UCLA Anderson Forecast with GoDaddy Small Business Research Lab

What Small Businesses Tell Us About the Economy That Wall Street Can't

William Yu, Economist
Thomas Ash, Economist

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Executive Summary

Understanding reliable leading indicators of economic activity is essential for forecasting and policymaking. This report examines the dynamic relationships between the real economy and Wall Street (financial markets), Main Street (traditional small business indicators, i.e., establishment births), and Small Street (GoDaddy's small and microbusiness data[1]), distinguished by its capture of earlier, often digital-first entrepreneurial activity.

Using U.S. national data from 1990–2025, granular ZIP-code evidence, and newly available real-time entrepreneurial indicators from GoDaddy (2020 onward), the study evaluates how effectively both traditional and novel indicators capture economic conditions experienced by households and workers. This is a new way of observing the economy, not a new theory of it.

The analysis is motivated by four hypotheses:

1. Financial market indices such as the S&P 500 do not consistently move in lockstep with macroeconomic indicators. Equity prices primarily reflect expectations and performance of large, publicly traded firms, and their relationship with real economic activity can vary over time.
2. Traditional small business indicators, such as establishment births, may also function as leading or coincident indicators.
3. GoDaddy's digital microbusiness data is reflective of broader small business activity and therefore an informative proxy, especially at local levels.
4. GoDaddy's proprietary participation index[2], along with measures of ventures and entrepreneurs, may serve as timely leading indicators or bellwethers of general economic activity.

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[1] Businesses who have a unique domain registered with GoDaddy and an active website.
[2] The participation index is one of three subindices of Microbusiness Activity Index (MAI), constructed as a weighted measure based on the density and growth rates of GoDaddy ventures (number of websites) and entrepreneurs (number of website owners). For more details, see https://www.anderson.ucla.edu/sites/default/files/document/2023-05/microbusiness_2021q3.pdf

The report also delivers four main findings:

1. **Stock market returns are statistically related to real economic activity, but the magnitudes are weak.** While equity returns add explanatory power beyond simple autoregressive models for GDP, employment, and unemployment, their economic significance is limited. This suggests that strong stock market performance does not reliably translate into broad-based economic gains.
2. **Small business formation—proxied by establishment births—is more tightly linked to macroeconomic dynamics than stock market returns.** Establishment births exhibit strong contemporaneous relationships with GDP growth and modest leading-indicator properties for employment growth and unemployment.
3. **GoDaddy's measures of entrepreneurship provide a novel, timely window into local small business dynamics across the U.S.** These indicators capture early-stage business formation that is not yet visible in official statistics, offering earlier insight into economic activity at local levels. There is a strong correlation between zip codes with high GoDaddy measures and job growth.
4. **GoDaddy's small business metrics provide limited but meaningful additional information about business-cycle fluctuations at the state level with some additional predictive power.** While constrained by data availability and the short time span, the results suggest that real-time small business indicators can complement traditional macroeconomic measures.

Taken together, these results demonstrate that financial markets, macroeconomic outcomes, and local entrepreneurship are interconnected—but not equally informative. A central takeaway of the report is that small business activity is a stronger and more direct indicator of economic health than indicators such as stock market performance if we're looking at real-economy conditions experienced by households and workers, especially when it comes to labor markets. Equity markets are limited in their reflection of valuations and global corporate dynamics, while small businesses more closely capture local economies in both short and long run in the United States. As more real-time entrepreneurial data become available, small business indicators could play an increasingly important role in economic monitoring, forecasting, and policy analysis. This research is a first step in why that would be helpful, and why the GoDaddy data may serve as a good proxy for now.

Table 1 summarizes our empirical findings.

Table 1. Relationship between the Economy and Wall Street, Main Street, Small Street

Indicators	The Economic Outcome		
	GDP	Payroll Employment	Unemployment
Small Street: GoDaddy Data	Leading	Leading	Leading
Main Street: Establishment Births	Contemporaneous	Leading	Leading
Wall Street: S&P 500	Leading	Leading	Leading

Degree of Correlation	None	Weak	Medium

Note: If an indicator exhibits a leading correlation, it typically also shows a contemporaneous correlation.

The table indicates the statistical strength of the result and is not alone intended to suggest one measure is better or worse than another.

1. Introduction

Leading indicators of economic activity are extremely valuable. Early signals about the trajectory of the U.S. economy support better decision-making and contribute to a more transparent information environment. In this report, we investigate several potential leading indicators of economic activity by connecting the economy with Wall Street (stock market returns), Main Street (small business indicators, i.e., establishment births), and Small Street (GoDaddy's indicators on local small business and entrepreneurial activity). Using U.S. data from 1990 to 2025, together with GoDaddy's real-time measures of entrepreneurial activity (available from 2020 onward), we examine how stock markets relate to macroeconomic aggregates and assess whether small business activity serves as a leading or coincident indicator of economic conditions.

This inquiry is particularly relevant in the current environment, where equity markets have performed strongly in recent years while perceptions of economic well-being among middle- and working-class households remain subdued. This divergence has fueled concerns about a K-shaped economy, in which asset-price gains accrue disproportionately to higher-income groups, potentially weakening the connection between Wall Street indicators and everyday economic experience.

The relationship between financial markets and the real economy has long been a central question in economics and finance. While equity markets are often viewed as disconnected from short-run economic fluctuations, over a medium-term horizon—potentially as early as two years ahead—they are frequently considered leading indicators of economic activity (Fama, 1990). Nevertheless, the magnitude, transmission channels, and limits of this linkage remain debated. In theory, equity valuations reflect the discounted value of firms' expected future cash flows and should therefore embed information about future economic plans. Although early studies documented strong links between stock prices and subsequent output, employment, and investment, more recent evidence suggests that both the strength and nature of this relationship have evolved over time. Our analysis confirms that real stock market returns are statistically significant predictors of economic activity, but their predictive magnitude is relatively weak. We also provide a brief review of the related literature.

