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Dominant Cities in Small Advanced Economies: Challenges and Policy Responses



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Overview, Summary and Conclusions

This paper discusses issues concerning regional development and urban agglomeration, primarily with reference to experience in Ireland but also in comparison with developments in other small advanced economies initiative (SAEI) countries. The SAEI is a collaboration between Ireland, Denmark, Finland, Israel, New Zealand, Singapore and Switzerland. It provides a forum where senior policymakers from these countries share insights on policy issues across the areas of economics, trade and innovation.

In the first section, the paper discusses the well-established economics of urban agglomeration. These include diversity of occupations, higher productivity, increased rates of entrepreneurship and innovation, as well as benefits to government including cost effectiveness in the development and maintenance of infrastructure. However, above a certain size, urban agglomerations can give rise to potential costs, particularly for housing, which can in turn drive a process of urban sprawl.

The paper then outlines the Irish case. It discusses the economic geography of Ireland's cities and population distribution and compares Ireland to other SAEI countries. Ireland's second-tier cities are both smaller relative to the largest city and less well spread across the country compared to comparison countries. Population growth has been concentrated around Dublin for several decades and this pattern is resulting in increasing sprawl, housing market problems and congestion.

The paper then outlines the evolution of Irish government regional policy since the 1960s, highlighting a recurring objective to develop other urban centres as a counterbalance to Dublin, but also a failure to implement this approach consistently.

Ireland's current approach to regional development, as articulated in the recentlyadopted National Planning Framework (NPF), places a renewed focus on developing Ireland's second tier cities as centres of scale. Research suggests that the most successful means of achieving the NPF's goals is by investing in key infrastructures such as public transportation and housing and generally making these cities more attractive places in which to live and work. These investments must crucially be made in advance of projected population growth. Cluster policies and the devolution of powers to regional and city governments are additional tools that have been explored in Ireland and elsewhere.

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The Economics of Urban Agglomeration

Benefits of Agglomeration

The uneven distribution of economic activity has long been observed internationally and in Ireland. Research has shown that this distribution is neither random nor are geographic factors chiefly responsible for the observed spatial patterns. Physical geography (such as topography, location by the sea or along a river) only accounts for about 20 per cent of the variation of spatial distribution of GDP per capita, with the remainder being due either to man-made agglomeration economies or to the interaction between man-made agglomeration economies and geography (Morgenroth, Prospects for Irish Regions and Counties: Scenarios and Implications, 2018)

There are several benefits to urban agglomerations that derive from their status as large concentrated centres of population. First, the scale economies that are inherent in large urban areas enable the growth of more specialised professions and allow for higher economic productivity. For instance, many professions and services may not have enough demand to sustain themselves in a small village or a moderately sized town, but they will have in a large city. This basic economic fact helps a city acquire productivity advantages based on higher demand. Second, urban agglomerations are often centres of entrepreneurship and innovation. They are associated with more company start-ups and the co-existence of large numbers of companies, research centres and higher education institutions enabling the networking required to foster spillovers and innovation.

There are benefits to governments as well as densely populated cities make service provision less expensive, and geographically concentrated infrastructures are easier to build and maintain. Urban agglomerations are also generally associated with an increase in the economic development of the rural hinterlands around them. Studies consistently show, for example, that areas within commuting distance of an agglomeration see an increase in jobs created in that locality, as individuals who work in the agglomeration, but live in the hinterland, tend to spend their money locally.

Agglomeration implies that economic activity in a particular sector is denser, measured by the number of workers per square kilometre, in urban areas. Urban areas tend to benefit as well from having diverse economies, fostering innovation and worker productivity as ideas 'jump' sector.

Agglomeration in urban regions also generates higher incomes, and employment rate growth and clustering - even within cities - has a positive impact. Overall, the evidence suggests that agglomeration economies are more important than localisation economies, although the two can operate in tandem. Localisation economies occur when an increase in the size of an industry in a city leads to an increase in productivity of a particular activity. An example is the growth of the technology industry in Silicon Valley. Localisation economies suggest that as an industry expands productivity in that industry increases due to spillover effects. Agglomeration economies suggest that as an agglomeration expands, this leads to productivity gains across all sectors and the creation of new sectors that were not previously economically viable. High skilled individuals also congregate in the larger, denser and more skilled labour markets and up to half of the differences in wage rates across local labour markets can be attributed to differences in human capital. In addition to considerations around wage rates and the probability of finding a suitable job, high skilled individuals choose their residential location on the basis of other quality of life characteristics. Cities with better consumer and cultural amenities such as shops, restaurants and art facilities enjoy faster growth. A process of cumulative causation applies, whereby a larger agglomeration can maintain a higher level of consumer amenities and thereby attract additional population. This also points to an important policy tool - namely the improvement of the quality of life to attract highly skilled individuals. This also means that once past a point of critical mass, agglomerations can be self-sustaining and will grow without policy interventions to encourage growth.

