National College of Ireland

Project Submission Sheet – 2019/2020

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Introduction

Rent prices in Ireland have remained a topical issue across Irish society and the Irish media over the last ten years. This has been the case due to the changing economic climate in Ireland which has seen it transform from the 'Celtic tiger' era of the mid 1990s - 2007 in which there was a 292% increase in house prices across a seven-year period [1] . During this period, property ownership rates were high and the demand in the Irish rental sector low. Following on from this period Ireland experienced its 'crash' in 2008 which brought a severe economic slump and a turn from favouring house ownership to renting in Irish society [2].

The increased demand in the rental sector and an upturn in the economy over the following years from around 2012 was not met with an increase in housing supply by the Irish property sector [1]. These combining factors have been argued to have led to a severe increase in rent prices over following years to the present day.

As a result of the economic highs and lows and shifting dynamics of the Irish property sector, it can be argued that the shortage of house availability has led to an economic monopoly for Irish landlords within the rental sector. As rent prices steadily increase over time, many people are choosing to buy property that has become available on the market instead of renting properties, as the mortgage repayments have been seen to be less expensive than monthly rent in some areas. This has been shown in August 2019 when it was reported in the Irish media that renting a private property in Dublin surpassed €2,000 a month [3]. Additionally, this year for the 29th quarter (7.25 years) in a row, rents have risen nationally, quarter-on-quarter. It is also the 13th time in those 29 quarters that rents have risen quarter-on quarter, not just on average nationally but in each of the 54 markets [1].

There are some crumbs of comfort though as the national annual rate of rent inflation was 8.3% in the first quarter of 2019, its lowest level in five years. A second silver lining is that rental inflation is the lowest in the Greater Dublin area. In Dublin, rents are 6.8% higher than a year ago and in Leinster, rents are 7.3% higher. In other parts of the country, where rents are on average much lower, inflation remains above 10% however [4].

The changing dynamics of the Irish economy and property sector will be examined in this project to assess what trends can be observed and what influencing factors can be identified to the Irish rental sector.

Research Questions

To examine the Irish rental market and its impacting factors this project will aim to examine the following research questions:

- What are the primary factors impacting the Irish rental sector and have these changed significantly within the time period of 2008-2018?

- Geography will certainly be one of these primary factors. Does the pattern of rental increases differ across the disparate regions of Ireland?

Data Description

The data sources used in this project were sourced from a variety of data repositories as shown below;

Source	Description	Rows	Columns
https://statbank.cso.ie/px/pxeirestat /Statire/SelectVarVal/Define.asp?Maintable= RIA02&Planguage=0	CSO - Residential Tenancies Board (RTB): Rent broken down by property type, size & location	18,732	10
https://www.cso.ie/en/releasesandpublications /er/pme/populationandmigrationestimatesapril2019/	CSO - Annual migration estimates from 1987-2019 (Table 1)	33	9
https://statbank.cso.ie/px/pxeirestat /Statire/SelectVarVal/Define.asp?maintable=CIA01	CSO - Estimates of Household Income by County and Region, Year and Statistic	241	39
https://www.daft.ie/report/2019-Q3-rental-daftreport.pdf Figure: "Stock of properties to rent on Daft.ie (start of month) and flow of new properties to rent, 2006-2019"	Daft.ie – Quarterly report – Q3 - 2019	161	2
http://insideairbnb.com/get-the- data.html	Dublin Airbnb Data		

Figure 1. Data Sources

Data Preparation

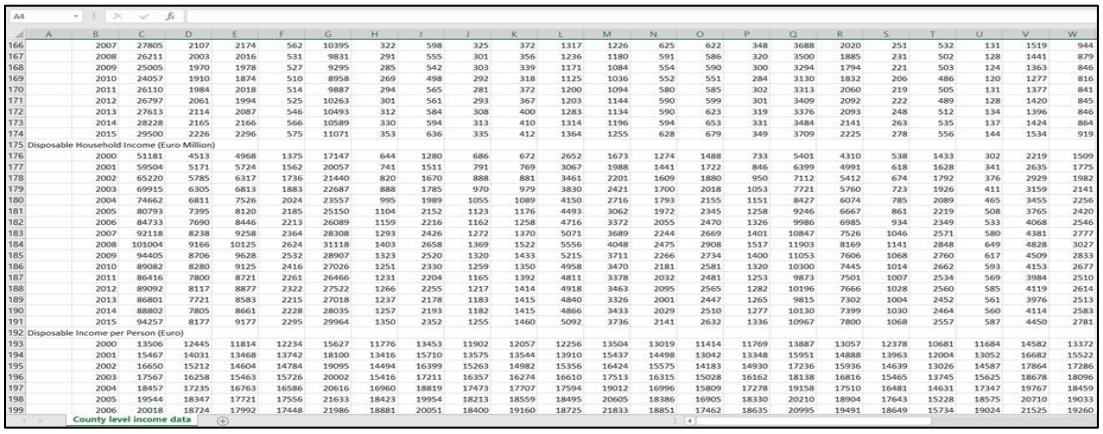
To prepare the data files for analysis some data cleansing techniques were carried out;

Rent Data

Rental price data was retrieved from the Central Statistics Office (CSO) online statbank service. The original source of the data however is from the Residential Tenancy Board (RTB). The data consisted of rental prices by location and year. This data was however broken up into 42 distinct sections (6 property types x 7 Bedroom number). Each such section was extracted from the csv file using a Python script and filtered to extract county level only data. The Python script also added and populated additional columns labelled "Property type" and "Number of Bedrooms" to clearly identify each section and transformed the data from a wide to long format. The final file was thus in a format that was easily digestible for Tableau.

Disposable Household Income data

The data file containing disposable household income was sourced from the CSO website. This file contained 241 rows and 39 columns and was restructured so that it was in the appropriate format for data analysis. The data relating to the disposable household income (Euro Million) was only kept in this file as this was the main field of interest.

