Non-pecuniary Benefits: Evidence from the Location of Private Company Sales

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ABSTRACT

We estimate how the non-pecuniary benefits related to the quality-of-life (e.g., clement weather) of a target firm's location affect its acquisition price. Using new data on private firm acquisitions, we find that firms in cities with a higher quality-of-life sell for a 16% premium over comparable firms in cities with a lower quality-of-life. Using historical wage-to-rent differentials to instrument for the contemporaneous proxy of quality-of-life, we show that the premium for non-pecuniary amenities of a city is in addition to any premium for the economic and trade-production amenities (e.g., agglomeration economies and navigable waters) that affect firm fundamentals.

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ABSTRACT

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1 Introduction

Non-pecuniary factors play a crucial role in the decisions of entrepreneurs. For example, Hurst and Pugsley (2011) provide survey evidence that non-pecuniary benefits (e.g., autonomy, flexibility) are of first-order importance in the decision by entrepreneurs to pursue self-employment. Further, researchers have hypothesized that returns on entrepreneurial activity and asset prices are also related to these non-pecuniary benefits (Hamilton, 2000; Moskowitz and Vissing-Jorgensen, 2002). However, the exact nature and relative size of the non-pecuniary benefits remains largely undetermined (Åstebro et al., 2014). As Bortolotti and Faccio (2009) note, "the problem is, of course, to find a way of isolating non-pecuniary benefits."

One way in which entrepreneurs express their autonomy, is through their choice of job location. We apply the intuition of Roback (1982), that workers accept lower wages to work in cities with higher amenities, to entrepreneurs buying small businesses. More recently, Deng and Gao (2013) show that CEO's of public firms receive higher compensation for working in a company headquarters in a less desirable area for otherwise comparable firms. We investigate if certain buyers of firms pay not only for the expected pecuniary rewards from owning a business, but also pay a premium for the non-pecuniary private benefits associated with working in a high quality-of-life (QOL) city.[1] To test this basic hypothesis, we use new data on private firm acquisitions and present the first empirical evidence that a location premium exists for private firms in cities with a high QOL. Importantly, we show that this premium is not solely due to traditional financial explanations, but stems from the buyer's preferences for high amenity locations.

Our results show that certain buyers in our sample of transactions pay an economically meaningful 16% premium for firms located in cities that have a higher QOL, relative to similar firms in cities with similar economic prospects. We estimate that this result suggests that the aggregate premium

[1] QOL includes factors such as the diversity of topographical landscapes, the occurrence of extreme temperatures and humidity, and average mean days of sunlight. We provide a decomposition of the QOL measure in the Online Appendix.

that arises for entrepreneurs is approximately \$800 million per year.[2] Our empirical strategy allows us to quantify the effect of non-pecuniary QOL measures (e.g., mild climate) on firm price, which are orthogonal to the city's pecuniary and production amenities that directly affect firm financials (e.g., natural harbors, navigable rivers and agglomeration economies). The evidence suggests that entrepreneurs forgo some financial returns (by paying a higher acquisition price for the asset) in order to consume the non-pecuniary benefits from working in a higher QOL city. Moreover, we show that the non-pecuniary benefits that arise from the firm's proximity to a high QOL location do not accrue to other shareholders who value the firm as a purely financial asset.

The intuition for our hypothesis is as follows. Buyers of small private firms (with an enterprise value of less than \$10 million) typically raise capital for the purchase of the target firm, and then assume the role of the CEO after the acquisition (e.g. 'management buy-in' or 'search fund').[3] In effect, the buyer is simultaneously choosing not only the target firm, but also the firm location. Since we cannot directly observe the preferences of the buyers, our primary analysis exploits geographic differences in QOL measures to identify the revealed preferences of these entrepreneurs. Our findings indicate that entrepreneurs pay a premium for locations with better economic prospects and, more interestingly, for locations with a high QOL.

We address several empirical challenges to identifying the causal relationship between the non-pecuniary benefits associated with high QOL locations and the acquisition price of the target. Establishing causality is difficult since variation in firm price could be explained by unobserved variation in the expected economic growth prospects of a firm's location, which may also be correlated with the QOL of the city. For example, if a firm's location also makes it more desirable to customers, then we would expect this to affect the firm's economic prospects and thus, its acquisition price (Murray et al., 2010). We take a number of steps to address this concern.

[2] A back of the envelope calculation assumes that there are 5,000 private transactions in the U.S. per year in which a premium arises. Transactions in which a premium arises have an average purchase price of \$1 million.

[3] IBBA Marketpulse, Q1-2017 reports that most buyers of small firms intend to run the company after the acquisition. According to the survey, the primary motivation for the sellers is retirement.

First, we take advantage of the detailed nature of the transaction data and directly control for company financial performance. If the location of a firm affects the firm's financial performance, then we would expect this to be reflected in the firm's financial statements. Thus, we directly control for a target firm's contemporaneous profits and revenues. Second, we also control for a wide variety of economic characteristics of the local area (e.g., population, unemployment, home prices, economic growth rates, etc.) as well as proxies for previously identified channels related to location (e.g., geographic fragmentation of capital markets, market liquidity, etc.). After controlling for these characteristics, we find that the premium on firms in high QOL locations remains both statistically and economically significant.

Despite our controls for various observable characteristics, it is possible that unobservable local economic characteristics drive the relation between price and the QOL of a city. For example, a firm's price may reflect expectations of the local entrepreneurial or regulatory environment that are not reflected in the financials of the firm or the area's economic characteristics. We undertake two additional empirical strategies to address endogeneity from an omitted variable. First, we examine cross-sectional sub-samples that distinguish buyers who plausibly value non-economic characteristics of a city from ones who do not. Second, we use a historical measure of QOL derived from worker wage-to-rent differentials, which is plausibly exogenous to current economic conditions and entrepreneurial growth prospects, to instrument for the current QOL of a city.

In a subsample test, we investigate whether a premium exists for high QOL locations among firms of different sizes. An omitted variable, which is correlated with the QOL of a city and the firm's financial prospects, might reasonably be expected to affect firm value similarly for firms of all sizes (i.e., the effect of the unobservable variable scales with firm size). However, we find that only the "treated" firms — those firms for which a buyer would be likely to move to a high QOL city — show a significant premium associated with the QOL. In a separate sub-sample test based on different buyer types, we find no evidence of a premium associated with desirable locations when the firm is purchased by a public company — a finding that is inconsistent with the hypothesis that economic factors related to the QOL of a city are causing our result. Instead, we find that only private buyers — buyers who are likely to relocate to the firm location — pay a premium for the QOL of a city — a finding that is consistent with the hypothesis that buyers are paying for the non-pecuniary benefits that arise from the QOL of a city.

Our second strategy to address the endogeneity concern is to instrument for a city's QOL. We do this by applying the methodology of Albouy (2008) and data from the 1990 U.S. Census to generate a historical measure of QOL. Albouy (2008) uses a hedonic model based on wage-to-rent differentials to calculate a QOL measure that reflects employee preferences for high amenity locations. We use a historical version of this measure to capture the QOL of a location that is plausibly independent of contemporaneous economic and entrepreneurial prospects. Further, we supplement this measure using the production amenity, calculated in Albouy and Stuart (2012), that captures any additional non-time varying local production amenities that might affect firm efficiency. Thus, any non-time varying economic characteristics would be reflected in the production amenity while contemporaneous economic growth prospects of a location should be reflected in our contemporaneous location controls and target firm financials. The lagged adjusted QOL measure predicts our proxy of the non-pecuniary amenities of a city, and we find a premium for firms in locations with high instrumented levels of QOL.

To address concerns that the effect we identify is due to the construction of the best places measure, we develop an index of QOL based only on the historical weather patterns and topography of each location. Cities with higher levels of this measure are associated with better weather and topography than their peers. We find a similar empirical relation between QOL and firm prices when using this weather and topography index to proxy for a location's QOL. Following Deng and Gao (2013), we also test the relation of the Morgan Quinto state-based ranking of quality of life on the transaction price and find similar results. However, given that this is a state-based measure it does not captures more localized variation in QOL relative to the weather and topography index or our best places measure.

Taken as a whole, we find evidence consistent with the hypothesis that buyers who can consume the non-pecuniary benefits associated with the QOL of a firm's location pay a significant premium for these benefits. However, given the persistence of local non-economic factors such as weather, it is difficult to develop an unquestionable exogenous shock to the non-pecuniary factors of a city that could more clearly identify the effect of location based non-pecuniary benefits on the acquisition price of a target firm. Nevertheless, our tests are highly suggestive that any plausible alternative explanation is not driving the proposed location premium.

It is important to note that in contrast to the agency problems first described by Jensen and Meckling (1976), the manager's consumption of the non-pecuniary benefits described in this paper does not diminish the value of the firm. Unlike cash holdings which could be squandered by firm executives (Faulkender and Wang, 2006), the non-pecuniary benefits that are associated with a firm's location are derived from a public good that is not depleted by an entrepreneur's consumption of that good. As a result, cities that bestow these non-pecuniary benefits onto the owners of local firms are creating significant economic value for local entrepreneurs. Further, by quantifying an economically important and previously unidentified channel for how non-pecuniary benefits affect the decisions of entrepreneurs, we raise the possibility of an agency issue in search funds and other private equity transactions. This additional agency issue might arise if the buyer of the firm is able to enjoy these benefits when they are funded by outside investors who finance the transaction.

This study contributes to several lines of literature. Our paper relates to the literature on weather and asset pricing returns (Hirshleifer and Shumway, 2003; Kamstra et al., 2003; Bassi et al., 2013; Goetzmann et al., 2014). Researchers have also presented significant empirical evidence that geography matters for investments and outcomes. Effects related to location have been documented through channels such as (1) agglomeration (Rosenthal and Strange, 2004; Gompers et al., 2005;

Dougal et al., 2015), (2) liquidity (Loughran and Schultz, 2005), (3) geographic fragmentation of capital markets (Lerner, 1995; Ivković and Weisbenner, 2005; Chen et al., 2010), and (4) payout policies (John et al., 2011). Further, an entrepreneur trading pecuniary benefits for the utility derived from locating in a desirable city is consistent with the labor literature on wage differentials among cities (Roback, 1982; Beeson and Eberts, 1989; Ellison and Glaeser, 1997, 1999; Glaeser et al., 2001; Kim et al., 2009; Seegert, 2011). This paper adds to this literature by establishing that a premium exists for firms located in areas with a high QOL that is independent of economic prospects. Thus, we provide direct empirical evidence for the model of Roback (1982) and show it applies to entrepreneurs and the prices paid for privately held firms.

Our paper is most closely related to Deng and Gao (2013) who show that compensation for executives of public firms is related to the geographic attractiveness of the state of the company headquarters. Our contribution is to show that the compensation premiums that arise for CEO's are tradable goods in the market for private firms. Further our specifications utilize CBSA-level data, which allows us to avoid the confounding effects related to state taxes and regulatory factors and capture more localized variation in QOL.

Our empirical tests also help further our understanding of how local non-economic characteristics influence the location choices of entrepreneurs — a topic of great importance to policy makers who have an interest in fostering entrepreneurship. Attracting entrepreneurs to local communities is important since new businesses are one of the primary drivers of job growth in the economy (Haltiwanger et al., 2013). However, we know little about what aspects of an area make it attractive to entrepreneurs, especially for entrepreneurs outside of venture capital backed industries (Chen et al., 2010). The ability to identify and quantify the importance of amenities to entrepreneurs might allow policy makers to better evaluate projects meant to attract and retain entrepreneurs (Hurst and Pugsley, 2011). Given the nature of our study, we can provide a quantitative estimate of those benefits for entrepreneurs.

Although our primary contribution is to provide evidence that entrepreneurs in cities with a higher QOL realize a premium when selling their firm, we also shed light on the general pricing of private firms by being one of the first large cross-sectional studies of private firm transaction pricing. Thus our findings also relate to the "private equity premium puzzle" (Moskowitz and Vissing-Jorgensen, 2002; Kartashova, 2014). While we cannot directly explain the prevalence of entrepreneurship, we are able to shed light on the trade-offs that entrepreneurs make between pecuniary and non-pecuniary benefits described in the extant literature. Our results indicate that buyers forgo higher financial returns in order to experience non-pecuniary benefits related to locations with a high QOL. If these gains can provide some separation between private equity and public equity owners, then our finding could help our understanding of this puzzle.

