Location of Real Estate Crowdfunding Properties

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Lieu des proprietés au socio-financement immobilier

Behnoush Shakeri

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Abstract

"Location of Real Estate Crowdfunding Properties"

Behnoush Shakeri

The emergence of real estate crowdfunding (RECF) in recent years has provided an appealing opportunity for investors to contribute to a real estate investment with a small amount of money. In response, this study focuses on two major issues. First, it is examined whether sponsors select the location of RECF properties prudently. The differences between neighborhoods containing RECF properties and the adjacent neighborhoods in the metropolitan statistical area (MSA) are compared. Second, the relation between the attractiveness of the selected counties and the sponsor's distance from the RECF property is examined. Since some RECF sponsors select properties that are at a considerable distance from their headquarters, they do not have thorough information about the target market, and so need to compensate for the information asymmetry and monitoring costs by selecting properties in more attractive locations. A set of RECF properties was manually gathered from seven leading U.S. real estate crowdfunding platforms, while market information and socio-economic data about the properties were extracted from CoStar and the U.S. Census Bureau, respectively. The empirical results demonstrate that RECF properties are found in neighborhoods that are more attractive than the average neighborhood in the same MSA. The results also support the argument that sponsors' increased distance from their RECF properties lead to their selection of more attractive counties with the better socio-economic conditions than the average county in the MSA. This causes sponsors to benefit from the potential price appreciation of RECF properties provided by an attractive real estate investment location.

Acknowledgement

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List of Abbreviation

Capitalization Rate (Cap Rate)

Crowdfunding (CF)

Gross Value Added (GVA)

Health Crowdfunding Platform (HCP)

Jumpstart Our Business Start-ups (JOBS)

Limited Liability Company (LLC)

Metropolitan Statistical Area (MSA)

National Crowdfunding Association of Canada (NCAC)

Real Estate Crowdfunding (RECF)

Real Estate Investment Trusts (REITs)

Securities and Exchange Commission (SEC)

Square Feet (SF)

Venture Capital (VC)

1.   Introduction

Crowdfunding, a new fundraising method, raises a small amount of money for an entrepreneurial project from a large group of individuals via the Internet. Crowdfunding began with musical and artistic projects and has expanded into digital currencies as well as the real estate sector. This emerging channel of efficient and transparent fundraising connects entrepreneurs who have novel ideas in different fields with investors. Crowdfunding also facilitates the estimation of entrepreneurs' target markets and their potential demand (Mollick, 2014). Needless to say, crowdfunding can stimulate the economy by developing innovation and new job opportunities. In addition to all the advantages of crowdfunding, however, Cumming et al. (2016) declare that this easy fundraising approach makes the crowdfunding marketplace more exposed to the fraudulent behaviors.

Real estate crowdfunding (RECF), in which real estate companies (sponsors) raise funds from Internet users for property development and renovation, is a relatively new form of equity criwdfundiing. A study from Massolution[1] reported that a $2.5 billion worth of crowdfunding capital was increased in the real estate sector in 2014 and this continues to sharply rise. Based on statistics provided by the National Crowdfunding Association of Canada (NCAC), RECF has surged within recent years and is likely to continue to grow over the next few years.

This new form of fundraising holds the potential to revolutionise the traditional models of real estate investing and financing. Sponsors can receive the required capital more quickly, and investors have the chance to participate in a real estate investment in a cost-efficient manner with investment amounts starting as low as USD $2,000. A significant advantage of investing in RECF is that investments can be directly made via the platform without intermediaries and paying high fees. However, even though RECF platforms have greater transparency by providing project documentations, business plans and complete information of underlying properties (Cohen, 2016), the investor should be knowledgeable enough to evaluate projects precisely. Each investment requires hours of due diligence on the part of the target group for RECF opportunities, who, in

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[1] 2015, CF-RE Crowdfunding for Real Estate, (http://reports.crowdsourcing.org/index.php?route=product/product&product_id=52.)

general, are accredited investors[2]. Accredited investors are wealthy enough but not necessarily informed. RECF projects are offered in different forms via platforms. Some opportunities have only one property, while there is an increasing trend in offering opportunities with several properties instead of just one property. In this study, I have named the first group of opportunities as the "single-property RECFs" and the second group as the "fund RECFs."

Focusing only on the price of the properties is not reasonable; instead, various factors should be taken into consideration before making a real estate investment decision, e.g. the economic activity of the area, available job opportunities, safety, facilities, accessibility and more which all indicate the characteristics of the location (Kumar et al., 2019). Selecting the location of real estate property is a crucial decision for real estate investors and the user (Chiarazzo et al., 2014). Based on the structure of RECF opportunities, sponsors, as investors in real estate, intend to obtain a significant capital gain. They aim to increase the rents and sale price and reduce the vacancy rate of real estate properties by improving property characteristics and management. High demand from the people who are inclined to live and invest in the location causes value augmentation and the vacancy rate reduction of properties in the area. Therefore, RECF sponsors benefit from investing in an attractive location because it results in properties with the potential of increasing in rental price and value due to the demanding market.

As a first step in my investigation of the location of RECFs are located, I compared the neighborhoods where RECF properties were located with the rest of the neighborhoods that are in the same MSA. I compared neighborhoods by considering the features that provide an attractive location for a real estate investment. The characteristics of the neighborhoods with RECF properties are defined by three classes of variables: real estate market characteristics, demographic characteristics and economic characteristics. Real estate market characteristics derive directly from lease and transaction features of properties in the neighborhood. These variables include sale price, rent, sale volume, vacancy rate, absorption rate, cap rate and the concession rate of the neighborhood. These variables signal whether the properties of the neighborhood are valuable and favourable for investors. The area's high absorption rate and low vacancy rate showed that there is demand for the market and that there are more occupied properties than empty properties. The

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[2] Accredited investors are categorized as institutional investors, individuals whose wealth exceeds USD $1 million, or individuals whose annual income has exceeded USD $200,000 for each of the two most recent years (https://www.investor.gov/news-alerts/investor-bulletins/ investor-bulletin-accredited-investors).

high rent, sale price and transaction sale volume of the area indicate an active real estate market, making the demand for properties high.

