Buying Private Benefits: Evidence from the Location of Private Company Sales*

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Abstract

We identify a price premium for firms based in preferable U.S. geographic locations using a large proprietary database of private company transactions. The 16% premium is robust to controls for local economic characteristics, industry concentration, and the liquidity and availability of capital in the local transaction market. We introduce a new measure based on how noneconomic characteristics of a city affect its desirability and find that firms located in cities with higher values of our measure sell for a significant price premium. Further, the premium is not significant when the buyer is a publicly traded company that fails to derive benefits from a preferable location. We also provide additional evidence that local economic prospects are not the sole driver of an entrepreneur's location preference.

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The market for private equity is an important piece of the U.S. economy, comparable in size to the public equity market, but its pricing is not well understood by the finance literature. A lack of data limits research on the determinants of private company valuations. While we may expect investors to value private companies in a similar fashion to public companies, we find that there are characteristics of private companies that may be relevant for certain buyers of private companies but not relevant for the valuation of public companies.

Public policy decision makers are interested in fostering entrepreneurship and attracting new businesses to local communities as entrepreneurs are the primary drivers of job growth in the economy (Haltiwanger, Jarmin, and Miranda, 2013). However, little is known about what aspects of an area make it attractive to entrepreneurs, especially for entrepreneurs outside of industries traditionally funded by venture capital (*i.e.* technology). Being able to quantify how important these aspects are to entrepreneurs would allow policy makers to evaluate projects meant to attract and retain entrepreneurs.

This paper is at the intersection of these two gaps in the literature. Our tests shows that entrepreneurs reveal their preferences for desirable geographic regions through the prices they pay for private firms and we quantify how much entrepreneurs value this desirability. Unlike a public firm, the largest shareholder of a private firm is often the firm's CEO. This makes the location's desirability, even the portion unrelated to the cash flows and risks of the firm, important to at least one of the shareholders of the private firm. In a competitive environment, the entrepreneur pays a premium for a firm in a desirable location and this premium represents the value that the entrepreneur places on desirability.

To perform our analysis we introduce a large database of private transactions that contains transaction prices and historical company financials, and use local economic and noneconomic characteristics as controls. Although researchers frequently use past financial performance in studies of public companies, to our knowledge, our paper is one of the first studies to use transaction prices, firm financials, and local economic and noneconomic characteristics to assess a large database of private firm transactions. Using this data, we test if entrepreneurs reveal

their preferences for certain locations by examining the cross-sectional variation in prices across locations. Using the inclusion of a city on a "best places" list as our initial proxy for desirability, we find that entrepreneurs pay an economically meaningful 16% premium for firms located in areas that have desirable features that are distinct from local characteristics that would directly affect firm cash flows or risks. This indicates that entrepreneurs' valuations of private firms are different from valuations of purely financial assets. Said differently, valuing a private firm by looking only at the corresponding financial returns of the investment – cash flows from the business and/or future sale of the company – would leave an incomplete picture. When valuing a private firm, entrepreneurs consider both the potential financial returns and a potential non-pecuniary private benefit related to the firm's location.

Our regression would be inconsistent if there was a correlation between our proxy for desirability and an omitted predictor of local economic growth. While we control for the past economic performance of a city, it is possible that a characteristic, observable to the entrepreneur but not to the econometrician, exists that relates desirability to growth and is omitted from our specifications. An example of this would be that the city has improving local government. We take advantage of the detailed nature of our data, along with economic controls, and examine various cross-sectional subsamples to help alleviate this concern.

We examine whether a private buyer or a public company makes the purchase. In both types of transactions, local economic growth prospects and real estate or wage differentials would similarly affect the target firm. However, we would not expect firms acquired by public companies to show a significant price premium for desirable locations because the private benefits of the location do not accrue to the public buyers in the same way as firms purchased by private buyers.[1] We find that the premium associated with desirability is significant and

[1] We would not expect public buyers, which are generally orders of magnitude larger than the private target, to relocate their CEO to the location of the private firm. Therefore, even a CEO of a firm with weak governance would not pay a premium since the CEO would not receive the private benefits.

large for private companies acquired by private buyers, but is smaller and statistically insignificant for public buyers.

We also analyze subsamples of transactions based on the size of the target firm. If an expectation of local economic growth and not desirability drives our result, then the effect should scale with size and the percent premium would be consistent across transaction sizes. However, we find that the premium associated with desirability is not significant for the largest and smallest quintile of firms in our sample, but is significant and an economically meaningful 12.9% premium for the middle quintiles of our sample. Taken as a whole, the tests on our subsamples provide further evidence that the private benefits of location conferred on the acquirer drive the premium for firms in desirable locations.

Our database explicitly controls for the value of any real estate in the transaction by removing it from the transaction price, avoiding any premium related to local real estate prices. Further, we explicitly control for median home prices and past home price growth in our regression specifications. We address concerns about wage differentials between cities by controlling for past firm financial performance. The use of past firm performance allows us to capture the effect of any wage differentials between cities because, all else equal, a firm in a lower wage area should have higher earnings, which would be reflected in past operating performance. In addition, we control for the local per capita income and per capita income growth in our regression specifications. Our result is also robust to other explanations for a desirability premium including capital accessibility and reduced monitoring costs for well-connected or wealthier regions, or a liquidity premium for desirable locations stemming from increased liquidity in the localized private firm market.

We recognize that there is likely a relationship between economic characteristics of a city and some aspects of its desirability. These economic characteristics might result in higher expected firm cash flows, which could similarly benefit the entrepreneur. We attempt to further rule out this explanation for a desirability premium by decomposing our best places variable into two orthogonal components. Our decomposition of desirability consists of an economic component

based on characteristics that could plausibly affect cash flows and a noneconomic component that are plausibly independent of cash flows. Using this decomposition, we construct a new measure of desirability to distinguish the effects of the economic characteristics of a city from the effects of the noneconomic characteristics of a city on the city's desirability. Both the economic and noneconomic components of our measure help explain the cross-sectional variation in firm prices. We find that there is a significant positive correlation between the noneconomic component of our measure and price, consistent with our previous results.

An entrepreneur trading financial return for the utility derived from locating in desirable locations is consistent with the labor literature on wages differentials across cities. Early work on this subject by Roback (1982) and Beeson and Eberts (1989) find that low wages in some cities are related to the existence of amenities that confer benefits on the local population. Addario and Patacchini (2008) and Kim, Liu, and Yezer (2009) support the existence of this wage differential stemming from variation in amenities in more recent empirical work. Our paper extends this strand of literature by showing this differential applies to the financial assets of entrepreneurs.

Researchers have found evidence that location matters for public companies as well. For example, investors prefer securities from local companies (Coval & Moskowitz 1999, 2001), there are externalities associated with firms clustering in a location (Krugman, 1991; Audretsch & Feldman, 1996), and there are geographically related investment and financing externalities (Loughran & Schultz, 2006; Dougal, Parsons, & Titman, 2014). The literature has paid less attention to how location matters for individual private companies outside of a nascent literature focusing on start-up firms and venture capital. Our paper is one of the first large scale studies on the effects of local economic and noneconomic characteristics on the pricing of private company transactions.

We also contribute to the literature related to urban effects and vibrancy. We build on the literature of Glaeser, Kolko, and Saiz (2001), Ellison and Glaeser (1997) and Ellison and Glaeser (1999) that highlight the importance of city amenities. We extend Glaeser and Mare (2001),

who find that workers in high-amenity cities are more productive, by showing that the quality of a city affects firm valuations. Consistent with Florida (2002a, 2002b), we find that noneconomic amenities of an urban area are important to entrepreneurs. Additionally, we quantify the importance of these amenities in terms of the premium an entrepreneur pays to own an equivalent firm in a desirable location.

Finally, our paper may shed light on part of the "private equity premium puzzle" identified by Moskowitz and Vissing-Jorgenson (2002). Our research shows that entrepreneurs forgo 16% higher returns in order to experience non-pecuniary benefits related to a desirable location. If these gains can act as a multiplier on other non-pecuniary benefits of entrepreneurship or provide some separation between private equity and public equity owners, then they could help explain the puzzle.

I. Data

A. Private Company Database

Our database contains over 16,000 private company transactions in the U.S. spanning 23 years from 1990 to 2013 and is provided by Business Valuation Resources, LLC. The data is collected from transaction intermediaries for private-to-private transactions and Security and Exchange Commission's (SEC) filings for private company acquisitions by public companies. Transaction intermediaries are typically members of the International Business Brokers Association. Whenever possible, the data is based on audited financial information conforming to US GAAP. Transactions are typically reported via an online form and staff members always review submitted transactions for inclusion and exclusion criteria. Staff members hand collect other data through direct contact with business intermediaries and investment bankers. The database contains the name of the source unless confidentiality is requested. Transaction intermediaries use the data to identify comparable transactions and track market-pricing trends.

The following criteria must be met to be included in the database:

- The acquired company must be private and 100% of the firm is acquired.
- The date of sale, firm entity (LLC, Corp, *etc.*), transaction type (asset vs. stock) is disclosed and the sale price is unambiguous.
- Transactions, in which most of the consideration is real estate, are excluded.

Our primary variable of interest is the price of the transaction. The database defines the price as the "total consideration paid to the seller and includes any cash, notes and/or securities that were used as a form of payment plus any interest-bearing liabilities assumed by the buyer". It excludes "(1) the real estate value and (2) any earn outs (because they have not yet been earned, and they may not be earned) and (3) the employment/consulting agreement values." We use reported financial data including Net Sales, Total Operating Expense, Gross Profit, and Assets. We also use other reported data including firm location, sale date, firm SIC code the number of days that the firm is listed prior to sale, and the existence of a post-acquisition employment agreement.

To our knowledge, we are the first paper to use the complete database. Therefore, we provide some additional details on the distribution of transactions in the database. The database includes most items commonly found on company financial statements, but some items are not well populated. For example, the database provides book equity value in only approximately half of the transactions. The database also includes other variables of interest. 36% of firms are C-corporations – other firms are a type of partnership entity (LLC, LP, GP) or sole proprietorship. While the average age of the acquired firms is 15 years, 75% of the companies are at least 6 years old. The database identifies the names of the public buyers, but private buyers and their location prior to the acquisition are not available in the database.

We include transactions starting in 1995, when the number of transactions first exceeds 120 and spans multiple industries. We include all industries except financial services. The final data set includes 16,991 transactions, which fall into 77 SIC-2 codes and 768 SIC-4 codes. From here, we categorize firms into Fama-French 48 (FF-48) and Fama-French 12 (FF-12) industry groupings. More than 65% of the transactions are in five FF-48 groups (Personal Services, Business

Services, Wholesale Trade, Retail, and Restaurants and Hotels). From discussions with industry insiders, we feel that this industry distribution is representative of the composition of private firms sold.[2] Later years have an increased number of transactions, though no year represents more than 10% of our sample. We provide a histogram of transactions per year in the Data Appendix.

