RESEARCH
SERIES
NUMBER 136
APRIL 2022

RENTAL INFLATION AND STABILISATION POLICIES: INTERNATIONAL EVIDENCE AND THE IRISH EXPERIENCE

CATHAL COFFEY, PAUL J.HOGAN, KIERAN MCQUINN, CONOR O'TOOLE AND RACHEL SLAYMAKER

ESRI ECONOMIC & SOCIAL RESEARCH INSTITUTE

RENTAL INFLATION AND STABILISATION POLICIES: INTERNATIONAL EVIDENCE AND THE IRISH EXPERIENCE

Cathal Coffey
Paul J. Hogan
Kieran McQuinn
Conor O'Toole
Rachel Slaymaker

April 2022

RESEARCH SERIES
NUMBER 136

Economic and Social Research Institute
Department of Housing, Local Government, and Heritage

Available to download from www.esri.ie
The Economic and Social Research Institute
Whitaker Square, Sir John Rogerson's Quay, Dublin 2
https://doi.org/10.26504/rs136

ABOUT THE ESRI

The mission of the Economic and Social Research Institute is to advance evidence-based policymaking that supports economic sustainability and social progress in Ireland. ESRI researchers apply the highest standards of academic excellence to challenges facing policymakers, focusing on 12 areas of critical importance to 21st Century Ireland.

The Institute was founded in 1960 by a group of senior civil servants led by Dr T. K. Whitaker, who identified the need for independent and in-depth research analysis to provide a robust evidence base for policymaking in Ireland.

Since then, the Institute has remained committed to independent research and its work is free of any expressed ideology or political position. The Institute publishes all research reaching the appropriate academic standard, irrespective of its findings or who funds the research.

The quality of its research output is guaranteed by a rigorous peer review process. ESRI researchers are experts in their fields and are committed to producing work that meets the highest academic standards and practices.

The work of the Institute is disseminated widely in books, journal articles and reports. ESRI publications are available to download, free of charge, from its website. Additionally, ESRI staff communicate research findings at regular conferences and seminars.

The ESRI is a company limited by guarantee, answerable to its members and governed by a Council, comprising 14 members who represent a cross-section of ESRI members from academia, civil services, state agencies, businesses and civil society. The Institute receives an annual grant-in-aid from the Department of Public Expenditure and Reform to support the scientific and public interest elements of the Institute's activities; the grant accounted for an average of 30 per cent of the Institute's income over the lifetime of the last Research Strategy. The remaining funding comes from research programmes supported by government departments and agencies, public bodies and competitive research programmes.

Further information is available at www.esri.ie

THE AUTHORS

Cathal Coffey was a Research Assistant at the Economic and Social Research Institute. Paul J. Hogan is an Administrative Officer in the Department of Housing; Kieran McQuinn is a Research Professor at the Economic and Social Research Institute and an Adjunct Professor at Trinity College, Dublin; Conor O'Toole is an Associate Research Professor in the Economic and Social Research Institute and an Adjunct Associate Professor in Trinity College Dublin and Rachel Slaymaker is a Research Officer in the Economic and Social Research Institute.

ACKNOWLEDGEMENTS

This research was completed under the Joint Research Programme on Housing Economics between the ESRI and the Department of Housing, Local Government, and Heritage. The views expressed in this paper are those of the authors and they should not be regarded as an official position of the Department of Housing, Local Government, and Heritage.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

EXECUTIVE SUMMARY

MAIN FINDINGS

Key findings from international experience:

- There is an economic rationale for the use of rent controls internationally in settings where the presence of market failures, information asymmetries or excess demand (coupled with inelastic supply) are prevalent;
- Following the Global Financial Crisis, a number of countries/regional authorities have either introduced or enhanced rental controls to provide 'rent stabilisation'. These policy regimes, which have often been targeted at areas with high rental pressures (mainly in urban areas), aim to have a specific, and often time bound, impact in high inflation localities. Examples include a number of states in the US, Scotland, Germany, and France;
- Evidence from the extensive international research in this area indicates that the benefits of rent controls accrue to existing tenants, but that other groups (such as potential new tenants) are often negatively affected through higher prices on properties that are not covered by the regulations or lower availability of properties more generally in the medium term. A common criticism of rent control regimes historically has been the supply-side externalities (lower maintenance investment and market exits of rental properties), which have been shown internationally to arise;
- More recent regulatory regimes have looked to offset these side-effects with better calibration including the usage of exemptions for new supply, allowances for maintenance investment and other mechanisms similar to the policy calibration found in the current Irish policies. The impact on supply is now likely more context specific and likely to depend on the specific regulatory set up in the operating jurisdiction, as well as the other market specificities in each country. In terms of the optimal policy design to ensure efficient functionality, ensuring sufficient exemptions are in place to attempt to offset these side-effects is critically important.

Key findings on review of trends and economic fundamentals

- Areas classified as RPZs have experienced slower rental price growth than non-RPZ areas over the period of our analysis. These effects are evident in both the event study analysis and the simple difference-in-difference models. These results are not to be fully attributed as causal, with possible confounding factors. Nevertheless, it does appear that the RPZs provided some degree of stabilisation in the Irish rental sector for those areas which were designated;
- Property-level microdata demonstrate a clear impact of the RPZs on the distribution of pricing; the share of properties with inflation rates set at 4 per

cent has risen notably. However, we found properties which experience growth rates above 4 per cent. It is not possible to identify whether these growth rates were actually in compliance with the restrictions due to data gaps; and

- The COVID-19 pandemic has had a profound effect on the Irish economy with major impacts on the labour market: at the height of the pandemic in Q2 2020, nearly one-in-three workers were unemployed. However, rents have not fallen. The recovery in the economy is likely to put considerable pressure on the rental market and our scenarios indicate further upward price pressure would be expected if stabilisation measures were removed.

Key findings on exploration of policy design and calibration

- In general, the above findings point towards continued upward pressure on rents which would increase if rent stabilisation measures were to be removed completely;
- Exemptions are available to target the well documented supply-side externalities of supply and substantial change/investment. The number of registered exemptions to date has been approximately 200. Our microdata analysis identifies more properties with a growth rate above the 4 per cent cap than the number of registered exemptions. Further efforts to ensure higher rates of reporting of exemptions would be beneficial along with improved data collection and monitoring; and
- Recent legislative changes provide for indexation of the allowable increases to a reference rate (in this case the Harmonised Index of Consumer Prices, HICP). Indexation is seen in other jurisdictions and allows the price cap to vary with the broader inflationary environment.

CHAPTER 1

Introduction

Following a period of rapid inflation in rental prices in Ireland, and concerns around affordability challenges for private renters, a system of rent stabilisation measures was introduced into the private rental sector in 2016. The policy instrument introduced a 4 per cent annual cap on rental inflation in specific areas designated as 'Rent Pressure Zones' (RPZs). Qualification as a RPZ was determined by both the growth rate and level of rents and aimed to provide a stabilising mechanism against further inflation being experienced in areas with already high, and fast growing, rent levels.

Ireland was not alone in introducing measures which attempted to curb excessive inflationary pressures in the rental sector following the 2007-2009 Global Financial Crisis. Several European countries (such as Germany, France and Scotland) as well as states in the US (Oregon, California and New York) introduced new, or adapted existing, regulations to stabilise rental price growth. While, historically, direct price regulation in the rental sector has long been criticised for its negative effects on supply, these new regulations sought to address these concerns with design features to offset these effects. Ireland's regulatory framework adopted many of these elements such as exemptions on new supply and energy efficiency, and substantial change investments.

Following the first 18 months of operation of the Irish RPZ scheme, research by Ahrens et al. (2019) considered how rental price trends had developed following its introduction. They found a moderation in the inflation rate of between 2-3 percentage points in RPZ areas compared to non-RPZ areas. They also found a high percentage of growth rates at the property level that were above the 4 per cent cap.

Since this initial research was completed, changes to the policy calibration have occurred and a large number of additional areas have been classified as RPZs. It is therefore appropriate to revisit this analysis to include the updated list of qualified RPZs and explore the longer time frame since the measures were introduced. Furthermore, it is timely to examine the development in rental price trends, the changing economic context with COVID-19, and to consider how trends may be expected to evolve in the coming period.

In July 2021, the regulations were changed such that rents in a RPZ cannot be increased by more than the general rate of inflation as recorded by the Harmonised

Index of Consumer Prices (HICP). Thus, since July 2021, the 4 per cent formula has been replaced by allowable increases based on the HICP. This rule was further changed in late 2021 to a maximum annualised increase of 2 per cent, due to rising general inflation in the economy. It must be noted that much of the research for this paper was undertaken before these changes were made and thus the context altered during the research period. However, the broad nature of the research as well as the backward-looking review of events and existing studies means that the findings apply regardless of any changes to the specific calibration of the caps.

Within this context, the aims of this paper are fourfold. First, it reviews the international literature and experience on rent regulations and rent stabilisation measures. Second, it uses updated microdata on rental tenancies to revisit and update the work of Ahrens et al. (2019). This updated dataset permits both a longer time series analysis across LEAs of the impact of the regulations for the areas first designated as RPZ, as well as a first look at the impacts in areas which qualified in 2019. Third, it develops a macroeconomic rental model to explain the extent to which rental price trends in Ireland are explained by economic fundamentals. This model can then be used to examine what rental pressures may look like as the economy recovers from the COVID-19 pandemic and if rental stabilisation measures were to be removed. Finally, it provides some specific reflections on the design and calibration of the scheme.

The rest of this paper is structured as follows. Chapter 2 presents the international evidence. Chapter 3 examines trends in price inflation and activity in the Irish rental market. Chapter 4 links the rental market to economic fundamentals and looks forward at likely future trends. Chapter 5 considers the design features of the scheme and Chapter 6 concludes.

CHAPTER 2

The economics of rent control and the international evidence

2.1 INTRODUCTION

The issue of rent controls has been extensively researched internationally with multiple studies considering their structure, economic rationale, and efficacy. The aim of this section is to provide a short economic overview of rent controls, to look at some of the international research in the area and then to provide some examples of recent policies that have been enacted. This section can therefore provide context for the Irish rent control regime and its similarities and differences to other countries in terms of calibration, but also in terms of the rationale for the introduction of the regulations.

The section is structured as follows: Section 2.2 presents a brief overview of the economics of rent control and presents some of the main findings from existing studies that consider the broader rent control settings. Section 2.3 focuses in on more recent examples of regulatory calibrations that are similar to the Irish rent stabilisation measures. The aim of this review is to consider the calibration of these rules and the context in which they were introduced, rather than to just look at their efficacy. We do draw on studies relating to efficacy if they are available.

2.2 THE ECONOMICS OF RENT CONTROLS AND THE INTERNATIONAL EVIDENCE

The impact and efficacy of rent controls has long been an area of intense debate in both the research literature and amongst policymakers. The use of direct price caps on private market rents, while having a long history, most notably came to prominence after the Second World War as many housing markets suffered an extreme shortage of supply (Basu and Emerson, 2000). These measures were expanded in the 1970s in many areas, including the United States, in response to high inflation and other social difficulties. To explore the differences, and evolution of rent controls, we use the categorisation presented by Arnott (1995) and discussed extensively throughout the literature (see Scanlon and Whitehead, 2014). This differentiates between first, second and third generation rent control regimes.

2.2.1 First generation controls

Many of the original measures have been labelled as ‘first generation’ rent controls (Arnott, 1995; Lind, 2001). These instruments place a limitation on the nominal level (and less frequently the growth rate) of rental prices such that rents either

a) fall in real terms and/or b) drop below the 'market' level (Lind, 2001).[1] They are normally discussed in terms of the standard price ceiling regulation in economics terms. The political economy motivation for the introduction of such regulations is typically to protect consumers from rent increases beyond their capacity to afford housing services and to maintain affordability for existing tenants (Gibb and Marsh, 2021).

Like any traditional price cap, the economic dynamics of such a measure ensure that prices are restricted to, or below, the regulatory cap and therefore economic surplus is transferred from the landlord (producer) to the tenant (consumer). In this regard, it can be seen in a similar vein to a subsidy or tax which benefits the incumbent tenant.[2]

While incumbent tenants often benefit from these regulations, the regulations have several important externalities (Turner and Malpezzi, 2003). From the landlord side, costs can relate to the transfer of property rights from the landlord to the tenant as well as the cost of depreciation to the unit (through lowering investment in maintenance). More importantly, the lower regulated price per unit can lead to landlords reducing the supply of units (as the regulated price is below the price needed to be willing to supply the unit). The impact overall is to lower the availability of rental properties to the likely detriment of non-incumbent tenants.

A number of issues are particularly important in relation to the impacts outlined above. First the degree to which the market is acting competitively matters for the efficacy of regulations. If landlords are in a position to exercise market power, then price controls can be beneficial (as would be common in other utilities like electricity, gas etc.) i.e. by regulating the price to take into account the cost of capital and depreciation but ensuring supernormal profits are not made. Such a feature is likely to be particularly important in markets where a smaller number of landlord suppliers provide a larger share of housing.

Second, the presence of information asymmetries or other market failures on the tenant or landlord side is likely to exacerbate the calculation of net costs or benefits. Finally, the degree of supply and demand elasticities is critical to the

---

1 By 'below the market level', we are referring to the situation such that the rents on rent-controlled properties are lower than what the rent would be if it were to be market determined.

2 A large number of early studies in the literature on rent control undertook simple estimates of the value of this subsidy by calculating the difference between the market and regulated price per unit standardised quantity once the unit suits the housing preference of the consumer (Turner and Malpezzi, 2003). Turner and Malpezzi (2003) note that estimates from the US (mainly New York), UK and Canada provide a range of consumer benefits to the tune of 10-20 per cent reductions in rental prices (for example Olsen, 1972; Gyourko and Linneman, 1989; Ault and Saba, 1990; Murray 1976; and Marks, 1984). A majority of these studies evaluated the evidence in the pre-1980 period.

reaction of landlords to price caps. If supply elasticities are high then landlords will react strongly to the price cap by lowering the level of supply; a more inelastic market may not have such effects (Turner and Malpezzi, 2003).

Another consideration put forward by Glaeser and Luttmer (2003) is that the welfare losses in terms of supply reductions as a result of rent controls underestimate the potential impact of these rules as they do not take into consideration misallocation effects. These misallocation effects (from an economics perspective) occur when households access housing based on non-price factors. Thus households are likely to sort into rents which do not reflect their own marginal value as they use connections, lotteries or other allocation measures to access accommodation in constrained markets.

2.2.2 Second generation rent controls

The discussion above applies, in the main, to the first generation of rent controls which set a direct limit on the level of the price. The economic dynamics of such a traditional price cap are easily explained. However, following the evidence in relation to the side-effects of the first generation controls, a more tailored suite of policies was developed which aimed to limit inflation, in many cases both between and within tenancies. These regulations which can be classed as 'second generation' rent controls, allowed for rent increases, in many cases above general inflation which means rents did not fall in real terms. The second generation rent controls often index rent increases to some benchmark rate, normally the Consumer Price Index (Whitehead and Williams, 2019). In some cases, landlords are also allowed to amortise the cost of substantial improvements as well as other increases in costs such as taxes, operating expenses or financing charges (Scanlon and Whitehead, 2014).

While the splitting of tenancy type and allowing price increases is a feature of second generation controls, Lind (2001) goes further in terms of his characterisation of the new range of rent regulations. He introduces a range of nuances across types of rent regulation as follows: a) weak transaction costs-related regulations which protect a sitting tenant against rents higher than the market rent; b) strong transaction costs related rent regulation which protects sitting tenants against rapid increases above costs; c) monopoly-related rent regulation which protects all tenants against rents higher than the market rents where landlords exercise market power; d) smoothing changes to market rents to protect against short-term overshooting; and e) protecting all tenants against certain types of increases in market rents.

While these regulations were less susceptible to negative externalities than original first-generation regimes, limits on inflation rates can also lead to

side-effects. A clear recent documentation as to risks and benefits of these regulations is outlined by Diamond et al. (2019). They use experimental variation across the introduction of rent controls in San Francisco to test a number of different hypotheses. A second generation rent control regime introduced in 1979 was deployed differently for buildings of four units or less which provided within-area variation across controlled and uncontrolled buildings. Using data on individuals' migratory patterns, they find lower mobility amongst tenants and lower displacement from within the city area for those impacted by rent controls. On the supply side, they find that landlords reduced supply by 15 per cent and sold to owner-occupiers or redeveloped the buildings. They conclude that while rents were likely lowered for incumbent tenants, the lower supply likely drove up rents in the long run, undermining the initial goal of the law. These findings are similar to Sims (2007) who found increased supply and increased maintenance when rent controls were relaxed.

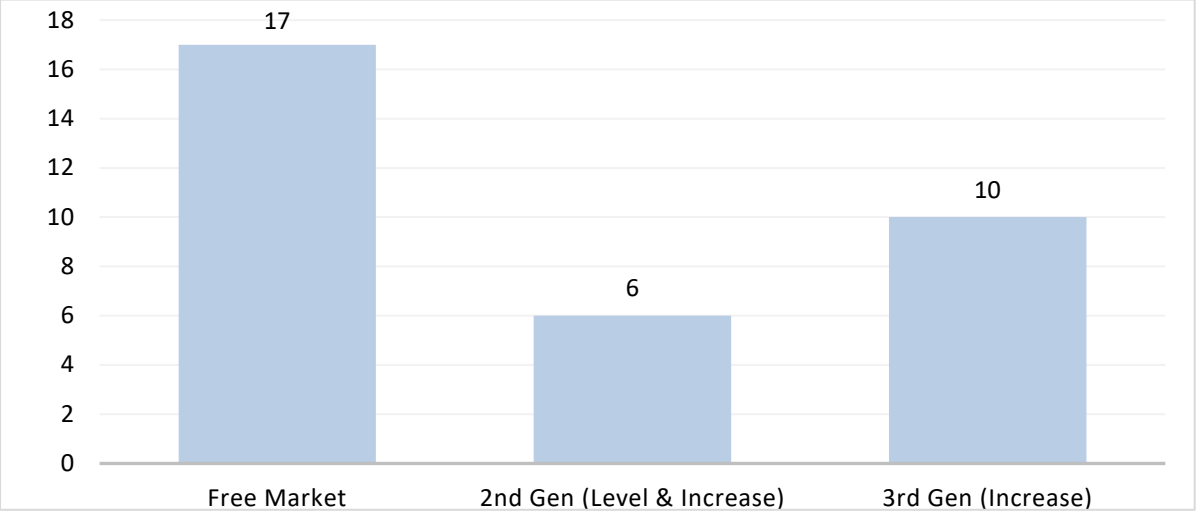
2.2.3 Third generation rent controls

A final class of rent controls are those that link only the increase in rent within a tenancy and are generally associated with the type of regime Arnott (1995) noted as *tenancy* rent controls (Scanlon and Whitehead, 2014). These types of measures allow adjustment to market levels between tenancies but ensure that existing tenants are not adversely hit with considerable inflation rates within their tenancy. The aim is also to provide landlords with a reassurance that they will be able to increase rent levels if costs are incurred. Scanlon and Whitehead (2014) note that this is a mechanism to smooth inflation while maintaining a long-term, competitive rate of return. They also note that these mechanisms should still be able to maintain the level of supply and avoid some of the negative externalities caused by the more severe price controls. However, there can still be difficulties where tenures are long and any inflation rate reduction (relative to market levels) offsets the turnover costs which are saved by having the same tenant. A beneficiary of these measures can be institutional investors who are happy to have a security of return once the price cap is set to compensate for (at least) general rates of inflation.

2.2.4 How prevalent are rent controls in Europe currently?

While the above rent control categories are used to capture a plethora of different models across countries and over time, it is useful to consider how these are currently deployed across Europe. A detailed discussion of rent regulation in Europe across 33 countries is provided in Kettunen and Ruonavaara (2020) who provide a classification of different areas by welfare state regime and rent control type. Of the 33 countries that they study across Europe, they break down the prevalence of rent control regimes as follows.

FIGURE 2.1 EUROPEAN COUNTRIES CLASSIFIED BY RENT CONTROL TYPE



Source: Kettunen and Ruonavaara (2020).

Of the 33 countries, 17 do not have specific regulations on rental increases or on rent levels. Six countries (Austria, Denmark, France, Ireland, the Netherlands, and Sweden) have second generation controls which limit both the increase between and within tenancies. A further ten countries (Belgium, Croatia, Cyprus, Germany, Luxembourg, Norway, Poland, Scotland and Switzerland) have legislation to limit rent increases for existing tenants or third generation controls. What is noteworthy is the broad usage of these policies across countries and in particular the movement towards third generation type policies.

2.3 RENT STABILISATION SINCE THE GLOBAL FINANCIAL CRISIS

While many countries have used varying measures to control rent inflation or initial rent price setting over decades, the period since the onset of the financial crisis in 2007 has seen a reappraisal and redeployment of measures specifically aimed at curbing excess inflation. The period of recovery after the 2007/2009 crash has seen significant increases in rents (and often house prices) in many countries and this has led to the imposition or recalibration of targeted measures to deal with rapid price inflation. Some of the countries and measures presented above by Kettunen and Ruonavaara (2020) are indeed this type of instrument. It is worthwhile to distinguish this group of measures from the above general discussion as their context and aspects of the calibration often differ from more historical examples. These measures are defined in this report as 'rent stabilisation' instruments: a useful definition for their broad operation is provided in Scanlon and Whitehead (2014). They note the measures

> *aim to provide greater certainty to both landlords and tenants within the period of the lease while taking account of market pressures at the beginning of the tenancy. The objective is not to hold down returns but to reflect longer term trends.*

There are a number of reasons why the period since the financial crisis is different given the tighter credit conditions and major economic shocks experienced globally following the financial crisis. This unique set of factors has led to a particularly strong period of rental inflation. Many countries which had not used rent controls for many years had begun to consider such measures (such as Ireland, Scotland and the current debate in New Zealand; see Appendix).

The measures are distinguished here from broader third generation controls for two reasons: a) their context differs in that they were mainly introduced post the 2007-2009 crash and b) their calibration is different in attempting to offset some of the supply-side concerns. They also have other characteristics like a defined duration and geographic limit which are notable. These measures (like those introduced in Ireland) are also often linked to having areas of high rent pressure at their core.

In this section we examine a number of countries (or states in the US case) which have introduced so called rent stabilisation measures since the Global Financial Crisis in 2007. We do this to inform the Irish regulations. This list is not meant to be exhaustive and other jurisdictions may provide examples for future assessments of the Irish regime. It is also not meant to be a survey of the existing regulations currently in place in these countries. Rather it takes examples of regulations and their calibration at particular points in time and uses these as context for Ireland. The current regulations in each jurisdiction may differ from the listings below. The examples were also selected to provide differing contexts, for example Germany with a long history of rent controls, provides a contrast to Scotland which, like the Irish case, has not had rent controls until recently. It also demonstrates that multiple jurisdictions, not only those with a long history of active rent regulation, have been experiencing considerable rental market pressures.

It is useful at this juncture to position Ireland within the context of different types of rent control regimes. It would appear that the current regulations share features of both second generation rent controls and the current rent stabilisation measures as discussed above. There are a number of reasons for this. First, the main feature of first generation rent controls is that they effectively introduce a nominal rent freeze. As Ireland's regulations only address the rate of inflation, they do not fit into this grouping which normally is used to capture the post-World War II early regimes. The feature of the second-generation regime that best captures Ireland is that the regulations apply both within and between tenancies for the same property. Third generation rent controls apply an inflation cap within tenancies but then allow a free-market rent setting when a new tenant comes in. This is not allowed in the current Irish regulations.

2.3.1 Meitbremse in Germany

Germany has had a long history of a very active usage of rent control regulations. Rent controls were first introduced in the early 1920s when rents were frozen for existing dwellings at their 1914 levels. Apart from some loosening in the early 1930s, rent levels were frozen until the late 1960s and even later in major German cities such as Berlin and Munich. Second generation rent controls were introduced in 1972 with rents loosely anchored to a proxy of the market rent. Ten years later, in 1982, further restrictions were introduced on rent increases with a cap placed on increasing the rent within an existing contract.