Population density and per capita income have been used as two major demographic characteristics that have a large impact on the demand side of the real estate market and are considered key factors in real estate market demand. This is because a higher population and income create a higher demand for rental properties.

The employment ratio, as well as the number of available business establishments and financial establishments, are considered the main indicators of the economic conditions of the neighborhood. The availability of job opportunities is one of the most influential factors that motivate people to buy or rent a property.

Neighborhoods that have better real estate market characteristics and socio-economic conditions are considered an attractive and lucrative area for real estate investments because they provide more potential renters and buyers for the selected properties. Sponsors must take into consideration the characteristics of the location for their RECF investments to have a reliable investment. Moreover, from the funders' point of view, RECF opportunities that offer properties in more attractive neighborhoods are a more appealing investment and have a higher chance of success. Thus, funders are more inclined to invest in these RECF opportunities.

To investigate whether there is a significant difference between the selected RECF neighborhoods and the rest of the neighborhoods in the MSA, I used logit regressions. The results illustrate that RECF properties are in more attractive neighborhoods compared to the rest of the neighborhoods in the MSA; RECF neighborhoods have higher rents, sale prices, absorption rates, and population density, as well as more business establishments. I can conclude that sponsors choose lucrative neighborhoods in an attempt of offering a reliable RECF investment.

Guenther et al. (2018) state that it is acceptable for crowdfunding opportunities to facilitate access to information for their investors and that geographical proximity is not essential for their investors. But investors are nonetheless sensitive to distance, and prefer to contribute to projects that provide more tangible, accessible information. Proximity is one of the focuses of real estate literature. The second part of this study investigates the relation between the distance and characteristics of the selected county for RECF properties. According to the literature, monitoring costs and information asymmetry increase as the distance to the investment increases (e.g. Ling et

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al., 2018; Eichholtz et al., 2015; and Kalnins & Lafontaine, 2013). As Ahlers et al. (2015) note, the information asymmetries are even higher for the project owners on equity crowdfunding platforms because these early-stage investors pay more attention to gathering the information and monitoring the project progress. Accordingly, I expect that when managers live within a shorter distance to the investments, they stand to benefit from their local networks, since their monitoring costs are typically lower and they can remain informed about the local market and upcoming changes. As evidenced by my sample, RECF properties are not necessarily close to sponsors. As an example, one sponsor with a headquarter in Tennessee wants to invest in a property that belongs to a neighborhood in California. It is essential for the sponsors to select a property in an attractive neighborhood of California to compensate for the monitoring cost and information disadvantages, and to benefit from the high growth potential of an attractive neighborhood. I thought it would be interesting to examine if sponsors care more about the attractiveness of the selected county in comparison to the adjacent counties by controlling for the overall attractiveness of the selected MSA. I presented an attractiveness score to be able to calculate the attractiveness of the counties and compare the attractiveness of the selected RECF counties with the adjacent counties in the MSA. An attractiveness score was created according to the most influential socio-economic variables. I found that when sponsors select a property at a larger distance from their headquarters, the selected counties are more attractive than the average county in the MSA, either because they have little information about the market or the monitoring costs are high.

Investment in real estate is not limited to purchasing a physical property or shares of real estate companies on the financial markets, such as REITs. Real estate crowdfunding provides a new opportunity for investors to contribute to real estate projects without engaging in brokerage or mortgages. They can also contribute to these types of projects with substantially smaller amounts of money. I found that RECF platforms are a dynamic, popular form of entrepreneurial real estate financing. For example, there is an increasing RECF trend in offering "fund-like" or "REIT-like" opportunities, especially electronic REITs (eREITS) and electronic funds (eFunds). These opportunities have met SEC regulations and are obliged to release their financial reports annually and quarterly. It is in evidence that RECF sponsors are inclined to make RECF opportunities more similar to traditional REITs, with a greater advantage for investing in RECF being that investments can be made directly via the platforms and without paying high transaction fees. This study is the first ever empirical study that sets out to identify whether RECF

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Commented [DS1]: Are those REITs?

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opportunities have the potential to be an alternative to traditional REITs by evaluating the attractiveness of the locations selected for RECF properties.

In this study, the dataset was hand-collected from various data sources. The real estate crowdfunding opportunities and properties addresses were collected from seven U.S. real estate crowdfunding websites. The real estate market and socio-economic characteristics of RECF properties were gathered from CoStar and the most recent reports of the U.S. Census Bureau, respectively. The unique datasets will contribute to the literature in analyzing how RECF sponsors consider the importance of location in offering their RECF investments through online platforms.

The rest of this thesis is as follows: Section 2 introduces the real estate crowdfunding structure and compares different real estate investment vehicles; Section 3 presents the literature review and hypotheses development; Section 4 illustrates the sample construction, data sources and applied methodology; Section 5 states the empirical analyses and results; and Sections 6 and 7 consist of a conclusion and robustness check respectively.

2.   Crowdfunding

It is undeniable that crowdfunding has an essential role in stimulating the small business economy (Lehner, 2013). Finding a source of funding is not easy for all small businesses and start-ups, but widespread internet access and functioning social networks facilitate raising capital for entrepreneurs and early-stage companies. Real estate crowdfunding sponsors are mainly small private firms and offer their project via platforms that provide them the opportunity to raise their financial needs.