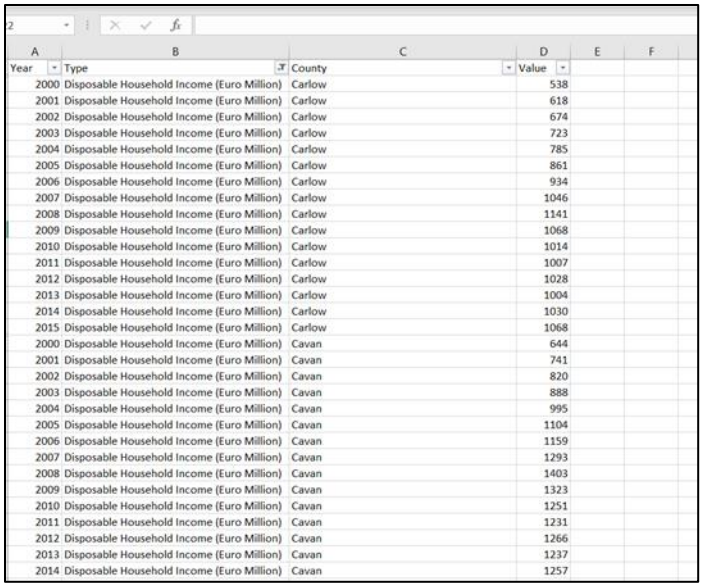


	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
166		2007	27805	2107	2174	562	10395	322	598	325	372	1317	1226	625	622	348	3688	2020	251	532	131	1519	944
167		2008	26211	2003	2016	531	9831	291	555	301	356	1236	1180	591	586	320	3500	1885	231	502	128	1441	879
168		2009	25005	1970	1978	527	9295	285	542	303	339	1171	1084	554	590	300	3294	1794	221	503	124	1363	846
169		2010	24057	1910	1874	510	8958	269	498	292	318	1125	1036	552	551	284	3130	1832	206	486	120	1277	816
170		2011	26110	1984	2018	514	9887	294	565	281	372	1200	1094	580	585	302	3313	2060	219	505	131	1377	841
171		2012	26797	2061	1994	525	10263	301	561	293	367	1203	1144	590	599	301	3409	2092	222	489	128	1420	845
172		2013	27613	2114	2087	546	10493	312	584	308	400	1283	1134	590	623	319	3376	2093	248	512	134	1396	846
173		2014	28228	2165	2166	566	10589	330	594	313	410	1314	1196	594	653	331	3484	2141	263	535	137	1424	864
174		2015	29500	2226	2296	575	11071	353	636	335	412	1364	1255	628	679	349	3709	2225	278	556	144	1534	919
175	Disposable Household Income (Euro Million)																						
176		2000	51181	4513	4968	1375	17147	644	1280	686	672	2652	1673	1274	1488	733	5401	4310	538	1433	302	2219	1509
177		2001	59504	5171	5724	1562	20057	741	1511	791	769	3067	1988	1441	1722	846	6399	4991	618	1628	341	2635	1775
178		2002	65220	5785	6317	1736	21440	820	1670	888	881	3461	2201	1609	1880	950	7112	5412	674	1792	376	2929	1982
179		2003	69915	6305	6813	1883	22687	888	1785	970	979	3830	2421	1700	2018	1053	7721	5760	723	1926	411	3159	2141
180		2004	74662	6811	7526	2024	23557	995	1989	1055	1089	4150	2716	1793	2155	1151	8427	6074	785	2089	465	3455	2256
181		2005	80793	7395	8120	2185	25150	1104	2152	1123	1176	4493	3062	1972	2345	1258	9246	6667	861	2219	508	3765	2420
182		2006	84733	7690	8446	2213	26089	1159	2216	1162	1258	4716	3372	2055	2470	1326	9986	6985	934	2349	533	4068	2546
183		2007	92118	8238	9258	2364	28308	1293	2426	1272	1370	5071	3689	2244	2669	1401	10847	7526	1046	2571	580	4381	2777
184		2008	101004	9166	10125	2624	31118	1403	2658	1369	1522	5556	4048	2475	2908	1517	11903	8169	1141	2848	649	4828	3027
185		2009	94405	8706	9628	2532	28907	1323	2520	1320	1433	5215	3711	2266	2734	1400	11053	7606	1068	2760	617	4509	2833
186		2010	89082	8280	9125	2416	27026	1251	2330	1259	1350	4958	3470	2181	2581	1320	10300	7445	1014	2662	593	4153	2677
187		2011	86416	7800	8721	2261	26466	1231	2204	1165	1392	4811	3378	2032	2481	1253	9873	7501	1007	2534	569	3984	2510
188		2012	89092	8117	8877	2322	27522	1266	2255	1217	1414	4918	3463	2095	2565	1282	10196	7666	1028	2560	585	4119	2614
189		2013	86801	7721	8583	2215	27018	1237	2178	1183	1415	4840	3326	2001	2447	1265	9815	7302	1004	2452	561	3976	2513
190		2014	88802	7805	8661	2228	28035	1257	2193	1182	1415	4866	3433	2029	2510	1277	10130	7399	1030	2464	560	4114	2583
191		2015	94257	8177	9177	2295	29964	1350	2352	1255	1460	5092	3736	2141	2632	1336	10967	7800	1068	2557	587	4450	2781
192	Disposable Income per Person (Euro)																						
193		2000	13506	12445	11814	12234	15627	11776	13453	11902	12057	12256	13504	13019	11414	11769	13887	13057	12378	10681	11684	14582	13372
194		2001	15467	14031	13468	13742	18100	13416	15710	13575	13544	13910	15437	14498	13042	13348	15951	14888	13963	12004	13052	16682	15522
195		2002	16650	15212	14604	14784	19095	14494	16399	15263	14982	15356	16424	15575	14183	14930	17236	15936	14639	13026	14587	17864	17286
196		2003	17567	16258	15463	15726	20002	15416	17211	16357	16274	16610	17513	16315	15028	16162	18138	16816	15465	13745	15625	18678	18096
197		2004	18457	17235	16763	16586	20616	16960	18819	17473	17707	17594	19012	16996	15809	17278	19158	17510	16481	14631	17347	19767	18459
198		2005	19544	18347	17721	17556	21633	18423	19954	18213	18559	18495	20605	18386	16905	18330	20210	18904	17643	15228	18575	20710	19033
199		2006	20018	18724	17992	17448	21986	18881	20051	18400	19160	18725	21833	18851	17462	18635	20995	19491	18649	15734	19024	21525	19260

County level Income data

Figure 2. Income data raw data

The data file was then restructured so that the data could be conveyed in a meaningful way to illustrate the Income data appropriately as shown in Figure 3 .



Year	Type	County	Value
2000	Disposable Household Income (Euro Million)	Carlow	538
2001	Disposable Household Income (Euro Million)	Carlow	618
2002	Disposable Household Income (Euro Million)	Carlow	674
2003	Disposable Household Income (Euro Million)	Carlow	723
2004	Disposable Household Income (Euro Million)	Carlow	785
2005	Disposable Household Income (Euro Million)	Carlow	861
2006	Disposable Household Income (Euro Million)	Carlow	934
2007	Disposable Household Income (Euro Million)	Carlow	1046
2008	Disposable Household Income (Euro Million)	Carlow	1141
2009	Disposable Household Income (Euro Million)	Carlow	1068
2010	Disposable Household Income (Euro Million)	Carlow	1014
2011	Disposable Household Income (Euro Million)	Carlow	1007
2012	Disposable Household Income (Euro Million)	Carlow	1028
2013	Disposable Household Income (Euro Million)	Carlow	1004
2014	Disposable Household Income (Euro Million)	Carlow	1030
2015	Disposable Household Income (Euro Million)	Carlow	1068
2000	Disposable Household Income (Euro Million)	Cavan	644
2001	Disposable Household Income (Euro Million)	Cavan	741
2002	Disposable Household Income (Euro Million)	Cavan	820
2003	Disposable Household Income (Euro Million)	Cavan	888
2004	Disposable Household Income (Euro Million)	Cavan	995
2005	Disposable Household Income (Euro Million)	Cavan	1104
2006	Disposable Household Income (Euro Million)	Cavan	1159
2007	Disposable Household Income (Euro Million)	Cavan	1293
2008	Disposable Household Income (Euro Million)	Cavan	1403
2009	Disposable Household Income (Euro Million)	Cavan	1323
2010	Disposable Household Income (Euro Million)	Cavan	1251
2011	Disposable Household Income (Euro Million)	Cavan	1231
2012	Disposable Household Income (Euro Million)	Cavan	1266
2013	Disposable Household Income (Euro Million)	Cavan	1237
2014	Disposable Household Income (Euro Million)	Cavan	1257

Figure 3. Cleansed income data

Migration data

The migration data was obtained from a CSO webpage entitled "Population and Migration Estimates April 2019". It was extracted by simply copying and pasting the data in table 1 into a file.