Agglomeration Costs

There are, however, also costs associated with urban agglomerations. As jobs and amenities concentrate within agglomerations, demand to live in them raises the cost of housing, often beyond the ability of the local population to pay. As people try to live as close to agglomeration as they can afford, this process creates urban sprawl and requires new infrastructure to cope with the spreading population. If this issue is not adequately addressed, many of the economic and quality of life benefits of agglomeration are reduced owing to sharply increasing housing costs and long commuting times.

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Urban Development Patterns in Ireland

Population trends

The Irish capital, Dublin, is an interesting case to compare internationally. Based on census data, Dublin is much larger relative to the country as a whole than the next largest agglomeration, compared with other similarly sized countries. Dublin's relative size has also increased over time. Since 1966, Ireland's population has grown by almost two million, from 2.88 million to 4.76 million in 2016. Most of this growth has been concentrated in the Greater Dublin Area, making it an increasingly dominant agglomeration. This can be seen in Figure 1, showing the increase in the population of towns and cities since 1966, particularly in and around the Dublin area which has a population of 1,200,000¹. While a number of other towns have grown, the relative share of Dublin and its commuter towns has clearly increased. Figure 2 shows that this rise in urban population has been accompanied by a declining rural population.

The concentration of growth in towns around Dublin means that growth in Ireland's other cities has been low. Only 11 percent of the growth of the urban population from 1966 until 2016 has been in the next four largest cities of Cork, Limerick, Galway and Waterford combined. This means that they are actually losing population share. In 1966, 18.8 percent of the population lived in these four cities, but this had fallen to 14.6 percent of the population by 2016.

This has occurred in a context where Ireland, in general, is more rural than other countries of similar size and economic status. In 2016, 37 percent of the population lived in areas defined by the Central Statistics Office (CSO) as rural. This compares to 15 percent in Finland, 14 percent in New Zealand, 12 percent in Denmark and 8 percent in Israel. In part, this reflects the continued economic importance of agriculture to the Irish economy.

¹ All urban populations are given as the population of their metropolitan area, as provided by the Central Statistics Office. These are revised with each new Census and are defined as the continuation of a distinct population cluster outside its legally defined boundary in which no occupied dwelling is more than 200 metres distant from the nearest occupied dwelling. This was chosen by the CSO as it is the definition in use by the United Nations.

Urban centres by size

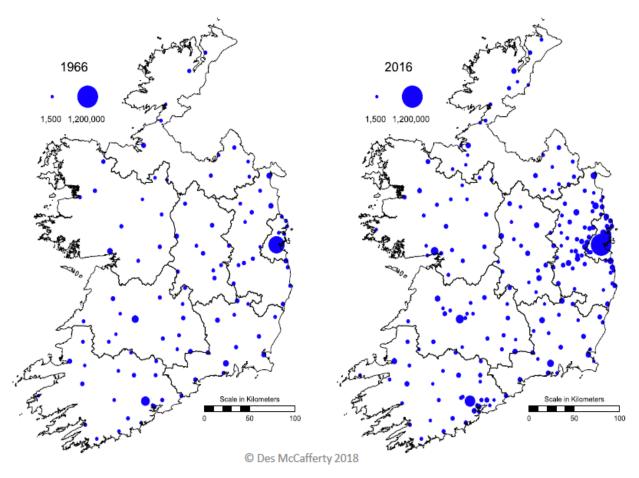


Figure 1- Geographic distribution of Irish urban centres in 1966 and 2016 (McCafferty, 2018)

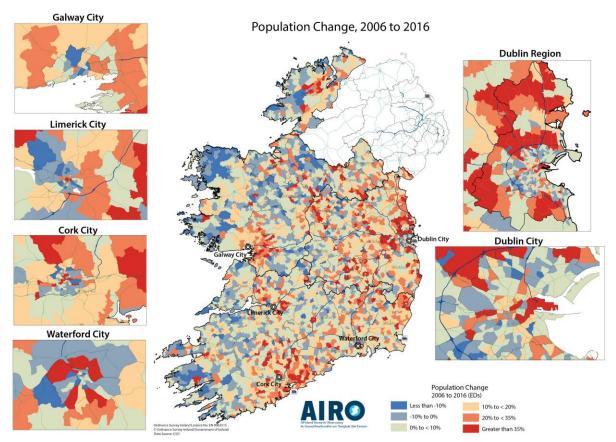


Figure 2 - Irish Population Change 2006-2016, showing clear urban sprawl developing around cities (Maynooth, 2016)