By contrast, small business activity is often viewed as a more direct signal of real economic conditions. Performance in the small business sector can represent the early stages of broader economic expansion, as it is frequently a source of innovation and experimentation (Glaeser, Kerr, and Ponzetto, 2010). These forces may drive subsequent aggregate growth or respond endogenously to it. We identify a simple national Main Street measure of small business activity—establishment births—and find evidence of both short-term dynamic relationships and long-run equilibrium links with macroeconomic variables. In addition, we show that GoDaddy's Small Street indicators provide a unique and timely snapshot of entrepreneurial activity. Comparing these measures with traditional small business indicators, we find that these small business indicators contain distinct information and offer evidence of a leading relationship for near-term economic fluctuations.

Our analysis yields four main findings. First, stock market returns are statistically related to real economic activity, but the magnitudes are weak. Equity returns do add explanatory power to macroeconomic forecasting models beyond standard autoregressive dynamics. Second, establishment births are more tightly linked to macroeconomic dynamics than stock market returns, exhibiting strong contemporaneous relationships with GDP growth and modest leading-indicator properties for employment growth and unemployment. Third, GoDaddy's measures of entrepreneurship offer a novel and timely window into local small business dynamics across the country, particularly business

formation, revealing a close relationship between Small Street and Main Street indicators. Fourth, GoDaddy's digital small business metrics exhibit stronger predictive power for the business cycle. Taken together, these results suggest that financial markets, macroeconomic activity, and local entrepreneurship are interconnected, but with varying degrees of influence.

2. Data and Empirical Framework

National Long-Term Time Series Data from 1990 to 2025

For analyzing the dynamic relationship between Wall Street, Main Street, and the economy, we use quarterly U.S. data from 1990 to 2025, including real S&P 500 returns[3], real GDP growth, payroll employment growth, personal consumption expenditures (PCE) growth, the unemployment rate, and the establishment births[4] as shown in Figure 1. We estimate distributed-lag models in which current and lagged stock market returns and establishment births enter alongside autoregressive terms of each macroeconomic variable. This framework allows us to quantify both contemporaneous and lead-lag relationships between asset markets, small business activity and real activity, consistent with the horizon-based logic emphasized in literature.

Figure 1. Stock Returns and Macroeconomic Series Growth

Sources: BEA, BLS, and Yahoo Finance

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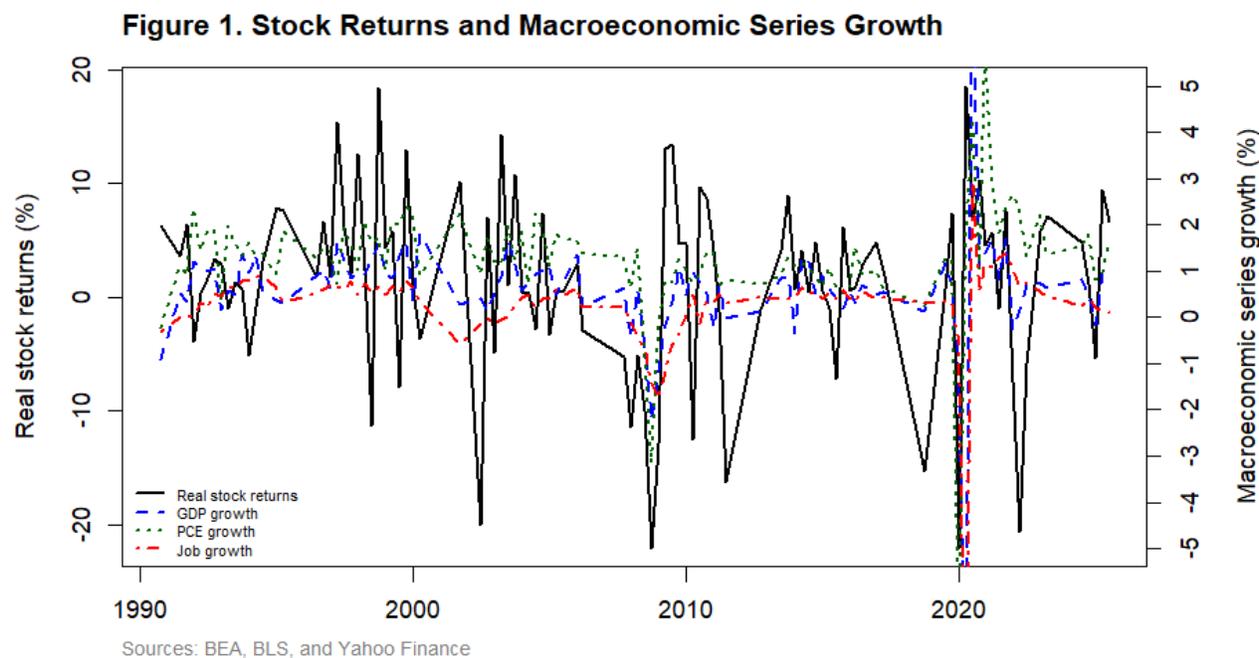
[3] Real stock market returns are computed as the average of daily log returns on the S&P 500 index within each quarter, adjusted for consumer price index (CPI) inflation.

[4] An establishment is defined as an economic unit that produces goods or services, usually at a single physical location, and engages in one or predominantly one activity. The data is from quarterly Business Employment Dynamics (BED). For details, see
https://www.bls.gov/news.release/cewbd.tn.htm

Nationwide ZIP Code Data in 2022 and 2023

To analyze the relationship between Main Street and Small Street across the country, we first assess whether GoDaddy's small business data capture meaningful small business activity across the United States. If validated, GoDaddy data can serve as a timely proxy for local small business dynamics, particularly given that official local small business statistics from the Census are typically released with a lag of up to three years. To examine the cross-sectional relationship between Small Street activity and Main Street economic outcomes at a granular local level, we use ZIP-code-level GoDaddy data on the number of ventures and entrepreneurs in 2022 and 2023, combined with Census ZIP Code Business Patterns data on establishments and employment.

