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Brian Hughes

Technological University Dublin, brian.hughes@tudublin.ie

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Demography is destiny: Strategic planning and housing in Ireland

Brian Hughes¹

Introduction

The approach to this demographic-based paper on housing comprises a demand-led perspective to spatial planning and housing provision. The principal arguments are that end-use demand is driven by demographic growth and that successful planning is predicated on sustainable market-led implementation. Accordingly, the thrust and direction of Ireland's *National Planning Framework* (NPF) must be driven by rational responses to population projections, its growth-driver of job creation, and anticipating the primary locations of future employment and for city-led end-use demand.

Since 2006 Ireland's potential to invest in capital formation has been handicapped by state economic constraints. In the intervening decade its Fixed Capital Formation, or Gross Domestic Fixed Capital Formation (GDFCF), collapsed from 24 per cent of GDP to low single-digit figures of circa 3 per cent in 2013. Despite its recovery to date, the building industry continues to be under-funded and under-capitalised. A 'normal' national (public and private) capital spend is about 12 per cent of GDP, about twice the current annual level of

¹ Brian Hughes is a consultant urban economist and demographer; a fellow of the Regional Studies Association, the Society of Chartered Surveyors Ireland and the Royal Institution of Chartered Surveyors; a planning and development chartered surveyor; and a member of the Central Statistics Office's Expert Group on Population and Labour Force Projections.

output.² There is emerging evidence of a slow, albeit sustained, recovery path. However, current housing output is still only a fraction of the 96,000-unit output achieved at its 2006 peak, and is insufficient to meet current demand.

This paper argues that future growth in inward migration will respond to the overall growth in the labour force; for example, to augment Ireland's chronic building industry labour requirement;³ to provide the necessary healthcare personnel, for the growth in population and especially for the projected increase in its older-age cohorts; and in response to the opportunities arising from new types of 'work'.

It is contended that a repeat of the significant precedent of demographic growth, averaging nearly 80,000 per annum in the 10 years to April 2009, must again be anticipated during the period of the NPF to 2040. Should the current growth trend, which commenced in 2015, continue to gain momentum as Ireland's economic recovery strengthens, Ireland will need to be prepared for much higher levels of population increases than those narrow variations conservatively projected in the NPF.

For many years, the National Economic and Social Council (2004) and others have pointed to the threat to Ireland's future competitiveness unless adequate, affordable accommodation can be provided, especially in those areas where employment growth is occurring. As so much of that growth is city-based, the argument for city-led growth is well grounded. This paper argues for the provision of adequate housing supply to cater for the return of such demographic growth. It also contrasts where the state's stock of housing is located as against where it should be located, having regard to the geography of both current and likely future employment and the need to reduce average commute distances and times.

Strategic spatial planning in Ireland – A historical review

The first observation in relation to the implementation of spatial planning is that it has never worked in Ireland. There is an existential incompatibility between the short-term and localised nature of the Irish political system, its constituency structure and its electoral system as it struggles to cope with the long-term and holistic objectives of

² See GDFCF investment data here: <https://data.oecd.org/gdp/investment-gfcf.htm>

³ The Construction Industry Federation has indicated that 114,200 construction-related personnel are required and that there is a ten-year-plus labour supply need in the construction sector (Construction Industry Federation and DKM Consultants, 2016).

spatial planning. Strategic planning policy has proven not to be amenable to the Irish political system, and this stand-off will continue unless the current and future strategies are able to obtain full statutory recognition with an all-party buy-in, together with adequate funding and an independent functioning from their constituent counties of the emerging three administrative regions at the EU's NUTS 2 level.

Past strategic plans included the city and growth poles of the Buchanan report (1968), which was promptly rejected shortly after its introduction in 1969, and there then followed four decades of no strategic regional or national-level planning. The *National Spatial Strategy* (NSS) of 2002, with its focus on 'balanced regional development', was almost immediately 'torpedoed' by the 'decentralisation' policy introduced in the budget of 2003, coupled with the subsequent economic collapse and withdrawal of the €400 million 'Gateway Fund'. Thus, the latest attempt at spatial planning in Ireland, the NPF, has been met by considerable levels of criticism and much scepticism (Ruane, 2018).

The principal NPF objective, to further the concept of 'balance' (a contested objective), is consistent with its strategic objective to achieve more even growth, thereby confronting Ireland's 'business as usual' economic recovery. In contrast, the advocacy by the World Bank (Zoellick, 2009) favours 'lumpiness' of population concentration, so as to achieve better-scale economics. Yet, the NPF seeks to limit the future growth of Dublin to 25 per cent of the state's demographic growth to 2040. This ignores Dublin's historical ability to generate about half of all state taxation revenues and its near 43 per cent share of total population growth in the most recent intercensal period, as set out in Table 1.

Furthermore, the NPF's strategic thinking and thrust ignores the 'core-periphery' spillover benefits, as articulated in Robert-Nicoud (2006), based on long-standing advantages of Pareto-like improvements (Hicks, 1940; Kaldor, 1939). Irish spatial planning strategists have yet to empathise with the concepts of 'lumpiness' and centripetal agglomeration (Zoellick, 2009).

