



How Political Parties Influence Housing Units in Newly Constructed Buildings

Evidence from 290 Swedish municipalities, 1994-2022

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Hur Politiska Partier i Kommunfullmäktige Påverkar Antalet Bostäder i Nyproducerade Byggnader: Bevis Från 290 Svenska Kommuner, 1994–2022

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Keywords: Political Economy, Political Coalitions, Sweden, Municipalities, Local self-governments, Fixed-effects Poisson, Political Fragmentation, Urban Government

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Abstract

Local self-governments in Sweden control local zoning and building permits, and the political drivers of housing supply can vary greatly dependent on the political context. I test whether ideology in municipal self-governments and political fragmentation influence the number of housing units in newly constructed buildings, in both multi- and single-dwelling buildings. I compile a panel dataset of Swedish municipalities covering the election periods 1994-2022, and estimate Fixed effects Poisson models, clustered at the municipality level. After controlling for demographic, economic and fiscal factors, neither left- nor right-leaning dominance shows any robust link to housing starts in either building type. Results from political fragmentation in local governments suggests additional parties to reduce expected multi-dwelling starts, but not when it comes to single-dwelling starts, regardless of ideology.

Keywords: Political Economy, Political Coalitions, Sweden, Municipalities, Local self-governments, Fixed-effects Poisson, Political Fragmentation, Urban Government

Table of contents

List of tables	7
List of figures.....	8
Abbreviations	9
1. Introduction	10
2. Background	12
2.1 Institutional Context	12
2.1.1 Local Self-Government	12
2.1.2 The Swedish Administrative Model – Central Government.....	13
2.2 Municipal Housing Provision.....	13
2.2.1 The Municipal Influence on Housing Provision.....	13
2.2.2 When is Municipal Planning Restricted	14
3. Theoretical Framework.....	16
3.1 Electoral Competition	16
3.1.1 Affect Component	16
3.1.2 Elect Component	17
3.2 Coalition Formation in PR-systems.....	18
4. Previous Research.....	20
4.1 Urban Governance in Sweden	20
4.2 Housing Supply Determinants	21
4.2.1 Specific Research in Sweden	22
5. Data	24
5.1 Data Description.....	24
5.1.1 Dependent Variables Dataset.....	24
5.1.2 Independent Variables of Interest Dataset	25
5.1.3 Creating my Independent Variables of Interest	26
5.1.4 Control Variables and Additional Data.....	27
5.2 Descriptive Statistics	28
6. Methodology.....	29
6.1 Research design and hypotheses.....	29
6.2 Why a Count Data Model?	29
6.3 Model Specification	30
6.3.1 Model (1a). Red-Green Political Dominance	30
6.3.2 Model (1b). Council Concentration	30
6.3.3 Presentation of Results.....	31
6.4 Limitations and Potential Threats.....	31
6.4.1 ‘Spillover’ Problems	31

6.4.2	Omitted Variables	31
6.4.3	Strict Exogeneity and Simultaneity	32
6.4.4	Assumptions Behind the Robust VCE	32
7.	Results	33
7.1	Left-Parties in Local Governments and Housing	34
7.2	Fragmented Local Governments and Housing	37
8.	Discussion	40
8.1	Left-parties with executive power	40
8.2	Council Concentration	41
8.3	Total Parties in Government	42
9.	Conclusion.....	44
	References	45
	Appendix 1	54
	Appendix 2 Total starts	57
	Appendix 3 Share MP rule	59

List of tables

Table 1. Control variables.....	27
Table 2. Descriptive statistics of variables used in the models.	28
Table 3. Interpretations of coefficients and IRR (examples).....	33
Table 4. The effect of Red-Green seat shares with executive power in the municipal council on housing starts (multi-dwelling buildings), with stepwise inclusion of vce(robust) and control variables (2)-(6).	34
Table 5. The effect of Red-Green seat shares with executive power in the municipal council on house starts (one-or two dwelling buildings). Stepwise inclusion of vce(robust) and control variables (2)-(6).	35
Table 6. The effect of normalised HHI on housing starts (multi-dwelling buildings), with stepwise inclusion of vce(robust) and control variables (2)-(6).	37
Table 7. The effect of normalised HHI on housing starts (one-or two dwelling buildings), with stepwise inclusion of vce(robust) and control variables (2)-(6).	38
Table 8. The effect of Red-Green seat shares in municipal council government on total housing starts. Stepwise inclusion of control variables (2)-(6).	57
Table 9. The effect of normalised HHI on total housing starts, with stepwise inclusion of control variables (2)-(6).	58
Table 10. MP seat shares with executive power in the municipal council on housing starts (multi-dwelling buildings). Stepwise inclusion of control variables (2)-(6).	59

List of figures

Figure 1. Depiction of parliamentary candidate opinions in relation to their respective party's official stance. Displayed on the Left-Right vs GAL-TAN dimension before the 2018 national election in Sweden. (Swedish Television, n.d.)	19
Figure 2. Annual housing starts and completions in Sweden by dwelling type, multi-dwelling buildings and single-family houses.	25
Figure 3. Number of local self-governments in Swedish municipalities by strictly Red-Green-, Center-Right- and Coalition blocs between the years 1994 and 2022.	25
Figure 4. Visualisation of the problem with missing data on political veto points connected to housing starts.	31
Figure 5. Two maps of Sweden showing total area of national interest (LHS) and national interest only from Energimyndigheten and SGU (RHS)	54
Figure 6. Municipalities that have adopted housing provision guidelines during the previous electoral term (2018-2022) or later.	55
Figure 7. Number of municipalities collaborating with other municipalities in the planning for housing provision between the years 2022-2025. Black=Yes, Red=No, and Grey=No answer.	55
Figure 8. What type of cooperation is it when it comes to housing provision between municipalities for the years 2022-2025.	56
Figure 9. Kernel Density of total housing units started for all Swedish municipalities between the years 1994-2022.	56

Abbreviations

<u>Abbreviation</u>	<u>Description</u>
SNBHBP	The Swedish National Board of Housing, Building and Planning (<i>Boverket</i>)
SCB	Statistics Sweden (<i>Statistiska centralbyrån</i>)
SALAR	Swedish Association of Local Authorities and Regions (<i>Sveriges Kommuner och Regioner, SKR</i>)
SGEA	Swedish Gender Equality Agency (<i>Jämställdhetsmyndigheten</i>)
S	The Social Democratic Party (<i>Socialdemokraterna</i>)
V	The Left Party (<i>Vänsterpartiet</i>)
MP	The Green Party (<i>Miljöpartiet</i>)
M	The Moderate Party (<i>Moderaterna</i>)
KD	The Christian Democrats (<i>Kristdemokraterna</i>)
L	The Liberal Party (<i>Liberalerna</i>)
C	The Centre Party (<i>Centerpartiet</i>)
SD	The Sweden Democrats (<i>Sverigedemokraterna</i>)
LG	Local Government
MC	Municipal Council
w.r.t.	With respect to

1. Introduction

Housing is a central aspect of people's quality of life, economic stability, and future opportunities. Sweden, like many other countries, faces significant challenges related to housing availability, affordability, and distribution. Meanwhile, during the last three decades, we also see growing concerns among certain voters regarding land exploitation and its implications. Moreover, local politics play a critical role in this context, as municipalities in Sweden control land-use planning and building permissions, which directly influence the supply of housing (Swedish National Board of Housing, Building and Planning [SNBHBP], 2025). Whether policy reflects voter preferences or party control, is extensively debated in political economy and can vary greatly depending on the political context (see Section 3.1). Empirically addressing this question is however difficult, because political parties are not randomly assigned to power (thankfully) but rather elected through voter preferences, identification becomes hard.

This thesis investigates whether the composition of local self-governing parties in Swedish municipalities influences the number of housing units in newly constructed buildings. Specifically, regarding the composition of parties, I examine: the seat shares of *Red-Green parties* with executive power in the municipal council, and the competition between parties in the municipal council. The analyses are conducted during election periods between 1994 and 2022, and distinguish between different housing types, such as multi-family dwellings, detached houses, and the total number of housing units.

Research by Folke et al. (2024) provides evidence that political self-interest leads local politicians to restrict multifamily housing projects located close to their homes. However, less is known about the ‘party effect’ on the number of housing units started in Sweden. Existing research in Sweden has primarily focused on fiscal outcomes such as local government spending and taxation, rather than housing policy (Pettersson-Lidbom, 2007; Folke, 2014; Aronsson, 2023). Theories within political economy, including the median voter theorem and coalition theories, imply strategic behaviour by local politicians to gain and maintain voter support (Downs, 1957; Alesina 1988; Bäck, 2003). But how these theories explicitly translate into local housing decisions in Sweden is less explored.

While this thesis does not claim a breakthrough, it lays a foundation that can guide and inspire future research on the political economy of Swedish housing.

First, it highlights a lacking literature regarding the ‘party effects’ on housing in Sweden. Secondly, it concludes, like Folke (2014), the importance of accounting for dynamic coalition formations in PR-systems. Lastly, the results seem to suggest that an increasing political fragmentation in local self-governments reduces expected housing units for multi-dwelling- but not for single-dwelling buildings, regardless of ideology.

The remainder of the thesis is structured as follows. Section 2 contextualises the setting of Sweden with regards to political institutions, housing, and how the two interact. Section 3 provides relevant theories, justifying the research question and hypotheses, whereas Section 4 review the scientific literature on determinants of housing, and the influence of local self-government in Sweden. Section 5 describes the data, data generating process and descriptive statistics. Section 6 outlines the research design and model specifications, and Section 7 reveals the results and a table to help with interpretations. Discussion and conclusions are presented in Section 8 and 9 respectively.

2. Background

2.1 Institutional Context

2.1.1 Local Self-Government

The Swedish governance can best be described as a unitary and decentralised state with a high degree of local autonomy, not to be confused with a deconcentrated state (Petersson, 2018, p.36). In the Swedish context, the national government has transferred some of its political decision-making power towards municipalities and regions. This power distribution is not done in a hierarchical way, meaning that municipalities do not answer before regions, but rather with separate responsibilities and freedoms in accordance with local preferences (Ahlbäck Öberg & Wockelberg, 2015, p. 141). In both municipalities and regions, elected representatives have the power to decide on taxation levels.

As mentioned earlier, municipalities (290) and regions (21) have different responsibilities related to their affairs, with some being mandatory, and some voluntary. Mandatory responsibilities for municipalities include e.g. social care, school, urban- planning and development, water and housing provision, while regions are responsible for e.g. healthcare and regional development (Swedish Association of Local Authorities and Regions [SALAR], 2024a).

It is widely recognized that citizens' understanding and engagement in local self-governance are essential for democracy to function effectively. While some point to positive developments such as innovative local initiatives aimed at strengthening democratic participation (Statistics Sweden [SCB], 2018), concerns are raised about unequal levels of engagement, voter turnout and political understanding in local self-governance (Swedish Gender Equality Agency [SGEA], 2021; SCB, 2022; SALAR, 2024a; Lidén & Grönlund, 2021; SOM Institute, 2023).

An important contextualisation with urban politics in Western Europe, including Sweden, is also the stronger partisan element compared to e.g. the United States, where more emphasis is placed on elected officials (Pierre, 1999). This is the reason behind the choice of my explanatory variables for the partisan constellations at the municipal level.

