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Rental Market Regulation in the European Union

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Rental Market Regulation in the European Union

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Abstract

The state of development of rental markets as a genuine alternative to home-ownership stands out as a particularly relevant institutional factor shaping the outcome of the housing market and playing a balancing role and alleviating house price pressures. This is especially the case when it proves to be an affordable platform for young and low-income households, providing them with a viable alternative to a hasty first step into the property ladder. In order to help policymakers develop a sizeable private rental market acting as an attenuating factor of housing prices volatility, it is important to depict the relevant dimensions of the rental market regulation and assess their likely impact on the aggregate housing market. Against this background, this paper first develops a two-dimensional indicator on rental market regulation, covering for rent controls and the tenant-landlord relationship. The resulting indices are put to the test by assessing their impact on housing prices. According to this analysis, an efficient, fair and swift judicial system appears as a necessary step towards unlocking rental markets full potential. Moreover, rent controls appear to have a significant destabilizing impact on the aggregate housing market, increasing the volatility of house prices when confronted with different shocks. Finally, qualitative aspects of the tenancy contract negotiation do not have a first-hand impact on housing market dynamics.

JEL Classification: C23, C38, R15, R28, R52.

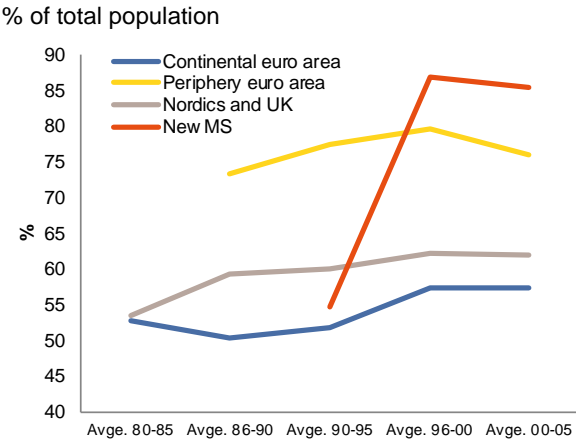
Keywords: Rental Market Regulation, Composite Indicator, Factor Analysis, Housing Market, Rent Controls, Tenant-Landlord Relationship, House Price Model.

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1. INTRODUCTION

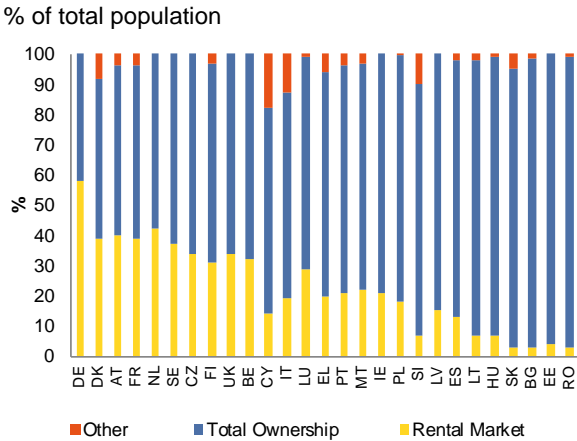
Over the past three decades, homeownership rates have increased in most European Union (EU) countries. This aggregate picture hides, however, regional differences in the evolution of tenure status. As seen in Figure 1, the Member States that joined the EU in 2004 and afterwards have come a long way since the beginning of the 90s. Across-the-board restitution and privatization of nationally-owned properties in the post-communist era, together with development of relatively small and expensive private rental markets with limited protection of contractual arrangements, triggered a rapid increase in ownership. Moreover, the periphery presents structurally high ownership rates throughout the whole period, although the gap with core euro area and Nordic countries has narrowed in the recent past. Correspondingly, the latest available comparable data show also a rather heterogeneous picture across the tenure status of the different EU Member States, as presented in Figure 2. Approximately 30 per cent of the EU population lives in rented dwellings, with a particularly high share (above 40 per cent) in some core euro area countries (DE, AT, FR and the NL) as well as the Nordics (SE, DK). On the contrary, new Member States (with the exception of CZ) together with some peripheral countries (e.g. IE and ES) generally rank higher in terms of ownership.

Figure 1: Ownership rate by region, average



Source: Luxembourg Income Study
 Note: Continental euro area includes AT, BE, DE, FR, LU and the NL. Peripheral euro area countries are EL, ES, IE and IT. The UK is bundled with DK, FI and SE. Finally, new Member States category refers to CZ, EE, HU, SI and SK.

Figure 2: Population by tenure status, 2008



Source: CECODHAS, 2012 Housing Europe Review. The category "Other" includes different items, depending on the country; vacant dwellings for ES or schemes for displaced persons in CY, amongst others.
 Note: 2001 for CY, 2004 for IE, 2007 for SI and 2010 for LV. Data for HR not available.

The progressive dilution of private rental markets in the EU was heavily affected by the alignment of market and policy incentives favouring ownership as the best option to meet accommodation needs (taxation benefits, easing of financing conditions, expectations frenzy, etc.). Biased incentives towards ownership fostered demand for owned housing (both new and second-hand), leading to rapid increases in house prices relative to rentals.¹ Price-to-rental ratios reached an all-time high for most EU countries in 2007-08, signalling potential

¹ For a deeper discussion and more evidence, see European Commission (2012).

overheating pressures in housing markets as in equilibrium households should be indifferent between buying and renting.²

With the unfolding of the recent financial crisis, it became evident that the existent policy incentives, distorting housing investment decisions, can foster macro-financial risks and vulnerabilities in the banking sector, as well as an inefficient allocation of resources, potentially crowding out tradable sectors and generating or aggravating external imbalances (see Andrews *et al.*, 2011 and Vandenbussche *et al.*, 2012 for some evidence). Notwithstanding these important implications, most EU countries do not have an encompassing regulatory approach to housing factoring in the role of the rental market as a counteracting force, diminishing the pressure on house prices and reducing their volatility.