50 State Panel Time Series Data from 2020 to 2024

To further examine the dynamic relationship between the economy and Small Street over the business cycle, we use quarterly data for all 50 states from 2020 to 2024, including real GDP growth, the unemployment rate, and GoDaddy measures such as the participation index[5] and the number of ventures and entrepreneurs at the state level. We use state level data since a key challenge is that we only have GoDaddy data available from 2020. Trying to determine whether an indicator correlates well with economic cycles requires more history. More history implies more economic cycles can be used to test how well the indicator moves with those cycles. Our data period also includes the Covid-19 pandemic and so requires further caution.
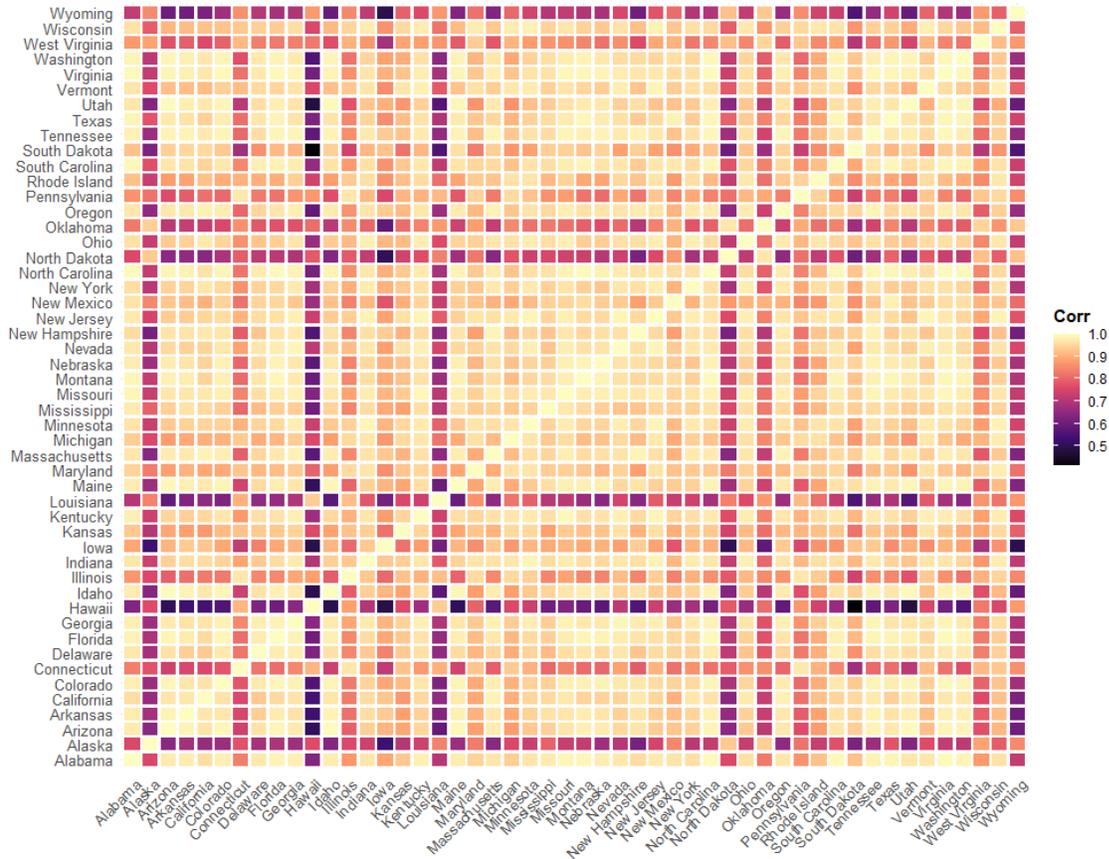
We attempt to solve this challenge by looking at state economic cycles. There are 50 U.S. states for which we have data. If each state moved independently this would give us 50 separate economic cycles with which to test how well GoDaddy predicts these cycles. Of course the states themselves have correlated economic cycles. Therefore, we must first compare these cycles to determine if we have sufficient variation to deliver meaningful results.

Figure 2 shows a heatmap of pairwise correlation coefficients. Correlation coefficients vary from -1 to 1, with 1 indicating perfect correlation, -1 indicating perfect negative correlation, and 0 indicating no correlation at all. Generally, a correlation of 0-0.3 is considered a low (positive) correlation, between 0.3-0.5 is considered a moderate to low correlation, 0.5-0.7 is considered a moderate correlation and higher is considered a strong correlation.

Figure 2 indicates a mixed picture. Many states have high correlations. However, there are clearly states with very decoupled economic fluctuations (for example North Dakota, Louisiana and Hawaii among others have low correlations with most other states). Overall, only 10 state-by-state pairs have a low-med correlation (between 0.3-0.5) out of 1225 total pairs i.e. less than 1%. While 200 have moderate correlations, or around 16%. We therefore view that some caution is needed by interpreting our evidence since there is not enormous variation across states over the period in question. A longer time-series of GoDaddy's data would help generate more robust conclusions. Nevertheless, it does appear that there are some separate economic cycles, and thus we attempt to examine how well GoDaddy's economic data precedes these cycles.

Figure 2. Correlations across US States, 2020-25

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[5] The participation index is constructed as a weighted measure based on the density and growth rates of GoDaddy ventures (number of websites) and entrepreneurs (number of website owners). For more details, see https://www.anderson.ucla.edu/about/centers/ucla-anderson-forecast/projects-and-partnerships/godaddy

We estimate distributed-lag models in which current and lagged GoDaddy small business indicators enter alongside autoregressive terms for each state-level macroeconomic variable.

3. Wall Street and the Economy: Time Series Evidence

Stock Returns and GDP Growth

Our first result using the dynamic linear regression model (Model 1) shows that stock market returns are positively related to GDP growth, but with weak magnitude. Over 1990–2025, a 1% increase in real quarterly S&P 500 returns is associated with approximately 0.08% higher GDP growth, distributed across contemporaneous and lagged quarters. Those statistically significant lag stock return predictors (lag 1 and lag 3) imply that real stock returns are a leading indicator for future GDP growth. Importantly, adding stock market returns to a pure GDP autoregressive model raises the R^2 from 0.03 to 0.27 (+0.24), adjusted R^2 from 0 to 0.20 (+0.20), indicating that equity returns contain information about future economic activity not captured by past GDP alone. This finding echoes the literature's conclusion that stock prices embed expectations about future real outputs, though the magnitude is smaller in recent decades.

Note that it may appear counterintuitive that the autoregressive GDP growth model yields a low R^2 of 0.03 (and an adjusted R^2 near zero). This result is driven largely by the extreme pandemic-related contraction in 2020Q2 followed by the sharp rebound in 2020Q3, which distorts short-term dynamics and

weakens the model's apparent predictive power. Importantly, this distortion affects all specifications in a similar way and does not materially alter our main empirical findings or conclusions.