2.1.2 The Swedish Administrative Model – Central Government

In Sweden, public agencies operate independently from government ministries due to constitutional restrictions on ministerial interference on specific cases. This means that national steering occurs through general regulations and frameworks (Dahlström, 2019, pp. 129–133). As a result, the agency of relevance to this thesis, ‘The Swedish National Board of Housing, Building and Planning’ [SNBHBP] is considerably autonomous. Nevertheless, the central government continues to define their overarching housing policy and instructions towards SNBHBP, but as many often point out, the information asymmetry and delegation problem remain (Dahlström, 2019, p. 131; Holmgren, 2017).

2.2 Municipal Housing Provision

2.2.1 The Municipal Influence on Housing Provision

As I mentioned in subsection 2.1.1, Swedish municipalities enjoy a high degree of local autonomy. Within this decentralised governance structure, municipalities are responsible for ensuring access to adequate housing, but how exactly? According to SNBHBP (2024), municipalities possess three main tools which they can utilize to provide housing for their residents:

a) Guidelines for housing provision

According to Section 2 of the Swedish Act (2000:1383) on Municipal Housing Provision Responsibilities, municipalities are legally obligated to adopt a housing provision action plan during each electoral term. While this requirement is mandated by law, the Act does not specify direct penalties for non-compliance. The guidelines should be based on analyses of demographic trends, market conditions, and unmet housing needs, serving as a foundation for physical planning and policy decisions. Following the introduction of the Act (2000:1383), many municipalities initially failed to adopt housing provision guidelines regularly. A 2012 revision of the law clarified municipal responsibilities and reinforced the connection to regional planning and the Planning and Building Act (SNBHBP, 2025). **Figure 6** in Appendix 1 provides an overview of the current situation across municipalities.

b) Land ownership combined with an active land policy

One of the primary tools at their disposal is the land allocation agreements. This allows municipalities to decide on the form of tenure, housing specifications or other agreed-upon criteria in development agreements (SNBHBP, 2024c). The adoption of guidelines for land allocation agreements has become increasingly

common among municipalities. In 2016, 58 municipalities reported having such guidelines. This number rose to 192 in 2020 and in 2022, it reached 221 (ibid.). These agreements sometimes extend beyond legal requirements, incorporating objectives such as promoting diversity among housing developers, ensuring ecological- and social sustainability (ibid.). But according to a study carried out in 2022 by (SALAR, 2023), when municipalities do set demands on the land developer, it is usually about construction, when it starts or when it should be finished. Besides this, adherence to design principles and stormwater management is the second most common request (ibid.).

Furthermore, some municipalities maintain land reserves to secure areas for future development. This proactive approach enables certain municipalities to respond more effectively to demographic changes and housing demands. Some municipalities are however reporting difficulties obtaining land at reasonable prices (SNBHBP, 2024c).

c) Public housing companies

Public housing companies play a pivotal role in the housing market for municipalities and have the overall public utility purpose to promote housing provision in the municipality. Their operations have been governed since 2011 by the Public Municipal Housing Companies Act (2010:879), which requires them to pursue a sort of ‘dual mandate’: acting in the public interest while operating under business principles. Public housing companies are in more specific terms exempt from the self-cost principle found in the Local Government Act, allowing them to generate profit (1991:900, Ch. 2 §7; Ch. 8 §3c).

In a document from Public Housing Sweden and SALAR (2019), they outline guidelines for municipalities on how to best form owner directives with this act in mind (2010:879). The responsibility for initiating and maintaining the work with owner directives lies with the municipalities. While the municipal council holds the final decision-making authority, experience highlighted by (SALAR, 2019) shows that the best results often are accomplished in dialogue, keeping in mind the expertise within the public housing company.

2.2.2 When is Municipal Planning Restricted

Swedish municipalities possess significant autonomy in spatial planning, yet certain national-level mechanisms can influence or constrain local decisions. One such mechanism involves areas designated as national interests under Chapters 3 and 4 of the Environmental Code (Miljöbalken, SFS 1998:808). These areas are identified to safeguard values of national significance, such as environmental protection, cultural heritage, infrastructure development and critical raw materials

(SNBHBP, 2022). National interests in Sweden are visualised in Appendix 1, *Figure 5*.

The municipalities should also in their action plan for housing provision specify how these are accommodated after a dialogue with the County Administrative Board (ibid.). The County Administrative Board states their audit opinion on the action plan during the second half between two election periods or when the municipalities ask for it (ibid.). Responsibilities on issues that affect national interests, environmental quality standards, flooding, erosion and more lies on the County Administrative Board, which has the authority to intervene in the municipal autonomy when necessary (SNBHBP, 2022; SNBHBP, 2023).

3. Theoretical Framework

This section outlines the central theoretical perspectives that have inspired the thesis. First, presenting *Electoral Competition*, focusing on the distinction between the *affect* and *elect* mechanisms in subsequent order. I will finally discuss theories on how *Political Coalitions* form in proportional representation (PR) systems.

3.1 Electoral Competition

Theories in Political economy have long recognized the significant role of electoral competition in shaping policy outcomes at both national and local levels (Downs, 1957; Wittman, 1983; Alesina, 1988). When examining the party effects on certain policy outcomes, following the work of Lee, Moretti, and Butler (2004) seem to be the common approach. Theories on electoral competition provide a nuanced view on how rational individuals, through voting, collectively determine the allocation of public goods. The authors distinguish ‘party effect’ into two competing mechanisms by which policy is formed; voters either *affect* policy or merely *elect* it. This is discussed further below.

Although this thesis includes the influence of coalitions, it is helpful to conceptually simplify the Swedish political arena, for this section, into two opposing blocs. In my case, as outlined in Section 5.1.3 & 6.3.1, this involves comparing the Red-Green coalition to all parties outside that coalition. By treating each group as a unified actor with shared goals, I use the theoretical tools of electoral competition to predict their expected behavior conditional on certain covariates. Although, as in my case, done somewhat unorthodox due to deviation from the standard method of a Regression-Discontinuity-Design. This stems from my research question, asking not only about the party effect, but also the effect of competition within the municipal council.

3.1.1 Affect Component

Building on Downs (1957) and the median-voter theorem, the *affect* component, or convergence, presumes that parties value office above ideology. Electoral competition therefore pulls their proposed policies toward the added preferences of the median voter. Within our context, both the left- and right-wing parties would open the same amount of land for housing development, precisely the quantity that aligns with the median voter’s preference.

Partial convergence models (Wittman 1983; Calvert 1985) relax Downs' assumption of purely office-motivated politicians but retain the result that expected policy moves inward as competition intensifies. Convergence is sustainable, however, only when campaign promises are credible. Voters must believe that centrist statements will translate into centrist governance (Lee, Moretti & Butler 2004, p.808).

3.1.2 Elect Component

The *elect* component, or divergence, arises when elections simply pick between parties' fixed policy bundles instead of inducing them to moderate. Assuming politicians have immutable "bliss points" as Lee et al. (2004) puts it, they enact their ideal policies once elected. When voters distrust campaign promises or when breaking them brings no reputational cost, candidates have no incentive to shift positions, so electors mainly select between preset agendas (Lee, Moretti & Butler 2004, pp. 808-809; Alesina 1988).

A complementary explanation is "strategic extremism", as Solé-Ollé & Viladecans-Marsal (2013) mentions, referencing Glaeser et al (2005b). parties may intentionally adopt platforms that sit further from the Center to galvanize their core supporters, by lifting turnout or attracting resources, thereby creating policy divergence (ibid.). Both perspectives imply that the land released for development would settle somewhere between the party's ideal allocation and the median voter's preference.

Policy divergence at the local level can however be argued against in three ways. First, following Tiebout (1956), residents may choose municipalities that match their preferences for local public goods. In turn, producing relatively homogeneous electorates in which policy conflict, and thus limited partisan divergence (Ferreira & Gyourko, 2009). However, if residential mobility is believed to be low in Sweden, it could constrain the sorting theory and thus preserve ideological heterogeneity.

Second, many local services can be regarded as technical rather than ideological, i.e. 'there is no partisan way of providing streetlights'. Land use policies can likewise be portrayed as non-partisan in numerous regional goals and within the housing provision responsibility. However, in places where peoples interests and backgrounds vary a lot, it is much tougher to negotiate mutually acceptable trade-offs. As a result, decisions about land use tend to become political issues.

Third, partisan differences emerge only when land-use becomes a prominent campaign issue. When the market is weak, i.e. there isn't much pressure for new

housing, both sides end up supporting similarly restrictive, low-development policies. In other words, because there's no urgent need for new homes, neither the left nor the right is 'forced' to open new land, and so their policy positions look almost the same.

3.2 Coalition Formation in PR-systems

The previous section portrays different views on how parties position themselves before elections to win votes, conditional on certain rigid assumptions. However, in proportional representation (PR) systems such as Sweden's, single parties rarely command an absolute majority; effective governance therefore rests on the formation of coalitions (Bäck, 2003).

Two main theoretical traditions explain how such alliances emerge. Game-theoretic work, beginning with Neumann and Morgenstern's (1944; rev. 2007) *minimal winning coalition* theory (MWC). It holds that rational parties assemble the smallest alliance capable of securing a legislative majority, thereby maximising the share of office benefits to each member. Later refinements add that parties try to minimise both their combined seat share and the number of partners, further encouraging compact formations (Bäck, 2003). The famous work of Tsebelis (2002) on *Veto Players* also explains in depth how the bargaining dynamics and political actors can influence policy outcomes.

A second perspective refers to ideology. Axelrod's (1970) *conflict-of-interest* concept proposes that parties closest to one another on a relevant policy axis have the highest probability of governing together. Subsequent research replaces simple rank orderings with continuous policy scores, predicting that the coalition with the narrowest ideological span is most likely to form (Bäck, 2003). Office-seeking and policy-seeking incentives thus intersect; alliances are expected to be both numerically efficient and ideologically cohesive.

Empirical analyses therefore treat coalitions as collective actors situated on the political spectrum. Across Western Europe the dominant organising cleavage has historically been the economic left-right dimension (Huber & Inglehart, 1995). In recent decades however, a new political dimension *Green-Alternative-Libertarian vs Traditional-Authoritarian-Nationalist* (GAL-TAN) has emerged, originally coined by Hooghe et al. (2002). This dimension together with Axelrod's (1970) theory could suggest that certain coalitions, especially less competitive councils (HHI*, see section 5.1.3), have less friction/bargaining costs when deciding on land use policy. Here, Swedish Left-GAL parties is theorised to support more restrictive land use policies, and Right-TAN parties the opposite, see *Figure 1*. Political scientists- Möller (2017) and Holmberg (2021) argues however that this

dimension has *Good-Evil* properties and does not represent the Swedish political landscape particularly well. Holmberg (2021) further adds that the distance between political party electors in Sweden is now much closer compared to fifty years ago, and that the degree of nationalism is what mostly determines the positioning of parties on GAL-TAN.