Our database has wide geographic dispersion. No state represents more than 12% of our sample and the majority of states have over 50 transactions. We provide a heat map of the transactions in Figure 1. The majority of firms are located in clusters in or around major cities. The geographic dispersion provides us with a sufficient number of observations to test the effect of geographic characteristics on price while including a series of fixed effects and controls.

The size of the economic area used in the analysis is a key consideration. We distinguish geographic areas using the Office of Management and Budget definitions of urban centers known as Core Based Statistical Areas (CBSA) areas.[3] While state-level statistics may be sufficient for taxes and weather in many instances, individuals typically make lifestyle choices at the city or CBSA level. Although large CBSA's, such as Greater Los Angeles, may have high variance in livability standards, companies in unattractive areas are easily accessible by freeway from areas in which entrepreneurs choose to live. Therefore, we feel that the CBSA is the appropriate level of geographic aggregation.

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[2] Although it is difficult to determine the comprehensiveness of our sample, we believe that it is representative. We provide the following back of the envelope calculation to assess the coverage: Using the Census Bureau figure of 2.35 million US employer firms with sales over $500,000, and the fact that 70% of private firms fail within 10 years (Small Business Development Center), if 25% of the surviving firms are sold and the balance of viable firms are transferred to family, liquidated, or sold to employees, that leaves approximately 175,000 salable firms. If the average firm is sold every ten years, we would expect 17,500 transactions per year, which suggests that our sample represents 5% of the total.

[3] From the U.S. Census: "Core Based Statistical Areas (CBSAs) consist of the county or counties or equivalent entities associated with at least one core (urbanized area or urban cluster) of at least 10,000 population, plus adjacent counties having a high degree of social and economic integration with the core as measured through commuting ties with the counties associated with the core. The general concept of a CBSA is that of a core area containing a substantial population nucleus, together with adjacent communities having a high degree of economic and social integration with that core."

To match our data to geographic variables, we drop all observations in which there is no city listing. We hand match the listed city to CBSA's and drop all transactions that fall outside of a CBSA. We do this to remove any potential bias of comparing transactions occurring in rural locations from transactions in more urban/suburban locations. Finally, we truncate our sample removing the top and bottom 1% of transactions by price to remove any outliers related to data entry error, transactions that may have been misclassified in the data, and extreme transactions that may bias our results (*e.g.* selling of the company for $1). We report the summary statistics from the filtered transactions in Table I. They are qualitatively similar to those in the original sample. We also report summary statistics for the full sample in the Data Appendix.

The median firm in our sample sold for approximately $300,000. 50% of firms sold for between $120,000 and $1.60 million. Income statement and balance sheet figures are skewed. The median firm generated approximately $654,000 in net sales. 50% of firms generated between $280,000 and $2.61 million in net sales. Median operating profit is approximately $49,000, though almost 20% of the sample have negative operating profit. If we exclude firms with negative operating profit, the median operating profit rises to $74,000. 50% of firms in that range have operating profits between $31,000 and $258,000. Total assets for the 25th to 75th percentile are $67,500 to $1.14 million.

As a form of verification, we compare our database to PeerComps, another private firm transaction database provided by banks that provided SBA-approved transactions ranging from $250,000 to $5 million. We observe that firms in the two databases have similar financial characteristics, come from similar states, and are evenly distributed across years as described in the Data Appendix. We are not able to include the transactions from PeerComps in our study as firm location is only specified at the state level. One difference between the databases is in the industry distribution. This difference may be related to only firms with SBA-funding being included in the PeerComps database. We provide a comparison of the two databases in the Data Appendix.

B. Best Places

The proxy for desirability is a key variable in our analysis. We use a best places identifier as our proxy for desirability. Money magazine has published a list of "Best Place to Live" since 1987. Other publications followed Money magazine and now there are numerous sources who offer their interpretation of best places to live. Our data comes from the five most popular sources – BusinessWeek Bloomberg, Mercer World Ranking, Money Magazine, AreaVibes, and US News.[4] We identify our best places using the most recent surveys. We use the most recent surveys, as past surveys are not always available. Although this may potentially introduce a forward-looking bias, we do not feel this is the case as the surveys and rankings are persistent over the course of our sample. We check for persistence using a sample of surveys for which we have historical observations.

From these surveys, we designate the top 20 ranked large metro cities and the top 30 ranked small towns as best places. Cities outside the top 20 are not consistently identified as best places. We use the top 30 small towns, which are identified in separate surveys, due to the poor comparability across size groups and the fact that the number of smaller metropolitan areas is approximately 50% larger than the number of large cities. Combining the lists of best places and eliminating overlapping results from the various surveys results in 40 unique large cities and 58 mid-size cities and small towns that we consider best places. Our results are robust to alternate levels of inclusion, indicating that our cutoffs are not driving our results. We classify any CBSA as being a best place if a city/town classified as a best place in the surveys is within the CBSA

[4] We note that the choice of best places data is consistent across sources who share nearly identical databases (*e.g.* Census, BEA, NOAA, EPA, FBI, *etc.*) in their published methodologies. By way of example, AreaVibes methodology indicates that the following metrics determine their list of best places: amenities (including grocery stores, restaurants, bars, shopping, coffee shops, schools, parks, libraries, book stores, entertainment, public transportation and fitness facilities), education, crime, cost of living, employment, housing and weather. Other databases, which publish their methodology, use similar sources and metrics.

and within an hour's drive to the central city of the CBSA.[5] We provide a list of best place cities and best place CBSA's in the Data Appendix.

We are not able to use ordinal rankings because the surveys do not provide a full ordinal ranking of all CBSA's. While one survey ranks the top 50 places, limiting our research to the 50 most desirable places from one survey may bias our sample. We could represent non-best places based on an average ranking for CBSA's left unranked after the top 50, but this would be similar to using the dummy variable. Another issue with ordinal ranking is that smaller best places cities do not rank highly when compared directly to large metropolitan areas. Therefore, we believe using a binary variable for best place is an acceptable proxy for a city's desirability to an entrepreneur.

C. Geographic Data

We collect broad level demographic and economic characteristics from a variety of publicly available sources. We provide a detailed discussion of the sources of this data, our aggregation methods, and summary statistics in the data appendix. For variables reported at the county-level, we aggregate to the CBSA using the county to CBSA crosswalk from the National Bureau of Economic Research (NBER). We then match the transaction data to the CBSA-level statistics. To do this we hand clean the transaction database in order to maintain consistency in naming and to correct for spelling (*e.g.* San Francisco vs. San Fran vs. San Fransisco) and use the county of the city to assign each transaction to a CBSA.

[5] Driving times were checked using Google Maps and are based on the driving time from the city/town identified in the survey and the central city of the CBSA. This is only a concern for states with large geographic counties. Excluding this criterion does not materially change our results.

II. Effect of Desirability on Valuation

We investigate if a private firm, being in a desirable location, generates non-pecuniary private benefits for the CEO. If the price paid for a firm in a desirable location reflects these private benefits, then this would result in a preferable location premium.

To motivate our intuition we provide a brief description of how a preferable location premium could be an equilibrium outcome. Private company transactions are frequently 'management buy-ins' in which prospective entrepreneurs are bringing investor capital to the transaction and coming in as CEO.[6] When a new CEO acquires the firm, he/she replaces the old CEO. There is a pool of equivalent CEO's competing to become manager-owners. There are two equivalent target firms located in different areas. One firm is in an area that produces private benefits for an entrepreneur and the other does not. Incoming entrepreneurs have equivalent additive utility functions consisting of the discounted future cash flows from the firm and the private benefit derived from the firm's location. All agents are aware of the private benefits and the cash flows. In equilibrium, since new entrepreneurs are competitive, they are indifferent between choosing to work for a firm in either location; hence, their expected utilities are the same. Since the projects are equivalent, the seller in a good (bad) area discounts the price of the firm less (more) when negotiating with the buyer and captures the value of being in a more (less) desirable area. Firms in less desirable locations sell for a lower price while sellers in desirable locations capture a premium. If we view the private benefits and cash flows from the firm as an annuity stream that is being sold, we can see that sale appears expensive as the sale price is observed while the private benefits are not. Our intuition is similar to the notion of wage differentials between high amenity and low amenity cities in Roback (1982), among others. In our setup, the cross-

[6] Interviews with industry experts suggest that 60-70% of private-to-private company transactions are management buy-ins' in which prospective entrepreneurs are not only bringing investor capital to complete the transaction, but are also coming in as CEO.

sectional difference in prices is acting as a differential such that the market for private equity across cities clears in equilibrium.

A. Firm valuation

We first establish a specification for firm valuations based on historical company financials. Absent any frictions or non-pecuniary benefits, a firm sells for the present value of its expected future cash flows. If past firm financial performance is a good indicator of expected performance, we can use the firm's historical financials to establish its fair price. Any unexplained variation when we regress the firm sale price on historical financials can then be attributed to pricing error. If there is correlation between this pricing error and the location desirability variable, after controlling for potential other omitted variables related to location that would affect either cash flows or discount rates (such as growth, availability of capital, liquidity, *etc.*), then this would indicate that there exists a premium for desirable locations.

To get comparability across firms, we scale the transaction price of the firm by an accounting variable. We use the Price-to-Sales multiple, as the dependent variable, to assess the relative differences in premium of the acquired firms. The Price-to-Sales multiple is one of the most common valuation metrics used in practice and is uniformly available in our dataset. Unlike Price-to-Earnings and Price-to-EBITDA, Price-to-Sales can be cleanly identified and is less prone to different interpretations and manipulations, as is the case with earnings.

In our specifications, we use the log of the Price-to-Sales multiple as the dependent variable to evaluate the effect in terms of elasticities and to account for the skewed nature of our data. Since we include Sales in the ratio of our dependent variable, the inclusion of log Sales as an independent variable allows us to capture non-linearity of the relationship of firm size to the price of the firm. We include a scaled version of Operating Margin (Operating Profit/Sales) to control for the profitability of the firm. The range of the Operating Margin is mechanically bounded from above at +1.0. Since we want to focus our analysis on firms that can be evaluated on their cash flows, we drop firms whose operating margins are below -1.0 as these firms will typically be priced using other factors (value of intellectual capital, liquidation value, *etc.*).

We also investigate how the existence of an incumbent CEO's employment agreement affects firm valuation. Although the database provider removed any explicit payment to the CEO from the reported transaction price, the employment agreement serves as an indicator of whether the incumbent CEO remains a member of the management team of the acquired firm. This could affect the price paid for the firm because it could reduce incoming management control and future cash flows. Further, it could have potential implications for the importance of the location of the firm for incoming management. For instance, if the CEO of the target firm is to remain in place, the incoming entrepreneur may not need to relocate to the acquired firm's location, thereby reducing the importance of noneconomic local characteristics. Therefore, in our specifications, we include the existence of an employment agreement as an additional control.

With a valuation based on company financials established, we can test if, everything else equal, a transaction in a city that is desirable has a higher price-to-sales multiple. We use a dummy variable when the firm is located in a best place as a proxy for cities with certain amenities or vibrancy that make it an attractive place to live.