Statistical significance reflects the precision of an estimated effect and whether it can be distinguished from zero given the data and sample size, whereas economic significance evaluates whether the magnitude of the estimated effect is large enough to have meaningful practical or policy implications. Statistical significance is assessed using two-tailed t-tests; coefficients with $|\,t\,value\,| \geq 2.63$, 2, and 1.66 are considered significant at the 1%, 5%, and 10% levels, respectively. The coefficients of 0.08 and 0.03 on stock market returns in Model 1 illustrate this distinction: while the estimate is statistically significant, its relatively small magnitude suggests limited economic significance.

Model 1: Correlation between GDP growth and real stock return from 1990 to 2025

R-squared: 0.27; Observations: 101; t-stats in parentheses are robust adjusted by Newey-West standard errors where *** denotes statistically significant at 1%, ** denotes statistically significant at 5%, * denotes statistically significant at 10%

GDP growth (t) = 0.77 + 0.08 * Stock return (t) + 0.03 * Stock return (t-1) + 0.02 * Stock return (t-2) + 0.03 * Stock return (t-3) + 0.04 * Stock return (t-4)
(t-value)   (3.9)*** (3.1)***   (2.3)**   (1.4)   (2.3)**   (1.2)

- 0.32 * GDP growth (t-1) - 0.17 * GDP growth (t-2) - 0.08 * GDP growth (t-3) - 0.04 * GDP growth (t-4)
  (-2.3)**   (-1.5)   (-0.8)   (-0.4)

Stock Returns and Payroll Employment Growth

The relationship between stock returns and payroll employment growth is weaker compared to GDP growth but still statistically meaningful (Model 3). A 1% increase in real stock returns is associated with about 0.04% payroll job growth, again with effects spread over multiple quarters. The inclusion of stock returns raises the R^2 of the job growth model from 0.02 to nearly 0.19 (+0.17). As a comparison, we switch the predictor here from stock returns to GDP growth using the same model setting. We can see GDP growth is the dominant driver of employment: a 1% increase in GDP is associated with roughly 0.82% growth in payroll employment and the model R^2 increased to 0.86 (+0.84). This contrast highlights an important asymmetry. While equity markets provide signals about future labor market conditions, real output growth remains far more consequential for job creation.

Model 3: Correlation between Payroll job growth and real stock return from 1990 to 2025

R-squared: 0.19; Observations: 101; t-stats in parentheses are robust adjusted by Newey-West standard errors where *** denotes statistically significant at 1%, ** denotes statistically significant at 5%, * denotes statistically significant at 10%

Job growth (t) = 0.1 + 0.04 * Stock return (t) + 0.03 * Stock return (t-1) + 0.01 * Stock return (t-2) + 0.01 * Stock return (t-3) + 0.04 * Stock return (t-4)
(t-value)   (0.9) (2.4)**   (3.9)***   (0.8)   (2)**   (1.5)

- 0.07 * Job growth (t-1) + 0.07 * Job growth (t-2) + 0.02 * Job growth (t-3) + 0 * Job growth (t-4)
  (-0.8)   (1.1)   (0.3)   (0.1)

Stock Returns and Unemployment Rates

Finally, stock market returns are negatively related to unemployment. A 1% increase in real stock returns is associated with roughly a 0.03 percentage-point decline in the unemployment rate, after controlling for high persistence in unemployment itself (R^2 is 0.67). The inclusion of stock returns raises the R^2 of the unemployment rate model from 0.67 to 0.72 (+0.05). This weak magnitude is consistent with broader concerns that recent stock market gains may reflect financial and valuation dynamics more than improvements in broad-based labor market or household economic conditions.

Model 4: Correlation between unemployment rate (Urate) and real stock return from 1990 to 2025

R-squared: 0.72; Observations: 101; t-stats in parentheses are robust adjusted by Newey-West standard errors where *** denotes statistically significant at 1%, ** denotes statistically significant at 5%, * denotes statistically significant at 10%

Urate (t)	=	1	-	0.03	*	Stock return (t)	-	0.02	*	Stock return (t-1)	-	0.01	*	Stock return (t-2)	-	0.01	*	Stock return (t-3)	-	0.01	*	Stock return (t-4)
(t-value)		(1.4)		(-2)*				(-3)***				(-0.5)				(-1)				(1.9)*		
			+	0.67	*	Urate (t-1)	+	0.08	*	Urate (t-2)	+	0.06	*	Urate (t-3)	+	0.03	*	Urate (t-4)				
				(5.7)***				(1.5)				(1.5)				(0.5)						

4. Main Street and the Economy: Time Series Evidence

Establishment Births and GDP Growth

We apply the same dynamic linear regression framework (Model 5) to examine whether Main Street indicators serve as leading and/or contemporaneous indicators for GDP growth. Direct long-run small business measures are scarce; therefore, we use quarterly total establishment births as a proxy for small business activity. The justification is that the number of total establishments is highly correlated (correlation coefficients exceeding 0.96) with the number of small establishments employing fewer than 50 workers (See discussion in Table 1 of Section 5) – i.e. most new businesses are small businesses.

Over the 1993–2025 period, a 1% increase in establishment growth is associated with approximately a 0.18% increase in contemporaneous GDP growth (higher than 0.08% in Model 1), though no significant effects are observed in lagged quarters. While this small business measure does not function as a strong or statistically significant leading indicator, the model's R^2 reaches 0.46—substantially higher than the 0.27 obtained in Model 1 using stock market returns. The inclusion of nationwide establishment births raises the R^2 of the GDP growth model from 0.03 to 0.46 (+0.43) and adjusted R^2 from 0 to 0.39 (+0.39). This finding suggests that small business activity is more tightly linked to macroeconomy dynamics than Wall Street performance.

