The National Planning Framework 2040: Aspects on What it Takes to Sustain a Viable Rural Community

Brian Hughes
Dublin Institute of Technology, brian.hughes@dit.ie

Follow this and additional works at: http://arrow.dit.ie/beschrecart

Part of the Urban Studies and Planning Commons

Recommended Citation
Opening Statement – Dr Brian Hughes

The National Spatial Strategy (2002-2020) and its Successor; on the subject area of
“What it takes to sustain a viable rural community”

[see also author’s published research papers, etc. on Arrow@DIT.ie]

1. Introduction:

Thank you for the invitation and I welcome this opportunity to present my research evidence to the Joint Oireachtas Committee on The National Spatial Strategy (2002-2020) and its Successor, the National Planning Framework, on the subject of “What it takes to sustain a viable rural community”

I am not quite sure as to the extent to which I can specifically assist this Committee. My areas of experience are primarily urban in nature but nevertheless I accept your kind invitation in good faith and because of the complementarity between urban and rural. My academic research colleague, Dr Conor Skehan is unable to be with me today as he is Chairing a Housing Seminar in Cork. In sending his apologies, he has very kindly provided me with material which I am at liberty to use and it will assist and broaden this presentation. His input comprises the intermediate Sections 4, 5, 6 and 7 of this Submission and I therefore beg your forbearance for the fact that will take somewhat longer to deliver than had originally been intended.

I am also grateful to my collaborating research colleagues in the Dublin Institute of Technology and in other research centres and indeed, also to the assistance afforded by the CSO in the use and application of their census data. I will also refer to five Appendices attached to this 15-page Opening Statement document – they run from Pages 16 through 78. Some of the historic Appendix material, unavoidably, repeats some of the Submission content.

What is Urban Agglomeration?

Urban Agglomeration was first identified in 1920 by Alfred Marshall as geographic human concentration, supporting specialisation and labour-market pooling and most importantly, geographic proximity, facilitating the spread of information. Thus urban agglomeration increases productivity and reduces public per-capita spending requirements because of scale economics. It also increases the occurrence and viability of services, of human capital formation and today’s knowledge-based economic activity.
So, the output from urban agglomeration is the formation and growth of cities, epitomised by the density of people and density of firms. Cities are increasingly dominant in the world’s economies and are now responsible for most of their national wealth creation.

Furthermore, large towns, particularly if they physically merge with another large one, can also agglomerate into cities and a current Irish example of this process at work is the formation of the State’s sixth city. This is Drogheda’s agglomeration with Laytown-Bettystown-Mornington, including Donacarney village and their densifying areas that link these former individual settlements to creating a Greater Drogheda Population now approaching 90,000 with a settlement grid agglomeration that now matches the population of and exceeds the density of Waterford City. The Drogheda City Status Group is in the process of Petitioning Government to confirm both this dynamic and expanded settlement as Ireland’s next city, copper-fastening the Eastern Development Corridor and consolidating the socio-political and geo-economic importance of the Dublin-Belfast Corridor, post-Brexit.

This added value from urban agglomeration is critical to Ireland’s economic future and is essential to its rural future, as increasing revenues generated from the core area are then available to assist the periphery; this is one of the most important principles, of both the disciplines of Urban Economics and the New Economic Geography. Thus the home market effect is boosted both by population growth and per-capita incomes. In addition, increasing property values provide a ‘feel-good’ factor which encourages spending and further rounds of both residential and commercial investment.

The resultant four years of Ireland’s sustained economic growth and its employment recovery is not evenly spread nor is intended to be. The United Nations, the OECD and indeed the World Bank are advocates of what’s called ‘lumpiness’ or centripetal agglomeration. This results in city formation and critically, it is the expanding cities, in turn, that support their regional and rural spheres of influence, as emphatically confirmed in the evidence-base demographics of the CSO census results.

Accordingly, the idealistic but impracticable principles of Balanced Regional Development - which was the intended as the core driver of the National Spatial Strategy (2002-2020) – they have resulted in unintended demographic consequences, aggravated by the faulty selection of some Gateway and Hub centres and anyway, twenty-three in number was far too many for a State that has the population equivalent of Greater Manchester. The irony of its failed strategy was demonstrated with same number of matching, alternative, centres achieved greater population growth (2002-2016) than those selected.

2. The National Planning Framework and the current Demographic Background:

Its replacement, the Ireland 2040 National Planning Framework proposes to be different. It is intended to have full statutory backing as recommend in the Mahon Tribunal, it must achieve prior
all-party political agreement, it is intended to be fully aligned with the State’s economic strategy and hopefully, it will be properly resourced to rectify the near-cessation of infrastructural investment over the past decade and it will be managed by way of the three newly-established Regional Assemblies (RA) for the East and Midlands, the Southern RA and the Border and Western RA.

Given the depth and length of Ireland’s economic collapse with its loss of economic sovereignty and the international bail-out, the demographic outcome of the 2016 census was surprisingly benign; especially so against the alarmist political background utterances of 80,000-plus emigrants per annum. The reality however, in the definitive census results published last month, confirms that these outward flows were 87% counterbalanced by inward migration flows. This resulted in the modest net emigration figure of 4,300 per annum for the five years to April 2016. During this period Ireland’s population continued to increase by almost 35,000 per annum. Today it is growing by about one thousand per week.

These two-way demographic flow-volumes are reflective of the offshore location and economic characteristics of this small but dynamic trading nation: one that is endowed with a temperate climate but is still disadvantaged with a ‘Tundra’ population density outside of the Greater Dublin Area and Louth. Likewise, our exports plus imports, expressed in relation to Ireland’s GDP emphatically confirms the reliance on the high Globalisation Index rating that this country enjoys and the nature of Ireland’s open trading economy.

The State’s population increased by 173,600, with the natural growth of births less deaths figure at 196,100 offset by net out-migration of 22,500 resulting in a creditable State population growth of 3.78% in the five years to April 2016. The net emigration loss represented just 13% of the net gain in population - occurred at a time of Ireland’s deepest economic and financial crisis and the subsequent, necessary corrective measures.

It is now thirty years since Ireland’s population last contracted - when net out-migration was greater than natural growth. Given the profound nature and depth of our recent economic and financial difficulties and to the subsequent and sustained recovery, it is unrealistic to expect that Ireland will return to a population loss scenario, anytime soon. The opposite is likely to be the case with the resumption to net inward migration for the past two years and the reality of continuing world population growth with its ‘supply-push’ effect that will require careful managing.

Indeed, Ireland will have every cause to celebrate this coming July because in or about that third quarter of 2017 this State will mark its two million growth in population, up by some 71% since the low point of April 1961. Furthermore, for the first time, Ireland’s cities are growing at a faster rate than their surrounding home counties. We have much to be grateful for as to the extent to which our cities are able to buffer what otherwise would have been much more serious emigration outflows, especially from rural Ireland.
Nevertheless, the forthcoming National Planning Framework must contain combined aligned spatial and economic strategies to address the fact that Ireland’s provincial cities have an average population of just 109,000, which size is only 9.3% of Dublin’s population.

That comparable excludes Dublin’s burgeoning towns together with its modest rural population. If Ireland’s provincial cities are to become the drivers of their regions and their wider rural areas as is now encouragingly evident for Cork and Galway, considered spatial strategies will be required to promote their accelerated growth so that their average size difference with that of Dublin can be reduced. This is imperative because the default alternative is for a Dublin city state to emerge.

Ireland therefore needs to have that set of “missing teeth” restored - in contrast with the city-size hierarchies of comparable countries such as Finland, Denmark, Scotland and New Zealand.

Therefore the researched, strategic, demographic objective is to at least double the size of the provincial cities as quickly as possible but well within the 2040 timescale of this Plan. That was the end objective of the Dublin Institute of Technology’s *Twice the Size* study of 2009 which had proposed a somewhat shorter timescale but without having had the fore-knowledge of our subsequent dreadful economic collapse.

3. **Town Settlements – Demographic Performance 2011-2016:**

There is a direct correlation between a city’s size and its sphere of influence, in terms of the growth outcomes of surrounding towns and their countryside, as shown in the following Table which confirms some of the most significant town population losses since April 2011.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Birr</td>
<td>5,822</td>
<td>4,370</td>
<td>(1,452)</td>
<td>-24.9%</td>
</tr>
<tr>
<td>Clifden</td>
<td>2,056</td>
<td>1,597</td>
<td>(459)</td>
<td>-22.3%</td>
</tr>
<tr>
<td>Bantry</td>
<td>3,348</td>
<td>2,722</td>
<td>(626)</td>
<td>-18.7%</td>
</tr>
<tr>
<td>Cootehill</td>
<td>2,123</td>
<td>1,853</td>
<td>(270)</td>
<td>-12.7%</td>
</tr>
<tr>
<td>Ballina</td>
<td>11,086</td>
<td>10,171</td>
<td>(915)</td>
<td>-8.3%</td>
</tr>
<tr>
<td>Ballyshannon</td>
<td>2,140</td>
<td>1,963</td>
<td>(177)</td>
<td>-8.3%</td>
</tr>
<tr>
<td>Templemore</td>
<td>2,071</td>
<td>1,939</td>
<td>(132)</td>
<td>-6.4%</td>
</tr>
<tr>
<td>Clones</td>
<td>1,761</td>
<td>1,680</td>
<td>(81)</td>
<td>-4.6%</td>
</tr>
<tr>
<td>Clonmel</td>
<td>17,908</td>
<td>17,140</td>
<td>(768)</td>
<td>-4.3%</td>
</tr>
<tr>
<td>Muinebeag</td>
<td>2,950</td>
<td>2,837</td>
<td>(113)</td>
<td>-3.8%</td>
</tr>
<tr>
<td>Macroom</td>
<td>3,879</td>
<td>3,765</td>
<td>(114)</td>
<td>-2.9%</td>
</tr>
<tr>
<td>Athy</td>
<td>9,926</td>
<td>9,677</td>
<td>(249)</td>
<td>-2.5%</td>
</tr>
<tr>
<td>Castlebar</td>
<td>12,318</td>
<td>12,068</td>
<td>(250)</td>
<td>-2.0%</td>
</tr>
<tr>
<td>Letterkenny</td>
<td>19,588</td>
<td>19,274</td>
<td>(314)</td>
<td>-1.6%</td>
</tr>
<tr>
<td>Sligo</td>
<td>19,452</td>
<td>19,199</td>
<td>(253)</td>
<td>-1.3%</td>
</tr>
</tbody>
</table>

Source: CSO 2016 Census - Profile 2; Analysis Brian Hughes
Not all towns or villages thrive, in the same way as there are laggard areas within cities. Nearness to a city however, is a critical factor in influencing town growth rates. Generally, the nearby fastest-growing towns are those within the sphere of influence of a nearby city, as exemplified by the performance of Cork or Galway towns. Distance decay is an important land-use/ transportation reality, as the spatial counterpart to urban agglomeration.

Within County Offaly, its second town Birr was replaced by Edenderry in the census of 2002. Edenderry is twice as near to Dublin as Birr and is now 68.4% larger. In the five years to April 2016 Edenderry grew by 5.5% whereas Birr lost 24.9% of its population.

Further research work is required to provide individual explanations for some of the above horrendous losses occurring within such short time period. Many other towns not listed in this Table have either stopped growing over a number of censuses or exhibit weak growth characteristics.

Thurles, for example - home to the founding of the GAA and location of the largest capacity stadium outside of Croke Park - in the 1981 census was placed within the top-twenty of Ireland’s town size; in 2016 it was the 56th place Irish town. My ‘what if’ question is: had the Buchanan Plan been politically accepted and implemented in 1969 and had its 1986 target of 175,000 for Limerick (including Shannon) been attained, what would have been the spillover benefit for Limerick’s regional sphere-of-influence towns, including Thurles, on the basis that the self-generating benefits of urban agglomeration would have continued to 2016 with that city’s population standing at 235,000 i.e. in direct proportion to the State population increase that has taken place 1986-2016? The irony is that the State population for 1986 was 1.16% above Buchanan’s projected State total of 3.5 million.

What is clear is that the former central place functions of many Irish towns as market places and as service providers for the agricultural surrounds has radically altered, reflecting both fundamental changes in agriculture, the nature and change of what constitutes ‘work’ and modes of living. Today, the ‘Fordist’ manufacturing single branch plant-era has almost finished and Nenagh is in the process of winding-down its largest, remaining plant. However, this is a world-wide phenomenon, epitomised by the most famous ‘firm’ town, the city of Detroit – yes, cities also fail!

Dr Conor Skehan has kindly allowed me to present some of his own research work which helps clarify some of these changes and their effects on agriculture and on rural life, as follows.

4. The Causes and Symptoms of Rural Decline:

The Causes of ‘Rural Decline’ - Understanding the Causes and Symptoms

Demographic changes are usually a symptom of underlying causes – that are usually economic and socio-cultural. Attempting to develop policies to address demographic changes requires an understanding – and acceptance – of these underlying causes.
In order to develop a series of appropriate responses and policies for rural areas it is also important to exercise care in the use of language – thus ‘change’ is usually a more useful way to describe new circumstances.

Universally, rural areas are the locus – real or imagined – of national identity. They are regarded as being unique, sacred, traditional, true and are venerated in way that are normally reserved for parents and families. For this reason ‘change’ in rural areas is almost always regarded with distrust and often with negative emotions – sadness, fear or anger.

The new Action Plan for Rural Development addresses this with refreshing clarity – stating at the outset that it is time to change the narrative about rural Ireland and also stating that the perception that “rural” is synonymous with “decline” is wrong.

Much of the assessment that underpins discussions about rural development centres on statements about rural decline as well as the existence of ‘unbalanced’ regional development in Ireland.

These assumptions need to be examined and challenged. It is important to recognise that the pattern of settlement and economic activity in Ireland are symptoms and not causes.

The fundamental causes of the spatial patterns of population growth are age and fertility - which are intrinsic and unlikely to be responsive to policy or planning measures. [Fingal and the West/North of the State] The secondary [much smaller] demographic driver – migration [both internal and inward] – responds to economic opportunities.

Beyond demographic drivers there are four ‘deeper’ fundamental drivers that give rise to the persistence of the continued growth and dominance of eastern Ireland.

Centralised governance, the Primate City, Urbanisation and Changing Agriculture are the ultimate drivers of the observed settlement patterns. These needs to be acknowledged and addressed as a prerequisite to making progress on the issue of rural development.

Non-rural issues are addressed first before considering the central issue of Changing Agriculture.

5. Non-Rural Issues:
Centralised Governance

Ireland is noted\(^1\) as having one of the most centralised systems of government in the EU. This is characterised by having very low levels of fiscal or functional autonomy at a local level\(^2\). This reduces the opportunities for the development of regionally-specific policies, plans or implementation.

The adverse effects of over-centralisation have little effect in the more urbanised eastern region. The effects are most significantly evident in peripheral, rural and disadvantaged areas that are the most highly dependent on government interventions. The adverse effects of many un-coordinated, inflexible, bureaucratic, generalised plans and schemes often fall most heavily on some of the most vulnerable rural communities. Significant devolution of functions from central to local government is a pre-requisite to address these actual causes of rural decline.

The Primate City

Dublin and its hinterland has become Ireland’s Primate City\(^3\). Population growth occurring predominantly in the Mid-East and Dublin is a long-standing feature of the pattern of settlement across the country. This is a normal and widely-occurring\(^4\) pattern of urban development - similar to what occurs in countries across the EU, such as France, Austria and Hungary - which also have traditions of highly centralised systems of governance. This has emerged relatively late in Ireland because of a slow transition away from an agricultural economy.

Describing this internationally normal and widespread pattern as one that is unique to Ireland or as an abnormal or problematic ‘over-development’ of one area over others is misleading and unhelpful. Primate Cities do indeed experience challenges of housing and transportation – but they also confer disproportionate economic benefits\(^5\).

As noted above the emergence of a Primate city is universally a symptom of excessive centralisation and not a cause of rural decline. This directly contradicts the common trope that ‘Dublin is robbing rural areas of population and development’.

The other universal drivers of change in Ireland are the twin forces of Urbanisation and Changing Agriculture. These are discussed in more detail below to draw attention to the significance of their roles as ultimate and intrinsic drivers that have little scope to be ‘shaped’ by national plans or policies, because they are caused by macro-economic and universal demographic and social trends.

---

\(^1\) A 2008 Council of Europe report on Ireland’s found that, despite many reports and promises of reform, Ireland continued to have “excessively centralised” government by international standards.

\(^2\) The average public expenditure by Local Government in the EU 15 is 46% - compared to Ireland’s 5%

\(^3\) A primate city is the largest city in its country or region, disproportionately larger than any others in the urban hierarchy. [Goodall, B. (1987) The Penguin Dictionary of Human Geography. London: Penguin.]

\(^4\) Paris, Budapest, Dublin, Kuala Lumpur, Lima, Mexico City, Seoul, and Vienna have also been described as primate cities within their respective countries.[ Pacione, Michael (2005). Urban Geography: A Global Perspective (2nd ed.). Abingdon: Routledge. p. 83.]

Urbanisation
Ireland has urbanised late by European standards. Over 75% of most northern European countries were urbanised by 1900 – Ireland in contrast still had over 60% of its population living in rural areas at the foundation of the State.

2 The average public expenditure by Local Government in the EU 15 is 46% - compared to Ireland’s 5%
4 Paris, Budapest, Dublin, Kuala Lumpur, Lima, Mexico City, Seoul, and Vienna have also been described as primate cities within their respective countries. [Pacione, Michael (2005). Urban Geography: A Global Perspective (2nd ed.). Abingdon: Routledge. p. 83.]

Almost 63% of the Irish Population are now urbanised and the UN Population division project this to increase to the EU average of 75% by 2050.

This is occurring throughout Ireland – demonstrating that much of the concerns about rural population decline is a local effect resulting from the transition away from an agricultural and towards an enterprise-based urban economy.

6. Ireland’s Changing Agricultural Composition:

Modernisation of Agriculture
At the foundation of the State over 60% of the population lived in rural areas and were involved in agriculture. Now less than 35% live in rural areas Irish agriculture has changed dramatically since accession and less than 4% work in the sector.

Fewer farmers are producing more food than ever before. However, farming is making an increasingly small contribution to the overall economy.
This has led to significant changes in patterns of settlement as workers move from agricultural areas with fewer jobs into urban areas that have more economic opportunities.

This movement of populations from rural to urban areas is a world-wide phenomenon – that began in Europe in the mid-nineteenth century – where is it known as ‘Landfluct’. In almost all countries this process of changing agriculture is described as ‘rural decline’ – with rural communities commonly ‘blaming’ urban areas for the results of changing agriculture.

**Obsolescence in Agriculture**

As countries develop, their population spend less and less of their income on food. To maintain affordability and to practice modern agriculture, agricultural land is increasingly only used if it is very productive. The result of this is that agriculture is rapidly ceasing to be the dominant land-use or source of income in many parts of Ireland.

Very large parts of the Midlands and West of Ireland have very low levels of agricultural productivity – many people are very surprised to learn that nearly two thirds of Ireland is classified as non-arable agricultural areas and less than 5% is high quality arable land. These patterns of different agricultural capacity are the direct cause of differences in the continued viability of agriculture – and of the associated communities [See Figure 8].

The direct result of these changes is that large and increasing parts of rural Ireland are ceasing to be required for agriculture – they are becoming obsolete. This has significant implications for the continued viability of the communities who formerly were engaged in agriculture. This is a common issue all over the world.

Obsolescence is a common issue in industry and urban areas – but is less frequently recognised as being ‘normal’ in relation to agriculture because rural areas are often thought of as being closely associated with culturally significant identifiers of legitimate national identity.

---

7. **Conclusions on the ‘Unbalanced’ Myth:**

---

6 An Irish household Ireland spends about 7.5% of its income on food – while in Pakistan – for example – the figure is 45% - See attachment 1. Source Washington State University sm.wsu.edu/researcher/wsmaug11_billions.pdf

7 Utilisable agricultural area has been declining at about 24000 hectares per annum. Utilising CORINE data (See Figure 5), non-arable agricultural areas are the largest land cover are, accounting for 62.6% of the land cover, with wetlands accounting for 15.2%, followed by forestry and semi-natural areas at 12.9% and Arable at 4.7%.
It is undoubtedly the case that there are marked differences between the patterns of growth in the east and west of Ireland – and the associated economic fortunes of each respective area.

This pattern results from a combination of causes – led by a centralised system of governance that has caused the emergence of the Dublin Region as a ‘Primate City’. This trend has been repeated throughout the state by a process of rapid urbanisation that results from the change of agriculture.

The two principle drivers of the patterns of settlement in Ireland are our Centralised Governance and our Changing Agriculture this means that these are fundamental considerations that need to be acknowledged and addressed in order to develop a series of appropriate responses and policies for rural areas.

Progress will only occur once these causes are acknowledged instead of wasting time and energy by addressing issues such as trying to increase population or trying to preserve the infrastructure for obsolete activities.

We will only start to make progress with an accurate diagnosis - acknowledging realities, using accurate analysis and making plans based on evidence.

We need to move away from decrying the ‘Business-as-usual’ economic model, of using emotional language, blame and denial as a basis for decisions about the future of Rural Ireland.

The 2017 Action Plan For Rural Development is a huge improvement on the work of the 2014 Commission for the Economic Development of Rural Areas.

It still falls far short of what’s needed, because it lacks maps. We need to make and map different plans specifically for our different rural Irelands.

We need different plans for Atlantic Ireland, The North Midlands, the South Midlands, the east Midlands and South East Ireland.

We need to make specific and deliberate plans to help some rural communities to grow old gracefully, comfortably and safely.

This approach will anticipate and invent new provisions – so that post offices, shops, Garda stations and bus services will transform in advance of need – instead of closing them, as abrupt injuries to the community. We need to end the denial that some communities are aging and instead confront this issue.

Changes of this type will feel like a victory if they have been planned for in advance.

This needs us to acknowledge, accept and prepare for inevitable changes – instead of remaining in denial – or wasting energy and time on blame.

Other rural areas will need deliberate and specific plans to ‘get out of the way’ of larger and more intensive modern farming. We need to end the denial that changing farming will change the countryside.
Meanwhile, other rural areas, near bigger towns, will need places specifically designated for rural settlement – with public transport, safe walks, amenities and bigger schools. We need to end the denial that many people want to live in rural settings.

The National Planning Framework offers the opportunity to address real needs as well as in identifying specialisations, purposes and priorities for specific rural areas.

The Wild Atlantic Way is a spectacular example of what can happen when we get specific in Rural Areas.

Now, we need to get specific about food, intensive farming, forestry and settlement.

We need to make specific proposals about what, why and how each rural area could be the best place in Ireland for one thing.

This is the exact opposite of the comfortable ‘One-for-Everyone-in-the Audience’ approach of Balanced Regional Development.

It is also the exact opposite of our ‘Business-as-usual’ approach of wanting everywhere in Ireland to have the same things.

The other ‘Business-as-usual’ approach that we have to change is to stop describing the growth of the Dublin as ‘The Problem’.

In the census statistics we’ve seen, that it is changing agriculture – not growing Dublin – that is affecting rural Ireland.

This incorrect diagnosis is even more dangerous because it endangers the source of the funds needed to support the changes of rural Ireland. …Thank you Conor for this input.

8. Sustaining a Viable Rural Community:

Against this background, what does it takes to sustain a viable rural community?

- Answer: Viable employment opportunities in that community or within reasonable commuting distance (nearby town or city). Developing human capital to create the skills requirement, having regard to the nature and change of ‘work’.

Examples: - with which this writer is familiar:

A village community centre in Kilbehenny, East Limerick, part funded by the Ballyhoura Initiative, provides changing facilities for hill walkers to the Galtee, Knockmealdown and Ballyhoura mountain ranges, their forests, mountain lakes and magnificent scenery.