Rental Supply data

Daft.ie is Ireland's leading online property website. In the "Daft.ie Rental Price Report 2019 Q1", there exists a figure entitled "Stock of properties to rent on Daft.ie (start of month) and flow of new properties to rent, 2006-2019". As a proxy for rental supply in Ireland, the stock data was extracted from this figure using a digitizer. This monthly data was then aggregated to provide annual estimates for the years 2006-2019.

Airbnb data

The data is sourced from the Inside Airbnb website http://insideairbnb.com/get-the-data.html which hosts publicly available data from the Airbnb site.

Data set is fairly clean. In order to get desired visualizations, some data imputations and transformations were performed. Most of the features are consistent and very few mismatches were identified. (The R script for the same is available in Appendix).

Data Quality: The data also had null/missing values. To preserve all the information, we imputed or dropped the rows and columns containing null values while conducting exploratory analysis that made use of these features. We construct a Missmap (Amelia Package) plot to analyse the missing values for the variables that we would be using in our exploratory analysis.

Data Field Creation

Once the data files were cleansed a few fields were created from the original source data to enhance the data analysis capabilities.

Mortgage Repayment Calculation

The mortgage repayment calculation assumes as 3% interest rate and a 30-year (360 payments) term. The calculation was applied to the average house price data for each county and the national average for all the years in the dataset.

Visual Design Approach

This project aims to show its findings through using a combination of different visualisation techniques. Different visualisations allow for different views of the data being displayed whether its categorical, numerical etc.

The data collected on Irish rent, income, mortgage repayments, migration and property sales have been analysed and will be displayed using a mixture of different kinds of maps, line charts, bar charts and a race chart.

The visualisations presented here have each been chosen with the express purpose of conveying the relevant and meaningful information contained within the data.

Analysis

To examine the research question for this project the following questions will be examined and answered through using different data visualisations.

- Are there any significant movement in rent prices?
- Has population migration had an impact on the volume of rental properties?
- Has county income had an influential factor on rent prices?
- Is there a difference between mortgage repayments and rent prices in Ireland over the years and also area wise?
- What have been the changes to rental patterns in Ireland?
- What alternative solutions to high rent prices are being used?

The results of these questions to be examined will be displayed using some of the visualization tools like Tableau and Flourish.

Results and Findings

The results of the data analysis carried out for this project will be displayed in this section using different data visualisation approaches.

EXPLORATORY DATA ANALYSIS

1. Are there any significant movement in rent prices?

The rent prices in Ireland have been examined across the time period 2008 – 2018. The regional distribution of rent prices across Ireland by county can be clearly observed through using a geographical map. Through using Tableau's functionality, the variance in rent across Irish counties can by examined across different years.

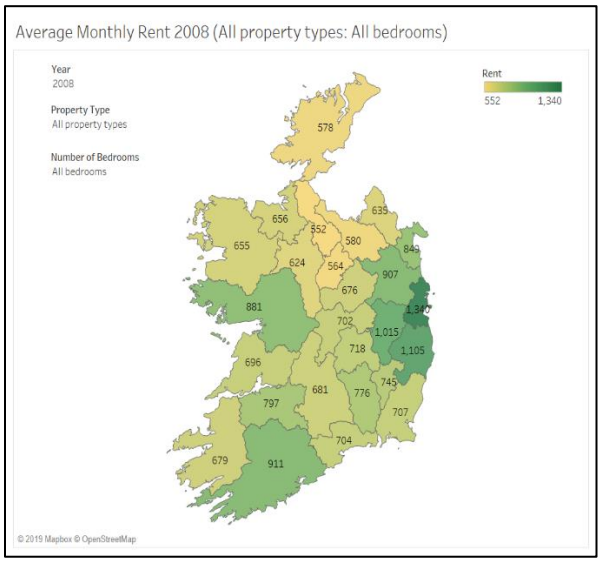


Figure 4. Map of Average Monthly Rent in 2008

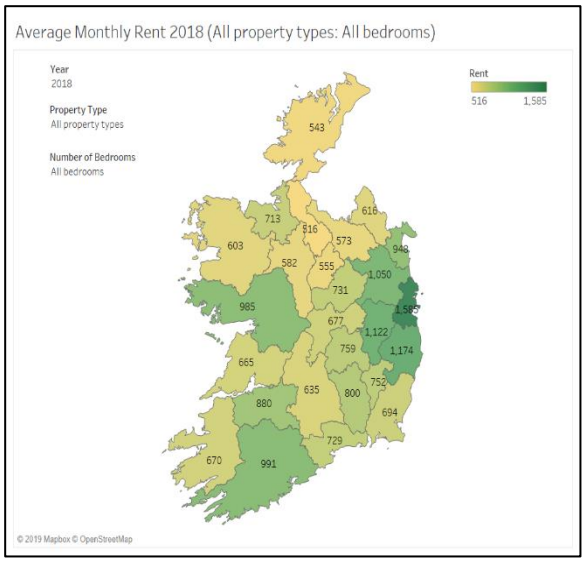


Figure 5. Map of Average Monthly Rent in 2018

Through examining the average rental data across Ireland, a reduction in average rent prices is observed until 2012 as shown in Figure 6. Then in line with the increased economic improvement from 2012, rental prices begin to increase again up to the end of the time period examined in 2018 as shown in Figure 5.

Using this map visualisation one can easily explore and observe how rental prices across Ireland decreased after the crash of 2008 before finally bottoming and increasing from 2011-2012 onwards. The above dashboard also allows the user to toggle between property type and number of bedrooms in a rental property. Using this functionality, one observes that detached houses across the country have the highest rent prices on average, while properties identified as 'other flats' are the least expensive. In summary, the above dashboard highlights the impact of geographical location, property type and property size on the rental price.

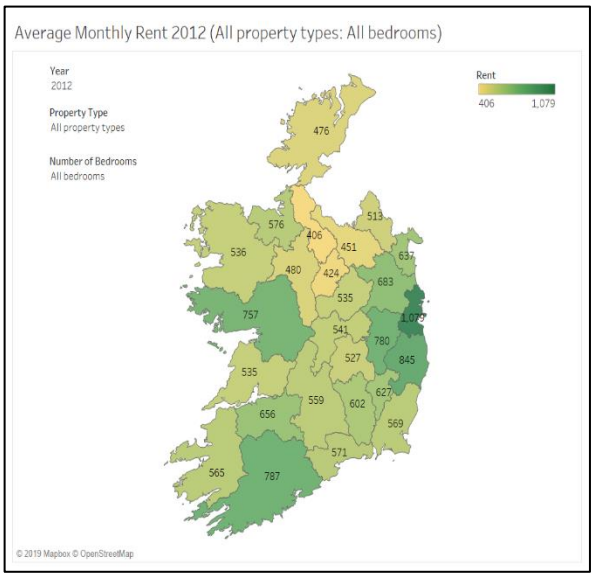


Figure 6. Map of Average Monthly Rent in 2012

2. Has population migration had an impact on rental supply?

Logically, population change must clearly have an effect on the number of properties available for rent. An increasing population if not matched by a supply of new rental properties should lead to a reduction in the available rental stock. Likewise, a decreasing population should free up rental properties and increase the number of properties available for rent. Migration is an important component of population change and one might expect it to have a big impact on the rental market (New migrants arriving to Ireland would most likely rent for example). Here we thus examine how the rental property stock in the Irish market has been impacted by migration?