Model 5: Correlation between GDP growth and establishment births from 1993 to 2025

R-squared: 0.46; Observations: 88; t-stats in parentheses are robust adjusted by Newey-West standard errors where *** denotes statistically significant at 1%, ** denotes statistically significant at 5%, * denotes statistically significant at 10%

GDP growth (t)	=	0.52	+	0.18	*	Est. birth (t)	-	0.03	*	Est. birth (t-1)	+	0.02	*	Est. birth (t-2)	+	0.02	*	Est. birth (t-3)	-	0.02	*	Est. birth (t-4)
(t-value)		(2.2)**		(2.6)**				(-0.9)				(0.7)				(0.7)				(-0.6)		
			+	0	*	GDP growth (t-1)	-	0.09	*	GDP growth (t-2)	-	0.05	*	GDP growth (t-3)	+	0.15	*	GDP growth (t-4)				
				(-0.0)				(-1.0)				(-0.5)				(1.5)						

Establishment Births and Payroll Employment Growth

Model 7 shows that the relationship between establishment births and payroll employment growth is substantially stronger than that observed for stock market performance in Model 3. Incorporating this small business variable increases the job growth model's R^2 from 0.02 to nearly 0.45 (+0.43), well above Model 3's R^2 of 0.19. A 1% increase in establishment births growth is associated with approximately 0.16% payroll employment growth, with marginally significant predictive power at a three-quarter lag (coefficient of about 0.03%). This result suggests that establishment births serve as a leading indicator of job growth with a horizon of roughly three quarters.

Model 7: Correlation between Payroll job growth and establishment births from 1993 to 2025

R-squared: 0.45; Observations: 88; t-stats in parentheses are robust adjusted by Newey-West standard errors where *** denotes statistically significant at 1%, ** denotes statistically significant at 5%, * denotes statistically significant at 10%

$$
\begin{aligned}
\text{Job growth (t)} = \ &0.04 + 0.16 * \text{Est. birth (t)} + 0.02 * \text{Est. birth (t-1)} + 0 * \text{Est. birth (t-2)} + 0.03 * \text{Est. birth (t-3)} + 0.01 * \text{Est. birth (t-4)} \\
& \text{(0.3)} \quad \text{(2.1)**} \qquad\qquad\qquad\; \text{(0.5)} \qquad\qquad\qquad\quad \text{(0.1)} \qquad\qquad\qquad \text{(1.9)*} \qquad\qquad\qquad \text{(0.5)} \\
& + 0.13 * \text{Job growth (t-1)} + 0.1 * \text{Job growth (t-2)} - 0.02 * \text{Job growth (t-3)} + 0.2 * \text{Job growth (t-4)} \\
& \quad\; \text{(1.0)} \qquad\qquad\qquad\quad \text{(1.4)} \qquad\qquad\qquad\; \text{(0.0)} \qquad\qquad\qquad\; \text{(2)*}
\end{aligned}
$$

(t-value)

Establishment Births and Unemployment Rate

Finally, establishment births are negatively associated with the unemployment rate. A 1% increase in establishment births growth corresponds to an approximately 0.15 percentage-point decline in the unemployment rate. Including this small business variable raises the unemployment model's R² from 0.67 to 0.80 (+0.13). Beyond the higher explanatory power relative to Model 4, the estimated effect is substantially larger than that associated with stock market returns in Model 4. Moreover, consistent with the findings in Model 7, establishment births exhibit leading-indicator properties at a four-quarter lag with marginal statistical significance. Overall, small business activity exhibits stronger leading-indicator properties of labor market conditions than stock market performance.

Model 8: Correlation between unemployment rate (Urate) and establishment births from 1993 to 2025

R-squared: 0.8; Observations: 88; t-stats in parentheses are robust adjusted by Newey-West standard errors where *** denotes statistically significant at 1%, ** denotes statistically significant at 5%, * denotes statistically significant at 10%

$$
\begin{aligned}
\text{Urate (t)} = \ &0.5 - 0.15 * \text{Est. birth (t)} - 0.02 * \text{Est. birth (t-1)} - 0 * \text{Est. birth (t-2)} - 0.03 * \text{Est. birth (t-3)} - 0.04 * \text{Est. birth (t-4)} \\
& \text{(1.4)} \quad \text{(-2.3)**} \qquad\qquad\qquad \text{(-0.5)} \qquad\qquad\qquad \text{(-0.0)} \qquad\qquad\qquad \text{(-1.6)} \qquad\qquad\qquad \text{(-1.8)*} \\
& + 0.89 * \text{Urate (t-1)} - 0.04 * \text{Urate (t-2)} + 0 * \text{Urate (t-3)} + 0.08 * \text{Urate (t-4)} \\
& \quad\; \text{(8.7)***} \qquad\qquad\quad \text{(-0.5)} \qquad\qquad\qquad \text{(0.0)} \qquad\qquad\qquad \text{(1.2)}
\end{aligned}
$$

(t-value)

5. Small Street and Main Street: Evidence on Granular Local Relationship

GoDaddy Entrepreneurs and Small Establishments

Moving from aggregate outcomes to local activity, we find that GoDaddy's measures of entrepreneurship are highly correlated with small business presence, particularly establishments with fewer than 50 employees. Notably, entrepreneur counts from GoDaddy are more strongly correlated with small establishments than traditional indicators such as payroll employment. This suggests that GoDaddy's real-time data capture early-stage entrepreneurial dynamics that may not yet be reflected in official labor market statistics.

Table 2. Correlations between Numbers of Ventures and Entrepreneurs and Other Economic Indicators by ZIP Code across the U.S., March 2023