Cappinalea Adventure Centre, Lough Caragh, Kerry, funded by the VEC, providing a range of venture sports, both on land and lake, taking advantage of some of Ireland’s best mountain climbing locations.
Recent Industrial and Commercial developments in Mitchelstown, Co Cork, including the Regional depot for Aldi, the new Butter Factory, the Milk reception and process centre. The ‘kerrygold’ factor – proven international and national winners.

Craft beers and whiskey innovations and start-ups, marketing and exporting.

Deer and quality beef rearing and production.

- Changing Agricultural Practice: specifically with reference to Conor Skehan’s contribution – Making plans based on research and on evidence. Re-focusing agricultural output to meet post-Brexit challenges. More productive land use possibilities, e.g. Hardwood timber afforestation. Grow trees instead of reeds!
- Re-configuring the built-environment of towns and villages: the changing nature and role for the re-population of towns and villages. The need to preserve the core of retail activities concentrated on both sides of the same street while converting for residential use of surplus former retail outlets and their overhead accommodation.
- A focus on urban design and architecture: vide the sustained population growth of Westport.
- Further development of Irish culture, music sports, heritage, family history and place, having regard to growing inward tourism volumes and domestic holiday trends.
- Accessibility: the future role for Ireland’s regional airports and ports? Further research!
- For Hotels and other Tourism investment – achieving better return on capital employed and application of cost-benefit analysis. Intensive, more year-round usage and broadening the seasonal ‘shoulder’.
- Coastal recreation and fishing opportunities. Recognising the changing dietary habits and fashions – the importance of seafood for home and export consumption. Long-term renegotiation of Ireland’s fish-quotas in Brussels?
- Rural Isolation: I’m not a sociologist but I empathise with this problem, having studied urban sociology and done charity work, visiting older folk, etc. – albeit in an urban setting.
- Ease of access for hill walkers is an issue that needs to be finalised – post the failed recent court case involving timber boardwalks.
- I’ve had and do very much value my Bus Pass for the past 5 years.
- If Public Finances remain constrained, and if it would help in a practical way, the Pass might be means-tested so that resources might then be re-directed and alternative funding could be allocated to provide transport to help counter the problem of rural isolation. However, high-density populations will continue to thrive with public transport provision: it’s there and is running anyway!
- This mobility problem is only going to get worse as the age profile of Ireland’s population continues to increase.
- Population projections point to a quadrupling of Ireland’s over-85 age cohorts within the time frame of the NPF.
- If our economy continues to improve, the possibility of providing more sheltered town or village-located old folk accommodation should be considered for those living alone.
• However, I am aware of the extent of this international problem of old-age isolation and how prevalent the incidents of dying alone has become in urban Japan, which was discussed at that TCD Asian Conference, last January, see Appendix.

• As Ireland’s population continues to expand and healthy-eating habits further develop, there will be increasing demand for horticultural products. Japanese farm size is much less than 10% that of Ireland’s but what is evident is their contrasting balance between intensive capital inputs in relation to scarce land. Perhaps there are more market gardening opportunities?

• The invaluable work of the IDA, Enterprise Ireland and other State agencies and the Private Sector tools need to be recognised and availed of.

• Others: for discussion, based on research proposals. It is understood that Welsh sheep farmers’ average incomes are just £12,500 per annum, 85% of which is in the form of direct payments. This is less than half the UK industrial income. Unviable agriculture and associated rationalisation is an international problem.

Time limits constrain further inputs at this point but for the Committee’s assistance I attach a number of additional lines of research such as the structural population performances of the differing parts of Ireland’s demography, vide the 5-Provinces Table, Appendix 5.

The TCD Paper of January 2017 re theoretical background to Urban Economics and the New Economic Geography – providing an historic contrast of Ireland, with Japan, vide Appendix 5.

The Nature and Change of Work – what it will mean for future employment location – for discussion – Appendix 3

Urban Agglomeration: Pareto Optimality versus Zero-sum Game, vide Appendix 2 and ditto - 3.

9. Ireland’s Structural Population Composition – its Settlements and Open Countryside:

The dynamics of population composition and growth related to Ireland’s settlement types. This penultimate section examines the structural change in the State’s population composition since 1996. Interestingly, Dublin continued to lose population share in the fifteen years to 2011. The most significant improvement has been the growth in the numbers of large towns and of their average population size.

In this Table the census of 1996 is used as the basis for comparison because it marks the commencement of the significant growth in the non-Irish born net in-migration and a period of unprecedented population
growth. These data confirm that notable growth took place in the numbers of towns and villages over this 20-year period, in a proliferation of 68 and 163 respectively. There were 68 additional towns and 163 further villages, between 1996 and 2016. In aggregate, the numbers of settlements increased by 36.26%. Large Towns of 10,000+ grew both in number from 23 to 41 whilst also increasing their average size, from 16,544 to 18,992 (+14.80%).

However, two notable observations serve to contrast these 20-year demographic dynamics in compared with what has happened during the most recent five-year period. The first point is that a higher growth occurred in the city population for all five cities than in their respective home counties. The second observation is that during 2011-2016, the number of villages actually reduced by twenty-three. Whereas three former villages became towns of 1,500 or more, the remaining twenty fell below the minimum threshold of 50 inhabited clustered dwellings within 100 meters separating distances. There were ten fewer large villages, four fewer medium-sized villages and nine less small ones.

The most significant and important sector of the rural population is represented by the 1.432 million people who dwell in the open countryside, i.e. 80.61% as against the 0.344 million or 19.39% of the rural population in the 2016 census who are village-based. Note: This includes smaller clusters of houses such as the emergence of ‘the new-line’, of less than fifty dwellings with separation of less than 100 metres.

10. Submission Conclusions:

Today, nearly 260,000 more people living outside of any settlement town or village than in the entire of Dublin City and its suburbs. Whereas the density of built-in Dublin is some 4,000 per sq. km. the rural density (including villages) is 40 or one one-hundred of Dublin’s density. The economic viability of public-sector transport provision is problematic for densities of less than 3,000 per sq. km.

These contrasts between rural population size and density contrasts with the Capital have significant implications for services provision, economies of scale and for long-distance commuting and overall economies of scale.

Another interesting fact is that Dublin and suburbs grew by 62,552 additional people during 2011-2016: this is some 7.14% more than the aggregate growth of Ireland’s 195 towns (+58,381). Some 25 nearby towns within its inner commuter belt added 16,553 with over a further 10,000 from its outer commuter belt.

In a provincial sense Dublin and the Rest of Leinster dominate both the share and growth of State population during 2011-2016, as confirmed in Table 2, with a 55.29% share of population and 74.18% of population growth. Maynooth represents the demographic centroid of the entire island’s population as the centre of gravity, inevitably, moves further east.

**Ireland must do everything possible to maintain the economic recovery** including pursuit of the ‘Business as Usual’ model – whilst seeking to modify its excesses. Given Ireland’s external challenges it would be foolhardy to do otherwise and further risk a premature end to our recovery and upturn. Otherwise, taxation resources will dry up as interests rates inevitably rise, the national debt and its interest-servicing requirement will intensify and continuing bottom-up initiatives will not of themselves be effective in helping to maintain a viable rural community. The hard political choice, for localism and short termism must
recognize the need to make the necessary economic and spatial strategy compromise for ‘today’s bread and tomorrow’s jam’.

As the EUs principal English-speaking nation, Ireland is uniquely located in the middle of the East-West geopolitical axis that includes our strong cultural and economic links with the USA, Canada and the UK. These economic markets comprise nearly 420 million people in addition to a similar populated European Union.

The concluding message in this Submission, from Conor and myself, is that if the National Planning Framework can succeed in achieving a proportional growth in the State’s provincial cities between now and 2040, together with Dublin and a greatly expanding Drogheda, Kilkenny and Portlaoise, they will be better able to contribute to our economic wellbeing as Ireland’s population recovers to exceed its pre-famine levels. In that way, increasing State revenues will provide the opportunity for core-periphery transfers to become financially affordable and these top-down transfers to less-endowed rural areas will be made possible.

Gur a mile maith agaimh.

APPENDIX 1

Submission by Dr Brian Hughes on the National Planning Framework

Address: 21, Woodbine Road, Blackrock, Co Dublin, A94 D921.
Mobile: 087 251 3395          email: brianhughes353@gmail.com

To: npf@housing.gov.ie 31th March 2017

Introduction: I welcome this opportunity to contribute to the NPF process although I am critical of the timing for the submission deadline: logically it should have followed after a reasonable time period to assess the area and demographic analysis flowing from the forthcoming CSO April releases for the 2016 census.

I wish to endorse the call for Regional and Spatial Economic Strategies to replace the withdrawn NSS with its mistaken focus on Balanced Regional Development. Likewise, I support the policy of developing Ireland’s Capital, its regional cities and Leinster’s potential city Drogheda-LBM. The
provincial cities can do much to strengthen their own regions along the lines of the political reforms being implemented under *Putting People First* and the geo-economic importance of the Dublin-Belfast Corridor in the all-island context of Brexit, thus:

*Given the establishment of the Regional Assemblies David Minton, Director Northern and Western Regional Assembly since 2014, reports that* Regional Government in Ireland has been reformed. The 8 regional authorities have been abolished, while the two regional assemblies have been radically re-configured resulting in three new Regional Assemblies: namely, the Northern & Western Regional Assembly, Eastern & Midland Regional Assembly, and the Southern Regional Assembly. A regional approach to development has undergone a revival of late with successful place based initiatives such as the Action Plan for Jobs, Regional Skills Fora and other regional based policy initiatives such as IDA’s ‘Winning Strategy’. The enhanced role of Regional Assemblies assisting the implementation of the new National Planning Framework could be a game-changer in Ireland’s approach to regional development and competitiveness.

*Up to this point Ireland has never pursued aggressive regional development targets. The Assemblies will be responsible for the preparation and adoption of Regional Spatial and Economic Strategies (RSES) bringing, it is intended, a clear regional focus on the implementation of the forthcoming National Planning Framework. The RSES are expected to herald a new era of ‘effective regional development’ rather than the traditional and unachievable ‘balanced regional development’ approach. Each of the Regional Assemblies has a leadership role to play in identifying regional policies and coordinating initiatives that support the delivery and implementation of national planning policy. For example, the Northern and Western Regional Assembly (NWRA) has adopted a ‘New Regions’ approach focused on connecting the existing strengths, latent potential and focusing on Infrastructure, Investment and Innovation. As a result the NWRA has put in place a clear strategy. Source RSA, Irish Branch, 2017.*

I am also supportive of the policy direction principles for rural Ireland as advocated by Chairman of the Housing Agency, Conor Skehan, as he articulated in the back cover page of Sunday’s Independent newspaper (12th March 2017), headed ‘Change in rural Ireland is only a problem when it stops changing.’ Here, the identification of the differing rural typologies is important where decisions on non-urban viability have to be confronted.

**The need for Agglomeration:** There needs to be a spatial policy focus on urban agglomeration so that Ireland’s weak urban population percentage share can increase rapidly from its present 63% level. Densification also requires a new spatial growth model: one that is driven by core-periphery complementarity and centripetal agglomeration. Conor also decrues the “build it and they’ll come” housing approach: the NPF must be demand-led and not view Dublin’s size and growth as a problem, especially as it is Ireland’s only metropolitan-sized city!

This writer is not convinced with the EUs approach to polycentrism and supports the criticism adduced by Paul Krugman, Mario Polezi and others. Indeed, the Hall and Pain (2006) critique on Ireland’s weak position, relative to other North-Western European Metropolitan City Regions is apposite and as with BRD, the EUs Polycentric Model is wholly inappropriate to this State, given Ireland’s fragile settlement size, its Tundra population density outside of the GDA and its regional economic per-capita data confirming lower incomes in rural regions, generally.
The World Bank’s call for ‘lumpiness’ (2009) and for increasing densities of population needs to be intensively pursued. In this way, Ireland’s competitiveness can be enhanced and better economies-of-scale achieved. Thus the strategy focus must change to recognise and pursue centripetal agglomeration and densification strategies so as to maintain and enhance Ireland’s competitiveness whilst combatting the trend towards long and medium commuting distances.

Balanced Regional Development (BRD) has created hundreds of additional small towns and villages, vide Table 1 herein. Unlike Buchanan, the NSS has conspicuously failed in its task of selecting ‘winners’ for growth centres or to have progressed the growth of Ireland’s cities. In particular, the NSS rationale for town selection (Appendix V, *ibid*) was faulty. Unfortunately and to Ireland’s cost, Buchanan’s 1969 strategy to grow Ireland’s cities was emphatically rejected by the political corpus of the day.

Again, it is a pity that the 2016 census data for this Table is not available at the time of this submission, demonstrating the up-to-date extent of the scattered fragile and uneconomic nature of Ireland’s settlement structure.

Perhaps the most ominous fact emerging from Table 4.1.2 of the *Issues and Choices*, P. 24 document, is the absence of 100,000 to 200,000 cities, where the other four comparator countries average almost three such cities. Table 1 below likewise confirms that Irish cities have lagged the overall national population growth by 40% since 1996, the census date from which Irish non-indigenous in-migration became significant.

The fifteen-year dynamic 1996-2011 in settlement formation and growth is as follows:

<table>
<thead>
<tr>
<th>Settlements of State</th>
<th>1996 Population (numbers)</th>
<th>% of State</th>
<th>2011 Population (numbers)</th>
<th>% of State</th>
<th>1996-11 % Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cities</td>
<td>1,313,301</td>
<td>(5)</td>
<td>1,528,960</td>
<td>(5)</td>
<td>16.42%</td>
</tr>
<tr>
<td>Large Towns Medium</td>
<td>380,522</td>
<td>(23)</td>
<td>730,415</td>
<td>(39)</td>
<td>91.95%</td>
</tr>
<tr>
<td>Towns</td>
<td>206,346</td>
<td>(29)</td>
<td>297,174</td>
<td>(41)</td>
<td>44.02%</td>
</tr>
<tr>
<td>Smaller</td>
<td>105,042</td>
<td>(27)</td>
<td>119,705</td>
<td>(30)</td>
<td>13.96%</td>
</tr>
<tr>
<td>Smallest</td>
<td>102,780</td>
<td>(48)</td>
<td>170,628</td>
<td>(82)</td>
<td>66.01%</td>
</tr>
<tr>
<td>Large Villages Medium</td>
<td>77,029</td>
<td>(62)</td>
<td>93,016</td>
<td>(76)</td>
<td>20.75%</td>
</tr>
<tr>
<td>Villages</td>
<td>93,387</td>
<td>(131)</td>
<td>123,200</td>
<td>(172)</td>
<td>31.92%</td>
</tr>
<tr>
<td>Small Villages</td>
<td>95,334</td>
<td>(317)</td>
<td>116,236</td>
<td>(404)</td>
<td>21.93%</td>
</tr>
<tr>
<td>Non-nucleated</td>
<td>1,252,346</td>
<td>(nil)</td>
<td>1,408,918</td>
<td>(nil)</td>
<td>12.50%</td>
</tr>
<tr>
<td>Total</td>
<td>3,626,087</td>
<td>(642)</td>
<td>4,588,252</td>
<td>(849)</td>
<td>26.53%</td>
</tr>
</tbody>
</table>

Source: Author’s analysis of CSO Censuses, Area Volumes 1996 and 2011, Tables 7 and 12.
BRD has also encouraged unnecessary one-off housing which is not urban-based or is not essential to a local rural economy, with serious consequences for Ireland’s competitiveness and its diseconomies of scale. Indeed housing development was often supply and not demand-led. With the proliferation of one-off housing in many parts of rural Ireland, dilution abounds and potential opportunities to focus growth into developing larger centres of population continues to create frustration as scattered service provision and the need for cross-subsidisation of services abounds.

Cities and Expanding Settlements: As the demographic centroid of the Island’s population continues to shift eastward (now near Maynooth), this needs to be supported by the compelling and evidenced-based justification herein, for one new provincial east-coast city at Drogheda-LBM, thereby strengthening the geo-political and economic Dublin-Belfast Corridor area south of the Border. For the first time in 2016, the eleven other counties of Leinster, excluding Dublin, have a greater aggregate population than all of Munster with its three provincial cities.

Serious spatial strategy questions have to be posed, as to why inland Tampere, Finland’s second city in its near-tundra climatic location, has passed out Cork’s population, situated 1,000 kilometres nearer the equator with its temperate climate and located on one of the best harbours in the world? Why had Tampere’s population growing at nearly twice the rate of Cork (1996-2011)? How does the international marketing of these cities compare in the context of the ‘knowledge economy’?

How infused have Ireland’s spatial planning principles been, to-date, with new urban economic and new economic geography thinking? Is Ireland appreciative of the benefits of core-periphery spill-overs? Had Buchanan been implemented as intended in 1969, would the State’s four provincial cities on average, still be only one-eleventh the population of Dublin?

At least, there appears to be no longer the local-short-term-political distraction, to change county borders to accommodate the inevitable spread of straddling settlements such as Drogheda, Waterford, Carlow or Athlone, especially with the expressed faith in the Boundary Committee’s confidence in modern local governance being able to implement and deliver the administration and management of Local Government. Let’s hope that the potential for local authority co-operation within the provisions of Putting People First can work. Otherwise, such competing and dysfunctional individual LAs should be wound up and amalgamated. The total populations of many counties can still be accommodated in Croke Park, in some cases without having to open Hill 16.

As is recommended in these recent Boundary Reports, all county boundaries can be left as they are, or indeed, being even restored to their original lines. With each successive census and further urban expansion, Ireland faces the inevitability of more such urban straddling.

Ireland’s largest town Drogheda is agglomerating with its thirty-fifth largest Laytown-Bettystown-Mornington and this emerging agglomerating city now matches Waterford City in population and
is growing at a much faster rate. Now that the EU-OECD has published (2015) the Harmonised Measure – Graz (Austria) Model, using square kilometre grids, this confirms the progress of their demographic, physical and functional agglomeration and it should be applied to the 2016 population data when released by the CSO so as to confirm it as Ireland’s emerging newest city.

**In Support of Business as Usual Aspects:** While it is conceded that some aspects of the ‘BUSINESS AS USUAL’ (BaU) economic model are not optimal in outcome, nevertheless its principles should be selectively pursued so that Ireland’s economic engine is further strengthened as an employment provider arising from Dublin’s sustained growth, as its only metropolitan-scale city and because of its economic potential. Such an approach is vital in the post-Brexit circumstance.

If the BaU spatial strategy is abandoned as suggested in the *Issues and Choices* document, economic growth will be reversed and the necessary resources to achieve future core-periphery spill-overs will not exist. It is instructive to note ESPON’s view that under the BaU model, both the Irish and Dublin’s economy will prosper.

Likewise, this model has instilled economic and business confidence, particularly due to the lengthening economic recovery period, with its sustained record of employment growth and reduced unemployment since 2007-08.

Ireland need to focus on further growth potential of the four provincial cities and environs population which, in 2016, still only aggregates to 436,299 in population. This gap with Dublin needs to be seriously reduced so that they can achieve critical mass and a higher central place order. Particular attention also needs to be paid to densification of Ireland’s provincial cities which fall well short (c. 60%) of the 3,000 people per square kilometre needed to create scale economics and make local public transport economic.

Both Urban Economic and NEG theory should increasingly be deployed as application tools to inform the use of demographics as a core evidence base to formulating Ireland’s NPF, which needs to be statutory-proofed against political interference. This is required so that the NPF will not suffer the same political fate as did the Buchanan Plan in 1969 or the NSS one year after its launch in 2003, with the contradictory decentralisation of public-sector employment to fifty two centres (one for everyone in the audience’ mentality). What an underwhelming spatial planning legacy Ireland has been obliged to endure with its adverse economic outcomes.

Particular note now needs to be taken of recent population growth, driven under BaU conditions. Demographically, Ireland must now be viewed as having five provinces, Dublin, the Rest of Leinster, Munster, Connacht and Ulster (part) as the following Table 1 confirms for their contrasting population, growth and share parameters:

**Table 1A: Provincial Population Performance - Numbers**
<table>
<thead>
<tr>
<th>Province</th>
<th>Census 2011 Pop.</th>
<th>Preliminary 2016 Pop.</th>
<th>2011-2016 pop. growth</th>
<th>5-year % growth</th>
<th>% share of State Surface Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dublin</td>
<td>1,273,069</td>
<td>1,345,402</td>
<td>72,333</td>
<td>5.68%</td>
<td>1.35</td>
</tr>
<tr>
<td>Rest of Leinster</td>
<td>1,231,745</td>
<td>1,285,318</td>
<td>53,573</td>
<td>4.35%</td>
<td>27.26</td>
</tr>
<tr>
<td>Munster</td>
<td>1,246,088</td>
<td>1,280,394</td>
<td>34,306</td>
<td>2.75%</td>
<td>35.12</td>
</tr>
<tr>
<td>Connacht</td>
<td>542,547</td>
<td>550,742</td>
<td>8,195</td>
<td>1.51%</td>
<td>24.74</td>
</tr>
<tr>
<td>Ulster (part)</td>
<td>294,803</td>
<td>296,120</td>
<td>1,317</td>
<td>0.45%</td>
<td>11.53</td>
</tr>
<tr>
<td>Ireland</td>
<td>4,588,252</td>
<td>4,757,976</td>
<td>169,724</td>
<td>3.70%</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Source: Brian Hughes analysis of CSO 2011 Census and 2016 CSO Preliminary Data
Note: Preliminary Census data

### Table 1B: Components of Population Growth, 2011-2016

<table>
<thead>
<tr>
<th>Province</th>
<th>5-year % growth</th>
<th>Natural Growth (Births-deaths)</th>
<th>NG as % of 2011 pop.</th>
<th>Out-migration as % of 2011 pop.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dublin</td>
<td>5.68%</td>
<td>64,406</td>
<td>5.06%</td>
<td>7,927</td>
</tr>
<tr>
<td>Rest of Leinster</td>
<td>4.35%</td>
<td>64,695</td>
<td>5.25%</td>
<td>(11,122)</td>
</tr>
<tr>
<td>Munster</td>
<td>2.75%</td>
<td>41,084</td>
<td>3.30%</td>
<td>(6,778)</td>
</tr>
<tr>
<td>Connacht</td>
<td>1.51%</td>
<td>18,579</td>
<td>3.42%</td>
<td>(10,384)</td>
</tr>
<tr>
<td>Ulster (part)</td>
<td>0.45%</td>
<td>9,518</td>
<td>3.23%</td>
<td>(8,201)</td>
</tr>
<tr>
<td>Ireland</td>
<td>3.70%</td>
<td>198,282</td>
<td>4.32%</td>
<td>28,558</td>
</tr>
</tbody>
</table>

Source: Brian Hughes analysis of CSO 2011 Census and 2016 CSO Preliminary Data
Note: Preliminary Census data

### Table 2: Provincial Performance - Population Numbers

<table>
<thead>
<tr>
<th>5 Provinces:</th>
<th>Census 2011 Pop.</th>
<th>Preliminary 2016 Pop.</th>
<th>2011-2016 population growth and % contribution</th>
<th>5-year % growth</th>
<th>% surface area of State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dublin</td>
<td>1,273,069</td>
<td>1,345,402</td>
<td>72,333 = 42.62%</td>
<td>5.68%</td>
<td>1.35</td>
</tr>
<tr>
<td>Rest of Leinster</td>
<td>1,231,745</td>
<td>1,285,318</td>
<td>53,573 = 31.56%</td>
<td>4.35%</td>
<td>27.26</td>
</tr>
<tr>
<td>Munster</td>
<td>1,246,088</td>
<td>1,280,394</td>
<td>34,306 = 20.21%</td>
<td>2.75%</td>
<td>35.12</td>
</tr>
<tr>
<td>Connacht</td>
<td>542,547</td>
<td>550,742</td>
<td>8,195 = 4.83%</td>
<td>1.51%</td>
<td>24.74</td>
</tr>
<tr>
<td>Ulster (part)</td>
<td>294,803</td>
<td>296,120</td>
<td>1,317 = 0.78%</td>
<td>0.45%</td>
<td>11.53</td>
</tr>
<tr>
<td>Ireland</td>
<td>4,588,252</td>
<td>4,757,976</td>
<td>169,724 = 100.00%</td>
<td>3.70%</td>
<td>100.00</td>
</tr>
</tbody>
</table>
The Rest of Leinster has replaced Munster as the second most populous ‘province’. Significantly, all-Leinster has accounted for almost three-quarters (74.18%) of the growth to reach a 55.29% share of State population in 2016. Dublin now has 28.28% of the State’s population having achieved nearly 42.62% of growth 2011-2016.