International comparisons

Dublin is clearly dominant even compared to other SEAI countries. In a country of Ireland's size, the next largest agglomeration would be expected to have a population of approximately 600,000 (using the city rank rule as discussed by (Krugman, 1999)), where the second city should be half the size of the first, the third half the size of the second and so on. This pattern has been considered almost economically universally valid and has been true since the nineteenth century. In fact, in Ireland the next nine largest agglomerations have a combined population of around 600,000.

A comparison with other SAEI countries is instructive. Denmark is often used as a point of comparison, as the two countries have similar populations. While Copenhagen is only marginally bigger than Dublin, the second largest Danish city is 20 per cent larger than Cork and the third largest city is 80 per cent larger than Limerick. For the other cities, the Danish cities are between 40 per cent and 80 per cent larger than their lrish counterparts. This can be seen in Figure 3 below.

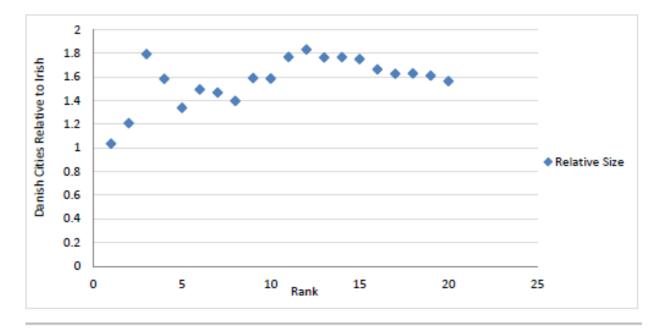


Figure 3 – Ratio of population in Danish cities to Irish cities by population rank (Morgenroth, 2018)

However, other SAEI countries are more similar to Ireland in having a clearly dominant large city. In Finland, the Greater Helsinki area has a population of approximately 1,200,000. The next largest city clearly outside of the Helsinki area, Tampere, has a population of approximately 300,000. In New Zealand, Auckland has a population of 1,500,000, while Wellington has a population of 400,000.

On the basis of the rule of city size cited earlier, all of the SAEI are in fact outliers. This makes them atypical and unlike other developed countries, such as the United States, particularly since such disproportionately large first cities are relatively rare in the rest of Europe (Puga, 1998).

Looking at Table 1 we can see that Ireland is an outlier even among other SAEI countries. Ireland's urban areas are considerably smaller relative to the largest agglomeration than in equivalent countries (Israel is also an outlier, with larger urban areas than might be expected). Ireland's second city of Cork is 18 percent of the size of Dublin. This is smaller than for any other country. Ireland's third city of Limerick is 9 percent of the size of Dublin. The usual figure in other countries appears to be over 20 percent, with only Odense in Denmark at 14 percent. Other urban areas are smaller too relative to the largest city. None of the 6-10 largest urban areas in Ireland have more than 3 percent the population of Dublin. These figures are at least 4 percent (as

in New Zealand), but are usually considerably above this. In addition to being relatively larger than their Irish counterparts, these cities are also larger in absolute terms than equivalent cities in Ireland.

A comparison with Northern Ireland (a region of the UK) is instructive, as population distribution in Northern Ireland falls much more in line with international norms. Dublin accounted for 24.6 percent of the total Irish population in 2016, and the combined twenty largest urban centres in the Republic of Ireland accounted for 42.4 percent of the total population. But, in Northern Ireland, Belfast accounted for 15.1 percent of the total population, while the twenty largest urban centres have a combined population share of over 50 percent. This ratio is much more in line with small developed countries internationally.

It is worth briefly pointing out that Ireland and Northern Ireland were part of the UK until 1921. If one considers the issue on an all-island basis, the population spread across cities is more balanced, as the Belfast metropolitan area has a population of 670,000.

In addition to being smaller than usual, Ireland's other urban agglomerations are not evenly spread around the country. In particular, there is no urban centre north of a line stretching across the centre of the country from Galway to Dundalk with a population of over 50,000. This hinders the development potential of the North-West region.

These deeply embedded legacy effects mean that Ireland's current large urban centres, particularly Dublin, are likely, in the absence of policy intervention, to continue to grow faster relative to the rest of the country, hampering the growth of less-developed regions as well as eroding Dublin's advantages.