Variable	Description	nv	ns	emp	est	n5	n5_9	n10_1	n20_4	n50_9	n100	n250	n500	n1000
ns	# of shoppers from GD	0.61	1	0.14	0.79	0.84	0.76	0.73	0.69	0.58	0.45	0.22	0.08	0.03
n5	# of establishments: less than 5 employee size	0.52	0.84	0.53	0.98	1	0.94	0.92	0.9	0.85	0.77	0.6	0.47	0.43
est	Total # of establishments	0.49	0.79	0.6	1	0.98	0.98	0.97	0.96	0.92	0.84	0.67	0.54	0.5
n5_9	# of establishments: 5-9 employee size	0.46	0.76	0.52	0.98	0.94	1	0.99	0.97	0.9	0.8	0.6	0.45	0.41
n10_19	# of establishments: 10-19 employee size	0.45	0.73	0.54	0.97	0.92	0.99	1	0.98	0.92	0.83	0.62	0.48	0.43
n20_49	# of establishments: 20-49 employee size	0.43	0.69	0.61	0.96	0.9	0.97	0.98	1	0.96	0.88	0.69	0.55	0.5
nv	# of ventures from GD	1	0.61	0.1	0.49	0.52	0.46	0.45	0.43	0.38	0.31	0.16	0.07	0.04
n50_99	# of establishments: 50-99 employee size	0.38	0.58	0.73	0.92	0.85	0.9	0.92	0.96	1	0.95	0.81	0.68	0.63
n100_249	# of establishments: 100-249 employee size	0.31	0.45	0.86	0.84	0.77	0.8	0.83	0.88	0.95	1	0.92	0.83	0.79
n250_499	# of establishments: 250-499 employee size	0.16	0.22	0.97	0.67	0.6	0.6	0.62	0.69	0.81	0.92	1	0.96	0.94
emp	Total # of employees in mid March	0.1	0.14	1	0.6	0.53	0.52	0.54	0.61	0.73	0.86	0.97	0.99	0.99
n500_999	# of establishments: 500-999 employee size	0.07	0.08	0.99	0.54	0.47	0.45	0.48	0.55	0.68	0.83	0.96	1	0.99
n1000	# of establishments: 1000 or more employee size	0.04	0.03	0.99	0.5	0.43	0.41	0.43	0.5	0.63	0.79	0.94	0.99	1

Sources: Census ZIP code Business Patterns in 2023, GoDaddy data in March 2023

Table 2 reports correlations between GoDaddy's enterprise metrics—number of ventures (websites, denoted *nv*) and number of entrepreneurs (shoppers, website owners, denoted *ns*)—and Census small business data at the ZIP-code level in March 2023. The latest available Census data indicate that *emp* represents total payroll employment in each ZIP code. Focusing on the highlighted results, the correlation between payroll employment (*emp*) and very small establishments (*n5*, fewer than five employees) is 0.53, while GoDaddy's entrepreneur measure (*ns*) exhibits a substantially higher correlation of 0.84 with *n5*.

A similar pattern holds across other small firm size categories. The correlation between *emp* and total establishments (*est*) is 0.60, compared with 0.79 between *ns* and *est*. For establishments with 5–9 employees (*n5_9*), the correlations are 0.52 for *emp* and 0.76 for *ns*. For firms with 10–19 employees (*n10_19*), the corresponding correlations are 0.54 and 0.73, respectively. For establishments with 20–49 employees (*n20_49*), payroll employment shows a correlation of 0.61, while GoDaddy's entrepreneur measure remains slightly higher at 0.69. Beyond this size range, payroll employment becomes more strongly correlated than GoDaddy's entrepreneur counts with medium- and large-sized businesses.

In addition, as mentioned in Section 4, we can see that the number of total establishments (*est*) is highly correlated with number of small establishments with smaller than 50 employees. Its correlation ranges from 0.98 for *n5* (fewer than five employees) to 0.96 for *n20_49*. Meanwhile, *ns* is also highly correlated with *est*, with a correlation coefficient of 0.79.

In summary, GoDaddy's entrepreneur measure provides a timely, real-time barometer of local entrepreneurial and small business activity, whereas Census small business statistics typically become available with a lag of up to three years.

Contemporaneous Correlation between Small Street and Main Street Indicators

Using data from approximately 35,000 ZIP codes over the 2022–2023 period[6], we estimate simple growth regressions to examine the contemporaneous relationship between Small Street dynamics and

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[6] Because the COVID-19 pandemic caused substantial disruptions, measures of small business activity and macroeconomic performance may be distorted; therefore, we focus on the post-COVID sample period.

Main Street outcomes. Small Street activity is proxied by changes in the number of GoDaddy ventures (*nv2223*) and entrepreneurs (*ns2223*), measured as the increase in websites and website owners, respectively, from 2022 to 2023. Main Street growth is captured by changes in total payroll employment (*emp2223*) and in the number of establishments (*est2223*) over the same period, as reported in Models 9 and 10.

We find that the addition of one GoDaddy entrepreneur is associated with approximately 2.9 additional local payroll jobs and 0.3 additional establishments. In contrast, the correlations between the number of ventures and Main Street indicators are substantially smaller. Although the R² values are weak—as is typical in cross-sectional analyses at the local level—the estimated coefficients are highly statistically significant, indicating a robust association between digital entrepreneurship and local employment and establishment growth.

Model 9: Correlation between GoDaddy's venture and entrepreneur increases and payroll job increase from 2022 to 2023

R-squared: 0.01; Observations: 35,001

$$emp2223 = 114 + 0.04 * nv2223 + 2.9 * ns2223$$
$$(t\text{-}value) \quad (20.7)*** \quad (11.3)** \quad\quad (7.9)***$$

Model 10: Correlation between GoDaddy's venture and entrepreneur increases and payroll job increase from 2022 to 2023

R-squared: 0.15; Observations: 35,001

$$est2223 = 153 + 0 * nv2223 + 0.3 * ns2223$$
$$(t\text{-}value) \quad (24.6)*** \quad (4.6)** \quad\quad (77.9)***$$

Further analysis shows that GoDaddy's entrepreneur measures are most strongly associated with very small firms (fewer than 50 employees), with weaker—and in some cases negative—associations for larger establishments. This pattern reinforces the interpretation that GoDaddy data primarily capture Small Street activity rather than broader corporate dynamics.

6. Small Street and the Economy: Evidence on State Business Cycle Dynamics

In this section, we examine whether Small Street activity can provide a useful leading indicator of economic performance within a short-run business cycle. For example, if small businesses represent a melting pot of ideas and innovation, they could be responsible for generating upswings in economic activity that turn into larger expansions in the wider economy. Similarly, if several small businesses take off and mature into larger businesses, creating synergies along the way this could create momentum that leads to stronger economic performance. Similarly, the converse could be true that weak small business activity creates a gap in the economy that snowballs into a larger economic downturn. We test some of these hypotheses here finding that generally these indicators provide some, albeit limited, additional information about future outcomes in the broader economy. However, we caution that our tests lack statistical power and a longer time-series is needed to reach firmer conclusions.

We wish to test the following statistical hypothesis to understand whether small business activity can serve as a useful leading indicator: Does adding contemporaneous and lagged values of our small business measures improve prediction of near-term GDP growth, relative to a model that uses simple lags?