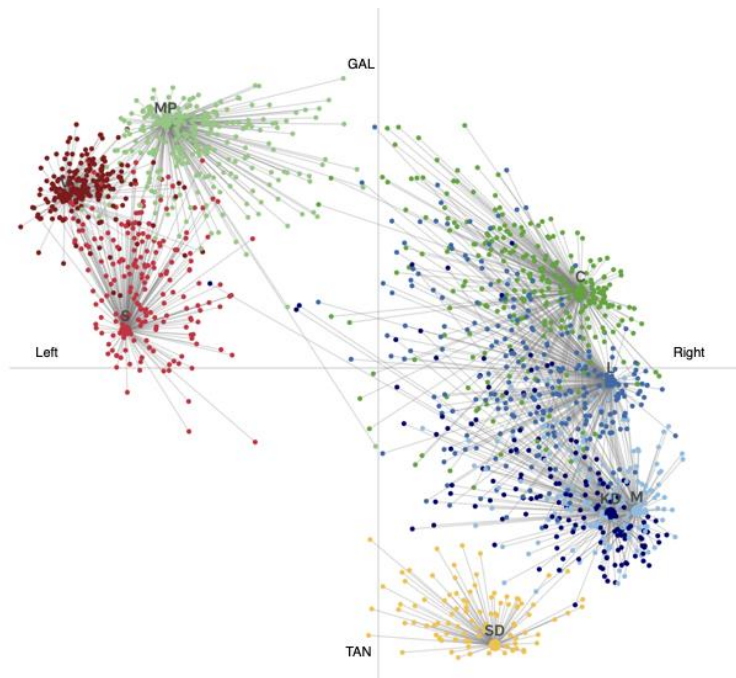


Figure 1. *Depiction of parliamentary candidate opinions in relation to their respective party's official stance. Displayed on the Left-Right vs GAL-TAN dimension before the 2018 national election in Sweden. (Swedish Television, n.d.)*

4. Previous Research

This section reviews previous research to determine whether this thesis makes any contributions and provides support for the chosen control variables. Section 4.1 examines how urban governance and political composition affect housing outcomes in Sweden. Section 4.2 outlines key determinants of housing supply more broadly. To maintain theoretical and contextual consistency as discussed in chapter 3, the following review includes mainly research on Sweden.

4.1 Urban Governance in Sweden

Limited studies have investigated how political composition at the municipal level affects housing development in Sweden. The limited available research suggest however that political incentives, ideological orientation, and coalition structures can influence both where buildings are located, the quantity and the type of housing stock.

Folke et al. (2024) analyse the role of political self-interests in housing decisions using detailed municipal data, including geocoded residences of politicians and building permit records. Their quasi-experimental study finds that neighbourhoods where more politicians from the ruling coalition live receive about 10% fewer approved permits for new apartment buildings, compared to other areas. No similar effect is observed for single-family homes. The authors interpret this as evidence of local politicians deflecting undesirable multifamily projects away from their own upscale neighbourhoods, thereby hindering housing supply in certain areas (Folke et al., 2024).

Focusing on broader municipal factors, Lindenau Stokke (2016) investigates why some municipalities built more housing than others during 2007–2014. Using regression analysis, the study identifies population growth and available land as the strongest drivers of housing construction. Political orientation also matters, municipalities governed by right-leaning coalitions tended to build more new apartments than those led by left-wing coalitions. Higher local tax rates and an aging population, meanwhile, correlated with lower construction rates (Lindenau Stokke 2016).

Complementing these findings, Andersson (2014) explores long-term political effects on public housing provision. Analysing the period after Sweden's housing sector deregulation in the 1990s, the study shows that municipalities with sustained left-wing governance retained larger public rental housing stocks, whereas right-leaning municipalities often reduced or sold off theirs. Andersson

concludes that political ideology at the local level shapes not only the quantity but also the type of housing available, with left-led cities maintaining broader public access (Andersson 2014).

4.2 Housing Supply Determinants

Housing construction is fundamentally influenced by macroeconomic and demographic factors (Davies & Heathcote, 2005; Mankiw & Weil, 1989; Börsch-Supan, 1986; Smith et al., 1984). Population growth and household formation are critical demand drivers. Higher growth, such as through immigration, increases the demand for new housing, whereas ageing or declining populations reduce construction activity (CBO, 2024). Economic cycles and household incomes significantly affect housing investments. Expansions characterized by rising incomes typically boost housing starts, while recessions reduce them (Leamer, 2007). Housing investments are notably sensitive to macroeconomic cycles, often preceding recessions (Leamer, 2007). Interest rates and credit availability strongly influence housing activity, where low rates stimulate demand and construction, while tight monetary policy and higher rates significantly reduce housing starts (Bernanke & Gertler 1995; CBO, 2024).

Changes in housing prices also act as crucial signals for construction activity. Rapid price increases indicate strong market demand and profitability, stimulating construction, whereas stagnant or declining prices discourage new projects (Mayer & Somerville, 2000). Empirical research emphasizes the importance of price changes rather than absolute price levels (ibid.). housing starts respond robustly to rising prices but less so to stable high prices (Mayer & Somerville, 2000). Topel and Rosen (1988) highlight the high short-term and even higher long-term elasticity of housing supply in response to price increases 1.0 and 3.0 respectively, explaining the volatility observed in housing investments.

Supply-side factors such as construction costs, including materials, labour, and land, significantly influence housing starts and completions. Increased costs can quickly render otherwise profitable projects unfeasible (Mayer & Somerville, 2000). Labour shortages particularly constrain housing supply; for instance, restrictive immigration policies reducing construction labour supply have markedly lowered housing production in affected regions (Howard et al., 2023). The availability and cost of materials also play a vital role, as disruptions in global supply chains have demonstrated (Howard et al., 2023).

Land-use regulations and geographical constraints critically impact housing supply. Stricter zoning laws, lengthy permitting processes, and building restrictions substantially reduce new housing development, as demonstrated

extensively in research by Glaeser et al. (2005a). Empirical studies consistently show lower housing elasticity in highly regulated regions, resulting in persistent price pressures due to restricted supply responsiveness (Glaeser et al., 2005a).

Geographical constraints further limit housing supply. Saiz (2010) quantitatively demonstrated that cities surrounded by physical barriers (e.g., oceans, mountains) have significantly lower supply elasticity compared to cities with abundant developable land. This geographical limitation often coincides with stringent regulations, intensifying the housing supply constraints (Saiz 2010).

While both single-family and multifamily housing respond similarly to broad economic factors, certain variables differentially influence each segment. Single-family construction is more directly tied to household incomes, credit conditions, and demographic trends such as family formation, making it particularly sensitive to interest rates (Mayer & Somerville, 2000). Multifamily housing, often driven by investors targeting rental yields and urban demand, may respond slightly differently due to varied financing structures and market conditions. Empirically, single-family construction is generally more volatile due to its quicker adjustment to market conditions, whereas multifamily projects have longer lead times and higher capital requirements (Mayer & Somerville, 2000; Howard et al., 2023).

4.2.1 Specific Research in Sweden

The determinants of housing supply in Sweden broadly align with global findings, particularly regarding the influence of macroeconomic, demographic, and regulatory factors. Similar to international research, Swedish studies emphasize that population growth and rising incomes are fundamental drivers of housing demand and new construction (Engerstam et al., 2022; Hansson, 2017). Outside of household income Faber (2018) also noted a high proportion of population between 25 and 44 as primary drivers of housing demand, subsequently affecting construction levels. Interestingly, Lind (2015) also argues that Swedish municipalities have become more restrictive towards new construction, especially those targeted towards lower income households. He attributes this to a combination of ‘Not-In-My-Backyard’[NIMBY]- arguments and environmental demands. Highlighting a potential conflict of goals between social and environmental sustainability when it comes to housing.

Housing prices play a similarly pivotal role in Sweden as it does globally. Swedish studies confirm that rising prices incentivize construction, yet the elasticity of supply seems to be comparatively low with ranging estimates of 1.38 by Caldera Sánchez and Johansson (2013) and 2.7 by Engerstam et al. (2022) (Hansson, 2017; Faber, 2018). Engerstam et al. (2022) focused however on big

cities, which could explain the higher elasticity, yet noted a slow adjustment process, with only about 13% of housing shortages or surpluses resolved annually. The authors attribute this sluggish response to complex planning procedures, zoning regulations, lengthy approval and appeal processes, and the limited competition within the construction sector. These institutional and regulatory bottlenecks, some argue, delay housing supply responses to market signals in Sweden (Caldera Sánchez & Johansson 2013). This mirrors Mayer and Somerville's (2000) observation in some respects, that price changes, rather than absolute levels, stimulate new construction. Observations regarding regulatory constraints also align with international research (Glaeser et al., 2005a; Saiz, 2010).

Unlike the global trend where land scarcity primarily is a natural constraint e.g., coastal cities in the U.S. as described by Saiz (2010), Sweden's land constraint seems to be predominantly political and institutional (Engerstam et al. 2022). Extensive municipal control over planning and land use creates bottlenecks in releasing buildable land, rather than pure physical scarcity Hansson argues (2017). Moreover, Sweden's strong rent control system, unique in its rigidity compared to other OECD countries, as Engerstam et al. (2022) claims, distorts incentives for new rental housing construction, particularly for multifamily developments. Globally, regulatory rent controls are often less extensive, and market-driven rental segments remain larger.

As mentioned shortly above, another notable difference comparatively lies in the structure of the construction sector. In Sweden, the dominance of a few large construction firms reduces competition and contributes to higher building costs (Warsame et al., 2010), whereas in larger international markets there tends to be a broader pool of construction firms competing across segments.

5. Data

The data is gathered from publicly available sources, including Statistics Sweden, Swedish Association of Local Authorities and Regions [SALAR] and their Municipality- and Region Database [KOLADA]. This chapter presents the data material used in the analysis.

5.1 Data Description

The study covers all 290 Swedish municipalities with annual data. Most variables are available for the period 1994–2022, but some extend back to 1991 or forward to 2024–2025. Due to data availability constraints for key control variables, certain panels are restricted to 1998–2022. With years as an identifier, the data have approximately 8108 observations. The dataset is however collapsed into four-year blocs, representing election periods, reducing the number of observations to 2027 in total. The dataset is structured as panel data with municipality and election period as identifiers.

5.1.1 Dependent Variables Dataset

My dependent variables are gathered from the same dataset provided by Statistics Sweden (n.d.a). The dataset contains information on dwelling starts and total dwellings in newly constructed buildings, divided into two types of buildings, multi-dwelling buildings and one- or two-dwelling buildings. The measurements for dwelling starts are available from 1991 and forward for municipalities. *Figure 2* illustrates the trend in housing starts and completions, indicating shifts in construction patterns between multi-dwelling and single-family houses over time.

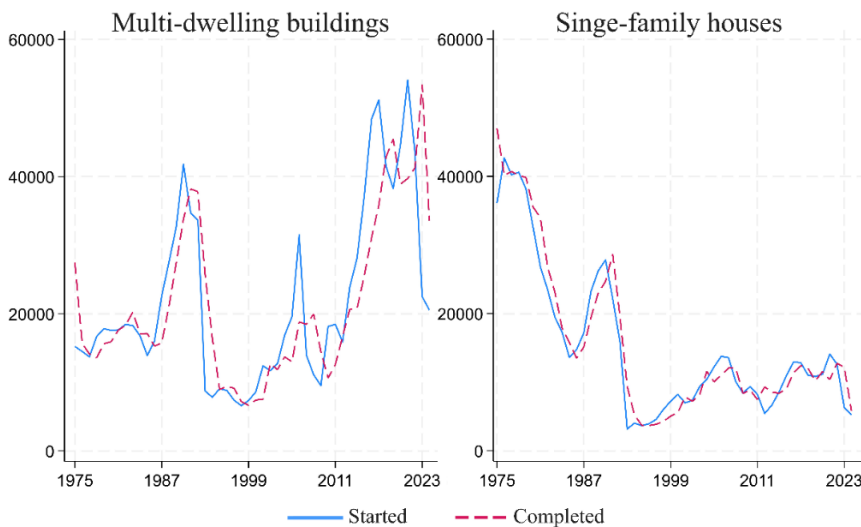


Figure 2. Annual housing starts and completions in Sweden by dwelling type, multi-dwelling buildings and single-family houses.

Worth to mention is also the kernel density plot of the dependent variable, total housing units started, which shows an extremely right-skewed distribution (see Appendix 1, *Figure 9*). Most observations are concentrated around zero and a long, sparse tail extending beyond 20 000 units. This pattern is further discussed in Section 6.2 and to an extent, motivate the methods used in the analyses.