Policy intervention in rental markets has traditionally been geared towards two other purposes: on the one hand, ensuring social fairness through sufficient supply of affordable accommodation, urban integration and stable living conditions and, on the other hand, avoiding market segmentation and ensuring effectiveness in contract enforcement. Indeed, throughout the 20th century, rental market regulation has developed mainly at times of overcrowding and social unrest intensified by housing shortages due to the World Wars (see Schmid, 2009 for a deeper historical overview). In this context, the implications of the rental market regulation on housing market outcomes have generally been overlooked in economic policy debates, despite it being an integral part of housing markets.

This work was developed in the context of the new procedure for the prevention and correction of macroeconomic imbalances (the Macroeconomic Imbalance Procedure), which enhanced the governance structures in EMU as of 2011,³ Against this background, this note considers rental market regulation in a broader context and aims at capturing its implications for the functioning of the housing sector in general. First, an assessment of rental market regulation across EU countries leads to the construction of indexes in two regulatory dimensions, namely the rent control and tenant-landlord relationships. Second, these indexes are used to study within a fundamental model of house prices the effects of rental market regulation on overall housing market outcomes. The findings suggest that rent control measures tend to have an adverse effect on housing market dynamics, increasing the volatility of house prices when facing shocks to the fundamentals (such as shifts in population, household income, residential investment and interest rates). On the contrary, qualitative aspects of regulation affecting the tenant-landlord relationship do not have a first-hand impact on the dynamic of house prices.

The remainder of the text is structured as follows. Section 2 deals with the origin, the objectives and the current configuration of rental market regulation, providing a quantitative

² As for any economic asset, the fundamental value of a house is defined as the stream of all expected future earnings (housing service flows or rental earnings) discounted for investors' preferences and financing costs.

³ To this can be added the recent "two-pack" which aim to further strengthen surveillance mechanisms for euro area Member States, including budgetary surveillance and stronger monitoring of countries with financial stability issues or countries requiring financial assistance.

indicator for the EU Member States along two regulatory dimensions: rental control and tenant-landlord relation. Section 3 uses the constructed indicator to analyse the impact of the different rental market frameworks on the house price dynamics and points to additional factors increasing substitutability between renting and owning options. Finally, section 4 recapitulates the main conclusions and attempts at giving some policy pointers.

2. RENTAL MARKET REGULATION

2.1. Regulation Dimensions

The assessment of rental market regulation is inspired by and extends previous OECD work on rental markets (see Andrews *et al.*, 2011) ensuring, to the extent possible, comparability of the results. The estimation of the impact of rental legislation on housing market outcome hinges on the construction of a quantitative indicator reflecting the degree of regulation in the rented housing market across EU Member States. For this purpose rental market regulation is sliced into 7 sub-indicators, catering for its main relevant dimensions;

- Rental Level Control (RLC), describing the degree of flexibility in setting rental levels for new contracts;
- Rental Increases Control (RIC), defining the rental updating methods within tenures;
- Procedural Formalism (PF) as a proxy for the efficiency of judicial proceedings. It covers different areas of courts proceedings: degree of professionalism of the main players (judges, lawyers, arbitrators, etc.), pre-eminence of oral vs. written acts, rules for presenting evidence and control by superior instances, amongst others;⁴
- Deposit Requirements (DR) for tenants, if any, in order to formalize the rental contract;
- Justified Reasons for Tenant Eviction (RE), giving occupation rights to landlords and thus reducing tenant security (such as renovation, urgent need, selling rights, etc.);
- Eviction Notification Requirements (NR), setting the timeframe for landlords to get back their property and for tenants to find a suitable housing opportunity;
- Duration of Contracts (DC), representing the average or representative length of a tenancy contract.

Subsequently, a principal component analysis is performed in order to better understand the interaction and the information conveyed by the 7 indicators under analysis. In a final stage, the information on contract negotiation obtained through principal component analysis can be further streamlined by means of the construction of two composite indicators, which will be

⁴ Taken from Djankov *et al.* (2002). Procedural formalism is negatively associated with fairness, impartiality and speed of a legal system. In short, the higher the formalism index the lower the quality and the longer the duration of court proceedings.

of use for the quantitative analysis on the effect of rental market regulation on housing market volatility.

The methodology developed in this note departs from OECD work by Andrews *et al.* (2011) in several aspects. First, the country coverage is expanded to the EU27. Second, data collection is based on a wide variety of sources including country-specific legal documents and reports by various specialized organizations rather than survey-based. Third, ex-ante aggregation of the sub-indicators into rental control and tenant-landlord regulation indices is not imposed. The final choice of the indicators is refined by "letting the data speak", via principal components analysis and the evaluation of the informational content of the individual sub-indices. Third, individual items or sub-indicators have been streamlined and adapted to better capture EU specificities and potential divergences Member States.

2.2. Analysis of Regulation Indicators

In order to better understand the interaction and the information conveyed by the 7 indicators under analysis, a principal component analysis is performed. According to the estimated eigenvalues and their overall explanatory power, the indicators can be grouped around three common factors.⁵ The first one relates to the rent control dimension, both in levels and in changes (RLC and RIC indicators). The second factor appears more related with all the items defining the tenant-landlord relationship (DR, RE, NR and DC indicators), while the third is dominated by the courts efficiency indicator (PF dimension).⁶

This split highlights the separation between rental contract negotiation (factors I and II) and their enforcement (factor III). The analysis of the rental market regulation can therefore be undertaken along these dimensions.

Contract Enforcement

Sub-optimal enforcement of contracts is generally a limiting factor for transactions in any market (see Johnson *et al.*, 2002 for an overview). This relation between the degree of formalism and the size of the market also holds true for the rental market as can be seen in figure 6, where countries with the less developed rental markets are identified as those presenting a higher degree of formalism.