The central objective of the NSS was to implement the policy thrust of balanced regional development. This cannot work as Ireland does not have the resources to promote every location – as it were, a 'one for everyone in the audience' approach. Little appreciation has been shown of the 'distance decay' factor in the wishful selection of twinned or even triplet growth centres, whose population scale and distances apart make it impossible to achieve worthwhile synergies intended in linked binary 'hubs' or threesome 'gateways'.

Table 1: Provincial performance – Population numbers and growth share

<i>Provinces</i>	<i>Census 2011 pop.</i>	<i>2016 pop. and % share</i>	<i>2011–16 pop. growth and % contribution</i>	<i>5-year % growth</i>	<i>% surface area of state</i>
Dublin	1,273,069	1,347,359 = 28.29%	74,290 = 42.79%	5.84	1.35
Rest of Leinster	1,231,745	1,287,044 = 27.03%	55,299 = 31.85%	4.49	27.26
Munster	1,246,088	1,280,020 = 26.88%	33,932 = 19.54%	2.65	35.12
Connacht	542,547	550,688 = 11.56%	8,141 = 4.69%	1.50	24.74
Ulster (part)	294,803	296,754 = 6.23%	1,951 = 1.83%	1.12	11.53
Ireland	4,588,252	4,761,865 = 100.00%	173,613 = 100.00%	3.78	100.00

Source: Author’s analysis of CSO’s 2011 and 2016 census data.

Note: Rounding may affect totals.

The limited ability of spatial planning strategy to determine or even favour one location over another has yet to be recognised because it is 'command-led' in nature, which is inimical to Ireland's democracy. The alternative end-use demand, where people choose where to live or work, is a function of affordability and the trade-off between house-price affordability and location preference (Alonzo, 1964, 1971). In turn, the international experience is driven principally by employment location and specialisation (Krugman 1979, 1980, 1991).

The NPF's intention to promote the four provincial cities is laudable. They are planned to grow on average by 2.44 times their 2016 populations, and thereby accommodate another 25 per cent of the state's total population growth by 2040. However, this is a very big 'ask' as, apart from Galway City, the other cities have not been able to alter their long term rank-size difference in relation to Dublin's population. Urban economic and demographic research confirms that it is difficult to alter rank size or city size order over the longer term (see Henderson & Wang, 2007). This is a particularly acute problem for Ireland because Dublin is almost eleven times the average size of the 109,000 population of the provincial cities.

Actual population growth tends to focus on the location and potential of Ireland's larger and emerging settlements, particularly in the eastern parts of the state. This is because of the steep increase in the volumes of medium- and long-distance commuting and the detrimental impact this is having on Ireland's competitiveness. Such potential, however, remains largely unfulfilled because of continuing deficits in central place activity. Rather than clustering such activities in a few select locations, the political hand determines a hospital here, a third-level college there, and so on.

As it makes both social and economic sense to locate housing, colleges and schools convenient to sources of employment and residential 'pools', this remains a critical consideration for a rational land-use and transportation interface, with shorter commutes. Demand for accommodation has never been as strong but this is severely compromised by affordability issues, both to rent and to buy, and the necessary sacrifice of unaffordable location trade-off for long-distance commuting.

Ominously, there is emerging evidence and supporting analysis that current residential construction is largely confined to conventional housebuilding, as current apartment development costs are nearly always ahead of sales prices, with the consequences for economically

unviable development (Society of Chartered Surveyors Ireland, 2017). This means that the task of locating densified homes close to employment is becoming more difficult to achieve, in the absence of apartment development and delivery.

It also means that opportunities to construct apartments on recycled brownfield sites and the quest to achieve higher densities are increasingly frustrated. The NPF hopes that 40–50 per cent of residential development will take place on infill or brownfield sites. However, urban renewal, the backbone of which is based on apartment-type construction, will continue to be unviable due to costs that are not matched by sale prices. VAT and local government charges are significant challenges in this regard.

Instead, and in the near absence of apartment construction, inevitably, some of the largest clusters of recent housebuilding are now taking place in Leinster towns which are well served with public transport, are close to motorways and are located within 30–45 minutes of major port and airport infrastructure. Examining the prime such example, it is instructive to consider what is happening on the ground in Drogheda, with its proximate suburbs of Laytown, Bettystown and Mornington (LBM).

The emergence of Ireland's sixth city at agglomerating Drogheda–Laytown, Bettystown, Mornington

In the census of 2016, the combined population of Drogheda–LBM was 52,828 (i.e. 40,956 + 11,872), which was just 676 short of Waterford City's population (CSO, 2016). During 2011–16 Waterford City and environs population increased by 1,985 to 53,504, or by 3.85 per cent, just ahead of the national growth average of 3.78 per cent. The comparative growth for Drogheda–LBM was nearly twice that level, at 3,361, or 6.79 per cent. These large towns are growing quickly and have physically merged with each other, along the east–west axis of Bettystown–Donacorney–Colp. Moreover, during the following two years since the 2016 census, this point of 'fusion' has witnessed considerable population and demand-led housing growth, particularly so where this physical agglomeration is now taking place. That is just the short-term picture.

However, a historical, longer-term growth comparison of Drogheda–LBM with all of the state's cities shows emphatically the emergence of Ireland's next city (see Table 2).