Based on the crowdfunding literature, there are four main crowdfunding types. In the first type, the founders raise capital with the aim of philanthropy. The funders contribute (donate) to the project, and there might not be any return in exchange. For instance, health crowdfunding platforms (HCPs) provide medical and treatment expenses that are contributed by donors to local partners to cure patients from developing countries (Proelss al el., 2018). The second type of crowdfunding is the lending model, in which the funders lend the money with a fixed rate of return (funders can expect determined future payments from the founder). The third type is reward-based crowdfunding. The funders invest their money in a project and expect a reward in the form of receiving the product at a better price and usually at a date earlier than the market release (Mollick,

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2014). Kickstarter is one of the largest crowdfunding platforms to offer such opportunities. The last type, a relatively new form of crowdfunding, is equity crowdfunding, in which firms issue financial assets to solve their financial needs and investors partake in the future cash flow of the firm (Hornuf & Schwienbacher, 2018). Real estate crowdfunding, the focus of this study, belongs to this fourth category. The sponsors offer real estate investment projects to clients, and investors can contribute to various real estate projects without dealing with mortgages, contracts, or brokerages.

In the following section, I will explain the structure of real estate crowdfunding and compare real estate crowdfunding opportunities to real estate investment trusts (REITs), the traditional real estate investment asset.

2.1.   Real estate crowdfunding structure

Recently, the United States has witnessed the emergence of various real estate crowdfunding platforms, operating under Regulation D Rule 506(c), established by the Jumpstart Our Business Startups (JOBS) Act in 2012 for investment by accredited investors. There are various large-scale urban projects offered on approximately 140 platforms all over the world and only wealthy, private accredited investors can invest in projects (Bieri, 2015).

Real estate crowdfunding (RECF) platforms provide an online marketplace for sponsors, developers, investors and lenders. Sponsors aim to improve the property's condition by renovating the interior and exterior, amenity upgrades and efficient management to increase the rent and price of the property. They intend to hold the properties for a determined period of investment and usually sell the property after the holding period as an exit strategy. Sponsors offer different property types, including commercial and residential properties. The sponsors provide interest to investors in the form of cash distribution, and benefits follow by selling the property during the holding period. Sponsors can raise their capital to $50M in the form of equity- or debt-based finance. By investing in an equity opportunity, investors purchase a share of an LLC (the company that provides the market or platform) that owns shares of a joint venture entity that carries investment properties. The cash distributions are made directly by the sponsor to the investors in periodic payments (it can be monthly, quarterly and so on). By investing in a debt opportunity, an LLC offers loans to sponsors for acquisition and refinance of commercial properties. Debt opportunity investors often receive monthly fixed payments (Formigle, 2016). There is usually a

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minimum investment for each project, and investors in RECF opportunities can invest as low as $2,000 USD. Most of these investment projects have a lack of liquidity and no redemption plan.

There are some features that make crowdfunding projects more attractive to investors. First, some RECF opportunities are prefunded projects: the company gives the money to the sponsors right away. After, it offers the project to investors via the platform. Prefunding a project can help the platform chooses more reliable investment opportunities and be assured about the success of the offering (Rivera, 2015). Second, some RECF opportunities are 1031 Exchange projects: the sponsor can defer the capital gain taxes on profit from selling a property. As a result, the owner may be able to use proceeds to purchase replacement properties. In other words, if the sponsors benefit from a 1031 exchange, by selling a property called "relinquished property," sponsors can invest in a like-kind investment (an increase in their purchasing power) which is called "replacement property." These investors defer tax payments until selling the replacement property ("What is a 1031 exchange," 2019).

Real estate investment can be categorized in two main ways: direct (physical property) and indirect (financial instrument). Direct investing is in the form of purchasing and managing an actual property, while indirect investing consists of investing the shares of real estate companies on financial markets. In recent years, real estate crowdfunding also provides a new opportunity for individuals to invest in the real estate market in an easier manner and with a smaller amount of investment. In the following section, different real estate investment vehicles are introduced.

2.2.   Real estate investment vehicles

In additional to the traditional way of investing in physical real estate property, various real estate investment vehicles have emerged that can be categorised under two main types: real estate investment trusts (REITs) and real estate crowdfunding (RECF) platforms.

Real Estate Investment Trusts (REITs): REITs were constituted in 1960. REITs are companies that mainly own real estate property and invest in the real estate sector. In order for a company to qualify as an REIT, based on SEC regulations,[3] the major part of its assets and income must be related to real estate investment, and they must distribute about 90% of their taxable

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[3] https://www.sec.gov/fast-answers/answersreitshtm.html.

income as a dividend to shareholders. REITs have three diffrent forms. First, equity REITs generally engage in income-producing real estate investments. Second, mortgage REITs generally fund real estate owners in the forms of mortgages or real estate loans. Third, hybrid REITs are companies that use the strategies of both equity REITs and mortgage REITs. The exchange status of REITs are categorised as follows ("REITs", 2019):

- ✓ **Public listed REITs:** This type of security is tradable on the primary exchange markets. Investing in a public REIT entails brokerage commission and market transaction costs, but they have liquidity advantages and transparency that makes it easy to calculate risks and returns. Also, reports about transaction prices are publicly available.
- ✓ **Public non-listed REITs:** This REIT is publicly offered, but not listed on a secondary market or an exchange. Public non-listed REITs are similar to the exchange-listed REITs in various dimensions: e.g. tax regulation, income derived from real estate, and dividend payout policy. However, there is no public market to trade them and the source of liquidity is based on redemption plans.
- ✓ **Private Real Estate Funds (Private REITs):** These meet all the requirements and security regulations of other REITs, but they are neither publicly registered nor listed in any exchange or secondary market. Private REITs are usually private real estate firms that offer a higher dividend to the investors without any redemption plan. Due to the higher risk, they must provide a higher return.