Formalism is positively related with the expected duration of dispute resolution. However, there is more to the efficiency of a legal system than just its speed. This nuance between the duration and formalism concepts is particularly relevant at a policy level, as both concepts are often mixed. As shown in figure 7, countries with lower degree of formalism generally present more rapid dispute resolution systems. This relation is less clear-cut when looking at intermediate or high levels of formalism. Member States like Austria present a relatively slow resolution system while faring better in aggregate formalism; the opposite is true for countries

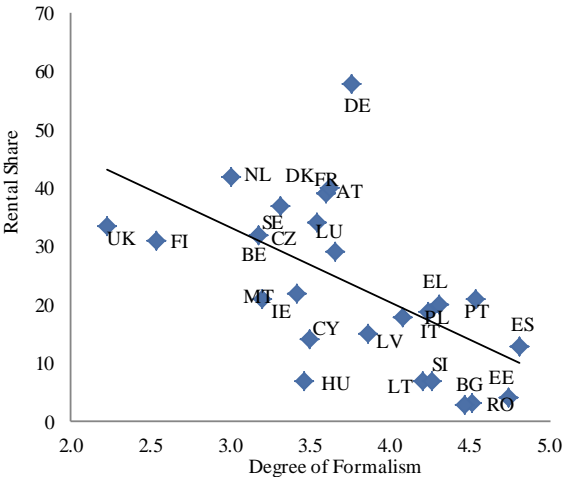
⁵ Those presenting eigenvalues above 1 and explaining altogether more than 70% of the total variance of the sample.

⁶ More details on the factor analysis are available upon request.

like Spain or Greece. The duration of enforcement or eviction proceedings is therefore only one aspect of the overall quality of the judicial system and it does not always reflect the existence of bottlenecks impeding rental market developments.

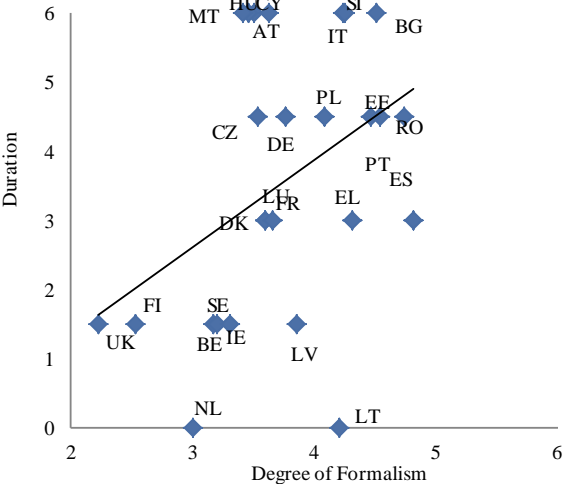
Achieving a sufficient degree of contract enforceability by reducing procedural formalism stands as a necessary step towards unlocking the rental market potential and providing tenants and landlords with the appropriate certainty about the economic effects of their transactions. An efficient and prompt judicial system with the necessary institutional settings in place (such as qualified professionals and clear and transparent appealing rules) goes, however, beyond the scope of rental market regulation. The analysis of the impact of rental indicators will therefore focus on those concerning specifically the rental market domain.

Figure 6: Procedural formalism against the size of the rental market, 2002



Source: Djankov et al. (2002) and CECODHAS, 2012 Housing Europe Review.
 Note: Data for procedural formalism in SK is missing. The rental share is defined as the population under a renting regime over the total population.
 Note: The degree of formalism combines information of seven sub-indices and lies between 0 and 7, with 7 representing the heavier judicial systems.

Figure 7: Procedural formalism against expected duration of dispute resolution, 2002



Source: Djankov et al. (2002).
 Note: Data for procedural formalism in SK is missing. The Duration indicator is constructed according to the necessary number of days to evict a tenant in case of non-payment (up to 3 months, 3 to 6 months, 6 to 9 months, 9 to 12 months and over 1 year).
 Note: The degree of formalism combines information of seven sub-indices and lies between 0 and 7, with 7 representing the heavier judicial systems.

Contract Negotiation

Abstracting from the enforcement dimension, the principal component analysis is repeated without inclusion of the formalism indicator. Only two common factors are identified in this case,⁷ and they represent the two relevant dimensions of contract negotiation as can be seen in the factor loadings in table 1.

In order to better understand how negotiation incentives are set in tenancy contracts across the EU, we then use clustering techniques as they help us find similarities in the data and classify

⁷ Explaining more than 60% of the total variance.

the countries accordingly. Following the methodology developed in Balasko *et al.* (2002),⁸ Member States are grouped into four non-mutually exclusive clusters along two dimensions representing rental control and tenant-landlord relations (i.e. the common factors identified previously).⁹ The resulting clusters are shown in figure 8. Both axes are increasing in the degree of tenant protection, either through quantitative rent restrictions (second factor) or qualitative contract regulations (first factor).

Two groups stand out as having greater tenancy protection, either via higher rent controls (DK, LU, AT and DE to a lesser extent) or a "pro-tenant" bias in the contract regulation (LT, BG, ES, PT and the NL). At the end of the spectrum, SE presents the highest degree of tenancy protection, topping in both dimensions. Among the countries with lower rent controls, SK, FR, BE, the UK and FI present a neutral stance in contract regulation while IE, IT, LV, EL and particularly PL appear to be more favourable to landlords.

Table 2: Factor loadings from the principal components analysis of negotiation sub-indices

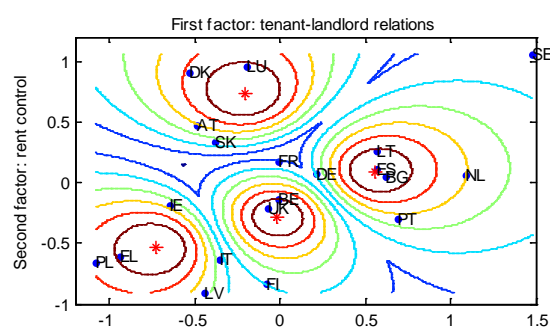
	Factor I	Factor II	Factor III
RLC	0.89	-0.02	0.17
RIC	0.92	-0.15	-0.18
PF	0.01	-0.15	0.88
DR	0.12	-0.89	0.17
RE	0.08	-0.42	-0.57
NP	0.22	-0.75	-0.21
DC	-0.23	-0.57	0.39

Source: Staff calculations.

Note: The loading matrix is rotated according to VARIMAX techniques. Due to data limitations, the CZ, CY, HU, MT, RO and SI are not included in the sample.

Note: Rent level control (RLC), rent increases control (RIC), procedural formalism (PF), deposit requirements (DR), existing reasons for eviction (RE), required notice period for evicting a tenant (NP) and duration of contracts (DC).