Using a line chart, the migration and rental supply data are displayed in Figure 7 . The line chart has been chosen as this is the most appropriate visualisation type to display trends across time clearly.

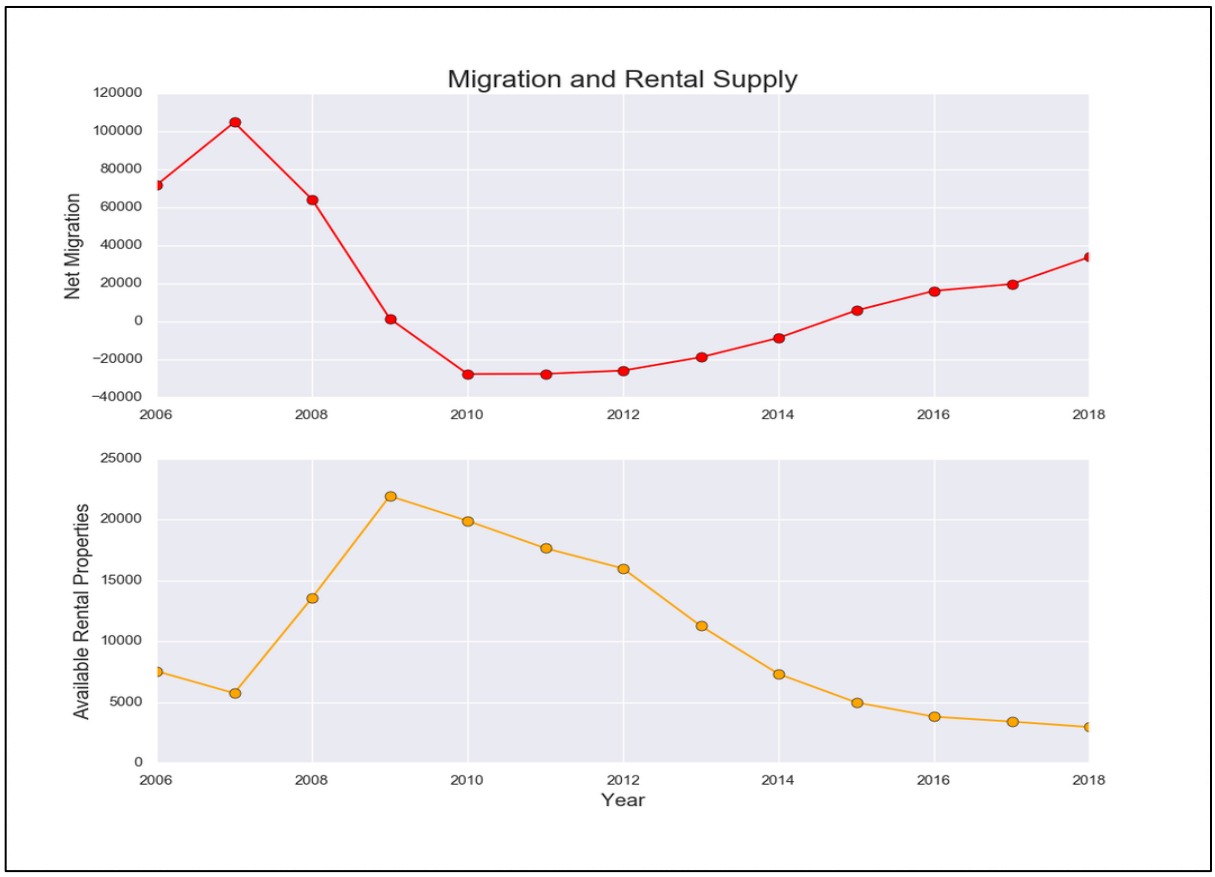


Figure 7. Line Charts of Migration vs Rental Supply (2006 - 2018)

We can see that in 2007 the net migration into Ireland hit a peak of approximately 100,000 people annually. The bursting of the housing bubble in 2007 marked the end of the Celtic Tiger era and we can clearly see trend reversals in the figure above immediately after this point in time. Net migration into Ireland begins to fall post-2007 and the number of available rental properties begins to rise.

It should be noted however that net migration in 2008 and 2009 was still positive. It is thus surprising to see such a marked increase in the rental stock. Factors other than migration must be influencing the rental stock. This is further reinforced when we examine the data over the period 2010-2014. In each of these years net migration is negative, yet the rental stock is steadily decreasing.

The above Figure 7 thus suggests that migration alone is a weak predictor of the rental stock.

3. Has county income had an influential factor on rent prices?

Household disposable income has a big impact on whether a family is able to rent or buy property. This has been examined and compared against rent prices across Irish counties in the time period 2008-2015. For the purpose of this analysis the top five and bottom five counties with the highest and lowest disposable incomes and rent prices have been selected. As the findings are being displayed based on the top and bottom performers, bar charts are the chosen visualisation technique for this data.

Using Tableau's analytics section, the average rent and income for each county is highlighted to show counties that are over and under-performing. This is shown in the Tableau worksheet of Figure 8.