Table 2: Twenty-year growth of Irish cities and the five NPF-nominated key towns, 1996–2016

	<i>1996 population</i>	<i>2016 population</i>	<i>Population growth</i>	<i>% growth</i>
Dublin	952,692	1,173,179	220,486	23.14
Cork	179,954	208,669	28,714	15.96
Limerick	79,137	94,192	15,054	19.02
Galway	57,363	79,934	22,570	39.35
Waterford	44,155	53,504	9,348	21.17
Drogheda+LBM	28,960	52,828	23,867	82.41
Dundalk	30,195	39,004	8,808	29.17
Sligo	18,509	19,199	689	3.72
Letterkenny	11,996	19,274	7,277	60.66
Athlone	15,544	21,349	5,804	37.34

This agglomeration and fusion is evidence-based on the comparative population densities of the contiguous square-kilometre grids where Drogheda meets LBM. This assessment is based on the methodology used by the EU–OECD (Dijkstra & Poelman, 2015). It is interesting to note that the agglomeration and fusion of Drogheda with LBM is nowhere acknowledged in the NPF and that, inexplicably, the town of LBM is omitted in its Appendix 2 listings.

It is noted from Table 2 that the aggregate twenty-year growth of the four other NPF-designated ‘key towns’ is 22,578, or 29.61 per cent growth, in comparison with Drogheda–LBM’s 23,867, a population growth that is exceeded only by Dublin and Cork. These evidence-based approaches to population scale (+50,000) and population growth (+82.14 per cent), together with the population grid densities applied to the harmonised EU–OECD methodology, have combined to provide Drogheda’s ‘just cause’ in submitting its recent, formally presented petition to government in its quest to obtain ‘city’ status.

Since the 2016 census, the scale of local housebuilding has reinforced the population growth of Drogheda–LBM in consolidating the emergence of Ireland’s next city. It is also of note that, in contrast to the locations of the four provincial cities, it is within a 25- and 35-minute drive of Dublin Airport and Port, respectively. This agglomeration has resulted in Ireland’s third-largest population growth (1996–2016), one that is substantially superior to the growth of Limerick, Galway and Waterford Cities, and is less than 5,000 behind that of Cork City and environs. Significantly, it is over twice the percentage of Galway’s impressive performance and is up to four times that of the other largest cities.

During 1996–2016 Ireland's population grew by 31.3 per cent (CSO, 2016). Over the same period, the Greater Drogheda Area, comprising the former Drogheda borough together with the surrounding Louth and Meath rural areas, grew by almost 80 per cent, from 46,451 to 83,317. This 'proven location' growth of 36,866 is not far short of the total 2016 population of the former NSS gateway town of Dundalk, at 39,004 (CSO, 2016). At over 3 per cent per annum compound, this population growth rate reflects the location and growth of employment which is increasingly driven by technology and knowledge-based 'work' associated with metropolitan city regions (Hall & Pain, 2006).

To date, however, local employment opportunities continue to lag behind Drogheda–LBM's population growth, despite the recent influx of new enterprises, and point to the need for further central place activity commensurate with the population scale. Drogheda–LBM has a daytime working population (DWP) to overall population of 13,132, as compared with the aggregate population of 52,828. This is just 24.86 per cent when compared with a state average of 42.14 per cent. This confirms an unusually large commuting content in their employment workforce. This makes it a particularly attractive location in possessing such a large local, skilled labour pool. Should the Brexit settlement prove opportunistic for the Dublin–Belfast Corridor, Drogheda–LBM's impressive concentration of population is best placed to become the state's north-eastern regional capital as Leinster's emerging second city.

Following the 1980s precedent of Galway's emergence as a city, the formal petition has now been made to government on Drogheda's behalf by their city status group, based on the application of the harmonised EU–OECD square-kilometre grid density measure – the standardised methodology as applied to the Austrian city of Graz (Dijkstra & Poelman, 2015).

Research outputs on the nature and change of 'work' point to ever-increasing concentrations in cities and larger centres of population. In a world where value creation is driven by the processing and dissemination of information, city-based employment clusters are becoming the norm. Foreign direct investment encouraged by IDA Ireland is likely to be focused close to, or within easy access of, such population concentrations. Today's cities provide clusters of identifiable economic activities with increasing focus on specialisation. Critically, large cities create large home markets for economic consumption purposes (see Fujita et al., 2001; Fujita & Thisse, 2013).

These facts point to the need for the NPF to focus on commercial growth potential, selecting growth centres that reflect end-use demand. It also requires state agencies like IDA Ireland and Enterprise Ireland to follow suit in order to concentrate their efforts in proven locations of population growth and scale, to those specific locations such as Drogheda–LBM that can apply the benefits of core-periphery spillover.

A 2016 census interpretation of Ireland's provincial population distribution

It is instructive to view a current-day interpretation of the state's population distribution and growth. As confirmed in Table 1, in the 2011–16 intercensal period Leinster enjoyed almost 75 per cent of Ireland's population growth. Dublin City and County accounted for nearly 43 per cent of state growth. This five-‘province’ configuration of the state's population distribution and growth is confirmed in size order as: Dublin, Rest of Leinster, Munster, Connacht and the three Republic of Ireland counties of Ulster.

These Irish data inform the Williamson Hypothesis (1965), wherein national growth requires concentration of economic activity (which in turn requires both population and employment) in the core region at the expense of the lagging periphery. In line with the emerging demographic realities described above, it is evident that a completely different location policy for the NPF is needed, as compared with its NSS predecessor's quest for ‘balance’.