In fact, projections suggest that Dublin is expected to have population growth above the national average annual projected growth rate of 0.6 percent, as well as significantly above average job growth².

² Regional Population Projections 2016 - 2031 - CSO - Central Statistics Office

	Ireland			New Zealand			Israel₃		
	Name	Population	% of largest	Name	Population	% of largest	Name	Population	% of largest
1	Dublin	1,173,179	100%	Auckland	1,534,700	100%	Jerusalem	901,302	100%
2	Cork	208,669	18%	Wellington	412,500	27%	Tel Aviv	443,939	49%
3	Limerick	94,192	8%	Christchurch	396,700	26%	Haifa	281,087	31%
4	Galway	79,934	7%	Hamilton	235,900	15%	Rishon LeZion	249,860	28%
5	Waterford	53,504	5%	Tauranga	137,900	9%	Petah Tikva	240,357	27%
6	Drogheda	40,956	3%	Napier-Hastings	133,000	9%	Ashdod	222,883	25%
7	Swords	39,248	3%	Dunedin	120,200	8%	Netanya	214,101	24%
8	Dundalk	39,004	3%	Palmerston North	85,300	6%	Beersheba	207,551	23%
9	Bray	32,600	3%	Nelson	66,700	4%	Bnei Brak	193,774	21%
10	Navan	30,173	3%	Rotorua	58,800	4%	Holon	192,624	21%
	Denmark			Finland			Switzerland		
	Name	Population	% of largest	Name	Population	% of largest	Name	Population	% of largest
1	Copenhagen	1,295,686	100%	Helsinki	1,176,976	100%	Zurich	391,359	100%
2	Aarhus	269,022	21%	Tampere	317,316	27%	Geneva₄	194,565	50%
3	Odense	176,683	14%	Turku	254,671	22%	Basel	168,620	43%
4	Aalborg	113,417	9%	Oulu	188,279	16%	Lausanne	133,897	34%
5	Esbjerg	72,261	6%	Jyvaskyla	117,974	10%	Bern	130,015	33%
6	Randers	62,563	5%	Lahti	116,549	10%	Winterthur	106,778	27%
7	Kolding	60,300	5%	Pori	84,442	7%	Lucerne	81,057	21%
8	Horsens	58,480	5%	Киоріо	83,454	7%	St. Gallen	75,310	19%
9	Vejle	55,876	4%	Vaasa	65,414	6%	Lugano	63,668	16%
10	Roskilde	50,393	4%	Joensuu	64,108	5%	Biel	53,667	14%

Table 1 – Populations of the ten largest urban areas in Ireland, New Zealand, Israel, Denmark, Finland and sSwitzerland, with each city as a % of the largest in that country

³ Uses figures from the Israel Central Bureau of Statistics.

⁴ The figure for Geneva does not include areas of the city that extend into France. This means that Geneva is likely considerably larger than the figure given.

Ireland's urban hierarchy: some challenges Urban Sprawl

An additional feature of the Irish experience is that the growth of population in the greater Dublin area has not primarily been occurring within the city itself, but in the towns and hinterland that surround it. At the same time, the median centre of Irish population has been consistently moving eastwards, showing that population growth is concentrated in the areas around Dublin and not just in medium-sized towns around the country in general. The prominence of Dublin is further shown by the fact that the major medium-sized towns near Dublin that have grown are not acting as major economic centres in their own right. Census data shows that these commuter towns (such as Swords, Balbriggan, Bray, Greystones, Leixlip and Maynooth) all have at least 40 percent of their workforce leaving them each day to work in Dublin⁵.

⁵ Where We Work - CSO - Central Statistics Office

Housing market issues

A particular challenge that Ireland faces is the low density of urban housing. In most European countries 30-40 percent of housing stock is in the form of apartments, compared to 10 percent in Ireland. This is a problem that stems both from historical preferences that are difficult to change and from Irish planning regulation and a tendency to favour objections from existing residents, captured by the term "nimbyism" (an acronym that refers to 'Not In My Back Yard'). There are quite stringent density regulations in Ireland owing to fears of overwhelming local infrastructure. Furthermore, Irish planners have historically rejected buildings

Irish Housing Market

Ireland is an expensive place to live, relative to many EU member states, particularly in terms of property costs. The shortfall and affordability of residential housing can influence decisions around relocation of talent. Despite an increase in construction activity, strong demand, particularly for apartments in urban areas, means that property price inflation is likely to continue. High rents push the cost of living out of line with other developed European economies. Increasing property prices and rental costs, combined with a tight labour market, and could result in higher wage demands and diminish Ireland's ability to attract and retain talent.