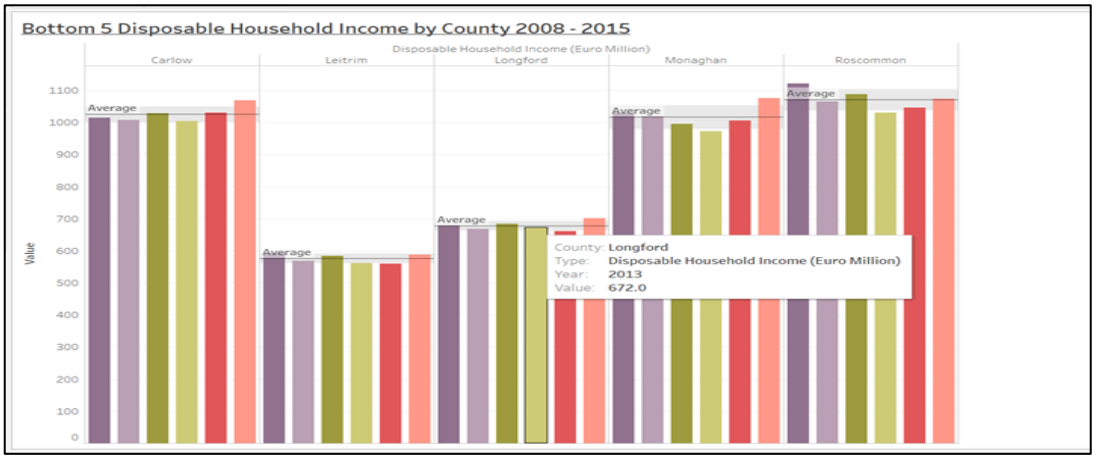


Figure 8. Worksheet highlighting Average Income

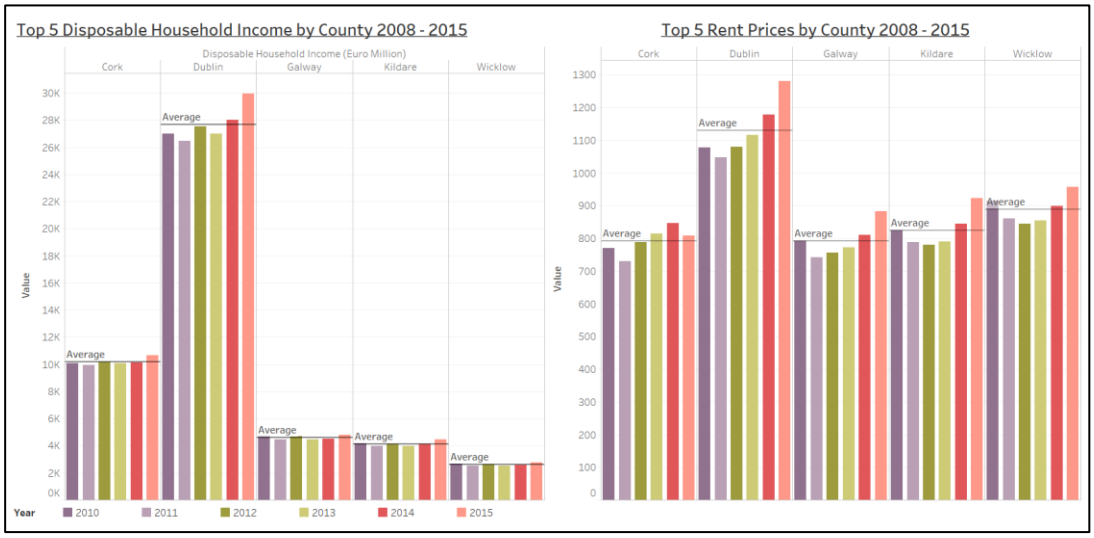


Figure 9. Top 5 Disposable Household Income

Figure 10. Bottom 5 Disposable Household Income by County 2008 -2015

Two Tableau worksheets were then created to show the :

- Five most expensive counties to rent in and the counties which have the top five disposable incomes (Figure 9)
- Five least expensive counties to rent in and the counties which have the bottom five disposable incomes (Figure 10)

Comparing these two figures, one striking difference presents itself. Namely, in the most expensive counties we can see the beginning of an upward trend in rental prices, while no such obvious trend is evident in the rental prices of the five cheapest counties.

This reflects an urban/rural divide. That is, over the period 2010-2015 there is increasing rental pressure around the larger urban population and economic centres of Dublin, Galway, Cork, Kildare and Wicklow (the latter two effectively being satellites of Dublin). Meanwhile, the rural counties of Carlow, Leitrim, Longford, Monaghan and Roscommon that are far from any economic nexus show little rental pressure (up to 2015).

The trend of increasing rents in the five large urban centres reflects the economic upturn following the Celtic tiger crash.

4. Is there a difference between mortgage repayments and rent prices in Ireland?

To examine the differences between monthly mortgage repayments and rent prices a Gantt chart, shown in Figure 11 was created in Tableau to highlight the differences and trends.

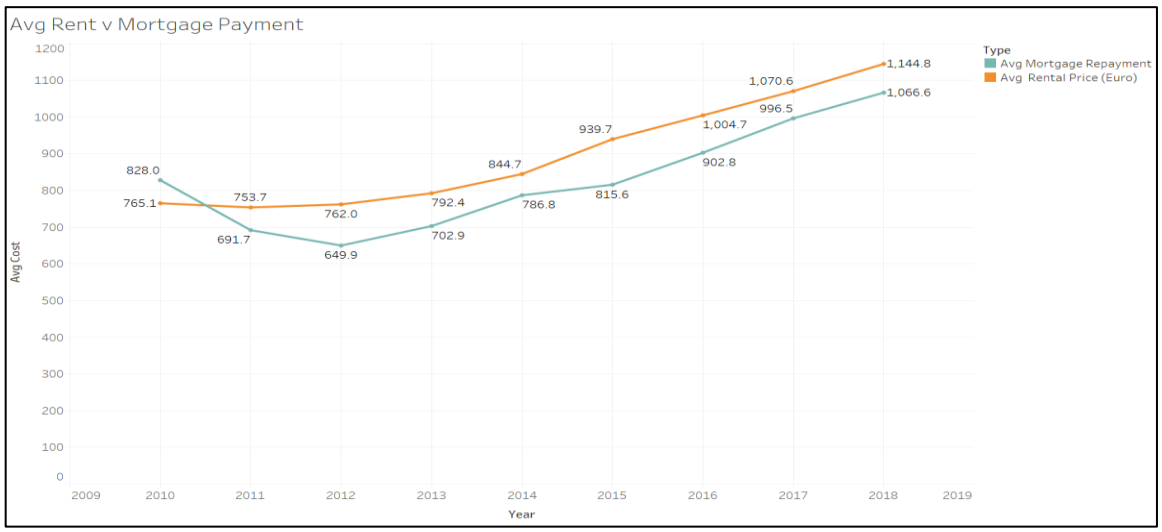


Figure 11. National average rent payments vs average mortgage repayments – Yearly Analysis

This highlights that since 2010 rent prices have become larger than monthly mortgage repayments. This is in line with our findings that there was a lack of supply in the rental sector which drove the rental prices up due to demand. This visualisation also illustrates the increases in both rent and mortgage repayments since 2010 and the differences between them.

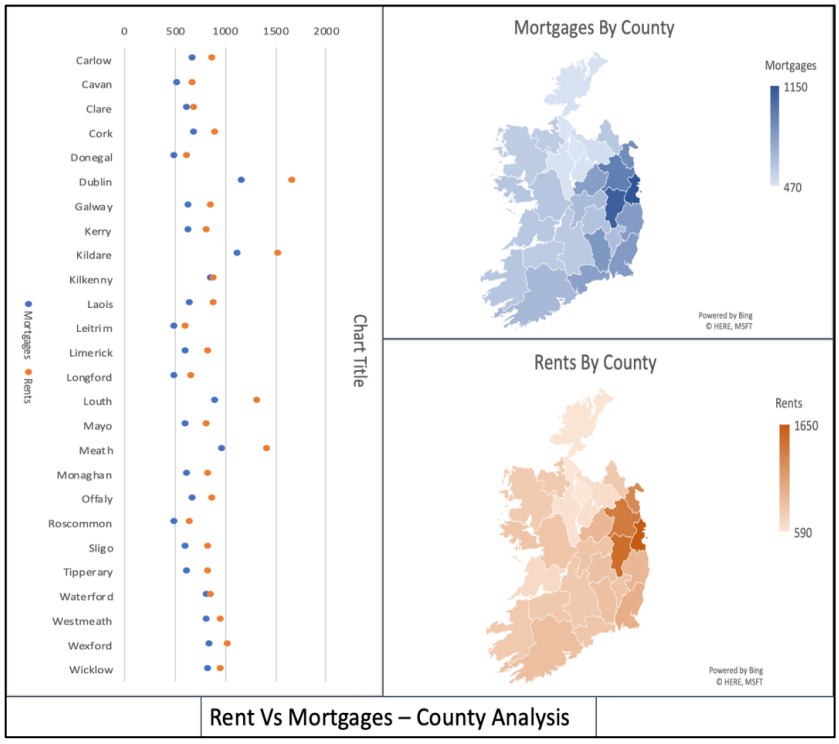


Figure 12. Mortgages vs Rent by County

Based on 2019 Q3 Daft.ie report data, rents now exceed mortgage repayments across Ireland. In some counties such as Dublin, Kildare, Louth and Meath, rents are very much higher than mortgage repayments. In a normal market this implies that people should have a bias toward buying a house over renting. Likewise, the data suggests that in the coming years, if trends persist, the market is primed to attract investment into the buy-to rent sector which may help alleviate the pressures on the rental market.