Figure 8: Tenancy contract negotiation archetypes , EU27



Source: Staff calculations with raw data from the European University University Institute, Tenancy Law Project; Global Property Guide and Staff calculations.

Note: The data refers to the private segment of the rental market. Data for the CZ, CY, HU, MT, RO, SI and SK is not complete along the six sub-indicators.

2.3. Construction of Composite Regulation Indicators

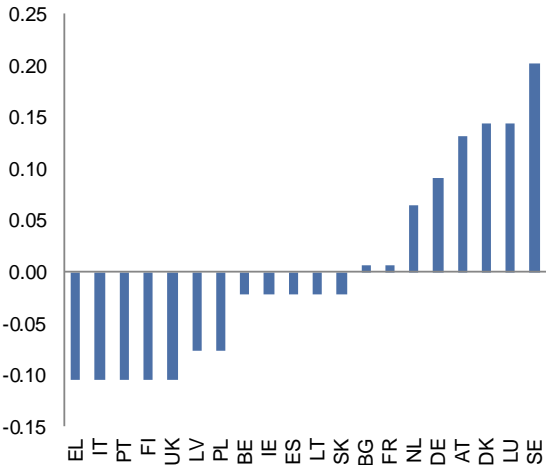
The factor loadings are now used as intermediate weights for the individual indicators in the construction of the composite, according to the proportion of the total variance of the indicator explained by the specific factors (see OECD, 2008 for a deeper technical explanation). Results from the calculations of the two composite indicators on rent controls (quantitative aspects of rental negotiations) and tenant-landlord relations (qualitative aspects of contracts) are shown in figures 9 and 10, respectively.

⁸ We thankfully acknowledge the authors for openly sharing their matlab codes.

⁹ Similarity is assessed mathematically as a distance measure between multi-dimensional data vectors. Fuzzy clustering algorithms allow for countries to belong to different subgroups in various degrees (given by boundaries or level curves), as clusters are not mutually exclusive.

The information conveyed by the indicators describes the situation of member States as of end-2012 and is used in the next section to give an estimate of the impact of rental market regulation on the house price dynamics. Tenancy regulation is nevertheless an active policy area and account should be taken of recent regulatory changes such as the rental market reform enacted in Spain in May 2013, in order to better gauge their quantitative impact (see box 1 for a description of the reform and an estimation of its impact on the composite values).

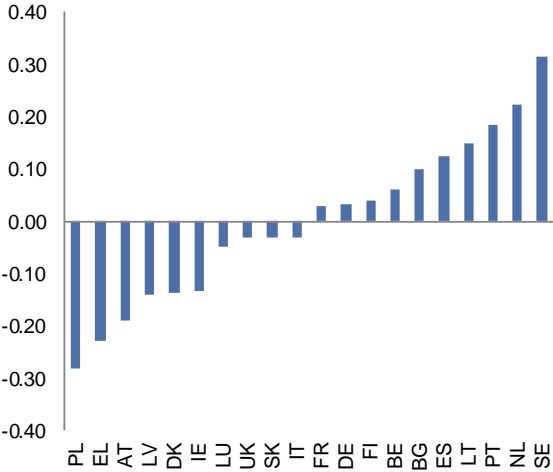
Figure 9: Composite Indicator I; Rent Control, EU27



Source: Staff calculations.

Note: The data refers to the private segment of the rental market. Data for the CZ, CY, HU, MT, RO, SI and SK is not complete along the different sub-indicators. Lower values of the composite indicator reflect lower degree of rent control. Dutch Social Housing Corporations are defined as non-profit organisations and thus included in the analysis.

Figure 10: Composite Indicator II; Tenant-Landlord Relationship, EU27



Source: Staff calculations.

Note: The data refers to the private segment of the rental market. Data for the CZ, CY, HU, MT, RO, SI and SK is not complete along the different sub-indicators. Lower values of the composite indicator reflect lower degree of tenant protection. Dutch Social Housing Corporations are defined as non-profit organisations and thus included in the analysis.

Box 1. Spanish reform for the Flexibilization and Promotion of the Rental Housing Market

The Act on Flexibilization and Promotion of the Rental Housing Market was adopted by the Spanish Parliament on 23 May 2013, aiming at a more flexible regulatory regime and strengthened legal certainty. This reform amends two existing pieces of legislation; the 1994 Law on Urban Rental Contracts (Ley 29/1994 de Arrendamientos Urbanos) and the 2000 Law on Civil Procedures (Ley 1/2000 de Enjuiciamiento Civil).

The modifications introduced by the reform can be classified as affecting the tenant-landlord relationship, rent controls and contract enforcement, according to the definition of the main dimensions in rental market regulation outlined above.

Rent control dimension:

- Rent increases for new leases will from now on be freely determined by the contractual parties, without need to explicitly index it to the consumer price index.

Tenant-landlord relationship:

- Minimum contract duration is reduced from 5 to 3 years, and subsequent automatic tacit extensions are reduced from 3 years to 1 year.
- Contract termination from the tenant side: under the current regime, the tenant may terminate the contract at any time with one month's notice. Moreover, the contract might specify a pecuniary compensation for the lessor in case of anticipated withdrawal from the lessee.
- Contract termination from the landlord side: the landlord can now terminate the contract for own occupation (that of an immediate family member or spouse in case of divorce) without need for specific mentioning in the contract.
- Contract termination in case of change of homeowner: owners were previously bound to existing rental contracts. However, according to the new legislation, the new proprietary of a dwelling is not required to abide by the existing rental contracts unless they were previously registered in the Land Registry.

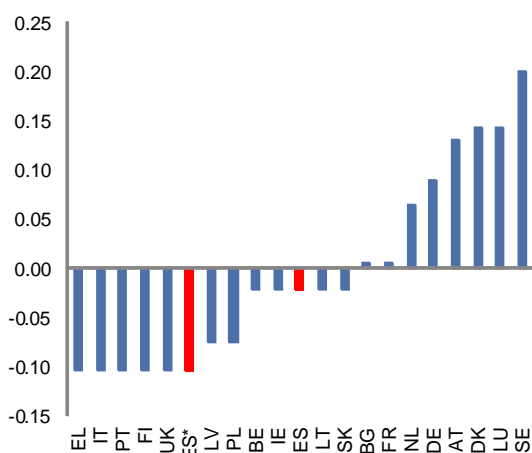
Conditions for contract enforcement/evictions:

- Under the new law, tenants who fall behind in the rental payment can be evicted within ten days after the lawsuit is filed. Until now, the landlord had to go to court and obtain first a declaratory judgment for the unpaid rent that could then lead to eviction. On the other hand, the tenant had the option of paying at the last minute and enervating the foreclosure.