Rent control interventions since 2010

More recently, in 2013, and due to severe pressures in the housing market, German federal states were given legislative powers to determine areas where the supply of rental dwellings under reasonable conditions is endangered and where the 'capping limit' could be lowered to a 15 per cent rent increase within three years (4.8 per cent annually), introducing an opportunity for region-specific capping limits. In the years since 2013, 11 of the 16 federal states have identified municipalities where the 'capping limit' was applicable.

Despite these changes, demand-side pressures in the housing market continued, and in 2015, the German central government introduced a 'rental brake' which provides regulations for local rental markets. This characteristic of the regulations is particularly important as they, like Ireland, are to be deployed on a geographic basis, with clear qualification criteria for entry.

The regulations are as follows: Federal states can identify municipalities or areas within municipalities with a 'tight' housing market. A municipality or part of can be declared as a tight housing market for a maximum of five years if at least one of the following criteria is met:

1. Local rents grow faster than the national average;
2. The local average rent-to-income ratio is significantly higher than the national average;
3. The population of the area grows but new housing construction does not complete enough dwellings;
4. The vacancy rate of an area is low while the demand is high.

The 'rental brake' regulates rents in new contracts with rents not allowed to exceed the typical local rent by more than 10 per cent. There are two exemptions to this regulation: the first when rents are negotiated for dwellings built after 1 October 2014. The rationale for this exemption (which is discussed in more detail in Chapter 5) is to address supply-side externalities i.e. by exempting new building

from rent controls, this should lessen the impact of any investment decline that may occur due to the price cap. The second exemption is for the first contract after a substantial refurbishment of an existing dwelling. The typical local rent is approximated using one of three methods. The first method called the 'Mietspiegal' is a survey of typical rents in the region or similar region conducted or recognised by the municipality or by representatives of landlords and tenants' associations, and updated every two years. The second method is a report produced by a sworn expert and the third method is using rents in three dwellings of other landlords.

Since the introduction of the regulations 13 of the 16 German Federal states have introduced caps on rents. Two years after their introduction, over 28 per cent of dwellings in 338 municipalities were covered by capping limits, benefiting approximately 22.5 million people. The 'rental break' regulation covered over 26 per cent of dwellings in 308 municipalities covering a total of 20.7 million inhabitants. One of the two regulations is valid in 382 municipalities representing 30 per cent of Germany's housing stock. Both regulations are in force in 264 municipalities covering 25 per cent of dwellings in Germany. The municipalities covered by both regulations are both larger (approximately 67,000 inhabitants compared to 7,000) and have a lower homeownership rate (29 per cent vs 43 per cent) than the national average. As of 2021, 12 states continue to use the Meitbremse.

Efficacy of the regulations

The impact of these regulations has been mixed both nationally and across geographies, with a number of papers providing differing measures of the impacts. A detailed study of the early impact of the measures was undertaken by Mense et al. (2017). The results suggest that the regulation benefits low/medium income households. Further, Mense et al. (2017) find that rent regulations alter land values (by raising land prices as new developments are exempt) and depress maintenance activities. On prices, they find that rents and house prices immediately drop in de facto regulated, high rent growth markets, while at the same time rents and prices of unregulated new dwellings rise. Another study on the regulations, Breidenbach et al. (2019), finds that the German rules dampened rental growth by 2.5 per cent but the effects vary by type of building, area and price segment. The effects do not appear to be persistent over time. The measures therefore have complex and varying impacts on differing channels. According to Sagner and Voigtländer (2021), the region of Schleswig-Holstein abolished the measure in 2019 as it was deemed ineffective.

The impacts were much less prevalent in Berlin, and rental pressure in these areas increased to such an extent that a nominal rent freeze was introduced in 2020 to attempt to cap price pressures. The rent freeze was deemed unconstitutional by

the Constitutional Court in 2021 and has been subsequently overturned. An overview of the details of these policies are included in Appendix 1. While it is unclear as to the long-term impact of these policies, it is very clear that the supply-side impacts have been considerable. Sagner and Voigtländer (2021) found that the number of rental apartments offered in Berlin halved since the introduction of the rent freeze. New rents did decrease which shows the efficacy of the policy on prices, but the study concludes that the protection of sitting tenants seems to come at an immense cost for people looking for a new rental apartment. These findings are reinforced by Hahn et al. (2020) who had similar findings on the Berlin rent freeze.

2.3.2 Rent Pressure Zones in Scotland

Following the financial crisis, pressures in terms of rental inflation have come to the fore in Scotland. The Scottish government introduced a regime of rent control measures that aimed to limit within-tenancy rent increases to stop excessive price rises.

The protections, contained in the Private Housing (Tenancies) (Scotland) Act 2016, were twofold. First, tenants who thought that price growth was excessive could apply for a formal review to a Rent Officer and, second, an area-wide, inflation-linked restriction on rent increases through 'Rent Pressure Zones' (Robertson and Young, 2018). The qualification of Rent Pressure Zones is done by local authorities on application for Ministerial agreement. Once Ministerial agreement is given then annual rent rises (but not initial rent setting) would be restricted to an index-linked reference increase which was on the basis of increases in the CPI plus 1 per cent plus a discretionary term the Minister can apply (CPI+1+X). The period of Rent Pressure Zone status was for five years.

In considering the calibration and design of the Irish regulations, it is useful to review the qualification criteria and functionality of the Rent Pressure Zones, which were modelled on the Irish rules (Gibb and Marsh, 2021). For this paper we denote the Scottish Rent Pressure Zones as SRPZs. To be deemed a SRPZ, local authorities would apply to the Minister for such status on a part, or all, of the authority's area if such an area had been subject to excessive recent rent increases. The local authority needs to provide sufficient evidence that a) rents are rising excessively; b) rent increases are causing undue hardship to existing tenants; and c) rents are having a detrimental effect on the authority's provision of other housing services.

However, to date, no areas have been deemed as SRPZ and the policies have not worked effectively. Two recent reviews have suggested changes (Gibb and Marsh, 2021; Robertson and Young, 2018) and a recent bill (Fair Rents Bill, 2020) has been introduced to the Scottish parliament to include a blanket CPI plus 1 per cent limit

on all rent increases.[3] One major difference relative to Ireland, and a critique of the Scottish system, is that the data collection has been poor and the necessary data have not been available to enable the local authorities to make the case relative to the above criteria. A report by Robertson and Young (2018) details the very strict criteria needed to demonstrate the case for qualification and the major difficulty that local authorities have in meeting these criteria. They conclude that lack of data is a major barrier to the effective policy implementation in Scotland. From an Irish perspective, the automatic qualification as an RPZ based on empirical data-based criteria stands in stark contrast to the Scottish case, and highlights the usefulness of linking the policies to such readily available and timely indicators as are published with the RTB/ESRI Rent Index.

2.3.3 Rent stabilisation measures in US

Due to the federal, state led legislative system in the US, rent stabilisation and rent control management has been state or regionally disaggregated. Many areas, like New York, San Francisco and California, have to varying degrees deployed measures to limit rent increases. However, many regimes have been adapted and relaxed over time. Whitehead and Williams (2019) note regimes are in place in five states and one district as of 2019 (California, New York, New Jersey, Maryland, Oregon, and the District of Columbia). Thirty-seven states prohibit or pre-empt rent control. In this review, we have included some selected examples of more recently introduced and adapted measures which are more relevant for the Irish situation.

Rent controls in Oregon[4]

Rent control was introduced in Oregon in 2019. A limit was placed on rent increases during any 12-month period. Rent increases cannot be greater than 7 per cent plus the Consumer Price Index (CPI) of the previous calendar year.[5] The maximum annual rent increase percentage is calculated by the Oregon Department of Administrative Services each year. The allowable rent increase percentage for the 2021 calendar year is 9.2 per cent. The allowable rent increase percentage for the previous year, 2020, was 9.9 per cent.

Rent control limits do not apply for any rental unit when the first certificate of occupancy for the unit was issued less than 15 years from the date of the notice of the rent increase and where the landlord is providing a reduced rent to the tenant as part of a local, state or federal programme or subsidy. The new controls also prevent landlords from using terminations in the first year of a contract to

3 For more information see: https://www.parliament.scot/bills-and-laws/bills/fair-rents-scotland-bill.

4 For more information see: (https://www.oregon.gov/das/OEA/pages/rent-stabilization.aspx).

5 The CPI is the annual 12-month average change in the Consumer Price Index for All Urban Consumers, West Region (All Items) published by the Bureau of Labor Statistics of the United States Department of Labor in September of the prior calendar year.

circumvent the rent control. The landlord then cannot reset the rent for the next tenancy by an amount greater than 7 per cent plus the CPI percentage if a previous tenancy is terminated during the first year with a 30-day no cause clause. To date, no research studies have been published that we are aware of which consider the impact of these regulations.

Rent control in New York[6]

New York has had a long history of rent control usage. Rent control in New York applies to residential buildings that were constructed before 1 February 1947 in municipalities that have not declared an end to the post-war rental housing emergency. The municipalities that still have rent control in effect include New York City, Nassau and Westchester counties. In New York City, rent control tenants are generally in buildings built before 1947 and have been in continuous occupancy since prior to 1 July 1971.

Rent control limits the rent an owner may charge for an apartment. In New York City rent control is operated under the Maximum Base Rent (MBR) system. A maximum base rent is established for each apartment, and it is adjusted to reflect operating cost changes every two years.

Outside of New York City, the New York State Division of Housing and Community Renewal (DHCR) determines the maximum allowable rates of rent increase under rent control. The rates of rent increase are subject to the limitations of the annual rent guideline board increases. Owners can apply for rent increases periodically. In New York State (both inside and outside New York City) rents can also be increased in any one of the three ways listed below:

1. With the written consent of the tenant in occupancy, if the owner increases services or equipment, or makes improvements to an apartment;
2. With the approval of DHCR, if the owner installs a building-wide major capital improvement;
3. In cases of hardship with DHCR approval.

More recently, New York has revisited the usage of rent inflation mitigation policies or rent stabilisation. The new Housing Stability and Tenant Protection Act (HSTPA) in June 2019 allowed any locality in New York State to enact rent stabilisation if 'a declaration of emergency' regarding available apartments is made in the area, pursuant to the Emergency Tenant Protection Act (ETPA) of 1974. 'A declaration of emergency' can be made if the vacancy rate for the housing accommodations or a

[6] For more information see: (https://hcr.ny.gov/rent-control); (https://hcr.ny.gov/system/files/documents/2020/11/fact-sheet-01-09-2020.pdf).

class of housing accommodations within such a municipality is less than 5 per cent. Rent Stabilisation generally covers buildings built between 1947 and 1974 and apartments removed from rent control.

Rent control in California[7]

San Francisco's first rent control law was introduced in 1979 and capped annual nominal rent increases to 7 per cent and covered all rental units built before 13 June 1979 with an exemption for owner-occupied buildings containing four units or less. The exemption was fairly large, covering 44 per cent of the rental housing stock in San Francisco. In 1994, a ballot was passed which removed the exemption and allowed for all multi-family structures built in 1979 and earlier to be subject to rent control. Buildings built in 1980 and later were not subject to rent control. Rent control laws in San Francisco did not change until 2020 possibly due to the California state Costa-Hawkins act. The Costa-Hawkins Act regulated the scope of rent control allowed in California and precluded any city from rent controlling any stock built in 1994 or later. The impact of the San Francisco regulations has been documented in detail in Diamond et al. (2019) which is noted in the preceding sub-section.

More recently, and of more direct relevance to the Irish case, the California Tenant Protection Act of 2019 came into effect on 1 January 2020 and expires on 1 January 2030. The new rent controls limit annual rent increases to the lower of either 5 per cent plus the local inflation rate which is measured using the Consumer Price Index (CPI), or a maximum allowable increase of 10 per cent. A landlord is now required to have 'just cause' to terminate a tenancy. Tenants are disallowed from waiving their rights to the protections included in the Act and any agreement made by the tenant to do so is void. The new regulations do not remove or replace tenant protections already covered by San Francisco's local eviction and rent increase regulations.

Exemptions are given for units that were constructed within the last 15 years which applies on a rolling basis. Units that have regulations limiting the affordability to low or moderate-income households are also exempt. Single family homes and condominiums are only exempt if the property is not owned by a real estate trust, a corporation or an LLC with at least one corporate member.

2.3.4 French experience since the Global Financial Crisis

The French experience with rent regulation in recent years has been classed as a model with considerable uncertainty attached (Whitehead and Williams, 2019). Private renting as a tenure has been relatively stable in France since the 1980s

7 *Source:* San Francisco Rent Board (2019).

(Scanlon and Whitehead, 2014). A recent overview of the regulatory environment in France conducted by Scanlon and Whitehead (2014) notes that the main regulatory position in France is set out in the Mermaz-Malandian law of 1989 which regulates increases within the lease but rent setting of initial rents for new leases is unregulated.[8] Rents for existing tenants were set in relation to the existing rent or benchmarked to similar properties. Price setting was linked to a reference index which is now the Consumer Price Inflation but historically also incorporated maintenance and renovation cost indices (Scanlon and Whitehead, 2014).

However, since the financial crisis, France, like other countries has experienced considerable upward price pressure in Paris and other urban areas. In 2012, new legislation was introduced focusing on specific high-pressure areas (38 in total) which limited all rent increases to the benchmark rate unless substantial work had been performed on the properties. While these regulations focused on capping rent inflation to a benchmark rate, a new 2013 law[9] introduced a strict level cap on prices in high rent pressure areas. In these designated high-pressure areas, the rent level and increase setting are regulated; the prices are set at a maximum of 20 per cent above the median for a similar property in the area. These are set annually. Where prices are set above the allowable level, adjustments are made in the next review. The new law does include a rent guarantee fund, that is paid into by both landlords and tenants, which will compensate landlords for arrears cases.

However, a further law change came in 2015 and is documented in Whitehead and Williams (2019). This law aimed at cities with high demand and rapidly growing rents and stated two specific conditions must be met:

- The rent must be the same across tenancies for new and old tenancies (in a sense a rent freeze); and
- The rent must not be more than 20 per cent above as noted in the preceding text.

These rules were applied in Paris and Lille and some evidence (Scanlon and Whitehead, 2014) has emerged demonstrating that rental growth has been restricted by the regulations. In 2017, the second of these rules was annulled in both areas but this was re-instated in Paris in 2019. A further 2018 law known as the Elan Law gives cities the right to impose rent control to ensure affordable housing. In August 2019, this was applied to areas designated as a 'zone tendue' or housing shortage area; 27 towns and cities.

8 A small portion of the market is limited to older regulations from 1948.
9 This law was intitled the ALUR law.

2.4 CHAPTER CONCLUSIONS

This chapter has provided an overview of the economics of rent controls, outlined some of the existing research and provided some examples of the more recent rent stabilisation policies which are closest to the Irish model in calibration and context. A number of findings emerge from this chapter:

- There is a clear economic rationale for the use of rent controls internationally in settings where the presence of market failures, information asymmetries or excess demand (coupled with inelastic supply) are prevalent;
- The research is clear in finding that existing tenants benefit from rent controls through lower rent levels or lower inflation rates. However, other factors such as lower labour market mobility have also been documented;
- International research suggests that regulatory regimes have had significant supply-side effects with studies demonstrating lower maintenance investment and market exits of rental properties. This can serve as a cost to potential new tenants;
- More recent regulatory regimes have looked to offset these side-effects with calibration designs including the usage of exemptions for new supply, allowances for maintenance investment and other mechanisms. In terms of the optimal policy design to ensure efficient functionality, ensuring sufficient exemptions are in place to offset these side-effects is important; and
- Following the financial crisis, many countries have experienced very rapid levels of rental inflation and have either introduced or enhanced rental controls to provide 'rent stabilisation'. These policy regimes have often been targeted at areas with high rental pressures (mainly in urban areas) which aim to have a specific, and time bound, impact in high inflation areas. Examples include several states in the US, Scotland, Germany, and France. The diversity of backgrounds shows these measures have been deployed across multiple jurisdictions, not only those with a long history of active rent regulation. A recent survey showed rent controls in place in 16 of 33 European countries.

CHAPTER 3

Trends in price inflation and activity: The Irish experience

3.1 INTRODUCTION

The international research outlined in Chapter 2 documents a range of impacts on prices and quantities (as well as other effects) which have been associated with different systems of rent controls. The main objective of the Irish regulations was to provide a limitation on rapid rental growth rates that were observed in the period just prior to their introduction. A previous study of the impact of the Rent Pressure Zone regulations in Ireland found that rental inflation was approximately 2 percentage points lower in Rent Pressure Zones as compared to other areas in the period after the rules were introduced (that is rents grew by 2 percentage points less in RPZ areas). This research was limited to the period up to Q3 2018 and therefore also predated the large number of additional newly qualified RPZ areas which were designated in 2019. Our analysis goes up to Q2 2020 which marks the beginning of the COVID-19 pandemic. At this point, changes to rental legislation such as a national emergency rent freeze would confound the impact of the RPZ rules, so we limit our assessment to before this point.

Given this context, the aim of this chapter is to revisit some of the analytical work undertaken as part of the Ahrens et al. (2019) study by updating the research to take into consideration developments since Q3 2018. This allows both a longer time series analysis across LEAs of the impact of the regulations for the early qualification areas and also a first look at the impacts in areas qualified in 2019.

It must be noted that while Chapter 2 notes a range of impacts on variables such as tenant turnover, mobility and supply-side factors, data gaps prohibit the detailed analysis of many of these aspects for Ireland. Where these data gaps exist, we have noted these as areas where additional information would be very useful. Our assessment in this chapter will be limited to the impact on prices and the price distribution. Certain data gaps (such as a full registry of all active tenancies and properties) will hopefully be bridged in the near future. More generally, it should be borne in mind that most of the data gaps in Ireland relate to aspects which may generally be seen as the unintended consequences of the policies (such as supply issues, maintenance, mobility, and incumbency). The available data relate to what are likely to be effects on observed prices, which are welcome from a policy perspective, and the empirical part of this paper necessarily focuses on the price impacts, but the accompanying unintended consequences, even if unobserved, should be borne in mind.

The rest of this section is structured as follows. First, we present a simple review of trends in rental inflation in Ireland across RPZ areas and non-RPZ areas. Second, we undertake a simple event study analysis. Third, we present a non-causal econometric test on the change in trends and, finally, we use microdata from a property-level sample of data to explore the impact of the regulations on the price distribution.

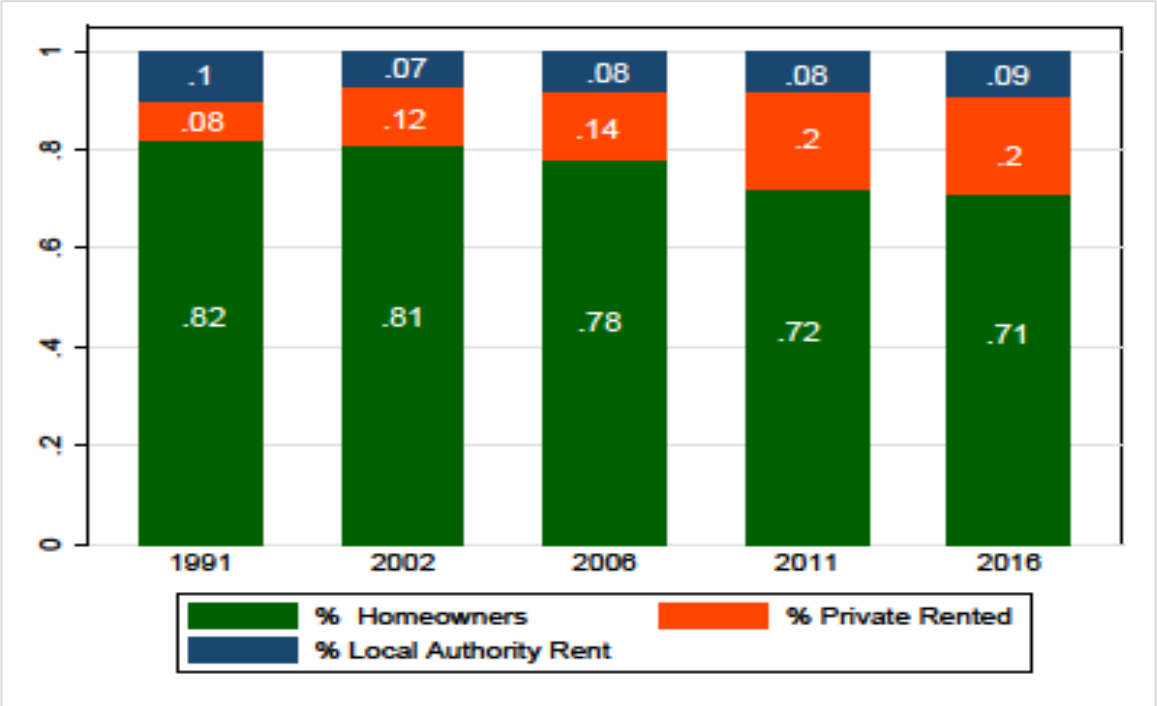
3.2 BACKGROUND AND BRIEF OUTLINE OF RPZ POLICIES

3.2.1 Background and context

To begin our discussion of the impact of the policies, it is useful to first outline the RPZ policies and provide some contextual background to the introduction of the regulations. To avoid repetition with previous research (Ahrens et al., 2019; O'Toole, 2021), this section is purposely limited to information required to contextualise the analysis in this report.

While the share of households in the private rental sector had been increasing steadily since the early 1990s, following the onset of the financial crisis, a clear acceleration in this trend can be observed. Data on housing tenure from the Census of Population are presented in Figure 3.1 which shows the increase in private renting from 14 per cent of households in 2006 to 20 per cent in 2016.

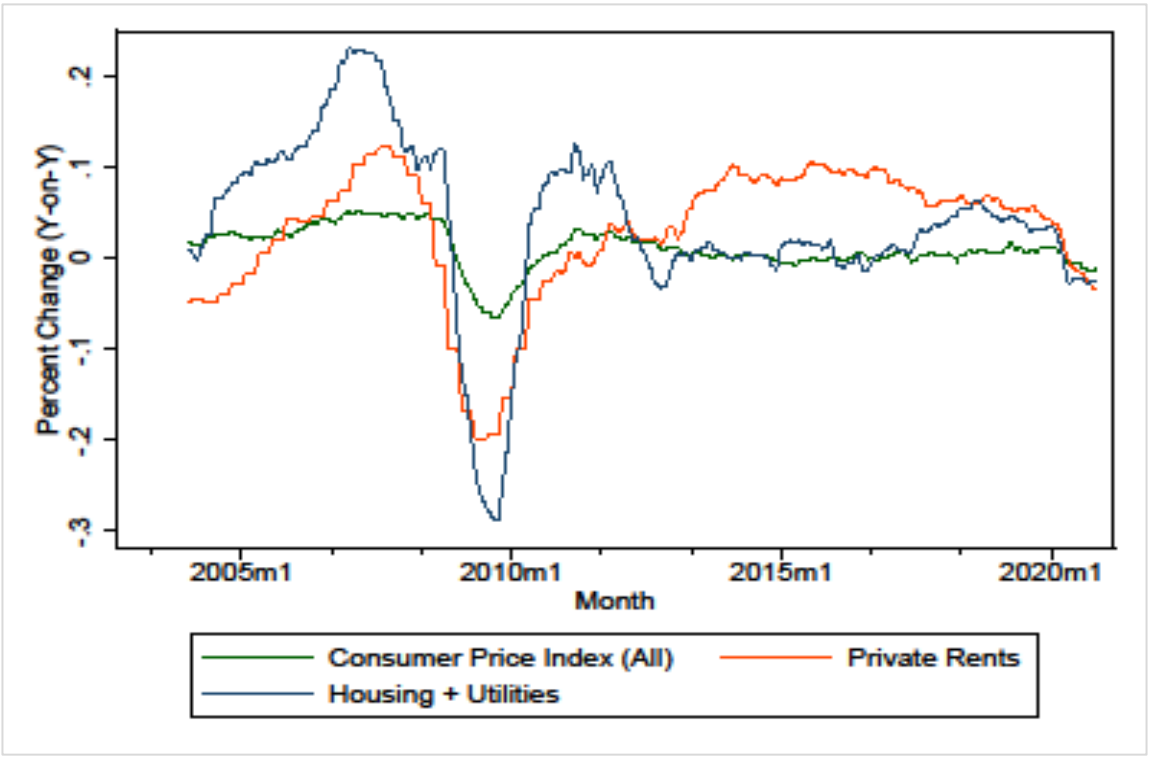
FIGURE 3.1 HOUSEHOLD TENURE IN IRELAND



Source: Central Statistics Office, Census of Population.