5. What alternative solutions to high rent prices are being used?

The increasing rent prices across Ireland over the last ten years has created opportunities for alternative solutions. One such solution has been Airbnb which allows homeowners to rent their homes, or even one or two rooms in their home, to people looking for accommodation. This is displayed using a symbol map in Tableau as shown in Figure 13 .

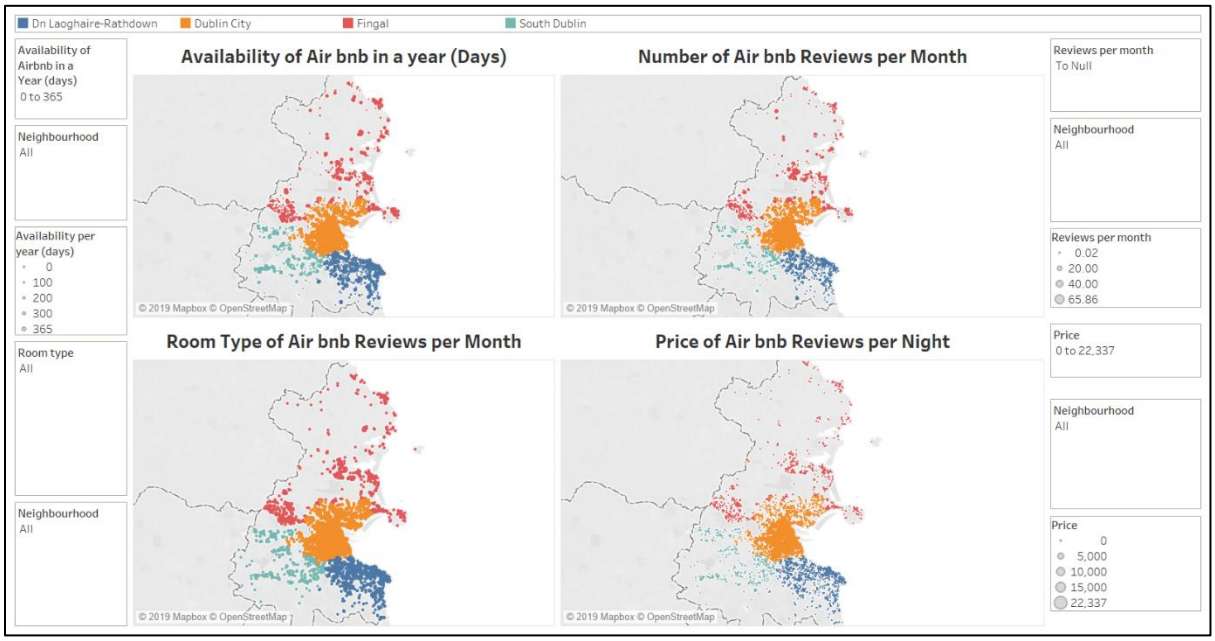


Figure 13. Map of Airbnb data

The cross functionality of the dashboard in Figure 13 enables the user to be able to see the location of available AIRBNB, how many rooms are available, price and how many reviews the property gets in a month. This visualisation shows how widespread Airbnb is across Dublin and the demand that is there, which is likely to be in part due to increasing rent prices.

6. What have been the changes to rental patterns in Ireland?

Figure 14 shows the age profile of population tenure status of households in 1991 and 2016. One can observe that both distributions are effectively unimodal. In 2016 we see that the most common renters are aged between 34-36 years. The number of renters then steadily decreases after that with age. This suggests that people after the age of around 36 years typically buy their own house rather than rent. Note that in 1991, this crossover age was much lower at about 26 years of age.

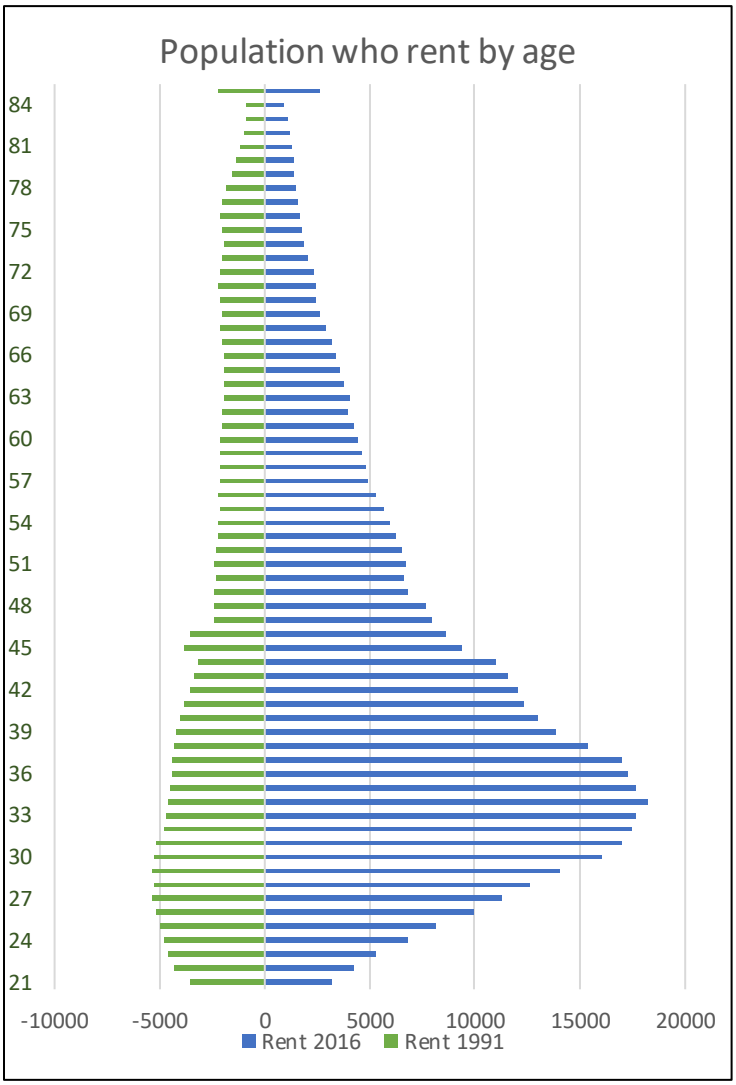


Figure 14. Rental Population by Age (1919 - 2016)

As per studies based on the census of the 20+ years, the ages which marked the changeover between renting and home ownership were 26 years (1991), 27 years (2002), 28 years (2006) and 32 years (2011). This data is based on the source [5].

