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Build It and They Will Come: The Role of Housing Policy in Attracting Local Business*

Robert T. Remuszka
PhD Student, Economics
University of Wisconsin – Madison

Famy Xia
PhD Student, Economics
University of Wisconsin – Madison

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Executive Summary

- Recent research suggests that the decline in new business formation and overall economic dynamism is closely linked to a slowdown in labor force growth. One key factor behind this trend is the limited responsiveness of housing supply to rising housing prices, which economists call low housing supply elasticity.
- In areas where it is difficult to build new housing, the increase in demand does not lead to enough new construction, making it harder for workers to move to areas where jobs and new businesses are growing, which in turn makes it more costly for new and expanding businesses to hire.
- This lack of responsiveness can be due to natural geographic barriers, but often it stems from man-made zoning and land-use regulations. Our analysis shows that Wisconsin, in particular, has room to ease these man-made restrictions, increasing housing supply in areas where demand—and prices—are rising.
- Using a two-region spatial economic model, we estimate that reducing housing constraints by just 1% in Wisconsin—corresponding to a small increase of 0.0059 % in the number of housing units—could lead to significant long-term gains:
  - A 5.8% increase in the number of firms
  - A 2.7% increase in total employment
  - A 2.86% decrease in average firm size, indicating more small business formation and market entry
- These results highlight the potential for housing reform—especially in high-demand urban areas—to support job creation, business growth, and a more dynamic state economy.

1 Introduction

It is increasingly understood that the persistent decline in the rate of firm creation beginning in the second half of the twentieth century is in large part due to decreases in the rate of labor force growth (Karahan et al., 2024; Hopenhayn et al., 2022). Concurrent with this downward trend in American dynamism is an increased reliance of US cities on zoning regulations which limit the supply of housing (Calder, 2017). What effect do differences in the stringency of local housing policy have in creating dispersion in dynamism and firm demographics?

We start by reviewing the accounting framework of Hopenhayn et al. (2022). A basic identity relates the firm entry rate to labor force growth, the growth rate in average firm size and the exit rate. Guided by the accounting framework, we then document the relationship between each component of the identity and the inverse supply elasticity of the Metropolitan Statistical Area (MSA) it belongs to.† The inverse supply elasticity is widely recognized in the literature as being influenced by zoning regulation (Glaeser and Gyourko, 2018). We show that, in the case of the labor force growth rate, the regression specification we use is theoretically grounded in a Roback (1982) type model. We then study similar regressions which look to assess the effects of housing policy on the other components of the accounting identity.

The accounting framework belies the full effect of housing policy on firm dynamism since, in general equilibrium, not all else is equal. Yet it is precisely the full general equilibrium response that is most relevant for policy makers. We thus calibrate a two-region version of the simple Roback (1982) model, augmented with a firm entry and exit decision, for Wisconsin and the rest of the United States. This allows us to assess the counterfactual effects of loosening housing policy through a 1% percent decrease in Wisconsin's inverse elasticity of housing supply. That is, under the status-quo policy an expected 1% demand-induced increase in the price of housing leads to a 1.704% increase in housing units. Under the counterfactual policy with a 1% lower inverse elasticity of housing supply, that same 1% increase in the price of housing should be met with an additional 0.006 percentage points. The number of firms in Wisconsin rises by 5.8% in the long run. These new firms are smaller than current incumbent firms, as the average firm size falls by 2.86% while employment grows by 2.74%.

The rest of the paper proceeds as follows. Section 2 discusses the accounting framework we use to investigate the components of firm dynamism. There, we estimate a set of regressions following from that framework, guided by our spatial model. In section 4, we take a more Wisconsin-centric approach and use the calibrated model to consider the

†While we are ultimately concerned with making statements about US cities, we collect data at the county level to increase the precision of our estimates.

effects of reducing Wisconsin's average inverse housing supply elasticity by one percentage point. The full development of the calibrated model we use can be found in appendix A.1.

