards fostering a more supportive and enabling environment for SMEs to operate and entrepreneurship to thrive in general (Dineen and Lenihan 2011).
Regional Dimension to Innovation Policy

The OECD (2009g) identifies a link between innovation and growth at the regional level and suggests that a regional enterprise environment needs to be dynamic and innovative in order for the economic benefits from human capital investments and infrastructure to accrue. “Innovation matters for regional policy and regions matter for innovation policy…” (OECD 2010e, p.49). As innovation is important for long run sustainable economic growth, it should be a key feature of regional growth strategies. This has been reinforced by the crisis which considers innovation central to recovery.

In this context, regions are definitely relevant actors in innovation policy and their importance has been growing over time. But the role of regions in innovation policy is complex and cannot be left to a replication of national policies regionally.

OECD (2010e, p.13)

At national level it is clear that innovation is on the government’s agenda. However, there is an evident lack of a spatial element to government innovation policies and ‘one size fits all’ approach to innovation will not enable regions to reach their full potential. Regions such as the Mid West are not fully recognised in national innovation policy as role of Irish regions, the (OECD 2010e, p.56) argues is “…confined to one of passive implementers of national policies…”. There is a need to improve the spatial dimension of innovation policies and develop region-specific promotion initiatives in areas of business start-ups. The OECD (2010e) states that there is a major the need to acknowledge the diversity of regional economic and innovation profiles as regions and their innovation systems can have different development paths. “Multiple types of regional innovation systems co-exist within the same country including knowledge hubs, industrial production zones and peripheral regions” (OECD 2010e, p.2). Therefore, the effectiveness of a ‘one-size fits all’ policy in Ireland is highly questionable in relation to innovation policies, especially as Forfás (2009a) highlights that the Mid West Region is underperforming in terms of innovation capacity and performance which is vital for the region’s future growth. The quality of the workforce, the capacity of a region to attract and retain educated workers and develop high value added goods and services, and the degree of entrepreneurship can all impact on levels of innovation (OECD 2010e).

It is important to have a regional dimension to innovation policies. Enhanced regional policies will contribute to broader national objectives including resolving the economic crisis and innovative regions can strengthen long term national competitiveness (OECD 2009f). Furthermore, the OECD (2010e) suggests that the current crisis has reinforced the need to
improve regional policy design and implementation as innovation can boost job creation and economic growth. “The crisis offers further opportunities to create the right conditions for innovation to thrive in all types of regions…” (OECD 2009g, p.3). This is reflected in the new paradigm of regional policy which focuses on strategies that bring innovation to the centre of regional growth (OECD 2010e). National innovation strategies in OECD countries are increasingly incorporating a regional dimension in order to utilise regional assets and improve national economic performance (OECD 2010e). The OECD (2010e) argues that the increased connectivity and networked character of innovation requires a spatial approach. As OECD (2009b) empirical evidence shows that the agglomeration of productivity factors is not enough to generate economic growth and innovation is required in order to stimulate this.

Irish Policy in the Area of Services Innovation

Innovation has been recognised as a key to growth…but the role of service-sector innovation has long been under-appreciated. (OECD 2005c, p.10)

While innovation is high on the government’s agenda, innovation in services has only come on to the government’s policy radar in recent years. The ‘Innovation in Ireland’ report (Ireland, Department of Enterprise Trade and Innovation 2008) has highlighted the need to focus on innovation in services and increasing innovation in sectors that have not traditionally been the focus of the government’s policy. More recently the report by the Innovation Task Force (2010, p.4), which recognises the importance of services innovation, has recommended that Ireland should be developed as an International Innovation Services Centre.

The promotion of innovation, particularly in services is strongly linked to higher education. Lifelong learning has a key role in up-skilling the workforce to become more competitive and productive in order to support an innovative economy (Government of Ireland 2010c). The QNHS (2010) ‘Lifelong Learning’ module for Q3 2008 shows that 18 per cent of those over 25 in the Mid West Region participated in lifelong learning (formal and non-formal education) during the year up to that period. This compares to 33 per cent in Dublin, 23 per cent in the West and 22 per cent in the Mid East. This underperformance of lifelong learning can significantly impact the level of innovation in the region, which highlights the importance of having integrated regional strategies in relation to these factors.
The Forfás (2006b) ‘Services Innovation in Ireland - Options for Innovation Policy’ suggests that there are fundamental differences with regards to innovation policy for services and manufacturing. Furthermore Forfás (2006) states that there are signs that innovation in services lags behind manufacturing. The ‘Community Innovation Survey for 2006-2008’ (CSO 2009c) found that 40.6 per cent of service enterprises are engaged in innovation compared to 52.3 per cent for industry (Table 8.2). However, there is evidence that services innovation may not follow traditional innovation measures such as R&D and patenting which can result in difficulty in measuring innovation in services or ‘hidden innovation’ (Northern Ireland, Department of Enterprise, Trade Investment (DETI) 2007). Services innovation is less technological and often based on learning capabilities, interaction of suppliers and consumers, and organisational change (Northern Ireland, DETI 2007). The OECD (2005c) argues that the policies for enhancing service sector innovation must reflect the differences in services and manufacturing including:

- Service sector innovation draws more extensively on the acquisition of knowledge from outside sources rather than from investments in formal R&D.
- The development of human capital is particularly important in services as they are highly reliant on educated and skilled labour.
- Entrepreneurship is an important driver of service innovation and the role of new enterprises in innovate activity is greater in the service sector.

The government’s ‘Innovation in Ireland’ report highlights business networks and clusters as one of the key policy areas that is fundamental to the government’s approach to innovation (Ireland, Department of Enterprise, Trade and Employment 2008). Forfás (2006) suggests that there are a number of factors that can influence innovation in services including networks and clusters, which have a positive impact on services innovation activity. Advanced telecoms and broadband are also important to enable innovation in services and to enhance the competitiveness of the sector (Forfás 2006). This has implications for both the measurement of services innovation and policy recommendations.

In terms of policy, the implications are similar: measures designed to promote technological innovation are likely to be largely irrelevant for many services companies”. Innovation in tradable services is important.

(Northern Ireland, DETI 2007, p.6)

Services and non-technological innovation will have a key role to play in the recovery. Northern Ireland’s DETI (2007) found that innovation in services can impact export growth.
It is clear from Table 8.2 that there is a need to enhance the levels of innovation in SMEs, in particular services SMEs, as the competitiveness of the Irish and Mid West economies will increasingly depend on the ability to increase innovation across all sectors of enterprise.

Table 8.2: Innovation rates by Sector and Size of Enterprise in Ireland, 2006-2008

<table>
<thead>
<tr>
<th></th>
<th>Small (10-49)</th>
<th>Medium (50-249)</th>
<th>Large (250+)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industry</td>
<td>44.6</td>
<td>69.5</td>
<td>85.8</td>
<td>52.3</td>
</tr>
<tr>
<td>Services</td>
<td>37.8</td>
<td>53.4</td>
<td>64.2</td>
<td>40.6</td>
</tr>
</tbody>
</table>

Source: CSO/Forfás - Community Innovation Survey 2006 - 2008

**Entrepreneurship Policies**

It is widely viewed that entrepreneurship is important for regional economic growth, productivity, innovation and employment, and in the economic crisis it has received more focus as it is a key part of indigenous enterprise (Dineen and Lenihan 2011).

Entrepreneurship has gained additional attention in the current economic crisis, as it is widely viewed as a key aspect of economic dynamism.

(OECD 2009f, p.5)

Entrepreneurship is a realistic alternative to employment for some of those who are unemployed. Policymakers are considering entrepreneurship with innovation in OECD countries to return to a sustained period of economic growth. The Global Entrepreneurship Monitor (GEM) 2008 for Ireland shows that there has been a move from ‘opportunity’ entrepreneurship to ‘necessity’ entrepreneurship. Necessity entrepreneurship can be driven by high levels of unemployment. 19 per cent of new ventures in Ireland are created by necessity (GEM 2009). Entrepreneurship that expands and internationalise will have a much greater impact on the economy which highlights the importance of internationalisation (GEM 2009).

“An innovation driven economy is key to stimulating entrepreneurship”(Dineen and Lenihan 2011, p.25). While not all entrepreneurship is determined by innovation it is one of the key ways through which innovation is brought to the market place (Forfás 2010a). Entrepreneurship is fundamental to the modern innovation process entrepreneurs turn ideas into commercial applications (OECD 2010e).

The recent interest in the role of the entrepreneur in driving economic development was strongly influenced by the endogenous growth revolution of the mid-1980s.