Dublin and Cork enjoyed net inward migration with the other cities being slightly negative. Thus the existence of adequate city-scale is essential for regional growth and so as to counteract emigration and to thwart the inevitability of further rural decline.

It is noted that the Rest-of-Leinster population now exceeds that of Munster. The fiscal evidence of core-periphery beneficence is shown by the fact that the GDA is responsible for generating nearly 70% of total State tax revenue.

Top-down spatial and economic growth policies are essential: for too-long the political focus for regional aid has been miss-directed towards fatuous ‘bottom-up’ solutions, many of which are one-offs and are uncoordinated with each other. In the context of the (old) Planning Regions from the prospective of an east-west divide, here is noted the marked difference in population share and growth performance between the east and west of State.

<table>
<thead>
<tr>
<th>Eastern areas:</th>
<th>2011</th>
<th>2016</th>
<th>Growth</th>
<th>% growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dublin</td>
<td>1,273,069</td>
<td>1,345,402</td>
<td>72,333</td>
<td>5.68%</td>
</tr>
<tr>
<td>Mid East</td>
<td>531,087</td>
<td>559,404</td>
<td>28,317</td>
<td>5.33%</td>
</tr>
<tr>
<td>Midlands</td>
<td>282,410</td>
<td>291,941</td>
<td>9,531</td>
<td>3.37%</td>
</tr>
<tr>
<td>South East</td>
<td>497,578</td>
<td>511,070</td>
<td>13,492</td>
<td>2.71%</td>
</tr>
<tr>
<td>East Border area</td>
<td>256,563</td>
<td>265,740</td>
<td>9,177</td>
<td>3.58%</td>
</tr>
<tr>
<td><strong>East of State</strong></td>
<td><strong>2,840,707</strong></td>
<td><strong>2,973,557</strong></td>
<td><strong>132,850</strong></td>
<td><strong>4.68%</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Western areas:</th>
<th>2011</th>
<th>2016</th>
<th>Growth</th>
<th>% growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>South West</td>
<td>664,534</td>
<td>689,750</td>
<td>25,216</td>
<td>3.79%</td>
</tr>
<tr>
<td>Mid-West</td>
<td>379,327</td>
<td>385,172</td>
<td>5,845</td>
<td>1.54%</td>
</tr>
<tr>
<td>West</td>
<td>445,356</td>
<td>453,413</td>
<td>8,057</td>
<td>1.81%</td>
</tr>
<tr>
<td>West Border area</td>
<td>258,328</td>
<td>256,084</td>
<td>-2,244</td>
<td>-0.87%</td>
</tr>
<tr>
<td><strong>West of State</strong></td>
<td><strong>1,747,545</strong></td>
<td><strong>1,784,419</strong></td>
<td><strong>36,874</strong></td>
<td><strong>2.11%</strong></td>
</tr>
</tbody>
</table>

**State** | 4,588,252 | 4,757,976 | 169,724 | 3.70%

Source: Brian Hughes analysis of CSO 2011 Census and 2016 CSO Preliminary Data.

**NOTE:** The full Border Region’s corresponding population totals during 2011 and 2016 are: 514,891 in 2011 and 521,824 in 2016, resulting in a 6,933 growth which is 1.35 % uplift for that region’s population growth. It is observed that all of Louth accounted for just over 79% of that region’s growth and the Drogheda + Louth Rural Area’s growth of 2,020 (vide Appendix 1) excluding the Meath Rural Area, compares with just 1,455 in aggregate, for the net population growth of that region’s other five counties. Likewise, another of that region’s county, Cavan, the south of which is also within Dublin’s sphere-of-influence, grew by 2,909 in 2011-2016, as per these CSO preliminary census results.
Recognising the Potential of Demographic Differences: How much worse would this east-west demographic contrast have been, were it not for the positive growth of both Cork and Galway cities in the South-West and West? Likewise, due to its higher incidence of in-migration compared with the East Regions since 1996, much of which was reversed after the economic downturn. Regions and sub-regions need to be based on the mass gravity of cities. Taking this east-west population divide, based on past growth differentials, it can be expected that by 2040 target date for the NPF, the State’s population growth could be upward of 1.60 million. With an anticipated growth rate of 1.5% per annum compound almost 80% of that growth could take place in the east which by that date could reach 4.25 million. The West of State area growing at 0.7% per annum compound could reach 2.11 million.

Accordingly, the East’s population is likely to grow from a current 62.5% to a 79.7% share whereas the West’s share would decrease from 37.5% to 20.3% by 2040.

In demonstrating the demographic projections for such growth difference, Fingal is compared with Connacht plus Ulster (part) in explanation of the latter’s dilution from a 37.5% share at present to 20.3% by 2040. The GDA share of State population would be about 43-44% by then, depending on the redirection of growth to large Leinster settlements becoming clearer. Fingal with a 2016 (preliminary) population of 296,214 has just 38.60% of the population of these two provinces (The Northern & Western Regional Assembly Area, but in omitting Galway City) [i.e. 846,862-79,504].

Yet its Q1 2016 Natural Growth was higher, at 969 as against 948, generated by Fingal’s much more viable current population – birth mothers, fertility, age profile differences, etc., vide CSO Vital Statistics.

Thus, it is unreasonable to ever expect the populations of Provinces such as Connacht plus Ulster, to replicate Fingal’s growth potential for the foreseeable future, leaving aside their respective propensities for attracting inward migration; let alone retaining such immigration, especially during down-turn periods of the economic cycle. Such demographic differentials, including urban and rural compositions need to be carefully considered in the selection of locations and numbers of growth centres in the NPF. These realities inform this submission’s growth projection differences of the 1.5% versus 0.7% for east and west, respectively.

The Task of Settlement Selection: Selecting ‘winners’ for growth centres is important, if the East’s growth momentum is to be achieved elsewhere. ESPON’s recent study of ‘second tier cities’ is noted although in the cited UK northern cities their scale-size is significantly larger than that of Ireland’s cities. The absence of central places with critical mass has reflected the undue attention given to fostering so many smaller settlements instead of focusing on developing Ireland’s provincial cities and reducing home to work, college and school commutes. The radical changes in what constitutes ‘work’, will influence both the locations of end-use-demand and employment.
For successive recent censuses Sligo town continues to lose residential population and unfortunately, this is likely to also be the case in 2016. However, even with good local employment, as measured in its league-table standing of its Daytime Working Population (DWP), where Sligo scores particularly well for its population size, this attribute cannot mask the serious defects in the overall population structure of its region, county or the town, which need to be factored in when answers are being sought as to why its population growth is so ‘flat’ over recent censuses relative to its impressive DWP count? The answer to this apparent dichotomy is very much related to the West’s population structure, its human capital resource defects and poor demographic dynamics when compared with the East of the island.

Since before Buchanan’s Plan the absence of meaningful-sized settlements in the Midlands and North West areas had been recognised. The low-growth, stagnation or contraction of county populations in these areas is again confirmed in the 2016 census. And yet Sligo, and Letterkenny, should logically, continue to be NPF growth centres because of the limited selection of centres of population scale in North West Ireland. In 1966 this author lived in the town and worked there when its population was 13,452 in the census. At that point Sligo was two-and-a-half times the population of Letterkenny, which passed it out in 2011. In that census Sligo had slumped to twenty-fourth in rank order of settlement size, having occupied twelfth position in the 1996 census. It may struggle to reach the ‘top 30’ in 2016.

The NPF needs to focus on how to grow these towns to a meaningful size so that they can more actively participate in a post-Fordist economy that is ‘knowledge-based’. How can they attract private-sector employment growth and not be over-dependent on public-sector decentralisation as a necessary crutch? Effective and sustained incentives and demand-led initiatives leading to clustering of private-sector economic activities at scale are essential. BRD combined with the disappearance of Gateway Funding have proved disastrous and have only served to copper-fasten such stagnation, aggravated by the distraction of decentralisation and incoherent policy formation, all reflective of unhelpful, negative political interference.

In contrast to this dismal picture, two further Leinster towns lend themselves to consideration as growth centres in the NPF, i.e. Portlaoise and Kilkenny. To demonstrate the selection of wrong choice growth centres in the NSS, in intercensal 2006-2011 Portlaoise’s population growth of 5,532 was almost equivalent to that of the three Midland ATM Gateway towns. Yet little account appears to have been taken of the importance of the Portlaoise land use-transportation interface in a geographic location or urban economic sense.

Likewise, both on demographic size and growth grounds, Kilkenny merits growth-centre consideration under the NPF. Athlone and Ennis must be viewed against their propensity to flooding and Tullamore in the context of the limitations of its river’s limited capacity for waste-water absorption. The ‘jury is out’ on centres such as Castlebar and Cavan and other designated growth centres under the NSS. The ‘death of distance’ factor as distinct from local politics must be considered in the validity of continuing to give false growth expectations under the concept of ‘linked growth centres’, e.g. Tralee with Killarney, particularly in the context of Kerry’s population...
performance. Population thresholds need to be re-thought in the selection of towns of the size of Monaghan or Tuam - which are hopelessly short of the 20,000 minimum threshold population guideline articulated in the NSS.

Selection should be influenced by ability to grow population and achieve critical mass, not in a former industrial-branch plant context now gone but rather, as to their realistic prospects of participation in the competitive ‘knowledge economy’. Effective transportation, broadband, education, skills appropriate to current and future employment requirements, arts and culture, all-year-round tourism and adventure sports, convention centres, international sports and the arts, all must be actively promoted, combined and funded if productive and talented people of different nationalities are to be attracted to such population growth centres and in the process, being the essential ingredient in creating such critical mass.

The NPF is sure to fail unless adequate capital expenditure is effectively directed to promoting and enhancing ‘winners’ which in turn will kick-start their regional growth.

Cost Benefit Analysis or return on capital investment analysis is a prerequisite for all investment, public or private. Such scale size driven by end-use-demand is likewise essential to locational choice-making for attracting institutional property investment to selected growth centres, thereby funding office, productive services and retail floor space.

Weather-proofing with enclosed shopping malls will anticipate higher rainfalls and the more extreme climatic conditions expected, especially in western areas. Large centres of population must be made attractive to potential institutional-grade property investment, thereby increasing the locational choices available to property (including REITS) and pension fund managers.

The NPF must be geared towards competitiveness and the creation of ‘fresh blood’ in the population profiles of provincial Ireland so that the demographic dynamism of areas like Fingal can begin to be replicated elsewhere. Surely, at this late stage, with the recent Nenagh cosmetics factory announcement, there must be belated recognition that the ‘branch plant’ era of unconnected one-offs is over and that a new economic model of co-ordinated enterprise with third and fourth-level education and research, is required for Ireland’s town settlements as their raison d’être. Combining this with the desertification of former residential accommodation (living over the shop), and the location of supermarket food chains to out-of-town-centre locations, require that a complete special rethink of the Von Thunen market place (1826) application as updated in the Alonso bid-rent model for such towns is long overdue. Their being by-passed by the nearby motorway is another radical change as is the higher population ‘threshold’ for viability in a ‘knowledge-based’ world that is now the norm.

**Hard choices will be required but which ones?** The following Paper which forms an integral part of this Submission, is therefore provided in supporting Drogheda-LBM’s selection (c. 52,000 in 2016) as a top-rank order of growth-centre in the NPF and in stark contrast to its defective selection as a third-ranked one after the NSS Gateways and Hubs, placing it alongside Carrick-on-Shannon (c.
3,500) in that discredited Plan. Lessons must be learnt in determining why towns such as Sligo (c. 19,000) have been unable to achieve organic demographic growth on their own. Bottom up initiatives that are meant to underpin rural Ireland, for the most part have not worked. That is why top-down intervention is essential and this is only possible if the wealth-creating conditions exist in the core region to fund attractive growth centres elsewhere.

Such intervention first requires that the core region is a dynamic and growing one that can generate the necessary added value and be able to afford the sustained high levels of capital investments that such a strategy can be implemented. Conscious of the legacy of Ireland’s high debt-to-GDP ratio that is precisely why further growth and concentration of population and economic activity in the core region of Dublin must be further scaled-up and the positive, commercial attributes of the ‘business as usual’ model be copper-fastened and reinforced. Drogheda-LBM is presented as the growth model for the Rest-of-Leinster province.

Assessing the Demographic Growth Momentum to Identify the Emerging City of Drogheda with Laytown-Bettystown-Mornington (LBM).

Brian Hughes, PhD, Dublin Institute of Technology. © August 2016, since modified.

This research paper presents the application of population density grid analysis in applying the 2015-published Harmonised European Union-OECD (HEU) methodology to this emerging east-coast city.

Abstract:

In earlier research literature this author deployed both population size and daytime working population data as measures of potential settlements, for selection as comparable growth centres for the National Spatial Framework, vide Hughes (2013). An identified problem, encountered in defining urban settlements and that of their spatial extent, is the dilemma of opposites; of being able to distinguish between the physical ‘separation’ and the agglomerating ‘contiguity’ of discrete settlements.

Focusing on linear distance as its principal ‘separation’ measure, the United Nations provides a limiting description, for separation, in the task of quantifying singular urban fields of agglomeration and thus in identifying processes of city formation. In contrast, The World Bank advocates three ‘D’s which, in addition to Distance and Division, includes Density (2009).

Particularly for Ireland as a sparsely-populated country, this latter measure assumes particular importance, especially given its scarce number of large settlements and their linear distances from each other. The Central Statistics Office (CSO) now has the facility for grid-enabled data, which can be used in distinguishing between examples of scattered morphology of sparsely-populated ribbon development in contrast to that which can identify densifying urbanisation cores.

Prior to the availability of the 2016 final census population results, this paper now investigates and applies population grid data measures based on the CSO grid-based demographic data from the 2011 census. Applied to a real-life example, this technique facilitates the further research objective of identifying Ireland’s emerging city, the east coast agglomeration of Drogheda with Laytown-Bettystown-Mornington (LBM).
In its census of 2011, the CSO adopted the United Nations updated convention for Settlement distancing in its application of the ‘100 Metre’ rule for settlement separation. This is applied to habitable buildings, including both residential and non-residential structures. Prior to 2011 the linear distance was 200 metres.

The rationale for its use is ...to avoid the agglomerating of adjacent towns caused by the inclusion of low density one off dwellings on the approach routes to town. CSO 2011 Census, Area Volume, Appendix 1. The GDA together with County Louth – which has Ireland’s two largest towns, Drogheda and Dundalk – this area comprises the Republic’s two million-plus population share of the dynamic Dublin-Belfast economic corridor area; in all, this corridor comprises just over 50% of the island’s 6.65 million people.

Analysing the agglomeration of LBM with Drogheda and in comparing this with that of Blackrock (Louth) with Dundalk, on the basis of the EU Grid criteria, this Paper concludes by noting the need to distinguish between physical separation and that of physical agglomeration and proximity densification under the new Harmonised European Union (The Graz methodology), especially for governance and local administration purposes in this new Putting People First era of local governance rationalisation.

1. Census Geography - Applied Measures:

The CSO’s evaluation of settlement size is set out in their Population Classified by Area Volumes of recent census results vide Appendix 1, Census Geographic Definitions, PP. 151-155, CSO (2012). It applies the linear distance rule for confirming settlement separation, applied so as to distinguish between a densely-populated urban field and an adjoining elongated ribbon of mainly housing development that often occurs on access routes to a defined city or town settlement. The objective is to provide definitive and regular-shaped settlements, thereby defining their footprints from their surrounding rural morphology.

Such measures for ‘division’ are effective in statistically isolating discrete new urban areas such as Béarna from Galway and the Balrothery separation from Balbriggan, resulted in creating these new town settlements in 2011. However, the application of such tests on their own, for cases of emerging urban agglomeration are inadequate, especially where two settlements are expanding towards each other and wherein, the provision of shared, linking infrastructure, the momentum of development is designed for and is resulting in emergence of a densified agglomeration, thereby producing a much larger unified settlement, albeit as one that may have more than one central core. The combined availability of a skilled, large labour pool is a pre-requisite for growth-centre selection.

The opposite effect from an inappropriate application of the ‘100 Metre’ rule can serve to ignore or overlook cases such as the emergence of bi-centric, adjacent settlements that are in a process of agglomerating and which are thus forming a larger settlement. One conspicuous example of an Irish failure to ‘see the wood from the trees’ is that of Drogheda’s progress in its agglomeration with nearby Bettystown-Laytown-Mornington (LBM) wherein yet another Local Government boundary adjustment had been initiated in late-2015, in an Area of Interest confined to Drogheda, which had the objective of facilitating its local government administration. Yet, there was no recognition of the bigger, emerging picture, of Drogheda’s agglomeration with LBM.

2. Urban Boundary Changes and Local Governance Issues:

Notwithstanding Ireland’s unusually low level of urbanisation – with a 2011 share of just 62.05% of its population living in settlements of 1,500 and over – its urban development ‘catch up’ process is
resulting in both population growth and a spreading of its urban settlements. Accordingly, many of its cities and towns are experiencing outward growth wherein its towns and environs are spreading beyond former administrative boundaries. Thus existing settlement boundary lines are being breached with successive waves of outward development.

Whereas in the census of 1996 the CSO listed twenty settlements whose population overlapped into another county, by 2011 that number had extended to twenty-eight settlements, vide Appendix 4 [Ibid.], *Populations of Towns or Environs/Suburbs which are located in more than one county*. In 2016 the list is probably well over thirty and is growing. For modern-day local government administration, such geographic expansion presents particular difficulty driven by the blinkered objective to manage single-settlement administration within a single county authority.

The frequency of such county-boundary ‘straddling’ now requires a more inclusive treatment for local governance purposes than this existing, blunt, solution of adjusting county boundaries. In implementing local governance reform since the 2011 census the first-phase in the current processes of local government has focused on the rationalisation and merging of county and city units, sometimes with considerable, unresolved, controversy and opposition, as in the case of Cork.

A second phase in this process of Local Government rationalisation, addresses the dilemma of governance adjustments for some larger and expanding settlements. It is noted that the foresighted provisions of *Putting People First* proposes flexible arrangements for cases of straddling settlements. However, such aspiration is likely to require updated, matching legislation.

Those boundary revisions were undertaken under outdated 1991 Local Government legislation for Waterford City, Drogheda, Carlow and Athlone towns, in descending order of population size. The objective, to contain such settlements within a single county for administrative purposes and to redraw county boundaries where considered expedient. Such administrative ‘juggling’ was intended to be implemented regardless of the evident extent of local business, resident and sporting opposition. It was intended to secure rates-base adjustment despite creating further geo-physical anomalies. In Drogheda’s case the centre line of the Boyne was the original Elizabethan county boundary.

3. **Drogheda – the grid-based evidence for a wider-based Boundary Review:**

Despite the publication in 2013 of the Government’s visionary *Putting People First*, Action Programme for Local Government, the Department of Housing, Planning and Local Government (DoHCLG) attempted to undertake yet another review of Drogheda’s former Borough boundary under Section 28 of the now dated Local Government Act 1991 Act, rather than implementing the principles contained in the *Putting People First* initiative, in pursuance of the administrative objective to retain larger single settlements within a single county council area – even if this will entail other county boundary ‘transfers’ such as is proposed from Roscommon to Westmeath and from Meath to Louth.

It is necessary to distinguish the important and unique case of adjoining and merging high-density agglomeration for the immediate proximity of Drogheda and LBM, in contrast to low-density and/or geographically separated low-density ribbon development, elsewhere in Ireland.

Drogheda-LBM provides a unique situation (except for Dublin’s suburbs) in Ireland, where two adjoining plus-10,000 settlements are physically merging. The population growth evidence points to Drogheda continuing its demographic growth of up to three times that of the State population.
growth rate since 1996. Since then it became and continues to be Ireland’s largest town. This ongoing agglomeration momentum is supported by the recent provision and commissioning of a 100,000 population capacity waste-water tertiary treatment plant at Marsh Road, Drogheda with its linking sewer networks of investment and likewise with the completion of the District-level Shopping Centre at Southgate together with the re-commencement of further residential development that are consolidating the merger of Drogheda with LBM.

In the failed local government rationalisation programme, demographic scale was one of two principal issue in question that distinguishes this Boundary Review that marks Drogheda’s difference with all previous such revisions. This could have resulted in a sizeable population residing south of the Boyne being ‘placed’ in County Louth; affecting about 14,000 subject to the 2016 census results. This would have also involve a transfer to Louth of several additional square kilometres of what is now part of County Meath. In Drogheda’s case, previous county boundary ‘adjustments’ on a smaller scale had already resulted in the cumulative ‘transfer’ of a similar sized area south of the Boyne, from County Meath to County Louth.

The second issue is that of identifying the emergence of a new city on the demographic scale of Waterford City. Unlike Waterford, Carlow and Athlone, what differentiates Drogheda is the zero ‘Distance’ separation cum urban proximity of another large i.e. plus-10,000 town that presents the most significant factor for the future administration of Ireland’s emerging city. All three other settlements are ‘stand-alone’ and unlike Drogheda, they do not adjoin another settlement of 10,000-plus.

Of itself LBM is Ireland’s thirty-fifth largest town and in 2011 it was on a par with Ashbourne as one of Meath’s largest towns. The boundary review documentation shows Drogheda’s proposed indicative and blue-hatched boundary line to the south of the current Borough area of Drogheda which will result in the town’s new boundary extending to the western edge of LBM. To accommodate Drogheda’s expansion it also would have been necessary to adjust its existing northern boundary line within County Louth which will affect a further 2,000-plus of the town’s population.

With the more-expansive boundary that will include the two towns under the Putting People First initiative, this will result in a Louth-Meath unification, with Drogheda-LBM becoming Ireland’s fifth largest city and that sub-region’s logical administrative centre with a 2016 or 2021 population greater than that of Waterford City. The need for individual County Council HQ offices in Both Dundalk and Navan will no longer arise, with the resultant savings and rationalisation. With the emergence of Drogheda+LBM as a city, the boundary transferral of further Meath territory into Louth should become an administrative irrelevancy. Drogheda + LBM’s confirmation as Ireland’s next city would complement the North’s earlier initiative to grant city status to both Lisburn and Newry, within the Dublin-Belfast Corridor.

4. Drogheda-LBM’s Population Urban Field Grid Matrix

The Urban Field of the Drogheda-LBM Population Density Grid on a One Sq. Km. basis is applicable to the OSI Discovery Series Map 43 (Fourth Edition, 1:50,000 scale) for the 2011 census population is set out in a population grid format, kindly provided by the CSO to this author in December 2015.
north-south depth of ten kilometre rows. The respective core populations are set out in an ‘all-border’ format, comprising fourteen medium-density central grids totalling 11,297 in population for LBM, located east of and next to the twenty grids totalling 37,669 for Drogheda.