2 Accounting for Firm Dynamism

To motivate our empirical investigation we will start with a review of the accounting framework in Hopenhayn et al. (2022). Let N be labor force size and M be number of firms. Then, average firm size is defined as AFS $= N/M$. Using tildes to denote growth rates, the definition of AFS tells us that $\tilde{M} = \tilde{N} - \widetilde{\text{AFS}}$. The change in the number of firms is equal to the number of entrants less exits. This implies that the growth rate in the number of firms can be written, $\tilde{M} = (\text{entry rate} - \text{exit rate})$. In turn,

$$\begin{aligned} \tilde{M} &= \tilde{N} - \widetilde{\text{AFS}} \\ \iff (\text{Entry Rate} - \text{Exit Rate}) &= \tilde{N} - \widetilde{\text{AFS}} \\ \iff \text{Entry Rate} &= \tilde{N} - \widetilde{\text{AFS}} + \text{Exit Rate}. \end{aligned} \tag{1}$$

In what follows, we investigate the effects of housing restrictions on each component of (1)'s right hand side. We focus on US counties to maintain sufficient statistical power. In doing so, we collect county-level data on housing prices per square foot from CoreLogic. We combine these county-level estimates with MSA-level estimates of the inverse housing supply elasticity provided by Saiz (2010). Additionally, we compute exit rates, entry rates and average firm sizes using Business Dynamics Statistics County Level Data from the Census. Labor force size data comes from the Bureau of Labor Statistics' Local Area Unemployment Statistics and personal income measures come from the Bureau of Economic Analysis county level tables.

3 The Effects of Housing Restrictions

To assess the effects of housing policy on firm dynamism we estimate regressions of the form,

$$\tilde{z}_{c,t} = \lambda_t + \delta_s + \beta_p \tilde{p}_{c,t} + \beta_\varepsilon \varepsilon_c^{-1} + \beta_{p\varepsilon} \tilde{p}_{c,t} \times \varepsilon_c^{-1} + \beta_y \tilde{y}_{c,t} + \boldsymbol{x}'_{c,t} \boldsymbol{\gamma} + u_{c,t} \tag{2}$$

where $\tilde{z}_{c,t}$ denotes one of the variables on the right hand side of (1) for county c in year t. The variables $\tilde{p}_{c,t}$ and $\tilde{y}_{c,t}$ denote the year over year growth rates of housing prices and per-capita income, respectively. We group counties into their associated local labor market using metropolitan statistical area (MSA) definitions consistent with those of Saiz (2010) and use his estimates of $1/\varepsilon_c$. Further, we include time fixed effects λ_t to control for aggregate economic conditions and state fixed effects to control for differences unobserved differences across states.[‡] Lastly, $\boldsymbol{x}_{c,t}$ denotes a vector of controls which will be made clear in the tables of our regression results.

With an eye towards the fully calibrated model, we show in appendix A.2 that the estimating equation (2) arises naturally from the theory we develop in appendix A.1 when the left hand side variable is taken to be labor force growth. That is, the economic model suggests that it is the interaction between price growth and the housing elasticity which matters, not simply the level of the housing elasticity. This is because, as the model suggests, the elasticity affects the pass through of a one percent demand-induced increase in price to labor force growth. We can test this hypothesis directly in the case of labor force growth. We turn to this next.

We first estimate (2) by OLS with $\tilde{z}_{c,t}$ equal to local labor force growth. The coefficient β_ϵ captures the direct association between labor force growth and inverse housing supply elasticity. If β_ϵ is negative, then a higher inverse elasticity of supply, $1/\varepsilon_c$, is associated with lower labor force growth. The interaction coefficient $\beta_{p\epsilon}$ indicates how the same 1% increase in prices varies with the restrictiveness of housing price growth. That is, it is a measure of how prices pass through to local outcomes differentially through housing restrictions. The results are reported in table 1. Column one begins by including both the elasticity measure and its interaction with price growth in the regression. As suggested by the theoretical argument in appendix A.2, we see that the direct effect of the elasticity is insignificant but that the effect of the interaction term is significant. Column two then simply removes the direct effect and is our preferred specification. There we see that same one percent increase in the price of housing reduces the labor force growth rate by an additional 0.004 percentage points in areas with a lower elasticity of housing supply. Columns three and four demonstrate that these effects are robust to the inclusion of the other factors in the accounting identity (1).