2 Data & Institutional Details

2.1 Private Company Database

Our primary transaction data are from Pratt's Stats – a new database of private firm acquisitions. The data include target financials and deal information on over 24,000 transactions for private targets. The database spans from 1990 to 2012. Business Valuation Resources collects the Pratt's Stats data through direct contact with business intermediaries and investment bankers. Transaction intermediaries are typically members of the International Business Brokers Association (IBBA), and pay subscription fees to Business Valuation Resources to access the data to identify comparable transactions and track market-pricing trends. To be included in the database, transactions must meet the following criteria: (1) the acquired company must be private and 100% of the firm is acquired; (2) the date of sale, firm legal structure, and transaction type (asset vs. stock) are disclosed and the sale price is unambiguous; and (3) transactions in which most of the consideration is real estate are excluded.

Our primary variable of interest is the price of the target company in the transaction.[4] We also use other reported financial data from the database including net revenue and operating profit, as well as the location of the target firm. The location of the target allows us to connect a transaction with geographic data, thus allowing for location-specific controls. The matching and construction of these controls are discussed in greater detail in Appendix A.

We include transactions starting in 1995, when the number of transactions in the database first exceeds 120 and spans multiple industries. We include all industries except financial services. The firms in the data represent 77 SIC-2 codes and 768 SIC-4 codes. We categorize target firms into Fama-French 48 (FF-48) industry groupings.

The firms found in the data typically serve an existing market with an existing good or service. We find that more than 65% of target firms in our data are in five FF-48 groups (Personal Services, Business Services, Wholesale Trade, Retail, and Restaurants and Hotels). Hurst and Pugsley (2011) describe the types of firms that are commonly found in our data. These types of firms cannot be easily moved without detriment to the business given the local nature of the customer base and reputation (e.g. a restaurant). As an alternative to purchasing the target firm, entrepreneurial buyers could also start a new business in a similar location. However, the choice of starting a new business entails significantly greater risks since the new firm lacks the customer goodwill and reputation of the existing business.

From discussions with industry insiders, we believe that this industry distribution is representative of the composition of private target transactions.[5] We provide a histogram of transactions per

[4]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, (2) any earn outs (because they have not and may not be earned), and (3) the employment/consulting agreement values."

[5]Although it is difficult to determine the comprehensiveness of the 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 180,000 firms which are salable to third parties. If the average firm is sold every twenty years, we would expect 9,000 transactions per year. In

year in the Online Appendix. We also compare the database to PeerComps, another transaction database for private companies and observe that the target firms in the two databases have similar financial characteristics, are in similar states, and are comparably distributed across years.[6]

The database has wide geographic dispersion. No state represents more than 12% of the sample and the majority of states have over 50 transactions. We provide a heat map of the transactions in Figure 1. The majority of acquired firms are located in clusters in or around urban areas. 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.

We distinguish geographic areas using the Office of Management and Budget definitions of urban centers known as Core Based Statistical Areas (CBSA).[7] Although large CBSA's, such as Los Angeles-Long Beach-Santa Ana, may have high variance in QOL standards, firms in unattractive areas are easily accessible by commuting from areas in which owners choose to live. Therefore, we believe that the CBSA is the appropriate level of geographic aggregation.[8]

To match the data to geographic variables, we drop all observations in which there is no specific location information (i.e., city, town, and/or county) available in the database. We also drop all transactions that fall outside of a CBSA.[9] Finally, we truncate the sample removing the top and

our sample, these filters produce about 10,500 transactions over 18 years, which suggests that the sample represents approximately 6.5% of the total.

[6]We are not able to include the transactions from PeerComps in our study as firm location is only specified at the state level. The median target firm in the PeerComps database is approximately double the size of the firms in the Pratt's Stats database. There is also some difference between the databases in their industry distribution which may be related to the types of firms that are eligible for SBA-funding — the inclusion criteria of the PeerComps database. We provide a more detailed comparison of the two databases in the Online Appendix.

[7]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."

[8]Results are similar using Metropolitan Statistical Areas (MSA).

[9]We do this for two reasons. First, some of the data on local characteristics are only available at the CBSA level. Second, we want to remove any concern that our QOL measures are capturing urban vs. rural price effects. Private firms in rural areas may have different capital structures and capital access relative to those in urban areas (Loughran and Schultz, 2006).

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 the results (e.g., selling of the company for $1). We report the summary statistics from the filtered transactions in Table I, which are qualitatively similar to those in the full sample (whose summary statistics are reported in the Online Appendix.)

The median firm price in the sample sold for approximately $300,000, while firms at the 25th and 75th percentile sold for $120,000 and $1.60 million, respectively. The median firm generated approximately $654,000 in annual sales. Firms in the 25th and 75th percentile generated sales of $285,000 and $2.61 million, respectively. Median annual operating profit was approximately $49,000, though approximately 20% of the sample firms had negative operating profit. Excluding firms with negative operating profit, the median operating profit rises to $74,000. Total assets for the 25th and 75th percentiles were $67,500 and $1.14 million, respectively.

2.2 Best Places

To define whether a potential buyer views a location as having high QOL, we use a proxy. Specifically, we proxy for high QOL by using an indicator of whether the firm's location is listed as a "Best Place" in one of five national magazines.[10] We use this as our proxy because the Best Places information is widely available and informative of whether the location has a high QOL.

Money magazine has published a list of "Best Place to Live" in the United States since 1987. In initial years, the publication provided a list based on reader surveys. Starting in 1991 Money magazine published a full list of cities ranked based on outside data sources. Other publications followed Money magazine and now there are numerous sources who offer their interpretation of desirable places to live. To avoid bias in the choice of publications, we include the data from the

[10]Using "Best Places" as a measure for household preferences was first established in the economics literature by Rosenthal and Strange (2004).

five most popular sources: BusinessWeek, Bloomberg, Mercer World Ranking, Money Magazine, AreaVibes, and US News.[11] Cities recognized as best places to live share a variety of economic and non-economic characteristics that people desire. As we show in section 6, these are predictable based on a city's economic characteristics (e.g., percent of wealthy households) as well as a city's geographic amenities (e.g., nice weather). We use an indicator variable to identify best places.[12]

2.3 Geographic Data

We collect broad level demographic and economic characteristics from a variety of publicly available sources including the US Census Bureau, the Bureau of Economic Analysis (BEA), and the Bureau of Labor Statistics (BLS), among others. In the Online Appendix, we provide a detailed discussion of the sources of this data, our aggregation methods, and summary statistics. 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.

3 Theoretical Framework and Empirical Methodology

Unlike public firms, the CEO's of private firms are typically the controlling shareholder. This makes the location's QOL, even the portion unrelated to the cash flows and risks of the firm, an important consideration in an acquisition. We investigate whether the price paid for a target firm

[11]We note that the choice of best places data is generally consistent across our sources. The surveys share nearly identical databases (e.g., Census Bureau, 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, cite similar sources.

[12]We are not able to use ordinal rankings because the surveys do not provide a full ordinal ranking of all CBSA's. We can represent non-best places based on an average ranking for CBSA's left unranked after the top 50 and this provides similar empirical results.

is affected by the non-pecuniary benefits associated with the QOL of the firm's location.

To motivate the intuition, we provide a brief description of how a preferable location premium could be an equilibrium outcome. The framework is motivated by the notion of wage differentials between high amenity and low amenity cities in Roback (1982). Private company transactions are frequently management buy-ins in which prospective entrepreneurs are not only raising investor capital to finance the transaction, but also become the firm's CEO following the completion of the transaction.[13] These transactions can be exemplified by the search fund, an investment vehicle used by an entrepreneur to finance the process of finding and acquiring a target firm.[14]

Assume that there exists a pool of equivalent entrepreneurs competing to buy a firm and become the CEO. Suppose, there are two firms (denoted H and L) that are potential targets. The two firms are equivalent but for their location. Firm H is in an area that produces non-pecuniary private benefits for the CEO that arise from the QOL of the location (a high amenity location), while Firm L is in an area that does not. All entrepreneurs share the same utility functions that depend on the expected discounted future cash flows from the firm and any expected private benefit derived from the firm's location less the initial cost of buying the firm. Entrepreneurs seek to maximize their expected lifetime utility. All agents have knowledge of the private benefits and the cash flows.

With free entry of prospective entrepreneurs, competition among them causes the entrepreneurs to be indifferent between purchasing a firm in either location. If the firms' expected cash flows are equivalent, then for the buyers to be indifferent the buyer of Firm H (in the high amenity location) must be willing to pay more for the firm such that the buyer's lifetime expected utility is the same as if he/she bought Firm L. Thus, the seller of Firm H (Firm L) area would receive a price premium (discount) relative to what would be expected if the firm was only sold based on

[13] Industry surveys indicate that approximately 30 to 40% of private-to-private company transactions are management buy-ins. A similar number of transactions are private-equity led deals in which the CEO is replaced along with the equity capital

[14] Investors in the search fund have the option to invest in the acquisition financing round on preferential terms (Stevenson et al., 1994).

its expected cash flows. This price premium (discount) reflects the amenities associated with the more (less) desirable areas. In our setup, the cross-sectional difference in prices acts as a differential such that the market for private firms across cities clears.

As we will explore in later sections, if the set of buyers do not value the non-pecuniary benefits of the location (e.g., if the owner does not relocate to the firm's location), then there should be no price differential between the two firms. Similarly, if all potential buyers already live in the location and do not face outside competition, then we would not expect a price differential between Firm H and Firm L. Finally, if the utility of the non-pecuniary benefits from the firm's location that accrues to the entrepreneur do not scale with the level of the expected cash flows, then the percent premium declines for firms with larger cash flow (i.e. the transaction price is be a smaller multiple of cash flows for larger firms).

In order to detect if the price differential between firms arises because of differences in QOL, we use the following equation as our primary specification (i represents the firm, j the firm's industry, k the firm's CBSA, and t the year of the transaction):

$$\ln(\text{Price}_{i,j,k,t}) = \beta_1 X1_{i,j,k,t} + \beta_2 X2_{k,t} + \beta_3 \text{BP}_{k,t} \tag{1}$$

Specifically, we regress log(Price) on an indicator variable which equals one (1) if the firm's location is included on the best places list (BP), as described in Section 2.2. Controls for the target firm (X_1) include log(Sales) capture size effects on firm price and a scaled version of Operating Margin (Operating Profit/Sales) controls for the profitability of the firm.[15] These factors would reflect, for example, the wage differentials between cities because, *ceteris paribus*, a firm in a lower-wage area should have higher earnings, which would be reflected in past operating performance. To compare firms that are equivalent in the cross-section, except for the desirability of the location to

[15] We only examine firms with an operating margin between +1.0 to −1.0. A firm whose operating margins is below −1.0 is typically a firm being liquidated and therefore priced by factors other than current cash flows (e.g., value of intellectual capital, liquidation value, etc.)

the owner, we add local economic and demographic controls (X_2) that may be related to expected cash flows and/or risks. Our specification also includes state, industry, and time fixed effects.[16] The use of state fixed-effects rules out the possibility that any time-invariant regulations at the state level are causing the results (e.g., right-to-work laws). In all of the specifications, we use robust standard errors clustered on CBSA to account for any correlation of residuals within a CBSA (Petersen, 2009). As a control, we also consider how the existence of an incumbent CEO's employment agreement affects (1) the firm price and (2) the likelihood that a buyer is required to live in the city of the firm.[17]

4 Results

4.1 Baseline Specification

Table II reports the results from our primary specifications. We find that target firms located in a best place sell for a premium relative to firms not located in a best place after controlling for company financials and local economic and demographic characteristics. The premium on QOL as proxied by best places is an economically significant 14% after controlling for firm financials. Column 1 shows that the variation in the acquisition price of the firm can be primarily explained by four factors – the size, profitability, and industry of the firm as well as the year in which the firm is sold. In aggregate, these factors alone explain 85% of the variation in firm price. However, as shown in column 2, after controlling for these factors firms located in a best place still show a

[16]We include industry fixed effects to investigate the effects within an industry rather than differences among industries. Furthermore, we include time fixed effects to isolate cross-sectional variation and control for time-series variation in preferences and prices.