We regress the log Price-to-Sales multiple of the firm on the historic company financials, the best places dummy (BP), and a series of local economic and demographic controls (X), as well as firm and time fixed effects. We include industry fixed effects since there may be variation among industries in how buyers apply historical financials when valuing a firm. Furthermore, we include time fixed effects since we are trying to capture cross-sectional variation. In all of our specifications, we use robust standard errors clustered on CBSA to account for any correlation of residuals within a CBSA (Peterson, 2009). The regression is (i represents the firm, j the firm's industry, k the firm's CBSA, and t the year of the transaction):

$$\ln\left(\frac{Price_{i,j,k,t}}{Sales_{i,j,k,t}}\right) = \beta_1 \ln(Sales_{i,j,k,t}) + \beta_2 \frac{Operating\ Profit_{i,j,k,t}}{Sales_{i,j,k,t}} + \beta_3 Industry_j + \beta_4 Year_t + \beta_5 BP_K + \beta_6 X_{k,t}$$

Our goal is to compare firms that are equivalent in the cross-section except for the desirability of the location to the entrepreneur. We explicitly exclude firms located in rural areas to remove

any concern that our best place measure is capturing urban vs. rural valuation effects.[7] We add geographic controls that may be related to expected cash flows and/or risks, are not captured by past financials, and are correlated with a city being a best place. We include the following local characteristics: the log of the population, the log of the population density, the log of the local tax rate, the log of the per capita income, and the log of the median house price. We attempt to control for the local talent pool, by using the percent of population with a bachelor's degree or higher. We also include 5-year average growth rates of the population, the per capita income, employment, and median house price. Given that the growth rates are persistent, we feel that historical growth rates are good proxies for an entrepreneur's expected growth rate of a given geographic area.

Table II reports the results of running our specification. We find that target firms located in a best place experience a premium to firms not located in a best place after controlling for company financials and local economic and demographic characteristics. The desirable location premium is an economically significant 18.8% after controlling for firm financials and local characteristics. Several of the geographic controls are statistically significant as well. Consistent with the urban effects literature, population density is a priced characteristic. Entrepreneurs appear to value urban areas rather than suburban sprawl as indicated by the economically and statistically significant positive value of population density and in contrast to the negative coefficient on population. Recognizing that population density usually increases with size; our specification allows us to identify these distinctions. A 10% increase (decrease) in population density (population) increases (decreases) the Price-to-Sales ratio by 0.61% (0.46%). This relationship could be capturing the effect of increased commuting times as higher density cities

[7] Loughran and Schultz (2006) compare the financing decisions of rural and urban firms and find that rural firms take longer to go public, conduct fewer seasoned equity offerings, and have more debt relative to urban firms. Dougal, Parsons, and Titman (2014) find that firm investment is related to the Tobin's q of nearby firms that are outside of its industry. They also find similar effects for capital raises in both debt and equity. Rural private firms may have different capital structures and capital access relative to urban private firms.

may have shorter (distance) commutes, while comparably large geographic cities like Atlanta and Houston have longer commutes.

Though statistically insignificant in the presence of other controls, median home price has a negative effect on price premiums of private firms. We believe that the increase in cost to the entrepreneur of purchasing a home can explain this negative effect on price. We also observe that the per capita income of an area has a positive effect on price premiums, with a 10% increase in per capita income being associated with a 1.9% increase in price. In addition, we observe that a 10% increase in the percentage of the local population having a Bachelor degree or higher reduces the Price-to-Sales ratio by 6.3%. Our interpretation is that there is a negative relationship between the local entrepreneurial talent pool and price.

B. Alternate Channel Controls

There exist potential alternative explanations for our results within the existing literature on how location affects the valuation and behavior of firms. While the vast majority of this literature has focused on public firms, the same intuition could apply to private firms.

B.1. Agglomeration

One alternative explanation to our story is the existence of externalities associated with firms of the same industry clustering in a given location, commonly referred to as 'agglomeration effects'. These externalities can result from reduced transportation costs, increased information, attraction of a large talent pool, or shared research, among others. The idea of agglomeration effects spans from Marshal (1920), to more recent discussion in Krugman (1991), and more specifically Audretsch and Feldman (1996), who discuss how agglomeration effects relate to small businesses. Agglomeration effects may play a role for the private firms in our sample. If firms experience a positive externality by being located in proximity to other firms in their industry (agglomeration), then this should positively affect their value. However, if firms experience a negative effect from increased competition with firms in their same industry and location, then this should negatively affect their value. If agglomeration or competition effects are correlated with the desirability of a location, then an omission of controls for these effects

would bias our specification. We control for the local effects of agglomeration and/or competition by using the concentration of firms in the same industry within the firm's CBSA. Specifically, we use the proportion of establishments in the firm's industry to the total number of establishments in the CBSA as our proxy. We include this variable in our regression and report the results of this regression in the second column of Table III.

The coefficient on local industry concentration is both negative and significant. A 1.0% change in industry concentration reduces the Price-to-Sales ratio by .97%. This result suggests that areas with abundant competitors negatively affect the price of firms due to increased supply of firms available for purchase in an area. The effect of increased competition outweighs any potential benefits of agglomeration in our sample. Our result may indicate that agglomeration effects only apply to larger public firms or certain industries (*e.g.* technology) and not for smaller private firm in a wide array of industries.

B.2. Home Bias

There are two other potential channels identified in the literature that may affect firm value and be correlated with desirability. The first is related to the entrepreneur's ability to monitor the firm and the firm's accessibility to local capital. Coval and Moskowitz (1999) find evidence that investors prefer securities from companies with local headquarters and identify this as a 'home bias' effect. This paper spawned a field of research on related topics. Coval and Moskowitz (2001) document that increased local ownership of a firm is associated with higher future firm returns. Ivković and Weisbenner (2005) show that individual investors earn better returns on local stocks. Pirinsky and Wang (2006) find that firms located in the same geographic area have returns that display strong co-movement.

The home bias effect could manifest in two related ways for private firms. First, if private firms require monitoring and monitoring costs increase with geographic distance, then investors must

pay a lower price for firms located far away in equilibrium.[8] The literature on venture capital investments supports this intuition for private firms. Lerner (1995) shows that a venture capital (VC) firm is more than twice as likely to serve as a director of a company that is in the same geographic area as one that requires a flight to reach the firm. Similarly, Bartkus and Hassan (2010) demonstrate that VC firms have more successful exits when investing in local firms. Second, and related to the first, if firms lack access to capital then this may either increase their risk (*e.g.* through reduced exit opportunities) and/or reduce their future cash flows if a lack of capital prevents investment in future profitable opportunities. In aggregate, firms located in areas with either low investable capital or areas with fewer connections to other cities with capital should have a lower price relative to firms located in areas with high investable capital or that are highly connected. Lerner (1995) and Becker (2007) find that connectedness and local capital have an effect on the valuation and success of private firms. [9] Therefore, in our tests for a premium associated with desirable locations we control for any potential "home bias" effect.

We control for this channel in four ways. First, we add a dummy if a firm is located in a financial center (Boston, New York, Chicago, LA or San Francisco). These areas should have lower costs of monitoring and due diligence as well as increased access to capital from private equity firms. Second, we include the number of unique connecting flights and flights to financial centers from the firm's city. Areas have lower monitoring costs if access from traditional centers of private equity and other cities where investors may be located is easier. Third, we include two variables that proxy for the concentration of local wealth. If there are fewer sources of local

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[8] Note that a similar story would hold if being either close to a firm or able to easily access the firm increased the availability of soft information available to investors. This would be similar to the story of Petersen and Rajan (1994) in which lending to informationally opaque small businesses generally requires incorporation of soft information. Petersen and Rajan (2002) find that distance is becoming less important. However, DeYoung, Glennon and Nigro (2008) find that increased distance in lending to small businesses is associated with higher default rates. This would indicate that distance and soft information still play some role.

[9] Becker (2007) shows that local capital supply is an important determinant of the success of local firms. However, he does not control for the financial characteristics of these firms nor compare individual firms within the cross-section of locations.

capital or reduced financial sophistication, the need for capital from other regions becomes more important. We use the percent of households with incomes greater than $200K and the number of successful locally owned firms – the number of local independent businesses with revenues over $1 million scaled by population. An abundance of wealthy households and entrepreneurs may indicate that more potential investors are in the area, which may result in lower monitoring costs and increased access to capital. Finally, we control for the financial development in the area by using the percentage of financial services establishments in the area relative to the national average. Similar to the previous measures, a higher concentration should indicate that there are potentially lower monitoring costs and increased access to capital. We report the results of adding these additional controls in the third column of Table III.

We find that being in a financial center is a significant determinant of the price premium for privately held firms after controlling for firm financials and local economic characteristics. A firm being in a financial center is associated with a 13.7% premium, consistent with general findings of Lerner (1995). We do not find any support for the hypothesis that the connectedness of a city, as proxied by the number of unique inbound flight connections or the number of direct flights to financial centers, is a significant determinant of the price premium of privately held firms.

Similarly, if home bias is a significant determining factor in the price premiums of firms, we would expect local wealth concentration and a higher concentration of entrepreneurial activity to increase price premiums. Our measure for the share of wealthy households is statistically and economically significant, increasing the Price-to-Sales ratio by 3.9% for every 1% increase in the percentage of wealthy households. Our measure for financial development of a local area, as measured by the concentration of local financial establishments relative to the national average, is not a statistically significant determinant of price premiums. Our results confirm the findings of Becker (2007), that the local availability of capital, as proxied by local wealth concentration, is important to businesses in an area.

B.3. Liquidity

The literature suggests that liquidity may vary with geography. Liquidity in this case is a function of both the speed and, concurrently, the deviation from the true price at which one can sell a firm. Loughran and Schultz (2005) find that rural firms trade less, have lower analyst coverage, and have higher trading costs. The authors argue that this indicates that the location of a firm affects its liquidity. Although their study is on public firms, there may exist similar geographical variation in the liquidity of the market for private firms. The liquidity of the local market would affect the risks of the firm and its subsequent valuation. If a local market for privately held firms is highly liquid and market liquidity is persistent, then the entrepreneur may expect that she could quickly sell the firm in the future for close to the fair market value. This reduces the riskiness of the investment and, all else equal, increases the price that investors would pay for the firm today. Therefore, in aggregate, firms located in areas with higher (lower) local liquidity should have a premium (discount). We counteract any potential bias from liquidity affects by adding controls for the liquidity of the local market in our specifications.

We control for the liquidity of the local market in two ways. First, we use the average time to sell a firm in the CBSA as a proxy for liquidity. Areas associated with quick sells should have a liquidity premium as the seller has immediacy. This immediacy should reduce the buyer's risk if he/she is hit with a future liquidity shock and needs to sell the firm quickly. Everything else equal, this reduces the risk of the purchase. Second, we use the volume of transactions relative to the number of independent businesses in the area. If a large percentage of businesses are being bought and sold in an area, this would indicate that there is an active market for companies in the area. This could be due to an increased number of business intermediaries or more active investors. In aggregate, an active market should imply a higher price for transactions occurring in these areas. We report the results of adding these additional controls in column four of Table III. We reject the hypothesis that reduced liquidity in a geographic area, as measured by our proxies, results in a discount. We observe a negative but statistically significant relationship between the relative number of transactions in a region and the price of the firm.