We then examine the relationship between housing supply elasticity and the two additional components that contribute to the firm entry rate according to (1). Using the same regression specification as before, we replace the dependent variable with average firm size growth and firm exit rates. Table 2 begins by estimating the effects of housing restrictions on average firm size. Columns (1) and (2) indicate that a 1% increase in housing prices is associated with an additional 0.002 percentage point decline in areas with less elastic housing supply. However, once we control for labor force growth, the effect becomes statistically insignificant and slightly smaller in magnitude. Consistent with the findings of the recent firm dynamics literature (Hopenhayn et al., 2022; Karahan et al., 2024), this suggests that the effects of lower housing supply elasticities on average firm size growth

[‡]We do not include MSA fixed effects because Saiz (2010)'s estimates of the housing elasticity are available only at the MSA level and contain no time variation. Thus, including MSA fixed effects would absorb the direct effect of housing restrictiveness on the outcome.

	(1) Lab. force growth	(2) Lab. force growth	(3) Lab. force growth	(4) Lab. force growth
House price growth	0.0143**	0.0143**	0.0116**	0.0121**
	(0.00461)	(0.00461)	(0.00402)	(0.00410)
Housing Supply Elasticity	-0.0397		-0.177**	
	(0.0457)		(0.0547)	
House price growth × Housing Supply Elasticity	-0.00376*	-0.00377*	-0.00316*	-0.00328*
	(0.00151)	(0.00150)	(0.00133)	(0.00136)
Per cap. income growth	-0.276***	-0.276***	-0.285***	-0.284***
	(0.0220)	(0.0220)	(0.0225)	(0.0225)
Growth in Avg. Firm Size			0.0628***	0.0616***
			(0.0138)	(0.0137)
Exit Rate			-0.292***	-0.255***
			(0.0559)	(0.0541)
N	12,896	12,896	12,892	12,892
Adj. R^2	0.285	0.285	0.307	0.304

MSA-clustered standard errors. All regressions include state and year fixed effects and are weighted by county labor force size.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 1: The pass through of house price growth into labor force growth rates.

	(1) Growth in Avg. Firm Size	(2) Growth in Avg. Firm Size	(3) Growth in Avg. Firm Size	(4) Growth in Avg. Firm Size
House price growth	0.00790**	0.00782**	0.00618*	0.00610*
	(0.00242)	(0.00242)	(0.00240)	(0.00240)
Housing Supply Elasticity	0.0763*		0.0811*	
	(0.0374)		(0.0366)	
House price growth × Housing Supply Elasticity	-0.00202*	-0.00199*	-0.00156	-0.00154
	(0.000846)	(0.000848)	(0.000851)	(0.000855)
Per cap. income growth	0.0491***	0.0491***	0.0824***	0.0823***
	(0.0127)	(0.0127)	(0.0160)	(0.0160)
Lab. force growth			0.121***	0.120***
			(0.0248)	(0.0248)
N	12,896	12,896	12,896	12,896
Adj. R^2	0.244	0.244	0.250	0.250

MSA-clustered standard errors. All regressions include state and year fixed effects and are weighted by county labor force size.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 2: The pass through of house price growth into average firm size growth rates.

	(1) Exit Rate	(2) Exit Rate	(3) Exit Rate	(4) Exit Rate
House price growth	-0.00727***	-0.00678***	-0.00613***	-0.00568***
	(0.00204)	(0.00201)	(0.00167)	(0.00164)
Housing Supply Elasticity	-0.454***		-0.457***	
	(0.0608)		(0.0620)	
House price growth × Housing Supply Elasticity	0.00163*	0.00145*	0.00133*	0.00116*
	(0.000690)	(0.000685)	(0.000585)	(0.000584)
Per cap. income growth	-0.0203***	-0.0207***	-0.0423***	-0.0421***
	(0.00457)	(0.00464)	(0.00683)	(0.00708)
Lab. force growth			-0.0798***	-0.0773***
			(0.0135)	(0.0144)
N	12,892	12,892	12,892	12,892
Adj. R^2	0.642	0.606	0.651	0.613

MSA-clustered standard errors. All regressions include state and year fixed effects and are weighted by county labor force size.
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 3: The pass through of house price growth into average firm exit rates.

operates through labor force growth. We repeat the exercise for exit rates in Table 3. A higher firm exit rate is associated with more elastic housing supply, which accounts for a higher firm entry rate. Additionally, this relationship is slightly mitigated in areas with high housing price growth as a 1% higher housing price growth is associated with a 0.001 percentage points higher firm exit rate in areas with less elastic housing supply.