The increase in households in the private rental sector occurred during a period with very low levels of housing supply, more restricted credit availability for lower income households (Lydon and McCann, 2017) as well as a strong recovery in household formation (through net migration and natural increase). Indeed, net migration increased substantially up to 2019 (Bergin and Garcia-Rodriguez, 2020). Demand-side pressures remained high with an improving labour market in the crisis recovery period. The confluence of these factors led to a rapid rise in private rental prices from 2012 onwards which considerably outweighed general price inflation. This can be seen using data from the CSO comparing general consumer price inflation with the sub-series for private rents and overall housing and utilities costs (Figure 3.2). The trend in new rents as measured by the ESRI/RTB Rent Index also shows a rapid increase in rental prices.

FIGURE 3.2 INFLATION TRENDS IN IRELAND: OVERALL AND HOUSING SERIES



Source: Central Statistics Office, Consumer Price Index.

A consequence of the increased rental prices was an exacerbation of existing affordability challenges for rental households, in particular low-to-middle-income households in urban areas. Two recent studies of housing affordability pressures (Corrigan et al., 2019; O'Toole et al., 2020) document the high share of renting households facing high housing costs; approximately one-in-three private renters who were not in receipt of state housing supports prior to the onset of the COVID-19 pandemic were classed as having insufficient income after housing costs to afford a standard basket of goods and services. In an international context,

research has shown that the absolute level of housing cost in Ireland is high with middle income renters facing high housing costs. This is common to other countries and part of a more global issue of high housing cost challenges for particular cohorts of the population (Kelly et al., 2021).

3.2.2 Rent stabilisation measures: The introduction of Rent Pressure Zones

To address the rapid rise in private rents, a system of 'Rent Pressure Zones' was introduced as part of the Planning and Development (Housing) and Residential Tenancies Act 2016. The system aimed to provide a short-term rent predictability – or rent certainty – brake on the market by limiting the allowable price growth for tenancy contracts to 4 per cent per annum in designated areas.[10] Both new and existing tenancies were subject to the price cap (a second-generation type measure limiting both within and between tenancy price growth). Areas where the rental levels were high and growing rapidly could be classified as RPZs. RPZs could be designated at either the local authority or local electoral areas and assignment as an RPZ was to be for an initial period of three years. Exemptions to the 4 per cent cap were available for new supply (new builds and new to market properties) as well as those properties which had undergone a major renovation, upgrade, or energy efficiency transformation.

To be designated as an RPZ, an area must pass the following conditions:

- The average rent in an area must be greater than the average national standardised reference rent; and
- The annual rate of rental inflation must be 7 per cent or more in four of the past six quarters.

The data against which these criteria are assessed are produced on a quarterly basis by the RTB and the ESRI for all local electoral areas in Ireland. These indices are developed using hedonic modelling of all registered new and renewal tenancies listed with the RTB (see Lawless et al., 2018).

When the policies were initially deployed, a single national average standardised reference rate was used: the standardised average national rate from the ESRI/RTB Index. Since summer 2019, three different standardised average rents are now used as a reference rate when assessing areas:

---

10 Recent changes to the calibration of the regulations as of July 2021 index the maximum allowable increase in RPZ areas to the Harmonised Index of Consumer Prices (HICP). Discussion around the calibration of maximum rental price growth ceilings is provided in Chapter 5.

- Dublin areas are compared to the national standardised average rent;
- The 'Greater Dublin Area' (Kildare, Meath, Wicklow) – excluding Dublin – is now compared to the national standardised average rent excluding Dublin; and
- The rest of the country – areas outside the 'Greater Dublin Area' and Dublin – are compared to an outside GDA standardised average rent.

Initially, at the end of December 2016, Cork City Council and the four Dublin local authorities were classified as Rent Pressure Zones. At the end of January 2017, the three Galway City LEAs were classified along with 9 other LEAs in Kildare, Cork County, Meath and Wicklow. Four further LEAs were classified in 2017 (Cobh, Maynooth, Drogheda, and Greystones). No further classifications took place until March 2019, when Navan and Limerick City East were designated.

Following the reference rate change in July 2019 for the level indicator outlined above, a large number of additional LEAs were designated as RPZs having passed the new criteria. Most of these classifications took place in the urban centres in Limerick, Waterford, Kilkenny and the Dublin, Cork and Galway commuter areas. A full listing of all LEAs and the dates when they were classified can be found on the RTB website.[11]

For the rest of this report, in a similar vein to O'Toole (2021), we group LEAs into two categories based on the date at which they were designated. We determine *Group 1: 2017* RPZs as the LEAs which were classified in 2017 as well as the LEAs in Cork City and Dublin which were designated at the local authority level in late December 2016. We determine *Group 2: 2019* RPZs as all those RPZs which were classified post the criteria change in 2019 as well as Limerick City East and Navan which were classified at the end of the previous quarter (28 March 2019). This allows us to separate out the analysis into these two distinct groupings where it is informative to do so.

It is also noteworthy to explore the share of tenancies that were covered by the regulations. When the initial classifications were introduced covering Dublin and Cork City in December 2016, the share of tenancy registrations was approximately 53 per cent (based on our research sample). This indicates that one in every two new or renewal tenancies was in an RPZ at that time. This increased to over 70 per cent in Q3 2019 when the Group 2 additional areas were covered by the regulations, thus seven in every ten new and renewal tenancies were covered by RPZ status by mid-2019.

11 For more information see: www.rtb.ie.

3.3 OVERVIEW OF INFLATION TRENDS IN RENT PRESSURE ZONES

To begin our analysis of the trends in inflation around the introduction of Rent Pressure Zones, we first provide some simple summary statistics focusing mainly on the national picture, as well as the larger urban areas. Our exploration of the trends will attempt to compare, within county, between RPZs and non-RPZ LEAs if such comparisons are available (this is not possible in Dublin for example as all Dublin LEAs were classified as RPZs at the same time). We break out the analysis by the following summary groups:

- National – Overall;
- National – Groups: RPZs versus non-RPZs;
- Dublin;
- Cork;
- Galway;
- Limerick; and
- Waterford.

The data used in this section of the report are taken from the quarterly RTB/ESRI Rent Index. The data are hedonically transformed LEA level information which were extracted from the Q4 2020 iteration of the Rent Index.[12] The dataset contains indices, growth rates (quarter-on-quarter and year-on-year), and standardised average rents. In this analysis, we present only year-on-year growth rates as these are the most directly affected variable in terms of the 4 per cent annualised cap in the regulations. For this analysis, any aggregations above the LEA level are compiled as weighted averages from the LEA figures. The weights are taken as the share of observations per LEA in each quarter.

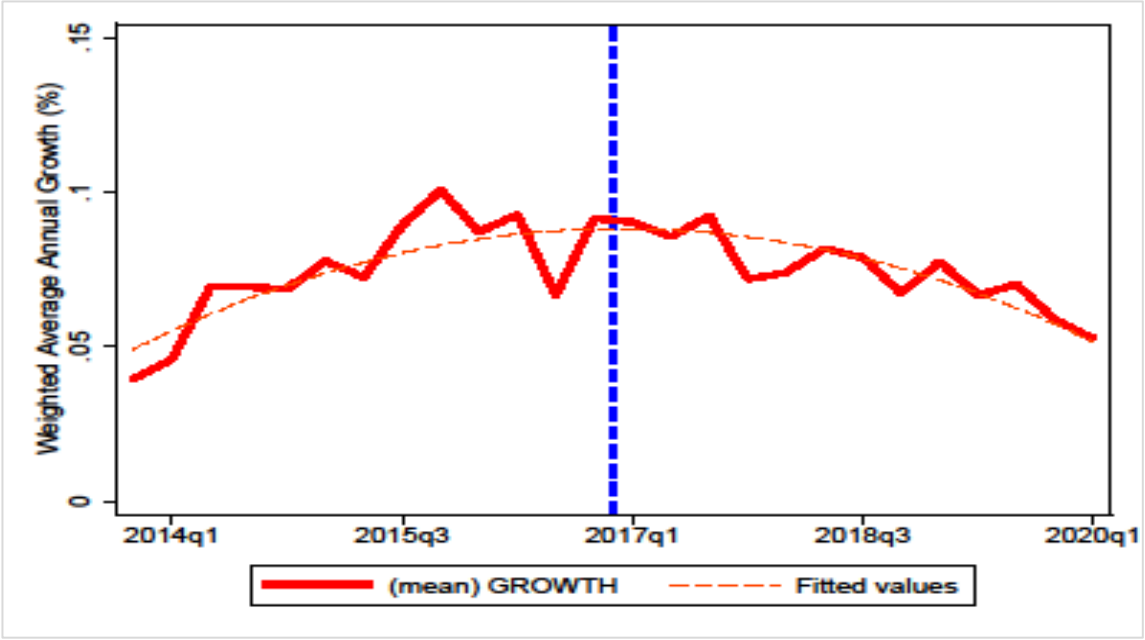
The overall trend in rents is outlined in Figure 3.3. The weighted average year-on-year growth rate in rents is presented on a quarterly basis as well as a very simple quadratic fitted trend line to remove some of the volatility. The timing of the introduction of the first RPZs, covering Cork and Dublin, is depicted with the blue dashed line. We have cut off the analysis of trends after Q1 2020 as, with the onset of the COVID-19 pandemic, emergency measures were introduced which placed further limitations on rental inflation nationwide. Any assessment of trends past

12 Hedonic transformation in this context is where the rental price data for each property are regressed on a series of property-type, geographic and other controls and a set of time dummies. The time dummies capture the variation over time holding constant all the control variables and thus control for changing structural features of the properties in the sample over time. The coefficients on these time dummies therefore capture the adjusted inflation rate which extracts from property features.

this point would therefore be affected by these policies and could not be linked directly to the RPZ regulations.

The average rate of inflation just before the introduction of RPZs was between 8 and 9 per cent but reached above 10 per cent in particular quarters. Focusing on the trend either side of the introduction of the policies, there does appear to be a drop in the rate of inflation that is associated (or concurrent) with the introduction of the rules. It should be noted that the upward trend in price inflation had been stabilising just before the regulations but at a high level. It should not be inferred that this change in the trend is solely caused by the policies using this metric. This is something we will return to later in this chapter.

FIGURE 3.3 TREND IN NEW RENTS – OVERALL



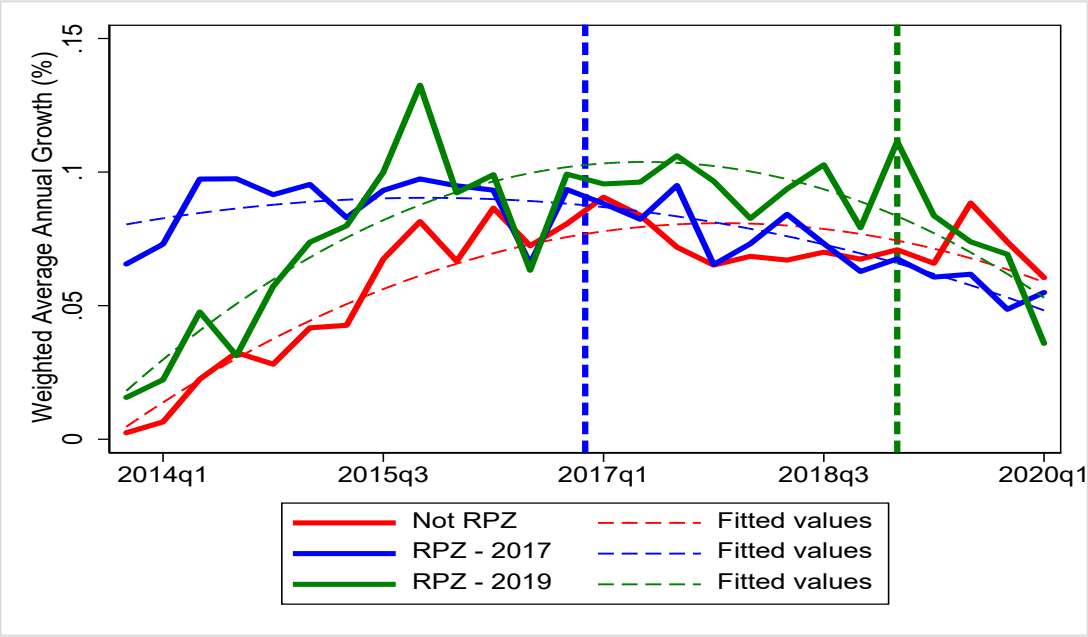
Source: Authors' analysis of underlying LEA data. Series presents a weighted average of the LEA data across the 166 LEAs using the Q4 2020 RTB/ESRI Rent Index dataset. The series includes new and part IV renewal tenancies and is hedonically transformed as part of the index.

To provide further insight into the trend growth rate, we disaggregate the change in the trend growth rates, splitting the data into three groups of LEAs: 1) the Group 1 2017 RPZs; 2) the Group 2 2019 RPZs; and 3) the LEAs that have never been an RPZ. Figure 3.4 provides a good insight into the relative change in the trends. For ease of review, we have included vertical lines for the first period in

which an LEA was classified as an RPZ in each group (end of Q4 2016 for Group 1 and start of Q3 2019 for Group 2).[13]

It is clear the trend growth rate in the Group 1 LEAs began to moderate after the introduction of the regulations whereas the growth rate of Group 2 LEAs, which were not RPZs at that point in time, did not moderate in a meaningful manner until after they were classified in 2019. It must be noted that in the period 2017 to 2019, these Group 2 LEAs are likely to be the better control group to explore the differing impact between Group 1 and Group 2, as these are mostly located in more urban areas and many are close to the Group 1 LEAs in economic (and spatial) terms. Focusing on the group of LEAs which have never been classified as RPZs, the growth rate in this group grew rapidly leading up to the onset of the RPZ policies but stabilised and moderated somewhat afterwards. Any moderation in this group is not due to the regulations and may be reflective of the economic conditions in these areas.

FIGURE 3.4 TREND IN NEW RENTS – SPLIT OUT BY RPZ GROUP



Source: Authors' analysis of underlying LEA data. Series presents a weighted average of the LEA data across the 166 LEAs using the Q4 2020 RTB/ESRI Rent Index dataset. The series includes new and part IV renewal tenancies and is hedonically transformed as part of the index.

3.3.1 A regional deep dive

To provide a more in-depth regional examination of the rental trends, we break down the analysis by different geographic areas for the main urban centres in

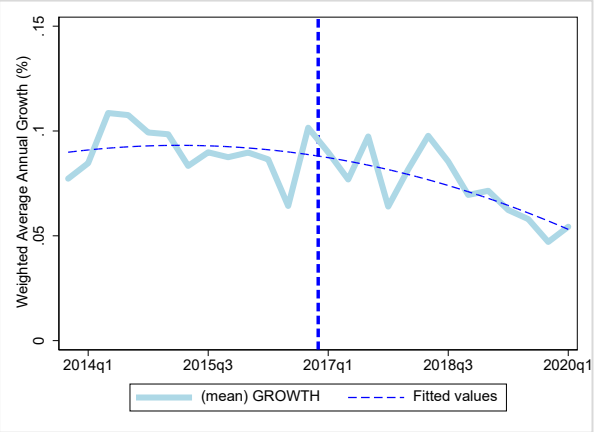
[13] 28 March 2019 was the date of classification of the first two LEAs in this group. We use the marker to denote the second quarter of 2019 as this is likely the first period where the changes in growth rates would be operationalised on the ground.

Ireland. We begin with Dublin. Figure 3.5 presents the trend for Dublin overall and a fitted quadratic trend for each of the four local authorities. It is clear the moderation seen in all RPZ areas after the introduction of the regulations in late 2016 is mirrored in Dublin. However, with Dublin, the pre-regulation trend appears to have been high but stable in the period before the regulations were introduced.

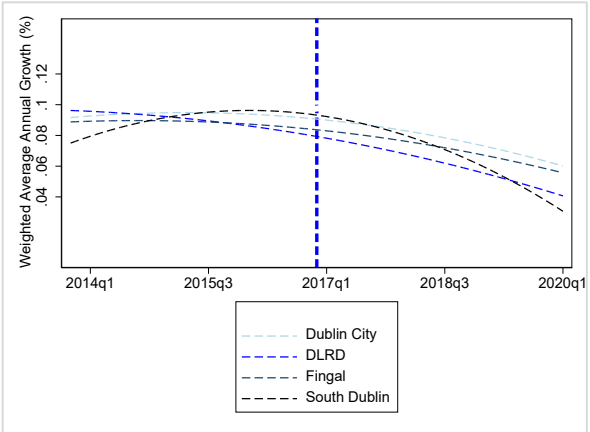
To provide more insight within Dublin, Figure 3.5(b) presents a quadratic fitted trend for each of the four Dublin local authorities. The area growth rates are averaged across each LEA (using the current boundary definitions) and weighted by the number of observations in each LEA. The trend analysis suggests that for Dun-Laoghaire Rathdown (DLRD), a downward trend in rental inflation was evident before the introduction of the regulations and this continued afterwards. For Dublin City and Fingal, the trend inflation dropped after the regulations. For South Dublin, the change in the trend is very evident as the growth rate peaked and reduced with a close association to the timing of the regulations.

FIGURE 3.5 TREND IN NEW RENTS – DUBLIN

(a) Overall Dublin



(b) Local authority trends



Source: Authors' analysis of underlying LEA data. Series presents a weighted average of the LEA data across the 166 LEAs using the Q4 2020 RTB/ESRI Rent Index dataset. The series includes new and part IV renewal tenancies and is hedonically transformed as part of the index.

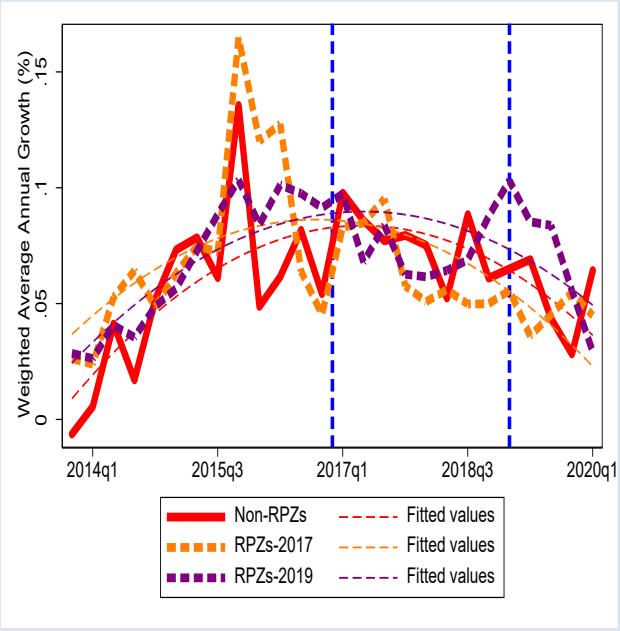
Figure 3.6 presents the trends in LEAs in Cork city and county by RPZ status. Cork provides a useful setting in which to analyse the RPZ legislation as, within the county boundary, there are LEAs which were classified as RPZs in Group 1, in Group 2 and LEAs that have never been RPZs. Figure 3.6 also presents the breakdown of the different LEAs in Cork and provides their RPZ status. Focusing first on the trend in the LEAs that were classified in Group 1 (orange line), these had very rapid growth rates in the period just preceding the introduction of the RPZ regulations and a clear moderation is evident since this period. For the Group 2 LEAs (purple dashed line), these LEAs had rapid growth rates in the period before 2017. They also experienced a moderation after the introduction of the RPZs, but this would not be related to the rules as these areas had not yet been classified.

This points towards a generalised slowdown, related to broader economic conditions, which is not unexpected given the very rapid growth rates that just preceded this period. However, it is noteworthy that this slowdown was only temporary in nature and growth rates began to rise again for this group and only began to drop after their own classification as RPZs in 2019. The trend in the non-RPZs (red line) appears to have moderated during the period after 2017.

FIGURE 3.6 TREND IN NEW RENTS – CORK CITY AND COUNTY BY RPZ GROUP

Overview of Cork LEAs and RPZ Status	
Name	RPZ Status
BANDON- KINSALE LEA-6	Group 2
BANTRY-WEST CORK LEA-4	Not
CARRIGALINE LEA-6	Not
COBH LEA-6	Group 2
CORK CITY NORTH-EAST LEA-6	Group 1
CORK CITY NORTH-WEST LEA-6	Group 1
CORK CITY SOUTH CENTRAL LEA-6	Group 1
CORK CITY SOUTH-EAST LEA-6	Group 1
CORK CITY SOUTH-WEST LEA-7	Group 1
FERMOY LEA-6	Group 2
KANTURK LEA-4	Not
MACROOM LEA-6	Group 2
MALLOW LEA-5	Group 2
MIDLETON LEA-7	Group 2
SKIBBEREEN-WEST CORK LEA-5	Not

Overview of Trends by LEA Group



Source: Authors' analysis of underlying LEA data. Series presents a weighted average of the LEA data across the 166 LEAs using the Q4 2020 RTB/ESRI Rent Index dataset. The series includes new and part IV renewal tenancies and is hedonically transformed as part of the index.

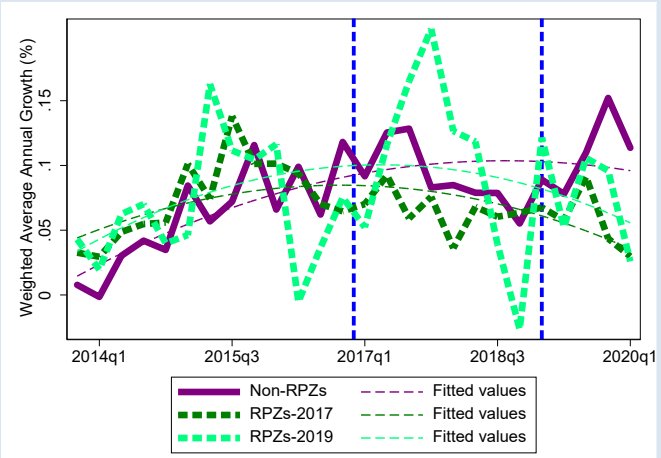
Figure 3.7 presents a similar trend analysis for Galway (city and county) to that presented for Cork city and county. Like Cork, Galway has LEAs that were classified in Group 1 and Group 2 as well as LEAs that have never been RPZs. The LEA names and their status is presented in Figure 3.7. The trend in the LEAs that were classified in Group 1 (dark green dashed line) had very rapid growth rates until the middle of 2015 and began to moderate in the period just prior to the introduction of the regulations. This clear moderation continued in the period since the RPZ status was designated. These findings suggest the market growth rates had begun to lower before the regulations. For the Group 2 LEAs (mint colour dashed line), these LEAs had rapid growth rates just after 2017. These areas were not RPZs at this stage. However, it must be noted considerable volatility in the trend is evident on a quarterly basis. This may relate to patterns in registrations, likely linked to the demand for third-level college places or other factors. However, the year-on-year nature of the inflation should have controlled for overall seasonal effects. The trend in the 2019 (Group 2) RPZs is very volatile. The trend in the non-RPZs (purple line) appears to have moderated during the period after 2017 but rose again after

the Group 2 LEAs were classified as RPZs. This could be suggestive of a spillover or anticipation effect but would need further analysis.

FIGURE 3.7 TREND IN NEW RENTS – GALWAY CITY AND COUNTY BY RPZ GROUP

Overview of Galway LEAs and RPZ Status	
Name	RPZ Status
ATHENRY-ORANMORE LEA-7	Group 2
BALLINASLOE LEA-6	Not
CONAMARA NORTH LEA-4	Not
CONAMARA SOUTH LEA-5	Not
GALWAY CITY CENTRAL LEA-6	Group 1
GALWAY CITY EAST LEA-6	Group 1
GALWAY CITY WEST LEA-6	Group 1
GORT-KINVARA LEA-5	Group 2
LOUGHREA LEA-5	Not
TUAM LEA-7	Not

Overview of Trends by LEA Group



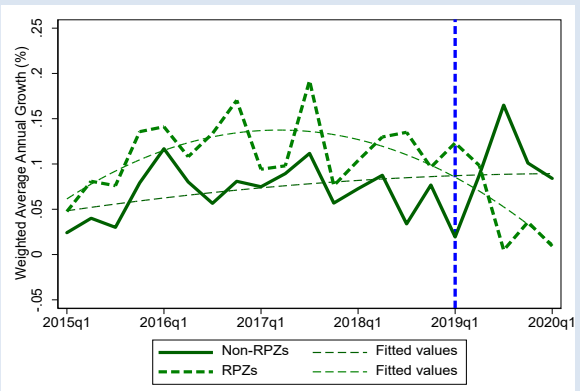
Source: Authors' analysis of underlying LEA data. Series presents a weighted average of the LEA data across the 166 LEAs using the Q4 2020 RTB/ESRI Rent Index dataset. The series includes new and part IV renewal tenancies and is hedonically transformed as part of the index.