5.1.2 Independent Variables of Interest Dataset

As for the datasets from which my treatment variables originate, I use data on won election seats in the municipal councils from Statistics Sweden (n.d.b) and data on municipal governments from SALAR (2024.a).¹ *Figure 3* shows the distribution of municipal governments by political blocs, highlighting political trends over time.

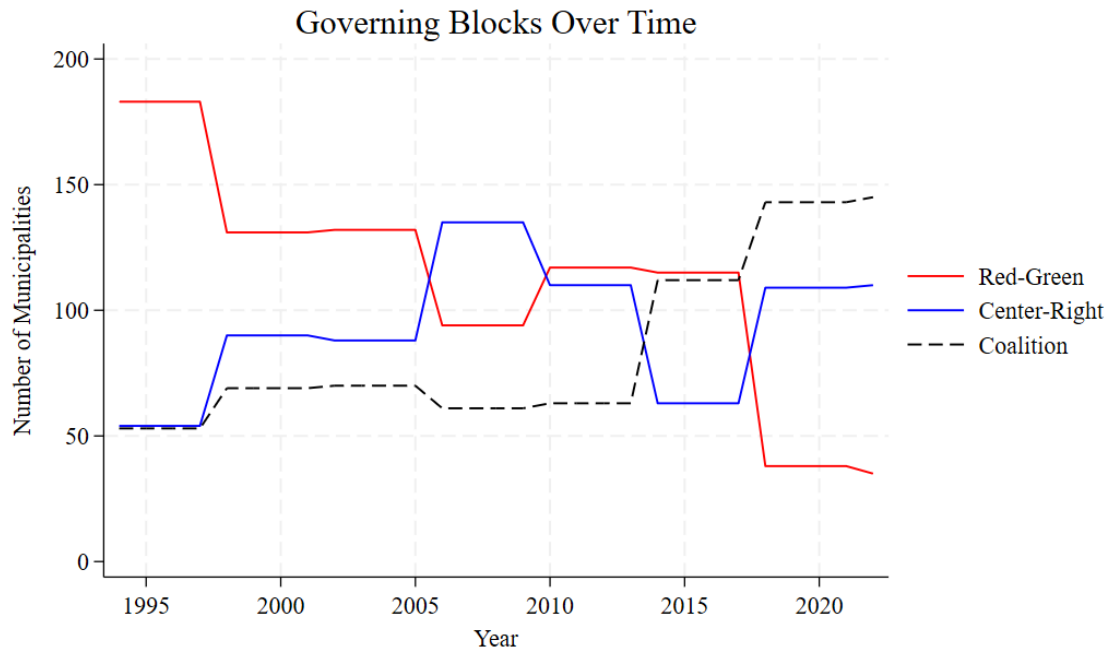


Figure 3. Number of local self-governments in Swedish municipalities by strictly Red-Green-, Center-Right- and Coalition blocs between the years 1994 and 2022.

Note. Red-Green=S, V, MP. Center-Right=M, KD, L, C, SD. Other parties are excluded.

¹ In seven cases, municipal council elections were appealed, and re-elections were held the year after the ordinary election. The dataset incorporates the updated results from these re-elections (Statistics Sweden, n.d.b).

5.1.3 Creating my Independent Variables of Interest

i. *Red-Green Parties in Local Government*

The first out of the two variables of interest are *Red-Green %*, representing seat shares in municipal council government for S, V and MP, the left oriented parties in Sweden. The variable is calculated as follows

$$\frac{\text{seats in LG for } (S + V + MP)_{it}}{\text{total seats in LG}_{it}},$$

where the numerator represents the total number of seats in local government for S, V and MP in municipality i and election period t . The denominator shows the total number of seats in local government for municipality i and election period t .

ii. *Herfindahl-Hirschman Index (HHI)*

To capture how concentrated or dispersed power is within a municipal council, I employ the Herfindahl-Hirschman Index (HHI; Herfindahl, 1950; Hirschman, 1945). The index is normally used to measure market concentration, but is equally suitable for political seat shares, see Rhoades (1993). The index is calculated for each municipality i and election period t as

$$HHI_{it} = \sum_{j=1}^{k_{it}} \left(\frac{m_{ijt}}{M_{it}} \right)^2, \quad (1)$$

where m_{ijt} is the number of seats won by party j in municipality i in election period t , and M_{it} are the total number of seats won in municipality i for election period t . k_{it} represents number of parties with seats > 0 in a given municipality i , period t . The index is bounded by $\frac{1}{k_{it}} \leq HHI_{it} \leq 1$, with the lower bound

indicating a perfectly equal share of seats won between parties and the upper bound indicating single-party dominance. Because the lower bound depends by construction on k_{it} and k varies a lot, comparing councils with different number of parties might be problematic. I therefore also construct a normalised index variable

$$HHI_{it}^* = \frac{HHI_{it} - \frac{1}{k_{it}}}{1 - \frac{1}{k_{it}}}, \quad (2)$$

which rescales the measure to the fixed interval $\{0,1\}$. Hence $HHI^* = 0$ corresponds to perfect equality in seats won, whereas $HHI^* = 1$ is equal to monopoly power, regardless of how many parties sit in the municipal council.²

5.1.4 Control Variables and Additional Data

In addition to the dependent and independent variables of interest, I include a set of control variables to account for potential confounding factors. These variables capture demographic, economic, and housing market characteristics at the municipal level.

Table 1. Control variables.

<i>Variable</i>	<i>Description</i>	<i>Period</i>	<i>Source</i>
Population	Population in the first year of each election period	1968–2024	Statistics Sweden (n.d.)
Ln Population	Ln of Population in the first year of each election period	— —	— —
Middle-aged %	Proportion of population between 30 and 59 years, %	— —	— —
House price	Property prices for one- or two-dwelling buildings, in 100 000 SEK	1998–2024	Kolada (n.d.d)
Ln House price	Ln of property prices for one- or two-dwelling buildings, in 100 000 SEK	— —	— —
L.1 House price	Ln of property prices for one- or two-dwelling buildings, in 100 000 SEK the previous election period.	— —	— —
Net investment	Net investments in the municipality, 1000 SEK per inhabitant	1998–2024	Kolada (n.d.c)
Income	Median earned income, 1000 SEK	1991–2023	Statistics Sweden (n.d.)
Ln Income	Ln of Median earned income, 1000 SEK	— —	— —
Education	proportion of the population between 16–74 years of age with post-secondary education, less than 3 years, %	1985–2024	Statistics Sweden (n.d.)
Unemployment	Proportion of persons registered as unemployed, %	1997–2023	Statistics Sweden (n.d.) & Statistics Sweden (n.d.)
Municipal tax	Municipal tax revenue, 1000 SEK per capita	1998–2024	Kolada (n.d.b)
Electoral part. %	Voting rates in election to the municipal council, %	1973–2022	Statistics Sweden (n.d.)
Fiscal equaliz.	Economic equalization for municipalities, 1000 SEK per inhabitant	1998–2024	Kolada (n.d.a) & Statistics Sweden (n.d.)
Total in gov.	Total number of parties in municipal local self-government	1991–2025	SALAR (2024.a)

² Because Knivsta (1994–2001) and Nykvarn (1994–1997) were not independent municipalities during those years, these observations are excluded/missing for the corresponding periods.

5.2 Descriptive Statistics

Table 2 presents descriptive statistics for the variables employed in this study. These statistics summarize mean, standard deviation, minimal- and maximum value and number of observations in the collapsed data.

Table 2. Descriptive statistics of variables used in the models.

Descriptive statistics	Mean	Std. dev.	Min	Max	Count
Total	427.7	1333.1	0.0	22242.0	2027
Multi	303.2	1210.9	0.0	21292.0	2027
Single	124.5	199.8	0.0	2210.0	2027
Red-Green %	0.5	0.4	0.0	1.0	1997
HHI	0.2	0.1	0.1	0.5	2027
HHI*	0.1	0.1	0.0	0.4	2027
Total seats	45.3	12.2	21.0	101.0	2027
Won seats M	8.7	5.5	0.0	41.0	2027
Won seats L	3.0	2.3	0.0	18.0	2027
Won seats KD	2.5	2.1	0.0	17.0	2027
Won seats SD	2.0	2.9	0.0	16.0	2027
Won seats C	5.5	3.6	0.0	25.0	2027
Won seats MP	1.9	1.6	0.0	17.0	2027
Won seats S	16.7	6.2	3.0	44.0	2027
Won seats V	3.0	2.4	0.0	21.0	2027
Won seats Other	1.9	2.8	0.0	18.0	2027
Population	32125.2	62923.9	2450.0	962154.0	2027
House price	13.4	12.7	2.2	119.3	2027
Net investment	3.7	2.5	-1.4	31.7	1739
Income	203.4	49.8	108.6	374.0	2027
Education	7.7	2.1	3.6	18.1	2027
Unemployment	15.3	4.9	5.2	36.3	2027
Middle-aged %	49.4	3.5	37.3	61.6	2027
Fiscal equaliz.	9.2	5.5	-18.1	30.2	1739
Municipal tax	35.3	8.1	18.4	75.3	1739
Electoral part. %	81.5	4.1	57.8	92.9	2027
Total in gov.	2.7	1.1	0.0	7.0	2027
Municipal gov. M	0.4	0.5	0.0	1.0	2027
Municipal gov. L	0.1	0.3	0.0	1.0	2027
Municipal gov. KD	0.4	0.5	0.0	1.0	2027
Municipal gov. SD	0.0	0.0	0.0	1.0	2027
Municipal gov. C	0.5	0.5	0.0	1.0	2027
Municipal gov. MP	0.3	0.4	0.0	1.0	2027
Municipal gov. S	0.6	0.5	0.0	1.0	2027
Municipal gov. V	0.3	0.5	0.0	1.0	2027
Municipal gov. Other	0.1	0.3	0.0	1.0	2027
Observations	2027				

6. Methodology

This chapter sets out the empirical strategy. Section 6.1 states the research design and hypotheses, 6.2 motivates the Fixed Effects Poisson count model, 6.3 presents the estimating equations, and Section 6.4 discusses limitations and potential threats.

6.1 Research design and hypotheses

I test whether the composition of local self-governing parties in municipalities affects the supply of new housing. Two dimensions of political composition are analysed with the following hypotheses:

- i. **H_1** : More Red-Green seat shares on the municipal executive board $\rightarrow$ reduces *housing starts* in newly constructed buildings.
- ii. **H_2** : A higher HHI* (less competition/veto players) in the full council $\rightarrow$ increases *housing starts* in newly constructed buildings.

6.2 Why a Count Data Model?

Since the dependent variable is a nonnegative integer, with many observations at zero, an ordinary linear regression would have its assumptions violated, leading to biased and inaccurate results. I therefore chose a count data model. This approach explicitly handles the discrete nature of my dependent variable.

Due to my dependent variable suffering from heavy overdispersion $\sigma^2 > \bar{X}$, I follow the recommendations from Wooldridge (2010, p.675) and various Statalist threads. The recommendation is to run the FE Poisson regression with robust standard errors, presented in Wooldridge (1999). According to Wooldridge (1999), the Poisson FE estimator with robust variance-covariance matrix (VCE) is completely robust to overdispersion, zero inflation and serial correlation within clusters. The Robust VCE option in Stata/BE 18.0 is equivalent to clustering on the panel variable, in my case municipalities, as the StataCorp's (2025: p.22) manual states, and discussed further by Wooldridge (2020), Stock & Watson (2008), and Arellano (2003). Not having the correct conditional mean, e.g. omitted variables, will however result in inconsistent estimates and invalid inference.