(De Grott et al 2004, p.1)
The most recent theories of regional economic growth see an important role for entrepreneurs as regional growth is considered to be endogenous. Entrepreneurship has many benefits for an economy which include the fact that entrepreneurs have a role in stimulating regional economic growth, which includes job creation, through the creation and growth of new enterprises. In addition to this new innovations that entrepreneurs bring to the marketplace can increase regional competition and productivity.

The Irish Government’s (2008) ‘Smart Economy’ document recognises the importance of entrepreneurship in order to build the ‘Innovation Island’. In the ‘National Recovery Plan 2011-2014’ (2010) the government outlines various measures to support entrepreneurship at a national level. Forfás (2010a, p.46) in Making it Happen: Growing Enterprise for Ireland’ states that:

Entrepreneurship is a significant driver of economic growth and will have a key role to play in Ireland’s return to sustainable growth and job creation.

However, despite the current importance of entrepreneurship for economic growth there is a lack of Irish policy documents in relation to this which hinders the development of indigenous enterprise. The over-emphasis on the attraction of FDI may explain why entrepreneurship is not considered in economic commentary or general analysis of the determinants of Ireland’s past economic growth (Dineen and Lenihan 2011). Furthermore, similar to innovation policy there is no strategy with the primary responsibility for regional entrepreneurship in Ireland. There is a need for a more focused approach to these policies as it is imperative that local assets are mobilised for long term sustainable growth in the Mid West. Forfás (2007) report “Toward Developing an Entrepreneurship Policy for Ireland” proposes that there should be an entrepreneurship policy for economic growth. Entrepreneurs in Ireland are faced with various barriers, which need to be addressed by an adequate policy, including (Dineen and Lenihan 2011):

- Access to debt and equity finance;
- The lack of business angels/informal investors and venture capital funding;
- Burden of government bureaucracy; and
- The need for more integrated and coordinated approach to policy supports, through a single contact point.
However, the international academic literature displays concerns that the majority of entrepreneurship policies are not leading to the expected results (Minniti 2008). Vaillant et al (2010) suggest that the quality of new ventures is impacting this. Dineen and Lenihan (2011) argue that improving the quality of entrepreneurship ventures as opposed to the quantity could have a major impact on socio-economic development. While Enterprise Ireland is focusing on high potential start ups (HPSUs), Dineen and Lenihan (2011) argue that there is scope for analysis in terms of the focus of government agencies on the quality of entrepreneurship in Ireland.

In relation to a regional dimension, Forfás (2009a) recognises entrepreneurship as a key factor in driving future regional economic growth.

The [Mid West] region needs to ensure that it facilitates ease of access to the ‘right’ information at the right time and in the right way to enable individuals to realise their potential.

(Forfás 2009a, p.20)

Forfás (2009) highlights the importance of various factors to stimulate entrepreneurship including networks, regionally based skills, broadband infrastructure. The GEM report (2009) also argues that entrepreneurs are important for regional development. However, it is evident that there is a lack of focus on entrepreneurship by Irish policymakers, particularly at a regional level. The empirical analysis of entrepreneurship in this research highlights that there is significant market failure in relation to entrepreneurship in the Mid West Region, particularly in relation to the gender balance which needs to be addressed by policymakers.

8.2.3 Recommendations
This section presents key recommendations in the areas of industry/enterprise, entrepreneurship and innovation in order to foster long term sustainable economic growth in the Mid West Region. However, some of the policy recommendations impact all Irish regions. These recommendations are based on foregoing review of the current government policies, the theoretical literature, regional data and the new paradigm of regional growth emerging in various OECD countries.

1. Export-led Regional Growth: The key policy recommendation from the empirical analysis in Section 2 is that economic recovery in the region should be export-led, as regional economies are reliant on their export-base to grow. This should be driven by a high value added service sector which is imperative for growth of advanced economies.
2. Regional Focus to Industrial/Enterprise Policies: There should be a spatial dimension to Irish industrial/enterprise policies, with tailored regional policies. In the case of the Mid West Region the service sector needs to be developed, particularly in relation to indigenous enterprise, innovation, entrepreneurship and SMEs.

3. Sectoral and Industry Mix: Policymakers must ensure that there is an optimal industry/enterprise mix in the Irish regions to ensure resilience against economic shocks. This should include a balance of FDI and indigenous enterprise as well as a sectoral mix with both a high value added services and manufacturing sectors in the Mid West.

4. Link between Services and Manufacturing Policies: There should be linkages between services and manufacturing policies with the increased ‘blurring’ of the sectors as many of those employed in manufacturing are in service type jobs.

5. Regional Innovation Policy: The government should develop a regional innovation policy which should have clear and concise regional targets, as no single innovation policy formula that will adequately promote innovation in all Irish regions. This should take into account the specific needs of enterprise in the regions with weaker innovation structures including the Mid West, and should include detailed policies for innovation in services and innovation in indigenous enterprise.

6. National Entrepreneurship Policy: Similar to innovation, the government should develop a specific entrepreneurship policy with emphasis on entrepreneurship in the service sector. As part of this, tailored regional policies should be developed. Policies that promote internationalisation are particularly important (Dineen and Lenihan 2011).

7. Tailored Regional Entrepreneurship Policy

A tailored regional entrepreneurship policy for the Mid West as well as other Irish regions should be developed in order to address the underperformance of entrepreneurship in the Mid West. This should focus on improving the quality rather than the quantity of entrepreneurs for enhancing national and regional value added. Encouraging female entrepreneurship particularly in terms of high quality entrepreneurship should be a key part of this policy. This is especially important for the Mid West Region which is significantly underperforming in
this regard. Initiatives should include mentoring, provision of venture capital, networking and training.

There is a need to integrate migration and entrepreneurship policies as there are strong links between these two areas. The Mid West needs to retain educated/skilled labour in the region and encourage them to become entrepreneurial. Moreover policies that attract entrepreneurs to the region should be developed. Retaining and developing female labour in order to stimulate entrepreneurship in the Mid West should be on the policy agenda. Furthermore, the government should focus on promoting entrepreneurship among the cohort of Irish abroad to attract some of this cohort back in the long term.

A regional entrepreneurship policy should focus on promoting internationalisation among entrepreneurs in the Mid West, as entrepreneurs that export are shown to have a greater contribution to the regional economy. Furthermore, introducing entrepreneurship in all levels of the education system and developing entrepreneurial skills at an early age in the Mid West Region is important. A regional entrepreneurship policy should foster the promotion of informal investors in the Mid West as this is lagging behind national trends and it an important option for finance for nascent entrepreneurs.
### Table 8.3: Summary of Key Policy Recommendations for Export-Led Growth in the Mid West

<table>
<thead>
<tr>
<th>Policy Recommendation</th>
<th>Key Elements</th>
</tr>
</thead>
</table>
| 1. Export-led Regional Growth | • Driven by the service sector.  
                      • Focus on internationalisation of indigenous enterprise. |
| 2. Regional Strategy to Industrial/Enterprise Policies | • Tailored regional policy for the Mid West which includes developing the service sector in terms of indigenous enterprise, innovation, entrepreneurship and FDI. |
| 3. Sectoral and Industry Mix in the Mid West | • Indigenous and FDI.  
                      • SME, entrepreneurship and MNEs.  
                      • High value added services and manufacturing. |
| 4. Link between Services and Manufacturing Policies | • Recognition of the role of services in the manufacturing sector and the development of high value added services in manufacturing. |
| 5. Regional Innovation Policy | • Explicit regional targets for the Mid West.  
                      • Policies for innovation in the region’s service sector.  
                      • Focus on indigenous enterprise.  
                      • Focus on SMEs, particularly in the service sector.  
                      • Link to lifelong learning policies. |
                      • Filter into tailored regional policies.  
                      • Link to migration policy.  
                      • Emphasis on exporting potential of entrepreneurs. |
| 7. Tailored Regional Entrepreneurship Policy for the Mid West | • Quality rather than quantity entrepreneurship.  
                      • Focus on female entrepreneurship and internationalisation.  
                      • Integrate migration and entrepreneurship policies.  
                      • Entrepreneurship in the education system.  
                      • Promoting informal investors.  
                      • Link to the region’s service sector.  
                      • Link to migration policy. |

### 8.2.4 Summary

From the discussion in this section it is evident that that indigenous industry has been largely neglected by Irish policymakers until recent years. Furthermore, it shows that there is a lack a regional dimension to industrial/enterprise, innovation and entrepreneurship policies. It is crucial that there a regional dimension to these policies in order to facilitate long term economic growth in the Irish regions including the Mid West. These policies should also
place more emphasis on the service sector and indigenous enterprise which are key factors for enhancing regional economic growth, particularly in the Mid West. This is important as in the current economic recession the Mid West was the worse affected in terms of MNE jobs losses across all Irish regions in 2009. This is exerting unfavourable implications on the performance of the Mid West Region. Similar to the national trend, indigenous industry has been relatively neglected in the region until recent years. Therefore, key policies required in order to foster sustainable economic growth in the Mid West include a focus on export-led economic growth, tailored industrial/enterprise policies with a good sectoral mix and industry mix. It is important that there are tailored regional innovation and entrepreneurship policies to realise their full potential in the region. The following section discusses sectoral and labour supply policies in order to drive the Mid West’s recommended regional growth model.