Figure 3.8 presents the trends in the growth rate for RPZ and non-RPZ areas in Limerick city and county. Both areas share a very similar trend of high rates of inflation in the period before the classification and it is very clear a reduction is evident in RPZ areas after the introduction of the regulations.

FIGURE 3.8 TREND IN NEW RENTS – LIMERICK CITY AND COUNTY BY RPZ GROUP

Overview of Limerick LEAs and RPZ Status	
Name	RPZ Status
ADARE-RATHKEALE LEA-6	Not
CAPPAMORE-KILMALLOCK LEA-7	Not
LIMERICK CITY EAST LEA-7	Group 2*
LIMERICK CITY NORTH LEA-7	Group 2
LIMERICK CITY WEST LEA-7	Group 2
NEWCASTLE WEST LEA-6	Not

Overview of Trends by LEA Group



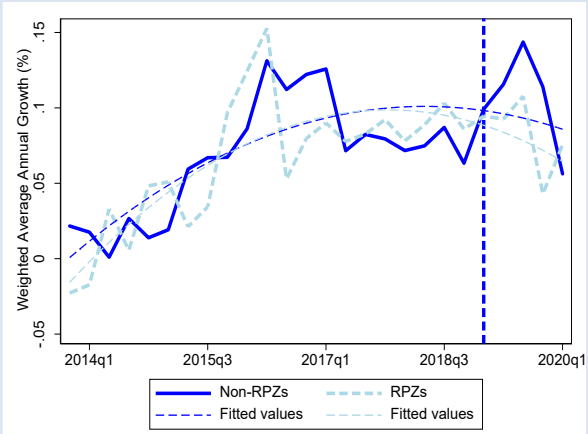
Source: Authors' analysis of underlying LEA data. Series presents a weighted average of the LEA data across the 166 LEAs using the Q4 2020 RTB/ESRI Rent Index dataset. The series includes new and part IV renewal tenancies and is hedonically transformed as part of the index. * denotes qualification just before the criteria change at the end of March 2019.

Figure 3.9 presents the trends in the growth rate for RPZ and non-RPZ areas in Waterford city and county. Both areas share a very similar trend of high rates of inflation in the period before the classification and it appears there is a divergence of the trend following the classification of two areas in the city in 2019.

FIGURE 3.9 TREND IN NEW RENTS – WATERFORD CITY AND COUNTY BY RPZ GROUP

Overview of Waterford LEAs and RPZ Status	
Name	RPZ Status
DUNGARVAN LEA-6	Not
LISMORE LEA-3	Not
PORTLAW-KILMACTHOMAS LEA-5	Not
TRAMORE-WATERFORD CITY WEST LEA-6	Not
WATERFORD CITY EAST LEA-6	Group 2
WATERFORD CITY SOUTH LEA-6	Group 2

Overview of Trends by LEA Group



Source: Authors' analysis of underlying LEA data. Series presents a weighted average of the LEA data across the 166 LEAs using the Q4 2020 RTB/ESRI Rent Index dataset. The series includes new and part IV renewal tenancies and is hedonically transformed as part of the index.

3.4 EVENT STUDY ANALYSIS

The second component of our empirical analysis is to conduct a simple event study analysis. This technique is suitable to account for the time varying assignment property of the RPZs, whereby different areas were classified as RPZs at different points in time. This difference in the timing of the policy designation makes it difficult to produce consistent trends for classified and non-classified areas.

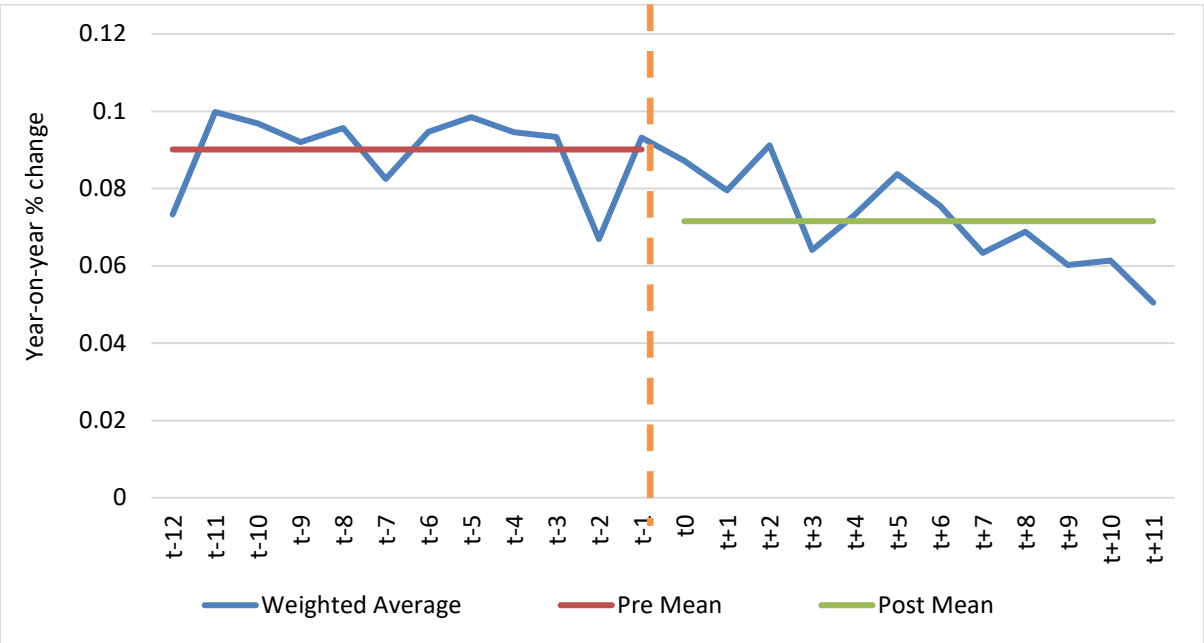
The aim of the event study is to consider the growth rates in rents for a similar time window for each area before and after the areas were qualified, regardless of the calendar date the area was classified. To provide a simple event study comparison, one would compare the level of inflation for a specified period before and after qualification as an RPZ, with the qualification set at 0 for each RPZ at the time of assignment. For example, take Ashbourne LEA which qualified in January 2017 and Drogheda LEA which qualified in September 2017. Comparing the impact on these two LEAs simultaneously is complicated due to the differing timing of the designations. An event study treats as the base quarter (indicated by *t*0) the quarter in which each LEA is designated and then takes an average of the inflation rates at this point across all RPZs. Period *t*+1 then is one period after qualification, *t*-1 is the quarter before qualification. These techniques are useful as they can

depict a sharp or gradual change centred on the policy introduction. However, they are also not to be interpreted in a causal manner (see O'Toole et al., 2021).

For the purposes of this analysis, we split the event study into the two RPZ groups. This is mainly done to allow a longer analysis to be completed for the 2017 Group 1 LEAS which have at least 12 quarters of data after their qualification, while the Group 1 LEAs which qualified around the third quarter of 2019, only have three quarters of data before the onset of the COVID-19 pandemic (which mainly began to have an economic impact during Q2 2020).

Figure 3.10 presents the event study for the Group 1 RPZs. The period provided is 12 quarters before and 12 quarters after the introduction of the regulations; *t*0 is the first period in which the regulations were fully operational. Below the figure we also provide the average across all LEAs for the 12 quarters before (the red line in the figure) and for the 12 quarters afterwards (green line in the figure). No real change in the trend growth rate occurred before the 'event' indicating a degree of market stability before the policy was introduced. After the introduction of RPZs, there was a gradual reduction in the trend growth rate. However, the effects are not dramatic, rather a slow moderation is evident. The difference in the averages is just under 2 percentage points.

FIGURE 3.10 EVENT STUDY FOR GROUP 1 RPZS – 12-QUARTER WINDOW

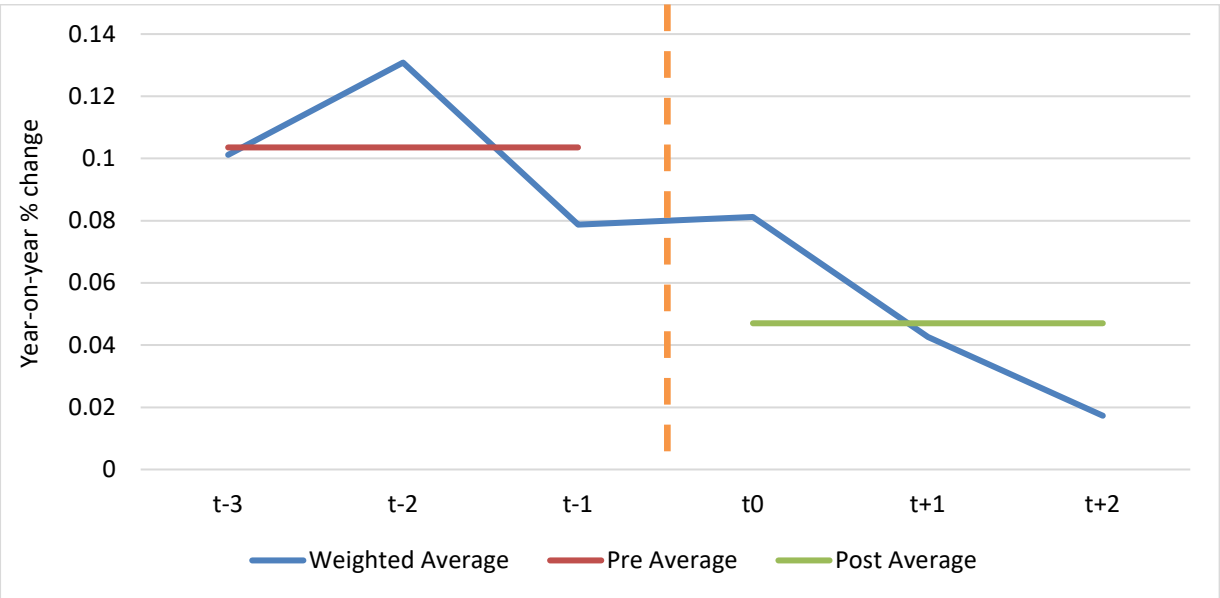


	Average Before %	Average After %	Difference %
Group 1 – 2017*	9.0	7.2	-1.8

Source: Authors' analysis of underlying LEA data. Series presents a weighted average of the LEA data across the 166 LEAs using the Q4 2020 RTB/ESRI Rent Index dataset. The series includes new and part IV renewal tenancies and is hedonically transformed as part of the index.

Figure 3.11 presents a similar event study for the Group 2 RPZs. Three periods post qualification (*t*0,…,*t*+2) are compared to three periods before qualification (*t*-3,…,*t*-1). While this is a much shorter time frame compared to the previous figure, a drop in the inflation rate within the nine months after receiving the RPZ status is clear. It must be noted that the last period here is Q1 2020 so some effects of the pandemic may be evident in the slowdown of the growth rate in this period (in particular for March 2020).

FIGURE 3.11 EVENT STUDY FOR GROUP 2 RPZS – 3-QUARTER WINDOW



	Average Before %	Average After %	Difference %
Group 2 – 2019**	10.4	4.7	-5.7

Source: Authors' analysis of underlying LEA data. Series presents a weighted average of the LEA data across the 166 LEAs using the Q4 2020 RTB/ESRI Rent Index dataset. The series includes new and part IV renewal tenancies and is hedonically transformed as part of the index.

Notes: * Maximum 12-quarter time window, ** 3-quarter time window.

3.5 ECONOMETRIC TESTING

3.5.1 Outline and methods

While the above event study and trend comparisons can provide some insights into the developments in rental inflation since the introduction of the RPZs, a more formal econometric analysis is useful to ensure the trends identified above are statistically different between the groups and time periods.

In this section, we follow Ahrens et al. (2019) and O'Toole (2021) and undertake a simple difference-in-differences analysis of the impact of the RPZs on the inflation rate by comparing the RPZ LEAs to the non-RPZs. This analysis is conducted at the

LEA level using the Rent Index series, so we assume no further hedonic controls are needed at this phase of the analysis. The full model and controls included in the Rent Index are detailed in Lawless et al. (2018).

We use the following simple difference-in-differences model to explore whether a statistically significant change in the trend is evident:

$$\Delta R_{it} = \alpha_o + \theta_i + \gamma_t + \beta\, RPZ_{it} + \varepsilon_{it} \quad (1)$$

The dependent variable (ΔR_{it}) is the annual rate of inflation for rents in LEA *i* in quarter *t*. The specification we deploy is the difference-in-differences method used in Ahrens et al. (2019). This approach includes a dummy variable for each quarter to ensure all time variation is removed from the specification. It is a more saturated version of the traditional difference-in-differences approach which includes only a single time control for the period after which the policy change occurred. The full dummy variable approach is also required for our analysis as we have a time varying assignment, i.e. RPZs were classified in different periods so it is not possible to simply use a single post-policy dummy. These effects are outlined as γ_t in the specification, Equation (1). We also include LEA level fixed effects, θ_i , again which provide a more saturated specification relative to the traditional treated group dummy. Finally, the key variable is the RPZ indicator which takes the value of 1 if an area has been classified and 0 otherwise (thus it varies overtime within LEA for those which become RPZs). The coefficient on this variable is the critical parameter, β. This captures the difference in the inflation rate between RPZ and non-RPZ areas after the classification as an RPZ. All estimated standard errors are clustered at the LEA level which controls for correlations across observations within each LEA and the regressions are weighted using the share of observations in each LEA in each quarter.

A final modelling choice was the time frame over which the analysis was to be conducted. For the full sample, including all RPZ classifications, we follow Ahrens et al. (2019) and use a symmetric time window choice. As there are 13 time periods from the first classification to the first quarter of 2020, we compare these to the 13 periods before the classification. This gives us an analysis period of Q4 2013 to Q1 2020. It must be noted the choice of time period (either before or after classification) does affect the magnitude of the estimated parameter which is not surprising as the growth rates can differ across LEAs over time, in particular when the financial crisis period dynamics are included in the analysis (from 2008-2013). Our deployment of a symmetric time window attempts to remove judgement from this decision.

3.5.2 Empirical estimates

The results of the difference-in-differences estimates are presented in Table 3.1. Column (1) presents the analysis for the full sample, including all LEAs. Column (2) presents the estimates for the Group 1 analysis only and column (3) contains the analysis for the Group 2 RPZs only. The table provides the estimated coefficient on the RPZ classification dummy. A statistically significant and negative effect is found in all three cases. The overall effect is -0.04, which indicates a moderation in the inflation rate of 4 percentage points in RPZs compared to non-RPZs after designation. The effect is smaller for the Group 1 RPZs, at approximately 2 percentage points. This finding is in line with the previous research (Ahrens et al., 2019; and O'Toole et al., 2021). The effect is larger for the Group 2 RPZs at -0.05; a 5 percentage point drop in the inflation rate for RPZs relative to non-RPZs.

TABLE 3.1 ECONOMETRIC ESTIMATES FROM SIMPLE DIFFERENCE-IN-DIFFERENCE ANALYSIS

	(1) All RPZs	(2) Group 1 – 2017	(3) Group 2 – 2019
RPZ Coefficient	-0.04***	-0.02***	-0.05***
T-stat	-6.27	-5.35	-4.48
LEA Dummies	Yes	Yes	Yes
Time Dummies	Yes	Yes	Yes
Weights	Yes	Yes	Yes
N	4,316	2,988	678
Time Frame	Q4 2013 – Q1 2020	Q4 2014 – Q1 2019	Q4 2018 – Q1 2020

Source: Authors' analysis.
Notes: *** 1 per cent significance level, ** 5 per cent significant level, * 10 per cent significance level.

At this juncture it is important to provide a cautionary note on the full causal attribution of these effects to the regulations alone. There are several confounding factors that may be at play. For example, the economic trends in the RPZ and non-RPZ areas may be different after the policy, in particular for those LEAs which may be remote geographically. Indeed, in a comparison of bordering LEAs, O'Toole et al. (2021) find that the magnitude of the impact falls to circa 1 percentage point, although this study only looked at early classifications and a shorter time frame. Controlling for these economic differences is partly addressed in Chapter 4.

Second, the qualification as an RPZ is dependent on the rate of rental growth.[14] This introduces an endogeneity bias[15] in the results which may conflate the policy impact. For example, if the group of RPZs had a structurally different growth rate or were substantially different in growth terms (as may well be the case as Dublin

[14] In treatment effects terms, the assignment of the status RPZ is not uncorrelated with the dependent variable rent growths, therefore the relationship is endogenous.

[15] Endogeneity bias refers to where the coefficient is larger or smaller than what it should be due to confounding factors etc.

and Cork are the majority of classifications and are likely to have idiosyncratic labour and housing markets), this would both determine whether they become an RPZ as well as affecting the trajectory of their growth rate after classification. For both of these reasons, it is better to consider the above estimates as indicative associations rather than causally determined effects of the RPZ policies. We also address some of these concerns when looking at the distribution of property growth rates in the next sub-section.

One extension of our research which would add a valuable contribution to our understanding of the impact of RPZs in Ireland would be to consider spatial spillover effects. Given the geographic designation of the RPZs, it is possible that classification as an RPZ could lead to spillover effects to neighbouring regions e.g. landlords/tenants in a non-RPZ, neighbouring an RPZ, may change their behaviour in anticipation of future RPZ classification, or else effects on prices or supply in the RPZ lead demand to be shifted across regions putting pressure on prices. These spatial spillover effects may lead to a confounding impact on both the neighbouring and RPZ areas and dampen the possibility of identifying the true effect of the classification. Future research which attempts to address these spatial considerations using appropriate econometric techniques should be explored and would make a valuable extension to our work.

3.6 MICRODATA ANALYSIS OF PRICE DISTRIBUTION IMPACTS

3.6.1 Overview and data

The final component of the review of inflationary impacts of the RPZs is to update some of the empirical analysis contained in Ahrens et al. (2019) and O'Toole et al. (2021) which draws on a property-level sample. This sample was taken from the overall RTB microdata on tenancies by matching properties on the address field and Eircode information to follow the same property over time.

There are a number of benefits to using this property-level sample to explore rental inflation dynamics. First, these data allow an analysis of a property-specific growth rate in rents which provides a much closer review of what is happening to individual pricing decisions following the introduction of the RPZ legislation. Second, these data allow a clear identification of pricing at the 4 per cent cap and the impact of the cap on the price distribution can be shown. Third, the extent of pricing above 4 per cent can also be quantified. Finally, our analysis uses the microdata for the 2019 group of RPZs for the first time, as previous research only focused on the earlier 2017 RPZ classifications.

A detailed overview of the data cleaning and matching strategy can be found in Ahrens et al. (2019) but we provide an abridged version here for information. The full RTB tenancy record extract was taken from the Q4 2020 Rent Index extract. The cleaning rules applied to the previous data were followed. This includes: 1) matching on Eircode for non-multiple Eircode properties; 2) for multiple Eircode properties using sub-address field data to identify the properties and 3) for properties with no Eircode, address strings and local electoral area flags were used. As previously documented, there are numerous missing values in address and Eircode fields, so data are lost. Furthermore, properties which are only identified in the dataset on one occasion are also dropped (as a minimum of two observations are needed to calculate a growth rate). From the initial sample of over 1.3 million observations, this leaves a property-level sample spanning Q3 2007 to Q4 2020 of approximately 530,000 observations. This represents an extra nine quarters worth of data as well as approximately 150,000 extra property-matched observations relative to the previous studies.[16]

There are a number of limitations to the property-level sample that should be kept in mind. First, the RTB data only capture new and part IV renewal[17] registrations. Therefore, taking a property-level sample from these data only focuses on those properties that re-register i.e. have a change in the tenant. Properties where tenancies continue (without becoming part IV) are not represented in this analysis. Indeed, if the RPZ legislation increased the length of leases, and reduced tenant turnover, then the share of properties identified over time could change. Second, the timings between registration observations are not uniform so as in previous research we calculate a compound annualised average growth rate:

$$CAGR_{it} = \left(\frac{rent_{it}}{rent_{it-s}}\right)^{12/(t-s)} - 1 \qquad (2)$$

where s is the time gap between the two tenancy agreements in months.

3.6.2 Distributional analysis of property-level data

For this research, we use the property-level sample to explore two issues. First, we look at the distribution of growth rates to explore the impact of the regulations and whether we observe any change in the price distribution following the classification of areas as RPZs. Second, we explore the extent to which price inflation is still observed above the 4 per cent cap. This analysis is not to be interpreted as an assessment of compliance with the regulations, for example, those properties with growth rates above 4 per cent could well have valid reasons

16 Further details are available from the authors on request in relation to the property sample and other data cleaning aspects. For example, all growth rates at a property level are cut off at +/-500 per cent increase and then a 1 per cent distributional cleaning to ensure good practice around data issues that may skew some individual growth rates.

17 Part IV renewal tenancies are continuing tenancies which must be re-registered with the RTB after four (later six) years.

to do so within the regulatory framework. However, the magnitude of pricing above 4 per cent is useful to consider in terms of the functionality of the scheme.

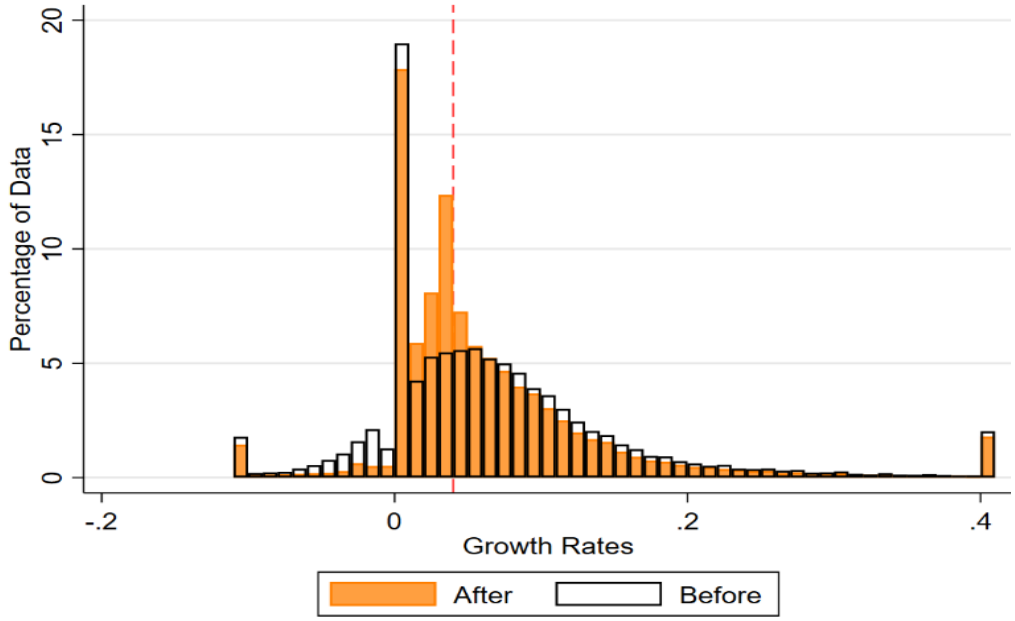
In this analysis, we use the microdata to produce a series of histograms which compare the distribution of growth rates for RPZ areas to a) their own pre-classification growth rates and b) to non-RPZ areas. We present separate analyses for Group 1 RPZs (2017) and Group 2 RPZs (2019).