Real Estate Crowdfunding (RECFs): Real Estate Crowdfunding platforms allow accredited and non-accredited investors to invest a relatively small amount of money in the real estate projects and in return they receive interest rate or rental profits of the properties.

RECF platforms themselves and the investments they offer have already changed dynamically within a short period. In the beginning, only projects with a single property were provided, while recently there are more "fund-like" or "REIT-like" projects. Offering electronic REITs and electronic real estate funds among a few platforms is the most recent phenomenon. Electronic REITs (eREITs) and electronic real estate funds (eFunds) can be categorised as public non-listed REITs that have met SEC requirements and are not tradable on exchanges. In contrast to regulatory requirements for real estate crowdfunding investments where platforms could only accept

investments made by accredited investors, both accredited and non-accredited investors can invest in electronic REITs and electronic real estate funds ("FAQs," 2019).

- ✓ **Single property and fund real estate crowdfunding:** These two types of RECFs might be different regarding sponsors' perspective and management strategy. The increasing tendency to offer fund RECFs proves that RECF sponsors have tried to make RECF opportunities more similar to REITs with lower transaction costs and easier trading. Some funds provide complete information about the properties in the portfolio since they have acquired the properties already, while some funds start as blind pools, which do not have specified properties but indicate that they will invest in various properties over the lifetime of the project. In some cases, they may introduce potential properties to acquire.
- ✓ **Crowdfunding eREITs:** This vehicle is a diversified portfolio of commercial real estate properties that has met SEC regulatory requirements and is not tradable on exchanges, being offered instead directly through crowdfunding platforms. There are currently some eREITs offered through a few RECF platforms such as Fundrise, RealtyMogul, and Crowdstreet platforms.
- ✓ **Crowdfunding eFunds:** There are other uncommon categories of REITs, such as investment opportunities called "eFunds." Based on the definition offered by the Fundrise platform, these offerings are distinguishable from eREITs in one significant aspect: this vehicle is a diversified portfolio of residential real estate assets. Fundrise currently offers three such portfolios. Also, Crowdstreet has one eFund opportunity registered in the SEC.

Table 1 summarises the traits of various real estate investment vehicles. As the difference shows, we can witness the evolution of a trend in RECF opportunities: RECF platforms try to provide real estate investment opportunities that are increasingly similar to traditional REITs by providing a marketplace where trading is more accessible than exchanges and substantial transaction costs are eliminated.

< Please insert Table 1 about here >

3. Literature review and hypothesis development

The location of properties is an important factor for the prediction of housing prices, and property characteristics can be reliable predictors for housing prices only by considering the neighborhood or real estate market of the property (Malpezzi et al., 1998; Gao et al., 2019; Pace & Zhu, 2019). Two properties with similar physical characteristic in two different geographical locations will have different rental prices depending on the characteristics of the location. For instance, the rental price of an office in Chicago can be $23 per SF, while an office with similar characteristics in Manhattan might be more than $33 per SF (Geltner et al., 2001; Pace & Zhu, 2019). In evaluating a real estate investment, the locations of underlying properties have an essential role in the performance of the investment (Ling et al., 2018).

The primary aim of sponsors is to benefit from the rent and property price appreciation during their investment period, to undertake their proposed returns to the funder of the RECF opportunity and to gain profits from their investments. Since the demand side of the real estate market drives a higher return due to the potential increase in rent and the price of the real estate property (Dennison, 2018), while being directly affected by the geographical location of the properties, in this study, I focus on the selected location of RECF properties. My main focus is to investigate whether RECF properties are selected in attractive locations where sponsors can achieve their aims. I define the attractiveness of a location based on several variables that cause demand in the area. I assume that if RECF properties are in a desirable location in terms of the available demand, the sponsors should benefit from the potential rents and price appreciation of commercial properties, achieving their primary aim. I reviewed the literature to find the specific market characteristics that RECF sponsors might take into consideration when choosing the location of a real estate property. The attractiveness of the real estate location can be determined in three different dimensions: real estate market characteristics, which indicate the leasing features of the properties and the existence of an active real estate market, and the demographic and economic characteristics that demonstrate the socio-economic condition of the area. When the property is in a location with good socio-economic conditions, the location adds to its demand in the real estate market.

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Real estate market characteristics:

This group of variables shows the leasing and selling characteristics of properties within the market which indicate the value of the property and can reflect the attractiveness of the real estate market. This group of variables includes rent, cap rate, sale price, sales volume, absorption rate, concession rate and vacancy rate.

Rent, as an essential indication of a lease, refers to payments that give people the right to occupy a building ("CoStar Glossary," 2019). Rent, as the immediate effect of supply and demand, is determined by tenants' need, quality and the type of building. Rent signals the current value of property in the real estate market (DiPasquale & Wheaton, 1992; Gabe & Rehm, 2014). Thus, I can expect that properties with higher rents have more demand from the market as a result of their high quality and favorable features, or that they are in an attractive location for investing in rental properties.

Cap rate is another important characteristic that calculates the net operating income expectancy (NOI) over the price of a property and mostly shows how the property is priced in proportion to its actual value. Cap rate can be considered as the inverse of the price-to-earnings ratio ("CoStar Glossary," 2019). Investors look for properties with a lower cap rate to maximize benefit from the investment and minimize risk (Chervachidze & Wheaton, 2013).