This message is difficult to impress on our tradition-focused and politically biased spatial policymakers. The regional differences of per capita incomes in Ireland strongly correlate with its concentrations of population scale, and particularly so within the Greater Dublin Area (GDA) and County Louth. Implementation of core-periphery strategies will maximise the growth of the core region and thereby provide the maximum resource potential for peripheral spillover.

Facts reflect the truth and no more so in the failures of its NSS predecessor, with its selected gateways and hubs. Even though a few gateways did well, all gateways and hubs lagged behind the growth rates of over twenty other faster-growing settlements during the lifespan of the NSS.

Ireland still has to experience its first ‘successful’ spatial strategy. The geographic strategy of the failed NSS had sought to implement balanced regional development. This introduced the concept of large

or small urban growth centres, gateways or hubs, in the belief that by creating settlements of sufficient population size as 100,000 or 40,000 'targets', respectively, such centres of critical mass would automatically be able to successfully counterbalance Dublin's centrality. The NSS was not favourably disposed towards Dublin, the principal engine of the state's economic momentum, where it sought to reduce the GDA's share of state population to 38.75 per cent. By the 2016 census, that share had increased to 40.05 per cent and, for the first time, the GDA's population now exceeds that of Northern Ireland.

An individual example of a selected gateway is Sligo, which has consistently failed to grow and break through the 20,000 population 'ceiling' over the last four censuses. As confirmed in Table 2, during 1996–2016 Sligo Town and its environs increased its population by just 689, or 3.72 per cent, and yet it is prominently featured as an NPF case study. Even more worrying for major centres of population on the western side of the state is the fact that the other three largest centres of town population – namely Tralee, Ennis and Letterkenny – also lost population during 2011–16 (CSO, 2011, 2016).

However, in the census of 2016, the four provincial cities of Cork, Limerick, Galway and Waterford, on average, were still only one-eleventh the population of the capital, having an average population size of 109,000, or just 9 per cent of Dublin and its suburbs. There is an urgent need to bridge this gap by targeting them for an accelerated increase while having due regard to their untested potential for selective, strategic growth. At the same time, implementation of the NPF must be such as to ensure that Dublin's economic contribution continues to be fully supported as the country's only metropolitan city region. Such city population differences will be difficult to achieve because of scale. This issue concerns the absolute size difference between the capital and the provincial cities. For example, Dublin and environs will likely be more than one million greater in population than Cork and environs in the census of 2021. Likewise, it is unreasonable to expect there to be similar rates of growth: Galway and environs may well exceed Limerick and environs' population because of the contrast in their historical growth difference (Table 2).

The NPF strategy must seek to consolidate the cities and key growth towns. For instance, Sligo's unimpressive historical growth is due, in part, to a locational preference to reside in nearby emerging towns such as Strandhill. The objective for compact settlement morphology is not an easy one to impose. However, greater planning

oversight should strive to prevent linear or sparse patterns of residential development.

In this regard, the Central Statistics Office (CSO) utilises the UN's '100-metre' distance rule to distinguish the boundary of a settlement from an extended line of 'ribbon development'. However, a reduction from 200 metres to 100 metres has resulted in unintended consequences: in Galway City's case, in the creation of a new town, Barna; or for Balbriggan, in the emergence of the town of Balrothery (both occurring for the first time in the 2011 census); and the otherwise unexplained 24 per cent population decrease in the population of Offaly's third town, Birr, due to the emergence of the adjacent new town of Crinkle.

However, although the CSO has introduced square-kilometre grids in their census data of 2011 as an integral parameter, the CSO does not officially recognise the use of this measure for the recognition of Drogheda's agglomeration with LBM. Instead, the CSO deploys a measure of dispersion (the UN's 100-metre distance of buildings) while ignoring the city 'harmonised' measure of population density. This inconsistency makes the task of recognition, and the resulting designation, of Ireland's next city a difficult hurdle to surmount. Furthermore, the CSO has no plans to recognise or introduce this EU-OECD harmonised methodology for application in the 2021 census.

Another consequence resulting from the 100-metre reduction in the distance metric was noted, wherein coincidentally during the lifetime of the NSS (2002–13) Ireland witnessed a proliferation of emerging small towns and villages, which, it could be argued, may not have been as a direct result of the NSS. Nevertheless, small towns and villages have increased in number by over 35 per cent since 1996. Likewise, further unsustainable levels of one-off housing will continue to be built unless the NPF can exert more effective control than that of its predecessor. In 2013 the NSS was quietly abandoned as it did not enjoy political-party support, nor was it statutorily based. Its successor, the NPF, awaits political ratification. Even then, this new plan will be just a strategic 'framework', dependent on the initiation and production of the three NUTS 2-level regional assembly plans, together with their revised, aligned county and local area plans.

As it states, the NPF's intention is to abandon the 'business as usual' model of sustained national recovery resulting from Dublin's growth, and instead it proposes to control the growth of the capital by

way of limiting its share of the projected state population growth to just 25 per cent of the 1 million expected population increase to 2040. This appears to ignore the fact that Dublin accounted for a 42.79 per cent share of the state's population growth in 2011–16. This provides clear proof that strategic planning policy can conceptually and idealistically suggest one thing whereas it is the 'implementation' effect of development, with its ensuing demographic outcomes, that really matters in terms of physical changes to the built environment.