Figures 3.12 and 3.13 present the distribution of property-level growth rates for: a) Group 1 RPZs for the periods before (Q3 2013 – Q4 2016) and after (Q1 2017 – Q1 2019) qualification for the majority of these areas; and b) Group 2 for the periods before (Q4 2018 – Q2 2019) and after (Q3 2019 – Q1 2020). The dashed vertical orange line indicates the 4 per cent growth rate point on the chart. For both groups, two charts are presented; the first presents the comparison of the RPZ LEAs before and after the introduction of the regulations and the second compares the RPZ LEAS to the non-RPZ LEAs after the regulations.

A number of points are clear from the distributional assessment. First, the regulations have caused a bunching of the distribution to occur at the 4 per cent cap which was not evident before (nor is it evident in the non-RPZ control group). It is clear the regulations are having an impact on the distribution. Second, a drift from high to low growth rates is evident in RPZs after the regulations relative to their pre-regulations position. Third, and similar to Ahrens et al. (2019), there are still a large number of properties with growth rates above 4 per cent on an annualised basis. This is not to be seen as a regulatory compliance assessment, but it does point to a considerable continued pricing above the 4 per cent cap. Finally, as presented in O'Toole et al. (2021), there appears to be drift upwards to the 4 per cent cap from lower points in the price distribution, which indicates that the cap is potentially being used as a reference point or anchor point for pricing decisions.

FIGURE 3.12 PRICE GROWTH DISTRIBUTION AT PROPERTY LEVEL FOR GROUP 1 RPZS

(a) Growth distribution for Group 1 RPZs before and after assignment

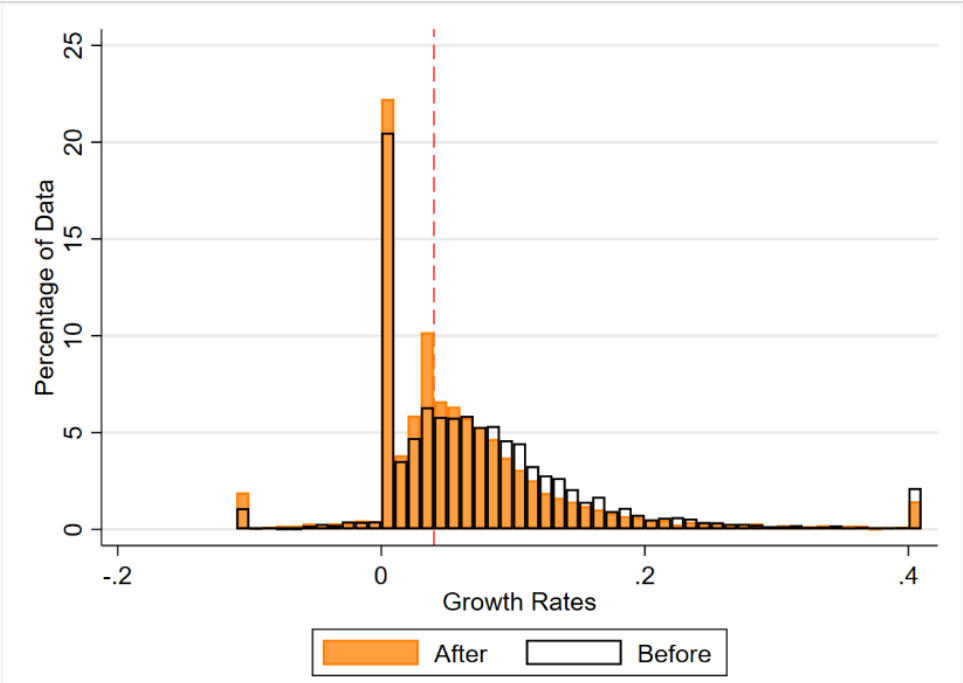


(b) Growth distribution after for Group 1 RPZs and non-RPZs

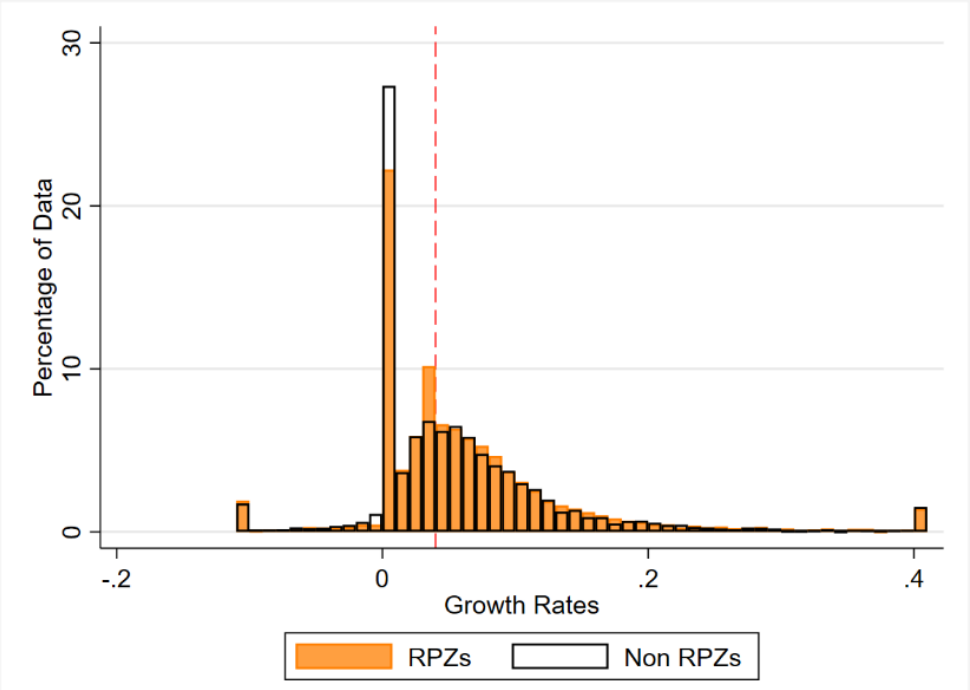
Source: Authors' analysis of RTB property matched sample. Analysis covers the period up to Q2 2019 as noted above.
Note: End points bunched at -0.1 and -0.4 for clarity.

FIGURE 3.13 PRICE GROWTH DISTRIBUTION AT PROPERTY LEVEL FOR GROUP 2 RPZS

(a) Growth distribution for 2019 RPZs before and after assignment



(b) Growth distribution after 2019 for RPZs and non-RPZs



Source: Authors' analysis of underlying LEA data. Series presents a weighted average of the LEA data across the 166 LEAs using the Q4 2020 RTB/ESRI Rent Index dataset. The series includes new and part IV renewal tenancies and is hedonically transformed as part of the index.

Note: End points bunched at -0.1 and -0.4 for clarity.

3.6.3 A deep dive into the high growth rates (above 4 per cent)

It is useful to consider the pricing above 4 per cent for those properties in Rent Pressure Zones for Group 1 and Group 2 LEAs. For this analysis, we can expand our end point to after Q1 2019 for Group 1 LEAs as we do not need a control sample

for comparison charts as was necessary above. We also round all growth rates to the nearest percentage to calculate the share above or below 4 per cent.

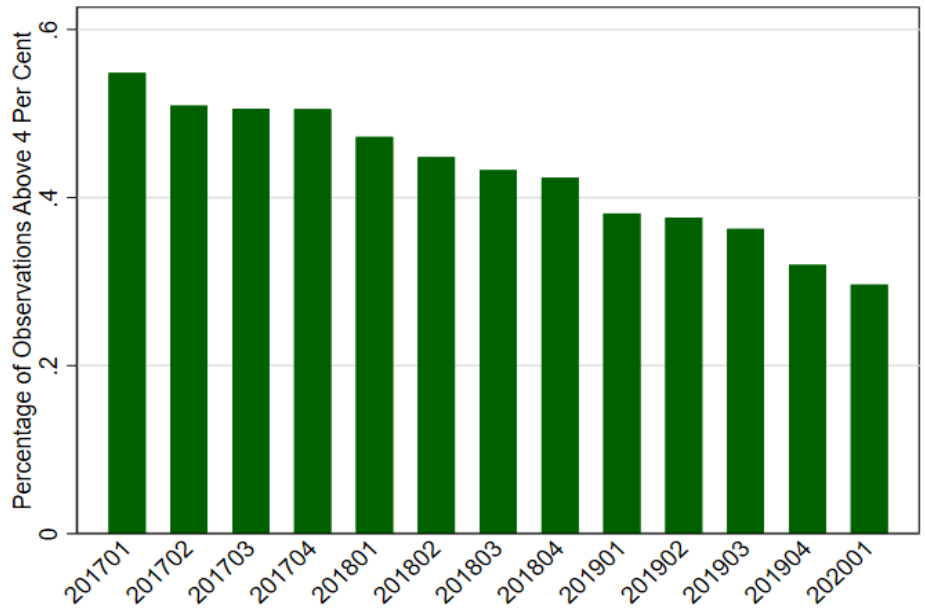
A couple of points on the dataset are worth noting at this juncture. First, this research dataset, which was developed by address matching over time, is not developed to measure compliance with the regulations, therefore any data indicating a growth rate above 4 per cent could be perfectly consistent with the regulations (for example if landlords were using valid exemptions). Given the figures are not developed to directly assess any compliance aspects of the RPZs at the individual property level, they should instead be interpreted as providing indicators of the pricing activity at the property level for the sample of data which we were able to extract from the broader tenancy database. Furthermore, in the broader sample we have here, our calculation of growth rates above 4 per cent captures some properties who we observe before and after the RPZs were introduced. For example, if a property is observed in 2014 and then again in 2019 the CAGR growth rate is calculated between these two points and assigned to 2019. Therefore the compound annual average growth rate which is calculated spans both RPZ and non-RPZs for the same property. Therefore the growth rate could be above 4 per cent due to high growth in the pre-RPZ periods i.e. a high growth rate observed in our analysis may again be due to activity before the regulations and not a non-compliance issue with the regulations. In some data splits below, we provide figures for the sub-sample of data for which we observe a property twice since the RPZs were introduced.

Figure 3.14 presents the percentage of observations above 4 per cent by quarter in the Group 1 RPZs from 2017 to 2020. The share of growth rates above 4 per cent has been trending downwards as rental prices have moderated. The share has decreased from above 50 per cent in 2017 to over 30 per cent at the end of the period. This decline could be due to the regulations or general market price moderation taking place; it is likely to be impacted by both factors. It does however indicate a strong number of growth rates continuing above the regulatory cap during the period in which the regulations were in operation. Panel B provides a similar chart for the Group 2 RPZs, but these areas are only observed for a shorter period as they gained RPZ status at the beginning of Q2 2019.[18]

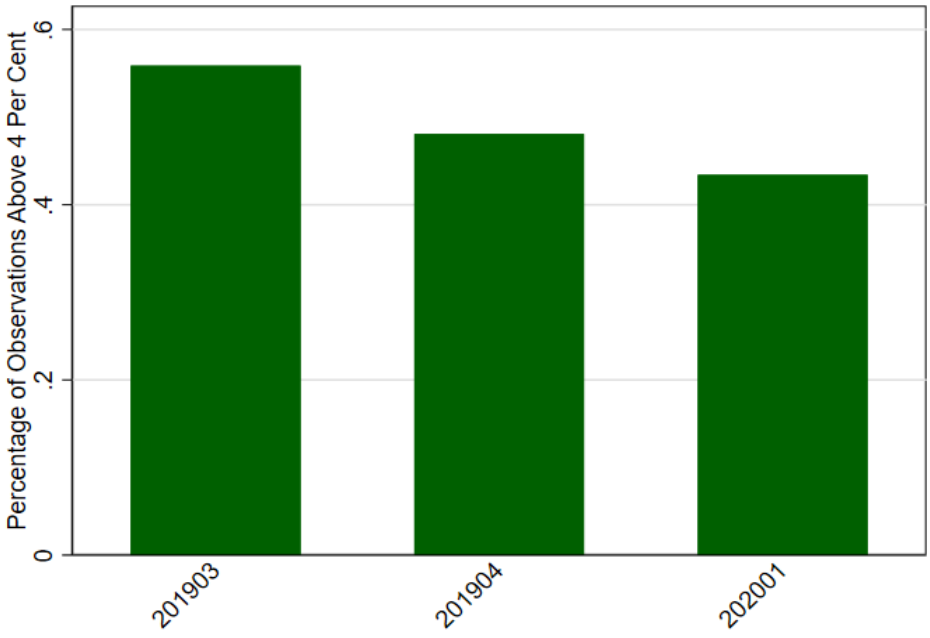
[18] A Limerick LEA was classified at the start of Q2 2019, and we include it in this group for exposition purposes.

FIGURE 3.14 PERCENTAGE OF OBSERVATIONS ABOVE 4 PER CENT BY QUARTER

(a) Group 1 RPZs from Q1 2017 to Q1 2020



(b) Group 2 RPZs from Q3 2019 to Q1 2020



Source: Authors' analysis of RTB property matched sample.

To provide more insight into the magnitude of these effects in terms of observations and properties, Table 3.2 presents the number of observations and properties in RPZs in our sample and the number with a growth rate above 4 per cent. As noted above, the structure of our data could lead to some of the growth above 4 per cent coming from observations predating the RPZ legislation. While the path of growth for these properties is still likely affected by the regulations, a more specific sample is to consider only those properties in which we can observe

two observations after the introduction of the RPZ. The figures for this sample are also presented in Table 3.2. The number of observations falls to a small number for Phase 2 properties as we observe these data for a very short period of time. It does appear that the proportion of properties with a rental growth rate above 4 per cent is lower for the sample after the RPZ start dates than the overall sample. However, this is likely due to many factors which would confound these effects over a long time horizon (for example, the overall sample can have observations dating back to 2007 in its calculation).

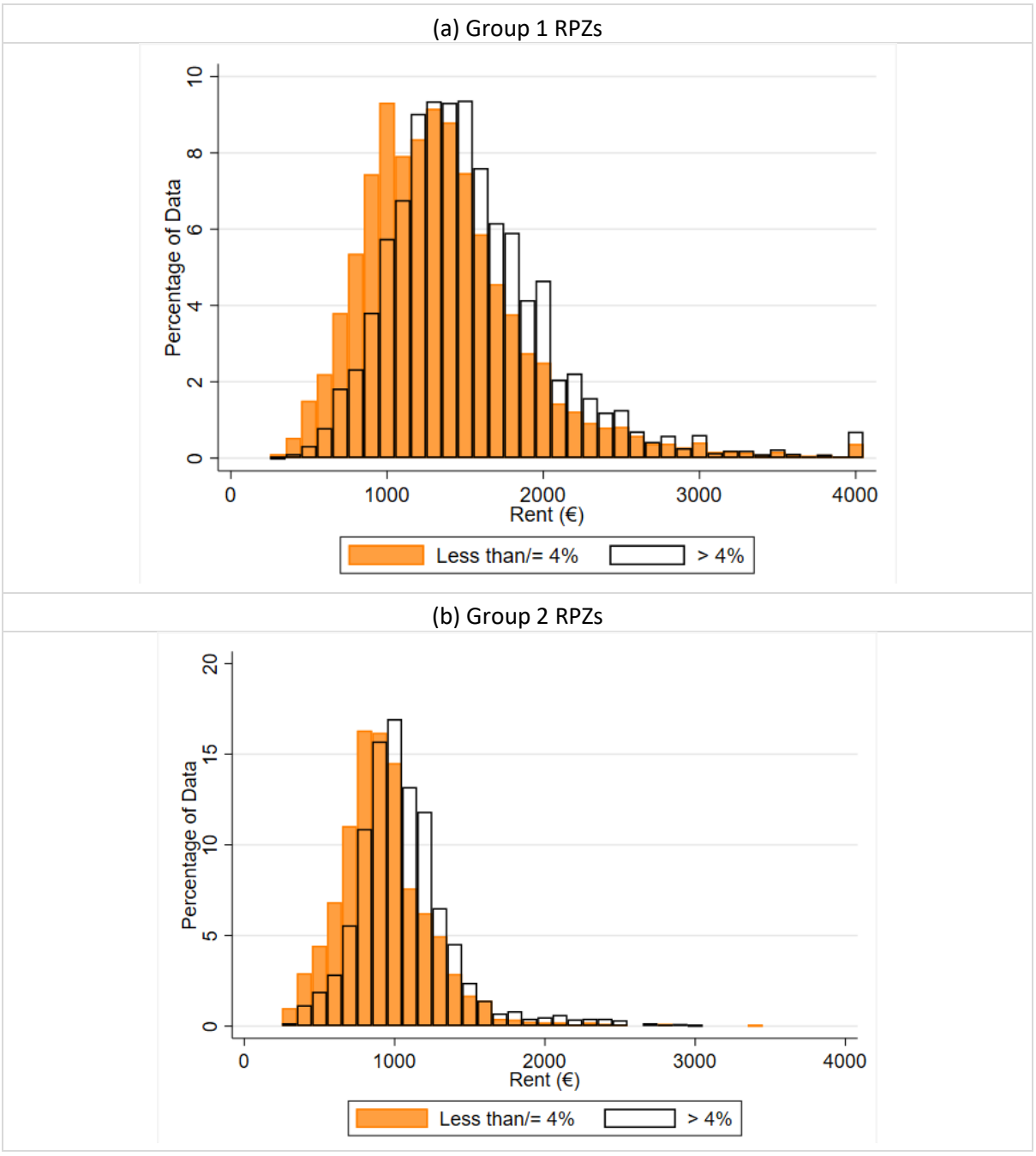
TABLE 3.2 OBSERVATIONS AND GROWTH RATES ABOVE 4 PER CENT

Overall Sample				
	Phase 1 RPZs		Phase 2 RPZs	
	Observations	Properties	Observations	Properties
Total	85,471	73,534	4,928	4,847
Above 4 Per Cent	37,268	35,110	2,426	2,424
% of Total	43.6%	47.7%	49.2%	50.0%
Sample with Previous Observation > RPZ Group Start				
	Observations	Properties	Observations	Properties
Total	17,036	14,912	384	377
Above 4 Per Cent	5,829	5,596	109	109
% of Total	34.2%	37.5%	28.4%	28.9%

Source: Authors' analysis.

The final element included is the level of rents for those growth rates above 4 per cent. It is noteworthy to consider whether the fast-growing rents are also the higher rents in euro level terms. Figure 3.15 presents the price distribution in level terms for two groups of observations: a) those whose growth rate is less than or equal to 4 per cent and b) those whose growth rate is above 4 per cent. It appears for both Group 1 and Group 2 RPZs that the growth rates above 4 per cent are those with the higher level rents in euro terms. This could be driven by numerous factors such as differences in the property types or areas in which the faster growing properties are located.

FIGURE 3.15 PRICE DISTRIBUTION (LEVELS) OF OBSERVATIONS ABOVE AND BELOW 4 PER CENT GROWTH RATES



Source: Authors' analysis of RTB property matched sample.
Note: Observations censored to €250 and €4,000.

3.7 CHAPTER CONCLUSIONS AND RECOMMENDATIONS

The aim of this chapter has been to revisit earlier research considering the trends in inflation since the introduction of Rent Pressure Zones and update this to the present period. This includes the additional quarterly data for RPZs qualified in 2017 as well as a first look at the trends in inflation for the group of RPZs qualified since 2019. A number of key findings emerge from the research:

- A clear downward trend is evident in rental inflation following the introduction of the RPZ legislation;
- There are differing impacts of the RPZ classification by area and by time period. The RPZ areas classified since 2019 have experienced a greater reduction compared to the 2017 RPZ areas (approximately 5 percentage points compared to 2 percentage points), although the period we can analyse post the regulations being applied is much shorter. These effects are evident in both event study analysis and simple difference-in-differences models;
- It does appear that the RPZs have provided a stabilising mechanism in the Irish rental sector for those areas which were designated. However, not all of the change is likely to be a causal effect of the rules and our analysis cannot be definitive on the causation due to the econometric identification strategy. Some non-RPZ areas also experienced a decline which suggests a component can be linked to broader economic conditions; and
- Property-level microdata allow us to consider the impact of the regulations on individual growth rates. It is clear that RPZs have had an impact on the distribution of pricing as peaks at 4 per cent have been identified. There continues to be a considerable number of growth rates above 4 per cent. It is not possible with these data to identify whether these are valid under the regulations or if these point towards non-compliance.

The analysis in this research focuses only on the impact on observed inflation rates. Rent controls are likely to impact a range of other factors such as supply, maintenance, tenant mobility and incumbency, which are often cited as negative externalities of the policies. If the data gaps could be bridged to assess these issues, the impact of the regulations on these factors may point to drawbacks from the regime. Future research should focus on identifying these channels in an Irish context.

CHAPTER 4

Rental prices, economic fundamentals and recovery scenarios

4.1 INTRODUCTION

The analysis presented in Chapter 3 shows a clear downward trend is evident in rental inflation following the introduction of the RPZ legislation. From this analysis alone it is not possible to conclusively infer a causal relationship due to potential confounding factors such as changing trends in key economic variables across RPZ and non-RPZ areas after the introduction of the RPZ legislation.

In this chapter we therefore seek to empirically examine the relationship between rental inflation and the adoption of Rent Pressure Zones (RPZ) in early 2017 at the macroeconomic level and attempt to control for changing economic conditions, which could lead to aforementioned confounding factors. We wish to examine whether the introduction of the Rent Pressure Zone policy actually had an impact on rental inflation. In order to do this, we use a series of macroeconomic models to examine the impact of Rent Pressure Zones in the context of how key economic and rental market variables evolved during this period. This allows us to better isolate and identify the impact of RPZs on rental inflation. This analysis can be thought of as a macroeconomic complement to the microdata analysis presented in Chapter 3.

Using these models, we also wish to examine how rental inflation is likely to evolve in the aftermath of the present pandemic in the absence of any rent controls. This involves conducting a series of exercises where the growth rate in rents is projected forward given a series of likely movements in key economic and rental market variables.

4.2 AN ECONOMIC MODEL OF RENTAL INFLATION

Typically, in the housing literature, when rent levels or growth rates are examined, they are done so in the context of house price movements. The house price to rent ratio is frequently examined, for example, as an indicator of stability or otherwise in housing markets; the ratio is examined in the context of the user cost of capital and the equilibrium or otherwise of the ratio is assessed (see McQuinn et al., 2021, and Cronin and McQuinn, 2016, for recent applications in an Irish context.)

In the empirical literature, fewer examples of specific rent level models are available. Where examples do exist, the specifications are somewhat similar to that of house prices in that rent levels are a function of ‘fundamental’ economic

variables such as income levels and interest rates. Coleman and Scobie (2009) is a particular example of such a specification.

Therefore, in the present context, we seek to specify such a model. By capturing the relevant economic determinants of rental inflation, we will be able to separately identify the impact of a policy measure such as RPZs. The specification of such a model is also heavily influenced by the data which are available. We use the LEA level data from the RTB/ESRI Rent Index as used in Chapter 3. These panel data provide us with both the standardised rents and the number of tenancy agreements across 166 local electoral areas (LEA) on a quarterly basis over the period 2007 to the present.

In addition to the rental and tenancy data available at a LEA level; we also add a county level estimate of unemployment. This is our main determinant of economic activity in the model; while it would be preferable to have such data available at a LEA level, no such indicator of economic activity is available from such a granular perspective (the manner in which the county level estimate of unemployment is calculated is detailed in McQuinn et al., 2021). However, in Ireland, given the small size and proximity of the LEAs, it is likely that county-level employment is a good proxy for what is happening at the LEA level.

We arrive at the final empirical specification:

$$r_{it} = \alpha + U_{it} + T_{it} + \sum_{i=1}^{166} D_i + \epsilon_{it} \quad (3)$$

Where r_{it} is the log of the rent level in the *i*th LEA at time *t*, U_{it} is the log of the unemployment rate for the county the LEA is in and T_{it} is the log of the number of tenancy agreements for the individual LEA. Separate individual dummy variables are included for each LEA. The number of tenancy agreements is included to capture supply-side effects in the model; the greater the supply of tenancies in an LEA, ceteris paribus, the more likely it is to result in lower rent levels. As such the model is a 'fixed effects' model which captures the fact that each LEA is significantly different to each other. This difference between the LEAs is then captured in the subsequent model estimates.