Sale price is another factor that signals real estate market conditions. Various factors determine the sale price of real estate properties, but the quality of properties is one major factor, since various studies declare the strong relation between the quality of properties and their sale price (e.g. Song, 1995; Bin and Polasky, 2004; Bourassa et al., 2003; Chen et al., 2007). Several studies show that market participants affect the transaction sale price of properties; for instance, Gabe & Rehm (2014) declare that non-local buyers pay more than local buyers for real estate properties in the Phoenix market because of their information disadvantages and their lack of knowledge about the market. Cypher et al. (2017) show that commercial real estate brokers can influence the price of properties to some extent. Even though the sale price of properties is affected by various factors other than the quality and desirability of the properties' location, I assume that the higher sale price signals an active real estate market and a relatively strong demand. I also include sale volume in my examination, since it is an informative variable about market

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transactions. Sale volume indicates the turnover of the market ("CoStar Glossary," 2019). The high sale volume is a positive signal that the market has more desirable properties and that it is an attractive location for real estate investments.

Absorption rate is another variable that indicates real estate market conditions. Absorption rate refers to the change in occupancy of the properties for over a year ("CoStar Glossary," 2019). Since absorption rate shows the short-run space demand of the office market (Sivitanidou & Sividanides, 1999), a high absorption rate indicates that there is substantial demand and a significant number of potential tenants.

Concession rate is an intuitive variable, since concessions, in the form of free rents, moving expenses, or above-standard improvements of the property, are granted by the landlord to attract tenants in a slow real estate market ("CoStar Glossary," 2019). A lower rate shows that landlords do not need to give concessions to attract tenants, meaning that there is demand for the properties.

The last variable that can show a favorable neighborhood is the vacancy rate. Vacancy rate demonstrates the ratio of the vacant areas to the existing rentable regions of the market ("CoStar Glossary," 2019). A lower vacancy rate shows that available rental properties are occupied and that there is a demand for the properties in the area.

Demographic characteristics:

This category of variables shows the demographic features of the real estate location by considering the population and per capita income of the area. The demographic characteristics of the location (e.g. growing population and income growth), create a higher demand for housing and rental properties (Dennison, 2018). These factors from the demand side of the real estate market drive a higher return for real estate investors by the potential increase in the rent and price of real estate property (Dennison, 2018). Moreover, Hwang & Quigley (2006) analyze the factors that affect housing pricing in the United States at the MSA level and declare that a higher income causes hosing demand, resulting in an increase in housing prices and a decrease in the vacancy rate in the area. They also show the positive relation between income growth and housing price appreciation. Gu (2018), using principal factor analysis, extracts population, income and gross value added (GVA) variables as factors in the demand side of housing prices. In this study, I consider population, population growth, income and income growth as the factors behind the

attractiveness of a location for real estate investments. According to previous studies, I can expect that in a densely populated area or high-income area, there will be a higher demand from potential renters and owners of real estate properties. Therefore, these areas will be desirable locations for real estate investments because sponsors will be able to benefit from potential increases in the rent and value of the acquired properties.

Economic characteristics:

This category includes many variables that demonstrate the economic condition of the area. Regional economic activity has a direct effect on real estate market demand and properties valuation (Clapp and Gaccotto, 1994). The employment ratio indicates the available job opportunities in the market, while the rate of change in employment influences the demand for commercial real estate (Fisher & Webb, 1992; Rosen, 1984). Distance from employment centers decreases home prices because people are more inclined to live close the their work place (Fullerton & Villalobos, 2011). Hwang & Quigley (2006) also declare that a higher employment ratio provides better economic conditions for the area. According to previous studies, it is essential to consier the employment ratio of the area as an important factor of real estate market demand. When there are more job opportunties available, more people reside and work in the area. The same follows for wealth creation and population growth, which lead to a higher demand for properties. Schweizer & Zhou (2017) treat the business establishments and financial establishments of the market as risk measures, showing that such establishments' high rate of concentration reduces information asymmetry in the market. I also use these variables as indicators of economic activity because the high percentage of business establishments and financial establishments provides more job opportunities and wealth, leading to higher incomes for individuals and their increased interest to work or reside in these areas. Wealth creation and population growth increase demand in the real estate market (Dennison, 2018). In this study, I gathered the employment ratios, the percentage of business establishments, the percentage of business establishment growth, the percentage of financial establishments, and the percentage of financial establishment growth to show that strong economic conditions cause the potential increase in the valuation of each location's real estate properties.

First, I searched for the differences between the selected neighborhoods containing RECF properties and their nearby neighborhoods according to three different categories of variables: real

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estate market characteristics, demographic characteristics and economic characteristics. In my hypothesis, attractive neighborhoods refer to neighborhoods with the potential for an increase in the value of real estate properties and rent resulting from high demand, the leasing characteristics of such properties showing an active real estate market. I expect that sponsors select properties in more attractive neighborhoods to make a reliable real estate investment with more potential for profit.

Hypothesis 1: *RECF properties are in more attractive neighborhoods compared to other neighborhoods in the same MSA.*

According to the literature, distance can have different definitions, such as cultural distance and geographical distance. Beugelsdijk et al. (2018) provide an extensive review of studies on cultural distance and examine the effect of cultural distance on the integration process of international investments. They show that cultural distance is important for evaluating post-investment decisions. However, in financial studies, the importance of geographical distance to the investment decision making process is more thoroughly addressed than the importance fo cultural distance. Therefore, I focus on geographical distance in this study.