[17]Although the database provider removed any explicit payments related to an employment agreement 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 may affect incoming management control, future cash flows and the importance of the location of the firm for incoming management. For example, if the CEO of the target firm remains in place, the buyer would not need to relocate to the acquired firm's location, thereby reducing the importance of non-economic local characteristics.

significant premium.

In column 3 of table II, we include a series of controls for observable economic characteristics of the local area (e.g., population, unemployment, economic growth rates, etc.). We find that the premium for firms in locations with high QOL is robust to the inclusion of these controls. In column 4, we include state level fixed-effects, allowing us to rule out the possibility that any time-invariant regulations at the state level are causing the results (e.g., right-to-work laws). We find that the premium for firms located in high QOL areas is still economically and statistically significant. Further, we note that the coefficient is relatively unchanged across these specifications indicating that the effect on firm price of our proxy for high QOL areas is relatively independent of the other observable characteristics.

The premium related to best places could be related to expected increases in the value of the property that the company uses. If the target firm has favorable lease terms without any price adjustment clauses (which is not common in practice), then the premium could be due to expected cost-savings in future lease payments relative to local competitors. We control for this factor by investigating the impact of lease assumptions on the price of the target firm in column 5. We find that the lease assumption does not significantly impact the price of the target. Importantly, our results related to the effect of best places on the price of the firm are generally unaffected.

In column 6, we interact our best places indicator with an indicator for the per capita income of a city being above median. We find that both the interaction term and the original proxy are both positive and significant. This indicates that a premium for QOL exists in cities with low per capita income as well as those with high per capita income. We interpret this result as being consistent with the hypothesis that the best places measure is not simply a wealth effect in which there is increased entrepreneurial activity. Finally, in column 7 we include the interacted best place variable as well as the geographic controls and state fixed-effects. The results on the effect of QOL on firm price maintain their robustness.

4.2 Alternative Explanations for Price Premiums Associated with Locations

The existing literature on the effects of location on firm price may provide alternative explanations for our results. While the vast majority of this literature has focused on public firms, the same intuition could apply to the transactions in our sample. We investigate the impact of these alternative channels in Table III.

One alternative explanation to the existence of a QOL premium relates to the externalities associated with firms of the same industry clustering in a given location, commonly referred to as "agglomeration effects" (Marshall, 1920). These externalities can result from reduced transportation costs, increased information, attraction of a large talent pool, or shared research, among others (Krugman, 1991). Agglomeration effects also relate to small businesses (Audretsch and Feldman, 1996) which may play a role for the private firms in the sample. 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.

Another channel identified in the literature that affects firm value is the buyer's ability to monitor the firm and the related ability of the firm to access financial capital. Coval and Moskowitz (1999) find evidence that investors prefer securities from companies with local headquarters and identify this as a "home bias" effect. Coval and Moskowitz (2001) document that increased local ownership of a firm is associated with higher future firm returns. Ikovic and Weisbenner (2005) show that individual investors earn better returns on local stocks. Although these studies focus on publicly traded firms, similar intuition could apply to private transactions. We investigate if the effects of home bias might affect our results.

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 those investors would pay a lower price for geographically distant firms in equilibrium.[18] The literature on venture capital investments supports this intuition for private firms. For example, 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. Second, and related to the first, if firms lack access to capital then this may reduce their future cash flows if it prevents investment in future profitable opportunities. Thus, in aggregate, similar firms located in areas with either low investable capital, or fewer connections to other cities with capital, would 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 price and success of private firms.[19]

We test for the existence of these home bias effects on firm prices by including a proxy for the availability of local financial resources in our specification. Specifically, we use the percentage of households in the CBSA that have incomes greater than $200,000. An abundance of wealthy households may indicate that more potential investors are in the area, which may result in increased access to local capital and lower monitoring costs.

Liquidity can also vary with geography. Liquidity in this case is a function of the speed and, concurrently, the deviation from the frictionless price at which one can sell a firm. Loughran and Schultz (2005) find that public firms in rural areas, have lower analyst coverage, and have higher trading costs. They argue that this indicates that a firm's location 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. We test for the effects of liquidity in the local market by using the volume of transactions relative to the number of independent businesses in the area. We interpret a large percentage of businesses being bought and sold in an area as an indicator for market liquidity.

[18]Note that a similar story would hold if being close to a firm increases the availability of soft information available to investors (Petersen and Rajan, 1994; DeYoung et al., 2008).

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

The results in table III show that the premium associated with a firm being in a best place is generally unaffected by the introduction of these controls. This provides some evidence that the best places variable is not a proxy for the aforementioned channels — agglomeration, home bias, or liquidity. Furthermore, when including proxies for all three channels, the coefficients on the proxies do not materially change from running them separately, indicating that they represent distinct characteristics. We find that firms in best places sell for a significant 16% premium after controlling for these channels.

One might be concerned that our proxy for QOL might reflect better long-term survival prospects of a firm, if areas with higher QOL have better business prospects or can maintain a customer base through economic downturns. In order to test if this is a concern, we use the Reference USA database, matching on name and location of the targeted firms. We include all firms for which we could find an a match in Reference USA, and consider a firm to have survived (=1) if it was still reporting positive revenue in 2015. We then test if being in a best place is a predictor of survival. We report the results of this test in Table IV. Using this proxy of survival, we find that being in a best place is not a significant predictor of the firm surviving. We do, however, recognize that this is a crude measure of survival predictability and the inherent potential for selection bias given that we can only observe firms that report to the Reference USA database. However, this is indicative that the QOL amenities we are identifying are not drivers of firm survivability.

Alternatively, it is possible that firms in best places alter the spread between their stated asking price and expected settlement price in order to attract a different type of client. If this was true, then our premium could be reflective of a difference in the strategies of the sellers. In order to test if this is a concern, we compare the stated asking price from the Pratt Stats database with the realized transaction price. Specifically, we calculate the ratio of the transaction price to the asking price. The average firm in our sample sells for approximately 85% of its asking price. We test if firms if the QOL of the firm's location is related to this discount (premium) in Table IV and find that our best place proxy is not a significant predictor of this discount (premium). Thus, we do not find evidence that the QOL amenities we identify are related to the sales price posting strategies of the target firms.

5 Endogeneity Concerns

We recognize that endogeneity, stemming from omitted variables, is a concern with an analysis of this type. To help alleviate this concern, we provide a discussion of potential sources of endogeneity and the methods we use to address them in our analysis.

Despite our controls for various observable characteristics, it is possible that other unobservable local economic characteristics could be driving the relation between the transaction price and the QOL of a city. For example, the firm's price may reflect expected changes to the local entrepreneurial or regulatory environment that are not reflected in the financials of the firm or the economic characteristics of the area in which the firm operates. 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) prices. Similarly, we do not observe if an individual or a company is buying the target firm. The relation of the type of buyer and the location may induce bias in the estimation as the type of firm being bought by an individual may be different than the type being bought by a private company. If there is a correlation between these unobserved characteristics and the proxy for the city's QOL, then this would bias our tests.

5.1 Subsample by Target Size

Cities that are more resilient to economic downturns (or that are less volatile or less correlated with the broader national economy) would bestow local firms with economic benefits that we would expect to be rationally priced. Likewise, changes in expectations related to real estate or wage differences that arise from the QOL of the city would also impact the economic value of the firm. If only these conditions affected transaction prices and not the non-pecuniary benefits that arise from the QOL of a city, then we would expect a similar impact across buyer types and target firm sizes. For example, a 5% increase in the economic growth of a location should increase the price of a small firm in a similar proportion to that of a larger firm.

In contrast, we would not expect the premium associated with non-pecuniary benefits that arise from the QOL of an area to be uniform across all firm sizes. For a premium on desirable locations to exist, a non-local buyer needs to be among the potential buyers (or expected to be among potential buyers in the future). A report by the International Business Brokers Association (IBBA) finds that buyers of small firms are purchased by local buyers 80% of the time, while firms with revenues in excess of $1 million are purchased by buyers who are more than 100 miles from the target more than half the time.[20] Consistent with this finding, we claim that the smallest targets are insufficient in size to motivate a buyer from another region to move. Thus, we would not expect low value firms in our sample to show a significant premium related to the QOL of the firm's location.

We also expect that the premium on QOL lacks scalability. For a firm with a purchase price of $1,000,000, we estimate the owner's lifetime value of the non-pecuniary benefits to be approximately $160,000. While we expect a prospective buyer that values the non-pecuniary benefits of a city to pay a larger dollar premium for a larger firm, reflecting an assumption that the buyer of a larger firm can spend more to live in desirable locations, we believe that the relation breaks down as the firm gets larger (e.g., a $1.2 million premium for a $10 million firm seems unreasonable). The lack of scalability suggests that the largest target firms bestows a private benefit onto the buyers that is a relatively smaller percentage of size, and therefore, more difficult to detect statistically. To summarize, if the QOL of a city, and not its growth prospects, causes firms to sell at a premium, then we hypothesize that the coefficient will not be significant for the smallest and largest transactions. To test this, we divide the sample into quintiles based on transactions size.

[20] IBBA Market Pulse, Q1-2015.

Table V Panel A reports that firms with a purchase price of less than \$100,000, the lowest quintile of price, do not exhibit a significant premium related to the QOL of a city. Similarly, firms that have a transaction price greater than \$5 million, the highest quintile of price, also do not exhibit a statistically significant relation between price and QOL. However, the middle quintiles of the sample, representing transactions that likely involve non-local entrepreneurs, show a statistically and economically significant premium. This finding would be consistent with the interpretation that non-pecuniary benefits are scale invariant.

5.2 Subsample by Buyer Type

Next we investigate circumstances in which different buyer types acquire the target. Different buyers place different values on the non-pecuniary benefits related to the QOL of a city. For example, when the buyer is a public company, the shareholders cannot consume the non-pecuniary benefits of the target firm location. Further, the CEO of the public firm does not capture the non-pecuniary benefit unless she were to relocate – something we do not expect given the difference in size between the relatively small target firms in the transaction sample and the larger public buyers. As a result, if non-pecuniary benefits related to firm location are affecting the price of the firm, then we would not expect it to appear if the buyer is public.[21] In contrast, we would expect a premium for private buyers. Alternatively, if the premium was driven by differences in expected cash flows based on location (e.g., unobservable growth prospects), then we would expect both types of buyers to pay a premium.

To test this, we divide the sample into firms purchased by publicly listed firms and firms purchased by private buyers. If the coefficient on best places is large and significant for private buyers and smaller and insignificant for public buyers, then this would be consistent with our hypothesis that

[21] We note that this result could imply that, *ceteris paribus*, private firms always outbid public firms. However, we observe that public firms generally pay significantly more for the existing economic benefits of a target than private bidders (i.e., public bidders pay higher valuation multiples than private bidders) and this private/public premium exceeds any premiums related to firm location (Bargeron et al., 2008).

private buyers are paying for the non-pecuniary benefits that are related to the QOL of a location. Table V Panel B reports that public buyers do not pay a statistically significant premium for locations. In contrast, private buyers have a statistically significant 17% premium associated with the best places indicator variable. This result is consistent with the hypothesis that entrepreneurs are paying for the non-pecuniary benefits that arise from the QOL of a location and that is not driven by cash flow or risk-based explanations.

Further, our results show that this finding holds for a subsample of the middle three quintiles of size that is also split by buyer type (i.e., public or private). We find that the coefficient on our best place proxy is similar in magnitude and significance for private buyers compared to that found in Section 5.2. However, it is smaller and still lacks significance for Public buyers. Thus, the effect of buyer type is not just capturing differences in sizes of the targets. This evidence is inconsistent with the hypothesis that economic factors associated with best places are explaining the price premium. Instead, it is consistent with a buyer paying a premium for non-pecuniary private benefits that arises from the QOL of a city.