8.3 Sectoral and Labour Supply Policies
This section considers sectoral and labour supply policies in Ireland with particular emphasis on the regional dimension and ‘whole of government approach’ in order to seek policy responses required to foster long term economic growth in the Mid West. The OECD (2011) argues that regional policy is dependent on introducing regional angles to sectoral policies. As service sector productivity, which was shown to be determined by education and female labour force participation, is particularly important for future Mid West economic growth, the policies that provide the framework for the performance of these are crucial. Following the policy discussion in each of these areas, key recommendations are presented in order to drive the suggested model of regional economic growth for the Mid West as presented in Section 1.

8.3.1 Services Sector Policy
This section briefly examines service sector policy in Ireland. “It is important to look at services if the aim of economic policy is to increase economic growth” (WölfI 2005, p.58). Based on data, productivity gains in the 1990s were more apparent in manufacturing in Ireland. However, services data is notoriously weak and the actual level of productivity cannot be determined for certain. However, it can be stated that most jobs nowadays reside in the services sector.

Notwithstanding the current slowdown in the Irish economy, experts agree that the services sector will serve as the engine of growth for the future of the Irish economy.

(Forfás 2008, p.2)
It is only in recent years that the service sector has begun to receive attention from Irish policymakers. The Service Strategy Group (2008, p.2), which recently published “Catching the Wave: A Service Strategy for Ireland”, highlights the importance of services for sustainable growth nationally and states that “…the services sector will serve as the engine of growth for the future of the Irish economy.” The Service Strategy Group (2008) argues that the importance of the service sector is not fully evident in Irish enterprise policy and suggests three key recommendations:

- Growing and diversifying Irish service exports;
- Promoting internationalisation (Outward Direct Investment); and
- Realising the importance of service companies that trade locally.

The Service Strategy Group (2008, p.2) emphasises that “…a shift in thinking is needed, so that services are brought into the heart of enterprise policy” and that services statistics should be improved to better inform policymakers in this area. The relationship between education and improving the service sector is recognised, as the Service Strategy Group (2008) suggests that enhancing skills in the service sector is important and the educational system needs to adapt to the service economy. The report emphasises the importance of implementing the ‘National Skills Strategy’ (Expert Group on Future Skills Needs 2007) as productivity improvements in services are generally through investment in human capital. Furthermore, the requirement of a wide variety of skills in the service sector is highlighted when compared to manufacturing.

The shift from dependence on growth in the manufacturing sector to growth in business and financial services as the driver of the economy has important implications for industrial policy and for policy on R&D human capital…The supply of labour with appropriate skills for the services sector will be important for future growth. This will involve not only ensuring an adequate output of graduates but it will also be necessary to ensure that Ireland is an attractive location for the skilled workers in the sector, be they Irish or foreign.

(Fitzgerald et al 2008, p.xi)

The shift towards services has implications for government policy and is likely to require changes in human capital (Wölfl 2005). Many of the service jobs now being created pay higher wages, but also require higher skills levels, educational attainment and advanced training, which was not previously required by the manufacturing sector (Allen 2002). Therefore, having an integrated approach to services, education and skills policies is crucial.
Regional Dimension of Service Sector Policy

While recent emphasis has been placed on the importance of the service sector for economic growth nationally, it is evident that there is a lack of a regional dimension to this. At the regional level, the Forfás (2009) ‘Regional Competitiveness Agenda’ for the Mid West emphasises sectors with the potential for development in the Mid West, including internationally traded services, logistics and supply chain management. High quality competitive priced broadband is crucial for the internationally traded service sector (Forfás 2009). Furthermore, language skills are highlighted as particularly important for both FDI and indigenous service companies to develop internationalisation strategies (Forfás 2009). Farrell et al (2007) have emphasised the importance of generic ‘soft’ skills such as management skills, language skills and communication skills for the service sector. Education and skills policies should be linked to service sector policies at regional level. The underperformance of the service sector in the Mid West suggest that the ‘one-size-fits-all’ approach to services policy in Ireland is not sufficient for development of the region.

IDA Ireland’s (2010a) ‘Horizon 2020’ document emphasises that the IDA will continue to focus on attracting FDI in global services particularly in the area of ICT, industry, consumer and business services, and financial services. In recent years IDA Ireland has attracted high value added services including Google, eBay, Amazon and PayPal to locate in Dublin. However, it is clear that these service type companies are not locating in the Mid West. This indicates that government policy in terms of attracting high value added services is centered on Dublin and the East, reflecting the unbalanced model of regional growth. With regards to indigenous enterprise, Enterprise Ireland (2007b) recognises the importance of service exports for future economic growth and targeting emerging services sectors. “The development and growth of services will be vital to the next stage of Ireland’s economic performance” (Enterprise Ireland 2007b, p.39). However, similar to IDA Ireland, Enterprise Ireland lacks region-specific targets in terms of developing the service sector. This is evidently impacting the development of the service sector in the Mid West.

Barriers to Service Sector Performance

Various barriers exist in relation to developing the service sector nationally and in the Mid West Region. Farrell et al (2007, pp.62-63) suggest that there are number of methods for developing a ‘dynamic local service sector’ in Ireland by:

- Removing Product Market Barriers Limiting Competition in Services;
• Reducing Public Sector Ownership;
• Revising Unnecessary Barriers to Scale as this can make enterprises less productive;
• Eliminating Red Tape; and
• Facilitating ‘Creative Destruction’ in Services. The government should make it easier to establish and grow new firms in Ireland.

Furthermore, a recent report by the OECD (2009c) ‘OECD Economic Surveys: Ireland’ recommends that increased competition is required in the domestic services sector. “Policies to boost competition in the sheltered services sector would make the [Irish] economy more efficient in the long run…” (OECD 2009c, p.16). It is imperative that the barriers to service sector performance are addressed.

8.3.2 Education and Skills Policies

Ireland’s capacity to generate jobs – both in indigenous enterprise and via foreign direct investment – depends on the quality of our workforce. (Ireland, DES 2011, p.34)

This section briefly considers education and skills policies in Ireland, taking into consideration the regional dimension. The importance of education and skills is outlined in the Irish government’s ‘National Recovery Plan 2011-2014’ (Government of Ireland 2010), ‘Building Ireland’s Smart Economy’ (Government of Ireland 2008b), the report of the Innovation Task Force (Government of Ireland 2008c) and the Forfás (2006b) ‘Services Innovation in Ireland – Options for Innovation Policy’ report. The Department of Education and Skills (2011), in the ‘National Strategy for Higher Education to 2030’, recognises the importance of raising the educational attainment of the Irish population, which is essential for Ireland to be an innovative and knowledge based economy in order to provide sustainable employment opportunities. With the emergence of new technologies policymakers must ensure that Ireland has the skills to realise the full potential of these (DES 2011). Furthermore, the DES report (2011, p.37) emphasises the importance of fostering entrepreneurship and that “…Irish graduates need to be job shapers and not just job seekers”. Education and skills have strong links to the enterprise strategy in terms of stimulating entrepreneurship, innovation and attracting high value added enterprise to the region. However, linkages between education and the service sector need to become more evident in government policy, specifically at the regional level. In particular the relatively low value added service sector in the region is resulting in skilled labour migrating. While the low
levels of skills in services mean that the region is unable to attract high value added service to
the same extent as other regions. Moreover, there is a lack of a regional dimension to
education policies in Ireland, and one policy for all regions will not enable the regions to
realise their full potential in this regard.

DES (2011) states that the current economic downturn has highlighted the importance of
lifelong learning and to ensure that the workforce can adapt to advances in technology. The
report of the Innovation Task Force (Government of Ireland 2008) emphasises the
importance of highly skilled graduates and lifelong learning. However, Ireland has low levels
of lifelong learning when compared to international trends (Ireland, DES 2011). Seven per
cent of adults in Ireland aged 25-64 were participating in education and training in 2008
compared to 32 per cent in Sweden, 30 per cent in Denmark, 24 per cent in Finland and 20
per cent in the UK. This is considerably below the EU-15 average of 11 per cent and the EU-
27 average of 10 per cent (Ireland, DES 2011). According to DES (2011) the lack of
availability of part-time study opportunities impacts this. Moreover, as discussed in the
previous section lifelong learning is particularly low in the Mid West Region. Therefore,
policymakers must ensure that lifelong learning is promoted to foster productivity growth in
the service sector particularly at the regional level.