6.3 Model Specification

To isolate the separate effects of (i) Red-Green political dominance and (ii) council concentration, I use two different Two-way Fixed Effects Poisson models, see equation (3) and (4) respectively. Both models use the same estimator, the QCMLE, also known as fixed effects Poisson (FEP) of Hausman, Hall & Griliches (1984) with cluster-robust (sandwich) standard errors, but differ in the main explanatory variable that is included.

In equation (3)-(4) the expression, $\ln \left(E[Y_{it}^{(H)} | RGS_{it}, \mathbf{X}_{it}, \delta_t, \alpha_i] \right)$ is the natural logarithm of the conditional mean of the count, not a log-transformation of the observed $Y_{it}^{(H)}$. The outcome itself remains an integer count inside the likelihood. The log-link renders the expected count as an exponential function of the covariates, which is the standard formulation for Poisson regressions.

6.3.1 Model (1a). Red-Green Political Dominance

$$\ln \left(E[Y_{it}^{(H)} | RGS_{it}, \mathbf{X}_{it}, \delta_t, \alpha_i] \right) = \beta_0^{(H)} + \beta_1^{(H)} RGS_{it} + \boldsymbol{\beta}^{(H)} \mathbf{X}_{it} + \delta_t + \alpha_i \quad (3)$$

$Y_{it}^{(H)}$ represents starts for number of housing units in newly constructed buildings in municipality i , election period t , and type of building H . Where $H = 1$ is multi-dwelling buildings, $H = 2$ single-dwelling buildings, and $H = 3$ total starts for all buildings (Appendix 2). RGS is Red-Green seat shares on the executive board (0-1) and $\mathbf{X}$ is a vector of control variables included in the model. δ_t constitutes election period fixed effects, i.e. four-year periods, capturing national shocks while α_i captures municipality fixed effects, controlling for all constant characteristics within municipalities. β_0 is the intercept, representing the expected coefficient of the dependent variable when all independent variables are equal to zero.

6.3.2 Model (1b). Council Concentration

$$\ln \left(E[Y_{it}^{(H)} | HHI_{it}^*, \mathbf{X}_{it}, \delta_t, \alpha_i] \right) = \beta_0^{(H)} + \beta_1^{(H)} HHI_{it}^* + \boldsymbol{\beta}^{(H)} \mathbf{X}_{it} + \delta_t + \alpha_i \quad (4)$$

HHI^* represents the normalised Herfindahl-Hirschman Index of seat concentration in the full municipal council, see 5.1.3 Herfindahl-Hirschman Index (HHI). All other notations as above in model (3).

6.3.3 Presentation of Results

The results from model (3), Red-Green, will be presented in **Chapter 7.1** for multi-dwelling buildings and one-or two dwelling buildings respectively. The results for $H = 3$, total housing start, can be found in Appendix 2. The results from model (4), HHI*, will be presented in **Chapter 7.2** in the same order as above.

6.4 Limitations and Potential Threats

Although the Two-way FE Poisson regression with robust VCE alleviates concerns regarding distributional misspecification and time-invariant heterogeneity, threats to causal inference remain.

6.4.1 ‘Spillover’ Problems

A central limitation of this study is that individual housing starts cannot be unambiguously matched to the specific local-government constellation that approved, or failed to approve, the underlying development.

A single start often reflects a multi-stage chain of decisions. Zoning amendments, detailed plan-approval, building permits, and in many municipalities, negotiated developer agreements. These steps can span several years and, crucially, do not always occur under the same political majority. Hence, a newly elected majority may be attributed for starts that it merely inherited. Missing data of the political veto point that matter leads to attenuation bias, diluting the estimated causal effects.

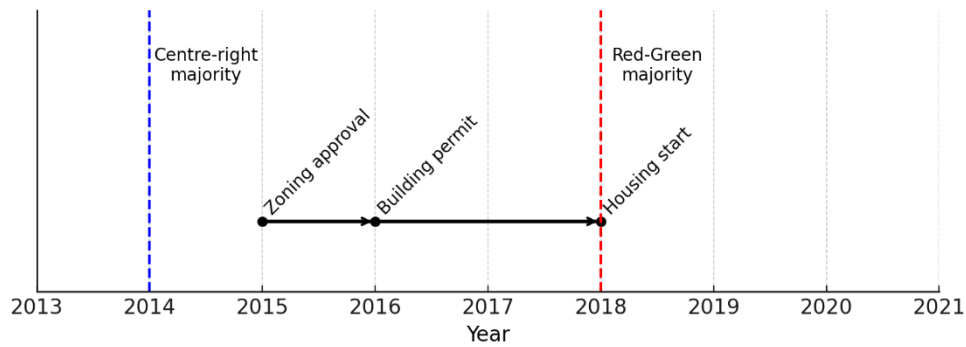


Figure 4. *Visualisation of the problem with missing data on political veto points connected to housing starts.*

6.4.2 Omitted Variables

As I mentioned earlier in 6.2, the biggest threat towards causal inference interpretation remains the potential for omitted variables in the model. This threat refers to time varying factors inside a municipality that could both influence new

housing starts and be correlated with my independent variables of interest. Examples of possible omitted variables that I can think of but could not find certainly exists. But, due to the sheer characteristics of political variables, it's hard to find data on all influential controls in a model for Swedish municipalities.

6.4.3 Strict Exogeneity and Simultaneity

The consistency proof for the FE-Poisson estimator requires strict exogeneity: current disturbances in housing supply must not feed back into the political variables in the same term. A sudden construction boom (or drought) could influence voter behavior at the subsequent election and thus seat shares.

Significant results should therefore undergo the following robustness check; lag of independent variable of interest, using values from the previous election period ($t-1$), breaking the same period feedback. Placebo regression to test pre-trends, replacing the dependent variable with housing starts two periods ahead. Insignificant coefficients here support exogeneity.

6.4.4 Assumptions Behind the Robust VCE

For my regressions I use Stata/BE 18.0's `vce(robust)` option, which clusters on municipalities when running `xtpoisson`, much like the `cluster` option for OLS (StataCorp, 2025: p.22). The main benefit of using the clustered option on the panel variable is that it allows arbitrary heteroskedasticity and serial correlation within each municipality. According to StataCorp's manual for Poisson with panel data (2025) the robust VCE is consistent when:

- 1) Number of clusters are "many", in this case I have 290 municipalities, which could be considered above the common threshold.
- 2) "Disturbances are uncorrelated across the clusters". Reasonable since the housing provision in Sweden is a municipal matter, but according to SNBHBP (2025b) there are reports from 2022 that 152 municipalities answered Yes when asked if they cooperated with other municipalities in the planning for housing provision, see Appendix 1. SNBHBP notes however that this cooperation tends to vary a lot in what type of cooperation and report that municipalities interpret cooperation differently. Still, might be cause for concern.

Collectively, these factors together imply that the estimated Poisson coefficients should be viewed as reduced-form associations. Not as causal evidence that any given municipal government structure is attributed to more- or less starts.

7. Results

This chapter begins with a summary table to aid interpretation of regression coefficients and incidence-rate ratios (IRR) transformations for the models used. Subsequently, Section 7.1 present results on how the share of left-wing seats in local governments affects housing construction, and Section 7.2 examines the impact of political fragmentation, measured by the normalised Herfindahl-Hirschman Index (HHI*), on local housing units. Furthermore, Because the measured HHI* ranges only from 0 to 0.40 in my sample, the IRR should be interpreted following the last example of *Table 3*.

Table 3. Examples of transforming coefficients into incidence-rate ratios (IRR).

Coeff.	Scenario	Formula	IRR	
-0,421	100 pp increase in left-parties' share	$e^{-0,412}$	$\approx 0,66$	(1)
-0,421	10 pp increase in left-parties' share	$e^{-0,412 \times 0,10}$	$\approx 0,96$	(2)
0,626	ln_pop100k	$e^{0,626}$	$\approx 1,87$	(3)
0,626	ln_pop100k	×	×	(4)
0.761	100 pp increase in HHI*	$e^{0.761 \times 0,40}$	$\approx 1,36$	(5)

Note. IRR has 1 as baseline. Values < 1 imply a negative association, and values > 1 imply a positive one.

The main takeaways from *Table 3* is to transform the coefficients into IRR so the effect can be read as a percentage change. This is done by exponentiating the product of the coefficient and the size of the change x you want to illustrate, $IRR = e^{\beta \times \Delta x}$. The exception is for already logarithmic coefficient which are interpreted as elasticities. For example, the coefficient in row (4) is interpreted as; housing-start rates rise of 0.63 % for each 1 % increase in population, other things equal.

7.1 Left-Parties in Local Governments and Housing

Table 4. The effect of Red-Green seat shares with executive power in the municipal council on housing starts (multi-dwelling buildings), with stepwise inclusion of vce(robust) and control variables (2)-(6).³

VARIABLES	(1) Multi	(2) Multi	(3) Multi	(4) Multi	(5) Multi	(6) Multi
Red-Green %	-0.108*** (0.005)	-0.108 (0.097)	-0.111 (0.101)	-0.096 (0.097)	-0.047 (0.099)	-0.084 (0.095)
ln Population	-0.824*** (0.037)	-0.824 (0.800)	-1.275 (0.851)	-1.946** (0.815)	-1.977*** (0.744)	-1.917*** (0.709)
ln House price			0.839** (0.409)	-0.005 (0.539)	0.632** (0.309)	0.677** (0.293)
Middle-aged %				0.060** (0.027)	0.061** (0.026)	0.056** (0.025)
Net investment				0.051*** (0.013)	0.050*** (0.011)	0.053*** (0.011)
ln Income				-4.829*** (1.746)	0.132 (1.399)	-0.546 (1.324)
Education					-0.113** (0.053)	-0.099** (0.050)
Unemployment					0.001 (0.017)	0.007 (0.016)
Municipal tax					-0.034 (0.028)	-0.037 (0.028)
Electoral part.%					0.025 (0.023)	0.016 (0.023)
Fiscal equaliz.					0.073*** (0.017)	0.058*** (0.016)
Total in gov.						-0.089*** (0.029)
Observations	1,951	1,951	1,947	1,674	1,674	1,674
Municipalities	283	283	283	282	282	282
Municipality FE	YES	YES	YES	YES	YES	YES
Election FE	YES	YES	YES	YES	YES	YES
Robust VCE	NO	YES	YES	YES	YES	YES

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Across most specifications, (2)-(6) from *Table 4*, the coefficient on Red-Green % remains negative and never reaches statistical significance $p < 0.1$. Except in column (1) where the regression runs with standard VCE, showing statistical

³ Observations represent sequential four-year terms of office, not single years, between 1994 and 2022.

significance of a $p < 0.01$ and a negative coefficient of -0.108 (0.005). This translates into an IRR of 0.90. In the full model, column (6), the estimate of -0.084 (0.095) translates into an incidence-rate ratio (IRR) of $e^{-0.084} \approx 0.92$. This means that moving from no Red-Green party representation on the executive board to full Red-Green control is associated with an expected 8 percent reduction in multi-dwelling housing starts, all else constant. The 95% confidence interval (CI) for the IRR is however between 0.76 and 1.11, so H_1 is not supported.

Table 5. The effect of Red-Green seat shares with executive power in the municipal council on house starts (one-or two dwelling buildings). Stepwise inclusion of vce(robust) and control variables (2)-(6).