Model (3) is for rent levels, however we also estimate a model for the growth rate or rental inflation:

$$\Delta r_{it} = \beta\, ECM_{t-1} + \sum_{j=1}^{4} \Delta r_{it-i} + \sum_{k=1}^{4} \Delta U_{it-k} + \sum_{L=1}^{4} \Delta T_{it-L} + \in_{it} \quad (4)$$

This model is referred to as an error correction model in that it allows information from the model in (3) above to influence the growth rate of rents; if actual rental

levels are greater (less) than the suggested solution from (3), than this will have a negative (positive) impact on rental inflation rates in Model (4). This term is called the error correction term (ECM). The ECM term is the residual from Equation (3). This is then lagged one period when included in the model in (4). The other variables included in the model are the growth rates for the unemployment rate and the number of tenancies. The lag of the dependent variable (the change in rent levels) is also included.

Both models allow us to assess how rents evolve in the Irish residential sector due to economic and market conditions. Therefore, we will have controlled for these relevant market conditions when examining the impact of the RPZs. Table 4.1 presents the results of the two models.[19]

TABLE 4.1 SUMMARY OF ECONOMETRIC RESULTS FOR RENT PRICE LEVEL AND RENTAL INFLATION MODELS: Q3 2007 – Q2 2020

Dependent variable	r_{it}	Δr_{it}
U_{it}	-0.316 (-130.50)	
T_{it}	-0.036 (-10.745)	
ECM_{t-1}		-0.161 (-20.275)
Δr_{it-1}		-0.406 (-34.529)
Δr_{it-2}		-0.138 (-12.606)
ΔU_{it}		-0.178 (-20.665)
ΔU_{it-1}		0.036 (3.669)
ΔU_{it-2}		-0.108 (-12.813)
ΔT_{it}		-0.015 (-8.945)
N	8,466	7,968
R^2	0.956	0.277
F(166,8298) = 6343.54 (0.00)		

Source: Authors' calculations.

The results for Model (3) indicate a strong relationship between rent levels and the unemployment rate and the number of tenancy numbers i.e. an increase in the unemployment rate results in a fall in rents while an increase in tenancy numbers in a particular LEA will result in rent levels in that LEA also falling. The model is

[19] The model is initially specified with four lags for the growth rate variables and then a general-to-specific approach is taken in the final model. By this, we mean that only the significant variables are included in the final model.

estimated on a log-log basis, so that enables the estimated coefficients to be interpreted as elasticities. Therefore, in the case of the labour market a 1 per cent increase in unemployment results in a 0.3 per cent fall in rents. In the case of tenancy agreements, a 1 per cent increase in the number of tenancy agreements in a LEA reduces the rent level by 0.04 per cent.[20]

The results for the rental inflation model indicate that there is an error-correction in the model i.e. if rent levels are greater than that predicted by Model (1), then the growth rate of rents will, ceteris paribus, decline. Both changes in the unemployment rate and changes in the number of tenancy agreements also are found to impact the rate of rental inflation.

4.3 MODEL SIMULATION AND FORECASTS

Initially the results from both these models are used to examine the implications of the RPZs. To do this we conduct a within-sample forecast. This means we use the models to forecast rent levels and growth rates over the period Quarter 1, 2017 to Quarter 2, 2020. This allows us to compare what the model says should happen to rent levels with what actually happened over the period. As the model does not allow for the presence of the RPZs, the difference between the actual movement of rents compared with what the model suggests can identify the impact of the RPZ legislation.[21] We conduct the in-sample forecast just for the LEAs in Cork and Dublin city as these were the first LEAs to have RPZs introduced.

Table 4.2 presents the actual and in-sample forecast of the average annual growth rate for rent levels for the Cork and Dublin LEAs covered by the Rent Pressure Zone legislation over the period 2017 to 2020.[22]

TABLE 4.2 ACTUAL AND IN-SAMPLE FORECAST ANNUAL AVERAGE GROWTH RATE (%): Q1 2017 – Q1 2020

	Actual	In-Sample Forecast
Cork + Dublin LEAs	3.2	3.9
Cork	2.7	5.3
Dublin	3.3	3.7

Source: Authors' calculations.

20 The dummy variable estimates for each of the LEAs in Model (3) are, in the interests of space, suppressed. They are available, upon request, from the authors.

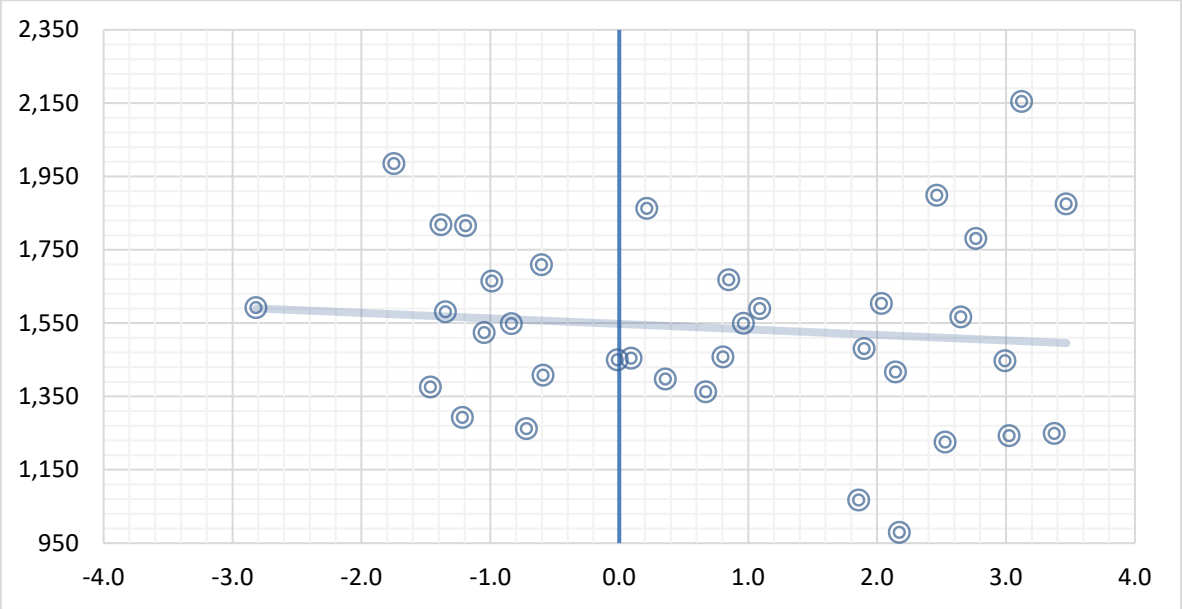
21 Note for consistency, the models we use for the exercise are estimated over the period Q3 2007 and Q4 2016. This is because we do not want the model estimates to be influenced by the presence of the Rent Pressure Zones.

22 Note all monetary values are in real terms unless otherwise stated.

From Table 4.2, there is some difference between the two growth rates; the in-sample forecast is larger than the actual growth for both the Cork and Dublin LEAs. Therefore, the growth rate suggested by the model is greater than what actually occurred over the period in question. This would suggest that the RPZs have had some impact in reducing the pace of rental inflation for these LEAs.[23]

In Figure 4.1 for the 36 LEAs (5 Cork LEAs and 31 Dublin LEAs), which have been designated as a Rent Pressure Zone, the difference between the actual growth rate and the in-sample forecast is plotted against the average monthly rent level for the LEA in question.

FIGURE 4.1 PLOT OF THE DIFFERENCE BETWEEN ACTUAL AND IN-SAMPLE GROWTH RATES AND AVERAGE MONTHLY RENT LEVELS (€) Q1 2017 – Q1 2020



Source: Authors' calculations.

To the right hand-side of the y-axis, the difference between the in-sample forecast and the actual growth rate is positive; in this case the in-sample forecast is greater than the actual rate, and for these LEAs the Rent Pressure Zone legislation has reduced the actual growth rate observed. It is clear from the graph that there are LEAs where the actual rate of rental growth is greater than the in-sample forecast.[24]

[23] Overall, when a similar exercise is completed for all LEAs, the model does not appear to systematically over or underpredict the rate of rental growth i.e. the difference between across the actual growth rate and the in-sample forecast is almost identical across the full sample of LEAs.

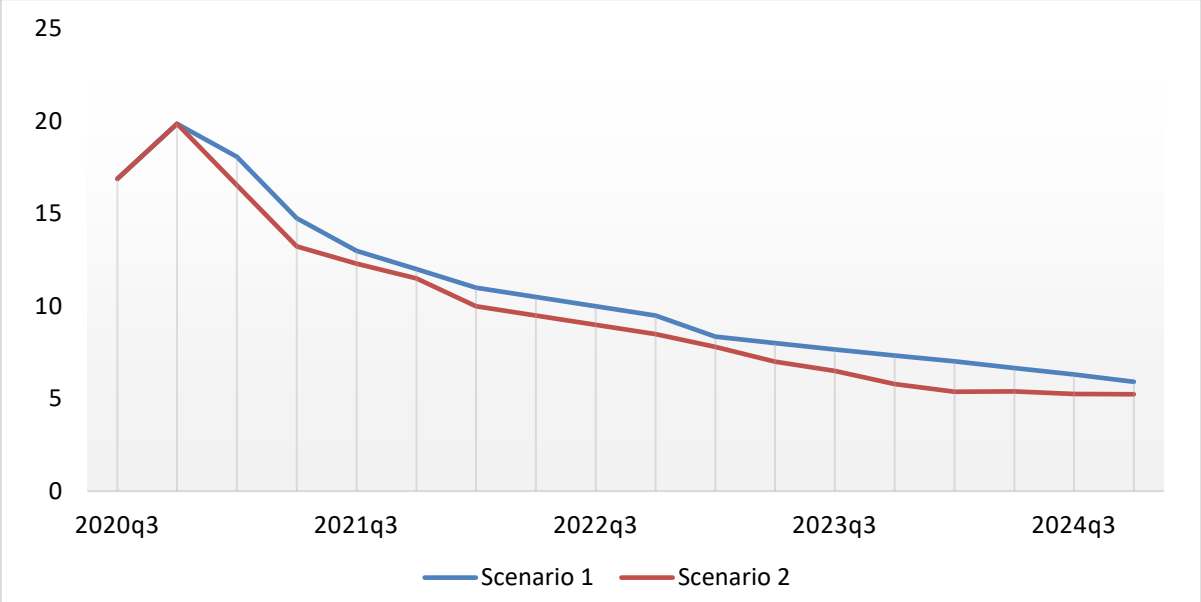
[24] Given the relatively small number of observations as compared to the total sample, in this case, it is probably wise not to place too much emphasis on this particular result.

4.4 PROJECTIONS OF RENTAL GROWTH RATES

We now use the models estimated in (3) and (4)[25] to project forward a series of rental growth rates based on future expected rates of unemployment and an assumed level of tenancy transactions. A long-run forecast is generated with Model (1) which provides future estimates of rent levels based on future unemployment rates and tenancy numbers. Then the corresponding growth rate of rents is forecast using the changes in the unemployment rate and the tenancy numbers.

In conducting the rental forecasts, we need to generate forecasts for both unemployment rates and the tenancy numbers. In order to capture the potential uncertainty around the future recovery of the economy from the COVID shock, two sets of future unemployment rates are used. These rates are based on post-COVID scenarios for the Irish economy examined in Garcia-Rodriguez et al. (2021). The future unemployment rates are presented in Figure 4.2.

FIGURE 4.2 FUTURE IRISH UNEMPLOYMENT RATES (%) Q3 2020 – Q4 2024



Source: Bergin and Garcia-Rodriguez (2020).

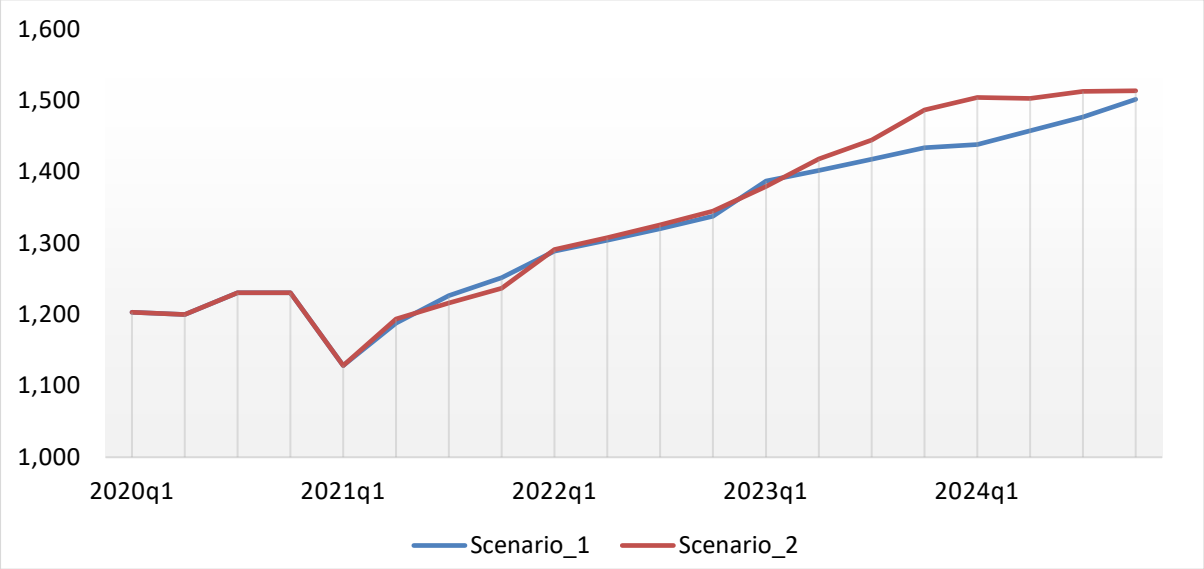
Both scenarios envisage a gradual and persistent fall in unemployment from early 2021 to 2024. By 2024 unemployment is expected to have fallen back to between 5 and 6 per cent depending on the scenario.

[25] We use an aggregate time-series version of the model to generate the forecasts, however the coefficients on the main variables are very similar to those in (3) above.

We now use these unemployment forecasts along with an assumed path of future tenancy agreements to generate a series of projections for future rental growth rates. In particular, we assume that tenancy numbers will increase by 5 per cent per annum over the period 2022 to 2024. Holding this assumption constant across scenarios ensures that no variation between scenarios is driven by changes in tenancies. In using the model in (3) and (4) to generate the forecasts, we are assuming that no Rent Pressure Zone legislation is in place i.e. rents will increase depending on the future unemployment rates and tenancy numbers and no restriction is placed on rental growth by the model. Therefore, the forecasts presented here for rent levels are in the absence of any form of rent control.

In Figure 4.3 we plot the resulting projected levels of rents in the Irish market over the period 2020 to 2024.

FIGURE 4.3 PROJECTED MONTHLY AVERAGE REAL RENT LEVELS (€) Q1 2020 – Q4 2024



Source: Authors' calculations.

In both cases, as the unemployment rate declines, rent levels are projected to increase quite significantly. Table 4.3 summarises the growth rates on a per annum basis between 2022 and 2024.

TABLE 4.3 SUMMARY OF PROJECTED GROWTH RATES FOR IRISH RENT LEVELS (%): Q1 2022 – Q1 2024

	Scenario 1	Scenario 2
2022	8.1	8.9
2023	6.2	7.4
2024	4.1	5.4

Source: Authors' calculations.

From the table it is clear that under both scenarios a significant increase in rental inflation is likely in the coming years, as the labour market continues to improve in the context of the recovery from COVID-19. The persistent downward trend in unemployment causes rents to increase in a sustained manner.[26]

4.5 CHAPTER CONCLUSIONS AND RECOMMENDATIONS

The analysis in this chapter has demonstrated the impact of the RPZs on price inflation holds when economic fundamentals are controlled for. A clear impact of the regime (over and above economic activity and market transactions) in Dublin and Cork is evident. This leaves the rental market susceptible to inflation risk if economic fundamentals increase. Indeed, the likely recovery of the economy following COVID-19 is expected to put upward pressure on rents in the absence of stabilisation measures.

[26] In terms of a sensitivity analysis, we also forecast rent levels when tenancy numbers are assumed to remain constant through the forecast period as opposed to increasing by 5 per cent per annum. This results in the forecasts, on average, being 0.7 per cent higher per annum. So, for example, the forecast increase under scenario 1 in 2022 would be 8.8 per cent compared with 8.1 per cent.

CHAPTER 5

Policy discussion, calibration and design

5.1 INTRODUCTION

The previous chapters have provided an overview of the impact of the regulations on pricing in Ireland as well as outlining the significant risk of heightened rental inflation that may occur as the economy recovers from the COVID-19 pandemic. Under these conditions, the continued deployment of a suite of stabilisation measures would likely play a role in limiting these risks.

The aim of this chapter is therefore to reflect on several of the economic aspects of the regulations. This section is not aimed at being a detailed regulatory impact assessment of all aspects of the calibration and design of the regulations. Rather, it considers some selected aspects of the economically impactful set up of the instruments and provides some discussion around these where evidence is available to do so. In any reassessment of the regulations, a thorough regulatory impact assessment and legal review of the design aspects would naturally be complementary to our discussion and would be beneficial.

To attempt to provide some discussion around calibration, monitoring and design choices, we consider several aspects where evidence or insights exist from our review of the data or the international experience. We first consider issues relating to the supply-side effects of the regulations which have been noted as one of the main externalities in the international literature. Second, we consider the setting of the maximum rental price growth ceiling and third we review the entry and exit criteria, and other issues.

5.2 MANAGING SUPPLY-SIDE EXTERNALITIES

A considerable risk with the usage of any regulatory price ceiling is negative supply-side effects; if prices are set at lower rates than market prices, the rate of supply in the market may be adversely impacted. This risk has been well documented in the literature on rent controls, as outlined in Chapter 2. Indeed, the impact of rent controls on the supply side of the housing market has been the most frequently used critique against such policies. The impact on supply has been found both in terms of reduced expenditure on maintenance and upkeep as well as the withdrawal or exit of units from the market. Lower investments in new supply are also expected (based on theory and literature).

More recent policy calibrations, indeed most of the regimes introduced in recent years, have provided a series of exemptions to attempt to limit the risks on the supply side. Ireland is no different. At present, two types of exemptions are permitted:

- Exemption 1: when a property has not been rented in the previous two years (new build or new to market) or when a property is, or is in, a protected structure and has not been rented in the last 12 months;
- Exemption 2: when the nature of a property has been substantially changed, which includes an increase in floor area by a minimum of 25 per cent amongst other criteria set out in law.

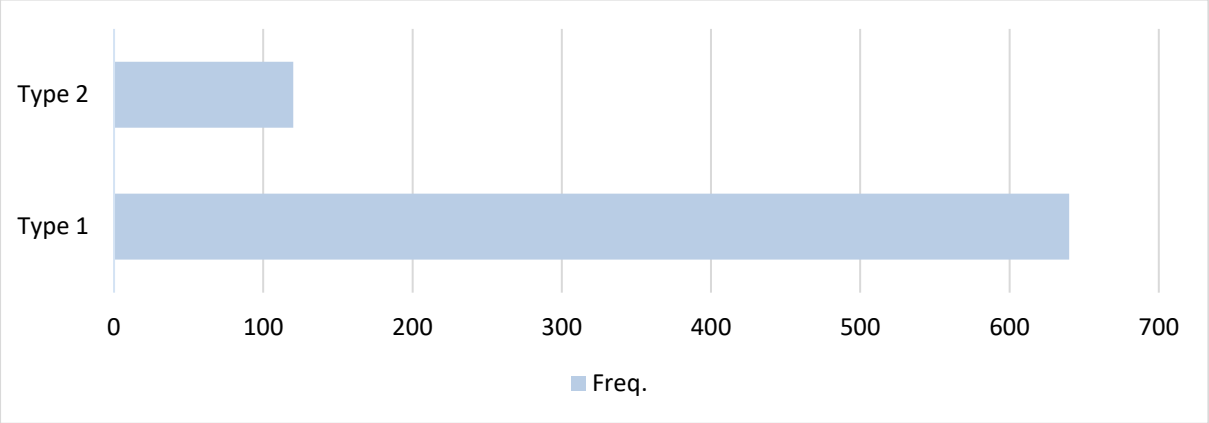
The first exemption is set with the aim of ensuring newly supplied units are not deterred and allows a free rent setting on the first pricing decision with the inflation rate capped thereafter. Of the other country case studies explored in Chapter 2, the exemption of new supply was often a feature (such as in Germany, Oregon and Scotland).

The Type 2 exemption is targeted at maintenance, upkeep and energy efficiency investments. Activities that are allowable include: a) a permanent extension to the dwelling that increases the floor area by 25+ per cent; b) Building Energy Rating improved by not less than seven building energy ratings; and three out of five of the minor reasons.[27]

Since July 2019, any exemption to the regulations must be notified to the RTB, including new properties to the market. For the purpose of this analysis, access to the microdata underlying the exemptions has been provided so as to explore their usage. In total, just over 800 exemptions have been registered since July 2019. Of these, a sample of 760 is used in this analysis (as these have sufficient non-missing data).

[27] Minor reasons listed are: internal layout of the dwelling being permanently altered; adapted to provide for access and use by a person with a disability; a permanent increase in the number of rooms; BER of D1 or lower improved by not less than three building energy ratings; BER of C3 or higher improved by not less than two building energy ratings.

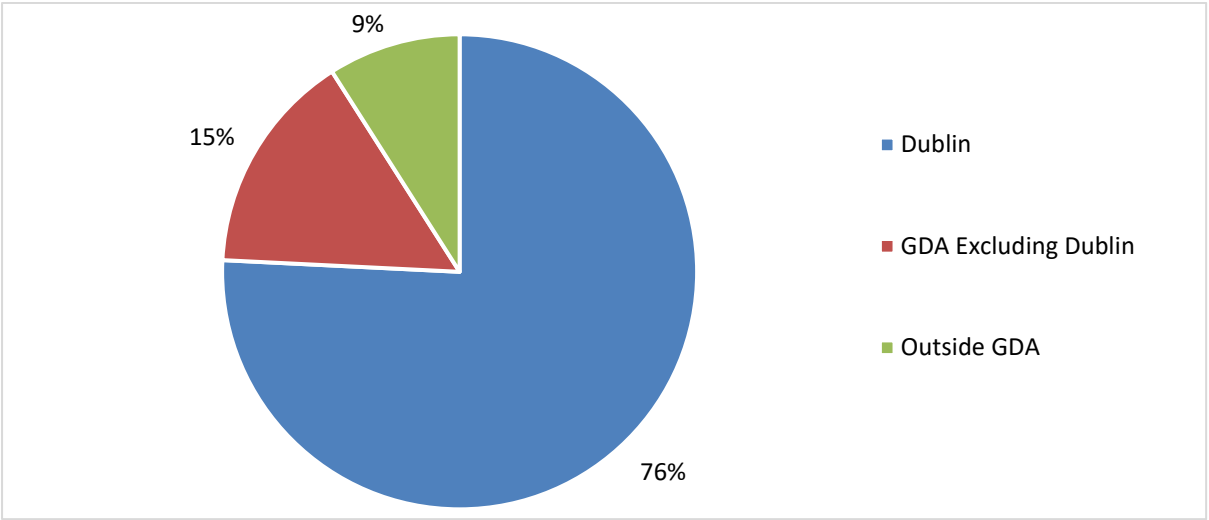
FIGURE 5.1 EXEMPTIONS OVERVIEW BY TYPE



Source: Authors' calculations using RTB data. Data cover 2019 and 2020.

Most of the registered exemptions are Type 1 exemptions (Figure 5.1). Figure 5.2 presents the breakdown of exemptions by area. A majority of the exemptions to date have been registered in Dublin (at 76 per cent of the total). This is unsurprising given the share of tenancies in Dublin as a percentage of the overall rental sector in Ireland (which has varied between 40 and 50 per cent of the new rental tenancies for the period 2016 to 2021 as measured by the RTB Index).[28] A further 15 per cent are in the rest of the greater Dublin area (GDA) while only 9 per cent have been outside the GDA.