One potential bias in these test is if the buyer type is correlated with the size of the firm. Although we distinguish between buyers that are public companies or not, we are unable to distinguish between different types of non-public buyers. Among this group, for the buyer type (private firm vs. individual) to bias our estimate, private firms (e.g., private equity firms), who generally pay premiums relative to individuals, would need to select target firms on the basis of the city's QOL as well. Firms which buy targets would presumably purchase the targets based on their expected cash flows, unlike individual buyers, which may also pay a premium for the ability to consume the intangible benefits associated with the target firm's location. As a result, we would expect the premium to be consistent across all target firm sizes unless private firm buyers only purchased firms of a particular target size. We know from industry surveys that firms are more likely to purchase the largest quintile of firms in our sample, yet we find that the premium declines with this group, which is inconsistent with the alternative hypothesis that buyer type explains our results.

5.3 Instrument for QOL

, Other factors may affect a buyer's choice to pay a premium for a firm in a place that is highly desirable for non-pecuniary reasons. For example, Austin, TX is said to bestow non-pecuniary benefits to entrepreneurs because entrepreneurial activity is flourishing rather than because of overall economic growth (though that plays a role). Thus, the vibrancy of the city could result in an influx of young, educated people that affects future firm cash flows. As a result, we may observe a correlation between unobserved entrepreneurial activity and takeover premiums in our data. This factor makes identification particularly challenging since it is difficult to control for unobservable measures of entrepreneurial activity. As a result, we require an exogenous source of variation in QOL — that is independent of entrepreneurial activity or other contemporaneous unobserved factors.

To help mitigate the endogeneity concern, we construct an instrumental variable based on a lagged measure of the QOL of a city using the methodology of Albouy (2008). This adjusted QOL measure uses the notion that in a competitive environment workers reveal their preferences for desirable locations through the wages they are willing to accept to take a job. Albouy (2008) builds on the Rosen-Roback model where workers accept either lower wages or pay a higher cost of living to live in areas with better amenities. By comparing the 'wage differential' in a city with its 'housing cost differential' one can calculate how much workers in a city are willing to pay for its amenities.[22] Furthermore, Albouy (2008) adjusts these differentials to account for household buying power, fed-

[22]The wage differential arises from a regression of the wages of workers on controls for employee characteristics including industry, occupation, experience, education, race, veteran status, immigrant status, marriage status, English speaking ability, all interacted with gender, and a CBSA fixed effect. The housing differential is from a regression of housing costs (either gross rent or imputed gross rent) on dwelling characteristics (size, bedrooms, kitchen, etc.), property size, a condo dummy, a commercial use dummy, all interacted with ownership status, and a CBSA fixed effect. The two CBSA fixed effects represents the wage and housing cost differentials, respectively. The difference, using the adjustments of Albouy (2008), represents the QOL measure for the area.

eral taxes, and additional sources of cost-of-living differences. We replicate the calculations for each CBSA in our sample using the US Census public-use (IPUMS) data from the 1990 US Census (Ruggles et al., 2004). We then supplement this measure using a production amenity measure calculated in Albouy and Stuart (2012) that captures any additional non-time varying local production amenities (e.g., natural harbors, navigable rivers and agglomeration economies) that might affect labor productivity and firm efficiency that are measured in labor wages. Thus, any non-time varying economic characteristics would be reflected in the production amenity while contemporaneous economic growth prospects of a location should be reflected in our contemporaneous location controls and target firm financials.

Two concerns arise in the use of this measure as a potential instrument. First, the instrument should be sufficiently correlated with the endogenous variable (i.e., best places) and this correlation should not be spurious, but instead driven by the underlying economic reasoning. We show that there is a strong relation between the lagged adjusted QOL measure and the best places variable. Further, there is a strong developed literature for using hedonic methods such as these for measuring a location's QOL (Albouy, 2008; Chen et al., 2010; Behrens et al., 2014; Eeckhout et al., 2014; Ahlfeldt et al., 2015; Diamond, 2016). In addition, it is likely that many of the non-economic characteristics of a city that give it a high QOL are persistent. Thus, it is likely the non-economic component that causes high QOL in the past will continue to cause high QOL throughout the course of our sample. Accordingly, we claim that our instrument satisfies the relevance condition.

Second, the instrument must be exogenous. Concerns of an endogenous instrument may arise here, for example, if the instrument is correlated with the city's entrepreneurial environment or the overall economic environment. For instance, if Adjusted QOL (1990), measured at the CBSA level, is also correlated with the CBSA's entrepreneurial environment, it would not be completely exogenous to a firm's financial prospects. We argue that this is not a concern for our tests for the following reasons. First, there is a significant gap in time between when our adjusted QOL measure is calculated and the surveys on which our best place variable is based. This gap combined with our contemporaneous geographic- and firm-level controls, gives us confidence that the lagged value of a CBSA's adjusted QOL measure is only related to firm price through its effect on the non-economic characteristics of a location. This is likely to hold since the non-economic characteristics of a location are highly persistent whereas the economic characteristics are likely to be time-varying. Second, we include state fixed effects to control for how inter-state variation in business environments, which might also be persistent, affect a firm's economic prospects. The state fixed affects allow us to set aside concerns that relate to persistent components of state taxes, regulatory regimes, and ease of doing business that may be correlated with best places. Further, we include a control that explicitly controls for the production amenity of a location, meaning our adjusted QOL measure captures only the amenities related to QOL that are independent of local production factors that affect the firm. Finally, we note that our calculations of adjusted QOL are based on workers' wages. Therefore there is a greater likelihood they would be independent of the growth prospects of small business owners in the area but still reflective of QOL for those small business owners. Thus, our instrument likely satisfies the exclusion restriction.

Table VI reports the results from a two-stage least squares regression of the natural log of Price on best places, instrumented with Adjusted QOL (1990). First, we find that the Adjusted QOL (1990) measures is a strong predictor of our best places measure (F-stat = 22.93 and is a highly significant coefficient in the direction we expect). Further, we find that the instrumented best places measure is a significant predictor of firm premiums. Additionally, the economic impact is similar to our OLS estimates — the instrumented best place proxy increases the acquisition price of the target by approximately 15.7% (compared to 14.4% in our baseline OLS specification). Moreover, when we include local production amenities as a control, we find that our results are robust. Specifically, the coefficient on instrumented best place is of similar magnitude and our historical Adjusted QOL is still a good predictor of being a best place. Further, when we include the geographic and other additional controls, the coefficient on instrumented best place is still positive and significant.

6 Additional Discussion and Robustness

In this section, we discuss some additional mechanisms that might bias or explain our main results — the relation of non-pecuniary benefits related to the QOL of a city and the price of an acquisition. One possible concern is that firms with good prospects choose to locate in a best place for other unobservable reasons. If this form of assortative matching exists, then the best place measure would also capture a measure of firm quality as opposed to just the QOL of the location for a buyer. Although this could be an issue with high-tech firms or those that receive VC-type funding, we do not believe that the types of firms that are most common in our sample are subject to this form of assortative matching. Instead, we expect the original owner started the firm in an area in which he/she was already living. Therefore, our implicit assumption that businesses are exogenously assigned to locations, after controlling for observables, should be valid.

Another alternative explanation for our findings is that the price premium reflects areas in which firms can more easily attract talent beyond that of the buyer. For example, if Austin, Texas has a reputation for being an attractive place to work, then more workers may consider relocating to the area in search of those amenities. In return, the relative wages paid for these workers would fall, as would the cost of finding talented employees. The general intuition of this story is consistent with our story of the buyer paying for non-pecuniary benefits. Although we cannot fully separate the premium for non-pecuniary benefits accruing to the buyer from this story, we do not believe this is a primary driver for two reasons. First, we include controls for firm profitability and economic growth of the area. This controls for any positive historical effect of talent, and implies that any remaining premium paid for the ability to attract talent relates to future talent needs of the firm. Second, if the talent hypothesis was true, then we would expect all buyers to pay the premium for talent attraction. However, our results in Table V are inconsistent with this hypothesis as only private buyers pay a premium for firms in cities with a high QOL.

Another potential way for growth to be driving our results would be if there is a correlation between the locations of high-growth industries and the best places proxy. For instance, 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 rerun our primary specification on the five largest industry sub samples. A robust result would suggest that the effect occurs across multiple industry subsamples rather than being due to a single dominant and fast growing industry.

Table VII reports the results of the regression within the five largest industry sub-samples. We find that in these sub-samples, there still exists a premium for the QOL of a city, as proxied by the best places variable. Although there is some variation in the magnitude of the premium across industries, we find a positive coefficient across all industries and significance within three of the five. The absence of significance for the personal and business services industry may be a reflection of the ability to relocate firms in this industry segment. For instance, many of the firms in this industry segment are software firms whose primary assets, intellectual property, could be easily relocated — thus eliminating the premium that a prospective buyer would pay for enjoying the QOL of the target firm's city. Moreover, we note that given the limited sample size, we have limited power in testing this effect. We do note that in terms of magnitude, the coefficients are similar in Personal and Business Services to our main specifications, indicating that the lack of significance may be related to the sample size.

We also perform several additional robustness tests. We test our specifications within certain periods to rule out the notion that any single period is driving the result. Specifically, we split our data into pre- and post-2005 and find similar results. In addition, we check if the premium for businesses located in high QOL areas exists in economic downturns. Specifically, we divide our sample into quarters in recessions (as defined by the National Bureau of Economic Research (NBER)) and those outside of recessions. Using these subsamples, we find that the premium for high QOL persists both in economic booms and busts. Although there is slight variation across periods, the magnitudes are qualitatively similar. This finding supports our hypothesis that the premium is related to the amenities that a location provides and not other characteristics related to fundamentals or discount rates that might vary with aggregate economic conditions. As a further robustness check, we include industry $\times$ time fixed effects to control for the concern that industry trends drive the results. The results are similar, indicating that the results are robust to within the same industry and year. The use of these fixed effects also controls for any time-varying industry level growth or expected growth. Table VIII reports these robustness checks.

Almazan et al. (2010) find evidence that firms in industry clusters have more opportunities for acquisitions and thus maintain financial slack for potential growth. This effect causes firms located in growing cities to maintain more financial slack. To test if this biases our results, we investigate if the financial slack of the target firm affects the results. The results in Table IX suggest that firms in high QOL cities may have other differentiating characteristics, and in particular, that they maintain more financial slack. Importantly, even in the presence of controls for financial slack in the specification, we continue to find results generally consistent with the non-pecuniary benefits hypothesis. Table IX also shows that our results are robust to controlling for realized 5-year growth rates, another proxy for expected growth.

We also investigate if the form of payment consideration affects the best places premium. In our sample, the majority of buyers are non-public firms, and the QOL premium only exists for these non-public firms. Since the valuations of private deals are typically priced on multiples of cash flow, we might expect that deals which have more cash (rather than equity) as payment consideration, will also have smaller growth opportunities. This could introduce a bias in our results. We find that controlling for the amount of the transaction price that is cash payment consideration slightly reduces the economic significance of the premium associated with the QOL. However, the results continue to be economically and statistically significance, after controlling for all-cash deals, as well as all of these additional controls.

Next we investigate if our results are driven by the forward-looking nature of our best places measure. The best places measure used in our study is based on only the 2013 survey results. While there are occasional changes in the rankings over time, these changes appear to be related to changes in the availability of data. For example, the 1990 and 1991 surveys are largely based on surveys. In contrast, the 2013 best places rankings are constructed from data from a variety of sources (e.g. Census Bureau, BEA, NOAA, EPA, and FBI) and provide similar results across the publications which report best places rankings. In Table X, we investigate if the earliest historical measure of best places we can find provides similar empirical results. Specifically, we run similar specifications as above, but base the best places measure on two surveys done in 1990 and 1991. The results are generally consistent with our main results from Table III, as well as the subsample results from Table V.