OECD figures suggest that the price-income ratio for housing in Ireland has grown rapidly in recent years. Since 2013 it has risen by almost 37 index points to 118. This is considerably higher than that for most other SAEI countries over the same time frame. In Denmark the price-income ratio increased by 11 points, in Israel it increased by 13 points until 2016 (the last available year of data) while in Finland it fell by 4 points. Only New Zealand shows such a comparable increase, with the price-income ratio increasing by 34 points since 2013, also to 118.

that are too high owing to concerns about their prominence and visibility. This means that few are above five stories. This limits the capacity of the city to house many citizens, leading to a pattern of urban sprawl.

Congestion

The National Competitiveness Council (an independent advisory body) in its 2018 Competitiveness Scorecard for Ireland cited traffic congestion and rapidly rising housing costs as key factors that could threaten Ireland's competitiveness. All of the counties in greater Dublin have over half of the population spending longer than thirty minutes commuting, with the six towns with the longest commutes in Ireland (Bettystown, Skerries, Greystones, Maynooth, Wicklow and Balbriggan) recording in the 2016 census that over 20 percent of the population spent over an hour commuting to work. Long commutes have real economic costs. Analysis undertaken for the Department of Transport, Tourism and Sport estimates the cost of time lost due to aggravated congestion was €358 million in the base year (2012). In the absence of mitigating measures, this is forecast to rise to €2.08 billion per year by 2033. This analysis only estimates the value of the time lost due to aggravated congestion. It does not include, for example, the impacts on journey quality as a result of driving on more congested roads or travelling via more crowded public transport, increased fuel consumption and other vehicle operating costs, or increases in vehicle emissions, or other intangible factors due to making an area in general less desirable. This suggests that costs of congestion are likely to be considerably understated.

While cities of scale remain key to a country's economic outlook, a more balanced regional growth policy would result in fewer problems created by capacity constraints.

⁶ The Costs of Congestion – Department of Transport, Tourism and Sport

Evolution of Regional Policy in Ireland

Buchanan Report, 1968

The Irish government's first significant regional policy initiative was the 1968 Buchanan report. This initiative aimed at creating balanced regional development with a focus on creating a number of large population centres. Outside of Dublin, just two cities - Cork and Limerick - were designated as "National Growth Centres", while Athlone, Drogheda, Dundalk, Galway, Sligo and Waterford were selected as "Regional Growth Centres" that would provide support to designated regions. While these centres had varying population levels they were well spread geographically across Ireland. Finally, four other towns were chosen as "Local Growth Centres" in order to facilitate a regional spread across Ireland, as depicted in Figure 4.

The report projected that Ireland's second tier cities could experience high population growth and that planning ought to be put in place to facilitate this. It was envisaged that these urban centres would then act as regional economic anchors for their hinterlands. It expected that considerable population growth would allow Cork and Limerick to compete with Dublin. However, the Buchanan report was never implemented in practice. While debate continues why this was the case, it has been attributed to a political culture of localism that inhibited the prioritisation of a small number of growth centres.

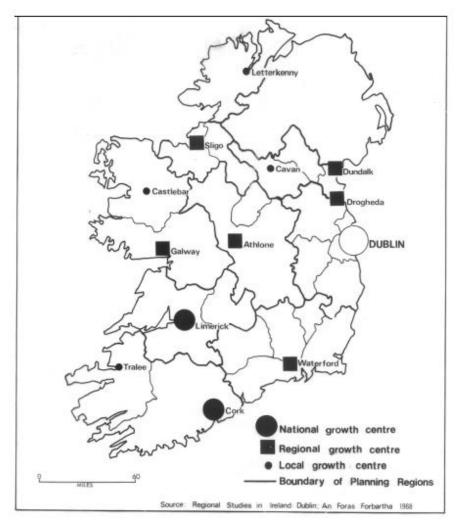


Figure 4 – The categorisation and distribution of growth centres for the 1968 Buchanan Report

Government Statement on Regional Policy, 1972

A second initiative, titled the Government Statement on Regional Policy, was released in 1972. This initiative centred on the attraction of foreign direct investment to locations around the country. This marked a departure from the strategy in the Buchanan Report which had focused on Ireland's second tier cities, and instead targeted a much broader range of towns across the country. The country was divided into 48 groups of towns with a plan for the creation of a certain number of jobs in each of them. This strategy proved successful in attracting foreign multinationals to establish manufacturing plants employing relatively low-

skilled labour in many rural towns. This was greatly facilitated by Ireland's entry into the EEC in 1973. However, this strategy became less effective as a regional development strategy by the 1990s, as the economy experienced a period of rapid economic growth with increased wage costs rendering Ireland less attractive as a location for these types of activities. As these plants were often the main source of employment in rural towns, these trends contributed to a decline in their population relative to Dublin.