In all, these adjoining 34 sq. km. grids comprise a core 2011 agglomeration population of 48,996 with an average density of 1,440 people per sq. km., set out as follows:

<table>
<thead>
<tr>
<th>Grid cells</th>
<th>6/7</th>
<th>7/8</th>
<th>8/9</th>
<th>9/10</th>
<th>10/11</th>
<th>11/12</th>
<th>12/13</th>
<th>13/14</th>
<th>14/15</th>
<th>15/16</th>
<th>16/17</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>79/80</td>
<td>131</td>
<td>54</td>
<td>86</td>
<td>9</td>
<td>28</td>
<td>107</td>
<td>58</td>
<td>97</td>
<td>40</td>
<td>37</td>
<td>-</td>
<td>647</td>
</tr>
<tr>
<td>78/79</td>
<td>26</td>
<td>6</td>
<td>27</td>
<td>59</td>
<td>58</td>
<td>84</td>
<td>52</td>
<td>83</td>
<td>5</td>
<td>-</td>
<td>-</td>
<td>400</td>
</tr>
<tr>
<td>77/78</td>
<td>20</td>
<td>17</td>
<td>61</td>
<td>16</td>
<td>449</td>
<td>153</td>
<td>79</td>
<td>65</td>
<td>99</td>
<td>-</td>
<td>-</td>
<td>959</td>
</tr>
<tr>
<td>76/77</td>
<td>74</td>
<td>219</td>
<td>2,643</td>
<td>3,308</td>
<td>2,423</td>
<td>10</td>
<td>5</td>
<td>80</td>
<td>489</td>
<td>908</td>
<td>-</td>
<td>9,557</td>
</tr>
<tr>
<td>75/76</td>
<td>1,212</td>
<td>1,534</td>
<td>3,226</td>
<td>3,553</td>
<td>823</td>
<td>5</td>
<td>46</td>
<td>112</td>
<td>275</td>
<td>1,059</td>
<td>-</td>
<td>11,845</td>
</tr>
<tr>
<td>74/75</td>
<td>1,028</td>
<td>1,631</td>
<td>3,183</td>
<td>2,727</td>
<td>2,411</td>
<td>2,470</td>
<td>673</td>
<td>752</td>
<td>748</td>
<td>691</td>
<td>-</td>
<td>18,314</td>
</tr>
<tr>
<td>73/74</td>
<td>73</td>
<td>553</td>
<td>494</td>
<td>705</td>
<td>435</td>
<td>861</td>
<td>56</td>
<td>13</td>
<td>1,224</td>
<td>2,162</td>
<td>185</td>
<td>6,761</td>
</tr>
<tr>
<td>72/73</td>
<td>42</td>
<td>20</td>
<td>80</td>
<td>62</td>
<td>45</td>
<td>13</td>
<td>106</td>
<td>11</td>
<td>90</td>
<td>705</td>
<td>392</td>
<td>1,566</td>
</tr>
<tr>
<td>71/72</td>
<td>5</td>
<td>25</td>
<td>87</td>
<td>-</td>
<td>85</td>
<td>5</td>
<td>15</td>
<td>20</td>
<td>35</td>
<td>443</td>
<td>1,378</td>
<td>2,098</td>
</tr>
<tr>
<td>70/71</td>
<td>51</td>
<td>25</td>
<td>5</td>
<td>61</td>
<td>76</td>
<td>43</td>
<td>52</td>
<td>253</td>
<td>223</td>
<td>21</td>
<td>8</td>
<td>818</td>
</tr>
<tr>
<td>Total</td>
<td>2,662</td>
<td>6,084</td>
<td>9,892</td>
<td>10,500</td>
<td>6,833</td>
<td>3,751</td>
<td>1,142</td>
<td>1,486</td>
<td>3,228</td>
<td>5,424</td>
<td>1,963</td>
<td>52,505</td>
</tr>
</tbody>
</table>

Footnote:
So as to maintain local anonymity, the CSO records a count of '5' where grids have recorded census populations of between 1 and 5. Zero-populated grids are as shown. So as to make the interpretation of the grid more manageable, it limits the matrix size to eleven kilometres in width and ten kilometres in depth. It is however recognised that this surface area is therefore somewhat smaller than that of the Drogheda and District area (population 60,646 in 2011) and somewhat smaller again than the Louth and Meath Rural Areas plus Drogheda.
Borough (CSO population 78,594 in 2011 and 83,042 in the Preliminary Census data of 2016). It is of a size that captures the adjoining Drogheda and LBM towns and their contiguous environs.

Based on the 2011 census demographic outcome there is today, little physical or demographic separation between the settlements of Drogheda and LBM. This is confirmed in the Ordnance Survey of Ireland Map ‘spine’, of an unbroken high-density ‘band’ of population in adjoining grids. This central ‘spine’ extends east-west for ten square kilometres, identified in an axis along the grid 74/75 (including from references 6/7 to 15/16), as shown in the one-kilometre cells of this Discovery Series, map No. 43.

This is used as the grid-base for the CSO’s grid matrix of populations based on the 2011 census. The west-to-east populations along this ‘spine’ grid line 74/75, comprises an aggregate population of 18,314, identified in their respective one sq. km. populations which is set out in the following Greater Drogheda’s Urban Field Grid Matrix, showing this consolidated ‘spine’ cells extract, thus:-

<table>
<thead>
<tr>
<th></th>
<th>6/7</th>
<th>7/8</th>
<th>8/9</th>
<th>9/10</th>
<th>10/11</th>
<th>11/12</th>
<th>12/13</th>
<th>13/14</th>
<th>14/15</th>
<th>15/16</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>74/75</td>
<td>1,028</td>
<td>3,631</td>
<td>3,183</td>
<td>2,727</td>
<td>2,411</td>
<td>2,470</td>
<td>673</td>
<td>752</td>
<td>748</td>
<td>691</td>
<td>18,314</td>
</tr>
</tbody>
</table>

Source: Part of the CSO population grid one-kilometre square matrix dimension, as requested and kindly provided to Brian Hughes, December 2015.

The six left-hand side Drogheda grids, east to include grid 11/12, are immediately followed by the four right-hand LBM ones from 12/13 eastwards. This agglomeration spine’ for Drogheda-LBM conclusively presents an interfacing and uninterrupted population density for these adjoined settlements. Furthermore, these ‘spine’ data represent just one row of a ten-row deep matrix. Their spatial argument, confirming this twin-settlement merger for Drogheda-LBM, is based on this east-west spine of the 110 adjacent population grids as laid out in the full matrix grid. These identified ten adjoining ‘spine’ square kilometre cells having an average population density of 1,831.4 which is higher than the density of any of the four provincial cities in Ireland in that 2011 census.

A significant distinguishing feature between ‘ribbon development’ morphology and a dense, continuous ‘urban field’ is the extent and depth of development. This author avers the selection of one-kilometre-square grids which is a spatially significant one; a measure in linear terms which is ten-times that of the 100 metre UN distance. However, in evaluating the process of urbanisation for evolving large settlements and in allowing for pockets of undeveloped land or of large underdeveloped sites, it is also desirable to balance ‘space’ area with density, discussed as follows, in using the example of the linking of Dundalk with its adjoining seaside suburb of Blackrock, Co. Louth

5. Dundalk and Blackrock – a Grid Comparison with Drogheda-LBM:

For Ireland second largest town - Louth’s County Town, Dundalk and its seaside suburb of Blackrock is centred to its south at some three to four kilometres remove. All together they comprise a 2011 census settlement population of 37,816, where the Blackrock area comprises 6,500 of its total population. Blackrock is adjudged to conform to the U.N. distance rule and thus to be included as the southern part of a single Dundalk settlement.

However, the one-kilometre square grid populations, when compared with the above Drogheda-LBM grid, reveals that its linking cells are less dense than those comparable ones for Drogheda-
LBM, the latter settlement’s identified linking cell density being diluted to 328, 482, 117 and 853 persons per square kilometre because of the presence of an 18-Hole golf course at Haggardstown. They are set out in a similar OSI Grid-map Discovery Series No. 36 (2007) format including the specified grid-cell references, as follows:

Dundalk-Blackrock 2011 Census
Population Grid – OSI Map References:

<table>
<thead>
<tr>
<th>Cells</th>
<th>02/03</th>
<th>03/04</th>
<th>04/05</th>
<th>05/06</th>
<th>06/07</th>
<th>07/08</th>
<th>08/09</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>09/10</td>
<td>158</td>
<td>676</td>
<td>380</td>
<td>276</td>
<td>-</td>
<td>50</td>
<td>88</td>
<td>1,628</td>
</tr>
<tr>
<td>08/09</td>
<td>236</td>
<td>2,650</td>
<td>1,799</td>
<td>120</td>
<td>362</td>
<td>-</td>
<td>54</td>
<td>5,221</td>
</tr>
<tr>
<td>07/08</td>
<td>35</td>
<td>2,232</td>
<td>2,314</td>
<td>1,807</td>
<td>1,854</td>
<td>753</td>
<td>272</td>
<td>9,267</td>
</tr>
<tr>
<td>06/07</td>
<td>90</td>
<td>1,024</td>
<td>1,304</td>
<td>4,360</td>
<td>2,872</td>
<td>50</td>
<td>19</td>
<td>9,719</td>
</tr>
<tr>
<td>05/06</td>
<td>97</td>
<td>85</td>
<td>637</td>
<td>2,802</td>
<td>2,105</td>
<td>-</td>
<td>-</td>
<td>5,726</td>
</tr>
<tr>
<td>04/05</td>
<td>52</td>
<td>69</td>
<td>29</td>
<td>378</td>
<td>328</td>
<td>117</td>
<td>-</td>
<td>973</td>
</tr>
<tr>
<td>03/04</td>
<td>66</td>
<td>39</td>
<td>67</td>
<td>255</td>
<td>482</td>
<td>853</td>
<td>-</td>
<td>1,762</td>
</tr>
<tr>
<td>02/03</td>
<td>109</td>
<td>83</td>
<td>159</td>
<td>471</td>
<td>2,028</td>
<td>599</td>
<td>-</td>
<td>3,449</td>
</tr>
<tr>
<td>01/02</td>
<td>6</td>
<td>27</td>
<td>21</td>
<td>31</td>
<td>331</td>
<td>-</td>
<td>-</td>
<td>416</td>
</tr>
<tr>
<td>Total</td>
<td>849</td>
<td>6,885</td>
<td>6,710</td>
<td>10,500</td>
<td>10,362</td>
<td>2,422</td>
<td>433</td>
<td>38,161</td>
</tr>
</tbody>
</table>

Source: CSO Population
Note: The boxed grids delineate the Dundalk-Blackrock ‘spine’, which runs in a north north-west south south-east axis.

The distorted result of applying the aforementioned 100 metre U.N. distance criterion on its own, instead of utilising density-proximity measurements is that it masks Ireland’s few emerging cases of urban agglomeration. **Such density research is vital to the task of settlement selection in the forthcoming National Spatial Framework.** From a side-by-side comparing of the two sets of grid population data, the Drogheda-LBM scale and size of urban agglomeration is far superior to that of Dundalk-Blackrock. Hence, the following comparisons are instructive:

- One Km. Grid Size: Drogheda-LBM = 110 sq. km; Dundalk-Blackrock = 63 sq.km.
- Total Grid Populations: Drogheda-LBM = 52,965; Dundalk-Blackrock = 38,161.
- Linking 2-grid Populations: Drogheda-LBM = 1,425; Dundalk-Blackrock = 810
- 2011 Populations: Drogheda = 38,578; Dundalk (excluding Blackrock) = 31,316
- 2011 LBM and Blackrock Populations: LBM = 10,889; Blackrock = 6,500 (*vide* Grid).
- Densest LBM cell = 2,162; densest Blackrock cell = 2,028 population.
- Void cells: Drogheda-LBM = 9 cells; Dundalk-Blackrock = 9 cells.

From a governance standpoint given these brief empiric comparisons and their resultant evidence bases, the NSS description of Drogheda’s status and presumed ‘function’, which is officially described as a ‘support’ town to the Dundalk Gateway, reflects a “tail wagging dog” assessment, focused on a misguided focus of retention of the current ‘county-town’ *status quo* arrangement.
It also reflects a rigid local governance mind-set of one that refuses to address the density and scale-size evidence of Drogheda’s agglomeration with LBM. This is buttressed in selectively using the U.N. Distance Rule for settlement separation whilst choosing to ignore the fact that Dundalk inclusive of Blackrock’s 2011 population is less than that of stand-alone Drogheda, without LBM.

6. Grid Spine Test: comparing Drogheda with Dundalk’s contiguity:

In analysing the population densities of the central spine cells that attach the respective adjoining settlements, it is possible to clarify the respective levels of agglomeration of Drogheda+LBM compared with Dundalk including Blackrock Co Louth, in 2011.

By definition, the Dundalk-Blackrock infill typifies a ribbon infill morphology which is essentially fixed because of the aforementioned presence and hollowing-out effect of its 18-hole golf course. Along the west side of the golf course, another ‘ribbon’ development links Dundalk southward to Blackrock represented by the cell grids of 378 and 255 populations. In contrast, Drogheda’s higher density link-cells already exhibit much superior densities, despite still having further infill-land development potential. First are shown the data of Dundalk’s spine cells:

Dundalk’s spine cells:-

<table>
<thead>
<tr>
<th></th>
<th>03/04</th>
<th>04/05</th>
<th>05/06</th>
<th>06/07</th>
<th>07/08</th>
<th>08/09</th>
<th>09/10</th>
<th>10/11</th>
<th>11/12</th>
<th>12/13</th>
<th>13/14</th>
<th>14/15</th>
<th>15/16</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>03/04</td>
<td>676</td>
<td>2,650</td>
<td>2,314</td>
<td>4,360</td>
<td>2,802</td>
<td>378</td>
<td>482</td>
<td>2,028</td>
<td>331</td>
<td>16,021</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>04/05</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>05/06</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>06/07</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>07/08</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>08/09</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>09/10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10/11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11/12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12/13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13/14</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14/15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15/16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>16,021</td>
</tr>
</tbody>
</table>

Source: OSI Grid-map Discovery Series No. 36 (2007): west-east first, followed by their north-south coordinates for these nine one-kilometre square populations.

For convenience of easy comparison, the corresponding Drogheda spine cells are shown alongside, as follows:

Greater Drogheda’s consolidated ‘spine’ cells extract, thus:-

<table>
<thead>
<tr>
<th></th>
<th>03/04</th>
<th>04/05</th>
<th>05/06</th>
<th>06/07</th>
<th>07/08</th>
<th>08/09</th>
<th>09/10</th>
<th>10/11</th>
<th>11/12</th>
<th>12/13</th>
<th>13/14</th>
<th>14/15</th>
<th>15/16</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>03/04</td>
<td>1,028</td>
<td>3,631</td>
<td>3,183</td>
<td>2,727</td>
<td>2,411</td>
<td>2,470</td>
<td>673</td>
<td>752</td>
<td>748</td>
<td>691</td>
<td>18,314</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>04/05</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>05/06</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>06/07</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>07/08</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>08/09</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>09/10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10/11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11/12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12/13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13/14</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14/15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15/16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>18,314</td>
</tr>
</tbody>
</table>

Source: Part of the CSO population grid one-kilometre square matrix dimension, as kindly provided to Brian Hughes, December 2015.

Thus Drogheda’s interface with LBM is at the point shown as where cell (population) 2,470 meets 673; the corresponding Dundalk interface with Blackrock is at the point where population cell 2,802 meets 378. The next respective cells show respective populations of 482 for Dundalk’s Blackrock and 752 for Drogheda’s LBM.

Accordingly, the Drogheda link-cells are noted as being significantly denser in populations than those of Dundalk’s. The lower densities for Dundalk’s link cells are explained primarily by the positioning and location of the aforementioned golf course. Yet, the contrasting case of Drogheda’s
potential is noted as one where these specific cells contain residentially zoned lands which remain to be developed and thus will become denser.

Contrasting these two sets of adjoining settlements, it is noted that the NSS 2002 strategy had obviously ignored Drogheda’s agglomeration with LBM as being one that then suggests linear discontinuity and would not have had the parallel evidence of density and proximity as adduced above. In contrast, the NSS had sought to rely solely on the formulation of far-fetched ‘Linked Gateway’ and ‘Linked Hub’ concept, where average distances are some 19 miles (30 km.) separating individual settlement populations in the 20,000 to 100,000 range (for Letterkerenny with Derry), but typically for settlements of about 14,000 to 20,000 (e.g. Athlone, Tullamore and Mullingar) with distances of up to 59 km.

Therefore, it is apposite to address the demographic data supporting the Drogheda-LBM agglomeration as Ireland’s next city: one that matches the demographics of fifth-city Waterford, based on comparative evidence of selected growth centres, including that of Dundalk.

7. Demographics and the Drogheda-LBM Growth Momentum:

Pending receipt of the 2016 final census figures, the data set out in the attached Appendix below summarises the 2011 composition of the Greater Drogheda Area and of its sphere-of-influence components, namely the Louth and Meath Rural Areas included in the existing Drogheda Borough, all comprising a 78,594 population total in 2011 (83,042 in 2016 Preliminary census) – i.e. more than twice the population of County Longford. Due to the much faster rates of growth since the 1996 census, this Appendix confirms that population total in 2011 is almost evenly split between the north and south banks of the Boyne and is likely to have a south bank majority, judging from the respective, superior, ED population growth as per the Preliminary 2016 census.

Given the locational advantages of the south bank area, including the south suburbs of Drogheda and LBM, especially given its accessibility to Dublin, the Airport and the M50, it is unsurprising that the two towns are now well advanced in their agglomeration with one-another, boosted by the rate of population growth: one that is an historic multiple times that of Waterford city. Also noted, compared with Dundalk’s 10,880 ‘at work’ figure Drogheda +LBM’s total in the 2011 census was 15,540, resulting in Dundalk being 69.48% of the latter.

As already noted, this unique case of Drogheda-LBM is not repeated in the three other proposed boundary review cases of Waterford, Carlow or Athlone, all of which are stand-alone settlements and are not remotely adjoined to another large town. It is also observed that in the 2011 census, LBM itself was larger in population than Enniscorthy, Tramore or the county towns of Wicklow or Cavan.

Accordingly, the nature of the current Boundary Review and its Terms of Reference misrepresented what has been happening on the ground and are both short-term in effect and are unfit for purpose in addressing the wider demographic picture, vide Appendix.

8. The Greater Drogheda Population Urban Field:
These data sets provide incontrovertible evidence of the Drogheda-LBM progress in their agglomeration with each other, based on the 2011 census and the population disposition of Greater Drogheda Area’s population growth. In the twenty years since 1996 the former Municipal Borough of Drogheda together with the adjoining Louth and Meath Rural Areas has increased by a massive 78.77% (46,451 to 83,042) at a time when Ireland itself has grown by 31.22%.

The Preliminary Report on the CSO 2016 Census has provided the earliest direct comparison at the Rural and Borough Electoral Districts with the populations of the 2011 Census Preliminary Report. Given the young age profile and family formation propensity of the more recently established population growth south of river, the argument in favour of amalgamating the Greater Drogheda Area population, but especially that of Drogheda with LBM with their intrinsic growth momentum, is both a persuasive and realistic one.

As has been found possible for the CSO to recognise Dundalk with Blackrock (Co Louth) as comprising a single settlement, it is consistent to argue similarly for Drogheda and LBM’s agglomeration as a unified urban field, based on the evidence contained as follows, in this Paper. It is also noted that complementing the developments south river, the Northern Fringe strategic plan to link Drogheda Port with the M1 will also provide for the development of the Louth CC-purchased land with the potential for 7,000 additional housing units and supporting infrastructure.

Next is examined the relevant referred-to, internationally-applied standardised methodology for city agglomeration and contiguity.

9. Harmonised European Union (HEU) Definition of ‘City’

The final area of this Paper’s research focuses on the EU’s new set of rules for defining cities, kindly brought to one’s attention by the CSO. Until 2015, there was no harmonized definition of ‘a city’ for European and other countries member of the Organization for Economic Co-operation and Development (OECD). This undermined the task of comparability, and also the credibility, of cross-country analysis of cities. To resolve this problem, the OECD and the European Commission has developed a new definition in 2015, of a city and its commuting zone.

This new definition works in four basic steps and is based on the presence of an ‘urban centre’ a new spatial concept based on high-density population grid cells. Source: Dijkstra, L. and Poelman, L. (2015), European Cities – Functional Urban Area Definition, European Commission, DG Regio

- Step 1: All grid cells with a density of more than 1 500 inhabitants per km² are selected (Map 1.1).
- Step 2: The contiguous high-density cells are then clustered, gaps are filled and only the clusters with a minimum population of 50 000 inhabitants (Map 1.2) are kept as an ‘urban center’.
- Step 3: All the municipalities (local administrative units level 2 (or LAU2) with at least half their population inside the urban center are selected as candidates to become part of the city (Map 1.3).
- Step 4: The city is defined ensuring that 1) there is a link to the political level, 2) that at least 50 % of the city population lives in an urban center and 3) that at least 75 % of the population of the urban center lives in a city (Map 1.4)
In most cases, as for example in Graz, the last step is not necessary as the city consists of a single municipality that covers an entire urban center and the majority of the city residents live in that urban center. This is not currently the governance circumstance in Drogheda+LBM.

10. Interpretation of the Harmonised EU Measures:

In the 2011 census Drogheda+LBM had twelve grids with densities of 1,500 and over, together with a further five with 1,000-plus populations. Dundalk+Blackrock’s respective count is eleven and two.

In applying the above 4-step test and in comparing Drogheda+LBM with Dundalk+Blackrock the following observations are noted. Dundalk+Blackrock fails on the application of the Step 2 minimum population requirement of 50,000 whereas Drogheda+LBM exceeds that minimum population criterion, but as in the anomalous case of Waterford City, only so when the matrix of all adjoining grids are included.

Thus, when the these kilometer-square grid cells of at least 1,500 population are identified, the test for ‘contiguity’ requires each of its surrounding eight cell cluster, in turn, to abut the one whose central cell has a population of at least 1,500 people.

In this context of ‘compactness’ this ‘test’ would be satisfied for the following grid cell disposition in the following extract for Dundalk+Blackrock, thus:

<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>4,360</td>
<td>2,872</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2,802</td>
<td>2,105</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>378</td>
<td>328</td>
<td>117</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>255</td>
<td>482</td>
<td>853</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>471</td>
<td>2,028</td>
<td>599</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>331</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In identifying particular ‘central’ cells with their respective populations and their afore-mentioned 8-cell clusters, is noted that ‘clusters’ 2,105 and 2,028 are contiguous with one another at the point (line) where cells 328 and 482 abut.

Where Drogheda adjoins LBM the same test for comparable cell clusters are shown, thus:

<p>| | | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>823</td>
<td>5</td>
<td>46</td>
<td>112</td>
<td>275</td>
<td>1,059</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2,411</td>
<td>2,470</td>
<td>673</td>
<td>752</td>
<td>748</td>
<td>691</td>
<td></td>
<td></td>
</tr>
<tr>
<td>435</td>
<td>861</td>
<td>56</td>
<td>13</td>
<td>1,224</td>
<td>2,162</td>
<td></td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>13</td>
<td>106</td>
<td>11</td>
<td>90</td>
<td>705</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In this case, the core cell clusters of 2,270 and 2,162 are at one-remove from each other with respect to their surrounding 8-cell positioning. On that basis in 2011, Drogheda+LBM
would appear to fail the second-step requirement for contiguity. However, should its specific cell, of 1,224 population of 2011, grow to equal or exceed 1,500 in a future (e.g. in the 2016 census), then the EU 50,000 minimum population criterion would appear to be satisfied, even omitting the low-density rows of cells from the top and bottom of the matrix.