To control for any correlation between our proxies for agglomeration, home bias, and liquidity, we include all of the variables in our regression. We report the results from this regression in the fifth column of Table III.

We find that the statistical and economic significance of best places is generally unaffected by the inclusion of the additional channels. Therefore, our best places variable is not a proxy for the other three channels – agglomeration, home bias, or liquidity. The premium associated with being in a best place is relatively stable across the additional specifications ranging from 16.2% to 19.0%. We find that after including the proxies for the three additional channels, as well as the original controls, firms in desirable locations, as proxied by our best places variables, trade for an approximate 16% premium. When including proxies for all three channels, the coefficients on the proxies do not change, indicating that they represent distinct characteristics.

III. Is Growth Driving the Results?

The most obvious alternative explanation to our main result is that there is a correlation between our proxy for desirability and an omitted variable related to the expected local economic growth of an area. We do control for past economic performance in our specifications, but these contemporaneous or historical measures may not capture expected growth. This may be especially concerning for local economies, in which an entrepreneur may not rely solely on past growth as a predictor of future growth. Instead, the entrepreneur may rely on soft information that is observable by the entrepreneur but not the econometrician. This could include things like expected local policy changes, changes in the quality of local government, or general sentiment about the future of the community. If these economic characteristics cause either an increase (decrease) in expected future cash flows or a decrease (increase) in the risks of the firm, then they would result in higher (lower) valuations. If there is also a correlation between these characteristics and the area's desirability, then this would bias our tests.

Although it may not be possible to control for expected growth directly, we use additional cross-sectional variation in our sample to rule out this concern. We do this by analyzing sub-samples of our database in three distinct ways. First, we examine the variation in our coefficient on best

places based on the buyer type, either a public company or a private buyer. Second, we examine how the coefficient on our best places variable varies across transactions sizes. Finally, we examine how our best places coefficient varies across industry.

A. Buyer Type

First, we consider other circumstances in which the buyer may not value the local amenities. If growth expectations are driving the results, then we would expect economic buyers to value and pay for the growth expectations. Similarly, economic buyers that value local economies that are resilient in economic downturns (or ones that are less volatile or less correlated to the broader national economy), would pay for those benefits in equilibrium. If real estate or wage differences were driving our result rather than expected growth, then we would expect economic buyers to pay for these as well. Alternatively, if private benefits explain the premiums for firms in desirable locations, we expect these premiums to be smaller and/or insignificant for purely economic buyers. Public buyers cannot realize non-pecuniary benefits of a firm's location and neither would the CEO unless the CEO relocated – something we do not expect given the difference in size between the target firms in our transaction sample and their public buyers. Therefore, if the best places dummy is unresponsive to the buyer type, growth may be driving the results.

To test this, we divide our sample into firms purchased by public firms and firms purchased by private buyers. If the coefficient on best places is large and significant for private buyers and smaller and not significant for public buyers, then this would be indicative that desirability and not growth is driving our results. We report the results of this test in Table IV.

We find that public buyers do not pay a premium for location. Private buyers have a statistically significant 18.1% premium associated with the best places variable, while public firms show a reduced premium that is not statistically significant. This result is consistent with private benefits and not growth expectations driving the premium associated with an area's desirability.

B. Size Sub-samples

We would expect the price of all firms, regardless of size, to increase with growth expectations. This is because growth is scalable across firm size. For example, if an entrepreneur expects an area to grow by 5%, this growth rate should be reflected in the valuation of all firms in the area. The scalability of growth implies that the percent premium associated with desirability would be consistent across transactions if the growth expectation for the local area drives our result.

The smallest firms are likely not sufficiently large to motivate someone from another region to move. For a desirability premium to exist, a non-local buyer needs to be among the potential buyers. If only local buyers are bidding for the firm, they do not pay a premium for a benefit that they are already receiving.

The largest firms may also lack a significant desirability premium. This result stems from growth being fully scalable but non-pecuniary benefits not being similarly scalable. For the median firm with a purchase price of approximately $300,000, we estimate the entrepreneur's value of the amenities at approximately $48,000 (300,000 x 16%). For an entrepreneur that is buying a $1M firm, our estimated premium would be $160,000, reflecting an assumption that an entrepreneur of a larger firm may earn more and spend a comparable percentage of income on amenities. However, this relationship breaks down as the firm gets much larger (*e.g.,* a $1.6 million premium for a $10 million firm seems unreasonable). This lack of scalability means that the largest firms will have a private benefit that is likely relatively smaller than their counterparts'. In return, the percentage premium on these firms will be small and potentially undetectable. Therefore, if desirability, and not growth, is driving our best places coefficient we should observe that the coefficient is reduced for the smallest and largest transactions but large and significant for medium size transactions.

To test this, we divide our sample into quintiles based on transactions size. We then rerun our main regression specifications for the lowest quintile, the middle three quintiles, and the largest quintile. The middle quintile ranges from $0.10 to $4.91 million in transaction size. Table V shows the results of this analysis.

We find that the firms with a purchase price of less than $100,000 do not exhibit a significant premium related to desirability of locations. Firms that are larger than $4.91 million in transaction value also do not exhibit a significant premium related to desirability of locations. However, the middle quintiles of our sample, representing transactions that most likely involve non-local entrepreneurs, show a statistically and economically significant premium. This evidence supports the hypothesis that local economic prospects do not drive the premium but instead the buyer pays a premium for non-pecuniary private benefits that a desirable location provides.

C. Industry Sub-samples

Another potential way for growth to be driving our results would be if there is a correlation between the locations of a particular high-growth industry and our best places measure. If the technology industry's growth expectations were driving the results, we would expect to see high premiums for that sector and low/no premium for other industries as a reflection of the different industry growth rates and expectations across industries. To test this we run the same regression on industry sub samples. A robust result would suggest that the effect occurs across each industry subsample rather than being dominated by a single fast growing industry. We report the results of the regression within the five industry sub-samples in Table VI.

We find that within our sub-sample of the largest industries in our sample, there is still a premium for desirability, as proxied by our best places variable. Although there is some variation in the magnitude of the premium, it is positive for each of the five industries and statistically significant for four of the five. We feel that the clustering of firms in certain industries within a subset of cities could partially explain the variation. This evidence supports the hypothesis that the premium is not driven by local economic prospects but by the buyer paying a premium for non-pecuniary private benefits that a desirable location provides.

IV. Decomposition of Best Places Measure

To distinguish the effects of local economic characteristics from the effects of noneconomic characteristics on desirability, we introduce a new measure of desirability based on a

decomposition of our best places variable. While best places surveys do not directly disclose their full methodology nor their weighting matrix, they do publish a list of public data sources. Using similar data sources as the surveys in our regression, we attempt to replicate a list of desirable places using economic and noneconomic characteristics. Using these results, we generate a two-part amenity measure from the economic and noneconomic characteristics of an area that predict desirable locations.

To understand how noneconomic characteristic affect the desirability of an area, we regress our best place dummy on noneconomic variables that may be related to desirability of an area but not directly related to its economic prospects. We include the crime rate for violent and property crimes in the CBSA. We include the occurrence of extreme weather and the average annual total precipitation as they may affect the desirability of an area. Furthermore, we include the average mean hours of sunlight in January and the mean humidity in July because we believe people prefer areas with increased sunlight in the winter and low humidity in the summer. We also examine the effects of air quality, as proxied by the percentage of days with unhealthy air. In addition, we examine the quality of the local schools, as proxied by the student-to-teacher ratio within the CBSA. To capture the potential existence of historical amenities, such as museums or historical sites, we use the CBSA's population in 1900. We include the number of arts, entertainment, and recreation establishments per capita to proxy for the availability of local entertainment, nightlife, and recreational activities. Finally, we include two measures of the topographical features of the CBSA. We include the percentage of the area of the CBSA that is covered by water and the land surface topography code, which measures the diversity of landscapes within the CBSA.

To generate our measure, we run a logistic regression of our best place dummy on both the economic and noneconomic variables.[10] This regression shows the effect of a change in our noneconomic variables on desirability taking into account their correlation with our economic variables. We standardize the coefficients to reflect the marginal effect of a one standard deviation change in the underlying variable. We report the results of the logistic regression in Table VII. We observe that both economic and noneconomic variables are predictors of best places. The non-economic variables have coefficients that we would expect. Areas with high crime rates and high student to teacher ratios, a potential indicator of lower quality lower education environment, are less desirable. Similarly, areas with extreme temperatures or increased precipitation are less likely to be best places. We also see that areas that had a large population in 1900, an increased number of recreational establishments per capita, and more diverse topographical landscapes are more likely to be a best place. To account for the potential correlation between the variables, we run our logit regression against both sets of variables. Many of the noneconomic variables are still significant and maintain the same sign. The significant variables that switch signs are no longer statistically significant indicating that they are correlated with the economic variables (*e.g.* crime being negatively correlated with wealth). As a whole, the noneconomic variables are still jointly significant in predicting our best place variable after controlling for the economic variables.

Using the coefficients from this regression, we then generate an economic desirability measure for each CBSA over our sample period. We do this by multiplying the unstandardized coefficients from the logit regression in column three of Table VII for our economic variables by the value of each variable for each CBSA-year combination in our sample. We repeat this process for the noneconomic characteristics to generate a noneconomic desirability component of our measure. Table AIV and Table AV of the Data Appendix report the top ten CBSA's for

[10] Our results are robust and qualitatively similar if we use either a linear probability model or a probit model. For brevity, we do not report these results. They are available upon request.

each component. We also record the residual from our regression. The residual proxies for other aspects of a city that affect desirability that we cannot measure (*e.g.* available park space, commuting times, "hipness").

We then test if the noneconomic desirability of a location, as represented by the noneconomic component of our measure, is priced into the transactions. To do this, we regress the log Price-to-Sales multiple for each transaction on their respective economic and noneconomic component value for each CBSA-year as well as the company financials, and industry and time fixed effects. If there is a positive significant coefficient on our noneconomic component, then this indicates that the noneconomic characteristics of a desirable area induce a premium. We report the results from this regression in Table VIII. The coefficients on the individual components and the residual represent the marginal effect of a one standard deviation change in the underlying component.

From Table VIII, we can see that our noneconomic component is a significant determinant of firm price premium as measured by the log Price-to-Sales ratio. The significant positive premium associated with the noneconomic characteristics persists after controlling for the effects of desirability associated with the economic characteristics of the city. Furthermore, we find that the intangible and unmeasurable aspects of the city associated with being a best place are also associated with a premium. A one standard deviation increase in the noneconomic component is associated with a roughly 4% increase the Price-to-Sales ratio. We feel that this provides further evidence that there is a significant positive premium for firms located in desirable locations, which is distinct from the location's expected economic growth. This evidence supports the hypothesis that the premium is driven by the buyer paying a premium for personal benefits that a desirable location provides.