Deng and Gao (2013) develop several different measures of the living environment around the headquarters of public firms. Their results are generally consistent with the wage differential story between high and low QOL cities. In Table XI, we investigate if replacing our best places proxy with the Morgan Quinto State Index for QOL generates similar results. Similar to Deng and Gao (2013), we use a time-varying measure of QOL, based on the state ranking in the year prior to the transaction (Top State is a 50), as well as a static measure based in 1994, the year prior to the first year in our sample. Using both the time-varying and static measures, we find similar results to our main specifications. Firms located in states with higher QOL sell for a significant premium, after controlling for firm and geographic characteristics, relative to firms located in states with lower QOL. Moreover, the results continue to hold for our two sub-sample tests. This indicates that the effect we identify with our best places proxy is not due to its construction but due to the revealed preference of entrepreneurs for high amenity locations.

Since the best places measure and the Morgan Quinto index do not provide a clear indication for the underlying mechanism that drives our results, we next explore if using only the weather and topography of a location to proxy for QOL give rise to a QOL premium. To test this, we develop a Z-score based measure of weather and topography. Our index includes six weather measures: (1) total precipitation; (2) days with rain greater than .01 inches; (3) the number of days with temperatures greater than 90 degress F; (4) the number of days with temperatures less than 20 degrees F; (5) the mean July humidity level; and (6) the mean hours of January sunlight; . Negative weather attributes (1-5) are given negative values (e.g., having larger amounts of rain is bad). It also contains two topographical measures associated with high QOL: (1) the % of surface area with water; and (2) the land surface topography code, which measures the diversity of landscapes within a CBSA. We take the sum of the z-scores for each location, and standardize it such that the average location has a index value of 0, and the standard deviation is 1. Table XII informs us that cities endowed with good weather (or the absence of miserable weather), and varying topography are correlated with a QOL premium. For robustness, we also show that generating an index based on using a just an indicator for if the location is in the top-20% of places with a given index attribute (e.g. a place in the top 20% of geographic variation and January sunlight has a value of +2) produces similar results.[23]

To further distinguish the effects of QOL from those of local economic characteristics on prices, we decompose the best places variable by separating the effects on QOL of various non-economic characteristics from the economic characteristics of a city. We include factors such as climate mildness, topographical diversity, and the abundance of water, all of which may not directly affect a firm's financial performance. Using this decomposition, we construct a new continuous measure of the QOL of locations such that it only represents the orthogonalized effects of specified non-economic components relative to effects of the economic components on the likelihood of being a best place. Consistent with our main result, we find a significant positive relation between the price of a target firm and the QOL of a city. Importantly, only transactions by buyers which are likely to relocate to the city have a significant positive loading on this measure, providing additional support

[23]Values are standardized such that the range from 0-10

for the identified price premium being only associated with the non-pecuniary benefits from local amenities. The results are further described in the Online Appendix.

7 Conclusion

In this paper we analyze the cross-sectional variation in the acquisition prices of privately held firms across the United States. After controlling for economic factors related to a firm's location, we present evidence that certain buyers pay for the non-pecuniary private benefits associated with the QOL of a firm's location. We interpret this result as empirical evidence of the non-pecuniary benefits that entrepreneurs obtain from locations of the firms that they manage.

We use an historical measure of QOL based on revealed worker preferences, using the methodology of Albouy (2008), controlling for local production amenities of Albouy and Stuart (2012), as an instrument for the non-pecuniary benefits that a city's QOL provides to a small business owner. The results using this instrument suggest that the entrepreneur that operates the firm derives non-pecuniary benefits from the location that do not accrue to other shareholders that value the firm as a purely financial asset. While this premium does not constitute all the non-pecuniary benefits of entrepreneurship, it highlights an important channel that has not been previously discussed.

The existence of a premium related to location may help explain why some private firms may appear expensive — the researcher observes the sale price and financial returns, but not the non-pecuniary benefits. We interpret our results as evidence that entrepreneurs are willing to trade financial returns of assets in exchange for non-pecuniary benefits.

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Figures and Tables

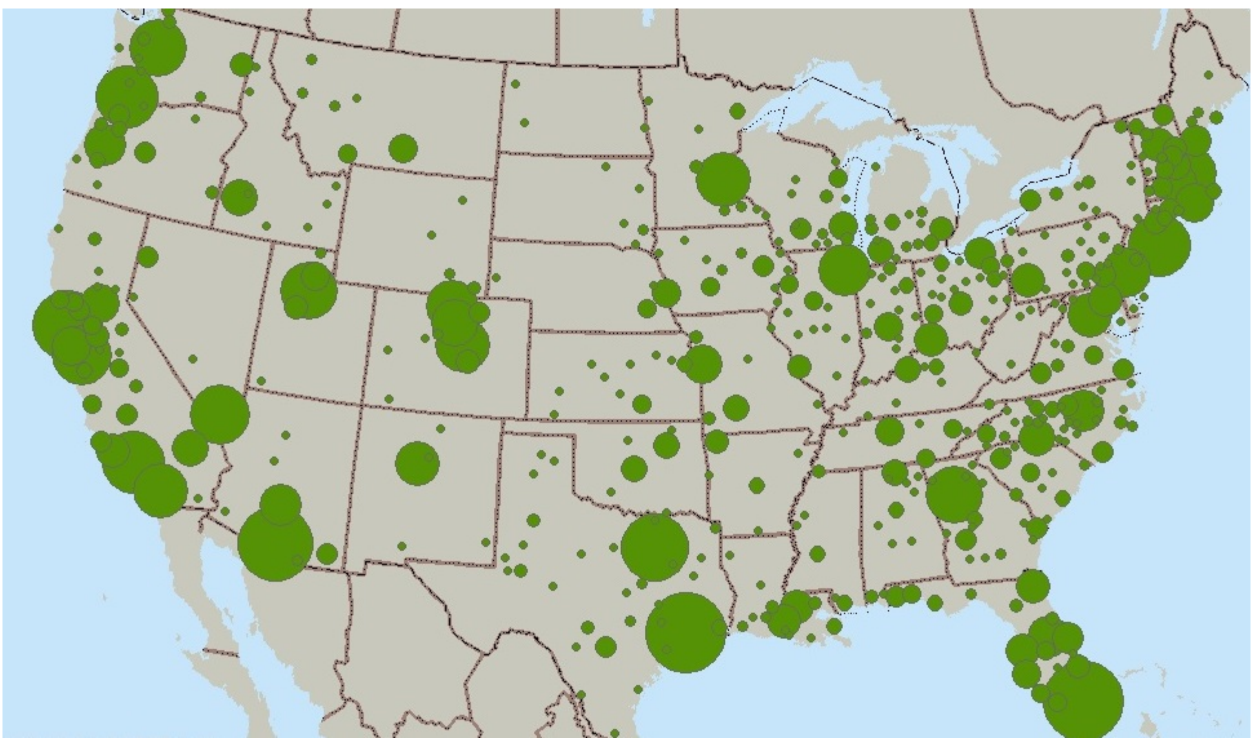

Figure 1. Heat Map of Transactions. The size of each circle represents the number of transactions per locations used in the analysis. Transactions are mapped to individual CBSA's.

Table I. Transaction Summary Statistics

This table shows the summary statistics of variables used in the analysis. The unit of observation is individual transactions and includes all transactions from between 1995–2012 for which the city of the transaction was identified and transaction price, sales, and operating profit was reported. Transactions that were in the top and bottom 1% were dropped as well as any transactions that did not occur within a CBSA.

	Mean	**Std. Dev**	**Min**	**25th Pctile**	**Median**	**75th Pctile**	**Max**	**N**
Price/Sales	0.991	3.858	0.006	0.324	0.516	0.864	160	8,262
Price ($000)	8,199	29,848	24	120	299	1,600	343,482	8,262
Operating Profit/Sales	0.098	0.188	−1.000	0.012	0.080	0.187	1.000	8,262
Operating Profit ($000)	397.3	3,763	−168,125	6.513	49.18	158.7	83,073	8,262
Net Sales ($000)	9,152	41,901	4.270	281.5	653.7	2,610	1.291×10^6	8,262
Local Industry Concentration	0.131	0.075	0.001	0.073	0.105	0.199	0.467	8,253
ln(Tax Burden)	−2.376	0.120	−2.811	−2.456	−2.366	−2.281	−2.078	8,262
ln(Population)	14.14	1.037	9.99	13.52	14.36	14.80	16.28	8,262
ln(Pop. Density)	6.074	1.023	2.512	5.475	6.204	6.542	8.900	8,262
ln(Median Home Price)	12.10	0.51	10.84	11.71	12.03	12.40	13.50	8,199
Employment Agreement	0.333	0.471	0	0	0	1	1	8,262
Transactions per year/# ('000) Firms	0.921	0.952	0.049	0.356	0.574	0.001	0.004	8,262
5-year Pop. Growth	0.015	0.010	−0.042	0.008	0.014	0.022	0.066	8,262
5-Year PCPI Growth	0.042	0.016	−0.014	0.033	0.041	0.051	0.113	8,262
5-Year Job Growth	0.015	0.017	−0.052	0.003	0.015	0.0250	0.084	8,262
5-Year Home Price Growth	0.058	0.053	−0.167	0.032	0.051	0.090	0.195	8,195
% of Pop. w/ Bachelors or higher	0.306	0.070	0.107	0.264	0.294	0.342	0.579	8,251
% of Households with Inc.> 200K	0.039	0.023	0.005	0.0238	0.033	0.047	0.169	8,262

Table II. Acquisition Price and Quality of Life

This table reports the results from regressing the natural log of the transaction price on various firm financial controls, geographic controls, and an indicator for Best Place (= 1 if the transaction takes place in a CBSA deemed a Best Place). We also report the effect from the interaction of Best Place and Indicator($Per\ Capita\ Income > Median$). Financial Controls are included for sales, operating profit/sales ratio and an indicator for the use of an Employment Agreements or if the buyer of the firm assumed a lease. Geographic controls include population, population density, % of population with a bachelors or higher, median home price, tax burden, and 5-yr growth rates. We provide complete variable definitions and sources in the Appendix. Industry (FF-48), year, and state fixed effects are as reported. Reported below the coefficients, in parentheses, are heteroskedasticity-consistent standard errors, clustered on CBSA. *** indicates significance at 1%, ** at 5%, and * at 10%.

Dep. Var. = ln(Price)	**Firm Financials (1)**	**Best Place (2)**	**Geographic Controls (3)**	**State FE (4)**	**Assumed Lease (5)**	**BP Interacted (6)**	**All (7)**
Quality of Life (QOL)							
Best Place		0.144***	0.170***	0.181***	0.180***	0.162***	0.161***
		(0.0329)	(0.0336)	(0.0401)	(0.0397)	(0.0352)	(0.0418)
Best Place x Ind(Per Capita Income > Median)						0.0239	0.0275
						(0.0432)	(0.0432)
Above Median per Capita Income						−0.0712**	−0.0787**
						(0.0284)	(0.0311)
Firm Financial Controls							
ln(Sales)	0.980***	0.977***	0.971***	0.962***	0.963***	0.964***	0.963***
	(0.00721)	(0.00742)	(0.00927)	(0.00902)	(0.00892)	(0.00874)	(0.00889)
Operation Profit/Sales	0.388***	0.426***	0.473***	0.457***	0.456***	0.407***	0.461***
	(0.104)	(0.104)	(0.109)	(0.110)	(0.109)	(0.105)	(0.109)
Employment Agreement	−0.0345	−0.0277	−0.0196	−0.0252	−0.0225	−0.0296	−0.0220
	(0.0247)	(0.0225)	(0.0222)	(0.0229)	(0.0232)	(0.0225)	(0.0230)
Assumed Lease					−0.0204	−0.0160	−0.0190
					(0.0221)	(0.0218)	(0.0220)
Geographic Controls							
% of Pop. w/ Bachelors or higher			−0.373	−0.306	−0.299		−0.217
			(0.293)	(0.378)	(0.377)		(0.375)
ln(Population)			−0.0403**	−0.0229	−0.0224		−0.0178
			(0.0183)	(0.0200)	(0.0199)		(0.0206)
ln(Pop. Density)			0.0541**	−0.000131	0.00101		0.00667
			(0.0234)	(0.0316)	(0.0316)		(0.0315)
ln(Tax Burden)			0.118	0.487	0.474		0.450
			(0.150)	(0.427)	(0.425)		(0.440)
ln(Median Home Price)			−0.0208	0.0251	0.0240		0.0669
			(0.0478)	(0.107)	(0.106)		(0.106)
5-year Pop. Growth			0.480	1.944	1.957		2.095
			(2.200)	(2.696)	(2.678)		(2.595)
5-Year PCPI Growth			−0.386	−0.364	−0.379		0.0126
			(1.394)	(1.232)	(1.233)		(1.182)
5-Year Job Growth			0.332	−0.389	−0.362		−0.229
			(2.151)	(2.275)	(2.261)		(2.194)
5-Year Home Price Growth			−0.483	−0.826	−0.836*		−0.979*
			(0.435)	(0.502)	(0.499)		(0.509)
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State FE	No	No	No	Yes	Yes	Yes	Yes
Adj. R2	0.850	0.851	0.849	0.851	0.851	0.852	0.851
Obs.	8,272	8,272	7,823	7,822	7,822	8,271	7,822