How do housing price growth and housing supply elasticity ultimately affect firm entry? Shown empirically in Table 4, a one standard deviation decrease in housing supply elasticity is associated with a 0.63 percentage point reduction in the firm entry rate. While this negative relationship is slightly stronger in areas experiencing high housing price growth, the interaction effect is not significant. These findings suggest that supply-constrained housing markets may suppress new business formation, regardless of the housing price growth in the area. Combined with our labor force growth regressions, any effects we do see are largely driven by housing policy's effects on local labor force growth rates.

3.1 Room For Policy?

To be sure that housing restrictions in Wisconsin are not due merely to geographic constraints, we compare the metro areas in Wisconsin with those in the rest of the U.S. in terms of both natural geographic constraints and man-made regulations. Figure 1 presents the percentile rankings of all U.S. metro areas in terms of geographic restriction and land use regulations, with the 11 Wisconsin metros highlighted in red. As shown in the graph, 8 out of 11 Wisconsin metros rank higher in terms of land use regulations than geographic restriction, as indicated by their position below the 45 degree line. This

	(1) Entry Rate	(2) Entry Rate	(3) Entry Rate	(4) Entry Rate	(5) Entry Rate	(6) Entry Rate
House price growth	0.00512*	0.00577**	0.00117	0.00176	0.00495**	0.00572**
	(0.00209)	(0.00218)	(0.00128)	(0.00136)	(0.00174)	(0.00190)
Housing Supply Elasticity	-0.604***		-0.593***		-0.343***	
	(0.0964)		(0.0899)		(0.0543)	
House price growth × Housing Supply Elasticity	-0.00121	-0.00144	-0.000172	-0.000385	-0.00101	-0.00122
	(0.000708)	(0.000745)	(0.000481)	(0.000512)	(0.000639)	(0.000691)
Lab. force growth			0.277***	0.280***	0.329***	0.337***
			(0.0189)	(0.0195)	(0.0178)	(0.0175)
Growth in Avg. Firm Size					-0.0827***	-0.0854***
					(0.0183)	(0.0187)
Exit Rate					0.533***	0.606***
					(0.0567)	(0.0577)
N	12,892	12,892	12,892	12,892	12,892	12,892
Adj. R^2	0.621	0.589	0.670	0.639	0.725	0.716

MSA-clustered standard errors. All regressions include state and year fixed effects and are weighted by county labor force size.
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 4: The pass through of house price growth into firm entry rates.

suggests that for most Wisconsin metros, regulatory factors play a more significant role in limiting housing supply than natural geographic constraints. Consequently, easing land use regulations in these areas could potentially spur housing development.