Box 2. Continuation

The impact of the reform on the composite indicators for Spain can be traced back by looking at the changes in the original sub-indicators defined previously. Out of the 8 dimensions considered, 2 are affected by the new regulation; rent increases and reasons for eviction. The newly calculated composite indicators can be seen in figure 11 and 12, where the Spanish situation is depicted both before and after the reform. With the recent reform, the Spanish legislation has indeed become more flexible in terms of rent setting and more neutral in setting the incentives between landlords and tenants (i.e. moving towards lower values of the composite indicators).

Figure 11: Composite Indicator I; Rent Control, EU27

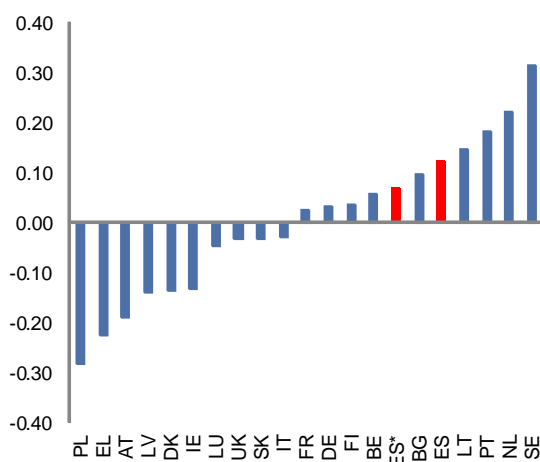


Source: Staff calculations.

Note: ES* refers to the Spanish rental market after the 2013 reform.

Lower values of the composite indicator reflect lower degree of rent control.

Figure 12: Composite Indicator II; Tenant-Landlord Relationship, EU27



Source: Staff calculations.

Note: Note: ES* refers to the Spanish rental market after the 2013 reform.

Lower values of the composite indicator reflect lower degree of tenant protection.

3. IMPACT OF RENTAL MARKET REGULATION

3.1. Bird's-eye view of the existing literature assessing the impact of rental regulation

The regulatory environment in the EU rental markets generally attempts at setting the right incentives for Landlords and Tenants by striking a balance between social fairness and economic efficiency. Initial steps in rental legislation, the so-called "transfer models", aimed at preventing indiscriminate rent increases (i.e. rent freezing in practice) and toughening eviction rules, effectively transferring rights from landlords towards tenants. These policies were initially conceived as temporary and even geographically constrained to specific areas. They were progressively adapted to changing economic and social conditions, giving way in the early 1980s to "regulated tenure models" of a more permanent nature and broader coverage, allowing for regular updates of rentals. Therein, rentals are generally regulated

within a given tenure but not for new contracts (tenancy rent control) and tenants are provided with considerable security of tenure.¹⁰

However, diverse factors generally impede a first-best solution and result in very heterogeneous configurations across Member States. As pointed out in Ellingsen and Englund (2003) the existing regulation includes a hysteretic component and should be understood within its historical context and legacy. In this vein, Schmid (2009) highlights the importance of political motivations rather than market developments as the main driver of fluctuations in tenancy law.

The existing literature generally assesses the performance of rental market regulation by gauging its impact on rents and new construction via shifts in demand and supply for renting. Overall, the effects on quantities and prices seem uncertain and there does not appear to be clear evidence on welfare gains from rent controls especially when taking into account associated efficiency losses, lock-in effects obstructing labour mobility or redistribution concerns (see Malpezzi and Turner, 2003 for a review of results under partial equilibrium models or Arnott, 1995 for a first attempt at modelling the rental sector within an imperfect competition set-up).

The costs of rent controls outweigh the benefits especially in the case of transfer models. In theory, tighter rent controls should lead to a decrease in regulated rents, increasing the attractiveness of renting for tenants, and thus demand. Moreover, tenants would be better protected against sharp increases in rents and tenure security would be enhanced (Arnott, 1995). On the other hand, reduced rents would shrink the supply of rental accommodation via its impact on profitability of residential investment for rental use (rental yields), triggering a downsizing of the rental markets (see ECB, 2003 and Lind, 2003), partially offsetting the drop in rents and also fostering potential lock-in effects for sitting tenants, which would hinder mobility.

If rents are regulated only within tenure (tenancy rent control models), the efficiency losses could be lower, as rents would be freely set for new leases and allow thus for at least a sluggish adjustment of rents towards their market level. However, the tensions between landlords and tenants could be exacerbated as the former would have incentives to increase the rotation of contracts (for example by encouraging eviction processes, by a biased tenant selection or through a reduction in the maintenance investment) while the latter would opt for long duration tenancies as their fixed costs of moving increase over time (see Arnott, 2003). Moreover, induced duality between new and existing tenants would imply adverse distributional effects for the former without affecting the aggregate rent levels. In practice, landlords will charge higher rents for new contracts, frontloading expected increases in the cost of life, as a compensation for the lower regulated rents within tenancies (see Andrews *et al.*, 2011 for some evidence).

¹⁰ See Hubert (2003).

Two caveats can be identified in the literature attempting to evaluate the several impacts of rental market regulation. On the one hand, most studies focus on the role of rent controls. A more encompassing analysis, taking into account other features affecting tenancy contract negotiation would enrich the conclusions on the role of tenancy legislation. On the other hand, the rental sector should be understood within the broader framework of the housing market, where rental regulation interacts with taxation incentives, macro-prudential regulation and social instruments, amongst others, in setting the evolution of prices.