Various studies focus on the importance of geographic distance in investment decision making, the role of information asymmetry in attracting investors, and the challenges companies might face by having a distant investment. Distance from headquarters reduces the ability of managers to monitor and motivate company employees. Distance also entails monitoring costs due to the hiring of employees to manage their businesses, and information disadvantages due to losing local networks and information patronage (Kalnins & Lafontaine, 2013; Hochberg et al., 2007; Sorenson & Stuart, 2001). The real estate literature has also paid close attention to the proximity issue. In real estate investment, distant buyers prefer to invest in properties with relatively lower vacancy rates and long-term leases due to monitoring costs (Holmes, Cynthia Xie, Jia., 2017; Ling et al., 2018). Moreover, the ownership and management of a property have a substantial effect on the rent and occupancy rate of REITs and non-REIT properties (Hardin III et al., 2009). Investors whose properties are closer to their offices benefit from higher effective rents because of the closeness of the managed property (Eichholtz et al., 2015).

Commented [DS4]: Is this the reason? Do you really have cultural differences in you data set?

Commented [BS5R4]: I meant the geographical distance, not cultural.

It is interesting to witness that many RECF sponsors invest in properties at a considerable distance from their headquarters (local offices), regardless of the information advantage of investing in local markets (Ivkovic and Weisbenner, 2005; Teo, 2009; Giroud, 2013). According to the literature, if RECF sponsors choose properties far from their headquarters, they may face several challenges. It is generally more difficult for them to acquire a thorough knowledge of the target market and there are delays in noticing changes in the target market (e.g., job opportunity decline) that could signal the need to sell the property. Moreover, property management is more difficult and expensive at a distance, since managers need to have a trusted property management team at the location. I hypothesize that when sponsors are within a shorter distance to their properties, they manage the property more closely, acquire more extensive information about the market, and benefit more from their local network. As a result, there is a trade-off between monitoring costs and the attractiveness of the location. When properties are at a larger distance from the sponsor's headquarters due to monitoring and management costs resulting from lack of information, they choose an attractive location for the property. An attractive location is determined by the factors that make the real estate markets favorable to the potential growth in value of the real estate properties. I hypothesize further that when comparing the selected location of RECF properties with adjacent locations, it will be found that sponsors look for a location more attractive than adjacent areas. To test this hypothesis, I consider the attractiveness of a county in comparison to the average attractiveness of the counties in the same MSA. I expect that RECF sponsors, due to their larger distance from the location of the property, tend to invest in counties that are more attractive than the average of the remaining counties in the MSA.

Hypothesis 2: *The larger the distance of properties to the sponsors' headquarters, the more attractive the county they select compared to the average of the other counties in the MSA, compensating them for information disadvantages and monitoring costs.*

In the next section of this study, the dataset construction and the applied methodology to examine these hypotheses are explained in detail.

4.   Data and methodology

4.1.   Sample construction

A sample of single-property and fund RECF properties was manually collected from seven leading U.S. RECF platforms (Fundrise, RealtyMogul, iFunding, Realtyshares, Crowdstreet, Patch of Land and AssetAvenue) during the period of Q1 2016 to Q1 2018. In this study, I included eREITs and eFunds opportunities in the sample of fund RECFs. I gathered RECF characteristics and property addresses from the listed platforms. RECF characteristics show the financial structure and offering features of the RECF projects. This information gives the general picture of single-property RECFs and fund RECFs. The definitions of RECF characteristics can be found in Table 2.

< Please insert Table 2 about here >

A sample of commercial properties was gathered from the several RECF projects. These properties were offered on the platforms listed above by various sponsors in the forms of single-property RECFs or fund RECFs. In the real estate literature, commercial property refers to a building or plot of land that generates profits from capital gain or rental income ("CoStar Glossary," 2019). The types of commercial properties available in the sample include retail, office, industrial and multifamily properties (residential apartments). "Mobile home parks" and "hotels" were excluded from the sample because they have different applications and investment perspectives than commercial properties. The final sample contains 426 commercial properties from 132 different single-property RECFs and fund RECFs. Figure 1 shows the distribution of RECF properties on the U.S. map. To locate the county and MSA of each property, I used an address GEO coding service, offered by TAMU Geoservices[4] (Texas A&M University, Department of Geography). I recorded the latitude and longitude coordinates of RECF properties and then, using them, calculated the earth surface distance of each property to all the MSAs and counties. The RECF property belongs to the county and the MSA that property has the shortest distance from.

< Please insert Figure 1 about here >

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[4] http://geoservices.tamu.edu/About/

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This study has two main hypotheses about the selection of RECF property locations. The emphasis of this study is on the characteristics that sponsors might take into consideration to provide a reliable real estate investment. A wise selection of investment location leads to potential growth in the acquired real estate properties.

I collected three different groups of variables to consider the different dimensions of the location: real estate market characteristics, demographic characteristics and economic characteristics. The first group of variables, real estate market charactersictis, was obtained from CoStar. CoStar has the most comprehensive database of real estate data throughout North America. The last two groups of variables, demographic characteristics and economic characteristics, were gathered through the U.S. Census Bureau.

Detailed property and real estate market data were extracted from CoStar. The addresses of RECF properties were searched one-by-one on the CoStar website, and the information hand collected from the resulting web pages. CoStar provides information for the markets in which commercial properties are located. The market information includes the absorption rate, cap rate, concession rate, rent price, sale price, sales volume and vacancy rate of the market in which the property is located. For instance, for a RECF property situated in Norton, Ohio, I could find the absorption rate for this property's neighborhood. This number represents the average absorption rate of all properties in the neighborhood. I could also find the absorption rate for this property's MSA. This number represents the average absorption rate of all the properties in the MSA. These neighborhood/MSA market characteristics are available for each RECF property.