National Spatial Strategy, 2002

In light of these new challenges the *National Spatial Strategy* (NSS) was unveiled in 2002. This strategy largely envisaged a return to the ideas of the Buchanan Report. It advocated the use of Dublin, Cork, Limerick, Galway and Waterford as existing "gateways". It also designated four new national level gateways - the towns of Dundalk and Sligo and the linked gateways of Letterkenny/(Derry) and the Midland towns of Athlone/Tullamore/Mullingar.

In addition, the NSS identified nine, strategically located, medium-sized "hubs" that would support, and be supported by, the gateways and would link out to wider rural areas. The role of the gateways acting at the national level, together with the hubs acting at the regional and county levels, was to be partnered by the county towns and other larger towns as a focus for business, residential, service and amenity functions. The NSS also identified an important need to support the role of smaller towns, villages and rural areas at the local level.

The NSS, like the Buchanan Report, was not implemented and indeed was effectively abandoned with the adoption of a new policy of "Decentralisation" in 2003. This plan was for the relocation of some 10,000 civil servants in different government departments and agencies away from Dublin to some 53 towns (many of them quite small) around the country. Progress on this plan was slow and this plan was eventually formally abandoned in 2011.

National Planning Framework, 2018

The National Planning Framework (NPF) is Ireland's current high-level strategic plan for Ireland's future development, and articulates an updated regional policy. It was published in 2018 alongside an accompanying public investment plan ("National Development Plan"). In essence, the NPF returns to the strategy of the Buchanan report by emphasising the development of Ireland's second-tier cities. It aims for the projected population increase in Ireland of one million people by 2040 to be evenly split between Dublin and the Mid-East region on the one hand and the rest of the country on the other. Crucially, as regards the four largest cities outside of Dublin, one quarter of total projected population growth is to be located in these. All four second-tier cities would need a population growth of 50-60 percent to achieve these targets.

The adoption of the NPF alongside the NDP represents a significant milestone in the evolution of regional development policy in Ireland; arguably, for the first time Ireland will have a fully integrated, and funded, regional policy.

The NPF emphasises the importance of regional infrastructure to achieve its goals, including increased broadband connectivity and urban renewal, in respect of which a specific National Regeneration and Development Agency is to be established. More broadly, the NPF and the flanking National Development Plan (NDP) are closely integrated and the aim is that infrastructure provision under the NDP supports the spatial strategy of the NPF. Other specific initiatives include establishing a Cabinet sub-committee, increased inter-departmental cooperation, the adoption of new planning guidelines and the establishment of four funds, one each for rural development, urban regeneration, climate action, and innovation⁷. Of these four funds, the Urban Regeneration Fund and Rural Development Funds are intended to support the key principles of strategic growth and renewal across

⁷ National Planning Framework, 2018

communities. As with the other funds, these will be competitive funds, whereby regional and local authorities and other agencies may bid to leverage public investment.

The NPF aims to overcome obstacles that have impeded the implementation of previous regional development plans. These issues include, but are not limited to, a degree of anti-urban bias, unrealistic expectations, lack of consistent government support, and, in the view of some observers, reluctance to devolve authority from central government to local government. In particular, past experience shows that cooperation between government departments is essential for the successful implementation of regional policy.

NPF Plans for Second Tier Cities

As has been outlined above, the solution currently being pursued is to foster the development of Ireland's four second-tier cities of Cork, Limerick, Galway and Waterford. These four cities are already noticeably larger than other Irish urban centres, but they have consistently experienced lower relative growth than Dublin and its surrounding commuter towns.

The NPF has specific plans and policy solutions for each of the four second-tier cities, designed to foster population growth and enterprise in each. For example, the NPF recognises Limerick's growth potential with an existing university and international airport and port facilities. The plan aims to build on these strengths while improving liveability with plans to develop a regional cycleway, enhancing road connectivity to the port, enhancing public transport to the technological park and university, encouraging inner city development and regeneration and by developing and diversifying existing communities in the city.