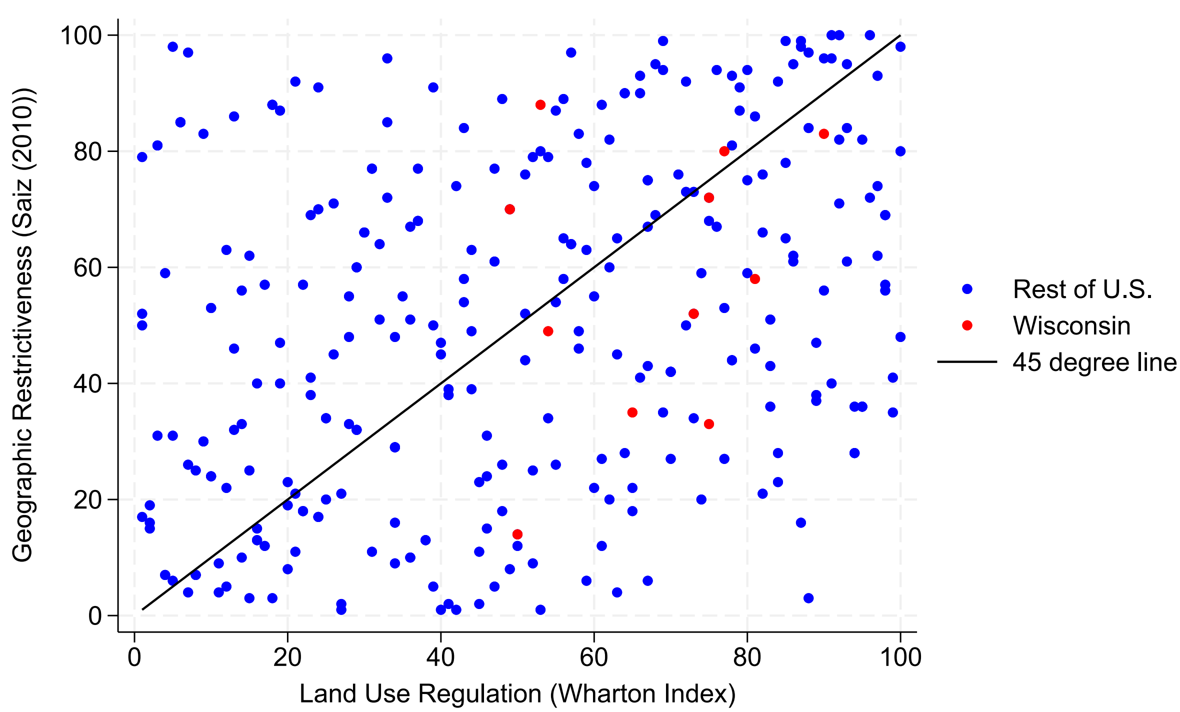

Figure 1: Percentile Rankings of Metro Areas by Geographic Restrictiveness and Land Use Regulation

4 A Policy Simulation for Wisconsin

In order to understand the broader general equilibrium effects of housing policy in Wisconsin, we now turn to our policy simulation. The full derivation of the model we use to do so can be found in appendix A.1.

4.1 Calibration and Counterfactual Policy

We start by collapsing all our data into two regions; Wisconsin and the rest of the country. We internally calibrate the mean and autoregressive coefficient of each location's productivity process, equation 4 of the appendix, to match the distributions of the number of firms and the population across the two regions. We report these estimates in table 5. All other parameters on the firm side of the model are externally calibrated using the corresponding estimates provided in Karahan et al. (2024). For households, we use an estimate of the dispersion in preferences across locations of 4, which is the middle of the range considered by Redding (2016). We feed the inverse supply elasticities estimated by Saiz (2010) into the model. We take the housing expenditure share to be 1/3, which is about the historical average found in Consumer Expenditure Survey.

The average inverse housing supply elasticity is 1.704 across Wisconsin cities, indicating that an expected demand-driven increase of 1% in housing prices corresponds to a 0.5869% (1/1.704) increase in the number of housing units. To implement a 1% reduction in the inverse housing supply elasticity, the total number of housing units must rise an additional 0.0059 percentage points. This small relaxation of housing constraints increases the number of firms and overall employment in Wisconsin by 5.8% and 2.7%, respectively. These gains in employment are driven by smaller firms as the average firm size falls by 2.86%.

Region	ρ_l	B_l
Rest of Country	0.89	1.0
Wisconsin	0.8	-1.0

Table 5: Internally calibrated parameters. All other parameters are set to their corresponding national average as reported in Karahan et al. (2024).

5 Conclusion

It has been argued that restrictions on housing, measured through the inverse elasticity of housing supply, have lead to declines in long run employment and business dynamism in Wisconsin. Simple accounting identities from the literature on firm demographics can be adapted to demonstrate that the effect of a one percent increase in housing prices translates into lower labor force growth in areas with higher inverse housing elasticities. Our empirical application of the accounting framework further suggests that the relation between housing and dynamism operates primarily through housing's effects on labor force growth.

While the empirical results we measure may seem modest, we have argued that such exercises will not recover full general equilibrium effects. Our fully calibrated spatial model of firm dynamism suggests that relaxing housing constraints leads to firm entry and employment gains in the long run. Thus, meeting housing demand movements with more housing construction than the state would otherwise create, particularly in larger metropolitan areas, brings business and jobs to Wisconsin.