In relation to government policy regarding skills, the ‘National Skills Strategy’ was
developed in 2005 (EGFSN 2007) in order to identify the key skills required for Ireland to
become a more competitive, innovative and knowledge-based economy. It recognises the
importance of continually enhancing the skills of the workforce for long term economic
growth. In 2006 Forfás released ‘Skills at a Regional Level in Ireland’ which examines skill
requirements for the regions until 2010. The report highlights the importance of developing
regional skills to meet the requirements of high level cluster specific skills. It emphasises the
issue of the ‘brain drain’ to Dublin from other Irish regions. The more recent ‘National Skills
Bulletin 2010’ (Forfás 2010) outlines the regional profile of skills but it does not provide a
regional analysis in terms of is the skills required for future regional economic growth.
Despite recent government documents in relation to education and skills, there is a clear lack
of a regional dimension to these policies and linkages to either the service sector or female
labour supply.

Skills mismatch has become an area of policy concern with the EU increasingly focused on
the area of skills mismatch as it is considered to have significant implications for
competitiveness. This has considerable consequences for policy objectives, which can no longer be to simply foster economic growth through increasing the level of education and skills, as this is inadequate due to the potential for mismatches (Mavromaras and McGuinness 2007). However, there are no policy documents in Ireland or detailed empirical analysis in relation to skills mismatches that exist. In terms of the Mid West, policymakers need to ensure that education and skills increased foster growth of high value added services, but not to the neglect of high value added manufacturing.

While the Irish education system has been effective in the past, as the economy becomes more globalised and services continue to increase in importance, the education system must adapt. Productivity gains in the service sector, which is relatively more labour intensive, require investment in educational attainment and skills of the labour force. As the range of skills across services is broad, the effective implementation of the Irish Government’s National Skills Strategy is important.

A strong engagement between higher education and enterprise has the potential to play a vital role in enhancing Ireland’s economic competitiveness.

(Ireland, DES 2011, p.17)

The level of educational attainment and skills in the Mid West has significant implications for entrepreneurship performance, development of indigenous enterprise, innovation capacity and performance, attraction of investment from outside the region and growing the region’s export base. However, the Mid West Region is underperforming in terms of tertiary educational attainment and the level of skills as many graduates and highly skilled are migrating due to better employment opportunities in other Irish regions, especially to Dublin, which is dominant in terms of service sector employment and productivity. This suggests that education and skills policies need to be linked to the service sector at the Mid West regional level in order to prevent any future skills mismatches.

8.3.3 Female Labour Supply Policy

Forget China, India and the internet: economic growth is driven by women.

(The Economist 2006b)

The economist argues that from the mid 1990s to 2006 much of the global economic growth was due to increased employment of women in advanced economies. In Ireland, the increase in female employment in the boom period of the 1990s fostered economic growth and ensured that any increases in demand were facilitated by supply. However, there is a
considerable lack of policy documents in Ireland relating to promotion of female labour force participation or removing barriers to female participation. It is generally an area that is overlooked by the Irish government in terms of enhancing national and regional economic growth. This is largely due to the fact that increases in female labour force participation in the 1990s were facilitated by the strong economic growth of that era to draw women into the labour market (Russell et al 2009). However in the future policies in this area will be required to encourage females into the labour force.

In the short to medium term at least, Ireland will no longer be able to rely on economic growth to draw women into the labour market, this may refocus attention on the efforts required in the policy domain for Ireland to achieve and maintain the targets set for female employment within the EU.

(Russell et al 2009, p.79)

In 2007 the government published the ‘National Women’s Strategy 2007-2016’ (Ireland, Department of Justice 2007) which focuses the objective of advancing women in Irish society. The targets include enhancing the participation of females in the labour force, supporting female entrepreneurship, realising the full potential of females in the education system, and ensuring that childcare meet the needs of parents. In order to increase the labour force participation of females the general objectives are outlined including strengthening initiatives which support females in returning to the labour market, and undertaking a survey in relation to encouraging lone parents to re-train and enter the labour market, and promote the FÁS “Expanding the Workforce” initiative (Ireland, Department of Justice 2007). However, there is a lack of explicit targets and there is no regional dimension in the strategy.

Increasing female labour force participation is addressed in an isolated context in the Human Capital chapter of the NDP 2007-2013 (Government of Ireland 2007) and it is not considered in individual regional sections as a factor for enhancing economic growth. There are vague policy recommendations in the plan for increasing female participation relating to childcare, tax reform and education. An example of this is in relation to increasing the participation of part-time workers which it states “will be explored” at a further date (NDP 2007, p.195). There are no specific strategies outlined in these areas at a regional level.

The empirical analysis in this research suggests there is a strong need to formulate regional policies to encourage female labour force participation as the OECD (2004) argues that policies can have a significant impact on female participation. “The female participation rate is depressed by policy and market failure” (OECD 2004, p.1). A strategy with a regional
dimension that links to education and the service sector would be of particular benefit in the long term for national and Mid West long term economic growth. Female participation is strongly linked to educational attainment which suggests that policies that link these two growth factors have the potential to be particularly effective for enhancing future productivity in the service sector. It is vital that any increases in the region’s level of educational attainment directly impact on increases in the region’s female labour supply. However, it is evident that females are migrating from the Mid West as a skills mismatch prevails in terms of female educational attainment and skills. Policies to encourage female labour force participation must be promoted by Irish policymakers and barriers to female labour supply must be addressed, particularly at the regional level.

8.3.4 Recommendations
The section presents policy recommendations in relation to the service sector, education and skills, and female labour force participation in order to drive the suggested regional growth model for the Mid West. These policies are informed by the foregoing policy discussion, the literature review, the conceptual framework, and the empirical evidence on the performance of the Mid West. It is evident from the discussion in this chapter that there is a lack of a ‘whole of government’ or regional dimension approach to these policies which is undoubtedly contributing to their underperformance in the Mid West.

1. Tailored Regional Service Sector Strategy: A tailored regional strategy for the creation of a high value added service sector in the Mid West should be developed by policymakers. This should include the promotion of innovation, R&D, exports, attraction of FDI, development and growth of indigenous enterprises and entrepreneurship in the service sector. It should also link to education and female labour supply policies.

2. Barriers to Service Sector Performance: Policymakers should address the barriers to service sector performance in Ireland and the Mid West, in particular access to high quality and competitive priced broadband in the region.

3. More Comprehensive Data for Measuring Services: There is a need for more data in relation to services in Ireland particularly in terms of productivity measurements, the regional dimension, and measurements for innovation in services, and measurement of the role of services in manufacturing. This would enable the full contribution of services to GVA to be determined.
4. Mid West Services Cluster: A high value-added services cluster which incorporates for example a shared services centre or centre for creative industries, should be developed in the Mid West Region. Clusters increase productivity efficiency, stimulate innovation, investment and facilitate entrepreneurship and competitiveness. This could include one-stop advice centres for firms, business mentoring and skills training. It would facilitate the Mid West Region in becoming more competitive, innovate and create high value added employment. For example this cluster could contain shared services or the emerging creative industries sector.  

5. Tailored Regional Education Strategies: A regional education strategy is required for the Mid West in order to increase the level of human capital in the region, retain and attract high levels of educated labour to the region, produce graduates with knowledge and skills that are relevant to developing a dynamic service sector (but not to the detriment of high value added manufacturing) and develop a regional economy that will provide employment for graduates. This should link to enhancing female labour supply and it should also incorporate the promotion of lifelong learning especially among females. Russell et al (2009 p.79) analysis found “… rising educational attainment has been one of the most significant factors driving increased participation.”

6. Regional ‘Talent’ Attraction Policy: Education is increasingly becoming a large export industry whereby countries and regions provide education to international fee-paying students. Countries such as Australia, New Zealand and the US have had significant success in exporting education. Education is currently Australia’s largest export industry

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79 Recent research (Accenture 2010) has shown that this sector has the potential to generate significant employment in Ireland in the future. Examples of shared services include HR, marketing, research, IT, finance, sales, customer service and logistics. The educational attainment and skills of the region’s labour force will be crucial for developing a cluster in this sector.

80 Henry (2007) argues that since the 1990s creative industries has been one of the fastest growing sectors and is fundamental to the success of advanced economies. Piergiovanni et al (2009) who empirically tested the Italian regions found that regional growth is significantly influenced by the level of growth in creative industries. It was found to accelerate both value added and employment. This sector includes computer services, digital media, communications, publishing, architecture and design, arts, broadcasting and more. This sector has the potential to boost exports which has been recognised in the UK, Australia and New Zealand (Henry 2007). There is no comprehensive national policy for the development of this sector and there is little research in Ireland on this sector (WDC 2009b). The Mid West should position itself to take advantage of this emerging sector.