3.2. Impact of Rental Market Regulation on Housing Market Performance

In order to fill these gaps, regulation measures derived in section 3 both on rent control and tenant-landlord regulation are introduced in an error-correction model (ECM)¹¹ of relative (i.e. inflation-adjusted) house prices, together with other explanatory variables such as population, real disposable income, real housing investment and real long-term interest rates. The fixed effect pooled panel estimation of the model covers the period from 1970 to 2011 for 15 EU Member States¹² and hence is suited for taking into account the time invariant regulatory indices as interaction terms, affecting the house price response to different determinants. These interaction terms would not be estimable in a country-by-country setting, since the regulatory indicators are time-invariant and therefore their interaction with other variables would introduce perfect multicollinearity in the model. The country fixed effect (a different intercept for each country) captures the average level of house prices over the sample period.

The estimated long-term relationship between the variables for the different model configurations can be found in table 3, together with the corresponding error-correction term. The estimation of the baseline case confirms the significance of the selected variables in explaining relative house price dynamics. The elasticity of relative house prices to population is about 1.8 (a 1 per cent increase in population leads, all else equal, to an increase of house prices of about 1.8 per cent), while the elasticity to real income is lower, around 0.7. The sensitivity to real interest rates is significantly negative (a 1 pp. increase in interest rates leads to a 1.4 per cent fall of house prices). The positive coefficient on housing investment is, at first, somewhat surprising, but is due to the fact that this supply variable is a flow rather than a stock. This implies that if the long-term equilibrium house price is high, the equilibrium housing investment is high as well.

The baseline is next augmented with the interaction term relating the regulatory indicator and the different explanatory variables, yielding four additional models for each regulatory index (columns RC1 to RC4 for the rent control composite and TL1 to TL4 for the tenant-landlord relation indicator). The results of the augmented models, shown in table 3, clearly point towards Rent Controls (RC) as having a positive impact on house price dynamics by increasing their response on impact to changes in all the explanatory variables. On the

¹¹ ECM methodology is selected as the selected variables appear to be cointegrated.

¹² Belgium, Bulgaria, Denmark, Estonia, Ireland, Greece, Spain, France, Italy, Lithuania, the Netherlands, Poland, Finland, Sweden and the United Kingdom.

contrary, the Tenant-Landlord index has, in principle, little influence on housing market developments.

Table 3: ECM estimation results for housing market model augmented with rental market regulation indicators

	Rental ind. = RC					Rental ind. = TL			
	Baseline	RC 1	RC 2	RC 3	RC 4	TL 1	TL 2	TL 3	TL 4
Cointegrating relation (coef. RHP=1, with country FE)									
Population	1.825 [7,58]	1.798 [7,45]	1.759 [7,33]	1.823 [7,62]	1.897 [7,95]	1.812 [6,95]	1.829 [7,58]	1.799 [7,42]	1.84 [7,66]
Real income	0.693 [11,95]	0.695 [11,99]	0.711 [12,28]	0.74 [12,17]	0.663 [11,44]	0.694 [11,75]	0.698 [11,82]	0.68 [11,4]	0.691 [11,95]
Real housing investment	0.388 [11,97]	0.399 [11,94]	0.41 [12,39]	0.355 [10,15]	0.389 [12,16]	0.387 [11,39]	0.39 [11,88]	0.396 [11,78]	0.386 [11,92]
Real LT interest rate	-0.014 [-6,03]	-0.013 [-5,66]	-0.012 [-5,11]	-0.014 [-6,22]	-0.014 [-6,19]	-0.014 [-6,01]	-0.014 [-5,97]	-0.013 [-5,78]	-0.015 [-6,32]
Rental ind. * Population		1.617 [1,36]				-0.165 [-0,13]			
Rental ind. * Real income			0.743 [2,81]				0.127 [0,47]		
Rental ind. * Real housing investment				0.528 [2,44]				-0.177 [-0,91]	
Rental ind. * Real LT interest rate					-0.061 [-3,47]				-0.036 [-1,85]
Adj. R2	0.892	0.897	0.898	0.898	0.899	0.896	0.896	0.897	0.897
Error-correction model of RHP									
EC(t-1)	-0.246 [-8,41]	-0.25 [-8,43]	-0.239 [-8,05]	-0.241 [-8,21]	-0.25 [-8,39]	-0.246 [-8,4]	-0.244 [-8,31]	-0.245 [-8,34]	-0.246 [-8,34]
Adj. R2	0.417	0.446	0.441	0.443	0.446	0.446	0.446	0.449	0.444

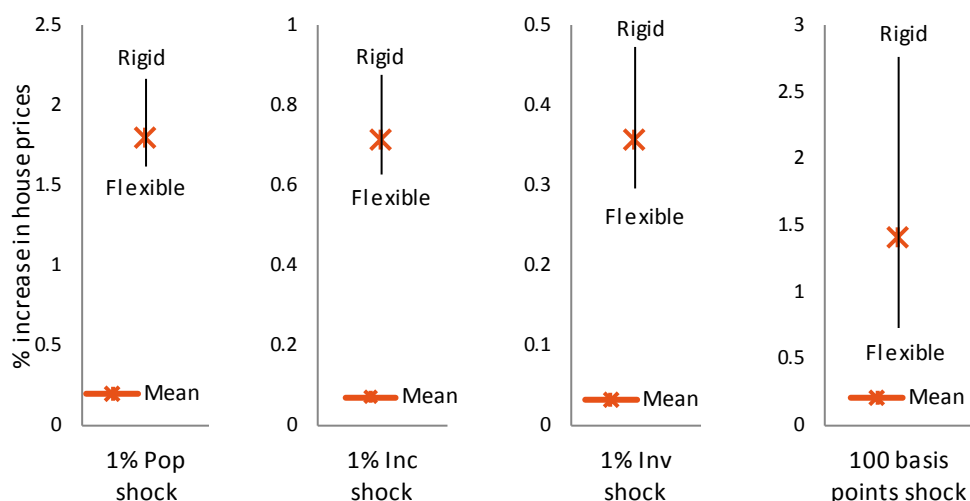
Source: Commission Services

Note: *t* statistics in square brackets. RC stands for Rent Control index and TL stands for Tenant-Landlord relation index. The R-squared in the cointegrating relation includes the variability explained by the country fixed effect.