V. Endogeneity Concerns and Robustness Checks

We recognize that endogeneity, stemming from omitted variables and/or simultaneity/reverse causality may be a potential concern with a regression of this type. To alleviate this concern, we

provide a discussion of potential sources of endogeneity and our method for addressing them in our analysis.

We control for omitted variables in multiple ways. First, we control for contemporaneous company financials. If better companies simply located in better places, this should largely be reflected in the companies' current sales and profits. Second, we control for contemporaneous local economic and demographic characteristics. These variables are highly persistent and should reflect both current and expected future characteristics of the local economy and demography. Therefore, our best place measure is more than a reflection of current economic aspects and the expected future growth of the city. After controlling for local economic and demographic characteristics, the remaining variation should capture non-economically related characteristics. Furthermore, since we are only looking at transactions that happen within a CBSA, we remove any concern that our best place measure is capturing urban vs. rural valuation effects. Third, we include controls related to agglomeration/competition effects, monitoring/accessibility to capital, and the liquidity of the local market.

It could still be the case that firms with good prospects choose to locate in a best place for reasons beyond those for which we have controls. If this is the case, our best place measure could be capturing a measure of firm quality as opposed to the desirability of the location for an incoming entrepreneur. Although this could be an issue with high-tech firms or those that receive VC-type funding, we do not feel that the types of firms in our sample would be subject to assortative matching. First, the median firm revenue in our sample is less than $650,000 and is typically in industry sectors that do not exhibit significant growth prospects. It is unlikely that the founders of these businesses would choose a specific city over another. Instead, we expect the original owner started the firm in an area in which he/she was already living. Further, the majority of the firms in our sample firms generally produce a homogenous good or service for a local market (*e.g.* convenience stores, auto body shops, and restaurants) with little differentiation from the competition. Therefore, we believe that our implicit assumption that businesses are exogenously assigned to locations is valid.

There is scope for additional robustness checks. We confirm the consistency of places rankings from year to year to insure that the effect holds over time. Further, the analysis using our generated economic and noneconomic desirability measures allows for time-series variation in the desirability of a city. Therefore, we do not feel we are introducing a form of look-ahead bias by using the most recent set of surveys.

We also test our specifications within certain periods to rule out any single period driving our result. We separate the data pre- and post-2005 and find similar results. For further robustness, we include state fixed effects in our main specifications. Our results are robust to the inclusion of state fixed effects in both significance and magnitude. In another robustness check, we include industry-time fixed effects for the best place regression to reduce the concern of industry trends driving our results. However, we do this at the Fama-French 12 industry level given the size of our sample. Our results for the best place coefficient are similar. Our interpretation is that our results are robust to within the same industry and year.

Finally, we regress the log Price-to-Earnings multiple of the firm on the best place variable and the historic company financials and find that the results are consistent with our finding for log Price-to-Sales. We report these robustness checks in Table IX.

VI. Conclusion

In this paper we analyze the cross-sectional variation in the transaction prices of privately held firms across the U.S. We find that buyers pay more for companies that are in locations favored by entrepreneurs. This result is robust to including local economic characteristics and controls for other potential channels. We generate a measure from noneconomic geographic characteristics associated with the desirability of a location and find that it has a significant positive effect on price multiples, after controlling for the effects of local economic characteristics. Furthermore, we find that our result holds for companies purchased by private buyers, but dissipates for firms purchased by public buyers. We believe the latter are the types of transactions in which the buyer would not derive a private benefit. We find further support to our channel in our firm size sub-segments. The result holds for the middle three quintiles of

firms, but dissipates for the largest firms, as private benefits related to location do not fully scale with firm size, and the smallest firms, which are too small to motivate a seller to move. Finally, our result holds for most industry sub-samples. These results provide evidence that managers of privately held firms extract private benefits from desirable locations and sacrifice financial return by paying a premium for firms located in desirable locations.

The existence of a premium helps explain why some private firms may appear expensive – the researcher observes the sale but not the private benefits. In future studies of firm valuations in which the acquiring CEO is part of the M&A team, researchers should take into account both economic and noneconomic aspects related to the location of the firm. We extend the literature by showing geographic cross-sectional variation in the price for private equity. We also extend the literature by showing that entrepreneurs are willing to trade financial return for amenities, consistent with results in the labor and urban literature related to wages and housing. Further, we show which local characteristics of an area entrepreneurs prefer. Evaluations of the potential benefits of instituting public policy aimed at attracting entrepreneurial activity could use our quantification of the entrepreneur's valuation of desirability (16% premium).

Future opportunities for research include evaluating the time-series variation in the prices and how it relates to the business cycle.

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Online Data Sources

- Business Valuation Resources: http://www.BVResources.com/prattsstats.
- Council for Community and Economic Research: http://www.c2er.org/
- Fast Forward, Inc. http://www.bestplaces.net/docs/datasource.aspx
- Federal Housing Finance Agency: http://www.fhfa.gov/
- National Association of Realtors: http://www.realtor.org/
- National Bureau of Economic Research: http://www.nber.org/data
- National Center for Education Statistics: http://nces.ed.gov/
- National Climatic Data Center, National Oceanic and Atmospheric Administration: http://www.ncdc.noaa.gov/
- Open Flights: http://openflights.org/data.html
- U.S. Census Bureau & Current Population Survey: http://www.census.gov
- U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards: http://www.epa.gov/airdata/ad˙rep˙aqi.html
- U.S. Department of Commerce, Bureau of Economic Analysis: http://www.bea.gov/regional/docs/econlist.cfm.
- U.S. Department of Commerce, Bureau of Economic Analysis: http://www.bea.gov/regional/docs/econlist.cfm.
- U.S. Bureau of Labor Statistics: http://www.bls.gov/
- National Archive of Criminal Justice Data: http://www.icpsr.umich.edu/icpsrweb/NACJD/
- Florida Department of Law Enforcement: http://www.fdle.state.fl.us/
- U.S. Department of Agriculture, Economic Research Service: http://www.ers.usda.gov/data-products.aspx

Tables and Figures

Figure 1
Heat Map - Total # of Transactions in a Given Location

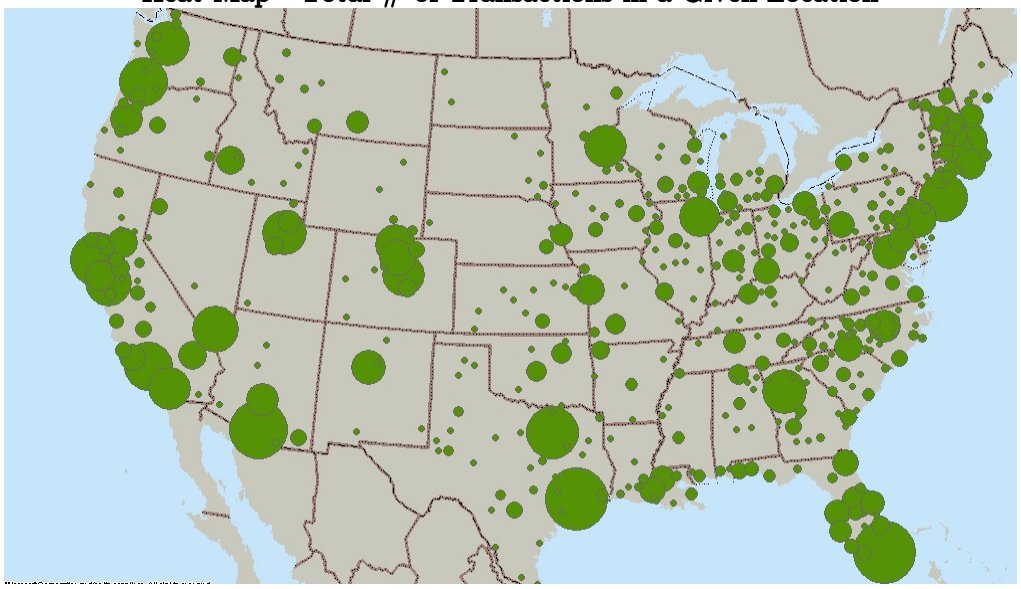


Table I
Business Valuation Resources Database Summary Statistics (1995-2012)
(Transactions used in Regressions)

VARIABLES	Mean	Std. Dev	Min	25th Percentile	Median	75th Percentile	Max	Obs
Price ($000)	8,240	30,074	24	120	299	1,600	344,200	8,263
Price/Sales	0.991	3.858	0.00623	0.324	0.516	0.864	160	8,263
Operating Profit/Sales	0.0984	0.188	-1.000	0.0118	0.0801	0.187	1	8,263
Net Sales ($000)	9,159	41,904	4.270	281.5	653.9	2,612	1.291e+06	8,263
Operating Profit ($000)	398.0	3,763	-168,125	6.513	49.20	158.8	83,073	8,263
Employment Agreement	0.333	0.471	0	0	0	1	1	8,263
Fixed Assets ($000)	1,232	8,044	-799.6	16.07	55	200	434,266	7,180
Intangibles ($000)	677.9	5,962	-115.0	0	0	59.58	187,200	7,173
Company Age	15.29	12.57	0	6	12	20	112	6,164
Number of Employees	17.70	151.4	0	3	5	11	9,901	5,247

Table II
Regression of ln(Price/Sales) on Company Financials, Local Economic and Demographic Characteristics, and Best Places

This table reports the results from running a regression of the natural log of the price/sales ratio for a transaction on various financial variable controls, geographic controls, and a Best Place Dummy (=1 if the transaction takes place in a CBSA deemed a Best Place). The transaction sample is as described in the text. Sales, Operating Profit, and Employment Agreements are from the database provider. The population, population density, and % of population with a Bachelors or higher is from the US Census. Per capita income is from the BEA. Median home price is imputed from the 2000 US Census and the FHA home price index. Tax burden is from the Tax Foundation. We provide complete variable definitions and sources in the Appendix. Industry fixed effects are run on FF-48 industries. Robust standard errors clustered on CBSA are reported in parentheses. *** indicates significance at 1%, ** at 5%, and * at 10%.