Cork is similarly recognised and its success at attracting foreign direct investment is acknowledged. The plan for Cork is to enhance the city's urban environment, including better housing choice and quality, new employment opportunities, improved public spaces and enhanced public transport, as well as safe and pleasant options for walking and cycling. The plan will also involve more immediate actions such as improved flood defences.

The underlying philosophy is that if these cities can be successfully developed to scale, they will be able to act as regional anchors for their rural hinterlands. Research consistently indicates that cities act as stimulants for population growth in the areas around them. Areas up to 80km away from cities grow faster than they would otherwise. The development of Ireland's second tier cities would therefore also provide an effective means of creating economic spillovers to their respective rural regions.

A crucial finding of research on regional development is that it is important to prioritise development within these cities, through infrastructure development and the attraction of enterprises, for example, rather than prioritising linkages between them.

Transportation Options

As outlined above, urban sprawl can contribute to undermining the benefits of urban agglomeration by creating population centres around cities that are not themselves centres of economic activity, but which act as commuting towns for the city itself. Research shows that urban sprawl is facilitated by transport infrastructure designed to provide connections between cities, such as motorways and rail connections. These improvements in transport infrastructures are not associated with significant population growth. In fact, only 2 percent of the population growth that has occurred in towns in Ireland can be directly attributed to such infrastructure⁸ In addition, Ireland is already well-developed in this area, with 58 percent of the population living within a 15 minute car journey of a motorway and 62 percent within the same distance from a train station.

Morgenroth, Accessibility improvements across Ireland, 2018

The key finding here is that in order to improve the competitiveness of Ireland's second tier cities and reduce urban sprawl, infrastructures need to be built within the cities themselves. These investments also need to be made in advance – it is not sufficient to build infrastructure after growth has taken place.

Cluster Development

IDA Ireland (Ireland's inward investment agency) has been successful in using Ireland's well-educated population and other advantages to attract investment to urban centres and their environs. In a number of locations, this has been reflected in the development of enterprise clusters, which have largely emerged organically around a number of Irish cities. These clusters arise where firms and other actors co-locate in a given area in order have access to specific skills or access to higher education institutions and research facilities (such as those supported by Science Foundation Ireland) and to benefit from spillovers from similar or related firms. The Atlantic MedTech Cluster which formed around Abbott in Sligo is one example, as are regional strengths in pharmaceuticals in Cork and medical devices in Galway. However, clustering policy (as distinct from 'just' co-location) in Ireland is probably best described as nascent relative to other developed economies which have used clustering initiatives as an effective policy tool for enterprise and economic

development for many years.

The development of clusters in the Irish context has been constrained somewhat by the composition of the enterprise base. Although a large number of major foreign owned companies are present (which offers potential for inter-firm relationships), in many cases the Irish subsidiary does not have global, regional or functional responsibility to make significant locally based business relationships. In addition, collaborations of scale between foreign owned and Irish-owned companies is constrained by the fact that sectoral overlap is limited. While there is

Regional Enterprise Development Fund

One tool used to promote clusters in Ireland is the Regional Enterprise Development Fund managed by Enterprise Ireland. This operates at a regional level and seeks to support industry clusters which are defined as structures or organised groups of independent parties designed to stimulate innovative activity through promotion, sharing of facilities and exchange of knowledge and expertise and by contributing effectively to knowledge transfer, networking, information dissemination and collaboration among the undertakings and other organisations in the connectivity. The fund co-finances regional development and has a budget of up to $\in 60$ million. This fund was established in 2017.

overlap, activity in the foreign owned sector is dominated by pharmaceutical, ICT and services, whereas Irish owned companies of scale operate predominantly in the food, drink and construction sectors.

Nonetheless, clusters may still represent a potentially valuable tool for regional development in Ireland. Policies that have been successful internationally include the identification of enterprises with potential synergies, incentives to attract cluster participants to co-locate, active cluster building and management, and policies to encourage innovation within the cluster to facilitate cluster growth.

International Policy Experience

In general, urban growth is best achieved by making a city somewhere where individuals want to live. Approaches to this include denser housing and the provision of high-quality public transportation and enhanced amenities. For instance, research suggests culture, amenities and pleasant surroundings can be useful tools ((Florida, 2002) explores this in a number of US cities), but in practice this can only maintained with investment in more basic infrastructure and encouraging people to use that infrastructure. These two features can interact. For example, research in Jinan in China found that individuals were more likely to use public transport if their walks to stations were pleasant and tree-lined (Fang, 2015).