Application of the HEU rule would therefore require the 18.40% shortfall to be eliminated in that 1,224-populated cell’s 2011 population. In this regard, it is noted that this cell is fully positioned within the St Mary’s Electoral District, which achieved an overall 11.12% growth (2011-2016) as per the 2016 Preliminary Census results. Depending on that actual, specific cell population performance, it is possibility that its growth performance may have already reduced or eliminated the 2011 shortfall, to be clarified once the full results for the 2016 census are available.

It is understood that Waterford’s comparable cell structure for its 2011 census grid outcome likewise presents some similar dis-continuous anomalies. However, there appears to be provision for the individual EU State to be able to apply for a derogation where a ‘city’ status already exists. Some six States have already availed of this Appeals’ provision.

Significantly, the application of evidence-based population density grid data, at the standardised one square kilometre level as published in 2015, now provides an internationally-recognised methodology to avoid the urban classification problem of what constitutes a ‘city’. It represents an accepted internationally recognised methodology for obtaining such insights that utilise such CSO data; which has been available only since 2013.

These tools should therefore be extensively utilised in the process of growth settlement selection in future national and regional-level spatial strategy plan formulation for Ireland.

11. Research Conclusions:

Pending the 2016 final census outcome on densities, the evidence adduced in this research, with its application of the Harmonised EU grid test informs the emergence of Ireland’s next stand-alone city, Drogheda+LBM; one that is on a population scale-size with Waterford City but which is experiencing much more rapid growth. It is noted that the Preliminary 2016 population of 83,042 for the Greater Drogheda Area (GDrA) in 2016 represents a 78.77% growth since 1996 – two-and-a-half times the national average. Together Drogheda+LBM have a 30%+ larger and denser agglomerating population than that of Dundalk+Blackrock, Co Louth. Over 2011-2016 Waterford City’s population increased by 1,637 to 48,369 or 3.50%, just below the national growth average: the comparative growth for Drogheda+LBM is 2.5 times that level, thereby reducing or even eliminating the former size difference with Waterford.

Significant built environment/infrastructure projects and the demographic and growth-momentum data as presented herein, articulates the progress made by Drogheda-LBM to 2011 – thrice the rate of the State’s population growth. The intervening five years to 2016 has seen the ‘retirement’ of the defective National Spatial Strategy including its conspicuous failure to recognise this most significant example of Irish urban agglomeration outside of Dublin. The 2002 NSS classification of Drogheda, where it was neither considered to merit a ‘Gateway’ nor a ‘Hub’ designation, but rather assigned a demeaning role as a ‘support town’ to Dundalk, was deeply flawed on urban economic and demographic-scale grounds. The comparative research evidence presented in this Paper
confirms that such spatial classification is perverse and is perhaps only explained as one that is politically-driven.

The forthcoming NPF is heralded as one that will use evidenced-based data in its construction and accordingly, is unlikely to ignore the emerging demographic evidence of urban agglomeration, for matrix field densification purposes, in settlement size classification and in placing Drogheda-LBM in the vanguard of Ireland’s major growth centres. The east-west split (Table 3 above) of the State’s population growth 2011-2016 was 132,850 versus 36,874 or 4.68% versus 2.37% growth (in the North-South line down to Youghal) and in dividing the Border Region into its three eastern and three western counties).

The background theory and application of grid-based measurement has been pioneered in Ireland by CSO’s Dermot Corcoran, in his DIT Masters Dissertation (2011) *Disseminating Irish Census data using grids: An example of combining spatial and statistical information*. One is grateful to Dermot for providing the Drogheda and Dundalk 2011 grid data in excel format consistent with and based on the respective specified OSI maps, as referenced.

The previous use and application of Small Area Population Statistics (SAPS) has the drawback of their wide surface-area variations for comparing the populations of small areas such as Electoral Districts.

Pending Brussels’ approval of Ireland’s three NUTS 2 Super Regions, as provided for in the *Putting People First* Action Programme, this research will assist the County Louth’s integration into the East Region (Map at Page 191, ibid). The agglomeration of Drogheda-LBM opens the path for this Government to undertake the process for the grant of city status. It will consolidate the growth of the Dublin-Belfast Economic Corridor, commensurate with Lisburn and Lurgan’s recent acquisition of city status north of the Border. This research paper presentation to the Regional Studies Association has tracked the demographic progress of Drogheda and Laytown-Bettystown-Mornington as the engine within the fast-growing Greater Drogheda Area.

The Centenary of 1916 should is being marked with appropriate examples of Ireland’s progress and achievements. The 2016 census results have begun to emerge. The agglomeration of Drogheda-LBM now provides a significant centenary opportunity for this Government to confirm Drogheda as Ireland’s next city!

**BIBLIOGRAPHY and REFERENCES**

Vide: Author’s Related Publications, on Arrow@DIT.ie [Hughes, B.]


Corcoran, D (2011) *Disseminating Irish Census data using grids: An example of combining spatial and statistical information*, DIT MSc Spatial Information Management dissertation


Hughes, B (2012) *Drogheda’s Case for City Status: A Presentation to the Minister for the Environment on behalf of Drogheda City Status Group and Drogheda Borough Corporation, May 2012 in Leinster House*, [an unpublished PowerPoint presentation].


*Putting People First* Action (2011) - Programme for Local Government, Department of the Environment Community and Local Government, Dublin


**APPENDIX A**
The following 2016 Preliminary Electoral District Populations are compared herein together with the 2011 Census out-turn for the Greater Drogheda Area, thus:

**Louth Rural Area:**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Clogher</td>
<td>3,031</td>
<td>3,237</td>
<td>206</td>
<td>6.8</td>
</tr>
<tr>
<td>Dysart</td>
<td>918</td>
<td>925</td>
<td>7</td>
<td>0.8</td>
</tr>
<tr>
<td>Monasterboice</td>
<td>1,342</td>
<td>1,365</td>
<td>23</td>
<td>1.7</td>
</tr>
<tr>
<td>Mellory</td>
<td>1,723</td>
<td>1,754</td>
<td>31</td>
<td>1.8</td>
</tr>
<tr>
<td>St. Peter’s (pt)</td>
<td>6,990</td>
<td>7,605</td>
<td>615</td>
<td>8.8</td>
</tr>
<tr>
<td>Termonfeckin</td>
<td>3,294</td>
<td>3,537</td>
<td>243</td>
<td>7.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>17,298</td>
<td>18,423</td>
<td>1,125</td>
<td>6.5</td>
</tr>
</tbody>
</table>

**Meath Rural Area:**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ardcath</td>
<td>1,911</td>
<td>1,945</td>
<td>34</td>
<td>1.8</td>
</tr>
<tr>
<td>Duleek</td>
<td>5,177</td>
<td>5,554</td>
<td>377</td>
<td>7.3</td>
</tr>
<tr>
<td>Julianstown</td>
<td>9,606</td>
<td>10,139</td>
<td>533</td>
<td>5.5</td>
</tr>
<tr>
<td>Mellifont</td>
<td>561</td>
<td>542</td>
<td>-19</td>
<td>-3.4</td>
</tr>
<tr>
<td>St. Mary’s (part)</td>
<td>10,769</td>
<td>11,967</td>
<td>1,198</td>
<td>11.1</td>
</tr>
<tr>
<td>Stamullen</td>
<td>4,696</td>
<td>5,001</td>
<td>305</td>
<td>6.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>32,720</td>
<td>35,148</td>
<td>2,428</td>
<td>7.4</td>
</tr>
</tbody>
</table>

**Drogheda Borough Area:**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Fair Gate</td>
<td>9,806</td>
<td>10,317</td>
<td>511</td>
<td>5.2</td>
</tr>
<tr>
<td>St. Laurence’s Gate</td>
<td>4,004</td>
<td>4,075</td>
<td>71</td>
<td>1.8</td>
</tr>
<tr>
<td>West Gate</td>
<td>6,042</td>
<td>6,284</td>
<td>242</td>
<td>4.0</td>
</tr>
<tr>
<td>St. Peter’s (part)</td>
<td>2,161</td>
<td>2,099</td>
<td>-62</td>
<td>-2.9</td>
</tr>
<tr>
<td>Mary’s (part)</td>
<td>6,563</td>
<td>6,696</td>
<td>133</td>
<td>2.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>28,576</td>
<td>29,471</td>
<td>895</td>
<td>3.1</td>
</tr>
</tbody>
</table>

**Greater Drogheda Area:**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>78,594</td>
<td>83,042</td>
<td>4,448</td>
<td>5.7</td>
</tr>
</tbody>
</table>

**Note 1:** Caution is required in above comparisons because the 2016 Census data are ‘preliminary’, pending publication of definitive census figures, in mid-2017. Preliminary State growth 2011-2016 was 3.7%.

**Note 2:** Drogheda Borough’s population was recorded as 30,393 in the 2011 census, some 1,817 above the ascribed figure listed in the 2016 Preliminary census. Thus the Louth Rural area is shown above as 17,298 compared with 15,481 in the 2011 Census, in the CSO Area Volume, Table 6.

It is expected that the 2016 census, usually at Table 7 of the Area Volume when published, should confirm the combined settlement population of Drogheda+LBM to have exceeded 50,000. This brings into play the Harmonised European Union’s four-stage density and agglomeration criteria as per nine-cell cluster measure for Graz, Austria, as set out in P. 12 of this Paper. As in previous inter-censal periods, for the Meath Rural Area this again is shown as the fastest growing part of the Greater Drogheda Area, and particularly so for the double-digit percentage growth of that part of the St. Mary’s Electoral District south-east of Drogheda Borough. The confirmed growth of the specific cell – population, having 1,224 in 2011, vide P. 13 super – would then become the decisive factor in confirming the Drogheda+LBM urban agglomeration. Furthermore, and having regard to infrastructural provision, the housing crisis combined with implementation of the sequential spatial planning model for timely new, mixed residential development for this already-serviced part of Drogheda will future-proof the realisation of such agglomeration.
Greater Drogheda:– Demographic Growth Evidence from 1996-2011 Censuses

Analysis of Greater Drogheda in 2011:

**SUMMARY:** Greater Drogheda: Urban and Rural North and South of Boyne

<table>
<thead>
<tr>
<th>Borough Add non- Borough</th>
<th>Town+envs. [Table 7]</th>
<th>L-B-M</th>
<th>Dr.+LBM (net)</th>
<th>TOTAL</th>
<th>Total pop.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>North of River</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>North of River</td>
<td>23,830</td>
<td>2,202</td>
<td>26,032</td>
<td>13,279</td>
<td>39,311</td>
</tr>
<tr>
<td>South of River</td>
<td>6,563</td>
<td>5,983</td>
<td>12,546</td>
<td>15,848</td>
<td>39,283</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>30,393</td>
<td>8,185</td>
<td>38,578</td>
<td>29,127</td>
<td>78,594</td>
</tr>
</tbody>
</table>

Share:

=78.78% =21.22% =100.00%

Analysis of Greater Drogheda in 1996:

**SUMMARY:** Greater Drogheda: Urban and Rural Growth North and South of Boyne

<table>
<thead>
<tr>
<th>Borough Add non- Borough</th>
<th>Town+envs LBM</th>
<th>Dr.+LBM (net)</th>
<th>TOTAL</th>
<th>Total pop.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>North of River</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>North of River</td>
<td>21,501</td>
<td>21,537</td>
<td>7,659</td>
<td>29,196</td>
</tr>
<tr>
<td>South of River</td>
<td>2,959</td>
<td>3,745</td>
<td>7,423</td>
<td>17,255</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>24,460</td>
<td>25,282</td>
<td>17,491</td>
<td>46,451</td>
</tr>
</tbody>
</table>
Growth in populations over the 15 years to 2011:

<table>
<thead>
<tr>
<th></th>
<th>Borough</th>
<th>Add non-Bor.</th>
<th>Add non-Bor.</th>
<th>LBM</th>
<th>Dr.+LBM</th>
<th>Rural (net)</th>
<th>TOTAL</th>
<th>Share of Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>North of River</td>
<td>2,329</td>
<td>2,166</td>
<td>4,495</td>
<td>0</td>
<td>4,495</td>
<td>5,620</td>
<td>10,115</td>
<td>31.47%</td>
</tr>
<tr>
<td>South of River</td>
<td>3,604</td>
<td>5,197</td>
<td>8,801</td>
<td>7,211</td>
<td>16,012</td>
<td>6,016</td>
<td>22,028</td>
<td>68.53%</td>
</tr>
<tr>
<td>Total</td>
<td>5,933</td>
<td>7,363</td>
<td>13,296</td>
<td>7,211</td>
<td>20,507</td>
<td>11,636</td>
<td>32,143</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

GDrA: % Growth: 15 years to 2011:

<table>
<thead>
<tr>
<th></th>
<th>Borough</th>
<th>Add non-Bor.</th>
<th>LBM</th>
<th>Dr.+LBM</th>
<th>Rural (net)</th>
<th>TOTAL</th>
<th>Share of Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>North of River</td>
<td>10.83%</td>
<td>6016.67%</td>
<td>20.87%</td>
<td>0.00%</td>
<td>20.87%</td>
<td>73.38%</td>
<td>34.65%</td>
</tr>
<tr>
<td>South of River</td>
<td>121.80%</td>
<td>661.20%</td>
<td>235.01%</td>
<td>196.06%</td>
<td>215.71%</td>
<td>61.19%</td>
<td>127.66%</td>
</tr>
<tr>
<td>Total</td>
<td>24.26%</td>
<td>895.74%</td>
<td>52.59%</td>
<td>196.06%</td>
<td>70.81%</td>
<td>66.53%</td>
<td>69.20%</td>
</tr>
</tbody>
</table>

Source: Analysis of CSO censuses of 1996 and 2011, by Brian Hughes, extracted from the Area Volumes, 1.

Note: In the CSO Preliminary 2016 Census Results the 2011 figure for St Peter’s Electoral District was reduced by 1,817 from that recorded in the Area Volume for the earlier census (from 30,393 to 28,576. The CSO advise that this difference reflects a population and land area issue at the Preliminary census stage, which will be rectified in the final figures for the 2016 census, when released in the spring of 2017. Accordingly, the Drogheda Borough area has appeared to ‘reduced’ in population, by that 1,817 figure. Accordingly, in the population growth figures in Appendix 3, below the 2016 census changes have been omitted. The relevant north Boyne EDs are: Clogher, Dysart, Monasterboice, Mullary, St. Peter’s and Termonfeckin. South river the relevant EDs are: St. Mary’s, Ardcat, Duleek, Julianstown, Mellifont and Stamullin. It is noted that the St. Peter and St. Mary EDs are split into their respective Borough and rural contents reflecting the pre-boundary review position.

Next is set out this author’s Critique on the Boundary Review Report for Drogheda and of its Relevance to the Growth Centre Selection for the Forthcoming National Planning Framework:
A Critique on the Boundary Review Report for Drogheda and of its Relevance to the Growth Centre Selection for the Forthcoming National Planning Framework:

Introduction: There is evidence to show that the four contemporaneous Reports (for Drogheda, Waterford, Carlow and Athlone) were completed with some haste and that they were over-reliant on following a standardised template of direction: to examine the four settlements without considering the possibility of nearby settlement merger. Accordingly this created a pitfall for the reviewers in the case of Drogheda’s review because of its unique circumstances of its urban agglomeration with another +10,000-populated large town Laytown-Bettystown-Mornington. That review also ignored and up-to-date measures including the 2016 census evidence or the 2015 EU-OECD Harmonised Measure to capture agglomeration. The position of Drogheda is unique, as there is no evidence of a similar occurrence of scale agglomeration in any of the other three settlements reviewed.

Specifically, the reviewers ignored or more likely, were unaware of this standard OECD-EU Harmonised (2015) measure for assessing the formation of a city – perhaps this also reflects an inadequate Terms of Reference, but then Waterford city itself is under close examination and hence the questioning of its city size minimum of 50,000 by the EU for this precise reason! The suspicion of ‘template’ adherence is very evident in the content of the second-last paragraph at P. 44 with the Review Committee’s focus just on the delineated Area of Interest and in their ‘finding’ of LBM as constituting an “adjacent rural area”. The following specific observations are relevant:

Page 17, Last Paragraph: States “With regard to political representation, the Council held that a change in the boundary resulting in the loss of approximately 6,000 residents may have a knock-on effect on the composition of Laytown/Bettystown Municipal District, resulting in a decrease in the number of Council seats.” This is a tacit recognition of the existence of a large block of population and Municipal District in LBM, albeit ‘Mornington’ is not included in the Laytown/Bettystown descriptive for this large town, recognised by the CSO as a ‘town’ since the census of the 1980s.

Page 18, First Paragraph: States “Meath County Council believed that proponents of the Drogheda City Status Campaign have taken the boundary review as an opportunity to promote their campaign. The Council was of the view that city status is separate from the question of the boundary review, but argued nonetheless that the creation of an additional city in the country is not justified. Any such city would lack the scale to compete internationally with other cities and is not supported by the Minister.” – Not so! At the NUIM Launch of the National Planning Framework on February 2nd 2017, in responding to Dr Brian Hughes pointing to the evidence basis that supports The Drogheda City Status Committee’s position, Minister Simon Coveney confirmed publically that he and his Department will examine this evidence and will take it on board in the formulation of the NPF and in any formal application for city status, see ‘Conclusions’, hereunder.
The issue of “lack of Scale” for Drogheda-LBM is refuted in current demographics which confirm a similar scale to Waterford City and that “the creation of an additional city in the country is not justified.” comment is not supported by this evidence. In the 2016 census there are over 41,500 people living on the north bank of the Boyne and a similar population resident on the sits south bank, i.e. comprising the Louth and Meath Rural Areas and the former Drogheda Borough. Specifically, this population has grown from 46,451 in 1996 to 83,042 in 2016, a twenty year growth of 78.77% compared with Ireland’s (State) population growth of 31.22% over the same twenty years.

Unlike Waterford, Drogheda-LBM is located just twenty minutes from a 29 million p.a. passenger movement Airport and twenty-five minutes from Dublin Port Tunnel, is growing at three times the rate of Waterford and is the largest settlement within the Dublin-Belfast Corridor, with its critical economic and geo-political role and strategic location. Following the precedent when Galway’s population exceeded that of Waterford in the 1980’s when it became a city, fast-forward to today and applying same precedent with the evidence-base is equally valid for Drogheda-LBM’s quest and application for city status.

Page 38, Last Paragraph: “5.5 Service Delivery (across the full range of local authority functions envisaged in the Action Programme for Effective Local Government, Putting People First and the Local Government Reform Act 2014). Meath County Council has focused significant investment in the Area of Interest, with €20.665m invested in the period 2001 to 2015. [see footnote 25]. Given the growth potential with 124.88 hectares of employment-zoned land,26 it can be anticipated that the area will remain a focus for the Council, with ongoing investment in services into the future. 26 Table 4.1 Meath County Development Plan 2013-2019.”

This Review Committee’s contradiction and failure to acknowledge the urban agglomeration between Drogheda and LBM is significant. This Page 38 section is at variance with the Page 44 section as this €20.665m ‘significant investment’ since 2001 to 2015 to facilitate future development. Another reason is their recognition of the “the growth potential with 124.88 hectares of employment-zoned land” and also ... Why build a Waste Water Plant south-river for a 100,000-people capacity and permit the construction of the nearby District-Level Shopping Centre at Southgate and grant planning permissions for thousands of further houses, if it was intended to remain a ‘rural area’ as was mistakenly described in the Boundary Committee’s Report?

Page 44, Second-last Paragraph: “The whole Laytown-Bettystown ED was not included in the Area of Interest (see section 4.2), and the Committee has identified no reason why this area should be included in County Louth, should the boundary be extended. The Report continues “...any extension into the adjoining rural area should ensure that any south-eastern expansion of Drogheda does not encroach on LaytownBettystown-Mornington and the distinct character of these settlements is retained.” Incorrect!

LBM is not an “adjacent rural area” or a series of “distinct settlements” as mistakenly describes what is Meath’s third largest town and Ireland’s 35th in the ‘Large Town i.e. +10,000 category’. In
the 2011 census LBM had a bigger population than the County Towns of Cavan and Wicklow and it is also larger than the ‘large towns’ of Enniscorthy and Tramore. Furthermore as the grid analysis herein below confirms, LBM is agglomerating with Drogheda and is therefore unique and different from the other Boundary Reviews of Waterford, Carlow or Athlone, none of which have a large agglomerating nearby town similar to LBM unlike the case for Drogheda.

**Conclusion:** Given the 2016 demographic background, the biggest error of the Boundary Report is that it was hopelessly under ambitious in its delineation of a confined ‘Area of Interest’ in excluding LBM. Ironically, the whole Boundary extension exercise appears to have been unnecessary, if by its own findings and admission (P. 33) the management and administration of an overflowing urban settlement can be adequately addressed under the provisions of Sections 85 and 86 of the *Putting People First* new era for Local Government!

Accordingly, all of Greater Drogheda, i.e. the Borough Council area together with both the Louth and Meath Rural Areas should form the Area of Interest to be managed and administered by a greatly-strengthened Greater Drogheda Area Council, as an interim “agency arrangement” and a precursor to Drogheda-LBM City becoming the capital of the new Louth-Meath Sub-Region in the rationalising and transferring to this enlarged Authority the County Councils of both Louth and Meath from Dundalk and Navan, respectively, to the new city. Substantial economies of scale could then be achieved by a population which would be equivalent to the Administrative County of Fingal.

With the distractions of the Boundary Review Report removed, this provides the Minister and his Department to take a comprehensive and wider view of boundary, city status and the rationalisation of counties Louth and Meath into a single administrative sub-regional entity, based and located in Drogheda-LBM as ‘Whitaker’ city. Such measure would strengthen the geo-political and economic environment for the largest settlement in the Dublin-Belfast Corridor in this post-Brexit and post-Nationalist majority Northern Ireland Assembly era.

Accordingly, the Drogheda City Status Group intends to petition in applying to the Minister to consider the 2016 Census as the evidence-base as Ireland’s next city. The grid demographic evidence, when it is to hand on the next few weeks, will provide the opportunity to apply this evidence to the EU-OECD Harmonised Measure for assessment of Drogheda-LBM as Ireland’s fifth city, having equalled or exceeded Waterford’s population as at April 2016.

The precedence for this is Galway which became Ireland’s last city in the 1980s after its population had exceeded that of Waterford City. The need for another provincial city in the Rest of Leinster ‘province’ is likewise justified on population proportionality, given its larger population and the fact that Munster has three provincial cities in addition to Connacht’s Galway City, vide Table 1. Furthermore, the compelling case for strengthening the Dublin-Belfast Corridor in the all-Ireland post Brexit context, is likewise endorsed as the first point, P. 37 of the NPF’s ‘Issues and Choices’ document.

In regard to towns and Municipal Districts, paragraph 6.4.2(c) states:
“However, in all cases the district should incorporate the relevant hinterland of each town, subject to the constraints imposed by county boundaries close to towns e.g. New Ross located adjacent to the Kilkenny/Wexford boundary, Carrick-on-Suir adjacent to the boundary between Tipperary and Waterford, or Athlone on the Roscommon/Westmeath border. In cases such as these, suitable agency arrangements or service level agreements ensure that one authority has responsibility for all functions (including development plans) and services throughout the entire area of the town, notwithstanding county boundaries.” If this cannot be done then these Local Authorities should be merged.

An interesting demographic parallel and growth contrast to Drogheda itself is the town and environs of Sligo. Over the fifty-years since the census of 1966 Sligo’s population has increased from 13,452 to 19,000 and Drogheda from 17,908 to 41,000 today (awaiting 2016 figure) i.e. respective growth rates of 41.24% and 128.95%. On locational grounds and as Connacht’s second-largest settlement, Sligo was designated as a ‘Gateway’ in the discredited NSS while Drogheda was classified a third tier town ‘status’ alongside Carrick-on-Shannon! Since 2002 Sligo’s population continues to decline. Hopefully the replacement NPF will pay greater attention to picking winners!