VARIABLES	(1) Single	(2) Single	(3) Single	(4) Single	(5) Single	(6) Single
Red-Green %	-0.029*** (0.007)	-0.029 (0.043)	-0.013 (0.040)	-0.007 (0.040)	0.019 (0.037)	0.031 (0.039)
Ln Population	-2.780*** (0.049)	-2.780*** (0.374)	-1.859*** (0.456)	-1.848*** (0.466)	-1.727*** (0.518)	-1.733*** (0.512)
L.1 House price			-1.120*** (0.155)	-1.124*** (0.165)	-1.095*** (0.158)	-1.095*** (0.158)
Middle-aged %				0.011 (0.026)	-0.022 (0.026)	-0.023 (0.026)
Net investment				0.020** (0.009)	0.022** (0.009)	0.021** (0.009)
ln Income				-0.262 (0.917)	1.725* (1.039)	1.766* (1.036)
Education					0.020 (0.027)	0.019 (0.027)
Unemployment					-0.048*** (0.013)	-0.048*** (0.013)
Municipal tax					-0.085*** (0.017)	-0.085*** (0.017)
Electoral part. %					-0.034* (0.018)	-0.034* (0.018)
Fiscal equaliz.					-0.005 (0.018)	-0.004 (0.017)
Total in gov.						0.015 (0.019)
Observations	1,997	1,997	1,716	1,716	1,716	1,716
Municipalities	290	290	290	290	290	290
Municipality FE	YES	YES	YES	YES	YES	YES
Election FE	YES	YES	YES	YES	YES	YES
Robust VCE	NO	YES	YES	YES	YES	YES

Robust standard errors in parentheses

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table 5 repeats the Red-Green analysis, but for one- and two-dwelling buildings on housing starts. Again, across the robust specifications (2)-(6), the coefficient is never significant, even at $p < 0.1$. The estimates are however notably much smaller compared to multi-dwelling buildings and varies in its direction. Yet again, column (1) with standard VCE repeats the previous pattern of being negative and significant at $p < 0.01$, but the relationship is much smaller. The coefficient of -0.029 (0.007) translates into an IRR of 0.971 with a 99% CI between 0.953 and 0.989.

In the full model, column (6), the estimate of 0.031 (0.039) translates into an IRR of $e^{0.031} \approx 1.03$ with a 95% CI between 0.96 and 1.11. A complete shift from zero to full Red-Green would thus change expected single dwelling starts by only +3%. The 95% CI for the IRR includes zero effect. This suggests that evidence is insufficient to claim (from this data at least) that more Red-Green seat shares on the municipal executive board causes/reduces the amount of housing units in newly constructed single buildings.

7.2 Fragmented Local Governments and Housing

Table 6. The effect of normalised HHI on housing starts (multi-dwelling buildings), with stepwise inclusion of vce(robust) and control variables (2)-(6).

VARIABLES	(1) Multi	(2) Multi	(3) Multi	(4) Multi	(5) Multi	(6) Multi
HHI*	0.858 (1.748)	0.691 (1.700)	0.610 (1.730)	2.796* (1.522)	1.369 (1.110)	0.917 (1.087)
ln Population		-0.788 (0.778)	-1.251 (0.820)	-1.721** (0.777)	-1.897** (0.761)	-1.919*** (0.738)
ln House price			0.847* (0.447)	0.003 (0.552)	0.634** (0.310)	0.662** (0.302)
Middle-aged %				0.064** (0.028)	0.063** (0.026)	0.057** (0.024)
Net investment				0.055*** (0.014)	0.052*** (0.012)	0.055*** (0.012)
ln Income				-5.011*** (1.751)	0.020 (1.385)	-0.342 (1.322)
Education					-0.106** (0.052)	-0.097* (0.050)
Unemployment					0.003 (0.017)	0.008 (0.016)
Municipal tax					-0.031 (0.026)	-0.036 (0.027)
Electoral part.%					0.020 (0.021)	0.014 (0.021)
Fiscal equaliz.					0.073*** (0.018)	0.060*** (0.016)
Total in gov.						-0.076*** (0.027)
Observations	1,978	1,978	1,974	1,689	1,689	1,689
Municipalities	283	283	283	282	282	282
Municipality FE	YES	YES	YES	YES	YES	YES
Election FE	YES	YES	YES	YES	YES	YES

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 6 introduces the normalised council-concentration index HHI* on started housing units in multi-dwelling buildings. Across all regressions (1)-(6), the coefficient is large and imprecise. It reaches weak significance, $p < 0.10$, in column (4) before turning insignificant once the full set of controls are included. The fully specified model in column (6) reports coefficients of 0.917 (1.087) for

HHI*. Considering the observed range (0→0.4) for HHI*, the IRR is estimated to $e^{0.917 \times 0.40} \approx 1.44$ with a 95% CI between 0.62 and 3.38.

Moving from a municipal council with equally distributed seats won ($HHI^*=0$) to the most concentrated council observed in the sample, ($HHI^*=0.40$) would raise the expected number of housing units built in newly constructed buildings by about 44%. The CI is however widely spread and covers the span of zero starts, H_2 is therefore not supported.

Table 7. The effect of normalised HHI on housing starts (one-or two dwelling buildings), with stepwise inclusion of vce(robust) and control variables (2)-(6).⁴

VARIABLES	(1) Single	(2) Single	(3) Single	(4) Single	(5) Single	(6) Single
HHI*	1.281** (0.541)	0.884* (0.511)	1.213** (0.559)	1.211** (0.530)	0.933** (0.438)	1.045** (0.427)
ln Population		-2.753*** (0.376)	-1.807*** (0.457)	-1.803*** (0.464)	-1.708*** (0.510)	-1.705*** (0.505)
L.1 House price			-1.101*** (0.154)	-1.096*** (0.167)	-1.083*** (0.159)	-1.082*** (0.158)
Middle-aged %				0.011 (0.026)	-0.022 (0.026)	-0.023 (0.026)
Net investment				0.020** (0.009)	0.021** (0.009)	0.021** (0.009)
ln Income				-0.376 (0.897)	1.574 (1.020)	1.573 (1.005)
Education					0.024 (0.026)	0.024 (0.026)
Unemployment					-0.047*** (0.013)	-0.048*** (0.013)
Municipal tax					-0.083*** (0.017)	-0.082*** (0.017)
Electoral part. %					-0.037** (0.017)	-0.037** (0.017)
Fiscal equaliz.					-0.006 (0.017)	-0.007 (0.017)
Total in gov.						0.020 (0.017)
Observations	2,027	2,027	1,733	1,733	1,733	1,733
Municipalities	290	290	290	290	290	290
Municipality FE	YES	YES	YES	YES	YES	YES
Election FE	YES	YES	YES	YES	YES	YES

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

⁴ Observations represent sequential four-year terms of office, not single years, between 1994 and 2022.

Table 7 repeats the council-concentration analysis, now for one- and two-dwelling housing starts. Across most regressions, (1) and (3)-(6), the coefficient on HHI* is positive, remarkably stable and statistically significant at $p < 0.05$. The biggest shift can be seen in column (2), where the significance drops to $p < 0.1$ after including $\ln$ Population for the first time. In the regression with all my controls, column (6), the estimated coefficient 1.045 (0.427), with the observed range in mind, provides an IRR of $e^{1.045 \times 0.40} \approx 1.52$ with a 95% CI between 1.09 and 2.12.

Moving from a municipal council with equally distributed seats won ($\text{HHI}^*=0$) to a council with the most unequal distribution of seats observed in the sample, ($\text{HHI}^*=0.40$) is therefore associated with an expected 52% increase in single-dwelling housing starts. The 95% CI being above zero could support H_2 for this specific building type.

8. Discussion

Many assumptions must be made for my results to be interpreted causally, and one should by no means do so. Most of these are however mentioned in section 6.4 in greater detail, and I see some as more difficult to ignore than others. First and perhaps most crucial, we must assume my regression have not excluded time varying factors inside municipalities that, could both influence new housing starts and be correlated with my independent variables of interest. Although my current specification is quite robust, this assumption is perhaps violated. Secondly, since I could not find data on land use policy or regulations, the estimations and links back to political decisions are expected to be noisy.

Estimating the unbiased impact of local self-governing parties on housing has proven to be quite the challenge. Since politics is not random (thankfully) but mostly reflect the desires and preferences of the voters, extracting exogenous variation from observational data was hard. This is especially true when one decides to employ unorthodox methods. The usual method when determining partisan effects is to employ an RDD in some shape or form, estimating effects in close elections (LATE). This can however be difficult in a Swedish municipal setting for many reasons, but as shown by Folke (2014), it can be done in PR-systems as well. I for one found it much to complex given the time- and data restriction in a bachelor thesis. Keeping this in mind, and since I also were interested in council concentration, I went with a different approach. The following discussion is divided into two corresponding sections like the results.

8.1 Left-parties with executive power

The results from Red-Green parties in local government did not support H_1 after robust controls for any building type. The estimated incidence-rate ratios in all specified models with robust VCE were small and statistically indistinguishable from 1 for multi-dwelling, single-dwelling and total starts. Because clustering inflates the standard errors to reflect within-municipality serial correlation, the significance and precision in column (1) for both building types are most likely overstated.

Even if we ignored the p-values, the estimated elasticities are modest relative to the very large variation in the data ($\sigma \approx 1\,211$ for multi-unit buildings and 200 for single-unit starts), see Section 5.2. A swing from 0 % to 100 % Red-Green representation would, at best, predict to cause about 25 fewer multi-unit starts and 4 extra single-unit starts each election period for the average municipality. These estimates assume no error or bias.

Although insignificant, multi-dwelling had a larger negative expected outcome of -0.084 (0.095) compared to singles smaller positive coefficient 0.031 (0.039). These are not per se unexpected results given the increase of different constellations/coalitions, both during the investigated period, but also comparatively to 50 years ago (Holmberg, 2021). Both Pettersson-Lidbom (2007) and Folke (2014) examined earlier periods which could help support these conclusions of less bi-partisan, or convergence if you will, for Swedish municipalities in recent decades.

I also conducted a complementary analysis of only ‘share of The Green Party (MP) in power’. This showed that higher shares of MP in power stayed negatively correlated with fewer multi-dwelling starts, even in column (6) with all my controls, although only at $p < 0.1$. This divergence within the broader Red-Green bloc might indicate heterogeneity, or perhaps some sort of conflict of interest between social- and environmental sustainability, supporting the claims of Lind (2015). If I were to speculate, it might be the case that The Social Democrats (S) or The Left Party (V) might allow more housing starts, but when MP gains influence, they have the power to prevent it, even after holding all controls constant.

Continuing the discussion of convergence, interpreting the results in the light of the affect/elect components, is different dependent on the housing type. Perhaps with a naive perspective, electoral competition might force convergence towards the median voter in housing units for single houses more than multi-dwelling buildings, going in line with Wittman (1983) and Calvert’s (1985) conclusions.

Another interpretation could be that multi-dwelling buildings includes a ‘fuzzy’ or even non-existent median. With the coexistence of diverse tenure statuses, and perhaps more heterogenous inhabitants, making pure policy convergence less electorally profitable. This might encourage parties to differentiate/pursue on symbolic or affective dimensions instead, e.g. strongly appeal to nearby electors as Folke et al. (2024) found. Extending this line of thought, there may be a risk that the effectiveness of the included controls varies between the two types of buildings.