It is possible for governments to make second-tier cities more attractive. Bristol, in the United Kingdom, is a good example. In Bristol a new industrial park was created around the train station in the centre, making it more attractive as staff prefer to work in city centres. This helped the city acquire new talent quickly and used the existing urban advantages of second-tier cities well. Bristol is also an example of the need to construct housing and infrastructure in advance, as supply has not kept up with the economic development of the city. This is a problem made worse by a lack of clear local government decision-making bodies in the cityregion.

Switzerland

The New Regional Policy in Switzerland⁹ is a plan that provides financial aid in terms of funds and interest free loans to Swiss regions, involving very close cooperation with the Swiss cantons – the primary unit of Swiss local government. The period of 2016–2023 for the plan has two focal points of support: industry, especially the promotion of regional innovation systems, and tourism. The former focuses on the support of innovation in SMEs, while the latter focuses on increasing competitiveness in tourist destinations. While Switzerland has some conditions that are not shared by SAEI members, such as a well distributed population and a federal system of government, its success in the area is still notable.

On a smaller scale, Freiburg in Germany is a model for the urban development of a small city. Since 1986, the city has had a continuous long-term policy of creating a high-density city that uses public transportation. The use of the city's planning department to formulate and stick to clear plans helped facilitate the long-term change and growth of the city. Over the long term these policies have resulted in a city of 'small distances' with one of Europe's highest living standards.

Successful cities require continuous policy work to maintain their success, so the process of improving second-tier cities needs political will and a broad consensus, as plans must be sustained through likely changes in the political party composition of governments.

New Regional Policy (NRP)

Devolution

Another key policy instrument recommended by the World Bank is local institutional reform. In Ireland, a lack of local institutional reform was cited in the 1968 Buchanan Report and remains an issue according to some observers. For example, Dublin has four local authorities rather than a single authority with responsibility for the wider city area. This is also an issue in other jurisdictions. For example, the comparative lack of success of the Scottish government's city-region deals has been attributed to including a lack of any meaningful devolution of power to the region, despite extensive infrastructural investment. However, local institutional reform provides the potential for long-term policy solutions at best. It is also an indirect tool and presupposes that local officials are better able to make decisions than those at higher levels. In Ireland, local government is relatively weak in an international context. Local councils have few powers and there are no directly elected executive figures, such as mayors. At regional level, there is a system of regional assemblies but these institutions have limited functions of a coordination nature with few powers or staff. This means that there are almost no governmental institutions between national government and the local level. Nonetheless Ireland is a small country both geographically in terms of population, with close connections between national parliamentarians and local citizens. This suggests that reform in this area may be less valuable than in other jurisdictions.

Bibliography

Central Statistics Office. (2013). Regional Population Projections 2016-2031. Dublin.

- Central Statistics Office. (2017). Where we work Census 2016. Dublin.
- Colin Buchanan and Partners. (1968). Regional Studies in Ireland. Dublin : An Foras Forbartha.
- Department of Environment, Heritage and Local Government. (2002). *National Spatial Strategy*. Dublin.
- Department of Housing, Planning and Local Government. (2018). *National Planning Framework*. Dublin.
- Department of Transport, Tourism and Sport. (2017). The Costs of Congestion. Dublin.
- Fang, K. (2015). Urban Accessibility Planning Support Systems. World Bank.
- Florida, R. (2002). *The Rise of the Creative Class. And How It's Transforming Work, Leisure and Everyday Life.* New York: Basic Books.
- Industrial Development Authority. (1972). Regional Industrial Plans, 1973-1977. Dublin.
- Krugman, P. (1999). The role of geography in development. *International regional science review, 22*(2), 142-161.
- McCafferty, D. (2018). *Structural and Spatial Evolution of the Irish Urban Hierarchy since Buchanan.* Sligo: Regional Studies Association Annual Conference.
- Morgenroth, E. (2018). Accessibility improvements across Ireland. *City-Led Development & Peripheral Regions RSA Irish Branch Annual Conference*. Sligo.
- Morgenroth, E. (2018). *Prospects for Irish Regions and Counties: Scenarios and Implications*. Dublin: ESRI.
- Puga, D. (1998). Urbanization patterns: European versus less developed countries. *Journal of Regional Science*, *38*(2), 231-252.
- RegioSuisse. (2018). New Regional Policy. Bern.

Quality Assurance Process

To ensure accuracy and methodological rigour, the author engaged in the following quality assurance process:

- Internal/Departmental
 - o Line management
 - The report was reviewed by the line management of the author.
- External
 - o Other Government Department
 - The report benefitted from comments provided by colleagues at the Department of Housing, Planning and Local Government.