VARIABLES	Baseline	No Controls	Best Places w/ Controls
ln(Sales)	-0.0201***	-0.0227***	-0.0303***
	(0.00590)	(0.00744)	(0.00904)
OP/Sales	0.390***	0.429***	0.418***
	(0.0492)	(0.104)	(0.104)
Employment Agreement in Place	-0.0354*	-0.0285	-0.0262
	(0.0196)	(0.0224)	(0.0220)
Best Place		0.144***	0.172***
		(0.0329)	(0.0355)
Geographic Controls			
% of Pop. w/ Bachelors or higher			-0.656**
			(0.315)
ln(Population)			-0.0456**
			(0.0181)
ln(Pop. Density)			0.0603**
			(0.0264)
ln(Tax Burden)			0.247
			(0.157)
ln(Per Capita Income)			0.194*
			(0.115)
ln(Median Home Price)			-0.0449
			(0.0480)
5-year Pop. Growth			0.716
			(2.314)
5-Year PCPI Growth			-0.713
			(1.545)
5-Year Job Growth			0.997
			(2.013)
5-Year Home Price Growth			-0.686
			(0.442)
Industry FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Adj. R2	0.178	0.184	0.187
Obs.	8263	8263	8185

Table III
Regression of ln(Price/Sales) on Company Financials, Geographic/Economic Characteristics, and Additional Channel Proxies

This table reports the results from running a regression of the natural log of the price/sales ratio for a transaction on various financial variable controls, geographic controls, variables related to financial connectedness and capital availability, and variables that proxy for localized liquidity. The transaction sample is as described in the text. Geographic controls include all the controls listed in Table II. The local industry concentration is the concentration of the target's firm industry in the CBSA. Financial center is a dummy =1 if the firm is located in the Boston, New York, Chicago, Los Angeles, or San Francisco CBSA. Inbound flights are the unique number of inbound flight connections to the largest airport in the CBSA. Flights to financial hubs are the number of daily flights to financial centers. The number of headquarters with revenue greater than $1MM is from Reference USA. The relative concentration of finance establishments is the concentration of finance establishments in the CBSA divided by the average concentration of finance establishments in the U.S. The average days to sell is from by the database provider. We provide complete variable definitions and sources in the Appendix. Industry fixed effects are run on FF-48 industries. Robust standard errors clustered on CBSA are reported in parentheses. *** indicates significance at 1%, ** at 5%, and * at 10%.

VARIABLES	Baseline	Agglomeration Controls	Home Bias Controls	Liquidity Controls	All
Financials					
ln(Sales)	-0.0303***	-0.0302***	-0.0322***	-0.0297***	-0.0319***
	(0.00904)	(0.00894)	(0.00896)	(0.00894)	(0.00888)
Operating Profit/Sales	0.418***	0.436***	0.421***	0.427***	0.445***
	(0.104)	(0.103)	(0.104)	(0.105)	(0.103)
Employment Agreement in Place	-0.0262	-0.0250	-0.0257	-0.0207	-0.0184
	(0.0220)	(0.0220)	(0.0215)	(0.0219)	(0.0214)
Best Places					
Best Place	0.172***	0.174***	0.163***	0.165***	0.150***
	(0.0355)	(0.0349)	(0.0348)	(0.0369)	(0.0345)
Agglomeration					
Local Industry Concentration		-0.972***			-0.950***
Capital/Connectedness		(0.210)			(0.207)
Firm Located in Financial Center			0.128**		0.119**
			(0.0510)		(0.0539)
ln(Inbound # of Flights)			-0.00470		-0.00461
			(0.00439)		(0.00482)
ln(# of Flights to Fin. Hubs)			0.000627		0.000198
			(0.00436)		(0.00460)
% of Households with Inc.>200K			3.828***		4.180***
			(1.313)		(1.309)
(# HQ's w/ Rev> $1MM)/pop			6.461		6.903
			(6.798)		(6.891)
Rel. Conc. of Finance Estab.			0.0950		0.141
			(0.0880)		(0.0875)
Liquidity					
ln(Avg Days to Sell in CBSA)				-0.00166	0.00411
				(0.0281)	(0.0286)
Avg Transactions in CBSA per year/#HQ's				-19.42	-30.11*
				(17.66)	(16.18)
Geographic Controls	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Adj. R2	0.187	0.190	0.189	0.187	0.192
Obs.	8185	8176	8185	8086	8077

Table IV
Regression of ln(Price/Sales) by Buyer Type Subsample

This table reports the results from running a regression of the natural log of the price/sales ratio for a transaction on various financial variable controls, geographic controls, variables related to agglomeration, financial connectedness and capital availability, and variables that proxy for localized liquidity. Private transactions were transactions in which the acquirer was a private company. Public transactions were transactions in which the acquirer was a public company. Geographic controls include all the variables listed in Table II. Agglomeration controls, Home Bias controls, and Liquidity controls include all of the variables listed under these controls in Table III. Industry fixed effects are run on FF-48 industries. Robust standard errors clustered on CBSA are reported in parentheses. *** indicates significance at 1%, ** at 5%, and * at 10%.

VARIABLES	Private	Public
Financials		
ln(Sales)	-0.160***	-0.238***
	(0.0131)	(0.0192)
Operating Profit/Sales	0.870***	0.221*
	(0.0618)	(0.127)
Employment Agreement in Place	0.0972***	-0.158**
	(0.0199)	(0.0660)
Best Places		
Best Place	0.166***	0.0671
	(0.0287)	(0.0751)
Geographic Controls	Yes	Yes
Agglomeration Controls	Yes	Yes
Home Bias Controls	Yes	Yes
Liquidity Controls	Yes	Yes
Industry FE	Yes	Yes
Year FE	Yes	Yes
Adj. R2	0.230	0.270
Obs.	6322	1755

Table V
Regression of ln(Price/Sales) by Size Subsample

This table reports the results from running a regression of the natural log of the price/sales ratio for a transaction on various financial variable controls, geographic controls, variables related to agglomeration, financial connectedness and capital availability, and variables that proxy for localized liquidity. Small transactions were in the lowest quintile by price, medium in the middle three quintiles, and large were in the highest quintile by price. Geographic controls include all the variables listed in Table II. Agglomeration controls, Home Bias controls, and Liquidity controls include all of the variables listed under these controls in Table III. Industry fixed effects are run on FF-48 industries. Robust standard errors clustered on CBSA are reported in parentheses. *** indicates significance at 1%, ** at 5%, and * at 10%.

VARIABLES	Small	Medium	Large
Financials			
ln(Sales)	-0.836***	-0.324***	-0.470***
	(0.0163)	(0.0137)	(0.0237)
Operating Profit/Sales	0.150***	0.422***	0.152
	(0.0476)	(0.0882)	(0.107)
Employment Agreement in Place	0.0223	0.0795***	-0.270***
	(0.0203)	(0.0206)	(0.0516)
Best Places			
Best Place	0.0181	0.121***	0.0387
	(0.0262)	(0.0286)	(0.0581)
Geographic Controls	Yes	Yes	Yes
Agglomeration Controls	Yes	Yes	Yes
Home Bias Controls	Yes	Yes	Yes
Liquidity Controls	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Adj. R2	0.789	0.324	0.493
Obs.	1524	5141	1412

Table VI
Regression of ln(Price/Sales) by Industry Subsample

This table reports the results from running a regression of the natural log of the price/sales ratio for a transaction on various financial variable controls, geographic controls, variables related to agglomeration, financial connectedness and capital availability, and variables that proxy for localized liquidity. Industries displayed are the five largest FF-48 industries by transaction count. Geographic controls include all the variables listed in Table II. Agglomeration controls, Home Bias controls, and Liquidity controls include all of the variables listed under these controls in Table III. Industry fixed effects are run on FF-48 industries. Robust standard errors clustered on CBSA are reported in parentheses. *** indicates significance at 1%, ** at 5%, and * at 10%.

VARIABLES	Personal Svcs	Bus. Svcs	WholeSale	Retail	Restaurants
Financials					
ln(Sales)	-0.0883**	0.0659***	-0.0747***	-0.126***	-0.0441
	(0.0363)	(0.0200)	(0.0227)	(0.0200)	(0.0395)
Operating Profit/Sales	0.999***	0.263	0.677**	0.910***	0.473***
	(0.154)	(0.170)	(0.341)	(0.289)	(0.146)
Employment Agreement in Place	-0.0350	0.00853	-0.0390	0.0985**	0.0376
	(0.0405)	(0.0491)	(0.0747)	(0.0445)	(0.0351)
Best Places					
Best Place	0.173**	0.0828	0.351***	0.116*	0.195***
	(0.0674)	(0.0752)	(0.0941)	(0.0605)	(0.0595)
Geographic Controls	Yes	Yes	Yes	Yes	Yes
Agglomeration Controls	Yes	Yes	Yes	Yes	Yes
Home Bias Controls	Yes	Yes	Yes	Yes	Yes
Liquidity Controls	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Adj. R2	0.119	0.122	0.0780	0.102	0.0714
Obs.	1108	1464	558	1343	1253

Table VII
Regression of Best Places on Non-Economic and Economic Characteristics

This table reports the results from running a logit regression of the BP dummy (=1 if the CBSA is deemed a Best Place) on non-economic and economic geographic controls. We include all CBSA's for which we have data, as described in the text. All data is most recent as of 2012. Crime data is from the FBI, the National Archive for Criminal Justice Data, and the Florida Department of Law Enforcement. The population, population density, and % of population with a Bachelors or higher is from the US Census. Unhealthy air data is from the Environmental Protection Agency (EPA). Establishments data is from the BLS. Weather data is from NOAA. The student to teacher ratio is from the U.S. Department of Education National Center for Education Statistics Common Core of Data (CCD). % of Water and Topography Codes are from the US Department of Agriculture Economic Research Service. We provide complete variable definitions and sources in the Appendix. All variables are standardized to mean zero and standard deviation of 1. Therefore, coefficients are the marginal effect for a one standard deviation change. Robust standard errors clustered on CBSA are reported in parentheses for the coefficients. P-values are reported for the F-Statistics. *** indicates significance at 1%, ** at 5%, and * at 10%.

VARIABLES	Non-Economic Variables	Economic Variables	All Variables
Non-Economic			
Violent and Property Crimes per 100,000	-0.337*		0.288
	(0.204)		(0.256)
Percentage of Days with Unhealthy Air	-0.0530		0.0357
	(0.146)		(0.198)
ln(Population in 1900)	1.742***		1.351***
	(0.334)		(0.460)
Recreation Establishments per 1,000	0.594***		0.447*
	(0.183)		(0.253)
Student to Teacher Ratio	-0.377**		-0.828***
	(0.181)		(0.291)
ln(Precipitation)	-0.954***		-1.756***
	(0.329)		(0.676)
ln(No. Days greater than 90 F)	-0.235		-0.583*
	(0.249)		(0.319)
ln(No. Days less than 20 F)	-0.684**		-0.579
	(0.299)		(0.440)
ln(Mean Hours of January Sunlight)	0.236		-0.503
	(0.240)		(0.356)
ln(Mean July Humidity)	-0.279		0.219
	(0.283)		(0.493)
ln(% of Water)	0.235		0.0778
	(0.197)		(0.295)
Land Surface Topography Code	0.303		0.322
	(0.186)		(0.284)

Table VII (Cont.)