8.2 Council Concentration

The association between HHI* and single-dwelling starts proved robust ($p < 0.05$) and positive, 1.045 (0.427), while multi-dwelling projects remained positive, 0.917 (1.087), no significant results were displayed except in column (4). Why are less fragmented municipalities displaying intervals above the IRR of 1 for single,

but not for multi-dwelling buildings then? One explanation could be, as I also discussed in the previous section, that parties have stronger or more spread preferences when it comes to multi-dwelling projects, as Folke et al. (2024) claims. The wide interval for multi-building units could reflect a larger political divide, driven by which party coalition earned public trust, rather than uncertainty about concentration effects (Lindenau Stokke, 2016).

Another explanation could be regarding electoral incentives. Single-family construction usually targets middle-class owner-occupiers who are shown to be influential in local elections (Faber, 2018). A dominant bloc can cater to this constituency with limited opposition, whereas dense multifamily developments could face stronger NIMBY resistance from both politicians and residents (Folke et al., 2024). Whether or not concentrated councils reduces internal bargaining costs is hard to conclude.

Important to note in this context is also all the multiple avenues and layers in which policy is implemented in a complex political system like Sweden. These analyses cannot capture everything. The HHI variable is not drawn from an established paper, but rather as an interesting thing to investigate. Perhaps it is unclear, but the theory behind it was that the structure (in terms of competition) in the council influences the game theoretic behavior of parties in coalition formation. Of course, this introduces the risk of omitted variables such as ideological proximity suggested by Bäck (2003) or simply, voter preferences. These reasons make it difficult to disentangle cause and effect with full certainty and should not promote any haste conclusions.

8.3 Total Parties in Government

Finally, although it ended up as a control in the end because I decided on HHI, I find it interesting to discuss the variable Total gov. across both models. The variable Total gov. represents how many parties are holding executive seats in the municipal government, i.e. the degree of political fragmentation. In the fully saturated models for multi-dwellings (*Table 4* & *Table 6*, col. (6)) each extra party in the respective model is linked to a -0.089 (0.029) & -0.076 (0.027) log-point drop in expected multi-dwelling housing starts. The results from *Table 4* would then translate into an IRR of ≈ 0.92 , with $p < 0.01$. A shift from a two-party to a four-party coalition, a common range in Swedish municipalities, would thus predict roughly 17 % fewer new apartment units over a four-year term. This is true even while the Variable Red-Green is held constant.

For single- and two-dwelling projects however, the corresponding coefficients are small 0.015 (0.019) & 0.020 (0.017) and statistically indistinguishable from zero (*Table 5 & Table 7*, col. 6). This divergence aligns with Axelrod's (1970) logic that; larger coalitions contain more actors with heterogeneous preferences, raising coordination costs and the likelihood of gridlocks on complex, capital-intensive developments. All this while leaving routines for single-plot permits largely unaffected. Because coalition size may itself respond to contentious growth politics, the negative association should be viewed as suggestive rather than strictly causal, but it underscores how governance structure can condition local capacity to deliver multi-unit housing.

9. Conclusion

This study set out to assess whether greater representation of Sweden’s Red–Green parties in municipal executive boards, and council fragmentation, restrains local housing units in newly built buildings. Using panel data between the years 1994 and 2022, and Fixed-effects Poisson models with clustered standard errors, I find no robust evidence that council ideology alone matters for either multi-dwelling or single-/two-dwelling housing starts. The negative and significant estimate observed in standard VCE specifications vanish once serial correlation is accounted for and a full inclusion of demographic, economic and fiscal controls are introduced. No clear conclusions regarding my constructed variable HHI, which aimed to capture competition within the general municipal council.

By contrast, political fragmentation on the executive board emerges as a potentially important brake on large-scale construction. Each additional party in the governing coalition is associated with an 8–9 percent reduction in multi-dwelling starts, net of ideology and all other controls, while exerting no discernible influence on single-plot projects. This asymmetry aligns with Axelrod’s (1970) and Tsebelis’ (2002) theories: broad coalitions raise coordination costs and enlarge the set of actors able to block complex, capital-intensive developments, yet leave routine permit decisions largely untouched. This highlights how governance structure might condition local capacity and influence their expected outcomes when it comes to deliver multi-unit housing.

However, several limitations follow these conclusions. The observational design cannot rule out time-varying confounders, and the absence of direct land-use or regulatory data likely dilutes the estimated relationships. Moreover, my indicators capture formal power shares rather than informal bargaining dynamics, and I have no data on the sizes of the measured housing units started.

Future research should address these gaps by exploiting quasi-experimental strategies, such as regression discontinuity in proportional systems following the method developed by Folke (2014). Since I found permit-level or zoning data publicly unavailable at the municipal level, my suggestions would be to investigate this, unless it has restricted availability. Lastly, it could perhaps be useful to investigate if stronger national-municipal cooperation is needed. Although this thesis did not contribute much regarding causal ‘party effects’ on housing, I do believe a gap regarding this in Sweden exists and should be explored further.

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Appendix 1

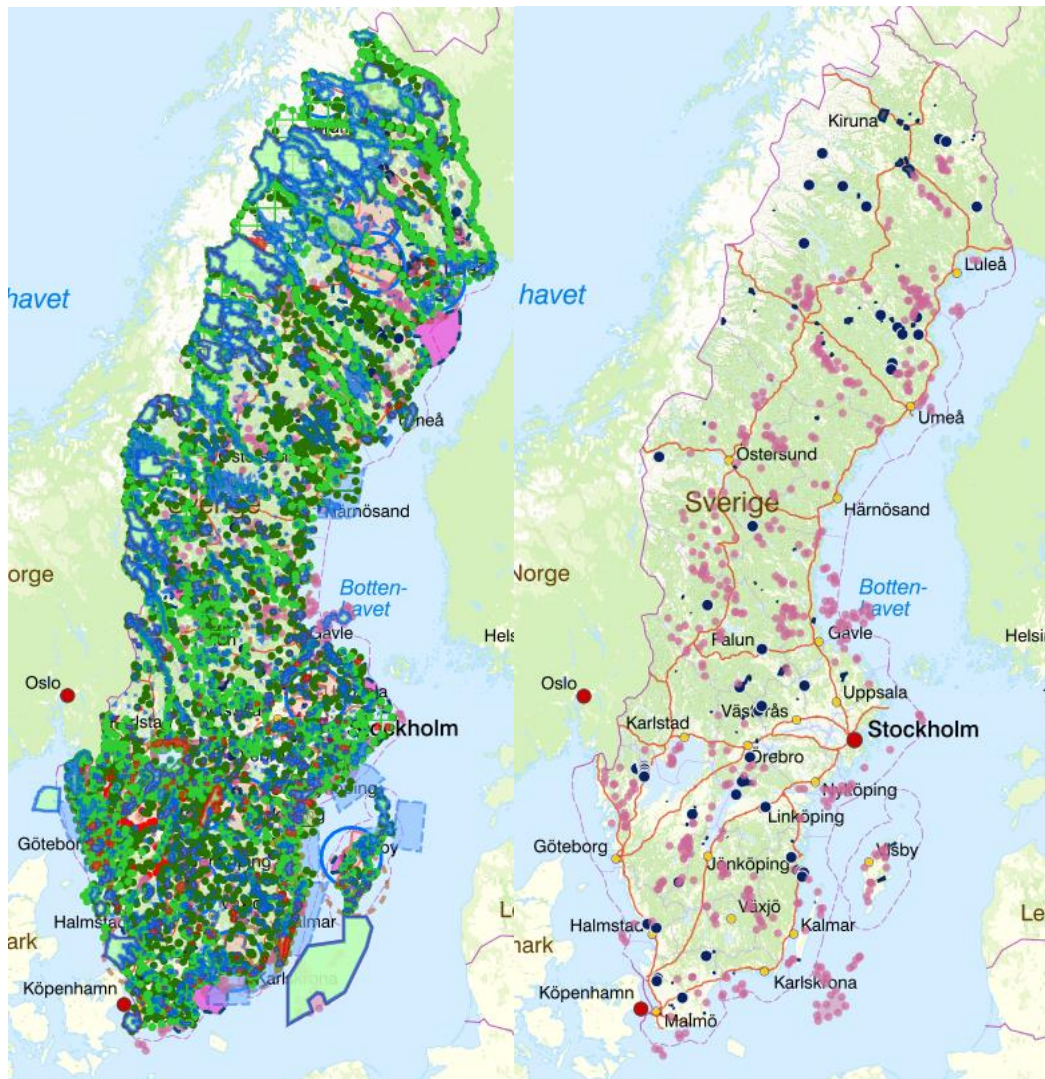


Figure 5. Two maps of Sweden showing total area of national interest (LHS) and national interest only from Energimyndigheten and SGU (RHS)

Source: Länsstyrelsen Västra Götaland, Geoportal.

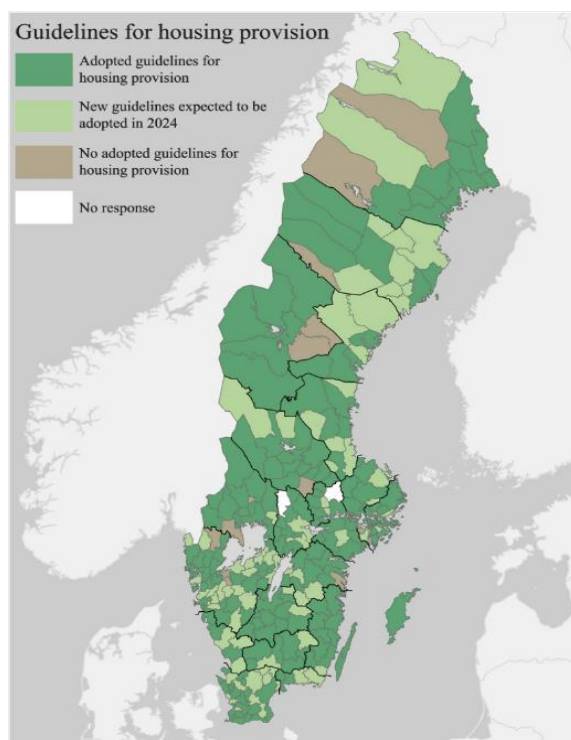


Figure 6. *Municipalities that have adopted housing provision guidelines during the previous electoral term (2018-2022) or later.*

Source: Housing market survey 2024, (SNBHBP, 2024b).

Illustration: SNBHBP, translation by author.

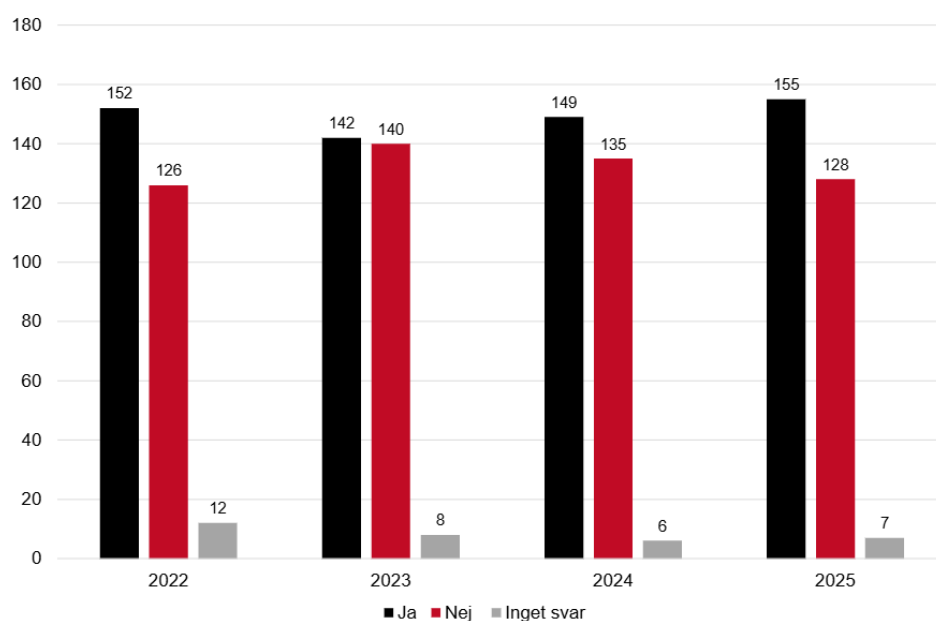


Figure 7. *Number of municipalities collaborating with other municipalities in the planning for housing provision between the years 2022-2025. Black=Yes, Red=No, and Grey=No answer.*

Source: SNBHBP (2025b).