81 For example in 2010, the Finnish Ministry of Education and Culture published their strategy to 2020 which has a regional dimension and recognises the different and divergent regions. The strategy supports developing strong regional knowledge.
A policy for exporting education at a regional level in Ireland should be developed which contain specific targets for the Mid West, as this is a growing export sector. It is important to attract 3rd and 4th level students to study in the Mid West Region in order to promote economic growth.

7. **Tailored Regional Skills Strategies:** A skills strategy should be developed by policymakers for each of the Irish regions. This is vital for the Mid West in order to increase its skills levels particularly within the service sector which are lower than the national average. This skills strategy should identify and assess essential skills for the future and ensure lifelong employability, in particular transferrable skills for a flexible labour force which include language, management and communication skills. It is important that this regional strategy identifies the skills required to develop indigenous enterprise, promote entrepreneurship and attract FDI in the service sector, as well as developing the skills required for enterprises to export.

- **The ‘Brain Drain’ and Migration of Females from the Mid West:** The level of outward regional migration from the Mid West highlights the lack of a whole of government approach or a regional dimension to policy. This should be addressed through a skills/jobs match policy as part of the regional skills strategy. The development of a high value added service sector would also facilitate this through providing employment that matches the level of female regional skills.

8. **Regional Female Labour Supply Strategy:** This strategy should be developed in order to ensure that more females enter the Mid West Region’s labour force. Barriers to female participation should be addressed in order to ensure that any increases in the education attainment of females directly translate into increases in female participation. This will enable the full potential of the service sector in the Mid West to be realised. This should include strategies for promoting female entrepreneurship in the region which is low relative to other Irish regions. This could include promoting education and skills for entrepreneurs, mentoring programmes and financial support.

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82 An example of ‘talent attraction’ policies is in the Catalonia Region in Spain where it has proven to be effective (OECD 2011). The researchers attracted to the region have shown to increase the levels of innovation in the region as measured by patent applications (OECD 2011). Catalonia focuses on this to drive its knowledge and innovation strategies (OECD 2011). In Catalonia a dedicated, head-hunting and recruitment agency has been established by the university and government to attract individuals to work in the region. Barcelona, which is considered to be the driver of the region’s development, has started to develop a higher education cluster to attract international masters students (OECD 2011).
9. **Removing excessive regulation in the service sector:** The OECD (2004, p.11) argues that:

Excessive regulations of the service market tend to hinder the development of the service sector, which is the predominant employer of women. They also tend to restrict the supply and drive up the prices of services such as childcare and household services. This problem is straightforward (but possibly not easy) to deal with through policy reform – which is likely to have positive effects beyond those on female participation.

Therefore, it is important that excessive regulations in the service sector are addressed to stimulate the level of female labour force participation nationally and in the Mid West.

10. **Flexible employment opportunities:** By law companies should have flexible work practices in relation to part time work, atypical employment, job share and parental leave. Rigid routines and a lack of flexibility make it impossible for females to reconcile work and family life. Part-time employment is crucial for encouraging females to participate in the labour market, and the OECD (2004) has found that the availability of more part-time work opportunities, through policies that remove distortions increases female labour force participation.

11. **Tax System:** The OECD (2004) suggests that Ireland is one of the OECD countries which could gain the most from reforming the tax system. “The impact of higher tax rates on second-earners should be carefully assessed and consideration given to moving to full individual taxation” (OECD 2009c, p.14). Furthermore, the OECD (2009c) argues that removing barriers in the tax-benefit system would increase female participation in the long term.

12. **Childcare:** Low maternal labour force participation in Ireland indicates a number of possible reasons including the affordability of childcare, and availability of flexible work practices (Russell et al 2009). In 2007 the OECD found that Ireland had the highest childcare costs as a proportion of earnings among 26 OECD countries (Russell et al 2009). Russell et al (2009, p.79) argue that the analysis presented in their research “…suggests that policy developments in relation to combining work and care for young children have not played a very significant role in the rise in participation over the last decade.” Childcare subsidies based on employment of the mother as a precondition and tax cuts for low income mothers should be introduced (OECD 2004). The OECD (2004) identifies Ireland as falling
into the model of low childcare subsidies and high part-time employment of females. Nordic countries with high levels of female participation have high childcare subsidies, low part-time employment and a favourable taxation system display high levels of female labour force participation. This highlights the importance of childcare subsidies for promoting female labour force participation.

13. Maternity Leave: Maternity leave should change to shared ‘parental’ leave. Prolonged absence from the workforce is a major issue that can impact on female careers. Sweden changed its ‘maternity’ leave to ‘parental’ leave in the mid 1970s. Research by the Swedish Institute of Labor Market Policy Evaluation (Johansson 2010) found that the future earnings of mothers increased by an average of 6.7 per cent for every month of leave taken by the fathers. Furthermore, Johansson (2010) suggests that it could be a significant factor in explaining the gender pay gap. There should be an option in Ireland for paid maternity leave to be shared between both parents as this would reduce the time for females outside of the labour market.

14. Regional Recruitment Programme: This should focus on workers in short supply in the Mid West. In particular campaigns should be aimed at Irish immigrants abroad and females could be targeted as they have a higher educational attainment than males and a higher propensity to return.

15. ‘Glass Ceiling’ in the Mid West: Females have high levels of educational attainment than males yet there are more males than females in managerial and higher professional roles in the labour force in the Mid West. It is important that this issue is addressed in order for the full potential of female labour supply to be realised and for future productivity enhancements in the service sector which is the predominant employer of females.

Figure 6.5 presents the recommended policies to drive the regional growth model for the Mid West. There should be integrated policies in the areas of the service sector, education, skills and female labour supply in order to ensure that policy changes have the desired or ‘linking’ effects. The latter policies should be aligned with any regional growth strategy that is developed for the Mid West Region. Furthermore, policymakers should consider establishing the Mid West a pilot region for the development of a tailored regional growth model in Ireland. While the model in this research is based on Mid West regional economic growth, it can be applied to other Irish regions.
Figure 8.2 Integrated Government Policies required in order to stimulate the Mid West Regional Economic Growth Model

**Education & Skills**

- Develop tailored regional education strategy for the Mid West to enhance the educational attainment and lifelong learning to create a dynamic service sector.
- Develop a regional skills strategy to grow the level of skills in the Mid West Region and promote transferrable skills for a flexible labour force to create a dynamic service sector.
- Address the regional skills mismatch, particularly in relation to graduates and female labour.
- Develop skills required for FDI and indigenous industries.
- Develop skills to promote regional entrepreneurship.
- Develop key skills for enterprises to export.
- Attract foreign 3rd and 4th level students and researchers to the Mid West Region.

**Female Labour Force Participation (a ‘by-product’ of education)**

- Develop a regional female labour supply strategy which links to education and the service sector.
- Address barriers to female participation including maternity leave, flexible work practices, childcare, tax and the glass ceiling.
- Remove excessive regulations in the service sector to promote female participation.
- Retain regional female population and attract female migrants.
- Promote regional female entrepreneurship and among the Irish cohort of females abroad.
- Ensure that females are employed in occupations in the region that match their qualifications to retain females in the region.
- Develop a regional recruitment programme aimed at attracting female graduates abroad.

**Service Sector Employment & Productivity**

- Develop a tailored regional (high value added) service sector strategy for the Mid West which promotes innovation, R&D, exports, attraction of FDI, development and growth of indigenous enterprises and entrepreneurship in this sector as well as addressing the ‘blurring’ of the manufacturing and service sector.
- Address national and region-specific barriers to developing a dynamic service sector.
- Create a services cluster in the Mid West in internationally traded services such as shared services or creative industries.
- Address the quality and price of broadband services in the Mid West.
- More comprehensive services data in terms of productivity, innovation and regional dimension.
8.3.5 Summary
From the policy discussion in this section, it is clear that Irish government policies in relation to the service sector, education, skills and female labour force participation lack an explicit regional dimension and a ‘whole of government’ approach. This is having major implications for the Mid West Region which is underperforming in relation to these key determinants of regional economic growth. Therefore, key policies required in order to drive the recommended growth model for the region include tailored education and skills policies, policies to remove barriers to female labour force participation and to promote increases in female labour supply. Furthermore, the development of a tailored regional services strategy is crucial for enhancing the growth potential of the region and for the development of a services cluster in the Mid West.

8.4 Conclusion
It is evident from the discussion in this section that future regional growth in the Mid West will be export-led. Industrial/enterprise, innovation and entrepreneurship policies will be imperative in driving this. However, the discussion shows that there is no explicit regional dimension to these policies which needs to be addressed by Irish policymakers in order for the full potential of the Mid West and other Irish regions to be realised. Furthermore, indigenous industry, particularly services, will become increasingly important for Mid West economic growth as the foreign manufacturing sector in the region is declining. Innovation and entrepreneurship will be crucial in driving the development of indigenous industry in the region. Key policies required for driving the model of export-led growth include tailored regional policies with a strong sectoral and industry mix, and regional innovation and entrepreneurship policies. It is important that export-led policies focus on the service sector and the internationalisation of indigenous enterprise.