Table III. Acquisition Price and Alternative Channels

This table reports the results from running a regression of the natural log of the price for a transaction on various firm financial controls, geographic controls, variables related to financial connectedness and capital availability, and variables that proxy for localized liquidity. Geographic controls include all the controls listed in Table II. The local industry concentration represents the number of establishment. The local wealth represents the percentage of households with annual income in excess of $200,000. As a measure of market liquidity for firms we control for the number of transactions per year scaled by the number of firms in the industry. We provide complete variable definitions and sources in the Appendix. Industry (FF-48), year, and state fixed effects are as reported. Reported below the coefficients, in parentheses, are heteroskedasticity-consistent standard errors, clustered on CBSA. *** indicates significance at 1%, ** at 5%, and * at 10%.

Dep. Var. = ln(Price)	**Baseline (1)**	**Agglomeration (2)**	**Home Bias (3)**	**Liquidity (4)**	**All (5)**	**Industry x Year FE (6)**
Quality of Life (QOL)						
Best Place	0.181***	0.179***	0.179***	0.161***	0.159***	0.156***
	(0.0401)	(0.0393)	(0.0429)	(0.0407)	(0.0420)	(0.0404)
Agglomeration						
Local Industry Concentration		−1.036***			−1.040***	−0.970***
		(0.199)			(0.199)	(0.208)
Capital Home Bias						
% of Households with Inc.>$200K			3.261***		3.089***	2.849**
			(1.175)		(1.187)	(1.217)
Market Liquidity						
Avg Transactions per year/Firm HQ				−5.019**	−4.407**	−5.071**
				(1.996)	(2.161)	(2.204)
Firm Financial Controls	Yes	Yes	Yes	Yes	Yes	Yes
Geographic Controls	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	No
Year FE	Yes	Yes	Yes	Yes	Yes	No
State FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry x Year FE	No	No	No	No	No	Yes
Adj. R2	0.851	0.851	0.851	0.851	0.851	0.855
Obs.	7,822	7,813	7,822	7,822	7,813	7,679

Table IV. Discount to Ask and Survival

This table reports the results from running the discount to ask and the survival of the firm (=1 if survives) on our QOL proxy. The discount to the asking price is calculated as the Transaction Price / Asking Price. Survival (=1) if the firm had some form of revenue, based on name and location, in the Reference USA database as of 2015, conditional on being in the database. Further discussion on creating this variable is provided section 4.2. Geographic controls include all the variables listed in Table II. Additional controls include all of the variables listed under additional channels in Table III. Industry (FF-48), year, and state fixed effects are as reported. Reported below the coefficients, in parentheses, are heteroskedasticity-consistent standard errors, clustered on CBSA. *** indicates significance at 1%, ** at 5%, and * at 10%.

	Survival		**Discount to Ask**	
	Base	**Controls**	**Base**	**Controls**
	(1)	**(2)**	**(3)**	**(4)**
Quality of Life (QOL)				
Best Place	−0.0173	−0.00104	−0.0114	−0.00102
	(0.0269)	(0.0275)	(0.0103)	(0.0103)
Firm Financial Controls				
ln(Sales)	0.0470***	0.0453***	0.0260***	0.0257***
	(0.00707)	(0.00756)	(0.00351)	(0.00363)
Operating Profit/Sales	−0.0311	−0.0398	0.0731***	0.0700**
	(0.0413)	(0.0394)	(0.0273)	(0.0283)
Employment Agreement	−0.00582	−0.0137	0.00815	0.00922
	(0.0223)	(0.0208)	(0.00975)	(0.0101)
Geographic Controls	No	Yes	No	Yes
Additional Controls	No	Yes	No	Yes
Industry FE	Yes	Yes	Yes	Yes
State FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Adj. R2	0.0315	0.0356	0.0267	0.0279
Obs.	3,405	3,285	5,352	5,104

Table V. Subsample Tests

This table reports the results from running a regression of the natural log of the transaction price on an indicator for best place (= 1 if the target is located in a best place) and various controls. Geographic controls include all the variables listed in Table II. Additional controls include all of the variables listed under additional channels in Table III. Industry (FF-48), year, and state fixed effects are as reported. Panel A shows sub-samples separated by transaction size. Column 2 shows transactions between \$0.1 million and \$4.92 million, while column 1 and column 3 show smaller and larger transactions. Panel B shows transactions in which the acquirer was a private (column 1) and public (column 2). Column 3 and column 4 show subsamples by acquirer type for the middle three quintiles of transaction size. Other controls are included as described in Table II and Table III. Reported below the coefficients, in parentheses, are heteroskedasticity-consistent standard errors, clustered on CBSA. *** indicates significance at 1%, ** at 5%, and * at 10%.

(A) Size Subsamples

Dep. Var. = ln(Price)	**Small (1)**	**Medium (2)**	**Large (3)**
Quality of Life (QOL)			
Best Place	−0.0184	0.135***	−0.0224
	(0.0275)	(0.0316)	(0.0727)
Firm Financial Controls			
ln(Sales)	0.169***	0.676***	0.529***
	(0.0157)	(0.0130)	(0.0256)
Operating Profit/Sales	0.147***	0.490***	0.162
	(0.0478)	(0.0877)	(0.121)
Employment Agreement	0.0237	0.0817***	−0.277***
	(0.0205)	(0.0205)	(0.0560)
Geographic Controls	Yes	Yes	Yes
Additional Controls	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
State FE	Yes	Yes	Yes
Adj. R2	0.125	0.639	0.473
Obs.	1,498	5,022	1,280

(B) Buyer Subsamples

Dep. Var. = ln(Price)	Full Sample		Middle Quintiles	
	Private	Public	Private	Public
	(1)	(2)	(3)	(4)
Quality of Life (QOL)				
Best Place	0.147***	0.00962	0.122***	0.0559
	(0.0368)	(0.0780)	(0.0327)	(0.101)
Firm Financial Controls				
ln(Sales)	0.827***	0.768***	0.675***	0.354***
	(0.0136)	(0.0200)	(0.0151)	(0.0433)
Operating Profit/Sales	0.853***	0.264*	0.820***	0.0368
	(0.0669)	(0.146)	(0.0768)	(0.228)
Employment Agreement	0.0994***	−0.157**	0.101***	0.119
	(0.0205)	(0.0693)	(0.0205)	(0.109)
Geographic Controls	Yes	Yes	Yes	Yes
Additional Controls	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
State FE	Yes	Yes	Yes	Yes
Adj. R2	0.733	0.608	0.614	0.229
Obs.	6,193	1,616	4,556	458

Table VI. Instrumenting with Adjusted QOL (1990) for Best Places

This table reports the results from a 2SLS regression of the natural log of the transaction price on an indicator for best place (= 1 if the target is located in a best place) and various controls. Best places is instrumented using a computed Adjusted Quality of Life (a-QOL) measure on 1990 census data for each CBSA. Adj. QOL (1990) is calculated using the methodology of Albouy (2008) on 1990 census data. The census data is from the 1990 Integrated Public-Use Microdata Series (IPUMS), from Ruggles et al. (2004). In addition, we control for the production amenities as calculated by Albouy and Stuart (2012). Geographic controls include all the variables listed in Table II. Additional controls include all of the variables listed under additional channels in Table III. Industry (FF-48), year, and state fixed effects are as reported. Reported below the coefficients, in parentheses, are heteroskedasticity-consistent standard errors, clustered on CBSA. *** indicates significance at 1%, ** at 5%, and * at 10%.

	First Stage			Second Stage		
Dep. Var. =	**Best Place**	**Best Place**	**Best Place**	**ln(Price)**	**ln(Price)**	**ln(Price)**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
Quality of Life (QOL)						
Adj.-QOL 1990	6.042***	5.422***	6.706***			
	(1.276)	(1.652)	(2.120)			
Best Place (Instr.)				0.157**	0.173**	0.234**
				(0.0752)	(0.0849)	(0.118)
Firm Financial Controls						
ln(Sales)	0.0128**	0.0118**	−0.000972	0.983***	0.984***	0.980***
	(0.00533)	(0.00533)	(0.00348)	(0.00872)	(0.00879)	(0.00893)
Operating Profit/Sales	−0.0899**	−0.0921**	−0.0809**	0.436***	0.442***	0.524***
	(0.0361)	(0.0387)	(0.0319)	(0.106)	(0.107)	(0.108)
Employment Agreement	−0.0529**	−0.0597**	−0.0265	−0.0375*	−0.0383*	−0.0227
	(0.0242)	(0.0246)	(0.0184)	(0.0222)	(0.0227)	(0.0232)
Other Controls						
Production Amenity		1.322	−0.455		−0.0105	−0.0848
		(0.991)	(1.051)		(0.291)	(0.587)
Geographic Controls	No	No	Yes	No	No	Yes
Additional Channels	No	No	Yes	No	No	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
State FE	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R2	0.523	0.543	0.691	0.863	0.863	0.862
Obs.	8,301	8,197	7,738	8,424	8,324	7,872
First Stage F-Stat	22.903	11.025	10.065			

Table VII. Industry Subsamples

This table reports the results from running a regression of the natural log of the transaction price on an indicator for best place (= 1 if the target is located in a best place) and various controls. Industries displayed are the five largest FF-48 industries by transaction count. Geographic controls include all the variables listed in Table II. Additional controls include all of the variables listed under additional channels in Table III. Industry (FF-48), year, and state fixed effects are as reported. Reported below the coefficients, in parentheses, are heteroskedasticity-consistent standard errors, clustered on CBSA. *** indicates significance at 1%, ** at 5%, and * at 10%.

Dep. Var. = ln(Price)	**Personal Svcs**	**Bus. Svcs**	**WholeSale**	**Retail**	**Restaurants**
Quality of Life (QOL)					
Best Place	0.115	0.110	0.420***	0.196***	0.114*
	(0.0842)	(0.0811)	(0.140)	(0.0665)	(0.0623)
Firm Financial Controls					
ln(Sales)	0.889***	1.060***	0.905***	0.869***	0.942***
	(0.0374)	(0.0207)	(0.0234)	(0.0210)	(0.0405)
Operating Profit/Sales	0.934***	0.250	0.284	0.898***	0.437***
	(0.150)	(0.169)	(0.375)	(0.294)	(0.154)
Employment Agreement	−0.0290	−0.00592	−0.0270	0.0735	0.0218
	(0.0440)	(0.0481)	(0.0795)	(0.0465)	(0.0342)
Geographic Controls	Yes	Yes	Yes	Yes	Yes
Additional Controls	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
State FE	Yes	Yes	Yes	Yes	Yes
Adj. R2	0.711	0.845	0.838	0.767	0.731
Obs.	1,108	1,475	566	1,346	1,253

Table VIII. Robustness Checks

This table reports the results from running a regression of the natural log of the transaction price on an indicator for best place (= 1 if the target is located in a best place) and various controls. The table shows robustness checks for (1) subsamples split into two time periods by transaction which closed before (column 1) after December 31, 2005 (column 2); (2) transaction in (column 3) and outside (column 4) of recessionary quarters (as defined by NBER); and, (3) industry x year fixed effects (column 5). Geographic controls include all the variables listed in Table II. Additional controls include all of the variables listed under additional channels in Table III. Industry (FF-48), year, and state fixed effects are as reported. Reported below the coefficients, in parentheses, are heteroskedasticity-consistent standard errors, clustered on CBSA. *** indicates significance at 1%, ** at 5%, and * at 10%.