To compare the neighborhood of an RECF property with the remaining neighborhoods in that MSA, I subtracted the neighborhood-level data from the MSA data. I refer to these variables as "the remaining neighborhoods in the same MSA as the RECF property." In the appendix of this study, I provide further explanations about the gathered data from CoStar by providing an illustrative example. To further highlight the characteristics of the locations, I included census variables that demonstrate the demographic and economic conditions of each location. I grouped the employment ratio, available business establishments and percentage of financial establishments as indicators of economic activity in the area. I also calculated the percentage change in business establishments and that of financial establishments between 2005 to 2015 to

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show the medium-term trend of these variables. This category of variables is called "economic characteristics" through the study. Furthermore, I included the population density and per capita income of the area as influential factors affecting real estate demand. I also calculated the medium-term trend of population density and per capita income from 2005 to 2015. This category of variables is called "demographic characteristics" within the study. These two categories of variables were collected from the U.S. Census Bureau, which provides the most recently available reports from the American Community Survey, County Business Patterns and Bureau of Economic Analysis. Data on demographic and economic variables are available at the county and MSA levels, which represent respectively the property's neighborhood and the remaining neighborhoods.

For the second hypothesis, to investigate the relation between the attractiveness of the selected locations and the distance of sponsors from their properties, I gathered data on the sponsors' headquarters and local offices by using information available on RECF platforms or by Google searching the sponsors' company name. GEO coding methods were applied to find the latitude and longitude of the sponsors' headquarters and local offices. The geographical distances between sponsors and RECF properties were calculated. For determining what variables demonstrate the attractiveness of a location, economic and demographic variables have been used as the main drivers of real estaet market demand. To examine this hypothesis, I also gathered data on county-level Internet coverage and labor cost to use as control variables. This information was provided by the American Community Survey's 2011 and 2016 5-Year Estimates. Internet coverage of the area indicates the availability and transparency of information. I assume that high Internet coverage alleviates information disadvantage for sponsors who decide to invest in a market far from their headquarters. Labor cost was also calculated for the construction businesses in the area. Since sponsors' purchased properties often require renovation or developing, sponsors might consider the labor cost of construction businesses as an important factor in choosing a location to acquire a real estate property. Table 3 shows the list of definitions, data sources and calculations of variables.

< Please insert Table 3 about here >

4.2.   Methodology

This section presents the applied methods for examining the hypotheses of this study. The first hypothesis is that there are substantial differences in terms of real estate market, demographic and economic characteristics between neighborhoods with RECF properties and the remaining neighborhoods in the same MSA. Real estate market characteristics show the leasing features of the properties and indicate an active real estate market. In addition, demographic and economic characteristics show the socio-economic conditions that lead to a high-demand real estate market, which has more potential for rent and price appreciations, helping sponsors to meet their investment strategy goals.

As explained in the data construction section, information on each neighborhood with RECF properties and the remaining neighborhoods in the corresponding MSA are available from CoStar. Moreover, economic characteristics and demographic characteristics of RECF locations are also available. The county-level data was used to measure the neighborhoods with RECF properties, while MSA-level data was used to measure the remaining neighborhoods inside the MSA. At first, I used a two-sided T-test assuming unequal variances to find if there was any significant mean difference between the neighborhoods with RECF properties and their adjacent neighborhoods in the same MSA. In the next step, multivariate regressions were also implemented to verify the accuracy of the differences derived from the T-test. I applied a logit regression, defining the dependent variable according to whether the neighbourhood has RECF properties. The neighborhood is equal to 1 if it is a neighborhood that lodges a RECF property and is equal to 0 if it is one of the remaining neighborhoods (defined by the same property type) in the same MSA. Exploratory variables demonstrate the characteristics of the neighborhoods' real estate market, demographic characteristics and economic characteristics; these variables signal that the neighborhood is an active real estate market or a favourable area for the potential growth in property value resulting from demand.

As evidenced by the unavailability of certain variables, concession rate was only available for multifamily properties, and the vacancy rate was only available for office, retail and industrial buildings. I excluded these two variables from the baseline models. Additionally, the sample contained four different types of properties: multifamily, office, industrial and retail. Based on the

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application and usage of each property type, each might experience different levels of demand and some locations might be more favourable for a specific property type than others; therefore, to monitor the impact of property type, the variety of properties was controlled by a fixed effect. Moreover, single-property RECFs and fund RECFs might have differences regarding management or chosen properties' locations. As Humphery-Jenner (2013) declares, diversification increases returns for corporations that make a risky investments like private equity funds. It sounds advantageous for investors to offer their offering in a pool of properties. Therefore, I also included RECF type as a dummy variable in the specifications to control the possible effect of single-property RECFs and fund RECFs.

Equation (1) shows the logit regression baseline model for examining the difference between the RECF property neighborhoods and the remaining neighborhoods that are in the same MSA. I expect that the absorption rate will have a significant positive coefficient, showing that there are more move-ins than move-outs in the existing properties in the area. This would indicate that the number of occupied properties increases and that there is more inclination to occupy properties in these neighborhoods. I expect that cap rate, as a determinant of property value that works as price-to-earnings ratio with stocks, will have a negative coefficient. A low cap rate ratio in a neighbourhood shows that investment is less risky, and that it has better properties in which to invest. Rent, sale price and sale volume might have a positive coefficient, showing a more active market that has the potential of growing property values.

Since the demographic and economic determinants of the location can determine the long-term demand of the market and are usually more stable, I also expect that population density, per capita income, and their corresponding growth rates will have a positive coefficient. Moreover, the employment ratio and the conditions of business and financial establishments in the area will all have significant positive coefficients. Generally, these variables show the higher wealth and money available to individuals who wish to buy and invest in the real estate market. Since sponsors acquire properties to renovate and improve the conditions of the property, they want to benefit from rents during the holding period and from the appreciated sale price arising from the available demand in the property's neighborhood. These variables indicate that RECF properties are in an active real estate market and that they provide a demand for properties that results in a reliable real estate investment for RECF sponsors.