Continuing regional demographic imbalances

Recent demographic changes recorded in the 2016 census confirm that many towns and their rural surrounds continue to stagnate. Regions without cities are not growing and even those with cities are struggling, exemplified by the performance of the Mid-West Region, (Appendix 1). The NPF must focus not only on planning for the accelerated growth of the four provincial cities, but selectively so, wherein their growth spillovers can benefit their own spheres-of-influence towns, especially in Munster and Connacht.

Similar countries such as Denmark, Finland, Scotland and New Zealand have larger and faster-growing secondary cities in the 250,000–500,000 population range, compared with the 109,000-average 2016 size of Ireland's four provincial cities. In combining Zipf's Law on the Rank Size of Cities with Christaller's Central Place Function for Cities, the nature and change of work, and of identified clusters of economic activity, must be harnessed in a concentrated way. Likewise, reversing shortages of housing supply for cities and other selected growth centres must be a priority for prospective employment needs, so as to combat Ireland's loss of competitiveness.

Ireland's second city should also be doing much better. For comparison, in the late 1990s the population of Finland's second city, Tampere, surpassed Cork. Tampere is positioned inland in a tundra location, whereas Cork's superior geographical potential is demonstrated in being located on the world's second-largest natural harbour and in being 1,500 kilometres nearer to the equator. Until very recently, no Irish government since the state's foundation had espoused or supported the growth of its cities. Here it is evident from Appendix 1 that widely contrasting regional growth performances mark Irish eastern regions from Irish western regions: in the Mid-West and West, urban growth is lower than elsewhere.

Strategic spatial planning and related demographics for housing needs

As Ireland again enters a period of sustained economic recovery, greater attention and research output are being devoted to the shape and content of its future built environment. The untested 'strategies' of the NPF are intended to exert an importance influence in the country's spatial disposition of the emerging population and growth pattern. However, the thrust of the NPF strategy policy is not empathetic with the demographic realities, such as the 2016 census confirmation that 55.33 per cent of the state population lives in Leinster (CSO, 2016). Furthermore, that critical metric is a steadily rising one.

By July 2017 the state's population was exactly 2 million more than its nadir mark of April 1961. Furthermore, Leinster today has almost the same number of people as the national population recorded in the 1961 census. This provides an insight into the demographic growth effect of Dublin and its sphere of influence on a wider population. Both urban economic and the new economic geography posit that cities are the future, and therefore there is an emerging demographic justification for at least one additional city in outer Leinster, preferably located north of the Dublin–Galway axis and logically in the most dynamic growth area, reinforcing and acknowledging the importance of the Dublin–Belfast Corridor.

In the opinion of the author, there needs to be a recognition that only to a very limited extent is planning policy able to counteract market-led forces. Supporting evidence for this was provided by the author of this paper to the Oireachtas All-Party Committee (Hughes, 2017). To try to persist with a 'plan-led' approach will only perpetuate past failures and will compromise the sustained growth momentum that Ireland has been enjoying since the recovery commenced in 2012. Thus, the distribution of future housing demand should reflect both population shares across the country and the general thrust of population dynamics.

Demographic growth research relating to end-use demand needs to be further refined to assess the locations of significant housing shortages. Such assessments of future demand will need to strategically plan for these new, emerging demographic trends given, for example, the 2011–16 first-time occurrence of the superior growth of population in all of the state's cities compared to their surrounding areas. These should also have regard to town growth, particularly

focusing on the larger and faster-growing towns, which again are concentrated mainly around Dublin and Cork.

Here it is instructive to consider the growth and distribution of the state's settlements. For consistency, the official definition of a settlement is taken to be a city or town plus their contiguous, adjoining environs in units of 1,500 and more.

Sustainable housing distribution, construction and management to meet Ireland's housing needs

The population growth of the state's towns confirms that eastern towns are generally growing much faster than those in the western parts of Ireland. The extent to which that east-west differential exists is reflected in the negative growth of the four largest western towns, failing to experience the dynamic growth that is taking place in the GDA of Dublin, Kildare, Meath and Wicklow, which, significantly and for the first time, has a greater population than that of Northern Ireland.

Likewise, the 2016 census confirmed that the GDA's population of 1.905 million, again for the first time, represents over 40 per cent of total state population. The centroid of the island's population is now close to Maynooth, which also is one of the fastest-growing large towns surrounding the capital. Recognition of these geographical and spatial realities are fundamental to understanding Ireland's future spatial planning requirements.

It is not surprising that the near-decimation of Ireland's building industry, which followed the country's economic collapse and the troika intervention, has led to a muted and unbalanced housebuilding response from builders and developers alike. A major question overhanging the state's construction industry is the extent to which its undercapitalised small- and medium-sized firms – those that were able to survive the deep recession – are surprisingly well placed to respond to Ireland's housing supply. Most such firms hold valuable land, and their strategy is to delay further by withholding sites, in response to such needs, until such time as site values have increased significantly. This indirectly is also the objective of the lending banks, which require such builders to provide up to half of the 'equity' to match their bottom-slice lending. The provision of expensive mezzanine finance is often a necessary bridge to kick-start a residential project – and this element of finance is costly.