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A Derivations

This appendix presents our estimating equations and the description of the full economic model used to derive them.

A.1 A Model of Spatial Dynamism

The model is a spatial extension of that in Karahan et al. (2024) in the spirit of Roback (1982). We start by describing preferences, technology and geography. We will then discuss firm and household optimization and close the discussion with a definition of equilibrium.

A.1.1 Environment

Preferences. The environment is composed of two agents, firms and workers. A measure $\mathcal{N}$ of workers lives a single period and can choose a city $l \in \{1, 2, \ldots, \mathcal{L}\}$ in which to live. Workers have preferences over consumption and square footage of housing in each location

$$A_l \left(\frac{c_l}{\alpha}\right)^{\alpha} \left(\frac{h_l}{1-\alpha}\right)^{1-\alpha}. \tag{3}$$

We allow for unobserved preference heterogeneity. These are codified in the following assumption,

ASM1 (Consumption Amenities)**.** *Preference heterogeneity for a location's consumption amenities, A_l, are unobserved but their distribution is assumed to be standard Fréchet with shape parameter ν,*

$$A_l \sim F(a; \nu) = e^{-a^{-\nu}}.$$

Firm Technology. Firms, on the other hand, are infinitely-lived and operate a decreasing returns technology in their location of choice,

$$e^{z_l} n^{\theta}.$$

The production technology depends on location l through the stochastic process governing the evolution of a firm's productivity,

ASM2 (Process for Firm Productivities)**.**

$$z_l' = (1-\rho_l)B_l + \rho_l z + \sigma\eta, \quad \eta \sim N(0,1). \tag{4}$$

The parameter ρ_l governs the degree of persistence in location l's process. The process is normalized so that productivity in the long run is B_l. We will thus view B_l as location

l's productive amenities. We omit a location subscript on the firm's current realization of productivity because all of the current period's decisions are made after the realization of z. Likewise, there is no subscript on the innovations η because the process is common across locations.

Housing Technology. Finally, we will suppose for simplicity that housing is supplied in each location by an absentee landlord. The supply function for the square footage of housing is given by

$$H_l = p_l^{\frac{1}{\varepsilon_l}}. \tag{5}$$

This function is provided with micro-foundations in Saiz (2010). In fact, we will externally calibrate ε_l using his estimates.

A.1.2 Households

Households maximize (3) in each location, subject to their budget constraint in each location,

$$y_l = w_l + \frac{\Pi_l}{N_l}$$

Each household has one unit of labor to supply and does so inelastically. Income y_l is thus comprised of wages and per capita profits. Rent payments are collected by an absentee landlord. Standard Cobb-Douglas optimization yields an indirect utility of

$$v_l = \frac{y_l}{p_l^{1-\alpha}}.$$

Using assumption 1, the probability with which location l is most preferred is given by[§]

$$q_l = \frac{v_l^{\nu}}{\sum_i v_i^{\nu}}. \tag{6}$$

From this, we immediately obtain labor supply N_l, in each location,

$$q_l = \frac{N_l}{\mathcal{N}}.$$

A.1.3 Firms

There are two types of firms, incumbents and entrants. Let us consider each type's decision problems in turn.

[§]After consumption and housing have been chosen, **ASM1** implies a distribution for the first order statistic of (3). The result is standard so we omit its derivation for brevity. The interested reader should see Eaton and Kortum (2002), in the context of trade, for details.

Incumbents. Incumbents choose how much labor to hire each period and whether to continue operating in the following period. The choice of how much labor to hire is static. Thus, an incumbent's period return is given by its static operating profits,

$$\begin{aligned}\pi(z; w_l, f_l) &= \max_n \left\{ e^z n^\theta - w_l n_l - f_l \right\} \\ &= e^{\frac{z}{1-\theta}}(1-\theta)\left(\frac{\theta}{w_l}\right)^{\frac{\theta}{1-\theta}} - f_l.\end{aligned}$$

The firm's dynamic decision is to choose its exit policy x before it realizes its next period productivity draw. Following Karahan et al. (2024), firms may also be hit with an exogenous exit shock with probability δ. The firm's Bellman equation is thus

$$J_l(z) = \pi(z; w_l, f_l) + \beta(1-\delta) \max_{x \in \{0,1\}} \left[(1-x)\mathbb{E}J_l(z') \right]. \tag{7}$$

If the value of continuing is expected to be greater than zero, it is optimal to stay the course and set x to zero. Otherwise, it is optimal to exit and return to the unbounded measure of potential entrants. We discuss the problem of these potential entrants next.