FIGURE 5.2 EXEMPTIONS BY REGION

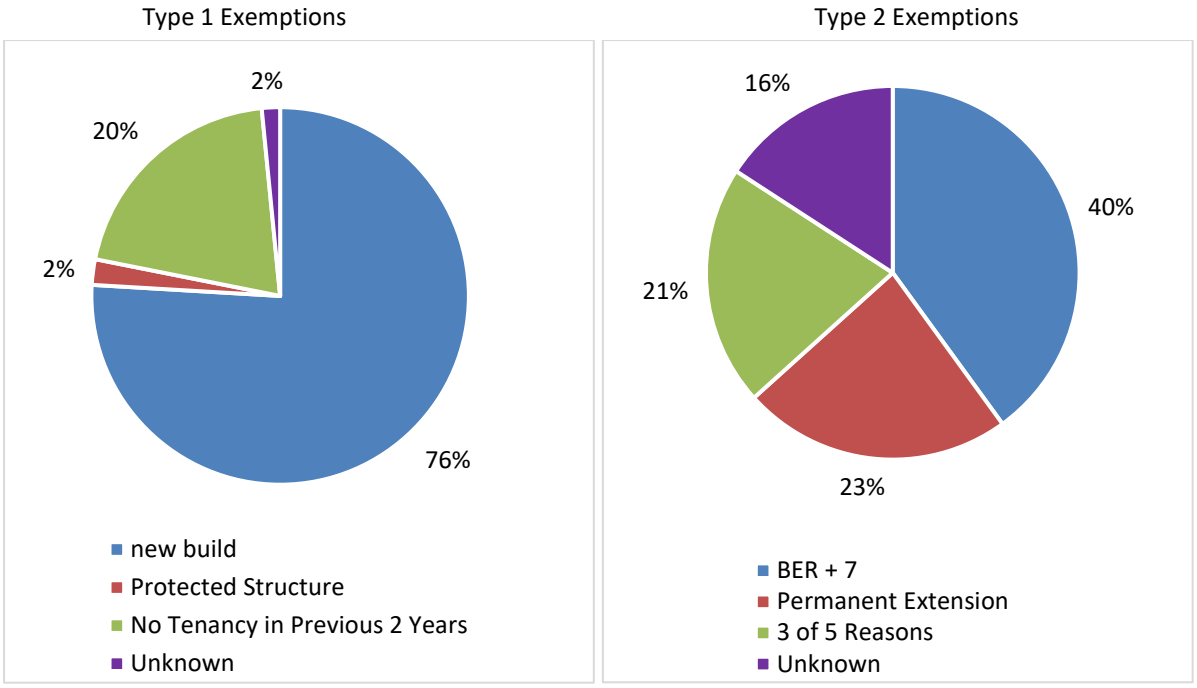


Source: Authors' calculations using RTB data.

[28] See Figure 20 in latest Index report: https://www.rtb.ie/images/uploads/Comms%20and%20Research/Rent_Index_Q3_2021_Final_Report.pdf.

Figure 5.3 splits out the exemptions by sub-type within the main categories of 1 and 2. The majority of the exemptions for Type 1 relate to new builds (76 per cent) while the second largest group are for no tenancies in the previous two years (20 per cent). Few exemptions have been used for protected structures. Of the Type 2 exemptions, 40 per cent are for major energy efficiency upgrades and a further 23 per cent for major extensions.

FIGURE 5.3 EXEMPTIONS BY SUB-TYPE



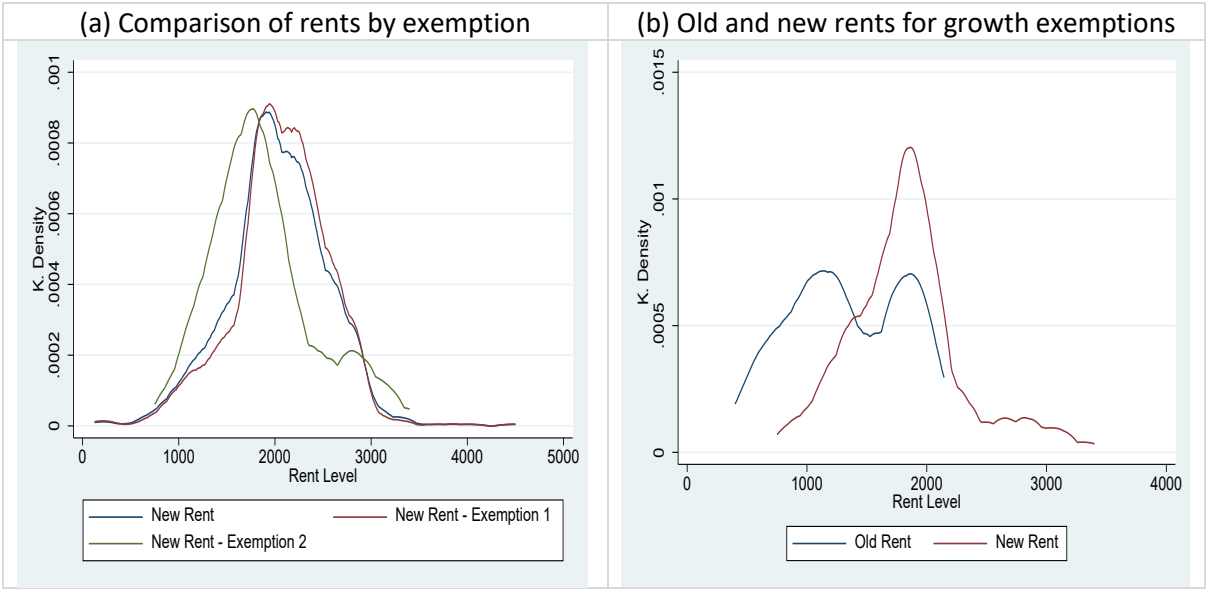
Source: Authors' calculations using RTB data.

An important insight from the tenancies data relates to the pricing of new exemptions. Figure 5.4 presents: (a) a comparison of the rental price distribution for Exemption 1 and Exemption 2 new rents; and (b) the distribution of the old and new rents where both figures have been provided (for example the rent level before and after a renovation in the case of some Type 2 exemptions). The rental distribution for Type 1 exemptions is higher than for Type 2; the median rent for Exemption 1 is €2,100, the median rent for Exemption 2 is €1,800. Both of these are far higher than the sample median of €1,150 for all new and renewal tenancies using the RTB database for 2019 and 2020. The fact that rents for new builds are higher indicates that the new supply (notified as exemptions) is coming in at higher price points than the overall market.

Comparing the old and new rents for Type 2 exemptions shows a considerable increase. The new rental distribution sits to the right of the old rents (new rents

are nearly all higher than the pre-exemption rents) noting that a majority of increases are far in excess of the previous levels. These may be entirely justified given the increase in investment costs and the capital outlay.

FIGURE 5.4 EXEMPTIONS PRICING



Source: Authors' calculations using RTB data.

Certainly, on paper, the targeting of exemptions in the Irish regulations would appear to be calibrated to offset the type of side-effects found in the existing literature around maintenance and upkeep. In that context, the continued use of these exemptions should form part of any ongoing stabilisation programme. However the low numbers of registered exemptions, when compared with the number of tenancies identified in the property level sample with growth rates > 4 per cent levels, would suggest continued efforts to increase the compliance and monitoring of the scheme would be beneficial.[29] Notification for new builds appear low (as compared to the level of housing completions) and more information should be provided to new suppliers to ensure all new-to-market properties are notified to the RTB as an exemption.

Finally, even if the exemptions are fully functioning, a risk remains that landlords may feel the inflation rate is insufficient under the regulated market and withdraw the unit from supply and/or cancel/delay possible investments. To date, there are

29 At present, enforcement proceedings are managed by the Residential Tenancies Board (RTB) who provide dispute resolution services. The RTB can also investigate breaches of the 2004 Residential Tenancies Act by the landlord and initiate improper conduct cases which includes non-compliance with the RPZs. Both landlords and tenants can report to the RTB for a breach of the RPZ rules and engage in dispute action. The RTB can also use information at its disposal to begin investigations. If improper conduct has occurred, a fine of up to €15,000 can be levied on the landlord.

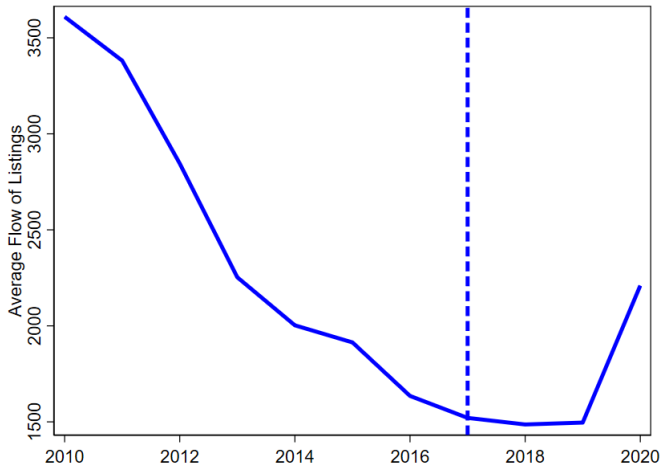
few comprehensive studies which have been able to document whether this is occurring in Ireland. A recent RTB survey of landlords[30] found that 26 per cent of small landlords indicate they plan to sell in the next five years. However, it is not possible to link this to the RPZs with many other factors possibly driving these decisions. O'Toole (2021) notes a lowering of tenancy agreements in Group 1 RPZ areas, but lower activity does not necessarily indicate supply withdrawals: lower activity could indicate longer duration tenancies, lower turnover and thus fewer new tenancies would be agreed. It could also be due to non-compliance and tenancies being agreed without registration. Furthermore, in Figure 5.5 an analysis of trends in listings from daft.ie shows the decline in the average flow of listings began well before the introduction of the RPZs i.e. the housing supply shortages in the rental sector predated the RPZs. The figures show the average monthly listing flows in Dublin city, Cork city and Galway city for the years 2010 to 2020. The vertical blue line denotes when the first RPZs were designated. While a sharp decline in supply did occur in Ireland, there does not appear to have been any major acceleration in this trend (with the exception of Cork city) after the regulations were introduced (which would be expected if supply was tightening due to the rules).

These points notwithstanding, and to conclusively assess supply-side effects, a well-identified research study which can capture the supply-side dynamics would need to be undertaken. As in previous research, such a study would test for the slippage of rental properties out of renting and into homeownership to identify whether supply is leaking out of the market. Such a study in an Irish context has not, to our knowledge, been undertaken and would be welcome. Our analysis should therefore be seen purely as a high-level, non-causal exploration. The study would also need to understand the forgone investment channels and the impact on market investment expectations as well as consider the impact on maintenance.

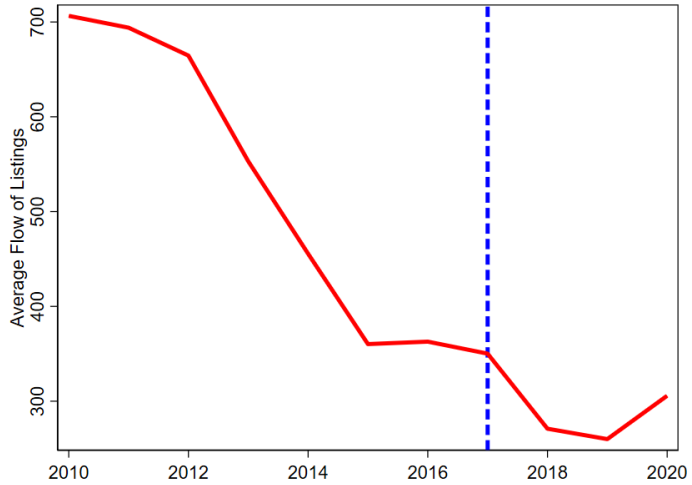
30 https://www.rtb.ie/news/the-rtb-publish-findings-from-their-rental-sector-survey-2020-reports.

FIGURE 5.5 AVERAGE FLOW OF DAFT RENTAL LISTINGS FOR DUBLIN, CORK AND GALWAY 2010-2020

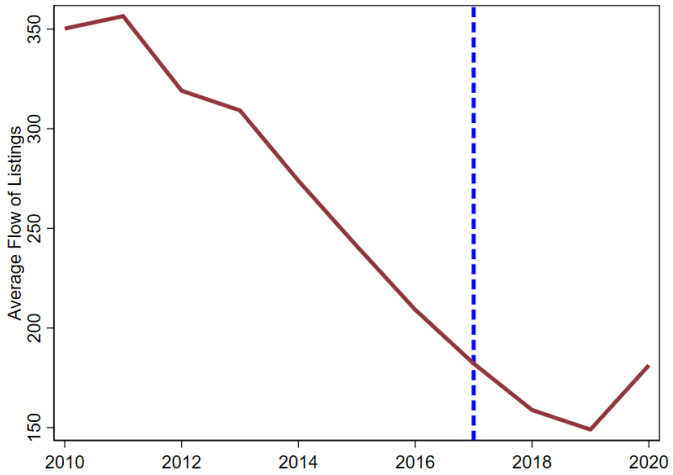
(a) Dublin average listings flow (Daft.ie)



(b) Cork city average listings flow (Daft.ie)



(c) Galway city average listings flow (Daft.ie)



Source: Daft.ie.

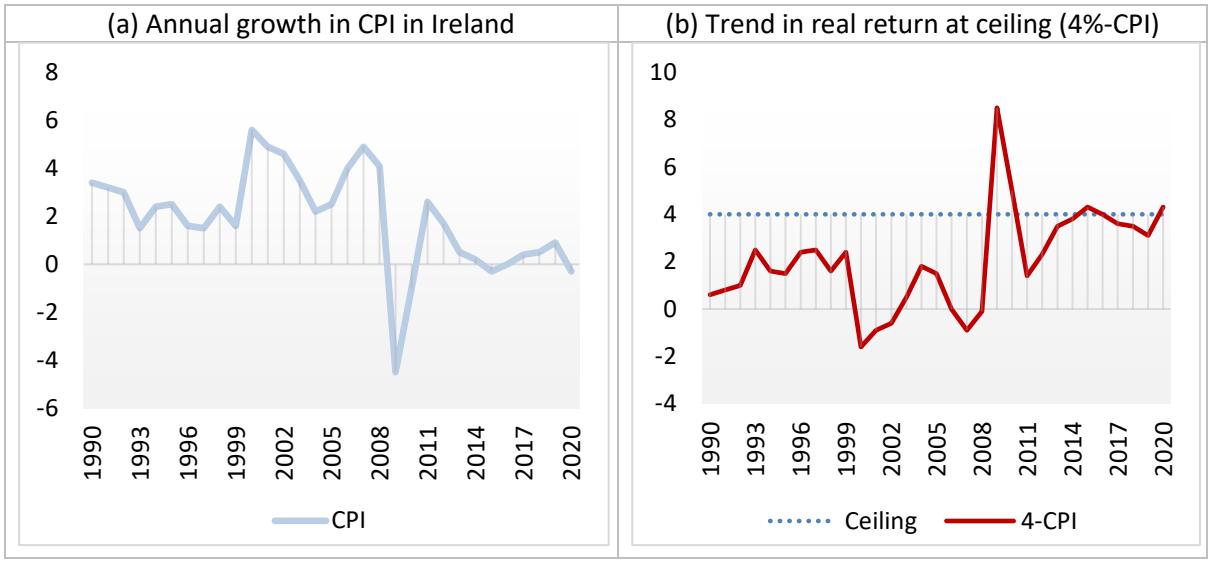
5.3 INDEXATION OF THE PRICE CEILING

In July 2021, the RPZ legislation was adapted to move from a nominal 4 per cent rental price growth ceiling to a ceiling which is linked to the Harmonised Index of Consumer Prices. The calibration decision as to whether to set this figure as a nominal ceiling or to allow it to float with an index is an important aspect of the policy design. In late 2021, this mechanism was again adjusted to account for rising general inflation rates by introducing a 2 per cent maximum rate increase.

To abstract from the specific calibration of the level of allowable growth rates, there are benefits and risks to approaches with and without indexation. Using any nominal figure, such as the 4 per cent that was deployed in Ireland, provides certainty to both landlords and tenants as to what the inflation rate is to be. While the setting of the actual level was likely determined by policy judgement, the certainty in the market that comes with a known nominal threshold may facilitate investors to plan capital expenditures and can also ensure households know the likely path of price increases.

However, the certainty provided by a nominal ceiling only materialises in a period of low and stable inflation, such as we have experienced in Ireland in recent years. Figure 5.6(a) presents the annual rate of inflation in Ireland for the overall consumer price inflation. The second panel (b) presents the real rate of rental increase at the price ceiling i.e. 4 per cent minus the annual CPI. Inflation has been very low in the period since 2016 when the regulations were developed and thus the real rate of rental increase (or real return) has been close to the 4 per cent cap for each year since the regulations began (and also for the years since 2013).

FIGURE 5.6 CONSUMER PRICE INFLATION IN IRELAND AND THE 4 PER CENT CEILING



Source: CSO.

However, taking a longer-term perspective, there have been periods (in the early 1990s and 2000s) when the inflation rate was closer to – or above – the 4 per cent level, which indicates that the real allowable rate of increase would have been close to zero or even negative. Consideration of these dynamics is important for the structural design of the ceiling over time. If inflation were to increase, this would lower the value of the nominal ceiling and could affect the investment and supply-side dynamics. For example, if inflation were to rise above the nominal ceiling for an extended period of time, while this would naturally increase affordability for sitting tenants if their incomes grew faster than rents, negative real returns (inflation greater than the nominal ceiling) would likely reduce investment incentives in maintenance and affect supply-side decisions. It is partly the capping of real rent increases as a nominal ceiling has been noted as problematic in the extensive literature on negative supply-side effects of the rent controls discussed in Chapter 2.

It is also worth noting in the present climate that there may be some short-term variability in the rate of inflation. The COVID-19 pandemic has resulted in significant supply-side restrictions in economies; however in an Irish context, there has been less of an impact on the demand-side of the economy. This may give rise to some volatility in inflation rates over the short term as prices for certain goods and services may increase sharply owing to limited supply in the face of strong, recovering consumer demand. This variability in the rate of inflation may give rise to considerable differences across renting households in terms of the changes in their prospective rent levels for example with the short-term revisions to the allowable rent increases that are incorporated into the current design. This potential difference across households is a disadvantage of moving from a fixed cap such as the 4 per cent level to that based solely on short-term movements of the HICP.[31] Using an annual inflation anchor would be less prone to short-term fluctuations.

Consideration of other countries' approaches to indexation and how to calibrate this metric are also useful to consider in an Irish context. Table 5.1 presents the inflation cap tool used in the case studies outlined in Chapter 2 (plus some additional which are provided for information).

31 The HICP or Harmonised Index of Consumer Prices is a common measure used across the European Union to measure price changes. The HICP and the CPI for Ireland differ in terms of the treatment and inclusion of a number of sub-components. For example, the HICP does not include a measure of owner-occupied housing cost and excludes other items such as mortgage interest, building materials, motor tax, housing insurance and car insurance. A detailed note on the differences is available on the CSO website: https://www.cso.ie/en/media/csoie/methods/consumerpriceindex/comparecpiandhicp16.pdf.

TABLE 5.1 OVERVIEW OF SELECTED INDEXATION AND CEILING CALIBRATION EXAMPLES

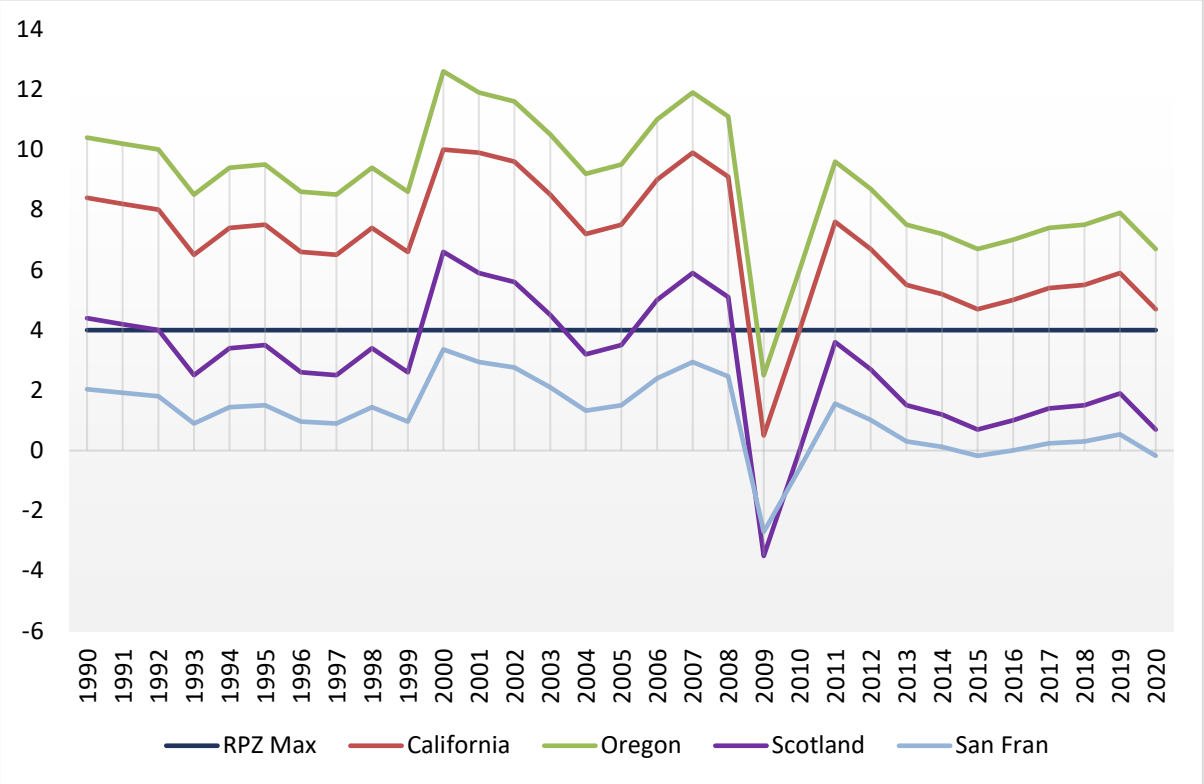
Country	Inflation cap
Germany 'Meitbremse'	15% over three years
Scotland 'RPZs'	CPI+1+X (where X is discretionary factor set by the Minister)
California	CPI+5 or max 10%
Oregon	CPI+7
France	CPI existing, max > 20 % over the median for similar dwelling

Source: Country case studies.

Many jurisdictions use an inflation ceiling measure which ensures a 'mark-up' (or CPI+) over inflation, measured as the core base CPI. The level of this mark-up differs markedly and likely depends on policymakers' judgement of the specific housing market context and the balance of objectives between tenant affordability and landlord returns. Some jurisdictions have in the past used a sub-index of inflation which directly links to service and maintenance costs of dwelling repair to ensure that the price inflation allowable can compensate for depreciation costs (for example, according to Scanlon and Whitehead (2014), France previously deployed this measure).

As an illustrative example of what some of these parameterisations might look like in Ireland, Figure 5.7 uses the examples in Table 5.1 (and San Francisco) (where a specific CPI+ parameter has been provided) as a guide to what the ceiling would be. Using the simple Scottish rule of CPI+1+X, or the model deployed in San Francisco, results in a lower ceiling in Ireland than the 4 per cent rate deployed up until July 2021. The California and Oregon rates would be higher. A critical issue to infer from this chart is the considerable variability in the ceiling over time that occurs when an index-linked measure is used. Careful consideration of the extent to which a mark-up is included is warranted as policymakers trade off lower inflation rates with the impact on market (in particular supply-side and investment) dynamics.

FIGURE 5.7 ILLUSTRATIVE PRICE CEILING USING INTERNATIONAL EXAMPLES



Source: Authors' calculations.

5.4 ENTRY, EXIT, AND OTHER CALIBRATION OPTIONS

Three important elements of the rent stabilisation regimes, both in Ireland and internationally, are the entry and exit conditions and geographic scope. While many of the historical cases were national in orientation, considerable geographic variation has often existed in rental regulation (for example across US cities and states).

Geographic variation is important, and a blunt national tool is unlikely to be suitable for heterogeneous and spatially differentiated markets like housing. Indeed, a reasonably distinct feature of the more recent rent stabilisation measures (which were documented in Chapter 2), is that these regimes are often limited to areas of high, fast growing rents where affordability pressures on tenants are likely to be greatest. Such a calibration is likely motivated to focus the policy impact on those areas where markets are clearly failing and to ensure that, in areas without such characteristics, policies are not deployed that might interfere with market dynamics, in particular the supply-side externalities which have been a feature of rent price ceilings. Table 5.2 presents an overview of the conditions used for other selected jurisdictions.