Accordingly, the potential apartment builder pleads an absence of profitability. Except for limited, fashionable locations, the general view held is that apartment construction costs are still above potential sale prices (Society of Chartered Surveyors Ireland, 2017). On the construction front, the industry is currently experiencing severe shortages in skilled manpower and the pressing need to revive its apprenticeship training. Planning and statutory regulation, infrastructure deficits and land hoarding are also imposing severe strictures on the industry.

Ireland's macroeconomic GDFCF figure remains one of the lowest in the EU, currently at about 6 per cent to 7 per cent of GDP.⁴ Although property values are rising, in many instances they are still inadequate to demonstrate financial viability, especially for residential apartment projects. What has to be appreciated is that the entirety of an apartment block of say 40–50 units has to be fully built out, completed and 'tested' for sale price. This contrasts with the conventional housebuilder, who can stop the current 'phase' after three or four completions if those houses are not selling. This shows a sharply different risk–reward profile.

It seems the risk–reward balance remains inadequate to induce many potential developments. Outside of the GDA there is inadequate residential construction activity, further aggravating the geographic imbalance of Ireland's economic recovery. Even within Dublin, there was very limited apartment construction underway at 2017 year-end. In particular, apartment construction output meets only a fraction of the strengthening demand for this type of habitation.

Recent research by the Society of Chartered Surveyors Ireland has found that apartment development is inherently a loss-making one (Society of Chartered Surveyors Ireland, 2017). It points to the fact that whereas simple structures may be affordable, more complex ones are not. At the same time, and parallel to this, site costs are becoming excessive and need to be controlled by a suitably empowered land development agency.

The National Asset Management Agency, in its evolving funding role, should also have a part to play in such controls. Land speculation has to be recognised as one of the most harmful obstructions to the flow of new development and to the sequential release of sites, in harmony with good planning practice and in response to demographic-driven demand.

⁴ See <http://www.cso.ie/indicators/Maintable.aspx>

The residential supply shortage

Ireland's residential supply shortage and its current housing crisis reflect the fact that very little construction activity took place for almost a decade following the economic collapse and cessation of construction in 2007. There was some one-off building in mainly rural locations, together with a modicum of refurbishment work until 2015 or thereabouts.

Thus, it is instructive to compare the last intercensal growth in households for 2011–16 with state population growth, and to compare the resultant ratio with the three previous intercensal levels from 1996 to 2011.

Measuring against each of those earlier periods reveals that their intercensal population growth was one to one-and-a-half times that of their contemporaneous new household growth. However, in the most recent intercensal period since then, the annual rate of housing output collapsed to between one-tenth and one-seventeenth of the total state population growth, despite its slowdown to 3.78 per cent in 2011–16. Table 3 compares population growth with households since 1991.

In the important consideration of matching population with households over the twenty years of 1991–2011, Table 3 confirms that the intercensal relationship was fairly close to three-to-two, and at no time was it less than one-to-one. Accordingly, this time span represents a reasoned, steady-state equilibrium summation for the relationship of population to households – one which should inform

Table 3: Growth in Ireland's housing stock compared with growth in population (1991–2016)

<i>Census</i>	<i>State household stock</i>	<i>State population</i>	<i>Growth in house- holds</i>	<i>Growth in popula- tion</i>	<i>Ratio of growth – population to households</i>
1991	1,160,249	3,525,719	Base year	Base year	Base year
1996	1,258,948	3,626,087	98,699	100,368	1.0169
2002	1,460,053	3,917,203	201,105	291,116	1.4476
2006	1,769,613	4,239,848	309,560	322,645	1.0423
2011	1,994,845	4,588,252	225,232	348,404	1.5469
2016	2,003,645	4,761,865	8,800	173,613	19.7288
25-year growth	843,396	1,236,146	843,396	1,236,146	1.4657
1996–2011 growth	–	–	834,596	1,062,533	1.2731

Source: Author's analysis of CSO's 2016 census.

future housing output to meet population growth, once the current housing emergency has been resolved. Thus, the principal cause of this emergency was the near cessation in housebuilding for nearly a decade, culminating in a relationship change over the five years to April 2016, when Ireland's population growth outstripped its household growth by nearly twenty-to-one.

At the time of writing, an intensive debate was underway as to the correct figure for 2011–16 housebuilding completions, with emerging evidence suggesting that completions are considerably below the 15,700 figure on which the Minister for Housing is relying. The research work of Lorcan Sirr of the School of Surveying and Construction Management, Dublin Institute of Technology, is instructive in questioning the sources of data and in obtaining a deeper understanding of the measures in use, including an appreciation of the different aspects of building obsolescence.

Table 3 also shows that an additional 136,370 housing units, rather than the 8,726 produced, would have been required to maintain that long-term ratio of 1.2731 through 2011–16. This calculation equates to an annual supply shortfall of 25,514. This, in turn, provides an estimation of pent-up and unsatisfied demand.

After the census of 2002, Ireland's rate of housing construction doubled, reaching a peak output of over 90,000 units in 2006. However, there was a mismatch in that much of that output was supply rather than demand led. This resulted in thousands of housing units being speculatively constructed in sparsely populated counties in the west, north-west and other predominantly rural locations where employment prospects are minimal. Despite the profound nature of today's housing crisis, there remains little demand for such accommodation, most of which is remote and far removed from significant employment locations (O'Brien, 2018, p. 6).