Entrants. A large and unbounded measure of potential entrants lingers over the economy awaiting an opportunity to enter one of the l locations. The fact that the measure is large and unbounded is what ensures that the free entry condition holds,

$$\int J_l(z_0) G_l(z_0) dz_0 \leq \kappa_l. \tag{8}$$

Entrants draw their initial productivity from the long run distribution of the process in **ASM2**. We denote the cumulative density of that distribution by $G_l(z_0)$.

Laws of Motion. Entry and exit by firms will induce a law of motion over the distribution of firms in each location. Let S be a set of measures.¶ For each location l we can define an operator $T_l : S \to S$ which takes in a measure, $\mu_l(z)$ and returns a measure $\mu_l'(z)$ using firm decision rules,

$$\mu_l'(z') = \int (1-\delta)(1-x_l(z))\Gamma_l(z'|z)\mu_l(z)dz + M_l' G_l(z_0). \tag{9}$$

We use $\Gamma_l(z'|z)$ to denote the Markov transition probabilities corresponding to **ASM2**. M_l' denotes the measure of entrants in location l. The fixed points of these operators will each define a measure of firms μ_l which will prevail in the economy's steady state. Lastly, the above integral is taken over the entire support of μ because some entrants will obtain a poor draw and exit immediately after their first period of production.

¶Not necessarily probability measures.

A.1.4 Definition of Equilibrium.

We will focus on the following notion of equilibrium.

Definition (Steady State Equilibrium)**.** *A steady state equilibrium is a collection of $\mathcal{L}$ dimensional price vectors $\{\boldsymbol{w}, \boldsymbol{p}\}$, a set of $\mathcal{L}$ dimensional vectors of firm value functions and measures $\{\boldsymbol{J}, \boldsymbol{\mu}, \boldsymbol{M}\}$ such that*

1. *Each component of $\boldsymbol{J}$ solves the corresponding location's Bellman equation (7)*
2. *Each component of $\boldsymbol{\mu}$ is the fixed point of the corresponding location's law of motion (9)*
3. *Each component of $\boldsymbol{M}$ is strictly positive so that (8) holds with equality*
4. *Each component of $\boldsymbol{w}$ and $\boldsymbol{p}$ clears the corresponding local labor and housing markets, respectively.*

A.2 Regression Specifications

Under the preference specification in equation (3) and the housing supply function (5), we can deduce from housing market clearing that,

$$
\begin{aligned}
& N_l \times h_l = H_l \\
\iff & N_l \times (1-\alpha) y_l = p_l^{1+\frac{1}{\varepsilon_l}}.
\end{aligned}
$$

Letting ticks denote values in the next year we have that

$$
\begin{aligned}
& \frac{N_l' y_l'}{N_l y_l} = \left(\frac{p_l'}{p_l}\right)^{1+\frac{1}{\varepsilon_l}} \\
\iff & \log\left(\frac{N_l'}{N_l}\right) = \left(1+\frac{1}{\varepsilon_l}\right)\log\left(\frac{p_l'}{p_l}\right) - \log\left(\frac{y_l'}{y_l}\right).
\end{aligned} \tag{10}
$$

Equipped with estimates of the inverse housing supply elasticity, equation (10) implies that the theory developed here suggests that house price growth has a direct effect on the growth rate of the local labor force. Furthermore, it suggests that it is the interaction of price growth with the housing supply elasticity that matters. That is, the theory presented in appendix A.1 comes with the econometric restriction that housing policy, as measured by the inverse supply elasticity, has zero direct effect on local labor force growth. A prediction we confirm in section 3.