	Time Periods		**Recessions**		**Fixed Effects**
Dep. Var. = ln(Price)	**Early**	**Late**	**Recessions**	**Non-Recessions**	**Ind × Yr**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**
Quality of Life (QOL)					
Best Place	0.119**	0.216***	0.185***	0.152***	0.156***
	(0.0538)	(0.0436)	(0.0663)	(0.0440)	(0.0405)
Firm Financial Controls					
ln(Sales)	0.925***	0.989***	0.952***	0.961***	0.960***
	(0.0136)	(0.0128)	(0.0290)	(0.00914)	(0.00955)
Operating Profit/Sales	0.372***	0.599***	0.732***	0.429***	0.462***
	(0.135)	(0.131)	(0.197)	(0.113)	(0.110)
Employment Agreement	−0.0281	−0.0220	0.0615	−0.0251	−0.00733
	(0.0302)	(0.0324)	(0.0655)	(0.0232)	(0.0215)
Geographic Controls	Yes	Yes	Yes	Yes	Yes
Additional Controls	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Industry × Year FE	No	No	No	No	Yes
State FE	Yes	Yes	Yes	Yes	Yes
Adj. R2	0.851	0.858	0.825	0.855	0.854
Obs.	3,956	3,854	1,058	6,748	7,679

Table IX. Extended Controls

This table reports the results from running a regression of the natural log of the transaction price on an indicator for best place (= 1 if the target is located in a best place) and various additional controls. Column (1) includes controls for 5-year future growth rates (from the year of the transaction). Column (2) includes a control for the natural log of the book value assets of the target firm. Column (3) includes a control for how much payment of the transaction price consisted of a cash payment. Geographic controls include all the variables listed in Table II. Additional controls include all of the variables listed under additional channels in Table III. Industry (FF-48), year, and state fixed effects are as reported. Reported below the coefficients, in parentheses, are heteroskedasticity-consistent standard errors, clustered on CBSA. *** indicates significance at 1%, ** at 5%, and * at 10%.

	Future Growth	**Assets**	**Cash Consideration**	**All**
	(1)	**(2)**	**(3)**	**(4)**
Quality of Life (QOL)				
Best Place	0.146***	0.152***	0.122***	0.0972***
	(0.0415)	(0.0408)	(0.0331)	(0.0316)
Firm Financial Controls				
ln(Sales)	0.957***	0.592***	0.801***	0.506***
	(0.00883)	(0.0172)	(0.0112)	(0.0175)
Operating Profit/Sales	0.530***	0.296***	0.618***	0.511***
	(0.106)	(0.0947)	(0.0803)	(0.0724)
Employment Agreement	−0.0173	−0.0349*	0.0594***	0.0315
	(0.0224)	(0.0207)	(0.0199)	(0.0200)
Extended Controls				
5-year Realized Future Pop. Growth	7.032*			1.266
	(3.800)			(2.812)
5-Year Realized Future PCPI Growth	1.150			1.412
	(1.549)			(1.379)
5-Year Realized Future Job Growth	−4.694			−0.987
	(2.865)			(2.287)
5-Year Realized Future Home Price Growth	0.501			0.808**
	(0.418)			(0.397)
Log(Assets)		0.382***		0.329***
		(0.0176)		(0.0175)
Cash Consideration Paid			−0.0422*	−0.0775***
			(0.0249)	(0.0225)
Geographic Controls	Yes	Yes	Yes	Yes
Additional Controls	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
State FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Adj. R2	0.851	0.882	0.874	0.897
Obs.	7,629	6,758	7,804	6,602

Table X. Historical Best Place Measure

This table reports the results from running a regression of the natural log of the transaction price on a measure of best places from 1990-1991. Column (1) reports the results without any geographic or additional controls. Column (2) includes geographic and additional controls. Column (3) includes our extended set of controls (future growth rates, production amenity, and industry x year fixed effects). Column (4) and Column (5) split the sample by whether the buyer was private or public. Geographic controls include all the variables listed in Table II. Additional controls include all of the variables listed under additional channels in Table III as well as realized future growth rates. Industry (FF-48), year, and state fixed effects are as reported. Reported below the coefficients, in parentheses, are heteroskedasticity-consistent standard errors, clustered on CBSA. *** indicates significance at 1%, ** at 5%, and * at 10%.

				Buyer Type	
Dep. Var. = ln(Price)	**Base**	**Controls**	**Ext. Controls**	**Private**	**Public**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**
Quality of Life (QOL)					
Best Place (1990-1991)	0.0910*	0.104**	0.120**	0.0810**	−0.0287
	(0.0486)	(0.0512)	(0.0481)	(0.0407)	(0.113)
Firm Financial Controls					
ln(Sales)	0.967***	0.962***	0.957***	0.826***	0.758***
	(0.00888)	(0.00912)	(0.00954)	(0.0142)	(0.0216)
Operating Profit/Sales	0.380***	0.454***	0.498***	0.857***	0.372**
	(0.107)	(0.109)	(0.109)	(0.0731)	(0.152)
Employment Agreement	−0.0420*	−0.0283	−0.0131	0.0906***	−0.169**
	(0.0226)	(0.0233)	(0.0214)	(0.0214)	(0.0700)
Geographic Controls	No	Yes	Yes	Yes	Yes
Additional Controls	No	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	No	Yes	Yes
State FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	No	Yes	Yes
Industry x Year FE	No	No	Yes	No	No
Adj. R2	0.853	0.852	0.854	0.733	0.604
Obs.	8,096	7,604	7,302	5,931	1,499

Table XI. Morgan Quinto Index

This table reports the results from running a regression of the natural log of the transaction price on the Morgan Quinto state-based ranking of quality of life, as described in section 6. Column (1) use the rank in the year prior to the transaction. Column (2) uses the rank held static in 1994. Columns (3) and Column (4) run the same specification as (1) but splits the sample on whether the buyer was a private or public firm. Columns (5), (6), and (7) split the sample by the size of the transaction. Column (5) is the smallest quintile, Column (6) is the middle three quintiles, and Column (7) is the larger quintile. Geographic controls include all the variables listed in Table II. Additional controls include all of the variables listed under additional channels in Table III as well as realized future growth rates. Industry (FF-48), year, and state fixed effects are as reported. Reported below the coefficients, in parentheses, are heteroskedasticity-consistent standard errors, clustered on CBSA. *** indicates significance at 1%, ** at 5%, and * at 10%.

	Full Sample		**Buyer Type**		**Transaction Size**		
	Varying	**Static**	**Private**	**Public**	**Small**	**Middle**	**Large**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**
Quality of Life (QOL)							
State Rank (Varying)	0.00326**		0.00268**	0.00276	−0.000923	0.00286**	0.000592
	(0.00131)		(0.00126)	(0.00240)	(0.000906)	(0.00113)	(0.00184)
State Rank (Static)		0.00283**					
		(0.00130)					
Firm Financial Controls							
ln(Sales)	0.965***	0.965***	0.831***	0.765***	0.170***	0.680***	0.532***
	(0.00841)	(0.00840)	(0.0138)	(0.0211)	(0.0158)	(0.0134)	(0.0260)
Operating Profit/Sales	0.528***	0.529***	0.819***	0.439***	0.157***	0.502***	0.268**
	(0.105)	(0.105)	(0.0729)	(0.156)	(0.0462)	(0.0855)	(0.121)
Employment Agreement	−0.0202	−0.0209	0.0900***	−0.179***	0.0187	0.0740***	−0.257***
	(0.0227)	(0.0228)	(0.0230)	(0.0672)	(0.0202)	(0.0223)	(0.0521)
Geographic Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Additional Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R2	0.848	0.848	0.726	0.608	0.117	0.634	0.475

Table XII. Weather and Topography Index

This table reports the results from running a regression of the natural log of the transaction price on our weather index, as described in section 6. Column (1) and (2) use the sum of the z-scores of each of our 10 components for each CBSA and standardizes the value to have mean 0 and standard deviation 1. Column (3) and Column (4) run the same specification as (1) and (2) but defines the index from 0-10, where being in the top 20% of our attributes increases the index by 1. Geographic controls include all the variables listed in Table II. Additional controls include all of the variables listed under additional channels in Table III as well as realized future growth rates. Industry (FF-48), year, and state fixed effects are as reported. Reported below the coefficients, in parentheses, are heteroskedasticity-consistent standard errors, clustered on CBSA. *** indicates significance at 1%, ** at 5%, and * at 10%.

	Z-Score Based		**Rank Based**	
Dep. Var. = ln(Price)	**No Controls (1)**	**Full Controls (2)**	**No Controls (3)**	**Full Controls (4)**
ln(Sales)	0.963***	0.955***	0.962***	0.955***
	(0.00894)	(0.00902)	(0.00901)	(0.00908)
Operating Profit/Sales	0.380***	0.511***	0.382***	0.513***
	(0.109)	(0.108)	(0.110)	(0.109)
Employment Agreement	−0.0346	−0.0170	−0.0324	−0.0155
	(0.0228)	(0.0236)	(0.0227)	(0.0235)
Quality of Life (QOL)				
Weather and Topography Index (Z-Score)	0.0784*	0.0886**		
	(0.0406)	(0.0442)		
Weather and Topography Index (Top 20%)			0.0485**	0.0492*
			(0.0238)	(0.0255)
Geographic Controls	No	Yes	No	Yes
Additional Controls	No	Yes	No	Yes
Industry FE	Yes	Yes	Yes	Yes
State FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Adj. R2	0.850	0.849	0.850	0.849
Obs.	7,954	7,344	7,954	7,344

A Data Appendix

The following is a detailed description for the sources of the individual data, as well as any adjustments or cleaning performed on the raw data:

- The transaction data was retrieved from Pratt's Stats online database on January 22, 2015. 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.[24]
- 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 Core Based Statistical Area (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 (an hour's drive) to the principal city of the CBSA.
- 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.
- Establishments data and employment data is from the U.S. Bureau of Labor Statistics (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.
- Per capita personal income is from the U.S. Bureau of Economic Analysis (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 Federal Housing Finance Agency (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.

[24] All of our results are robust to the inclusion of financial services firms. We exclude financial firms because they are commonly valued using different metrics than non-financial services firms which would introduce noise into our specification.

- Number of headquarters is from Reference USA for each county and then compiled into CBSA's using NBER county-CBSA crosswalk.
- Local industry concentration is calculated as the annual number of establishment in the firm's industry in the CBSA divided by the total number establishments in the CBSA. Industry is defined broadly using the BLS definitions: Goods producing, Natural Resources, Construction, Manufacturing, Service Providing, Trade-Transportation, Financial, Information, Professional and Business Services, Education and Health Services, Leisure and Hospitality, and Other Services. We use the BLS mapping to assign firms by Standard Industrial Classification (SIC) code to these mappings.
- All change variables are the annualized 5-year growth rates for the given variable.

Internet Appendix to:
"Non-pecuniary Benefits: Evidence from the Location of Private Company Sales"

This appendix provides complete results for the robustness checks discussed in the paper. Below we describe the contents of the appendix tables.

B Data Appendix

Table B.I. List of Best Places 2013

These are the Best Places as identified by BusinessWeek, Bloomberg, Mercer World Ranking, Money Magazine, AreaVibes, and US News in 2013.