Taking account of Ireland’s potential out to 2040 to attract net in-migration as the remaining EU English-speaking country, planning for such growth potential must receive appropriate attention in the formulation of the NPF. There is little merit in presuming that such additional population should be spread around the country so as to rebalance areas of low density. The policy should be that such additional population will be economically active and therefore needs to be located in areas of employment growth taking account of the nature and change of ‘work’. Primarily this will be in Ireland’s cities.

**NPF Submission Conclusions:** The NPF gives all relevant bodies a fresh opportunity to take a hard look at the viability of the differing aspects of rural Ireland. Some rural areas will thrive because of nearby successful urbanisation: many such areas will not respond to resuscitation as they are inherently and demographically defective. Like unviable towns, they will require hard decisions to be taken in the national and financial interests.

Recent developments and related announcements call into question the viability of providing internet connections to about 300,000 such homes that had earlier been earmarked for connection. Many such residences are in vulnerable flood-prone locations.

Bank branch closures follow in the wake of rural post offices with more in the offing. Garda stations, rural schools and even postage stamp costs are in the news. Rural pubs and drink-driving issues have been debated. The current Bus Eireann strike unintentionally, serves to identify defective and isolated locations. And yet many planning permissions continue to be granted for more one-off housing developments, supported by local politicians, many of which are inherently in such locations.
The hand of spatial strategy implementation is now being forced because of these bank and post-office closures and the realisation of the extent of rural isolation when buses are not running. Elderly people with health issues are particularly vulnerable to geographic and social isolation with special and are especially vulnerable to predatory crime. On all fronts, the cumulative costs to the State cannot continue to be ignored.

Finally, rural politicians should bear particular responsibility for resolving such failures and there is a pressing need for all political representatives to familiarise themselves with aspects of urban and regional economics, location and core-periphery theory and to be au fait with the dynamics of new economic geography and the processes and benefits of urban agglomeration in Ireland out to 2040. Otherwise, the National Planning Framework will succumb to the same fate as past spatial strategies, despite laudable intentions to place it on a formal statutory footing and in seeking to achieve political ‘buy-in’.

**APPENDIX 2**

Article for SCSI Journal - 2nd Draft

**Cities: Ireland’s Continuing Unrecognised Economic Growth Potential**

Dr Brian Hughes © May, 2016

I for one was surprised that the growth potential of Ireland’s cities was not identified as an issue in the recent General Election. True, many politicians from nearly all political backgrounds had decried the two-tier nature of Ireland’s economic recovery in the post-Celtic Tiger era as evidenced in Dublin’s growth and to some extent for Cork and Galway cities, in contrast with stagnation elsewhere. This was highlighted in politicians’ outpourings of rural neglect with the sharp decline experienced in towns, villages and the countryside. Thus the new government has appointed several ministers and junior ministers, charged with additional rural and regional responsibilities.

The problems of rural Ireland are expected to be the subject of a forthcoming Oireachtas Committee’s attention not least from the challenge by

**Fianna Fáil Spokesperson on Agriculture Éamon Ó Cuív [who] has branded comments about rural Ireland made by the former Secretary General in the Department of Finance John Moran as “unresearched, unfounded and ridiculous”**.
Mr. Moran has put forward a plan, which would see future investment concentrated on regional cities, rather than rural areas.

Deputy Ó Cuív has hit out at the proposal saying, “This attitude needs to be challenged and runs contrary to the principle of “cherishing all the children of the nation equally” by ensuring that all citizens have access to basic services.

“It is imperative that the newly formed Oireachtas Committee dealing with rural development forensically examines the statement made by John Moran and others in the Establishment who believe that rural areas should be neglected and denied basic services and infrastructure.

“It is alarming to think that a person who held such a senior position in the public service has these views, and it should act as a warning to all of those who espouse balanced development of the challenges that lie ahead”.

Nowhere in this heated and controversial debate, to date, has there been evidence from like-minded Irish politicians of having an appreciation of the spill-over effects that cities play in benefiting their regional spheres of influence. Neither appears to be an understanding of the top-down endowments that are central to the core-peripheral growth of successful city regions which underwrite the dynamics of urban economics, of central place theory and of the new economic geography which have underscored Paul Krugeman’s Nobel Prize award for economics achievements of 2008.

Balanced Regional Development as a spatial and economic policy has singularly failed to acknowledge why cities exist and the urban agglomeration reason for their growth. Ireland’s demographics confirm that it has encouraged the proliferation of one-off housing, small towns and villages to the detriment of city concentration and growth-centre formation, advocated by The World Bank in 2009.

Likewise, there has been a critical political failure to acknowledge that rural living and their associated sparse populations imply enormous costs to the State, the Private Sector and to the taxpayer of the inordinate costs in maintaining services: to unviable branch banking and post offices, rural one and two-classroom schools, ‘scattergun’ broadband provision, garda stations, the ambulance service, GP practices as well as the upkeep of the inordinate length of Ireland’s rural road structure. It has also reinforced Ireland’s political system in perpetuating clientelist parliamentary politics at the expense and neglect of policy formation and legislation enactment.

Given the €160 Billion increase in the State’s National Debt over the past decade as well as private debt burdens and likewise of their long-term cost of servicing, Ireland now needs to focus its increasingly limited resource of current and fixed capital expenditure into a few centres for growth rather than in continuing to practice ‘Balanced Regional Development’ with its failed ‘one for everyone in the audience’ approach. Instead, future policy formulation
will have to foster Specialisation and long-run location of activity that fuses Trade Theory with Economic Geography.

Specifically, there is an urgent need to reduce the ever-widening population disparity between Dublin's 1.11 million population compared with just 105,000, the average size of the State's four provincial cities. In turn, such substantially-enlarged cities would provide the necessary gravity mass of ‘lumpiness’ and would then be in a much better position to benefit their regions and to then become the dynamic cores to create enhanced employment and rectify the demographic imbalances that currently prevail outside of the Greater Dublin Area.

The disappearance of the 2002-2020 National Spatial Strategy was primarily due to its inappropriate core policy of Balanced Regional Development when applied to a sparsely populated country. We need to continuously remind our politicians of their past calamitous decision-making including their rejection of the principal recommendations of the Buchanan Report for city growth in 1969 and the 2003 debacle for ‘scattergun’ Public Sector Decentralisation.

In conclusion, it is important that Deputy Ó Cuív’s-described ‘John Moran and others in the Establishment’ are now supported and encouraged. Evidence-based data will continue to provide painful reminders of the State’s long-termed policy neglect - in not focusing the growth of its provincial cities. To my SCSI colleagues and to all other professional bodies associated with the built environment and with capital investment allocation function, this is a respectfully reminder of our collective responsibility to ‘forensically’ contribute to this important upcoming debate.
APPENDIX 3

Rural Employment Potential

Two significant areas, for both future urban and rural employment opportunities are in the Building and Medical industries. Recently, the Construction Industry Federation pointed to Ireland’s need to provide:

- 15,200 Electricians
- 7,800 Bricklayers
- 11,800 Plumbers
- 30,800 Carpenters/Joiners
- 13,900 Plasterers/Tilers
- 9,400 Painters/Decorators
- 9,600 Managers
- 18,100 Operatives
- 27,600 General Labourers
- Sub-total = 114,200

Together with ‘plane loads’ of Q.S.s, Architects, Engineers and project managers, at an estimated hiring rate of 1,000/month and

- The need for many, many more apprentices.

At this rate of ‘take up’ at 1,000/month, we’re talking about a 10-12 year labour-supply need, assuming the now nearly four years of employment recovery continues and not least, recognising both the housing supply crisis and the shortage of commercial accommodation and the huge infrastructure deficit across the board.

Liam Doran continues to highlight the shortage of nurses of 5,000-plus and other health-care staff, the funding for which will gradually increase from the broadening of the taxation base and the revenues from increased employment.

Also kept in mind, is the multiplier effect resulting from such increased employment, in support services, etc.
APPENDIX 4

The Eight Key Concepts of Balanced Regional Development in the 2002-2020 NSS

- The key concepts (of the NSS) are potential, critical mass, gateways, hubs, complementary roles and linkages.
- Potential is the capacity that an area possesses, or could in future possess, for development, arising from its endowment of natural resources, population, labour, its economic and social capital, infrastructure and its location relative to markets.
- Critical mass relates to size and concentration of population that enables a range of services and facilities to be supported. This in turn can attract and support higher levels of economic activity and improved quality of life.
- Gateways have a strategic location, nationally and relative to their surrounding areas, and provide national scale social, economic infrastructure and support services. Further development of the five existing gateways at Dublin, Cork, Limerick/Shannon, Galway and Waterford is a key component of the NSS.
- In addition, a small number of other large towns, which have the potential capacity to become gateways and lead development in their regions, will play a key role in achieving a more balanced role in regional development.
- Hubs: A number of towns will act as hubs, supporting the national and international role of the gateways and in turn energising smaller towns and rural areas within their sphere of influence.
- Complementary roles for other towns, villages and rural areas; various medium-sized towns in each region will act as ‘local capitals’ providing a range of services and opportunities for employment. Within the spatial framework provided by the NSS, rural potential will draw upon local economic strengths, supported by a stronger structure of smaller towns and villages as a focus for economic and social activity and residential development.
- Linkages in terms of good transport, communications and energy networks are vitally important to enable places and areas to play to their strengths.

Source: The National Spatial Strategy (2002-2020: 12)

A Note on Ireland’s Political Decision-Making: The recent negotiations between Ireland’s two main political parties, regarding the extent to which rent control should apply to urban areas, provided interesting insights as to why ‘scientific’ evidence and research should be allowed to outweigh the ‘political’ reasons for making such decisions. In a similar manner, scientific research should be applied when the selection of growth centres considered by the Government for the forthcoming National Planning Framework.

Nowhere in this heated and controversial debate, to date, has there been evidence from like-minded Irish politicians of appreciating the spill-over effects that cities play in benefiting their regional spheres-of-influence. Neither do they appear to understanding the top-down endowments that are central to the core-peripheral growth of successful city regions which underwrite the dynamics of urban economics, of central place theory and of the new economic geography findings which underscored Paul Krugeman’s Nobel Prize award for economics achievements of 2008.
Balanced Regional Development as a spatial and economic policy has singularly failed to acknowledge why cities exist and the urban agglomeration reason for their growth. Ireland’s demographics confirm that it has encouraged the proliferation of one-off housing, small towns and villages to the detriment of city concentration and growth-centre formation, advocated by The World Bank in 2009.

Likewise, there has been a critical political failure to acknowledge that rural living and their associated sparse populations imply enormous costs to the State, the Private Sector and to the taxpayer of the inordinate costs in maintaining services: to unviable branch banking and post offices, rural one and two-classroom schools, ‘scattergun’ broadband provision, garda stations, the ambulance service, GP practices as well as the upkeep of the inordinate length of Ireland’s rural road structure. It has also reinforced Ireland’s political system in perpetuating ‘clientalistic’ parliamentary politics at the expense and neglect of pressing policy formation and legislation enactment.

Given the five-fold or €160 Billion increase in the State’s National Debt over the past decade as well as private citizens’ debt burdens and likewise of their long-term cost of servicing, Ireland now needs to focus its increasingly limited resource of current and fixed capital expenditure into a few centres for growth rather than in continuing to practice ‘Balanced Regional Development’ with its implicit, failed ‘one for everyone in the audience’ approach. Instead, future policy formulation will have to foster Specialisation and long-run location of activity that fuses the Fujita and Krugman approaches to Trade Theory with Economic Geography.

Specifically, there is an urgent need to reduce the ever-widening population disparity between Dublin’s 1.17 million population compared with just 110,000, the average size of the State’s four provincial cities. In turn, such substantially-enlarged cities would provide the necessary gravity mass of ‘lumpiness’ and would then be in a much better position to benefit their regions and to then become the dynamic cores to create enhanced employment and rectify the demographic imbalances that currently prevail outside of the Greater Dublin Area.

The standing down of the 2002-2020 National Spatial Strategy was primarily due to its inappropriate core policy of Balanced Regional Development when applied to a sparsely populated country. We need to continuously remind our politicians of their past calamitous decision-making including their rejection of the principal recommendations of the Buchanan Report for city growth in 1969 and the 2003 debacle for ‘scattergun’ Public Sector Decentralisation.
International Lessons for the Future Spatial Direction for Ireland: aspects of agglomeration and their influences on the economic role of cities

© Dr Brian Hughes 25th January, 2017

Abstract

Ireland’s demography in the world context is unique. Its population count remains the same as it was some 200 years ago and yet it has experienced profound movements. This paper contrasts Ireland’s changing demography with that of Japan since the 1840’s, for these the two offshore nations, located off either end of the Eurasian land mass. Historic urban literature identifies that governmental policies towards cities and city-based industry and services appears to explain many of these contrasts. In Ireland’s case such policy both prior to and since the formation of the State has been an ambivalent one that has not favoured the growth of its provincial cities. Ireland’s forthcoming National Planning Framework provides a policy opportunity to change policy direction and opt for intensive city growth. Urban economic and new economic geography advances show that Ireland is no different from similar nations and the principal question for the future is: will the focus of development be in favour of its secondary cities or will Dublin by default become Ireland’s city state of the 21st century?

The choice is to remain with the failed policies of the last spatial plan, premised on balanced regional development, which has created many additional villages, small towns and one-off housing while Ireland’s provincial cities get left further behind compared with ‘primate’ Dublin. The paper provides interesting insights into the preliminary 2016 census figures to portray the contrasting populations and regional growth differences. Celebrated world urban experts, including Japan’s Masahisa Fujita and Nobel Prize winner Paul Krugman and also Jacques-Francois Thisse, all emphasise the wealth creation benefits of cities, driven by the move from physical to cerebral types of work and to the concentration of economic activity.

The paper reviews some of the major players on the world stage of Urban Economics and the New Economic Geography. It points to future demographic possibilities and concludes that the adoption of urban-agglomeration policies of densification, centripetal rather than centrifugal growth and a positive land-use/transportation interface with the objective of reducing commuting times, all will enhance competitiveness and which should inform Ireland’s spatial policy direction.

1. Introduction:

Dr Lorna Carson has kindly guided speakers to present their own discipline, theories and methods, in a way that would provide listeners with fairly quick access, allowing the talks to move quite promptly into one’s applied areas to allow for comparison and discussion across related disciplines. First, may I thank Lorna for this opportunity to address you and I add my greetings to all our guests but especially to our Japanese visitors, academics and their students as well as to all attending this important seminar. At the latter part of a day-long symposium there is always a risk of repeating material that already has been addressed, so my apologies if this should occur. My own background takes in both an academic and professional practice and as a former student of real estate, spatial planning and development since 1966 this also includes Urban Economics, Demography and their related applications, particularly to cities.

I should like to commence by referring to the classic literature of Jane Jacobs in one of her famous books, The Economy of Cities (1969), published by Vintage, USA ...wherein, she contrasts the 19th century
industrialisation of an independent, emerging Japan with the political and economic subjugation that had retarded a colonised Ireland. These contrasts between Japan and Ireland are stark. Jacobs vividly describes the desperate subjugation of the Irish people (and to quote from P. 11) …were held in an iron economic and social subjection. But that the very core of that subjection – and the reason that it was so effective and had rendered Ireland so helpless – was the systematic suppression of city industry, the same suppression in principle that the English had unsuccessfully tried to enforce upon industry of the little cities of the American colonies.

Jacobs also noted the 19th Century similarities: geographical offshore Islands located at the opposite edges of the massive Eurasian land-mass. During the 1840s Japan’s population was a static one and at 26.9 million it was a little over three times that of Ireland’s ‘high point’, of 8.4 million in 1841. So the question arising in the first Table is: why did Japan’s population grow from three times that of Ireland’s to nearly twenty-two times its size over a 120 year period 1841 to 1961?

<table>
<thead>
<tr>
<th>Year</th>
<th>Japan</th>
<th>Ireland</th>
<th>Multiple</th>
</tr>
</thead>
<tbody>
<tr>
<td>1841</td>
<td>26.95</td>
<td>8.44</td>
<td>3.19</td>
</tr>
<tr>
<td>1961</td>
<td>92.93</td>
<td>4.25</td>
<td>21.87</td>
</tr>
<tr>
<td>2016 (p)</td>
<td>126.39</td>
<td>6.62</td>
<td>19.09</td>
</tr>
<tr>
<td>2041 (f)</td>
<td>121.84</td>
<td>8.62</td>
<td>13.85</td>
</tr>
</tbody>
</table>

Source: Brian Hughes, based on Populstat.info.HTML

2. Demography:

In the global context Ireland presents a unique demographic case in its dramatic population decline between 1841 and 1961. Even though it has recovered and has grown by nearly 60% in population since 1961, today it is still some 1.7 million below 1841 census of 8.4 million - some 175 years further on. The following graph shows the overall performance of the island’s population for the last 300 years, thus:

Population of Ireland 1700 to 2000

![Graph showing population of Ireland from 1700 to 2000](Wesleyjohnston.com - up to about 1990; since then the graph continues upward to 6.61 m.)

Source:
[This author has extended the indicative Wesley Johnston graph line beyond 2000 to take account of further population growth into this century – pending release of the final 2016 CSO census results in mid-2017, whilst noting that the results for Northern Ireland are next due, for the 2021 UK census, in 2022/3]

Because of its weak urban base, the Republic of Ireland (RoI) reached its lowest population of just 2.818m together with Northern Ireland’s (NI) 1.4 m (approx.) so by that 1961 date the Island had just 4.20 million people. Japan had grown to 92.93 million by then – i.e. by 22.2 times that of Ireland, whose population was a little over half of its 1841 figure. **Today, RoI is still only 72.88% of its 1841 population, but that’s not the full picture. At its lowest point in the census of 1961 the Rol part was just 43.17% of its 1841 population of 6,528,799.** By 2011 the RoI had recovered 47.78% of the 1841-1961 population loss and the recovery was up to 52.27% by the 2016 preliminary census total. Today, the island’s population of 6.62 million comprises a 72% living in RoI with 28% in NI.

**Looking ahead, the 2050 projections for a total island population is in the 9-10 million range. Here it is necessary to make the obligatory disclaimer for professional demographers. They are always reticent in projecting levels of growth that are more than twenty years out, primarily because it means having to make fertility predictions for birth-mothers, some of whom have not yet been born!**

**Significant dissimilarities, in comparing 19th century Ireland with Japan, commences with their political systems and governance. Japan’s and legacy notes the Shogun’s embrace of western technology: especially of a famous Scottish influence. Enter Aberdeenshire’s entrepreneur and industrialist Thomas Blake Glover.** The Japanese Times, for its part, notes an issue of cultural disparity:

> However, there’s an anomalous legacy of Glover and his ilk, too, thanks to the persistence of a mid-Victorian typology of discrete ethnicities with which he would have felt quite at home. Hence, in the received wisdom of today’s Japan, Glover’s fame has slipped far below that of the Tosa revolutionary Sakamoto Ryoma, despite the latter quite likely having been less influential in bringing about the Meiji Restoration. But Sakamoto is now better remembered, not because of Glover’s dubious dealing, but because he is imagined to better encapsulate the modern Japanese spirit.

3. **Early Industrialisation – Comparing Japan and Ireland:**

Persisting with this ‘spirit’, the first imported and then locally-produced Bicycle epitomises Japan’s infatuation with early technology and industrialisation as exemplified by Jane Jacobs in her book (1969). In 19th century independent Japan with accelerating city industrialisation is contrasted with the colonially, ‘subjugated’ Ireland as Jacobs described; it focused on primitive agriculture with London’s iron grip on limiting industrialisation so that their colonies do not compete with mainland Britain. The contrasting outcome: Japan’s dramatic progress in technical prowess - its adoption and in further adaptation of western industrialisation, demonstrated in its meteoric technological mastery; conclusively demonstrated in the astonishing naval outcome at Tsushima, in its comprehensive defeat of the Tsarist Russia’s navy in 1905.

Ireland in contrast, experienced a very limited scale of Industrialisation: first Belfast grew from a small town in 1800 to exceed Dublin’s population in the census of 1911. Thus Belfast, for the first and only recorded time, was then larger than Dublin. Ireland’s fraught history of stultified industrialisation, culminated in an eight-year period of fratricidal military belligerence, starting with the failed Rising of 1916, then the War of Independence and a bitter Civil War, which resulted in partial Independence by way of Free State status in December 1922, an economic ‘war’ with Britain and culminating in the 1948 Declaration of the Republic of
Ireland (RoI). Thus today’s Dublin is about twice the population of Belfast: the UK census being held every ten years.

Heavy manufacturing Industry developed quickly in Northern Ireland with its foundation of shipbuilding, linen, and engineering compared with food, drink and tobacco in RoI. The South’s traditional agriculture with focus on food/ drink exports to Britain is such that even today agriculture is still over-dependent and the uncertainties posed by ‘Brexit’ will present further challenges!

**Today’s political division of the island’s 6.61 million people has the RoI 4.76m. as a Member State of the EU; Northern Ireland at 1.85m is part of 67m UK which intends to exit the EU. Ireland’s geography is described as having a Tundra level of population density of only 78.32 per sq. km. as at 2016 despite its temperate-climate location.**

Such demographic sparsity creates significant public and private service-delivery problems due to inevitable dis-economies of scale. At 84,431 sq.km. Ireland is marginally smaller than the US State of Indiana. In contrast, Japan at 377,930 sq.km., is some 5.52 times bigger than the surface area of the RoI and it is 4.48 times the size of the entire island of Ireland.

As the next Table shows, it surprises most people including myself, that in 1841 the island of Ireland’s population density, at that point was over 40% greater than Japan’s. However, with the Great Famine of 1845-1849 and the enforced emigration combined with an absence of sizeable cities, quickly shrunk with its spectacular collapse of population so that even with today’s recovery, and with an absence of even medium-sized cities it is less than one-quarter as dense as Japan.

<table>
<thead>
<tr>
<th>Year</th>
<th>Population per sq.km.</th>
<th>Japan</th>
<th>Ireland</th>
<th>Ireland as % of Japan’s density</th>
</tr>
</thead>
<tbody>
<tr>
<td>1841</td>
<td>71.31</td>
<td>99.96</td>
<td></td>
<td>140.18</td>
</tr>
<tr>
<td>1961</td>
<td>245.89</td>
<td>50.34</td>
<td></td>
<td>20.47</td>
</tr>
<tr>
<td>2016 (p)</td>
<td>334.43</td>
<td>78.41</td>
<td></td>
<td>23.45</td>
</tr>
<tr>
<td>2031 (f)</td>
<td>364.39</td>
<td>94.99</td>
<td></td>
<td>26.07</td>
</tr>
</tbody>
</table>

Source: Brian Hughes, based on Populstat.info.HTML

Because of its sustained emigration, Ireland is responsible for a world diaspora that is now estimated at over seventy million. Japan’s population, having ‘topped out’ at 127.33 million in 2010, has marginally declined to 126.9 million in 2016, thereby being 19.2 times the size of Ireland’s total 2016 population. Japan’s population contraction, to-date, is of modest proportions but can, if it chooses, allow some non-indigenous in-migration so as to maintain its economic workforce. Source populstat.info.html

It is almost futile to compare Japan and Ireland cities: Tokyo is by far the world’s largest one and there are many other sizeable ones by comparison with Ireland’s cities. The next Table sets out the Irish cities in rank
size order. In applying George Zypf’s famous ‘Law’ (1949) of City Rank Size, it states that the size of a country’s second and subsequent city should equate to the inverse of its rank order, one-half, one-thirds and so on. The following Table 3 confirms the fragile sizes of Ireland’s smaller cities and their Gini-coefficient ‘shortfall’ in population compared with Zypf’s Law. The following 2011 data of Table 3 city population is used because the 2016 populations for city size will not be published by the CSO until mid-2017.