Figure 13 depicts the elasticity of house prices to changes in its main determinants; population, real income, real investment and real interest as estimated in the augmented models. The response from house prices is obtained for an average level of RC as well as for the most flexible (minimum impact) and most rigid (maximum impact) cases, by adding the interaction term.

Taking into account the impact of rent control regulation significantly shifts the response of house prices to the different shocks. In this line, the recent rental market reform in Spain, which brings down RC from an average situation to the most-flexible cases (such as Finland), would significantly reduce the impact of a selected shock on house prices by around 10 percent (almost by a half for an interest rate shock). This is particularly important in the current context of negative shocks to the main housing demand determinants as it would cushion their negative impact on the housing market dynamics.

Figure 13: Relative house price response to shocks under different rent control scenarios (minimum rent control or flexible regime, average control and maximum degree of rent control or rigid scenario)



Source: Commission services

Note: the bars represent the house price response to a positive 1% shock in population, real income, real investment and a negative 100 basis points shock in real interest under different scenarios for rental setting flexibility.

Note: Higher absolute values represent the least flexible country (highest rent control index). A symmetric interpretation applies for the minimum values (most flexible or best performing case). The average country is represented by the marker.

3.3. Additional factors fostering the Rental Market balancing role

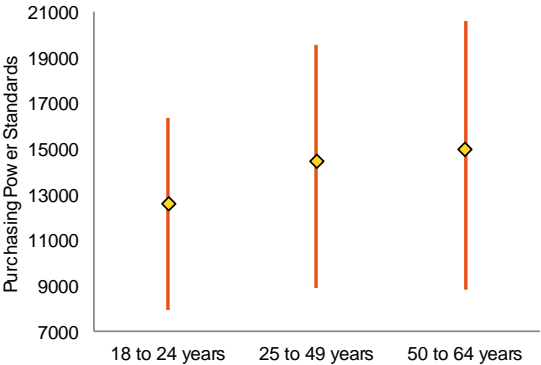
In order for the rental market to play its complementary role, distortions limiting substitutability between ownership and renting should be minimized. Particularly, in the current economic context, several cyclical factors -- credit tightening, higher unemployment, and expectations of house price falls -- are affecting negatively the demand for home ownership. As young cohorts (most often corresponding to lower income ones, as can be seen in figure 3) struggle to enter the property ladder, a well-functioning and affordable rental sector would provide a viable alternative, cushioning the impact of existing constraints

If the rental market provides suitable housing opportunities particularly for low income groups, one would expect more stable housing markets. This would imply a negative relationship between the share of low income tenants and house price dynamics (or inversely, a positive correlation between homeownership rates for low income deciles and house price deviations for a sustainable benchmark). During the build-up phase of a house price boom, affordable rental opportunities for young/low income cohorts would tame demand pressures and thus limit price increases. Equivalently, low income households are more vulnerable to adverse shocks in the downturn, exacerbating thus price corrections and financial instability.

The relationship between low income owners and house price dynamics is also supported when controlling for other important determinants of relative house prices, such as population, residential investment, real interest rates and households' disposable income. For these purposes, the Hausman and Taylor's (1981) technique is used (see Greene 2003 for a more detailed exposition and Hilbers et al. (2008) for a recent application to housing markets)

in order to take explicitly into account the lack of time variation of the share of low income owners variable. Table 1 shows the estimation results,¹³ which point to a positive and significant contribution of the share of low income owners to house price growth in three VECM model specifications out of four.

Figure 3: Distribution of income by age, 2011



Source: Eurostat
 Note: The first, second and third quartiles of the income distribution in the EU27 are represented.

¹³ The following linear model is estimated: $p_{it} = X'_{1it}\beta_1 + X'_{2it}\beta_2 + Z'_{1i}\alpha_1 + Z'_{2i}\alpha_2 + \mu_i + \varepsilon_{it}$, where p_{it} is the logarithm of the relative house price for country i and X'_{1it} denotes all variables that are time varying and uncorrelated with the individual specific random error, μ_i . X'_{2it} comprises time varying variables for which a correlation with the individual specific random error is allowed for. In a similar vein, Z'_{1i} holds the time invariant variables that are uncorrelated with μ_i and Z'_{2i} comprises time invariant variables that may be correlated with μ_i . Finally, ε_{it} is the time and individual specific error term of the regression model.

Table 1: Hausman-Taylor estimation results for share of low income homeownership

		model1	model2	model3	model4
VARIABLES		relative house price	relative house price	relative house price	relative house price
Time varying	real short term interest rate	-0.00255 (0.00255)	-0.00439 (0.00279)	-0.00388 (0.00272)	
	real housing investment	0.359*** (0.0386)			0.339*** (0.0386)
	real disposable income	0.707*** (0.0543)	1.194*** (0.0571)	1.324*** (0.0608)	0.709*** (0.0558)
	Population		-0.324** (0.127)		
	Urban population			-0.0278*** (0.00575)	
	real long term interest rate				-0.00841*** (0.00287)
Time invariant	Share low income ow ners	2.133 (1.311)	4.533* (2.442)	4.441* (2.693)	2.355* (1.229)
	Constant	-1.273* (0.664)	0.926 (1.583)	-0.773 (1.352)	-1.258** (0.628)
	Observations	419	419	412	415
	Spec. Test	0.002	0.009	0.431	n.a.
	p(value)	1	1	0.93	

Source: Zentrum für Europäische Wirtschaft (ZEW)

Note: The model cannot be estimated with the ordinary least squares method (OLS) since the presence of regressors that are correlated with the latent effects μ_i renders OLS estimates inconsistent. Therefore, a different estimation strategy that goes back to Hausman and Taylor (1981) needs to be employed. It builds on a feasible generalised least squares (GLS) method which rests on three estimation steps.

Note: Standard errors in parentheses, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Spec. test denotes the Hausman-Taylor test for correlation between the included variables and the country-specific effect. Entries show the chi-squared statistic with p-values in parentheses. n.a. denotes that the test is not applicable due to a non-positive definite covariance matrix.