The consideration of sectoral and labour supply policies illustrates that there is a lack of a regional dimension or integrated approach to these policies. These policies are particularly important for driving the recommended model of long term economic growth for the Mid West as services exports are a key factor for future regional economic growth. Of particular importance are tailored regional strategies in these areas which will foster sustainable economic growth in the Mid West, including services, education, skills and female labour supply. There is potential to create a virtuous circle of economic growth in the region, provided that supportive government policies are in place. Overall, it is clear that significant changes are required in government policy in order to drive long term economic growth of
the Mid West and other Irish regions, which in turn will promote national economic recovery on a sustainable basis. The following chapter concludes this research and present key areas that merit future research.
Chapter 9

Conclusion and Areas for Further Research
9.1 Introduction

The Mid West is considerably underdeveloped relative to other Irish regions and international economies, largely due to the region’s low value added service sector and a leakage of highly skilled labour, including graduates and female labour, from the region. Historically, most funding and development targets by the Irish government have been directed towards the Dublin and the East, and therefore the entire West, including the Mid West Region, is comparatively neglected. Regional development and growth issues in Ireland have not received the level of focus relative to international economies, and there is a lack of an explicit regional development policy in Ireland which is contributing towards the unbalanced model of regional economic growth with growth occurring mainly in Dublin and the East.

This research examined the recent growth performance of the Mid West, out of which key research questions emerged. Based on this, the study sought policy prescriptions informed by the foregoing regional growth literature, the growth theoretical framework, and international best practice case studies which had key lessons to be learned for Irish policymakers.

This study investigated two questions:

1. What factors will promote regional economic growth in the Mid West Region?

2. Given the underperformance of the region, what are the policy targets and instruments required in order to facilitate sustainable economic growth, with particular emphasis on services, education and female labour force participation?

Specific focus was given to the performance of the Mid West Region’s service sector which is relatively underdeveloped in terms of its contribution to regional employment and productivity. The region was found to be more reliant on construction and ‘footloose’ manufacturing entering into the current economic recession which left it particularly vulnerable. The region is also underperforming in terms of the population’s educational attainment and skills which links to the outward migration of graduates and highly skilled female labour from the region. This in turn is impacting the performance of the region’s service sector. Moreover, it was shown that female participation is relatively low in the region which is linked to the region’s underdeveloped service sector. The Mid West is
suffering from the classic regional case of a leakage of productivity factors, namely labour and enterprise.

9.2 Key Findings and Implications for Irish Policymakers

A Confluence of Regional Growth Factors to drive Mid West Economic Growth

Based on the theoretical overview and related empirical findings in Section 1, this research shows that regional growth is determined by a confluence of factors and therefore requires integrated policies that produced ‘linkages’ in a region resulting in the concentration of labour and capital. In particular this research illustrates that regional economic growth is determined by endogenous factors including human capital, labour supply, indigenous enterprise, entrepreneurship, innovation as well as technological progress. Regional policies should be tailored and focus on growing the Mid West Region endogenously through the promotion of the latter growth determinants.

The Interaction of Education and Female Labour Force Participation for Enhancing Service Sector Productivity

The literature review of services and regional economic growth, and empirical evidence presented to validate this, shows that there is a positive correlation between education and service sector productivity, which is relatively more reliant on human capital when compared to manufacturing and agriculture. Furthermore, the findings illustrate that education can also indirectly impact service sector productivity through increasing female labour force participation which is particularly important in relation to Ireland. This highlights the importance of region-specific and integrated policies, in order for education and female labour supply to enhance service sector productivity in the Mid West Region. A tailored service strategy should be developed for the Mid West, which focuses on enhancing the export potential of services, firms, R&D, development of indigenous services enterprise and attraction of FDI, and fostering entrepreneurship in services. As part of this a high value added services cluster, which should includes shared services and creative industries, should be developed in the Mid West.

An Export-Led Growth Model for Sustainable Economic Growth

The analysis of the recent macroeconomic performance of the Irish economy shows that Ireland experienced two very different economic booms during the period from the 1993 to 2006. The first boom of the Celtic Tiger era in the 1990s was based on an export-led model,
while the second boom in the early 2000s, which was reliant on a domestic-led property bubble that was fuelled by foreign borrowings, was always going to collapse. If the construction sector is subtracted from the second economic boom, the Irish economy has actually been in recession since 2000. As Ireland is considered to be a ‘regional economy’ it is particularly reliant on its export base rather than the domestic economy for economic growth. Therefore, the key policy recommendation for sustainable economic growth is that Irish policymakers should promote a model of export-led growth that is balanced rather than having growth poles, particularly in the East of the country. The model of export-led growth should be driven by the service sector and the internationalisation of indigenous enterprise. Industrial/enterprise policy is key in promoting export-led growth, and within this innovation and entrepreneurship policies are important. A tailored industrial/enterprise policy is required for the Mid West in order to develop a strong sectoral and industry mix, and to enhance its service sector and indigenous enterprise. Moreover, a tailored regional innovation policy for the Mid West should be developed, that focuses on indigenous enterprise, services and SMEs.

**Underperformance of the Mid West**

The analysis of the economic performance of the Mid West Region illustrates that the service sector contributes relatively less in terms of employment and GVA, with the region being more reliant on construction and industry relative to other Irish regions. There is a relatively high concentration of low skills within the region’s service sector, with the growth of low value added service occupations in the region. The findings suggest that government policy has had a major role to play in this, as well as the low skills level in the sector. There is a strong correlation between the low skills in the region and the low contribution of services to regional GVA, as the concentration in the lower end of the production process diminishes the contribution of the service sector to GVA. The findings in this research show that advanced regions and countries have a large proportion of employment accounted for by services, and that there is considerable scope for enhancing the performance of the region’s service sector to stimulate economic growth. This highlights that Irish policymakers should promote the region’s service sector, through a tailored services strategy, to facilitate economic recovery in the Mid West, which should be linked to tailored education, skills and female labour supply policies.
**Low Entrepreneurship Performance**
This study confirms that the level of entrepreneurship has strong links to the performance of the service sector and the outward flow of labour from the Mid West Region. The findings in this study demonstrate that the Mid West is significantly underperforming in terms of various entrepreneurship indicators, in particular in relation to female entrepreneurship. Ireland does not have an entrepreneurship policy, and this needs to be developed by policymakers. Moreover, policymakers should facilitate entrepreneurship with specific regional targets and instruments due to varying levels of regional performance particularly in relation to the gender divide. This tailored regional policy for the Mid West should focus on quality rather than quantity entrepreneurship, internationalisation, the promotion of informal investors, female entrepreneurship, and it should link to migration policy.

**Low Female Labour Force Participation**
This study finds that female labour force participation is particularly low in the Mid West, and that the region’s female employment growth was one of the lowest across Irish regions over the 20 year period to 2009. The percentage of females employed in some of the knowledge-intensive services is relatively lower in the Mid West. A tailored regional female labour supply strategy should be developed for the Mid West. This should address barriers to female labour force participation, including excessive regulation of the service sector, as well as promoting increases in female labour supply. This should be liked to migration policies in order to attract back female emigrants through the development of a regional recruitment programme which should also focus on attracting female entrepreneurs to the region. This strategy should address the skills mismatch in the region as this is particularly affecting females.

**Positive Total Period Fertility Rates (TPFRs)**
Female labour force participation and demographics will be particularly important for Mid West labour supply growth in the future with the return to net outward migration in recent years from the Mid West. The analysis shows that the Mid West has an extremely favourable TPFR, but this will only enhance the region’s future labour supply provided that people remain in the region. This has important implications for government policy and suggests that developing a high value added and knowledge intensive service sector will reduce the leakage of skilled labour from the Mid West to other Irish regions with more developed service sectors.
Low skills and graduate and female ‘brain drain’

The Mid West is underperforming in terms of the percentage of the labour force with a third level qualification when compared to the national average. There is an outflow of recent graduates or a ‘brain drain’ from the region, to regions with a more developed service sector, due to a lack of employment opportunities and therefore, a skills mismatch exists in the region. Tailored regional education and skills strategies should be developed for the Mid West, which focus on lifelong learning, the skills required for promoting entrepreneurship, the skills that should be developed for enterprises to export and for the attraction of FDI and development of indigenous enterprise. This should include promoting education as an export, by attracting third and fourth level students, and researchers to the region.