To establish a baseline model, we first present a model using several lagged periods of GDP growth to explain current GDP growth. As explained in Footnote 3, even past GDP growth struggles to explain current GDP growth due to the extreme GDP growth in 2020 Q2 and Q3 of Covid period. The R^2 is relatively low at 0.08 (note adjusted R^2 is 0.01).[7]

Model 11: State GDP growth from 2020 to 2024, 50 States Fixed Effect Model
R-squared: 0.08; Observations: 720

GDP growth (t) =   - 0.10 * GDP growth (t-1) + 0.04 * GDP growth (t-2) - 0.07 * GDP growth (t-3) - 0.03 * GDP growth (t-4)
(t-value)   *(-1.2)*   *(0.4)*   *(-0.9)*   *(-0.4)*

Next adding each state's participation index from 2020 to 2024, as shown in Model 12, we find a marginal correlation between the two variables, with the participation index exhibiting an approximately three/four-quarter leading relationship. The inclusion of the participation index raises the R^2 of the GDP growth model from 0.08 to 0.13 (+0.05). Overall, the participation index adds additional information, albeit weak, to predict the economic cycle.

Model 12: Correlation between the State Participation Index and GDP growth from 2020 to 2024, 50 States Fixed Effect Model
R-squared: 0.13; Observations: 710

GDP growth (t) =   + 0.14 * Participat. idx (t) + 0.01 * Participat. idx (t-1) - 0.13 * Participat. idx (t-2) + 0.52 * Participat. idx (t-3) + 0.27 * Participat. idx (t-4)
(t-value)   *(1.7)*   *(0.1)*   *(-0.8)*   *(4.5)* ***   *(2.0)* +

                         - 0.07 * GDP growth (t-1) + 0.07 * GDP growth (t-2) - 0.09 * GDP growth (t-3) - 0.05 * GDP growth (t-4)
                         (-1.0)   *(0.8)*   *(-1.2)*   *(-0.6)*

The numbers of ventures and entrepreneurs do not add much to the participation index. The index performs slightly better as a leading indicator for GDP growth than these other small business indicators. We conduct a similar analysis using job growth data in Model 13 and unemployment rates in Model 14. Generally, employment fluctuations are more predictable. We use year-over-year job growth to avoid issues with seasonality as job growth is very seasonal. Overall, the small business indicators are weaker as leading indicators for job growth than was the case for GDP growth. This is partly because past employment growth is already reasonably successful in explaining current employment growth. Adding the participation index takes the R^2 from 0.88 to 0.89 (adjusted R^2 moves from 0.86 to 0.87). The same is true for unemployment rates which are more well behaved than GDP growth rates and therefore explained well by their lagged values. Nevertheless, the participation index does provide some additional explanatory power.

Model 13: Correlation between the state Participation Index and Job growth from 2020 to 2024, 50 States Fixed Effect Model
R-squared: 0.89; Observations: 566

Job growth (t) =   0.01 * Participat. idx (t) + 0.02 * Participat. idx (t-1) - 0 * Participat. idx (t-2) - 0.07 * Participat. idx (t-3) + 0.09 * Participat. idx (t-4)
(SEs)   *(0)*   *(0)*   *(0)*   *(0)*   *(0)***

                         + 0.54 * Job growth (t-1) + 0.17 * Job growth (t-2) - 0.01 * Job growth (t-3) - 0.16 * Job growth (t-4)
                         *(0.09)****   *(0.1)*   *(0.1)*   *(0.1)**

Note: for all variables y/y growth is used as is more common for job growth.

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[7] Note that dynamic panel models can be subject to bias if effects are fixed and not random (i.e. correlated with error terms) and in such cases it is typical to use the Arellano-Bond estimator. We do not expect this to be the case here for state level regressions but test the AB estimator anyway and find no difference in our conclusions.

Model 14: Correlation between the state Participation Index and Unemployment rates from 2020 to 2024, 50 States Fixed Effect Model

R-squared: 0.87; Observations: 566

Urate (t) = - 0.08 * Participat. idx (t) - 0.11 * Participat. idx (t-1) - 0.13 * Participat. idx (t-2) - 0.3 * Participat. idx (t-3) + 0.03 * Participat. idx (t-4)

(SEs) (0.07) (0.03)* (0.04)** (0.08)** (0.09)

+ 0.34 * Urate (t-1) + 0.26 * Urate (t-2) - 0.33 * Urate (t-3) - 0.2 * Urate (t-4)

(0.09)** (0.09)** (0.07)*** (0.04)***

7. Main Street and the Economy: Evidence on Long-term Trend Relationship

Table 2 shows that the contemporaneous correlation between small business establishments and total employment at the ZIP code level is moderate. It is worth noting that existing literature suggests that the long-run relationship between small business and the real economic activity may be substantially stronger than short-run correlations imply. Glaeser, Kerr, and Ponzetto (2010) show that U.S. metropolitan areas characterized by smaller average establishment size and higher startup intensity subsequently experience faster employment growth, indicating that a vibrant entrepreneurial environment serves as a leading indicator of long-run local economic expansion.

In Sections 4 and 6, we analyze growth rates of small business and economic variables to ensure stationarity, focusing on short-term lead–lag dynamic and business-cycle relationships over horizons of several quarters. For example, Models 5 through 8 show that the small business indicator exhibits a strong contemporaneous relationship but a relatively modest leading-indicator effect. A limitation of this approach, however, is that differencing may remove information about potential stochastic long-run equilibrium relationships.