Table 3: All-Island City Populations in 2011 (thousands):

<table>
<thead>
<tr>
<th>City ('000)</th>
<th>Rank Order</th>
<th>2011 Population (a)</th>
<th>Where Dublin = 100.00%</th>
<th>Zipf’s Law Population (b)</th>
<th>Zipf Target Shortfall/ [Surplus.] (b)-(a)</th>
<th>Zipf % extent of Shortfall [(b)-(a)/ (b)]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dublin</td>
<td>1</td>
<td>1,110.6</td>
<td>100.00</td>
<td>1,110.6</td>
<td>0.0</td>
<td>N/A</td>
</tr>
<tr>
<td>Belfast</td>
<td>2</td>
<td>515.00</td>
<td>46.37</td>
<td>555.3</td>
<td>40.3</td>
<td>7.26</td>
</tr>
<tr>
<td>Cork</td>
<td>3</td>
<td>198.6</td>
<td>17.88</td>
<td>370.2</td>
<td>171.6</td>
<td>46.35</td>
</tr>
<tr>
<td>Derry</td>
<td>4</td>
<td>93.6</td>
<td>8.43</td>
<td>277.7</td>
<td>184.1</td>
<td>66.29</td>
</tr>
<tr>
<td>Limerick</td>
<td>5</td>
<td>91.4</td>
<td>8.26</td>
<td>222.1</td>
<td>130.7</td>
<td>58.86</td>
</tr>
<tr>
<td>Galway</td>
<td>6</td>
<td>76.8</td>
<td>6.92</td>
<td>185.1</td>
<td>108.3</td>
<td>58.51</td>
</tr>
<tr>
<td>Waterford</td>
<td>7</td>
<td>51.5</td>
<td>4.64</td>
<td>158.7</td>
<td>107.2</td>
<td>67.55</td>
</tr>
<tr>
<td><strong>Aggregate city population ‘shortfall’ in relation to Dublin:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>742.2</strong></td>
<td><strong>41.95</strong></td>
</tr>
</tbody>
</table>

Source: CSO Principal Demographic Results, Censuses of 2011: Table 7, Areas data, together with 2008 estimates for Belfast and Derry are sourced from NISRA. Official settlement figures are not available for 2016. Both Lisburn and Newry are excluded from this earlier Table of 2011 population size. The approximate 2016 populations of RoI cities, as per this author’s estimates are: Dublin at 1.165m., Cork at 0.215m., Limerick at 0.094m., Galway 0.081m and Waterford at 0.053m.


Analysis: Brian Hughes.

Note: This aggregate ‘shortfall’ in population represents 11.60% of the all-Ireland 2011 population of 6.4 million. The Gini Coefficient shortfall for above Table is calculated at 41.95% which reflects a considerable level of city-size distortion, mitigated somewhat by Belfast’s ‘relative normality’ and Derry’s (2008) inclusion on the basis of the stated size-difference with Limerick (2011). The measure of Ireland’s distortion in city size is compatible with a ‘basket’ of Western European cities, vide Eurostat populations, 2011. This however, notes that smaller countries have a greater size variance in comparison with larger ones, due to their ‘primate settlement’ effect of their largest cities. This finding supports the view that for small countries or provinces, as in the cases of the Republic and of Northern Ireland, primacy is to be expected, simply based on the limited size of entity. This is supported in research by Mansury, Y. and Gulyas, L. (2006). Some opponents to excessive urbanisation would argue the opposite: that Dublin and Belfast are too large!
Nevertheless, in terms of achieving scale economies, future Irish governments should seek to reduce such Rank-size shortfall: a policy initiative that would require them to commit to seriously growing the State’s ‘provincial’ cities, especially having regard to the increasing importance of the Producer Services sector and in particular, of the economic dynamics of the ‘knowledge economy’, based on sufficiency of human resources and in recognition of the role of economic clusters.

Vital to any country’s economic prospects is not just its population endowment but in particular, its density as evidenced in its cities. This next Table is an up-to-date summation of the island of Ireland:

<table>
<thead>
<tr>
<th></th>
<th>Republic of Ireland</th>
<th>Northern Ireland</th>
<th>RoI % of Island</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016 (p) Population</td>
<td>4,757,976</td>
<td>1,855,000 (est.)</td>
<td>71.95%</td>
</tr>
<tr>
<td>Cities – population</td>
<td>1,614,000 (5)</td>
<td>885,000 (4)</td>
<td>64.59%</td>
</tr>
<tr>
<td>Remainder of pop.</td>
<td>3,143,976</td>
<td>970,000</td>
<td>76.42%</td>
</tr>
<tr>
<td>Surface Areas</td>
<td>68,466 sq.km.</td>
<td>15,965 sq.km.</td>
<td>81.09%</td>
</tr>
<tr>
<td>Density per sq. km.</td>
<td>69.49/ sq.km.</td>
<td>116.19/ sq.km.</td>
<td>78.32/ sq.km.</td>
</tr>
</tbody>
</table>

Source: Brian Hughes, based on Eurostat and on his 2016 estimates for cities

These data confirm that whereas the RoI has over 81% share of the Island’s surface area, it comprises just over 64% of its city population and 76% of the entire population. This Table also shows that the RoI population density is only 67% of Northern Ireland. The reality is that even after gaining limited Independence in December 1922, the RoI’s population continued to languish out to 1961, having practically no urban or industrial policy strategy to counteract the continuing outflows of mainly rural emigration. With only one metropolitan-sized city, Dublin, the difficulty in retaining population remains a persistent problem to this day, with net outward migration in almost every other part of the State.

A significant factor in retarding the State’s economic growth has been a long-standing government antipathy towards the development of its cities. At its lowest point of population in 1961 the aggregate population of the five cities was 33.1% of State compared to 29.2% for the world’s cities share of world population. However, by 1986 the State’s cities share of population had remained almost static at 33.8% when the share of all cities had risen to just over 40% of world population. This divergence persists where the 2016 (preliminary) State population share in its cities is just 34.1% at a time when the corresponding figure for aggregate world cities has risen to 54% of world population. The following data confirms the inexorable eastward shift of Ireland’s overall population distribution and recent growth performance, the next Table sets out the contrasting picture as between the East and West of Ireland (see Map – showing the 5 ‘provincial’ components of RoI).

Table 5: Provincial Populations - Imbalanced Recent Growth Performances
<table>
<thead>
<tr>
<th>5 Provinces:</th>
<th>Census 2011 Populations</th>
<th>Preliminary 2016 Populations</th>
<th>2011-2016 pop. growth contributions</th>
<th>5-year % growth</th>
<th>% of State surface area</th>
<th>% share of Population growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dublin</td>
<td>1,273,069</td>
<td>1,345,402</td>
<td>72,333</td>
<td>5.68%</td>
<td>1.35</td>
<td>42.62%</td>
</tr>
<tr>
<td>Rest of Leinster</td>
<td>1,231,745</td>
<td>1,285,318</td>
<td>53,573</td>
<td>4.35%</td>
<td>27.26</td>
<td>31.56%</td>
</tr>
<tr>
<td>Munster</td>
<td>1,246,088</td>
<td>1,280,394</td>
<td>34,306</td>
<td>2.75%</td>
<td>35.12</td>
<td>20.21%</td>
</tr>
<tr>
<td>Connacht</td>
<td>542,547</td>
<td>550,742</td>
<td>8,195</td>
<td>1.51%</td>
<td>24.74</td>
<td>4.82%</td>
</tr>
<tr>
<td>Ulster (part)</td>
<td>294,803</td>
<td>296,120</td>
<td>1,317</td>
<td>0.45%</td>
<td>11.53</td>
<td>0.79%</td>
</tr>
<tr>
<td>Ireland</td>
<td>4,588,252</td>
<td>4,757,976</td>
<td>169,724</td>
<td>3.70%</td>
<td>100.00</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

Source: Brian Hughes analysis of CSO 2011 Census and 2016 CSO Preliminary Data

This Table comprises RoI’s provincial composition where Dublin (city and county) is separated from the remaining eleven Leinster counties and that of Munster, then Connacht and finally the three Ulster counties. Table 5 highlights the striking 2011-2016 growth differences and sharply dis-improving population performances contrasting Dublin and the smaller-populated provinces, especially when they are compared with the State’s overall growth. Population densities (not shown): Dublin City + County is 21 times the density of Rest of Leinster, 27 times that of Munster and 43 times the density of Connacht + Ulster (pt.). The Greater Dublin Area, comprising counties Dublin, Kildare, Meath and Wicklow, at 1.9 million people for the first time exceeds 40% of State population and is also larger than Northern Ireland.

4. Absence and Failures of City-growth Spatial Policies:

When the first opportunity did present itself to espouse the planned acceleration of urban growth for RoI in the form of the Buchanan Plan of 1969, it was firmly rejected by that government on the grounds that it would be too disruptive and biased in favour of cities. That Plan would have required an accelerated programme for housing construction, principally in the provincial cities of Cork and Limerick, together with more modest expansion for six other moderate sized cities and towns.

Irish governments have always been wary of planned growth, that might seek to favour one location, county or province over others and so the only other spatial plan had to wait until the 21st century to emerge. As with our cities, politics and planning do not make for friendly bedfellows in Ireland! Shortly after the millennium, the introduction of the National Spatial Strategy (2002-2020) was based on the premise of Balanced Regional Development (BRD), vide Appendix 1. It has proved to be a near-complete failure – in this writer’s opinion – because BRD is unviable as it unrealistically seeks to support all regions, towns and villages – it is non-discriminatory, with “a one for everybody in the audience” approach to growth expectation.

Until it was quietly withdrawn after only nine of its eighteen year life-cycle in 2012, all that the NSS had succeeded in doing was to accelerate the formation and proliferation of hundreds of additional villages and many small towns together with thousands of additional one-off houses. These comprise over 200 mainly small towns and nearly 700 villages of up to 1,500 in population – the minimum threshold which defines the
smallest populated ‘town’. It is interesting to note this week’s announcement of the latest government initiative for 600 small towns and villages with an initial budget of €60 million; that is an average of €100,000 per settlement.

In maintaining widespread population dispersal, after 2002 the five cities lost further population share and some of the eighteen other growth centres called ‘Gateways’ or ‘Hubs’ have stagnated and some have even lost population. In short, poor strategic choices were made in the selection of growth centres and too many of them were chosen. Sligo notably has lost population over the last three censuses; Portlaoise was not selected despite the fact that it achieved the same population growth (2006-2011) as the aggregate growth of the three Midland-designated ‘Gateway’ towns of Athlone, Tullamore and Mullingar. Dundalk was however, selected as the north-east Gateway despite the impressive growth of Drogheda with Laytown-Bettystown-Mornington, now emerging as Ireland’s sixth city. Fast-growing Drogheda-LBM may now have passed out the smallest city Waterford in its 2016 population. However, the population details for individual settlement won’t be available until mid-2017.

5. **The Critical Policy Issue:**

The key to Ireland’s future rate of growth rests with the city and with its human resource-base. To what extent will both public policy formulation and the private sector’s economic response enhance the growth of Ireland’s cities? Will the forthcoming National Planning Framework (NPF) policy recognise to the nature and change of work in the ‘knowledge economy’, to densification and with its demographic growth increasingly drawn to its agglomerating cities?

Will there be adequate acknowledgement of the formation of new work clusters similar to the ‘knowledge cluster’ of the Grand Canal area of south Dublin city or to Dublin’s ‘aircraft leasing cluster’ which funds and manages about half of the world’s commercial aircraft? To what extent will the New Economic Geography with its large potential multipliers be cherished in its spatial policy formation? These are the major issues that need to be addressed It is anticipated that the NPF growth centres may be announced next Thursday by Minister for the Environment Coveney at Maynooth University.

At present, Ireland’s (all island) **demographic centroid** is moving further east and is now positioned, coincidentally, close to Maynooth, which is located just 25 kilometres west of Dublin’s city centre. To-date there is no formal spatial acknowledgement that Ireland’s population growth is focused on the east coast, generated by the dual concentration of Dublin and Belfast (DB) metropolitan regions *vide*, Irish Times, 27.12.2016 headline, where Minister Coveney has invited the citizenry to debate the role of secondary cities in forthcoming NPF. The opportunity to provide for a sixth city along the DB corridor is prescient, especially given the geo-political developments now emerging.

6. **Good Spacio-Economic Practice and Harsh Economic Realities:**

So this writer’s theoretical expectation is that based on Japanese and other countries’ experience, the direction of public spatial policy backed up with international and private investment support, should seek
to achieve Pareto-Optimality wherein a win-win series of outcomes will eventuate for this entire island. This objective is not just laudable or desirable but in Ireland’s case, it is an essential one, given the national legacy of debt and issues of future major economic uncertainties. Strategic spatial opportunities must therefore be grasped so as to avail of ‘core’ growth and ‘peripheral’ spill-over spatial policy outcomes.

Today, urbanisation and urban agglomeration still appears to many of our rural-based politicians as discomforting concepts - ones that have attracted a stubborn political reluctance and even resistance, to recognise and acknowledge the potential to grow our provincial cities and despite the fact that RoI is still only about 63% urban (2016 Preliminary Census), the five cities comprise just 1.6 million or just one-third of the near 4.76 million population of the Republic. With the demise of most 1960-1980s branch plants, industrialisation has largely bypassed or even deserted many Irish provincial towns but the services base of its cities is consolidating, featuring cerebral rather than physical output, reflecting modern Ireland’s enthusiasm for education and added value.

Post the 2009 Troika Bailout and international ‘rescue’ (IMF+EU+ECB), Ireland continues to retain a credit-worthiness standing as reflected in its current bond yields, despite its high 90% debt-GDP ratio. However, even with its political and economic stability Ireland remains very vulnerable to a trading position as an off-shore island economy. Likewise, our demography remains potentially fragile with propensity for two-way migration, now inward in direction since 2015. It continues to be vulnerable as one of the most Globalised economies in the world with a rating of 170%, that is Exports + Imports / GDP.

The RoI has just one metropolitan city region plus the four much smaller Provincial cities, with their average 110,000 population which is just one-eleventh the size of and just one-third the density of Dublin. These provincial cities have an average density of 1,300 people per sq.km. Dublin’s population density is approaching 4,000 and about 6,300 for Japanese cities.

Apart from the slower domestic economy, Ireland’s growth expectation is FDI industry-based together with an over-dependence on agricultural. Exports: notable areas include Pharmaceuticals, Professional Consultancy, Software, Cloud-media, Medical Devices, Information Technology, Aircraft Leasing and Financial Services.

Given that nearly 75% share of RoI’s recent population growth is in Leinster (including Dublin) a reasonable case can be made for the nomination of one additional city in this part of the country. In proposing Drogheda as that new city, recognition is also being given to the pressing need to reinforce the Dublin-Belfast Corridor, especially in a post-Brexit geo-political context. The physical agglomeration of two towns plus the fact that one of them is Ireland’s largest populated town presents a clear-cut candidate for Ireland’s next city.

7. Ireland’s emerging new city – Drogheda-LBM (‘Whitaker City’):

Located just twenty minutes from the Dublin Port Tunnel and 30 miles north of Dublin and reinforcing the Dublin-Belfast Corridor, Drogheda together with another large town, Laytown-Bettystown-Mornington (LBM) together match the population of Waterford city. This application of the EU Harmonised Density Measure (Sq. Km.) is a very recent example of standardised practice for assessing urban agglomeration. First is set out the four-step criteria as applied to an Austrian city: known as the ‘Graz Model’ applied to Drogheda plus LBM, thus:
Until 2015, there was no harmonized definition of ‘a city’ for European and other countries member of the Organization for Economic Co-operation and Development (OECD). This undermined the comparability, and thus also the credibility, of multi-country analysis of cities. To resolve this problem, the OECD and the European Commission has developed a new definition of a city and its commuting zone in 2011. This new definition works in four basic steps and is based on the presence of an ‘urban centre’ a new spatial concept based on high-density population grid cells. Source: Dijkstra, L. and Poelman, L. (2015), European Cities – Functional Urban Area Definition, European Commission, DG Regio.

- **Step 1:** All grid cells with a density of more than 1 500 inhabitants per km² are selected.
- **Step 2:** The contiguous high-density cells are then clustered, gaps are filled and only the clusters with a minimum population of 50 000 inhabitants (Map 1.2) are kept as an ‘urban centre’.
- **Step 3:** All the municipalities (local administrative units level 2 (or LAU2) with at least half their population inside the urban center, are selected as candidates to become part of the city (Map 1.3).
- **Step 4:** The city is defined ensuring that 1) there is a link to the political level, 2) that at least 50 % of the city population lives in an urban center and 3) that at least 75 % of the population of the urban center lives in a city (Map 1.4)

In most cases, as for example in Graz, the last step is not necessary as the city consists of a single municipality, that covers the entire urban center and the vast majority of the city residents live in that urban center. This is the usual case in Europe but not so in Ireland where the position in Drogheda, Waterford, Athlone or Carlow, together with other growing Irish settlements, are increasingly expanding over two or more counties, for which traditional governance implementation with the old-fashioned county system of local administration is no longer suited. Here, the provisions of the radical reform policy of Putting People First (2014) will assist in overcoming the Louth-Meath boundary conundrum.

At their interface, where the specific example of the relevant parts where Drogheda adjoins LBM the same E.U. test for comparable cell clusters are shown, thus:

<table>
<thead>
<tr>
<th></th>
<th>Drogheda (part)</th>
<th>Laytown-Bettystown-Mornington (part)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population Grids</td>
<td></td>
<td></td>
</tr>
<tr>
<td>823</td>
<td>2,411</td>
<td>2,476</td>
</tr>
<tr>
<td>5</td>
<td>673</td>
<td>691</td>
</tr>
<tr>
<td>46</td>
<td>752</td>
<td>748</td>
</tr>
<tr>
<td>112</td>
<td>1,224</td>
<td>1,059</td>
</tr>
<tr>
<td>275</td>
<td>1,059</td>
<td></td>
</tr>
<tr>
<td>2,162</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The related issue of density is especially significant in sparsely-populated countries or regions where the emergence of agglomeration is infrequent or indeed, where the concept of agglomeration is counter-cultural. Any country that is apathetic to the development of its cities is unlikely to be focused on density, urban agglomeration or perhaps even to matrix-clustering. Asia, with its burgeoning mega-cities, not least that of Japan, stands in sharp contrast with Ireland’s temperate climate but handicapped with its tundra density of population.

8. **Analysis of Population Grid Data:**
In this case the core cell clusters of 2,470 and 2,162 are at one-remove from each other with respect to their surrounding 8-cell positioning. On that basis, Drogheda+LBM would appear in 2011 to fail the second-step requirement for contiguity. However, should that particular cell of 1,224 population in that census of 2011 grow to equal or exceed 1,500 in a future (e.g. 2016 or subsequent census), the EU Harmonisation criterion would then appear to have been met. This would require the 18.4% shortfall of 2011, in that particular cell’s population to be eliminated and depends upon this cell’s share of the growth that has occurred during 2011-2016 in the St Mary’s Electoral District.

So, this leads on to the principal confrontational issue of this Paper: The NSS (2002-2020) is being replaced by NPF: When will it happen? What format will it take? Will it address the Irish Urban vs. Rural dilemmas? Will there be a provincial-city focus for growth to counterbalance Dublin? Otherwise, Dublin will continue to become Ireland’s 21st century citystate, vide Hughes (2010) PhD.

Focusing on the Sustainability of Balanced Regional Development (BRD), as set out in Appendix 1 for its 8-point definition. Those who still support BRD are strongly reluctance to accept radical change despite the overwhelming evidence of the old spatial policy being the cause of one-off housing, rural and small town proliferation and of city/urban dilution? Likewise they fail to accept or take any responsibility for its dismal demographic outcome.

Thus as an initiative to support the recognition of Ireland’s sixth (or is it fifth in size?) I will ‘christen’ Drogheda-LBM as ‘Whitaker’ city in honour of its august past residents (1916-2017).

9. Applications for Urban Economic and New Economic Geography theory:

This section is Urban Economic in theme. Japan’s most celebrated international urban economist Masahisa Fujita notes that the nineteenth century German Landowner Johann Heinrich Von Thünen in his pioneering work, has provided the foundation of both urban economics and the new economic geography (NEG). In Fujita’s opinion, Von Thünen’s (1826) thinking on industrial agglomeration was not only amazingly advanced for that time, but in many respects remains novel even today. Fujita uses the Von Thünen (1826) bid rent model as was transformed by William Alonso (1960, 1966) to further his own work on the urban sphere. Furthermore, Fujita showed ...that if Thünen’s well-known theory on agricultural land use is unified with Fujita et al.’s pioneering work on industrial agglomeration by using modern tools, then we achieve a prototype of the New Economic Geography model.

What are these modern tools? Even for non-math readers, Fujita’s literature on cities is surprisingly accessible, viz. His Urban Economic Theory – Land Use and City Size (2003), Cambridge University Press. This provides ...an examination of the economic reasons determining choice of location. It develops, through analysis of the bid rent function, a unified theory of urban land use and city size.

In summary, the modern-day Japanese giant is Fujita who together with Krugman and Venables (The Spatial Economy, 2001, MIT Press), and likewise, in Fujita and Thisse (The Economics of Agglomeration, 2013, Cambridge) – have produced this body of pioneering work - that has contributed to unifying the new urban economics with the new economic geography, and in doing so has illuminated our understanding and beneficial use of these disciplines. Vide, Appendix 3.
10. Urban Agglomeration and Demography - the drivers and location for future growth:

In her 1969 Appendix, Jacobs demonstrated diagrammatically how and why specialised economic concentration occurs in cities. Her five-stage set of diagrams show:

- The Simple Export-Generating Process
- The Import-Replacement Process
- Export Generation into Large Cities
- The Two-Reciprocating Systems, (for simple and subsequent cycles) and
- Correlation of these four stages with conclusions as to the nature and change of ‘work’ which Jacobs foresaw, as becoming increasingly cerebral and services-orientated.

It is useful to cite some of the major players, dates and their principal contributions, resulting from Von Thunen’s above-described Urban Economic foundation of 1826. Then William Alonso in his Paper to the Regional Science Association (1971) explained his five inflection points – Costs and Benefits of City-Size, in his graphical portrayal of population size, plotted against Average and Marginal Costs and Benefits. This 1971 context was primarily based on an industrial-manufacturing city as contrasted with the ‘knowledge economy’ one of present-day. This overall perspective is shown as follows with Inflection Point D reflecting the optimum city size for current citizens and Point E is the optimum perspective of in-migrants:


Fujita’s Land Use and City Size work on housing lot size and population density changes within a city (1989) clarified the issue of residential equilibrium within a monocentric city. In turn, this raises a further issue – one that is driven by the fundamentals of the new economic geography. Ireland’s recent demographic history proves that specialisation and the location of economic activity cannot be spread or resourced in a way that is envisaged by Balanced Regional Development. Such activity increasingly is spatially clustered, vide Appendix 5.
The scene-setting quotation taken from Fujita and Thisse is very clear... *Economic activities are not concentrated on the head of a pin, nor are they spread evenly over a featureless plain. On the contrary, they are distributed very unequally across locations, regions and countries, generating contour lines that vary with time and place.* P.1, Fujita and Thisse (2013).