Likewise, it is well documented that Ireland's severe economic downturn, and related banking crisis, was primarily caused by the collapse in house prices together with irresponsible bank lending, some of which funded housing developments in such remote locations. In turn, the severe economic downturn led to both the rapid loss of over 15 per cent of total state employment and the consequent loss of 'effective' housing demand, i.e. the ability to service outstanding mortgages. Accordingly, a much larger cohort of the population are unable either to borrow to purchase or to afford the prevailing levels of rents, and are increasingly dependent on state assistance and state-provided housing.

Thus, a range of Irish government measures have been introduced to assist the rising incidences of foreclosures, to grant rent subsidies and to encourage an acceleration in housing construction, both for the public and private sectors. Such measures include the help-to-buy scheme, which has made a positive contribution but which could benefit from 'tweaking' based on the experience of its implementation to date. Likewise, the mortgage-to-rent initiative has also contributed and demonstrates the need to address the housing crisis in a multipronged approach. Despite recent increases, the rate of housing construction and completions remains wholly inadequate to meet the ever-increasing demand for accommodation. Furthermore, and despite the increased activity in housebuilding, the rates of completion continue at historically low levels.

Further government initiatives will be required to repopulate the vacant stock of housing, estimated at some 180,000 in the 2016 census, and to bring much of it to the market place promptly, either for purchase or to rent. There is ongoing debate as to the effective level of vacancy, and to the extent to which housing units can speedily be released to assist the housing shortage.

Another related debate is critical of the state's purchase of housing from the existing stock. Accordingly, innovative incentives and even measures of compulsion are likely to be required so that this ready-made potential supply source – the existing vacant housing stock – can be brought into rapid use. Underscoring the need for such measures is the reality that the supply of new housing would otherwise take years to provide an adequately annual contribution to resolving the accommodation crisis.

There have been elements of double-counting of housing acquisitions, voids being returned to use and the late completions of partially built units. This raises the question of uncertainty for a more precise determinant for housing output. This arises because of the differing supply interpretations as to Ireland's annual rates of residential completions. The most optimistic estimate for year 2016 is 16,000, rising to perhaps 18,000 and 20,000 in 2017 and 2018, respectively.

However, Sirr (2017), Goodbody (2017), Reynolds (2017) and others have pointed to actual completions of less than half the numbers suggested by the Department of Housing. Whatever the true and accurate figures, such rates are recognised as being wholly inadequate. Many researchers are in agreement as to the need for a rate of 45,000 to 50,000 new units per annum; that level of output is unlikely to be reached before the mid 2020s (see Williams et al., 2009).

Recently published research by Lyons (2017) confirms that every additional 10,000 migrants require, on average, 4,000 dwellings. At the current migration level, 8,000 additional housing units are required. Obsolescence results in a requirement for 10,000 replacement units. Natural growth accounts for about 14,000 units and headship 'adjustment' to include pent-up demand is 13,000–18,000, depending on the extent of an orderly rationalisation of the existing housing stock, which in turn is a function of location efficiency – i.e. the extent to which the stock can match employment locations.

These four 'headings' therefore comprise total demand of 45,000–50,000 per annum, only a very limited portion of which can be met with the existing vacant stock. Attention is also drawn to Lyons' research conclusion, that Ireland's stock of apartments is uniquely low by international comparison, at 12 per cent of total housing stock.

In line with the EU median of 45 per cent, apartment provision should therefore comprise the major portion of future housebuilding, particularly so in contributing to the growth of Ireland's cities. Further disturbing revelations point to much of the stock of public local authority apartments as being in urgent need of replacement. Local authorities, responsible for the taxpayers' historical investment in public sector housing, have a 'trustee' responsibility for the care and maintenance of this housing stock.

A regime of more intensive estate management needs to be put in place for this purpose and likewise, as recently highlighted, for the oversight of issues such as overcrowding within the private rented section. Such estate management research by local authorities, carried out in close cooperation with the CSO, would include portfolio scrutiny of their county's entire housing stock, monitoring new completions, date of first occupation, obsolescence and abandonments.

An important lesson to be learnt from Ireland's economic collapse was in the area of assessment of end-use demand for all aspects of real estate, but in particular for housing demand. Strategic spatial planning now requires that all development plans provide for a 'needs assessment' of demand, which is related to their county or area's underlying demographics and to the need for 'sequential' development.

As supply will not reach adequate levels until the mid 2020s, it is incumbent on policymakers to focus on the pressing need to competently manage the existing 2-million-plus housing stock – as it were, to be able to 'sweat' this critically important asset-based sector

of Ireland's built environment. Forthcoming government budgets should provide statutory and fiscal opportunities to reverse the low rates of housing transactions, estimated to be only one-third of a 'normal' rate of annual turnover, despite maintaining the historically low rates of transfer taxes, including low rates of stamp duty and the absence of capital gains tax on the principal private residence, unlike in the UK.

Conclusions

The impact of Ireland's intercensal population growth rates since the millennium is inadequately reflected in the country's strategic spatial policy implementation. Such policy directions continue to be overly influenced by a rural political mindset, one that tends to be obsessed with issues of 'balance' while ignoring the roles of cities and potential cities, and their historically high growth rates in relation to their surrounding counties.