To address this issue, we apply the Johansen trace test to examine whether the log level of establishment births (*lbirths*) is cointegrated with the log levels of real GDP (*lgdp*) and payroll employment (*lemp*), as illustrated in Figure 3. The results indicate a statistically significant long-run relationship. The estimated coefficient near one suggests a proportional long-run association between establishment births and real GDP, implying that sustained growth in new business formation moves in tandem with sustained GDP growth. The estimated coefficient for payroll employment (approximately 0.47) is positive but well below one, indicating that employment grows more slowly than establishment births in proportional terms over the long run. Note that this estimate remains substantially larger than the corresponding short-run effect identified in Model 7. Overall, this simple cointegration analysis supports the existing literature, pointing to a meaningful and persistent long-term equilibrium relationship between Small Street activity and the broader economy.

lgdp ≈ 0.93*lbirths + 4.95; lemp ≈ 0.47*lbirths + 9.31

Figure 3. Log GDP, Payroll Employment, and Establishment Births
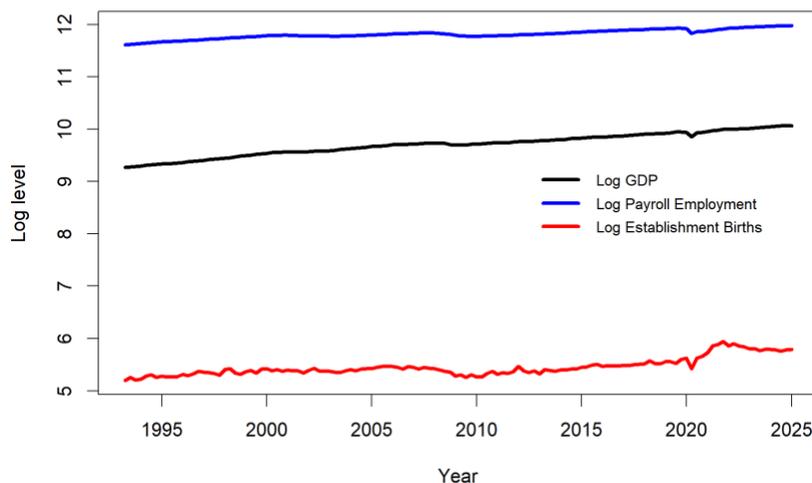
8. Literature Review: Stock Returns and Real Activity

A large literature examines the relationship between stock prices and real economic activity. A foundational contribution is Fama (1990), who shows that stock returns—particularly at longer horizons—are closely related to medium-term, future real activity such as industrial production and output growth. Fama interprets this relationship as evidence that equity prices embed information about expected future cash flows and discount rates.

The exact point at which the stock market becomes a meaningful leading indicator however is a challenge. Current stock market performance can be an indicator of near-term economic performance, however the opposite is often also true. Therefore at shorter intervals stock market performance can be an extremely noisy indicator of economic activity. Many examples exist of strong/weak stock market performance being accompanied by weak/strong economic performance, these two also frequently converge.

While the early literature documents a strong stock market–real economy linkage, research since 2010 paints a more nuanced picture. Several strands of recent work emphasize that rising corporate profits and equity valuations have not translated proportionally into domestic real investment, and that financial markets may have become more disconnected from traditional measures of Main Street activity.

One important line of research studies the real effects of corporate payout policies. Almeida, Fos, and Kronlund (2016) provide quasi-experimental evidence that share repurchases motivated by short-term earnings targets are associated with lower real investment and employment. Their findings suggest that, at least in some cases, stock-market-oriented financial decisions may come at the expense of real economic activity. Complementing this micro-level evidence, Gutiérrez and Philippon (2017) document a broader macro pattern of "investmentless growth" in the United States. Despite high profitability and elevated equity valuations, private fixed investment has remained weak relative to historical benchmarks. They argue that changes in market structure, competition, and corporate governance may help explain why profits increasingly flow to payouts rather than capital expenditure.

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A second strand of the post-2010 literature focuses on globalization and multinational firms. Studies examining large liquidity shocks—such as changes in U.S. international tax policy—find limited evidence that increased corporate cash translates into higher domestic investment. For example, Dharmapala, Foley, and Forbes (2011) show that repatriated foreign earnings primarily financed share repurchases rather than domestic capital investment. More recently, Albertus, Glover, and Levine (2025) study the Tax Cuts and Jobs Act and find that unlocking foreign cash holdings did not lead to significant increases in investment, employment, or R&D, either domestically or abroad. These results reinforce the view that globalization and financial integration may weaken the traditional link between U.S. equity prices and U.S. real investment.

A third strand revisits the predictive relationship between financial markets and real activity in the modern era. Research on financial conditions indices and asset-price predictors shows that equity prices continue to contain information about future output and employment, but that the relationship is unstable over time and sensitive to the business cycle. Gilchrist and Zakrajšek (2012), for example, demonstrate that financial risk premia embedded in asset prices forecast economic downturns, highlighting the role of financial markets as amplifiers of real shocks rather than simple mirrors of current activity.

Taken together, the post-2010 literature suggests that stock markets remain informative about future economic conditions, albeit at more medium-term horizons, but the transmission from Wall Street to the real economy has weakened and become more indirect. Profits, valuations, and stock prices increasingly reflect global earnings, financial policies, and discount-rate movements, rather than domestic capital formation alone. This evolving relationship motivates our empirical re-examination using updated data and our extension of the analysis to small business activity.

9. Conclusion and Implications

This report triangulates the relationship between the real economy, the stock market, and new measures of small business activity using modern data. We find that equity returns remain informative about future economic conditions, but their influence on real outcomes is limited. These results align with recent literature showing that stock prices increasingly reflect discount rates, payout policies, and global earnings rather than domestic capital formation. These findings help contextualize recent public perceptions of economic divergence: despite strong financial market performance, the transmission to broad-based economic outcomes appears weak, reinforcing concerns about a disconnect between Wall Street and everyday economic conditions.

By contrast, small business activity—proxied by establishment births—exhibits a tighter connection to the real economy, particularly labor market dynamics. Establishment births growth is associated with contemporaneous GDP growth and substantially improves model fit relative to stock market indicators, while also serving as a modest leading indicator of payroll employment and unemployment over horizons of three to four quarters. We also present preliminary evidence suggesting that the relationship between establishment births and the economic variables is stronger in the long run than short-run analyses alone can capture.

By incorporating GoDaddy's small business data, we extend the analysis beyond traditional Main Street aggregates and provide new insights into Small Street dynamics at the local and state levels, potentially years before they appear in official statistics. While our empirical results primarily capture

short-run and contemporaneous relationships, small business indicators offer relatively strong leading information about near future economic performance.

Taken together, the findings suggest that small business activity offers a more direct and economically meaningful lens on real economic health than financial markets alone. As additional years of GoDaddy and related data become available, future work will examine longer-horizon relationships, including whether regions with stronger entrepreneurial ecosystems today experience persistently higher growth in employment, output, and business scale over time.

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