A Lack of an Explicit Regional Development Policy in Ireland

Ireland does not have an explicit regional development policy in the manner of many OECD countries such as Sweden, France and Finland. In particular the Irish government is currently pursuing a ‘national’ approach to economic recovery while other OECD countries are decentralising policy and creating tailored, long term regional growth strategies. If Irish policymakers fail to recognise their current ‘one size fits all’ approach is not adequate, this could significantly hinder the ability of economic recovery to be sustainable. Policymakers should be encouraged to foster regional economic growth in the current economic recession to stimulate economic growth on a long term basis. Therefore, an explicit long term regional development policy should be developed by Irish policymakers which should filter down into key policy areas including industry/enterprise, the service sector, education, skills and female labour supply. In order for this to be effective a ‘whole of government’ approach is required. The tailored regional growth strategies should focus on regional competitiveness though mobilising regional endogenous assets. One government department should be responsible for regional development policy in Ireland and ideally a regional minister should be appointed to ensure that each government department outlines how their policies impact the Irish regions. Furthermore, mutli-level governance should be a more integral part of the Irish government policy formation and implementation process. In addition to these recommendations, regional development policies should be informed by: detailed regional empirical data to enable a comprehensive understanding of the regions; the regional growth theories to understand the various factors that drive regional economic growth; and case studies of international best practice to learn key lessons in terms of the policies are most effective in fostering regional economic growth.
9.3 Conclusion

Overall, the government’s approach to regional development is not realising the full potential of the Mid West Region, which is suffering from underdeveloped service sector, low levels of human capital, low female labour force participation and a leakage of productivity factors, in particular recent graduates and female labour. Subsequently, there is an unbalanced regional growth model in Ireland. An explicit, integrated and long term Irish regional development policy should be developed in order to address this. Key dimensions of this should include industry/enterprise, innovation, entrepreneurship, services, human capital and female labour supply. The sustainability of future Irish economic recovery will undoubtedly be hindered unless the full potential of all Irish regions is realised. In the current economic environment growth and recovery will not occur without a stimulus in relation to the indigenous sector and jobs growth. It is not adequate to rely exclusively on a world recovery and FDI as the only driver of growth in Ireland. Irish policymakers should view the current economic recession as a key opportunity to develop a balanced export-led growth model to foster sustainable national economic growth. As emphasised in recent international commentary it is imperative that a crisis should never go to waste (Rosenthal 2009; Florida 2010).

9.4 Future Research

One possible avenue for further research would be to establish a regional policy framework in Ireland, in pursuit of a balanced regional growth model. The regional focus is relatively neglected and requires more attention. There is a need for a strategy that is tailored for the Mid West. This would require an evaluation framework in terms of how the policies are evaluated and whether there is deadweight or displacement. There should be a specific aspect of evaluating whether spending by policymakers is achieving in the desired results. Another area for future research includes economic modelling. The growth performance of the Mid West is an area that has not received much attention, and this research emphasised the recent literature and economic performance of the region. Therefore, economic modelling, such as econometrics, would be an area for future research, which would add another layer of analysis.

83 Deadweight refers to grants for investment in an area that would have happened regardless of the grant, while displacement refers to funding for firms or jobs that displaces these from other areas.
Bibliography


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Appendices
Appendix A

Regional Growth Models
A.1 The Export Base Model

The Export Base Model assumes that each productive sector is categorised to the export base sector or the residentiary (non-export base) sector. Goods assigned to this sector include agriculture and manufacturing, while goods assigned to the residentiary sector include services, construction, local government, wholesale and retail trade (Kraybill 2003). In its simplest form the regional export theory equation suggests that the regional growth rate is a function of the performance of the region’s export base:

\[ Y_t = f(Y_B) \]

Where:
\( Y_t = \) total regional income (or employment)
\( Y_B = \) export base sector income (or employment)

Figure A.1: Export Base Theory of Economic Growth

Regional growth can be predicted as resulting from a change in the export base activity:

\[ \Delta Y_T = a + b\Delta Y_B \]

Where:
a = is an intercept term / constant
b = the export base multiplier
Key Assumptions:

- Firstly, this theory assumes that the region is driven only by exogenous demand which is outside the control of the region. The model assumes that growth in relation income or employment depends entirely on the growth of exports, investment or government spending, all of which are considered to be exogenous (Kraybill 2003).

- It is assumed that the region faces no constrains in relation to capital and labour. Perfect elasticity of supply for capital and labour is assumed as the factors are considered as having perfect factor mobility. In addition to this labour is considered to be either unemployed or underemployed (Kraybill 2003).

- This model also implies that there is no technological progress, as in this model the relationship pertaining to income and output does not change (Kraybill 2003).

Albeit, the assumptions of the model are generally unrealistic for most regions, the model presents an important argument that regions are economically open, and factors and products move more freely between regions than nations.
A.2 The Neoclassical Growth Equations with and without Technical Change

The Growth Equation with no Technical Change

In its simplest form the Solow Growth Model focuses on capital accumulation as the key determinant of economic growth. This theory suggests that in an economy where there is no technological innovation, output is determined purely by labour and capital inputs (Armstrong and Taylor 2006). The production function can be expressed as:

\[
Y = F(L,K)
\]

- \( Y \) is real output
- \( K \) is the stock of capital
- \( L \) is the labour force

There are two inputs, capital and labour, and one output. In this production function there is constant returns to scale. Therefore, if \( K \) and \( L \) are doubled for example, \( Y \) is doubled. A more specific form of the above relationship can be seen in the Cobb-Douglas production function. This is often thought to provide a reasonable description of existing economies (Barro and Sala-i-Martin 2004). In this model the ratio of capital and labour can be altered without impacting the level of output. Assuming constant returns to scale the following equation is obtained:

\[
Y = AK^aL^{1-a}
\]

- \( Y \) = Output
- \( K \) = Capital
- \( L \) = Labour
- \( A, a \) = Constants / parameters to be estimated

Where:
\( A>0 \) is the level of technology and \( 0<a<1 \).
The horizontal axis measures the ratio of capital per worker. The invested capital for example could include technical knowledge, training, equipment and machinery, therefore, the more that is invested in the capital per worker, the more productivity increases (McCain 2007). The vertical axis measures the interest rate, which can be used to measure the extra productivity from investing an additional unit, the marginal productivity of capital. The principle of diminishing returns applies to capital, therefore as the level of capital increases, the marginal productivity of capital decreases as capital per worker increases (McCain, 2007). If the level of capital increases at a faster rate than labour, the ratio of capital to labour rises, profits from investment decrease and therefore, investment slows. This continues until it reaches an equilibrium point. If the interest rate is less than the time preference line, there is no incentive for investors to invest. At the equilibrium point ‘K’ in Figure A.2 the natural rate and the warranted rate of growth are equal. Therefore, the labour force grows at the same rate as the stock of capital, and there is no increase in labour productivity (McCain 2007). This leads to a stationary state where there are no increases in labour productivity or standards of living at this equilibrium point. At the equilibrium point output per worker, capital per worker and consumption per person do not grow. Therefore, in order to alter the growth rate at the steady state then the population must change as this is the key determinant of the equilibrium growth rate.

The Growth Equation with Technical Change
Previously economic growth theory had been dominated by the role of investment increasing labour productivity (McCain 2007). However, these models displayed shortcomings as investment only accounted for a small part of economic growth, and the proportion of growth that could not be explained by investment ‘the residual’ became increasingly more important.
Neoclassical economists attempted to explain the residual by technological innovation which could result in investment and research and development (McCain 2007).

In his model Solow (1956) showed how the interaction of capital accumulation, increased by labour supply, and technological progress impacts output. It is assumed in this model that capital and labour will benefit equally from any technological innovations (Armstrong and Taylor 2006). Solow (1956) used the simplified production function to depict a firm’s output, Q, as a function of three variables:

- Labour (L)
- Physical Capital (K)
- Human Capital (H)

Equation: $Q = A_f (L,K,H)$

- Where Q represents the Gross Domestic Product (GDP).
- L, K and H are the endowments of the economy. The model was revised to include human capital
- Economists tend to classify ‘A’ as an index of technology. Any increases in ‘A’ represent technical progress, and ‘A’ also has a multiplier effect, whereby an increase in technological innovation leads to an increase in the level of output, even if the inputs, L, K and H, remain constant.