In this regard, the future policy treatment for Dublin and its metropolitan area is the critical issue for maintaining Ireland's economic recovery while servicing and reducing its national debt burden and housing scarcity. Full recognition must be given to the need to lever up on the eastern direction trend of Ireland's population growth in contrast with the futile attempts to create a similar artificial demand where no such demand exists, with the exceptions of the provincial cities and a few other areas with proven growth potential. Changing to this course of direction can only be effective if appropriate, researched and evidence-based answers are found to the following set of strategic questions.

Will the NPF receive the necessary statutory support and all-party political 'buy in'? Will it be adequately funded with appropriate infrastructural support? Will it replace the failed NSS policy of balanced regional development strategy with the implementation of appropriate 'lumpiness' of centripetal agglomeration? Will it receive the necessary endorsement from the individual politician, both rural and urban? Being a long-term strategic plan to 2040, how will this reconcile with the innate, short-term and locally driven political mandates? Will the principal political parties agree to the strategic objectives of spatial planning? Will the necessary alignment of spatial planning and its capital investment plan be achieved? How will the NPF be rolled out as indicated via the three newly established

administrative regional assemblies (ARAs)? Will the ARAs, in turn, be able to operate above and independently of their respective county compositions?

Whereas the NPF has identified just five 'key' growth centres, the responsibility for regional-level planning has been passed onto the ARAs. Will these ARAs select too many growth centres or the right ones? Despite their unimpressive growth, will the same growth centres be selected again, as in the NSS? What approaches will be taken to reverse the population decline in major western towns, including Tralee, Ennis, Sligo and Letterkenny? How can their central place functionality be exploited so as to bring their populations in line with their DWPs?

An interesting observation with regard to Ireland's provincial population composition and its spatial distribution is that the Rest of Leinster (i.e. excluding Dublin City and County) is the second most populous province (Table 1). This raises the question of the Rest of Leinster area having a city in its own right, especially given that Munster has three of the four existing provincial cities? As suggested in the 'questions and issues' paper of the NPF, should such a city be located in the midlands? This author argues that such a city should be able to reinforce the Dublin-Belfast Corridor, and on population and agglomeration grounds, as the demographic evidence from above shows that it should logically be the emerging city of Drogheda-LBM.

Serious thought should again be required to consider the re-establishment of a national research and policymaking body, akin to the former National Institute of Physical Planning and Construction Research, An Foras Forbartha, which was summarily abolished by the then Taoiseach, Charles Haughey, in the 1980s. The successful implementation of the NPF will require the need for such coordinated research, related policy and effective governance in today's Ireland.

In conclusion, this paper points to the need for coordinated, thorough planning and development research, both publically and privately funded, along the lines of An Foras Forbartha. It also raises a series of questions, many of which reflect past decision-making based on previous planning strategies. Had that body been available for intensive research over the last three decades, how much of the wasteful and uncoordinated built environment research and activity would have been avoided?

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Appendix 1

Table A1: Ireland's planning regions, 2011–16 populations

<i>Planning region</i>	<i>Population 2011</i>	<i>Population 2016</i>	<i>Population growth</i>	<i>Total % growth</i>
Border	514,891	523,217	8,326	1.62
Dublin	1,273,069	1,347,359	74,290	5.84
Mid-East	531,087	559,973	28,886	5.44
Midlands	282,410	292,301	9,891	3.50
Mid-West	379,327	384,998	5,671	1.50
South-East	497,578	510,333	12,755	2.56
South-West	664,534	690,575	26,041	3.92
West	445,356	453,109	7,753	1.74
Total – state	4,588,252	4,761,865	173,613	3.78

Source: Author's analysis of the CSO's 2011 and 2016 census data.

Table A2: Ireland's regional urban population

<i>Planning region</i>	<i>Population 2011</i>	<i>Population 2016</i>	<i>Population growth</i>	<i>Urban % growth</i>
Border	190,845	199,412	8,567	4.49
Dublin	1,244,528	1,317,645	73,117	5.88
Mid-East	336,134	357,311	21,177	6.30
Midlands	126,538	131,792	5,254	4.15
Mid-West	178,244	180,621	2,377	1.33
South-East	225,720	233,065	7,345	3.25
South-West	375,241	392,778	17,537	4.67
West	169,632	173,157	3,525	2.08
Total	2,846,882	2,985,781	138,899	4.88

Source: Author's analysis of the CSO's 2011 and 2016 census data.

Table A3: Ireland's regional rural population

<i>Planning region</i>	<i>Population 2011</i>	<i>Population 2016</i>	<i>Population growth</i>	<i>Rural % growth</i>
Border	324,046	323,805	(241)	-0.07
Dublin	28,541	29,714	1,173	4.11
Mid-East	194,953	202,662	7,709	3.95
Midlands	155,872	160,509	4,637	2.97
Mid-West	201,083	204,377	3,294	1.64
South-East	271,858	277,268	5,410	1.99
South-West	289,293	297,797	8,504	2.94
West	275,724	279,952	4,228	1.53
Total	1,741,370	1,776,084	34,714	1.99

Source: Author's analysis of the CSO's 2011 and 2016 census data.