4. CONCLUSION AND POLICY LESSONS

Policymakers generally attempt at accomplishing very diverse objectives with rental market regulation; striking the right balance of incentives between both contracting parties, correcting for possible market failures (such as information asymmetries); providing affordable minimum living standards; fostering labour mobility or increasing public revenues. However, on top of partial equilibrium considerations of efficiency or social concerns, the rental market regulation has broader consequences for housing market dynamics and household finances and thus needs to be assessed from a macroeconomic perspective.

Despite a very heterogeneous tenure status across Member States, homeownership rates have witnessed a generalized increase over the last three decades, heavily affected by the realignment of taxation as well as regulatory and macro-prudential incentives in favour of homeownership vs. renting. A well-developed and efficient rental market providing a viable alternative to ownership plays a balancing role by alleviating house price pressures and smoothing housing market dynamics. This is especially the case when it proves to be an affordable platform for young and low-income households, providing them with a viable alternative to a hasty first step into the property ladder.

In order for policymakers to meet this macroeconomic challenge while caring for efficiency and social considerations, it is important to understand the relevant dimensions of the rental market legislation and assess their likely impact on the aggregate housing market. There is increased awareness in Member States of the relevance of renting as an alternative to ownership, as reflected in recent reforms in Portugal and Spain aiming at increasing the rental market efficiency. Moreover, rental market regulation reforms also figure prominently in the 2013 European Semester recommendations issued by the European Council for the Netherlands, Sweden and the United Kingdom.¹⁴

According to the analysis above, regulation covering tenancy contracts can be split into three dimensions; their enforcement and the contractual negotiation of quantitative (rent levels and rent increases) and qualitative (deposit requirements, duration of contracts) aspects. Several policy messages stand out in terms of their relevance for the overall housing market:

- **An efficient, fair and swift judicial system appears as a necessary step towards unlocking rental markets full potential.** Although the identification of the existing inefficiencies remains country-specific, Member States should aim at achieving a low degree of procedural formalism. Indeed, the duration of enforcement court proceedings is usually considered as a proxy for the quality of the judicial system. However, other dimensions covered also by the formalism indicator should not be overlooked, such as information on the degree of professionalism of the main players, pre-eminence of oral acts, rules for presenting evidence and control by superior instances.
- **Rent controls appear to have a significant destabilizing impact on the aggregate housing market, increasing the volatility of house prices when confronted with different shocks** (e.g. shifts in population, disposable income, residential investment and long-term interest rates). Therefore, when setting controls on both rent levels and rent increases, policymakers should bear in mind their broader implications for housing market stability and consider them within the context of existing incentives for home ownership such as taxation incentives (deductibility of interest rates, property taxation vs. other assets, etc.) or macro-prudential measures (LTV caps, amortization rules for mortgages, etc.).
- **The drawbacks of rent controls in terms of unintended consequences for housing market stability and negative effects on labour mobility would advise against their use for redistribution purposes.** Social concerns such as the provision of affordable housing opportunities for young and low-income households and the prevention of homelessness situations require more targeted policies, which would be welfare-enhancing while not taking a toll on rental market efficiency.
- **Qualitative aspects of the tenancy contract negotiation do not have a first-hand impact on housing market dynamics.** Striking the right balance between tenant and landlord incentives, i.e. creating security of tenancy and avoiding market segmentation between sitting and new tenants while ensuring landlords' property rights, can therefore mitigate rental market inefficiencies and correct for market failures without contributing to housing market imbalances.

¹⁴ Council recommendations of 9 July 2013 (OJ reference TBC).

REFERENCES

- Andrews, D., Caldera-Sánchez, A. and Johansson, A. (2011), "Housing Markets and Structural Policies in the OECD," OECD Economics Department Working Papers No. 836.
- Arce, O. and López-Salido, D. (2011). "Housing Bubbles," *American Economic Journal: Macroeconomics* 3:212-241.
- Arnott, R. (2003), "Tenancy Rent Control," *Swedish Economic Policy review*, Vol. 10, pp. 89-121.
- Arnott, R. (1995), "Time for revisionism on rent control?," *Journal of Economic Perspectives*, Volume 9,1, pp. 99-120.
- Balasko, B., Abonyi, J. and Feil, B. (2005), "Fuzzy Clustering and Data Analysis Toolbox," Matlab Central File Exchange.
- Djankov, S., La Porta, R., Lopez-de-Silanes, F. and Shleifer, A. (2002), "Courts: the Lex Mundi Project," NBER Working Paper 8890.
- ECB (2003), "Structural factors in EU housing markets". Lind, H. (2003). "Rent regulation and new construction: With a focus on Sweden 1995-2001," *Swedish Economic Policy Review*, Vol. 10, pp. 135-167.
- European Commission (2012), "Assessing the dynamics of house prices in the euro area," *Quarterly Report on the Euro Area*, 4/2012.
- Ellingsen, T. and Englund, P. (2003), "Rent Regulation: An Introduction," *Swedish Economic Policy Review*, Vol. 10, pp. 3-9.
- Greene, W.H. (2003), "Econometric Analysis," 5th edition, Prentice Hall.
- Hausman, J.A. and Taylor, W.E. (1981), "Panel Data and Unobservable Individual Effects," *Econometrica*, 49(6), 1377-98.
- Hilbers, P., Hoffmaister, A.W., Banerji, A. and Shi, H. (2008), "House Price Developments in Europe: A Comparison," IMF Working Paper WP/08/211.
- Hubert, F. (2003), "Rent control: academic analysis and public sentiment," *Swedish economic policy review*, vol. 10, 61-81.
- Johnson, S., McMilan, J. and Woodruff, C. (2002), "Courts and Relational Contracts," *Journal of Law, Economics and Organization*, 18(1).
- Malpezzi, S. and Turner, B. (2003), "A review of empirical evidence on the costs and benefits of rent control," *Swedish Economic Review*, Vol. 10, pp. 11-56.
- OECD (2008), "Handbook on Constructing Composite Indicators: Methodology and User Guide," OECD publications.

Schmid, C.U. (2009), "General Report on European Tenancy Law," European University Institute Research Project on Tenancy Law and Procedure in the EU.

Vandenbussche, J., Vogel, U. and Detragiache, E. (2012), "Macroprudential Policies and Housing Prices—A New Database and Empirical Evidence for Central, Eastern, and South-Eastern Europe," IMF Working Paper 12/303.

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