TABLE 5.2 EXAMPLES OF ENTRY AND EXIT CONDITIONS, GEOGRAPHIC SCOPE FOR SELECTED OTHER COUNTRIES

Aspect	Germany 'Meitbremse'	Scotland 'RPZs'	France
Qualification	• Local rents grow faster than the national average • The local average rent-to-income ratio is significantly higher than the national average • The population of the area grows but new housing construction does not complete enough dwellings • The vacancy rate of an area is low while the demand is high	• Rents payable within the proposed Rent Pressure Zone are rising by too much • Evidence that such rent rises are causing undue hardship to tenants • Offer evidence that the local authority is coming under increasing pressure to provide housing, or subsidise the cost of housing, as a consequence of these rent rises	High pressure areas – high levels
Exit criteria	Set five-year period	Set five-year period	n/a
Geography	Regional	Local authority (sub) areas	Regional or sub-regional

Source: Country case studies.

In these approaches, all three have a non-national scope and are targeting the deployment of stabilisation mechanisms to high rental pressure areas. The Irish rules are exactly this type of case. The areas which have been shown to have the greatest affordability challenges have been urban centres (Corrigan et al., 2019), therefore rent controls are likely to be of most importance in these areas. The specific qualification criteria of a) a 'level criterion' (the level of rent exceeding a reference rate)[32] and b) a 'high inflation rate criterion' (four of the past six quarters with an annualised inflation rate of ≥7 per cent) targets the deployment of stabilisation measures to those areas in Ireland where the rental market pressures are greatest. Looking at the areas which have been qualified as RPZs in Ireland, these have been mainly the urban areas (Cork, Dublin, Galway, Limerick, Waterford etc.) and their commuter towns.

In terms of the parameterisation, the entry conditions for the German and Scottish cases are closer to the Irish case and have specific criteria on high and rising rents. Both relate the criteria to local areas (regions in Germany and local authority areas in Scotland). The geographic scope of the Irish regulations (LEA level) would appear to be similar to the Scottish case. The use of both local authority and local electoral areas in the Irish case is useful. The element common to both jurisdictions which Ireland does not have is a specific reference to affordability; in the German case, a specific rent-to-income[33] condition or in the Scottish case a reference to 'hardship'. While a link to affordability would in theory be useful, there are a number of

32 Ireland currently has three reference rates: 'national' for Dublin LEAs; 'non-Dublin' for LEAs in counties in the GDA excluding Dublin; and 'rest of country' for non-GDA LEAs.

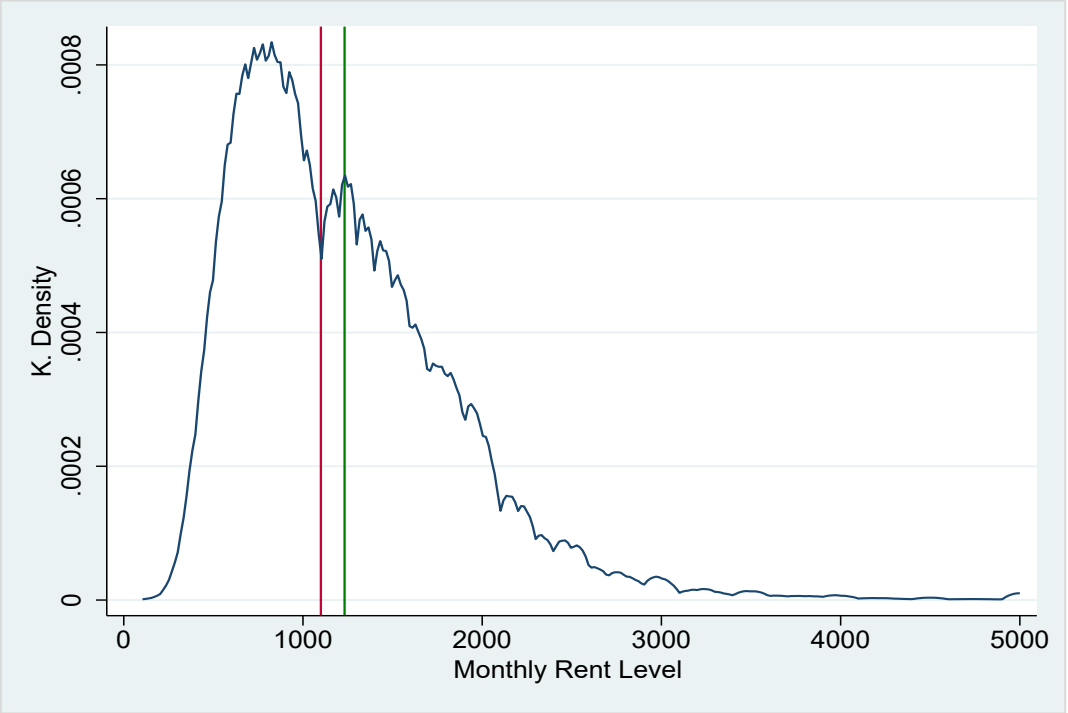
33 Other jurisdictions such as California have larger areas of designation.

reasons to why it might not be needed in Ireland at present. First the areas with the highest rents are also those with the main affordability pressures (as noted in Corrigan et al., 2019). Thus the Irish rules have automatically 'entered' the areas with high affordability pressures.

Second, while rent data are readily available at a high frequency and high geographic coverage (166 LEAs from the RTB/ESRI Rent Index on a quarterly basis), income data are not so readily available in Ireland. Given current data availability and the fact the current rules have worked well in terms of designating the areas with affordability pressures, the current calibration is likely to be sufficient. Indeed, it is useful to compare with Scotland where a review of their regulations indicates that the lack of data and complexity involved in proving these conditions have been the reasons no RPZs have been designated there (Robertson and Young, 2018).

From a data perspective, a number of points are worth making for Ireland. First, the stabilisation measures are aimed at both new and existing tenants. However, the RTB/ESRI Rent Index only covers new rental agreements (and part IV renewals). If data become available to measure the inflation rate on the stock of rents (new and existing), for example through annual registrations, then migrating any future system to measures of the stock of rents would likely be beneficial. Secondly, while the average rent (used in the level condition) is appropriate as a measure of central tendency in the data, the rental distribution has a long right skew (see Figure 5.8). Therefore, the median rent may be a better measure of the typical payment in the market. If standardised medians are to be made available in the future, along with the overall stock of rent metrics, then these may be a useful element to consider in terms of setting the criteria.

FIGURE 5.8 DISTRIBUTION OF RENTS (NEW AND RENEWAL), 2018-2020



Source: Authors' calculations using RTB tenancies data.
Note: The red line represents median monthly rent while the green represents the mean monthly rent during the period in question.

Another consideration surrounding the Irish rent level criteria is whether a similar 'smoothing' to that for the growth rate condition could be used. An illustrative example is worth using here. Take the following hypothetical local electoral area 'A' for seven quarters (Table 5.3). The level is an example of a standardised average rent in that LEA in each quarter relative to its reference rate. The growth rate in the example is the annualised growth in the quarter. It is clear that in period *t*+5 this area would qualify as an RPZ in four of the last six quarters as its rental growth rate was ≥ 7 per cent and the level is above the reference rate. However, is it also clear that this is the only quarter that the level is higher.

As LEA level data can be volatile due to small sample sizes, this increase could be purely due to some quarter specific idiosyncrasies (such as the entry to the market of a new apartment block) that does not necessarily remain over time. Therefore, in economic terms, this area should not really be classified as 'high' over a smoother time horizon. Shifting the level condition to have a similar 'smoothing' element may ensure these quarter-specific trends do not affect classification, and, hence, could be considered.

TABLE 5.3 ILLUSTRATIVE LOCAL ELECTORAL AREA DATA ON LEVEL AND GROWTH IN RENTS

	LEA 'A'	
	Level (as per cent of reference rate)	Growth (% year-on-year)
t	60	7
***t*+1**	75	6
***t*+2**	60	8
***t*+3**	65	9
***t*+4**	70	10
***t*+5**	101	7
***t*+6**	80	7

Source: Authors' calculations.

The final aspect of the Irish regulations we consider are the exit conditions. At present, Ireland uses a time bound exit condition of three years. This is similar to Scotland and Germany in terms of calibration with those areas having a five-year cut-off. The alternative would be to move to an empirical method for de-designation with conditions for example relating to the growth rate and/or level of rents. However, this could have considerable complexity in choosing how to parameterise these cut-offs. This would likely introduce considerable uncertainties. Therefore, using a time bound measure is likely to remain the most appropriate to 'turn off' the rent controls in each area.

5.5 CHAPTER CONCLUSIONS

A number of conclusions arise from this chapter:

- The targeting of exemptions in the Irish regulations would appear to be calibrated to offset the type of side-effects found in the existing literature. In that context, the continued use of these exemptions should form part of any ongoing stabilisation programme. The number of exemptions registered appears low and efforts to increase awareness around registrations should be undertaken;
- Recent changes to the calibration of the regulations indexed the maximum allowable increase in RPZ areas to the Harmonised Index of Consumer Prices (HICP). This is in line with many other jurisdictions which link the price ceiling with reference to an index rate, such as the Consumer Price Index which is used in other jurisdictions. This would permit the allowable increase to vary with the broader inflation environment, but it would add complexity from a calculations and communications perspective. Many other countries also allow a mark-up over the general CPI to compensate for housing market-specific costs;
- The entry conditions are in line with other countries and, by having both high rent and high inflation criteria, do appear to have been deployed to the areas with the greatest affordability pressures (urban centres). Consideration could

be given to linking the criteria to measures using data on the stock of rents if such indicators become available. Adjusting the 'level' criteria to have a smoothing component (such as the average over a number of quarters) would also be advisable as it would better deal with volatility at the LEA level.

CHAPTER 6

Conclusions

The period since the onset of the financial crisis has seen large volatility in rental prices. Since the Irish economy began to recover in 2013, rapid growth in private rental prices was observed as limited supply and improving demand-side factors led to an increasing excess demand for housing. A policy response to address the high inflation rates was introduced with the deployment of RPZs to high inflation, high rent areas in Ireland.

It is clear from the international research that Ireland's response was in line with other countries which have experienced high rental inflation in this period. Indeed, Ireland's challenges are similar to those in many other jurisdictions experiencing housing shortages. The international research has long highlighted the negative supply-side externalities with early rent control measures i.e. lower supply and a drop in maintenance and upkeep investment. However, most of these studies were completed on earlier regimes which did not necessarily calibrate the measures to address the supply-side effects directly. More recent iterations of these policies, like those in Ireland, do calibrate the measures.

In terms of the developments in inflation in Ireland, the evidence indicates that Rent Pressure Zones have had an impact on price inflation (as evidenced by the distributional changes and other analysis) and this finding holds when controlling for economic fundamentals. There is also evidence of pricing above the 4 per cent cap which appears to be more prevalent than the number of notified exemptions. Better monitoring and collection of data on exemptions would be useful in understanding compliance with the regulations.

The COVID-19 economic crisis has affected the Irish economy profoundly, with nearly one-in-four of the labour force counted as unemployed in March 2021. With the continued excess demand for housing, and the potential for a sustained recovery in the Irish economy, it is likely that these market factors would put considerable upward pressure on rental prices in a scenario where stabilisation mechanisms were removed entirely. The continued usage of these mechanisms is likely to be required and should be considered an essential part of the rental market policy tools in future. Such stabilisation measures should continue to be cognisant of the potential for supply-side externalities, but they can also be seen as a valid intervention to reduce inflationary pressures in the housing market.

A number of critiques of rent regulation internationally have been put forward in the broader literature: rent controls are likely to impact a range of other factors such as supply, maintenance, tenant mobility and incumbency, which are often cited as negative externalities of the policies. Our research, due to data gaps, has not addressed the prevalence or occurrence of these factors in Ireland. If the data gaps could be bridged to assess these issues, assessing these channels would provide further insight into the full impact of the regulations. Future research should focus on identifying these channels in an Irish context. Further research which would account for spatial spillovers between RPZs and non-RPZs would also be welcome.

REFERENCES

Ahrens, A., M. Martinez-Cillero and C. O'Toole (2019). *Trends in rental price inflation and the introduction of rent pressure zones in Ireland.* Residential Tenancies Board. https://onestopshop.rtb.ie/images/uploads/Comms%20and%20Research/Trends_in_Rental_Price_Inflation_and_the_Introduction_of_RPZs_in_Ireland.pdf.

Arnott, R. (1995). 'Time for Revisionism on Rent Control', *J. Econ. Perspectives* 9:99-120.

Ault, R. and R. Saba (1990). 'The economic effects of long-term rent control: The case of New York', *Journal of Real Estate Finance and Economics* 3, 25-41.

Basu, K. and P. Emerson (2000). 'The Economics of Tenancy Rent Control', *Economic Journal*, 110, Issue 466, pp. 939-62.

Bergin, A. and A. Garcia-Rodriguez (2020). *Regional demographics and structural housing demand at a county level*. Economic and Social Research Institute (ESRI) Research Series, No. 111.

Breidenbach, P., L. Eilers and J. Fries (2019). 'Rent control and rental prices: High expectations, high effectiveness?', Ruhr Economic Papers, No. 804, ISBN 978-3-86788-932-2, RWI – Leibniz-Institut für Wirtschaftsforschung, Essen, http://dx.doi.org/10.4419/86788932.

Coleman A. and G.M. Scobie (2009). 'A Simple Model of Housing Rental and Ownership with Policy Simulations', Motu Working Paper 09-08 Motu Economic and Public Policy Research, July.

Corrigan, E., D. Foley, K. McQuinn, C. O'Toole and R. Slaymaker (2019). 'Exploring Affordability in the Irish Housing Market', *The Economic and Social Review*, 50, Issue 1, pp. 119-157.

Cronin D. and K. McQuinn (2016). 'Credit availability, macroprudential regulations and the house price to rent ratio', *Journal of Policy Modelling*, 38, pp. 971-984.

Daft.ie (n.d.). 'Quarterly Rental Market Reports Database'.

Diamond, R., T. McQuade and F. Qian (2019). 'The Effects of Rent Control Expansion on Tenants, Landlords, and Inequality: Evidence from San Francisco', *American Economic Review*, 109, Issue 9, p. 3365-94.

Garcia-Rodriguez, A., A. Bergin, L. Rehill and E. Sweeney (2021). 'Exploring the Impact of Covid-19 and Recovery Paths for the Economy', Department of Finance Working Paper.

Gibb, K. and A. Marsh (2021). 'Rent Control: Unpacking the Debates', paper presented to European Network for Housing Research Conference, Cologne.

Glaeser, E. and E. Luttmer (2003). 'The Misallocation of Housing Under Rent Control', *American Economic Review*, 93, Issue 4, pp. 1027-1046.

Gyourko, J. and P. Linneman (1989). 'Equity and efficiency aspects of rent control: An empirical study of New York City', *Journal of Urban Economics* 26, 54-74.

Hahn, A.M., K.A. Kholodilin and S.R. Waltl (2020). 'Forward to the Past: Short-Term Effects of the Rent Freeze in Berlin'. Department of Economics Working Paper Series;

Numéro 308. Vienna University of Economics and Business. https://epub.wu.ac.at/7911/.

Kelly, J., G. Kennedy and D. Lambert (2021). 'The cost of housing and indebtedness across European and OECD households'. No 10/FS/21, Financial Stability Notes, Central Bank of Ireland.

Kettunen, H. and H. Ruonavaara (2020). 'Rent regulation in 21st century Europe. Comparative perspectives', *Housing Studies*, DOI: 10.1080/02673037.2020.1769564.

Lawless M., K. McQuinn and J. Walsh (2018). 'Identifying rent pressures in your neighbourhood: A new model of Irish regional rent indicators', *The Economic and Social Review*, Vol. 49, pp. 73-92, No.1, Spring.

Lind, H. (2001). 'Rent regulation: a conceptual and comparative analysis', *European Journal of Housing Policy*, 1:1, 41-57, DOI: 10.1080/14616710110036436.

Lydon, R. and F. McCann (2017). 'The income distribution and the Irish mortgage market', No 05/EL/17, Economic Letters, Central Bank of Ireland.

Marks, D. (1984). 'The effect of rent control on the price of rental housing: An hedonic approach', *Land Economics* 60, 81-94.

McQuinn K., T. Monteiro and C. O'Toole (2021). 'House price expectations, labour market developments and the house price to rent ratio: A user cost of capital approach', *The Journal of Real Estate Finance and Economics*, 62, pp. 25-47.

Mense, A., C. Michelsen and K.A. Cholodilin (2017). 'Empirics on the causal effects of rent control in Germany', FAU Discussion Papers in Economics, No. 24/2017, Friedrich-Alexander-Universität Erlangen-Nürnberg, Institute for Economics, Nürnberg.

Murray, M.P. (1976). 'Hicks, Marshall, and points off the demand curve', *Public Finance Quarterly* 4, 493-500.

O'Toole, C. (2021). 'Exploring Rent Pressure Zones: Irelands Recent Rent Control Regime', paper presented to European Network for Housing Research Conference, Cologne.

O'Toole, C., A. Ahrens and M. Martinez-Cillero (2021). 'Price regulation, inflation, and nominal rigidity in housing rents', *Journal of Housing Economics*, 52.

O'Toole, C., K. McQuinn, R. Slaymaker, C. Coffey and E. Corrigan (2020). '*Exploring the short-run implications of the COVID-19 pandemic on affordability in the Irish private rental market*', Economic and Social Research Institute (ESRI): ESRI Research Series 108.

Olsen, E.O. (1972). 'An econometric analysis of rent control', *Journal of Political Economy* 80, 1081-1100.

Robertson, D. and G. Young (2018). *An Evaluation of Rent Regulation Measures within Scotland's Private Rented Sector*, A Report for Shelter Scotland.

Sagner, P. and M. Voigtländer (2021). 'Supply side effects of the Berlin rent freeze', paper presented to European Network for Housing Research Conference, Cologne.

San Francisco Rent Board (2019). 'Summary of AB 1482 (the California Tenant Protection Act of 2019)'. Available at: https://sfrb.org/article/summary-ab-1482-california-tenant-protection-act-2019#:~:text=Statewide%20law%20that%20goes%20into,or%2010%25%20whichever%20is%20lower.

Scanlon, K. and C. Whitehead (2014). *Rent Stabilisation Policies: International Evidence, Report for Camden Borough Council*, London School of Economics.

Sims, D.P. (2007). 'Out of Control: What Can We Learn from the End of Massachusetts Rent Control?', *Journal of Urban Economics*, 61 (1) pp. 129-51.

Turner, B. and S. Malpezzi (2003). 'A Review of Empirical Evidence on the Costs and Benefits of Rent Control', *Swedish Economic Policy Review*.

Whitehead, C. and P. Williams (2019). *From ideas to reality: longer term tenancies and rent stabilisation – principles and practical considerations.* A Report for the Residential Landlords Association, London School of Economics.

APPENDIX 1

Additional country details of rent policies

A.1 BERLIN RENT FREEZE

On 23 February 2020 the Law on the Revision of Legal Provisions regarding Rent Limitation came into effect in the Federal State of Berlin. The law created maximum rent limitations per square metre based on the year of completion and level of facilities of the unit that is rented. The rent cap introduced limits rents until 31 December 2020 to no higher than the rent agreed on the effective date of 18 June 2019. The rent freeze also applies to stepped rent and index rent leases.

If the rent was increased between the effective date and the entry of the law, the rent increase is not valid for the time period until the expiry of the rent freeze law. Since the date that the law came into effect, only the rent agreed on 18 June 2019 is owed. From January 2022 on, rent increases of up to 1.3 per cent of the net rent agreed on the effective date are permitted based on a random sample taken by the Federal Statistics Office on 31 December of the previous year.

The new law also limits rent increases after the modernisation of a unit. The modernisations that allow for a rent increase are:

- If the modernisation is mandatory by law;
- Is the thermal insulation of the building envelope, the basement ceiling or the top floor or roof;
- The replacement and optimisation of a heating system;
- The removal of barriers in the unit such as widening doors, remodelling bathrooms or by removing thresholds.

When the unit modernisation represents one of the above mentioned construction measures, the landlord is entitled to increase the rent of existing leases and new leases provided that the effective date rent does not exceed the rent caps. In these cases the landlord can increase the rent by up to one euro per square metre per month above the rent owed on 18 June 2019.

For a re-letting the net rent may not initially exceed the rent agreed on the 18 June 2019 with the previous tenant of the flat. If this rent is higher than the rent cap amount allowed by the state law, then the maximum rent allowed is the capped amount allowed by state law allowing for surcharges for modernisation work on the unit. If the unit was vacant on 18 June 2019, then the basis rent is the rent that

was paid by the last tenant of the unit prior to the 18 June 2019. There is an exemption in the cases where the rent paid was less than €5.02 per square metre monthly and the flat has modern facilities such as a built in kitchen and energy consumption value lower than 120kWH. In this scenario the landlord can increase the rent when re-letting by one euro per square metre to a maximum rent of €5.02 per square metre per month. In April 2021, the German Constitutional Court deemed the rent freeze to be unconstitutional.

A.2 RENT CONTROL IN NEW ZEALAND[34]

New Zealand traditionally had very low to non-existent levels of rent control. The Residential Tenancies Act (RTA) 1986 allowed for rents in the private sector to be increased every six months and landlords were allowed to terminate periodic tenancies with 90 days' notice or 42 days' notice if the housing unit was to be sold or for the landlord's family.

However in the last few decades there has been an increase in the proportion of households renting from 23 per cent in 1991 to 32 per cent in 2020. There was also a significant number of Maori and Pacific people in the rental market with 56.9 per cent of Maori people and 66.9 per cent of Pacific people living in rental homes in Census 2013. Due to the changing nature of the rental market, reforms to the Residential Tenancies Act were introduced in 2020. Most of the reforms came into effect on 11 February 2021 with only two changes (termination on ground of tenant physically assaulting landlord, and the ability of tenants to terminate a tenancy due to family violence) delayed due to a requirement for regulations to be made coming into effect by at least 11 August 2021 or before.

Reforms introduced include the conversion of fixed term tenancy agreements into periodic tenancies unless the landlord and tenants agree otherwise, or the landlord gives notice using the reasons listed in the RTA to periodic tenancies. There are changes to the notice periods for periodic tenancy agreements with the notice period for the owner or owner's family requiring the property increased to 63 days, and increased to 90 days for selling the property. The new reforms remove the landlord's ability to end a periodic tenancy by giving 90 days' notice to the tenant, without giving the tenant a reason. Periodic tenancies can only be ended by the landlord for one of the following reasons;

---

[34] This is drawn from the following sources: https://www.legislation.govt.nz/act/public/1986/0120/latest/whole.html https://www.hud.govt.nz/assets/Residential-Housing/Tenancy-and-Rentals/Residential-Tenancies-Act-Reform-Summary-of-Changes.pdf.
https://www.hud.govt.nz/assets/Residential-Housing/Tenancy-and-Rentals/Residential-Tenancies-Act-Reform-Frequently-Asked-Questions-Update-September-2020.pdf.

- The landlord issued a tenant three notices for separate anti-social acts in a 90-day period;
- The landlord gave notice that a tenant was at least five working days late with their rent payment on three separate occasions within a 90-day period;
- The landlord will suffer greater hardship than the tenant if the tenancy continues;
- Existing provisions of the RTA relating to rent arrears, damage, assault and breaches still apply.

The notice period for the tenant in these scenarios is determined by the Tenancy Tribunal when the landlord applied to the Tribunal to terminate the tenancy.

Other reforms introduced include the banning of rental bidding invitations by landlords and agents with a ban also in place on the advertising of rental properties with no rental price included. There is also a new limit introduced on rent increases with an increase now only allowed once every 12 months. New infringement regime for breaches of the RTA has also been introduced with existing penalties increased between 50 and 80 per cent over the existing levels which were set in 2006. The ability for the regulator to issue Enforceable Undertakings and Improvement Notices to correct a breach of the RTA is also a new reform.

Whitaker Square,
Sir John Rogerson's Quay,
Dublin 2
Telephone **+353 1 863 2000**
Email **admin@esri.ie**
Web **www.esri.ie**
Twitter **@ESRIDublin**

ESRI ECONOMIC & SOCIAL RESEARCH INSTITUTE