New innovations in technology result in marginal productivity shifting to the right (MP to MP¹) and the equilibrium point shifts from K to K¹, which is illustrated in Figure A.3. This results in an increase in the productivity of labour and standards of living also rise. Neoclassical economists view innovation as a continuous process that ensures labour productivity growth remains at a steady state (McCain 2007).
The Cobb-Douglas Production Function can be extended to including the influence of technological progress:

\[ Y = Ae^{\text{gt}}K^\alpha L^{1-\alpha} \]

\[ g_t \] = the constant rate of technological progress over the time period t.
Appendix B

Services and Economic Growth
B.1 Definition of Services

McLachlan *et al* (2002) suggest that following characteristics of services are often presented in literature:

- The intangible or immaterial nature of services. The Economist (1988, pp.9-10) once described services as “anything sold in trade that could not be dropped on your foot”, which suggests that the output of services is non-material, such as a lecture.

- The non-storability, non-inventory and non-transferability of services, such as medical advice and air travel which cannot be stored, which is in significant contrast to manufacturing goods which are tangible, and can be stored and distributed (OECD 2000).

- The direct interaction between the producer of the service and the consumer is also a key traditional characteristic of services, which again is in direct contrast to manufactured goods where direct contact between the producer and consumer is not required. Many services have to be consumed at the point of production and therefore perishability is an associated characteristic. However, in contrast the production of a manufactured good is generally separate to the final consumer’s demand of the good.

In addition to the above traditional characteristics associated with services, the following are also characteristics evident in the literature (McGee 1992):

1. Variability: Services have a tendency to be more variable and dependent on the performance of a producer.
2. Compatibility: Services often depend on the quality of the interaction between producer and the consumer.
3. Untestability: It is often difficult to ‘try out’ a service.
4. Scope for misunderstanding: Intangibility means that it is much easier for there to be misunderstanding between the producer and consumer in relation to the specific nature of the service to be provided.
5. Difficulty of evaluation: It can be difficult to evaluate a service once it has been received in comparison to tangible goods.

However, while many services are characterised by some of the above characteristics, there are many exceptions to the traditional characteristics often associated with services. Fuchs (1968, p.15) maintained that the characteristics of services are not so easily defined and he argued the difficulties in distinguishing services:
A dentist who makes a false tooth and places it in the patient’s mouth is certainly delivering a tangible product, but dentistry is invariably classified as a service. It is difficult to make a sharp distinction between the activities of an auto assembly plant and those of an automobile repair shop, but the former is invariably classified in industry and the latter is usually regarded as a service.

Moreover, advances in technology have resulted in the changing nature of services, and altering the key characteristics often associated with them (Boden and Miles 2000). According to the OECD (2000) technological progress has reduced the differences between services and other activities. Growing technology has resulted in consumers being able to consume services in deferred time without having to be present physically, such as a performance or a movie, which can be copied and mass produced similar to manufactured goods (OECD 2000). Another example is computer software programmes which, like a manufactured good, can be boxed and stored, and is a tangible output. Subsequently, the production of services can result in economies of scale. The relationship between service providers and consumers is altering as services providers can produce a product that is not mass produced but that can be mass consumed, such as online internet access to newspapers and dictionaries. Moreover, technology has influenced the relationship between service providers and consumers for example real estate, financial services and retail where direct contact between both parties is no longer necessary (OECD 2000).
Appendix C
Labour Supply
C. 1 Determinants of Female Labour Force Participation

The main determinants of female participation include fertility rates, marriage rates and family size, childcare and labour market conditions. In order to successfully design policy measures that could help to attract females into the labour force and subsequently increase participation rates, policymakers need to understand the factors influencing the ‘evolution’ of female participation rates (Genre et al 2010).

Fertility Rates, Marriage Rates and Family Size
Marriage rate as an indicator of fertility began to fall in the 1970s and 1980s as the incidence of non-marital fertility began to increase rapidly in Ireland and the Mid West, due to social changes in society. The 1960s and 1970s in Ireland produced a marriage boom. This subsequently led to an increase in fertility, which was evident in 1980 when births peaked at 74,000. Although, the marriage and birth rates fell in the early 1990s, since then however, the number of marriages (21,541) in Ireland and the marriage rate at 4.8 per 1,000 population in 2009 have been on the increase in recent years. The number of marriages in 2009 was 12.4 per cent higher than in 2000. The increase in participation of married women in the labour force also illustrates that marriage now has less impact on female labour supply than previously. The number of births at national level has increased to 74,278 in 2009, surpassing its peak of 74,000 in 1974.

Childcare
Russell and O’Connell (2004) suggest that much of the increase in female participation in the 1990s and early 2000s has been the result of women moving from the home to employment, which subsequently, illustrates the importance of childcare to assist the transition. In terms of the cost of childcare, the most recent data suggests that the cost of childcare in the Mid West is lower than the national average. Table C.1 illustrates the cost of childcare among the Irish regions. While childcare costs in the Mid West are lower than the national average, it still remains an important issue that impacts female participation trends.
Table C.1: Cost of Paid Childcare per Household by Region, 2002 & 2005

<table>
<thead>
<tr>
<th>Region</th>
<th>2002</th>
<th>2005</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Border</td>
<td>80</td>
<td>100</td>
<td>25.2</td>
</tr>
<tr>
<td>Midland</td>
<td>88</td>
<td>119</td>
<td>35.9</td>
</tr>
<tr>
<td>West</td>
<td>85</td>
<td>107</td>
<td>25.7</td>
</tr>
<tr>
<td>Dublin</td>
<td>119</td>
<td>145</td>
<td>21.7</td>
</tr>
<tr>
<td>Mid-East</td>
<td>107</td>
<td>124</td>
<td>15.0</td>
</tr>
<tr>
<td>Mid-West</td>
<td>85</td>
<td>111</td>
<td>30.3</td>
</tr>
<tr>
<td>South-East</td>
<td>81</td>
<td>107</td>
<td>31.6</td>
</tr>
<tr>
<td>South-West</td>
<td>90</td>
<td>109</td>
<td>21.3</td>
</tr>
<tr>
<td>Total</td>
<td>98</td>
<td>121</td>
<td>23.7</td>
</tr>
</tbody>
</table>

Source: CSO QNHS Childcare Module 2005

1 Childcare refers to types of childcare arrangements usually made by parents/guardians on a regular weekly basis during the working day (e.g. Mon-Fri 7am-7pm or similar, as applicable to household). Includes categories ‘Paid relative’, ‘Paid carer’, ‘Creche/montessori’ and ‘Other’. Time period December-February 2005.

However, CSO (2008a) research has also shown that a large proportion (61 per cent for preschool children and 80 per cent for primary school children) are reliant on a parent of guardian for childcare as opposed to formal childcare. Lower provision of formal childcare services in the Mid West means that the opportunity cost of participating in the labour market for mothers with young children is high and can significantly influence levels of female labour force participation among the younger cohorts.

**Labour Market Conditions**

A region’s policy, culture and gender wage gap influence a region’s labour market and can have significant influence on female labour force participation. Female labour force participation in generally influence by a combination of cultural and policy-related factors. Culture and policy are evidently related as a country’s policies are reflective of its culture (Daly 2007). The Scandinavian economies have a long tradition of good levels of female labour force participation and polices that reflect this tradition (Daly 2007).

The gender wage gap influences female labour force participation in Ireland and the Mid West Region. Women in Ireland are paid 17.1 per cent less than men which is similar to the EU average of 17.6 (CSO 2010c). However, despite being similar to international average trends it is still a wide gap. This has implications for policy as the gender wage gap limits the potential attractiveness of the labour market for females, impacting economic growth.
C.2 Skills Mismatch Theory

Skills and education mismatches can be categorised into two groups: skills shortages where employees with adequate qualifications and skills are not available; and skills underutilisation where employees are not being able to use their skills and qualifications to their full potential (Mavromaras and McGuinness 2007). Skills mismatch has come to the forefront of policy debate in the EU due to demographic change, increases in global competition and skills-based technological change (Cedefop 2010).

A low skill equilibrium can exist when there is an apparent balance for supply and demand within a region in which firms produce low value added goods or services. There is no incentive to move up the value chain and/or for the labour force to up-skill. Subsequently, measures in relation to both supply and demand are required to raise the region’s skill level (Forfás 2006). Skills mismatch is a widespread problem. It is argued that 40 per cent of employees are considered to be experiencing a skills mismatch (Mavromaras et al 2009). Lower productivity is a result of skills mismatches with the loss of output from a region, and subsequently a loss in competitiveness. The job assignment model as developed by Sattinger (1993) argues that employees in jobs that are below their education level will find that the characteristics of the jobs will limit their use of skills and subsequently impact negatively on productivity and earnings. It restricts potential productivity levels that could be achieved. Conversely employees that are in jobs above their educational attainment level lack the necessary skills to realise the full productive potential of the job (Allen and De Weert, 2007). This is important for the Mid West as the region as a large proportion of those with high educational attainment migrate from the region to regions with a larger proportion of higher skill quality jobs. However, despite this topic receiving considerable research there is an evident lack of theoretical advances and definitive empirical conclusions (Mavromaras and McGuinness 2007).