7. Race Chart

Another visualisation that was used in this project to help illustrate the change in rent prices over the years was a race chart.

This was created using Flourish and it animates the changes and trends in the rental data across the years. Snapshots of this animation across the time period 2008 – 2018 are shown in Figure 15, Figure 16 and Figure 17. Using this race chart, the trends observed using other visualisation techniques were confirmed. That is, rent prices are seen to decrease post-2008 before bottoming and increasing steadily from about 2011-2012 onwards.

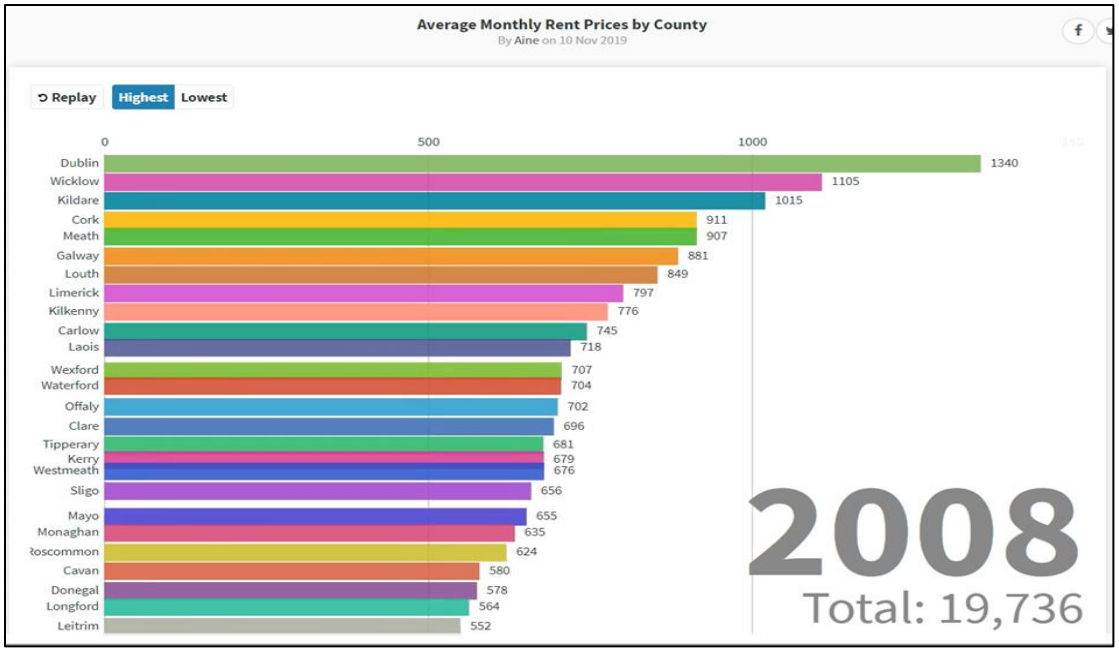


Figure 15. Average Monthly Rent Prices 2008

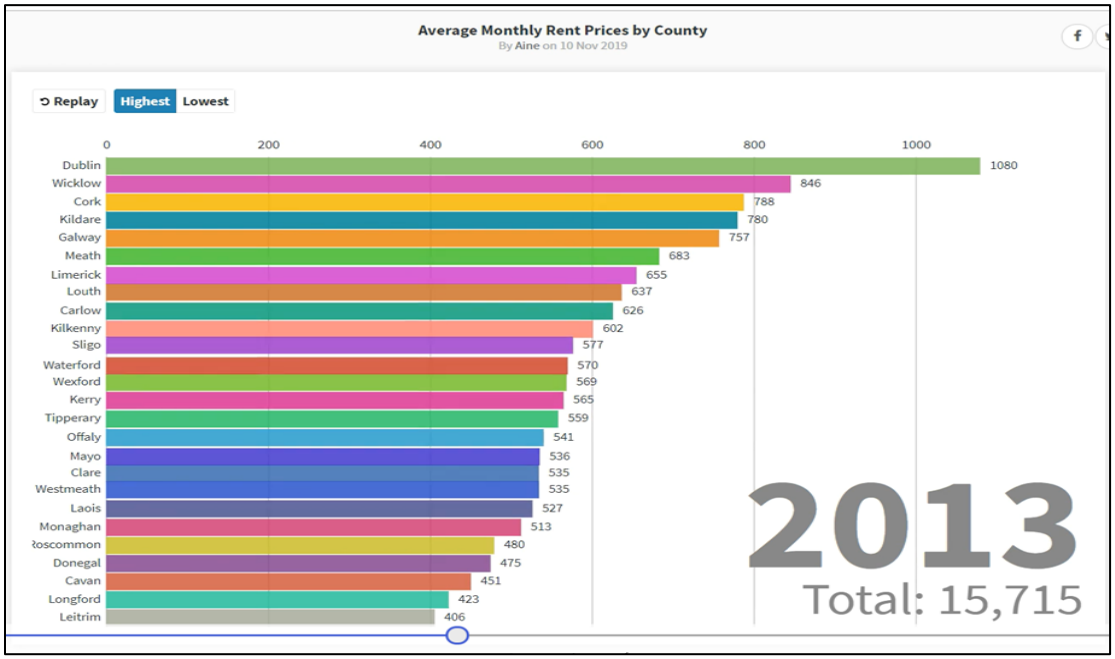


Figure 16.Average Monthly Rent Prices 2013

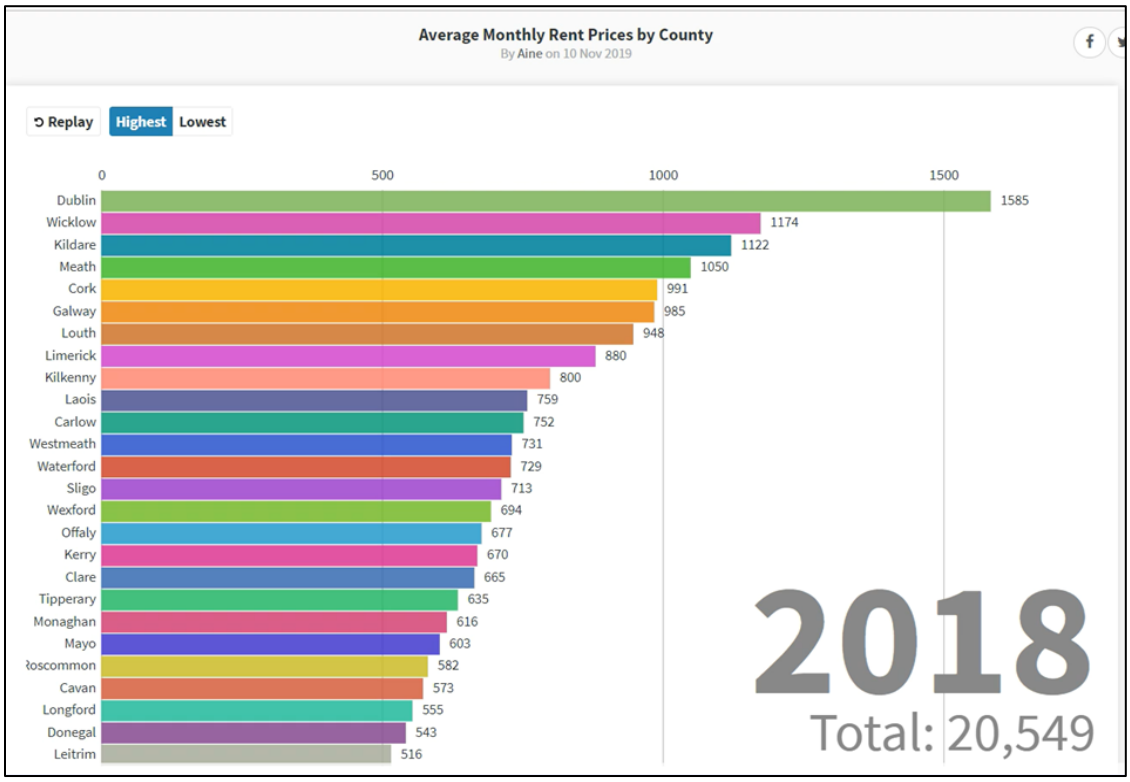


Figure 17.Average Monthly Rent Prices 2018

RENTAL ECONOMICS

HOUSING PARADIGM IN IRELAND

An in-depth look into how rentals trends are in recent years in Ireland

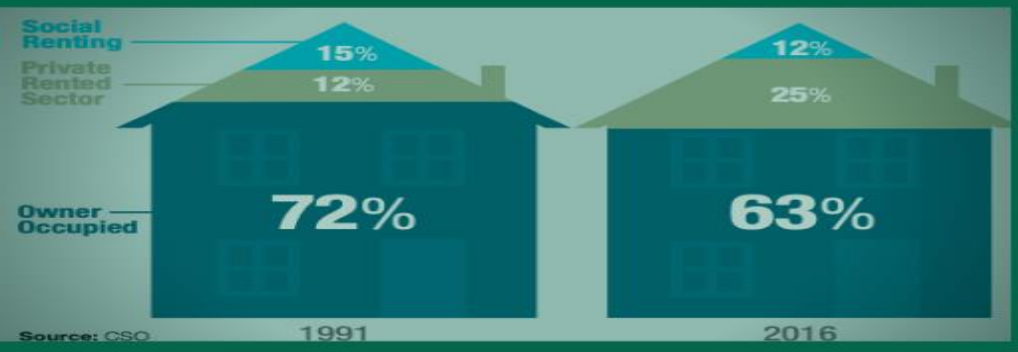
5.4%	12.5%	21.5%	2.6	6.1%	25.8%
LIVING IN APARTMENTS	RENTING FROM A PRIVATE LANDLORD	PAYING OVERBURDENED RENTAL LEVEL	AVERAGE HOUSEHOLD SIZE	ANNUAL NATURAL POPULATION CHANGE	POPULATION INCREASE TO 2080
23.9%	20.0%	26.3%	2.3	-0.7%	-2.0%

RENT PREDICTIBILTY

RENTS ARE INCREASING BY 10% PER ANNUM

People are uncertain whether they can afford to stay where they are living

TENURE VS AFFORDIBILTY



TENURE VS AFFORDIBILTY

In Ireland, there is an ongoing shift towards renting with 25% doing so in Dublin according to the 2016 Census, over double the 12% recorded in 1991.

WHERE DUBLIN STANDS

Dublin Properties to Rent

The number of properties listed as available for rent on Daft.ie is less than a fifth of the peak of 8,264 recorded in Q2 2009.

Dublin Aprtment Rents

Apartment rents in Dublin have hit their highest level since records began in 2007.

Dublin Apartment Prices

Dublin apartment prices have doubled since the bottom of the market in 2012, however they remain 29% below their previous peak.

25%

Rise now 25% higher than 2008 peak.

The next wave of investment activity will concentrate on Build-to-Rent opportunities

Conclusions

In this project we have collected a wide variety of data relating to the rental market in Ireland. The primary purpose of the exercise was to examine the trends present in the data and how they might impact rental prices. Through a series of visualisations we present different perspectives of the rental issues facing modern Ireland. The primary trend examined is in the rental prices themselves. Via an interactive dashboard and a race chart, we illustrated how rental prices decreased significantly in the wake of the 2007 crash before bottoming over the years 2011-2014. Since then rental prices have shown steady increases year on year and have since exceeded their Celtic Tiger peaks. This recovery in rental prices was not homogeneous across the country however. Our data shows that prices first began increasing again in the major population and economic centres. For example, in 2012 prices began rising in Dublin, Cork and Galway. In 2013, this recovery then spread to Meath, Westmeath, Kildare and Wicklow (all satellite counties of Dublin). By 2015 all counties were exhibiting rental price increases with the final counties to recover located in the most rural parts of the country (See fig. ??). This is evidence that economic factors are likely a key driving force for rents. That is, demand for rental properties is greatest where the jobs are.