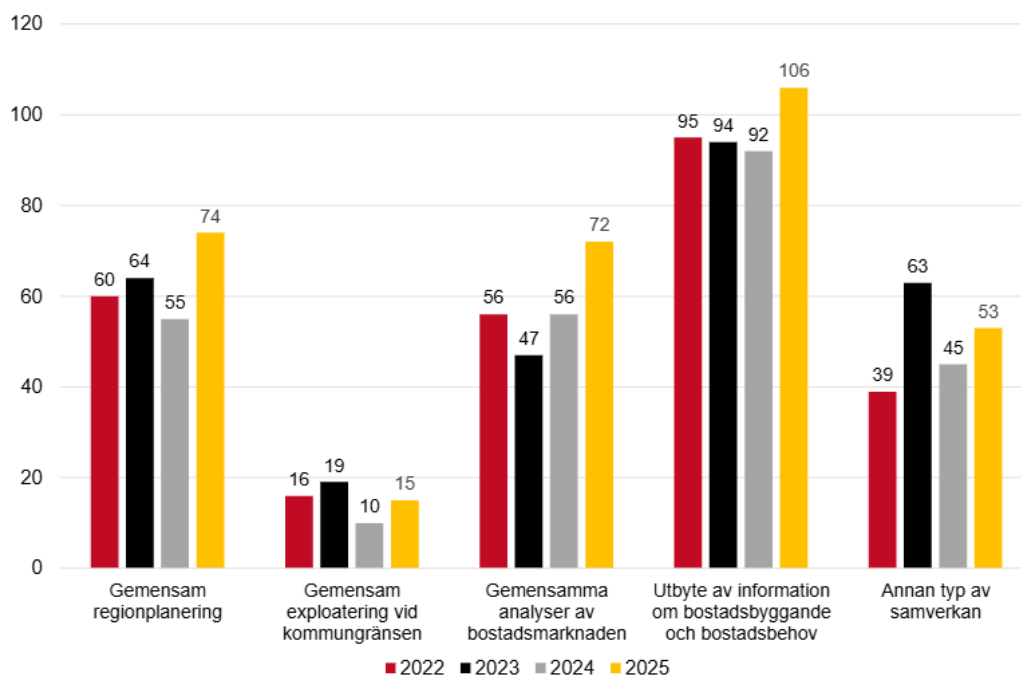


Figure 8. What type of cooperation is it when it comes to housing provision between municipalities for the years 2022-2025.

Source: SNBHBP (2025b).

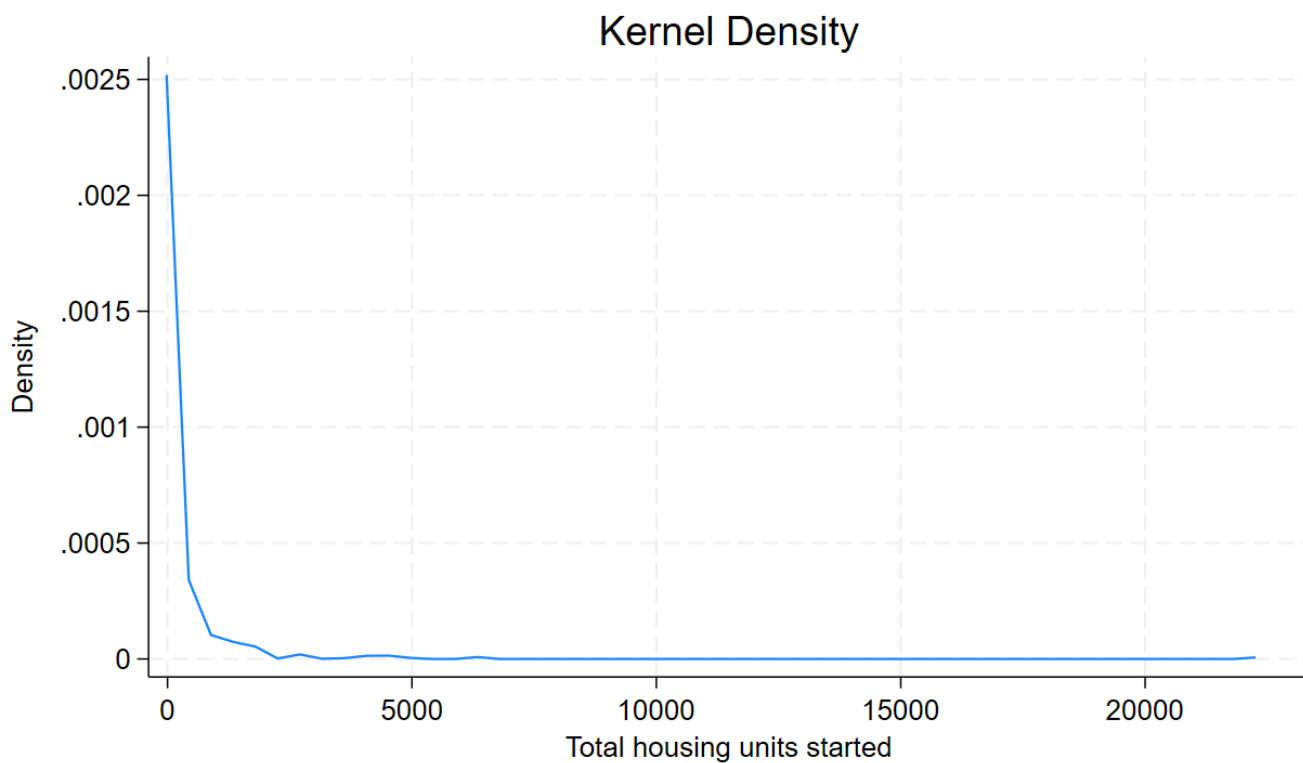


Figure 9. Kernel Density of total housing units started for all Swedish municipalities between the years 1994-2022.

Appendix 2 Total starts

Table 8. The effect of Red-Green seat shares in municipal council government on total housing starts. Stepwise inclusion of control variables (2)-(6).⁵

VARIABLES	(1) Total	(2) Total	(3) Total	(4) Total	(5) Total	(6) Total
Red-Green %	-0.078 (0.073)	-0.077 (0.072)	-0.080 (0.074)	-0.067 (0.076)	-0.027 (0.082)	-0.052 (0.081)
ln Population		-0.586 (0.471)	-0.831 (0.628)	-0.890 (0.555)	-1.163** (0.517)	-1.121** (0.497)
L.1 House price			-0.569*** (0.183)	-0.565*** (0.207)	-0.418* (0.228)	-0.427* (0.220)
Middle-aged %				0.080*** (0.019)	0.066*** (0.017)	0.065*** (0.017)
Net investment				0.044*** (0.011)	0.045*** (0.010)	0.047*** (0.010)
ln Income				-2.685** (1.070)	0.432 (1.432)	0.118 (1.316)
Education					-0.108*** (0.039)	-0.103*** (0.038)
Unemployment					-0.026* (0.015)	-0.023* (0.014)
Municipal tax					-0.071*** (0.021)	-0.073*** (0.021)
Electoral part. %					0.001 (0.016)	-0.002 (0.016)
Fiscal equaliz.					0.020 (0.018)	0.012 (0.017)
Total in gov.						-0.049** (0.020)
Observations	1,997	1,997	1,716	1,716	1,716	1,716
Municipalities	290	290	290	290	290	290
Municipality FE	YES	YES	YES	YES	YES	YES
Election period FE	YES	YES	YES	YES	YES	YES

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

⁵ Observations represent sequential four-year terms of office, not single years, between 1994 and 2022.

Table 9. The effect of normalised HHI on total housing starts, with stepwise inclusion of control variables (2)-(6).⁶

VARIABLES	(1) Total	(2) Total	(3) Total	(4) Total	(5) Total	(6) Total
HHI*	0.476 (1.155)	0.352 (1.151)	1.073 (1.231)	1.488 (1.030)	0.533 (0.737)	0.284 (0.732)
ln Population		-0.575 (0.455)	-0.791 (0.616)	-0.808 (0.529)	-1.146** (0.520)	-1.152** (0.514)
L.1 House price			-0.522*** (0.201)	-0.507** (0.216)	-0.397* (0.224)	-0.399* (0.220)
Middle-aged %				0.081*** (0.018)	0.067*** (0.017)	0.066*** (0.017)
Net investment				0.045*** (0.011)	0.045*** (0.010)	0.047*** (0.010)
ln Income				-2.823** (1.120)	0.384 (1.450)	0.244 (1.360)
Education					-0.105*** (0.039)	-0.102*** (0.038)
Unemployment					-0.025* (0.015)	-0.023 (0.014)
Municipal tax					-0.070*** (0.020)	-0.073*** (0.021)
Electoral part. %					-0.000 (0.015)	-0.002 (0.015)
Fiscal equaliz.					0.020 (0.018)	0.015 (0.016)
Total in gov.						-0.041** (0.019)
Observations	2,027	2,027	1,733	1,733	1,733	1,733
Municipalities	290	290	290	290	290	290
Municipality FE	YES	YES	YES	YES	YES	YES
Election period FE	YES	YES	YES	YES	YES	YES

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

⁶ Observations represent sequential four-year terms of office, not single years, between 1994 and 2022.

Appendix 3 Share MP rule

Table 10. MP seat shares with executive power in the municipal council on housing starts (multi-dwelling buildings). Stepwise inclusion of control variables (2)-(6).⁷

VARIABLES	(1) Multi	(2) Multi	(3) Multi	(4) Multi	(5) Multi	(6) Multi
Share MP in rule	-1.252** (0.608)	-1.219** (0.575)	-1.277** (0.612)	-1.276*** (0.446)	-0.849** (0.373)	-0.702* (0.416)
ln Population		-0.634 (0.668)	-1.129 (0.748)	-1.712*** (0.652)	-1.910*** (0.695)	-1.915*** (0.690)
ln House price			0.934*** (0.327)	0.187 (0.399)	0.682** (0.274)	0.696** (0.281)
Middle-aged %				0.065** (0.026)	0.061** (0.025)	0.057** (0.025)
Net investment				0.049*** (0.012)	0.048*** (0.011)	0.052*** (0.011)
ln Income				-5.025*** (1.368)	-0.711 (1.385)	-0.914 (1.324)
Education					-0.096** (0.046)	-0.090** (0.046)
Unemployment					0.003 (0.016)	0.007 (0.015)
Municipal tax					-0.036 (0.028)	-0.039 (0.028)
Electoral part. %					0.021 (0.022)	0.016 (0.023)
Fiscal equaliz.					0.057*** (0.017)	0.050*** (0.016)
Total in gov.						-0.059* (0.032)
Observations	1,951	1,951	1,947	1,674	1,674	1,674
Municipalities	283	283	283	282	282	282
Municipality FE	YES	YES	YES	YES	YES	YES
Election period FE	YES	YES	YES	YES	YES	YES

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

⁷ Observations represent sequential four-year terms of office, not single years, between 1994 and 2022.

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