Likewise future population spread will be increasingly ‘lumpy’ as propounded by the World Bank’s *World Development Report* (2009): Reshaping Economic Geography. This viable alternative to BRD is the centripetally driven core-periphery model, as described by the treble chain-stages of Krugman’s NEG Nobel-winnings research findings and publication (years) as follows:

- Increasing Returns and Intra-Industry Trade (1979), leading to
- Increasing Returns and Transport Costs (1980), and then incorporating

Given the circumstances of Ireland as a progressive western economy, with its proclivity for short-termed political horizons and its preoccupation on resolving local issues and on current spend, the inevitably capital-spend contraction becomes the norm, despite its mandatory urban economic role for securing future growth. With Ireland’s current economic recovery there is ‘early growth’ evidence, but much more is required for the following objectives:

- Sustained investment in infrastructural improvement
- A positive land-use/ transportation interface with long-term goals
- City densification and increased building heights
- Monocentric morphologies as opposed to Polycentric spread of commuter belt
- Reducing home-to-work, schools and college-journeys
- Edge-city policy and land management
- The focus on arresting the proliferation of rural one-off housing
- Co-ordinated transportation projects such as Dublin’s Eastern By-pass
- Improved competitiveness linked to supply of affordable accommodation

Much work remains outstanding in the application of demography to the NEG literature. For instance as it was only in 2015 that the European Union agreed to adopted a unifying approach to the measurement and definition of the ‘city’ and as shown: how this population density, grid, approach called the ‘Graz Model’ is applied by this writer in identifying Ireland’s newest, yet to be confirmed, city at Drogheda-LBM.

Ireland has an underdeveloped and scattered settlement structure. The emerging realisation is that modern industry and business services will see further clustering in specific urban locations because face-to-face relationships matter. The concept of ‘cottage industry’ remains an idealistic hope that hasn’t happened and given the slowness in Irish rural broadband roll-out the time frame is pushed back into the next decade and with RoI Broadband just reaching one-million homes.

The Irish Housing supply crisis and related national competitiveness issues, of rent and house-price affordability, largely arises from an over-concentration on one-off rural housing. Instead, there is a need
to address the potential for urban densification, the recycling of brown-field sites and meeting the demand for housing. And thus the mismatch of housing shortages with the need for demographic concentration and growth remains a major stumbling block for the Irish economic and its competitiveness ambitions.

Now, in a general-knowledge type talk it is risky to become over-specialised. However I focus on city-specific examples of good practice – at all times driven by solid evidence base and on proven urban economic theory. There is a huge dilemma for Irish Government, maintaining fiscal balances for capital and/ or current expenditure? One example of good practice is the current debate on legislative provisions for an elected Mayor for Dublin. City governance and International promotion are interlinked, as constantly articulated by Dublin City Council.

Looking to the future with optimism, one of Ireland’s ‘Fifth Cavalry’ rescuers has been The European Investment Bank’s (EIB) in its recent role in Ireland’s financial bailout. Increasingly it may also have a continuing role, as potential funder of choice for much-needed capital infrastructure. The question is: can sources such as the EIB be used as a substitute for direct Government funding for capital purposes in off-balance sheet ways?

This, for Ireland continues to be an important issue because for the foreseeable future most taxation revenues are likely to be used to fund current spending including pensions. Dependable sources of capital investment are predicated by the need for all investment propositions to be stress-tested for viability.

11. Some major issues for Ireland’s cities:

With time limitations, the following areas occur:

**Improving their environment:** Brown-field vs. green field development. For Ireland: the emergence of the Strategic Development Zone concept – there are just ten of them as of today. Their benefit - of direct grant of Planning Permission by An Bord Pleanala (the Irish Planning Board).

**Best use of natural environment:** I do hope our visitors will sample Dublin’s superb geographical appointment, the bay, the mountains, its centrality and accessibility. Physical endowment of proximity to sea, access to the rural environment, its temperate climate.

**Commuting and the sustainability of satellite towns:** The Alonso/ von Thunen value/ distance relationship critical to Ireland’s competitiveness - driven by property values, both commercial and residential. The Hall-Pain (2006), *The Polycentric Metropolis* findings of North-west European city-regions re Dublin’s excessive mono-centricity.

**Centripetal agglomeration:** The need for further densification and use of brown-field sites – 2016 Preliminary Census evidence for the 5 Irish cities.

**Growth elsewhere – other settlements:** If not in provincial cities, where will future growth be expected to occur? Limitations on future agricultural output with climate change penalties for methane? The food industry: – its ability to diversify? Limitations for agriculture production, due to bovine-generated methane gas constraints.
Reduced home/work commuting: Residential locations must empathise with employment location.

Intensive recycling of brown-field sites: Uses of existing Utilities, Infrastructure and Social Goods – schools, etc. The importance of Urban Design to add value to urban renewal on a human scale.

12. Presentation of theories/methods and Conclusions:

This Paper concludes, as suggested by your Director, with a brief citation of related theories, methods, their limitations and conclusions, thus:

Theories: The Von Thunen-Alonso Value-Distance foundation of Urban Economic theory; The application of Central Place Theory, Christaller, 1933 and its transportation variation, Losch, 1944, in discerning viable urban growth centres; the application of Zipf’s Law; Alonso’s Value to Distance trade-off; the now-standardised EU Matrix Harmonisation measure (the Graz model) 2015 and its demographic model that informs the emergence of RoI’s sixth city - Drogheda-LBM.

Methods: Demographic Analysis, emerging cities Drogheda – 2016 population to be confirmed, as complying with the 2015 EUH criteria, combining Theories and Methods.

Limitations: Whereas sound theory is based on life experience, today’s uncertainties include the BREXIT outcome and Trump election! The prospect of changing Trade patterns, The extent of flexibility and cohesion of the future EU? National legacies of High State Debt/ GDP ratio; Making hard choices between future further Current and reduced Capital Spending; Prospects of increasing inflation and rising interest rates.

If there is belated political recognition then there will be more positive emphasis on the opportunities to grow our cities. The potential for our provincial cities to contribute to overall economic growth has remained largely unexploited in Ireland’s spatial policy strategy to date. Buchanan was rejected in 1970 and the National Spatial Plan of 2002 was fundamentally anti-city despite its empty rhetoric. Therefore the forthcoming National Planning Framework will provide the opportunity to rectify past policy weaknesses so as to provide new directions for top-down city-led growth to the regions. In doing this Irish policymakers and politicians may contribute to reversing the decline in rural areas. On their own, bottom-up attempts to arrest this decline, have been both unrealistic and largely unsuccessful. They have been based on futile balanced regional development idealisms, devoid of economic or financial direction. Whereas one is not dismissive of effective bottom-up initiatives, increasingly top-down concentrations of ‘lumpiness’ are the way forward as heralded by the World Bank (2009), if they are focused on city-led initiatives, evidence-based on the compelling theories of urban economics and of the new economic geography (NEG).

Alongside this is the need to devise a positive, yet careful EU approach to European and world migration which needs to be addressed in ways that accommodates refugees and economic migrants without unduly disrupting the economies and populations of recipient countries in the first world. Whilst recognising the evidence of urban overdevelopment, Japan is proof positive of the benefits that derive from fostering urban agglomeration and in availing of the economies that arise from urban densification and for urban technology. This for Ireland must also be the desired spatial policy approach.
Ireland’s considerable potential for growth arises from a number of attributes, recognising its uniquely low density of population and educational attainment, albeit significantly handicapped by the absence of sizeable cities. We have pointed to Ireland’s positive demographic trend despite the economic collapse of the first decade of this new millennium and to unavoidable austerity impositions. This paper is premised on ‘optimism’; the by-word of Ireland’s man of the 20th Century, T.K. Whitaker. The Republic of Ireland, hopefully, can and will remain as a committed member of the European Union as its principal and only English-speaking nation.

This paper also recognises the geographic opportunities resulting from Ireland’s unique international location – within the east/west UK to US and Canadian economic sphere of the world’s major English speaking nations.

As to the possibility of RoI’s National Planning Framework espousal of a policy for Irish city-growth, its authors should heed Fujita et al. (2001, 31) *The interaction between economies of scale and endogenous market size can lead to a cumulative process of agglomeration.* Earlier, Kaldor (1940) in what is known as Kaldor Improvements had found that *Agglomeration with compensation from core to periphery can make both regions better off when trade costs are sufficiently low.*

Thus the need, to both cherish and recognise the potential of Ireland’s cities, presents spatial and economic policy opportunities to deploy related theories and techniques that have developed world-wide, not least those of Japanese urban scholars – including the pioneering achievements of Masahisa Fujita.

I wish to thank my DIT colleague Dr Lorcan Sirr for his review of this Paper and for his kind assistance in the preparation of the accompanying Powerpoint Presentation.
BIBLIOGRAPHY and REFERENCES


Brakman and Garretsen (2009), Spatial Economic Analysis, Regional Studies Association.


Central Statistics Office (2009) data on 2006 census settlement surface areas, kindly provided to this writer


Daly, G and Kitchin, R. (2013) Shrink smarter? Planning for spatial selectivity in population growth in Ireland, Administration, vol. no. 60


Hughes, B et al. (2008), in Twice the Size? Imagineering the Future of Irish Gateways, Futures Academy, DIT, Dublin


Hughes, B (2012) Drogheda’s Case for City Status : A Presentation to the Minister for the Environment on behalf of Drogheda City Status Group and Drogheda Borough Corporation, May 2012 in Leinster House, [unpublished PowerPoint presentation].


Meredith, D and van Egeraat (2013) Revisiting the National Spatial Strategy ten years on, Administration, vol. 60, no. 3.

National Spatial Strategy (2002-2020), DoECLG, Dublin


Appendix 1

The Eight Key Concepts of Balanced Regional Development in the 2002-2020 NSS

- The key concepts (of the NSS) are potential, critical mass, gateways, hubs, complementary roles and linkages.
- Potential is the capacity that an area possesses, or could in future possess, for development, arising from its endowment of natural resources, population, labour, its economic and social capital, infrastructure and its location relative to markets.
- Critical mass relates to size and concentration of population that enables a range of services and facilities to be supported. This in turn can attract and support higher levels of economic activity and improved quality of life.
- Gateways have a strategic location, nationally and relative to their surrounding areas, and provide national scale social, economic infrastructure and support services. Further development of the five existing gateways at Dublin, Cork, Limerick/Shannon, Galway and Waterford is a key component of the NSS.
- In addition, a small number of other large towns, which have the potential capacity to become gateways and lead development in their regions, will play a key role in achieving a more balanced role in regional development.
- Hubs: A number of towns will act as hubs, supporting the national and international role of the gateways and in turn energising smaller towns and rural areas within their sphere of influence.
- Complementary roles for other towns, villages and rural areas; various medium-sized towns in each region will act as ‘local capitals’ providing a range of services and opportunities for employment. Within the spatial framework provided by the NSS, rural potential will draw upon local economic strengths, supported by a stronger structure of smaller towns and villages as a focus for economic and social activity and residential development.
- Linkages in terms of good transport, communications and energy networks are vitally important to enable places and areas to play to their strengths.

Source: The National Spatial Strategy (2002-2020: 12)
A Note on Ireland’s Political Decision-Making: The recent negotiations between Ireland’s two main political parties, regarding the extent to which rent control should apply to urban areas, provided interesting insights as to why ‘scientific’ evidence and research should be allowed to outweigh the ‘political’ reasons for making such decisions. In a similar manner, scientific research should be applied when the selection of growth centres considered by the Government for the forthcoming National Planning Framework.

Nowhere in this heated and controversial debate, to date, has there been evidence from like-minded Irish politicians of appreciating the spill-over effects that cities play in benefiting their regional spheres-of-influence. Neither do they appear to understanding the top-down endowments that are central to the core-peripheral growth of successful city regions which underwrite the dynamics of urban economics, of central place theory and of the new economic geography findings which underscored Paul Krugerman’s Nobel Prize award for economics achievements of 2008.

Balanced Regional Development as a spatial and economic policy has singularly failed to acknowledge why cities exist and the urban agglomeration reason for their growth. Ireland’s demographics confirm that it has encouraged the proliferation of one-off housing, small towns and villages to the detriment of city concentration and growth-centre formation, advocated by The World Bank in 2009.

Likewise, there has been a critical political failure to acknowledge that rural living and their associated sparse populations imply enormous costs to the State, the Private Sector and to the taxpayer of the inordinate costs in maintaining services: to unviable branch banking and post offices, rural one and two-classroom schools, ‘scattergun’ broadband provision, garda stations, the ambulance service, GP practices as well as the upkeep of the inordinate length of Ireland’s rural road structure. It has also reinforced Ireland’s political system in perpetuating ‘clientalistic’ parliamentary politics at the expense and neglect of pressing policy formation and legislation enactment.

Given the five-fold or €160 Billion increase in the State’s National Debt over the past decade as well as private citizens’ debt burdens and likewise of their long-term cost of servicing, Ireland now needs to focus its increasingly limited resource of current and fixed capital expenditure into a few centres for growth rather than in continuing to practice ‘Balanced Regional Development’ with its implicit, failed ‘one for everyone in the audience’ approach. Instead, future policy formulation will have to foster Specialisation and long-run location of activity that fuses the Fujita and Krugman approaches to Trade Theory with Economic Geography.

Specifically, there is an urgent need to reduce the ever-widening population disparity between Dublin’s 1.17 million population compared with just 110,000, the average size of the State’s four provincial cities. In turn, such substantially-enlarged cities would provide the necessary gravity mass of ‘lumpiness’ and would then be in a much better position to benefit their regions and to then become the dynamic cores to create enhanced employment and rectify the demographic imbalances that currently prevail outside of the Greater Dublin Area.

The standing down of the 2002-2020 National Spatial Strategy was primarily due to its inappropriate core policy of Balanced Regional Development when applied to a sparsely populated country. We need to continuously remind our politicians of their past calamitous decision-making including their rejection of the principal recommendations of the Buchanan Report for city growth in 1969 and the 2003 debacle for ‘scattergun’ Public Sector Decentralisation.
APPENDIX 2

Apropos this Paper’s reference to Ireland’s recent population dynamics. Shown below are the contrasting Regional performances of both the Census populations (2011 and 2016 (Preliminary)) together with the varying regional contributions to growth for that five-year period to April 2016.

Table: Irish Planning Regions - Population Growth, 2011-2016

<table>
<thead>
<tr>
<th>Region</th>
<th>Census 2011</th>
<th>Census 2016 (Prel.)</th>
<th>Population Growth</th>
<th>Population Growth Rate</th>
<th>Regional Population Growth Rate</th>
<th>Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dublin</td>
<td>1,273,069</td>
<td>1,345,402</td>
<td>72,333</td>
<td>5.68%</td>
<td>42.62%</td>
<td></td>
</tr>
<tr>
<td>Mid East</td>
<td>531,087</td>
<td>559,404</td>
<td>28,317</td>
<td>5.33%</td>
<td>16.68%</td>
<td></td>
</tr>
<tr>
<td>Midlands</td>
<td>282,410</td>
<td>291,941</td>
<td>9,531</td>
<td>3.37%</td>
<td>5.62%</td>
<td></td>
</tr>
<tr>
<td>South East</td>
<td>497,578</td>
<td>511,070</td>
<td>13,492</td>
<td>2.71%</td>
<td>7.95%</td>
<td></td>
</tr>
<tr>
<td>East Border area</td>
<td>256,563</td>
<td>265,740</td>
<td>9,177</td>
<td>3.58%</td>
<td>5.41%</td>
<td></td>
</tr>
<tr>
<td><strong>East of State</strong></td>
<td><strong>2,840,707</strong></td>
<td><strong>2,973,557</strong></td>
<td><strong>132,850</strong></td>
<td><strong>4.68%</strong></td>
<td><strong>78.27%</strong></td>
<td></td>
</tr>
<tr>
<td>South West</td>
<td>664,534</td>
<td>689,750</td>
<td>25,216</td>
<td>3.79%</td>
<td>14.86%</td>
<td></td>
</tr>
<tr>
<td>Mid-West</td>
<td>379,327</td>
<td>385,172</td>
<td>5,845</td>
<td>1.54%</td>
<td>3.44%</td>
<td></td>
</tr>
<tr>
<td>West</td>
<td>445,356</td>
<td>453,413</td>
<td>8,057</td>
<td>1.81%</td>
<td>4.75%</td>
<td></td>
</tr>
<tr>
<td>West Border area</td>
<td>258,328</td>
<td>256,084</td>
<td>-2,244</td>
<td>-0.87%</td>
<td>-1.32%</td>
<td></td>
</tr>
<tr>
<td><strong>West of State</strong></td>
<td><strong>1,747,545</strong></td>
<td><strong>1,784,419</strong></td>
<td><strong>36,874</strong></td>
<td><strong>2.11%</strong></td>
<td><strong>21.73%</strong></td>
<td></td>
</tr>
<tr>
<td><strong>State</strong></td>
<td><strong>4,588,252</strong></td>
<td><strong>4,757,976</strong></td>
<td><strong>169,724</strong></td>
<td><strong>3.70%</strong></td>
<td><strong>100.00%</strong></td>
<td></td>
</tr>
</tbody>
</table>

Source: Brian Hughes analysis of CSO 2011 Census and 2016 CSO Preliminary Census data.
Note: East Border includes Louth, Cavan and Monaghan; West Border comprises Donegal, Sligo and Leitrim.
The corresponding all-Border Region figures are: 514,891, 521,824, 6,933, 1.35% and 4.08%, respectively.

During 2011-2016 the Greater Dublin Area alone, comprising the Dublin and Mid East regions, contributed 59.30% of the total State growth. Of note in the above data, is the contrasting east-west performance to State population growth; 78.27% versus 21.73%. The 2016 census also confirms a return to net in-migration
and thus previous intercensal growth rates can be expected to resume. For instance, in 2002-2006 the State population grew by 322,645 (+8.26%) and during 2006-2011 it was up by a further 348,404 (+8.22%). Thus, in the nine years to April 2011, the State population grew by 671,049 (+17.13%) above the 2002 level, as confirmed in these twenty-first century censuses.

Appendix 3

Figure 7.2: Equilibria in the Base Multiplier Model of Fujita et al. (2001: 29)
In this quadratic-based equation model approach to depicting a growth-shift stimulation, it is noted that after the ‘break point’, equating to 1.6 on the ‘X’-axis is reached, then the former sedate slope of the settlement’s growth curve below that point, is followed by a leveraged and sudden ‘jump’ from 2 to 8 on the ‘Y’-axis, its ‘multiplier’ effect. Following that burst of growth, a significantly steeper growth progression ensues; as depicted by the forty-five degree angle of the post-bifurcation event, as shown by the thick black line, occurring after the ‘sustain point’ is reached.

In turn, this theory adds support to explain Dublin’s current emergence of economic buoyancy, coming on top of that settlement’s unexpected, near-65,000 population increase (2006-2011) and even larger one of 72,300 (2011-2016). If this is the case, is it then possible to envisage for the future, a replication of such a multiplier ‘shift’ outcome for other cities – but most realistically for Cork, in developing Ireland’s ‘missing’ hierarchical tier of 200,000 to 500,000 in settlement size?

### Appendix 4

The complete matrix for the twin settlement of Drogheda and LBM confirms a grid formation in a north-south depth of ten kilometre rows. The respective core populations are set out in an ‘all-border’ format, comprising fourteen medium-density central grids totalling 11,297 in population for LBM, located east of and next to the twenty grids totalling 37,669 for Drogheda. In all, these adjoining 34 sq. km. grids comprise a core agglomeration population of 48,996 with an average density of 1,440 people per sq. km., set out as follows:

**Drogheda-LBM 2011 census Population Spread – OSI Map Grid References:**

<table>
<thead>
<tr>
<th>Grid cells</th>
<th>6/7</th>
<th>7/8</th>
<th>8/9</th>
<th>9/10</th>
<th>10/11</th>
<th>11/12</th>
<th>12/13</th>
<th>13/14</th>
<th>14/15</th>
<th>15/16</th>
<th>16/17</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>79/80</td>
<td>131</td>
<td>54</td>
<td>86</td>
<td>9</td>
<td>28</td>
<td>107</td>
<td>58</td>
<td>97</td>
<td>40</td>
<td>37</td>
<td>-</td>
<td>647</td>
</tr>
<tr>
<td>78/79</td>
<td>26</td>
<td>6</td>
<td>27</td>
<td>59</td>
<td>58</td>
<td>84</td>
<td>52</td>
<td>83</td>
<td>5</td>
<td>-</td>
<td>-</td>
<td>400</td>
</tr>
<tr>
<td>77/78</td>
<td>20</td>
<td>17</td>
<td>61</td>
<td>16</td>
<td>449</td>
<td>153</td>
<td>79</td>
<td>65</td>
<td>99</td>
<td>-</td>
<td>-</td>
<td>959</td>
</tr>
<tr>
<td>76/77</td>
<td>74</td>
<td>219</td>
<td>2,643</td>
<td>3,308</td>
<td>2,423</td>
<td>10</td>
<td>5</td>
<td>80</td>
<td>489</td>
<td>906</td>
<td>-</td>
<td>9,557</td>
</tr>
<tr>
<td>75/76</td>
<td>1,212</td>
<td>1,534</td>
<td>3,226</td>
<td>3,553</td>
<td>823</td>
<td>5</td>
<td>46</td>
<td>112</td>
<td>275</td>
<td>1,059</td>
<td>-</td>
<td>11,845</td>
</tr>
</tbody>
</table>
A principal weakness of this NSS proposal for the midlands ATM gateway, is the absence of a nucleus as ‘A’ in the figure above, and for existing settlements or their size, there is little to indicate or encourage where development might take place. Mullingar’s ‘R’ location is preferable in terms of Dublin’s Sol proximity as is evidenced in its more rapid population growth. However, it has little current commercial or development activity, Curran (2008). It is uncertain how settlement spatial clustering could occur in the absence of a sizeable nucleus – where ‘A’ might represent, geographically, the towns of Clara with a population of 3,242 or perhaps even Moate having 2,731 people in the 2011 census - especially in a very low-density agricultural setting, with modest levels of industrial development activity and in an absence of tertiary-level agglomeration.

Walsh, in Bartley and Kitchin (eds) (2007: 52), whilst not specifically defining UA, articulates Dublin’s critical mass in the context of local and regional potential, thus:

_It has been defined as the size, concentration and characteristics of populations that enable a range of services and facilities to be supported and which, in turn, can attract and support higher levels of economic activity. The transformation that has occurred in Dublin since the early 1990s illustrates the_
importance of critical mass. Dublin’s success has been assisted by its population size and structure, level of education, the availability of educational resources, the mix and clustering of different types of labour pools in niche sectors, transport links to other regions and countries, the informal network of people and expertise that provide the scale of critical mass to support rapid economic progress.

Appendix 6

Bio for Dr Brian Hughes: Consulting in Urban Economics and Demography

- Brian is an Urban Economics and Demographic Consultant in both the Private and Public Sectors.
- He researches in the areas of Urban Economics, Demography and Growth Centre Agglomeration
- A Graduate in Environmental Economics, Brian qualified as a Planning and Development Chartered Surveyor, working in Property Investment and Development with Irish Life PLC, before moving full time into academia
- He was the first Membership Secretary of the new Regional Studies Association, Irish Branch in 1975
- He lectured in Urban Economics and Demography, Dublin Institute of Technology and likewise to Masters of Urban and Regional Planning in University College Dublin
- He holds an Honours Masters in Spatial Planning and his Dissertation uses population and daytime working population measures for growth-centre selection
- Brian’s PhD Thesis focused on areas of urban economics and demography: It posits that the GDA will become Ireland’s City State of the late 21st Century
- He is a member of the Government’s CSO Expert Group on National and Regional Population, Migration and Labour Force Projections and he is also a member of the Statistical and Social Inquiry Society

Today, Brian Hughes will provide a general and broad approach his own discipline (theories/methods) in a way that would allow listeners fairly quick access, but that the talks would move quite promptly into applied areas to allow comparison/discussion across the disciplines.

Brian P. Hughes, PhD, MSc (Hons), Dip Env Econs, FeRSA, FRICS, FSCSI, MSSISI

Publications:

Brian.hughes@dit.ie   Arrow@DIT.ie (Hughes, B)