Other trends such as the recent steady increase in inward migration into Ireland since 2015 was illustrated. We also examined the recent trend in the stock of properties available to rent on the Irish market. In Fig. ?? we can see that there has been a steady decrease in this stock since 2010. In fact this stock has reached all time lows at the present time and is likely the key factor for current record rents. The previous low was in 2007 at the height of the Celtic Tiger when the net migration into Ireland was at an all time peak of 100,000 people per year. It is clear that there is not enough new rental properties appearing on the market to keep up with demand. It should be stated that the link between migration and the available rental stock is not clear and obvious. The data presented in Fig. ?? suggests that this relationship is complicated and needs further investigation.

In Fig. ?? we presented data comparing mortgage repayments to rental prices. Since 2010, in all counties without exception, rental prices exceed mortgage repayments. From a purely financial perspective it thus makes little sense to rent as opposed to buying. This thus poses the question as to why the proportion of renters in Ireland is at an all time high today. The age distribution of renters shown in Fig. ?? perhaps suggests an answer to this conundrum. There is a clear trend in the typical age of a house buyer which has been steadily increasing over the past three decades. This suggests that affordability and access to credit is likely the main issue at play here. That is, the typical person is taking longer to save a deposit to access finance.

We also briefly looked at the phenomenon of Airbnb. We presented data relating to the Dublin area and demonstrate its increased popularity over the past decade. This is an economically driven trend. That is, renting short term produces superior investment yields over the traditional longer term leasing. It is thus leading to a contraction in the number of available properties for long term renting, though we present no data here that conclusively establishes this hypothesis.

With regard to our research questions, our investigations would appear to identify economic factors as the primary driver of rental prices. The reduction in the available rental stock is also a key contributing factor, while net inward migration did not display any obvious simple correlation to rental prices. Our investigations thus suggest that unless the supply of rental properties increases substantially in the near future, rent prices will continue their upward trend. However, it should be noted that we are currently in one of the longest global economic expansions in modern times and have not experienced any major recessions since 2007-2009. If the US, Europe or China were to suffer a severe downturn in economic activity, as a small open economy, the turmoil will likely spread to these shores. Another recession will then ensue and thus likely again prove a downward shock to rents.

Finally, this is by no means an exhaustive study on the subject of the Irish rental market. We only present here a small number of perspectives on the topic. For example, no data is shown on the number of new properties built, no examination of the investment into the buy-to-let property sector is performed and no detailed analysis is executed on how rental prices vary with property type or size.

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