VARIABLES	Non-Economic Variables	Economic Variables	All Variables
Economic			
% of Households with Inc.¿200K		0.356	1.499**
		(0.457)	(0.593)
% of Pop. w/ Bachelors or higher		1.075***	1.093***
		(0.303)	(0.390)
Rel. Conc. of Finance Estab.		0.172	0.457
		(0.282)	(0.372)
(# HQ's w/ Rev> $1MM)/pop		0.222	0.324
		(0.217)	(0.296)
ln(Inbound # of Flights)		-0.131	-0.538
		(0.377)	(0.421)
ln(# of Flights to Fin. Hubs)		0.407	0.478
		(0.360)	(0.472)
ln(Population)		1.211***	0.576
		(0.369)	(0.537)
ln(Pop. Density)		-0.932***	-0.531
		(0.298)	(0.374)
ln(Tax Burden)		0.354	0.280
		(0.280)	(0.305)
ln(Per Capita Income)		-0.242	-0.164
		(0.352)	(0.555)
ln(Median Home Price)		0.475	-0.750
		(0.385)	(0.605)
5-year Pop. Growth		0.0530	0.947**
		(0.287)	(0.431)
5-Year PCPI Growth		-0.441*	-0.0944
		(0.262)	(0.310)
5-Year Job Growth		0.602*	0.119
		(0.314)	(0.388)
5-Year Home Price Growth		0.229	-0.589
		(0.343)	(0.434)
Pseudo R2	0.252	0.449	0.535
Obs.	306	306	306
F-Statistic of Non-Economic	56.87***		25.28**
	(.000)		(0.0136)
F-Statistic of Economic		63.24***	51.79***
		(.000)	(.000)

Table VIII
Regression of ln(Price/Sales) on Best Place Measure

This table reports the results from running a regression of the natural log of the price/sales ratio for a transaction on various financial variable control and Best Places measures. The Best Places measures were generated by first running a logit regression of a Best Place (dummy=1 if CBSA is deemed a Best Place) on a series of non-economic and economic variables as of 2012. The residual component was the deviation residual from the logit regression. We then generated a measure of BP from the predicted components for each of the two sets of variables using the coefficients from the logit regression. Predicted components and the residual are standardized, such that the coefficient is the marginal change for a one standard deviation change in the component. Industry fixed effects are run on FF-48 industries. Robust standard errors clustered on CBSA are reported in parentheses. *** indicates significance at 1%, ** at 5%, and * at 10%.

VARIABLES	Noneconomic Index	Economic Index	Residual	Full
Financials				
ln(Sales)	-0.0202***	-0.0179**	-0.0203**	-0.0204**
	(0.00757)	(0.00756)	(0.00789)	(0.00794)
Operating Profit/Sales	0.425***	0.391***	0.405***	0.439***
	(0.109)	(0.107)	(0.109)	(0.109)
Employment Agreement in Place	-0.0454*	-0.0382	-0.0336	-0.0349
	(0.0255)	(0.0260)	(0.0235)	(0.0236)
Best Places				
BP Measure-Noneconomic Components	0.0440***			0.0405***
	(0.0160)			(0.0134)
BP Measure-Economic Components		0.0269		0.0296**
		(0.0177)		(0.0145)
Residual from Logit			0.0555***	0.0483***
			(0.0160)	(0.0168)
Geographic Controls	No	No	No	No
Agglomeration Controls	No	No	No	No
Home Bias Controls	No	No	No	No
Liquidity Controls	No	No	No	No
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Adj. R2	0.178	0.176	0.179	0.181
Obs.	7857	7857	7857	7857

Table IX
Robustness Checks

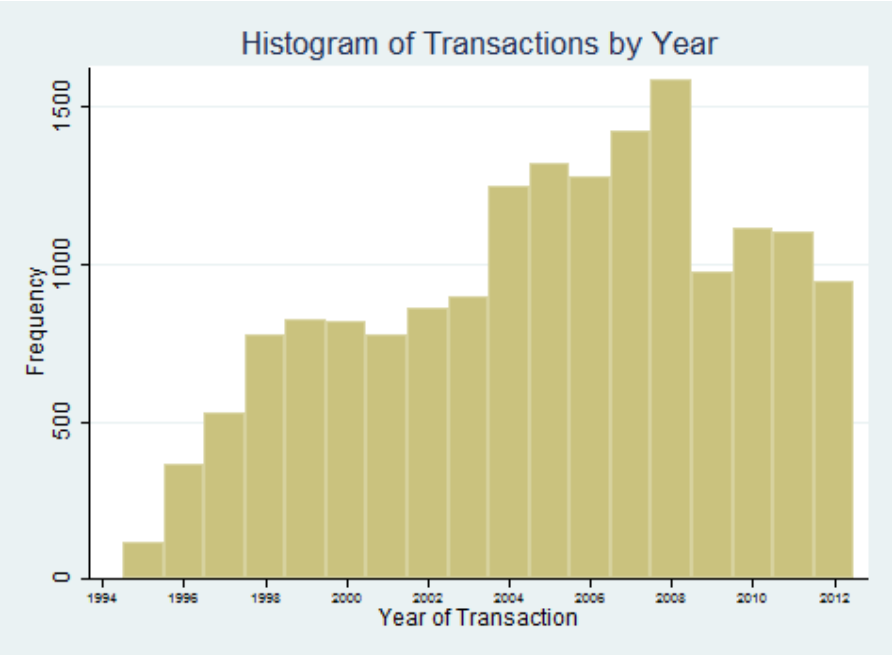
This table reports the results from running a regression of the natural log of the price/sales ratio or the natural log of the price/operating profit for a transaction on various financial variable controls, geographic controls, variables related to agglomeration, financial connectedness and capital availability, and variables that proxy for localized liquidity. Geographic controls include all the variables listed in Table II. Agglomeration controls, Home Bias controls, and Liquidity controls include all of the variables listed under these controls in Table III. Industry fixed effects are run on FF-48 industries. Industry x Year FE were run on FF-12 Industries. Private transactions were transactions in which the acquirer was a private company. Public transactions were transactions in which the acquirer was a public company. Robust standard errors clustered on CBSA are reported in parentheses. *** indicates significance at 1%, ** at 5%, and * at 10%.

	Time Period		Fixed Effects		Price to Operating Profit		
VARIABLES	Pre-2005	Post-2005	Industry x Year FE	State FE	P/OP	P/OP - Private	P/OP - Public
Financials							
Employment Agreement	-0.00866	-0.0249	-0.0327*	-0.0264	-0.132***	0.119***	-0.208***
	(0.0274)	(0.0356)	(0.0195)	(0.0226)	(0.0274)	(0.0355)	(0.0594)
(Sales/1000) to Operating Profit					1.625***	1.010***	2.773***
					(0.349)	(0.227)	(0.729)
ln(Operating Profit)					-0.165***	-0.448***	-0.229***
					(0.0206)	(0.0219)	(0.0244)
Best Places							
Best Place	0.127***	0.200***	0.163***	0.150***	0.290***	0.252***	0.0697
	(0.0460)	(0.0392)	(0.0312)	(0.0421)	(0.0622)	(0.0626)	(0.0647)
Geographic Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Agglomeration Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Home Bias Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Liquidity Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	No	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry x Year FE	No	No	Yes	No	No	No	No
State FE	No	No	No	Yes	No	No	No
Adj. R2	0.203	0.207	0.202	0.197	0.295	0.445	0.348
Obs.	4078	3194	8077	8077	6523	5245	1278

Data Appendix

Transactions Data

Figure A1



We present summary statistics for the full sample of transactions below. They are qualitatively similar to those reported in Table I.

Table AI
Business Valuation Resources Database Summary Statistics (1995-2012)
(All Transactions)

VARIABLES	Mean	Std. Dev	Min	25th Percentile	Median	75th Percentile	Max	Obs
Price ($000)	25,197	232,723	0.100	125	342.3	3,000	1.660e+07	16,969
Price/Sales	8.224	207.8	7.49e-06	0.322	0.539	0.941	18,526	16,969
Operating Profit/Sales	-0.644	26.23	-2,580	0.00575	0.0805	0.196	1	16,417
Net Sales ($000)	20,572	179,415	0.655	284.6	732.1	3,507	9.808e+06	16,969
Operating Profit ($000)	425.5	25,669	-1.868e+06	3.677	50.25	171.5	905,897	16,417
Employment Agreement	0.327	0.469	0	0	0	1	1	16,969
Fixed Assets ($000)	6,412	137,400	-799.6	22.20	71.11	300	1.190e+07	15,071
Intangibles ($000)	5,097	84,143	-115.0	0	20	136	6.848e+06	13,141
Company Age	15.10	13.25	0	6	12	20	352	12,046
Number of Employees	22.14	322.6	0	2	5	10	25,000	10,375

Income statement and balance sheet figures are skewed. The median firm generated approximately $732,000 in net sales. 50% of firms generated between $284,000 and $3.50 million in net sales. Median operating profit is approximately $50,000, noting that almost 20% of the sample have negative operating profit. 50% of firms in that range have operating profits between $3,000 and $172,000.

We present a comparison of our database to another available database provided by PeerComps. The PeerComps database is compiled from small business loans. We report data on key financials, geographic distribution, time series distribution and distributions of transactions by state and industry.

Table AII
Comparison of Databases

	PeerComps	Pratt-Stats
Financials (Median)		
Price ($000)	872.8	342.3
Price/Sales	0.70	0.54
Net Sales ($000)	1,575.8	732.1
Observations	6,977	16,969
State Distribution		
Top 3 (FL, CA, TX)	37%	44%
Top 5 (add GA, CO)	46%	51%
Top 10 (add AZ, PA, MA, OR, NC)	60%	63%
Time Series Distribution		
2001-2007	60%	46%
Peak Year	11%	9%
2001-2010	77%	68%
Industry Distribution		
Manufacturing	16%	12%
Health Care and Social Assistance	14%	4%
Retail Trade	14%	20%
Professional, Scientific, and Technical Services	13%	5%
Accommodation and Food Services	10%	19%
Other Services (except Public Administration)	8%	14%
Others	25%	26%

Geographic Data

Table AIII
CBSA Summary Statistics (1995-2012)