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

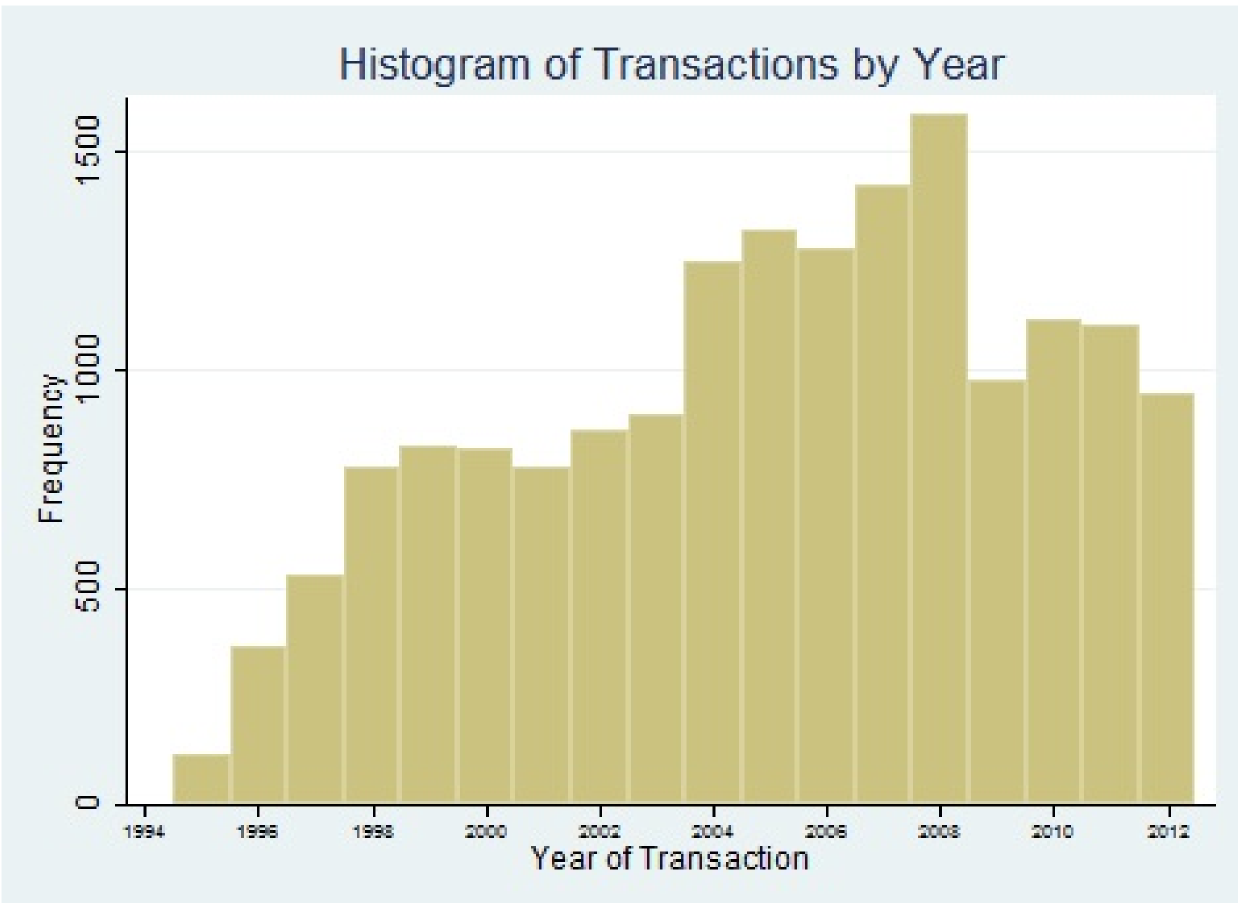

Figure B.1. Histogram of transactions. Number of transactions per year in database.

Table B.II. Comparison of Database

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.

	PeerComps	**Pratt's-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%

C Decomposition of Best Places Measure

To distinguish the effects of local economic characteristics from the effects of non-economic characteristics on livability, we develop a new and separate measure of livability based on a decomposition of the best places variable. While best places surveys do not directly disclose their full methodology or their weighting matrix, they do publish a list of public data sources. Using similar data sources as the surveys in the sample, we attempt to replicate an ordinal ranking of desirable places based on both non-economic and economic characteristics.

In order to understand how non-economic characteristics affect the livability of an area, we regress the best place dummy on non-economic variables that may be related to livability of an area but not directly related to its economic prospects. We include proxies for local QOL characteristics. These include proxies for the occurrence of extreme weather, the average annual total precipitation, the average mean hours of sunlight in January, and the mean humidity in July. To capture the potential existence of historical amenities, such as museums, established cultural and historical sites, we use the CBSA's population in 1900. Finally, we include two measures of the topographical features of the CBSA. We include the percentage of the area of the CBSA covered by water and the land surface topography code from the Department of Agriculture (DOA), which measures the diversity of landscapes within the CBSA.

We run a logistic regression of the best place dummy on these non-economic variables. Table C.IA reports the results of the logistic regression. We standardize the coefficients to reflect the marginal effect of a one standard deviation change in the underlying variable and report odds ratios. The non-economic variables have coefficients that we would expect. Areas that had a large population as of 1900 (our measure for cities with more abundant historical and established civic institutions) are more likely to be listed as a best place. Further, areas with reduced rainfall and areas with more water and more diverse topographical landscapes are more likely to be in the group of best places.

Since we want to isolate the components of livability only related to the non-economic characteristics of an area, we run the logit regression with both the non-economic variables highlighted above as well as the economic controls used in the previous sections. Although many of the non-economic variables are no longer significant, they are jointly significant maintain the same sign. None of the statistically significant variables in the non-economic only regression switch signs, though some lose statistical significance indicating that they may be correlated with the economic variables. Table C.II and Table C.III of the Data Appendix report the top ten CBSA's for each component.

Using the coefficients from this combined regression, we generate a non-economic livability measure for each CBSA over the sample period. We do this by multiplying the underlying unstandardized coefficients from the logit regression in column three of Table C.IA for our non-economic variables by the value of each variable for each CBSA-year combination in the sample. This gives the portion of livability of each area that is due to the non-economic variables and that is independent of the economic variables by construction.[1]

We then test if the livability associated with non-economic characteristics of a location, as represented by the measure, affects the transaction price. To do this, we regress the log(Price) for each transaction on their non-economic component value for each CBSA-year as well as the company financials, economic controls, and industry, state, and time fixed effects. A positive significant coefficient on the measure indicates that the non-economic characteristics of a desirable area induce a premium.

Table C.IB reports the results of this regression. The coefficients on the non-economic components represent the marginal effect of a one standard deviation change in the underlying component. The non-economic component is a significant determinant of firm price premium as measured by the log(Price) of the target firm. A one standard deviation increase in the non-economic component of best places is associated with an approximately 7% increase in the price of a target firm. The significant positive premium associated with the non-economic characteristics persists after controlling for the identifiable economic characteristics of the city.

Additionally, we provide one further check using one of our subsamples. We split the sample between private and public buyers. Only private buyers would benefit from the non-economic component of a desirable location. Therefore, we would expect private buyers to load positively on the non-economic components, while public buyer loading would be expected to be insignificant. Table C.IB provides the results of this analysis. The non-economic component has a significant positive loading for private buyers and an insignificant loading for public buyers. 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 and supports the hypothesis that the buyer pays a premium for personal benefits that a desirable location provides. Additionally, the use of this measure should alleviate concerns regarding the lack of an ordinal ranking for best places in our prior analysis.

The measure for the non-economic components of livability could be a tool for future research

[1]The results are robust to performing a similar analysis using a linear probability model (LPM), indicating that the non-linearity from using a logit model in the predictive regression does not drive the results.

into the effects of geographic location on firms and the local economy. Since the non-economic component of the measure has a low correlation with the economic component, the measure could be used as a potential instrument for the livability of a location that is independent of the local economy but for its effect on attracting entrepreneurs. Furthermore, our decomposition could prove useful for policy makers when evaluating the effects of public investment. For instance, we show that increasing the quality of the local schools or encouraging recreation is correlated with a premium for company prices paid by buyers.

Table C.I.

Panel A reports the odds ratios 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. The population, population density, and % of population with a Bachelors or higher is from the US Census. Weather data is from NOAA. % 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. Panel B reports the results from running a regression of the natural log of the price for a transaction on various financial variable controls and the non-economic components measure. 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. We then generated a measure of BP from the predicted components for the non-economic variables using the coefficients from the logit regression in Table C.I.A. The BP measure is standardized, such that the coefficient is the marginal change for a one standard deviation change in the measure. The remaining controls are the same as described in the main body of the paper. 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%.

(A) Predictors of Best Places

Dep. Var.: Best Place = 1	**Non-Economic**	**Economic**	**All**
Non-Economic			
ln(Population in 1900)	1.320**		0.416
	(0.562)		(0.347)
ln(Precipitation)	−0.924***		−0.862**
	(0.306)		(0.434)
ln(No. Days greater than 90 F)	−0.249		−0.404
	(0.267)		(0.344)
ln(No. Days less than 20 F)	0.113		0.422
	(0.254)		(0.333)
ln(Mean Hours of January Sunlight)	0.173		−0.0951
	(0.231)		(0.246)
ln(Mean July Humidity)	0.221		0.672
	(0.287)		(0.463)
ln(% of Water)	0.330*		0.442*
	(0.186)		(0.251)
Land Surface Topography Code	0.392**		0.368
	(0.173)		(0.232)

Table C.IA (Cont.)

Dep. Var.: Best Place = 1	Non-Economic	Economic	All
Economic			
% of Households with Inc.> $200K		0.342	0.758***
		(0.221)	(0.275)
% of Pop. w/ Bachelors or higher		1.168***	0.993***
		(0.207)	(0.249)
ln(Population)		1.297***	1.234***
		(0.266)	(0.351)
ln(Pop. Density)		−1.031***	−1.002***
		(0.277)	(0.365)
ln(Tax Burden)		0.218	−0.146
		(0.191)	(0.184)
ln(Median Home Price)		0.187	−0.323
		(0.249)	(0.323)
5-year Pop. Growth		−0.298	0.294
		(0.221)	(0.286)
5-Year PCPI Growth		0.0940	0.0609
		(0.109)	(0.137)
5-Year Job Growth		0.702***	0.440
		(0.237)	(0.277)
5-Year Home Price Growth		−0.195*	−0.0276
		(0.104)	(0.115)
Pseudo R2	0.154	0.324	0.393
Obs.	5,062	5,062	5,062
F-Statistic of Non-Economic	58.87***		16.90**
F-Statistic of Economic		90.42***	69.62***

(B) Amenity Measure

Dep Var = log(Price)	No Controls	Controls	Buyer Type: Private	Buyer Type: Public
Best Place				
BP Index-Noneconomic Components	0.0470*	0.0541**	0.0523**	−0.0352
	(0.0248)	(0.0251)	(0.0262)	(0.0516)
Firm Financials				
ln(Sales)	0.965***	0.959***	0.827***	0.769***
	(0.00882)	(0.00907)	(0.0141)	(0.0206)
Operating Profit / Sales	0.965***	0.959***	0.827***	0.769***
	(0.00882)	(0.00907)	(0.0141)	(0.0206)
Employment Agreement	−0.0384*	−0.0238	0.0976***	−0.151**
	(0.0226)	(0.0232)	(0.0214)	(0.0694)
Geographic Controls	No	Yes	Yes	Yes
Additional Controls	No	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
State FE	Yes	Yes	Yes	Yes
Adj. R2	0.851	0.850	0.731	0.605
Obs.	8,202	7,754	6,153	1,597

Table C.II. Top Ten CBSA's from Non-economic Variables

These are the Top Ten CBSA's as measured from the analysis in Table C.IB using the non-economic variables. Each CBSA was ranked based on its values for 2012.

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
Winchester, VA-WV
Providence-New Bedford-Fall River, RI-MA
Pittsburgh, PA
San Diego-Carlsbad-San Marcos, CA
Chicago-Naperville-Joliet, IL
Charlottesville, VA

Table C.III. Top Ten CBSA's from Economic Variables

These are the Top Ten CBSA's as measured from the analysis in Table C.IB using the economic variables. Each CBSA was ranked based on its values for 2012.

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