VARIABLES	Mean	Std. Dev	Min	25th Percentile	Median	75th Percentile	Max	N
Best Place	0.202	0.402	0	0	0	0	1	6,858
Violent and Property Crimes per 100,000	866.4	361.6	19.42	631.7	815.3	1,042	5,348	6,600
Percentage of Days with Unhealthy Air	0.0567	0.0734	0.000100	0.0110	0.0357	0.0699	0.480	6,192
Recreation Establishments per 1,000	0.394	0.211	0.0524	0.288	0.351	0.434	2.159	6,822
Student to Teacher Ratio	16.18	2.681	9.058	14.43	15.67	17.53	54.32	6,748
Precipitation (in.)	39.24	14.18	2.800	32.05	41.83	49.10	80.36	6,732
No. Days greater than 90 F per year	37.31	34.16	0	10	26.25	55.98	173.8	6,498
No. Days less than 20 F per year	32.72	30.69	0	3.900	26.47	54.50	173.8	6,498
Mean Hours of January Sunlight	150.1	39.20	52	128.8	149.2	171	266	6,768
Mean July Humidity	57.08	15.82	14	52	61	68	80	6,768
% of Water	0.0557	0.0167	0.00977	0.0443	0.0535	0.0688	0.0925	6,768
Land Surface Topography Code	8.826	6.653	1	4	5.390	15	21	6,768
% of Households with Inc.¿200K	0.0238	0.0173	0.00288	0.0139	0.0185	0.0275	0.169	6,817
% of Pop. w/ Bachelors or higher	0.243	0.0809	0.0780	0.182	0.232	0.287	0.583	6,760
Rel. Conc. of Finance Estab.	1.023	0.172	0	0.916	1.025	1.139	1.714	6,822
(# HQ's w/ Rev¿ $1MM)/Pop	0.0102	0.00426	0.000457	0.00832	0.00944	0.0108	0.0530	6,822
Inbound # of Unique Flight Connections	17.48	37.71	0	0	3	13	214	6,858
# of Flights to Fin. Hubs	2.997	5.974	0	0	0	3	33	6,858
Population ('000)	632.0	1,111	18.61	137.6	247.1	628.4	11,790	6,822
Population in 1900 ('000)	122.6	292.6	0	23.36	54.71	110.6	4,293	6,858
Population Density (Pop per Sq. Mile)	335.2	541.2	5.960	111.8	193.9	354.5	7,333	6,822
Tax Burden	0.0939	0.0114	0.0465	0.0869	0.0939	0.101	0.127	6,822
Per Capita Income	30,933	8,485	11,203	24,828	29,891	35,606	84,437	6,822
Median Home Price	131,624	74,345	39,203	87,937	110,380	147,142	731,839	6,727
5-year Pop. Growth	0.0109	0.0103	-0.0511	0.00402	0.00976	0.0161	0.0801	6,822
5-Year PCPI Growth	0.0387	0.0130	-0.0173	0.0311	0.0397	0.0469	0.146	6,822
5-Year Job Growth	0.0110	0.0167	-0.0521	-0.000622	0.0104	0.0218	0.119	6,822
5-Year Home Price Growth	0.0353	0.0437	-0.178	0.0164	0.0376	0.0536	0.195	6,651

-We generated the best places variables by compiling surveys from BusinessWeek Bloomberg, Mercer World Ranking, Money Magazine, AreaVibes, and US News. We use the most recent surveys as of 2013. From these surveys, we designate the top 20 large metro cities and the top 30 small towns as best places. We classify any CBSA as being a best place if a city/town classified as a best place in the surveys is within the CBSA and in reasonable proximity to the central city of the CBSA.

-Violent Crime and Property Crime rates come from the National Archive of Criminal Justice Data (NACJD) for all CBSA's except those in Florida, which did not report to the NACJD. We compiled the number of arrests for violent and property crimes for each reporting agency in a county using the NAJCD uniform crime reporting county crosswalk. For Florida, we received county-level data from the Florida Department of Law Enforcement. We then compiled the county information into their respective CBSA's using the NBER county-CBSA crosswalk. We use the most recent data provided for each year.

-We compile percentage of days with unhealthy air data from the EPA reports for 2002, 2007, and 2012. The average over the three reports is used.

-Recreation establishments, household wealth, educational attainment, population, and population density data is from the US Census American Community Survey and US Census Decennial Census for each county and then compiled into CBSA's using NBER county-CBSA crosswalk. We generate missing data by linearly imputing from the closest two years. If no post-year or prior-year is available, the closest year is used.

-Student to teach ratio data is from the US Department of Education. If no post-year or prior-year is available, we use the closest year.

-Weather data is from NOAA. Precipitation, number of days greater than 90 degrees, and number of days less than 20 degrees are for each CBSA. Mean hours of January sunlight and mean July humidity are the weighted averages from county data using the NBER county-CBSA crosswalk. We used population as our weights.

-Percentage of water and land surface topography code data is from the USDA. They are both the weighted averages from county data using the NBER county-CBSA crosswalk. We used population as our weights.

-Finance establishments data is from the BLS for each county and then compiled into CBSA's using NBER county-CBSA crosswalk. Missing data is generated by linearly imputing from the closest two years. If no post-year or prior-year is available, the closest year is used.

-Finance establishments and employment data is from the BLS for each county and then compiled into CBSA's using NBER county-CBSA crosswalk.

-Per capita personal income is from the BEA for each county and then compiled into CBSA's using NBER county-CBSA crosswalk.

-Tax rate data is from the Tax Foundation. It included local income tax rates and sales tax rates. It is a weighted average from county data using the NBER county-CBSA crosswalk. We used population as our weights.

-We compute median house price data from the FHFA home price index and the median home price for each county from the 2000 US Census. It is a weighted average from county data using the NBER county-CBSA crosswalk. We used the number of households as our weights.

-Airport data is from the FAA. We used the airport with the maximum number of inbound flights within a CBSA as our measure.

-Number of headquarters is from Reference USA for each county and then compiled into CBSA's using NBER county-CBSA crosswalk.

-All change variables are the annualized 5-year growth rates for the given variable. Therefore, if a value went from 100 to 150 its annualized 5-year growth rate would be approximately 8.45%.

Table AIV
Top Ten CBSA's from Noneconomic Variables

CBSA Name
Los Angeles-Long Beach-Santa Ana, CA
San Francisco-San Mateo-Redwood City, CA
New York-Wayne-White Plains, NY-NJ
Lynchburg, VA
Pittsburgh, PA
Charlottesville, VA
Providence-New Bedford-Fall River, RI-MA
San Diego-Carlsbad-San Marcos, CA
Chicago-Naperville-Joliet, IL
Winchester, VA-WV

Table AV
Top Ten CBSA's from Economic Variables

CBSA Name
San Francisco-San Mateo-Redwood City, CA
San Jose-Sunnyvale-Santa Clara, CA
Bridgeport-Stamford-Norwalk, CT
Bethesda-Frederick-Gaithersburg, MD
Cambridge-Newton-Framingham, MA
New York-Wayne-White Plains, NY-NJ
Denver-Aurora, CO
Boulder, CO
Seattle-Bellevue-Everett, WA
Washington-Arlington-Alexandria, DC-VA

The List of Best Places – Cities and Towns

- Auburn, AL
- Mesa, AZ
- Phoenix, AZ
- Scottsdale, AZ
- Irvine, CA
- Los Angeles-Long Beach, CA
- Napa, CA
- San Diego, CA
- San Francisco, CA
- San Jose, CA
- San Luis Obispo, CA
- Colorado Springs, CO
- Denver, CO
- Firestone, CO
- Louisville, CO
- Loveland, CO
- Parker, CO
- Brookfield, CT
- Washington, DC
- St. Augustine, FL
- Tampa, FL
- Atlanta, GA
- Peachtree City, GA
- Honolulu, HI
- Iowa City, IA
- Waukee, IA
- Boise, ID
- Pocatello, ID
- Chicago, IL
- Bloomington, IN
- Westfield, IN
- New Orleans, LA
- Boston, MA
- Sharon, MA
- Westford, MA
- Baltimore, MD
- Bangor, ME
- Farmington, MI
- Apple Valley, MN
- Chanhassen, MN
- Minneapolis, MN
- Rochester, MN
- Savage, MN
- St. Cloud, MN
- St. Paul, MN
- Columbia, MO
- Kansas City, MO
- Billings, MT
- Missoula, MT
- Apex, NC
- Charlotte, NC
- Durham, NC
- Raleigh, NC
- Bismarck, ND
- Fargo, ND-MN
- Grand Forks, ND-MN
- Papillion, NE
- Merrimack, NH
- Windham, NH
- Berkeley Heights, NJ
- Hillsborough, NJ
- Montville, NJ
- Albuquerque, NM
- Las Vegas, NV
- Ithaca, NY
- New York, NY
- Mason, OH
- Medford, OR
- Portland, OR
- Sherwood, OR
- Philadelphia, PA
- Pittsburgh, PA
- Upper St. Clair, PA
- West Goshen Township, PA
- Johnson City, TN
- Nashville, TN
- Austin, TX
- Dallas, TX
- Plano, TX
- San Antonio, TX
- The Colony, TX
- Draper, UT
- Farmington, UT
- Lindon, UT
- Alexandria, VA
- Arlington, VA
- Charlottesville, VA
- Lynchburg, VA
- Vienna, VA
- Burlington-South Burlington, VT
- Newcastle, WA
- Seattle, WA
- Eau Claire, WI
- La Crosse, WI
- Madison, WI
- Menomonee Falls, WI
- Oshkosh-Neenah, WI
- Morgantown, WV

The List of Best Places CBSA's

- Albuquerque, NM
- Appleton, WI
- Atlanta-Sandy Springs-Marietta, GA
- Austin-Round Rock, TX
- Baltimore-Towson, MD
- Bangor, ME
- Bethesda-Frederick-Gaithersburg, MD
- Billings, MT
- Boise City-Nampa, ID
- Boston-Quincy, MA
- Boulder, CO
- Bridgeport-Stamford-Norwalk, CT
- Burlington-South Burlington, VT
- Cambridge-Newton-Framingham, MA
- Charlotte-Gastonia-Concord, NC-SC
- Charlottesville, VA
- Chicago-Naperville-Joliet, IL
- Colorado Springs, CO
- Columbia, MO
- Dallas-Plano-Irving, TX
- Denver-Aurora, CO
- Des Moines, IA
- Durham, NC
- Edison, NJ
- Fargo, ND-MN
- Fort Collins-Loveland, CO
- Grand Forks, ND-MN
- Greeley, CO
- Green Bay, WI
- Honolulu, HI
- Indianapolis, IN
- Iowa City, IA
- Ithaca, NY
- Kansas City, MO-KS
- La Crosse, WI-MN
- Lake County-Kenosha County, IL-WI
- Las Vegas-Paradise, NV
- Los Angeles-Long Beach-Santa Ana, CA
- Lynchburg, VA
- Madison, WI
- Manchester-Nashua, NH
- Medford, OR
- Milwaukee-Waukesha, WI
- Minneapolis-St. Paul-Bloomington, MN-WI
- Missoula, MT
- Morgantown, WV
- Napa, CA
- Nashville-Davidson--Murfreesboro, TN
- Nassau-Suffolk, NY
- New Orleans-Metairie-Kenner, LA
- New York-Wayne-White Plains, NY-NJ
- Newark-Union, NJ-PA
- Omaha-Council Bluffs, NE-IA
- Oxnard-Thousand Oaks-Ventura, CA
- Philadelphia, PA
- Phoenix-Mesa-Scottsdale, AZ
- Pittsburgh, PA
- Portland-Vancouver-Beaverton, OR-WA
- Provo-Orem, UT
- Raleigh-Cary, NC
- Rochester, MN
- Rochester, NY
- Rockingham County, NH
- San Antonio, TX
- San Diego-Carlsbad-San Marcos, CA
- San Francisco-San Mateo-Redwood City, CA
- San Jose-Sunnyvale-Santa Clara, CA
- San Luis Obispo-Paso Robles, CA
- Santa Ana-Anaheim-Irvine, CA
- Scranton--Wilkes-Barre, PA
- Seattle-Bellevue-Everett, WA
- St. Cloud, MN
- Tacoma, WA
- Tampa-St. Petersburg-Clearwater, FL
- Terre Haute, IN
- Warren-Farmington-Hills-Troy, MI
- Washington-Arlington-Alexandria, DC