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$$Neighborhood_i(1/0) = \alpha + \beta_1 Absorption + \beta_2 Cap\ Rate + \beta_3 Rent + \beta_4 Sale\ Price +$$
$$\beta_5 Sale\ Volume + \sum_j \varphi_j Demographic\ Characteristics_j +$$
$$\sum_k \gamma_k\ Economic\ Characteristics_k + F_1 Property\ type_i + t_1\ RECF\ type_i + \varepsilon \qquad (1)$$

The second hypothesis concentrates on the relation between the attractiveness of RECF property locations and the sponsors' distance from RECF properties. The question is about whether sponsors decide to invest in a county with better conditions than other counties in the MSA when the sponsors' head offices are located at an increased distance from the property. Real estate market characteristics might reflect the mispricing (underpricing or overpricing) of real estate properties and thus might not be strong indicators of an attractive location in which to invest. The demographic and economic characteristics of the area, on the other hand, indicate economic prosperity and the growing demand for real estate properties. Therefore, socio-economic conditions are the most important factors determining whether sponsors achieve their investment goals because these variables indicate the long-term demand of the real estate market.

To select variables that demonstrate the attractiveness of the locations according to demographic and economic characteristics, I first used exploratory factor analysis. I kept the factors that had an eigenvalue larger than 1, and gave each factor a meaningful label based on the variables influencing the factors that define the counties' attractiveness. Since there is a trade-off between distance and sponsors' knowledge about the target market, I expect there to be a positive relation between distance and the attractiveness of the selected investment location. When sponsors select an attractive county for their RECF properties due to their larger distance from the market and their information disadvantages, they consider the attractiveness of the selected county relative to adjacent counties in the MSA. To address this hypothesis, I created an attractiveness score with which I could rank counties based on their important economic and demographic characteristics. The variables considered effective were the ones that determined the county's attractiveness based on factor analysis results. I could not find support in the literature to give different weights to these attractiveness variables. Appadu et al. (2016) present a scoring approach for explaining the attractiveness of M&A activity; I applied a similar method to find the attractiveness score for the counties. I converted the ranges of each variable to a range of 0 to 100. This shows the value of each variable according to a percentage score. Since all the factors have a positive impact on the attractiveness of the county, I defined the overall attractiveness score of

each county as an equally weighted average of variables that vary in a similar range: 0 to 100. A high value in an attractiveness score shows the high attractiveness of a location.

$Attractiveness\ Score =$
$Average\ (Population\ Density, Population\ Density\ Growth, Per\ Capita\ Income,$
$Per\ Capita\ Income\ Growth, Employement\ Ratio, Establishment, Establishment\ Growth,$
$\%Financial\ Establishment, \%Financial\ Establishment\ Growth)$ (2)

I used a sample containing all the counties with RECF properties and the remaining counties in their respective MSAs. I calculated the value of the attractiveness score for each county, then sorted all the counties according to their score. Counties with a higher attractiveness score earned a higher rank. The county with the lowest score had a rank equal to one, while the county with the second lowest score had a rank equal to two, etc. When a county had a higher attractiveness score, I ranked it with a higher number. In this way, the more attractive counties had a higher rank number.

One point that should not be neglected is the overall attractiveness of the MSAs. For instance, one county may have a rank value of 25, while the average rank of the counties in the MSA is 30. This selected county has worse conditions than the average of the other counties within the MSA. On the other hand, another selected county may have a rank of 10, while the average rank of counties in the MSA is 4. This selected county has better conditions than the average of the other counties within the MSA. Accordingly, rank alone cannot be a good indicator of the attractiveness of the county compared to the other the counties in the MSA. Therefore, a new variable, called "Dif. Rank," was created to control the overall attractiveness of the MSAs. According to my definition, when the Dif. Rank has a positive value, the rank of a county is higher than the average of the other counties within the MSA, or, more precisely, the county is more attractive than the average of the other counties within the MSA.

$Dif.Rank =$
$Rank(of\ a\ county\ in\ the\ MSA) - Avg.Rank(of\ all\ counties\ in\ the\ same\ MSA)$ (3)

Finally, to examine how the distance of sponsors from their RECF properties affects their decision to choose counties that are more attractive than the average county within the MSA, the following regression was applied: Equation (4). In this regression, distance, as the logarithm of geographical distance of sponsors from the RECF property, is the dependent variable. Real estate

market characteristics, internet coverage and labor costs were also controlled in this model. I expected that the coefficient of the distance variable would have a significant positive value, demonstrating that the information disadvantages of investing in more distant real estate markets encourage sponsors to select counties more attractive than the average county in the MSA. Since sponsors might not have complete information regarding distant markets, they select counties with above-average attractiveness to alleviate the effect of information disadvantages and monitoring costs.

$$Dif.Rank_i = \alpha_0 + \alpha_1 Distance_i + \sum_r \partial_r\, Real\; Estate\; Characteristics_k +$$
$$C_1\, Internet\; coverage_i + C_2\, Labor\; cost_i + p_i\, Property\; type_i + t_1\, RECF\; type_i + \varepsilon \qquad (4)$$

In the following section of this study, the empirical results are explained to verify the accuracy of the developed hypotheses.

5.   Empirical analyses

5.1.   Summary statistics

As stated before, RECF characteristics and properties locations were collected manually from a sample of RECF opportunities on real estate crowdfunding platforms. The statistical descriptions of RECF-level characteristics are shown in Tables 4–6. Some interesting insights into RECF opportunities arise. For instance, about 90% of offered opportunities are equity-financed, and there are only a limited number of debt-financed opportunities. All the fund RECFs are equity financed, while a limited number of debt-financed RECFs are among single-property RECFs. The distribution payments are usually quarterly or monthly. The minimum investment in RECF opportunities can be as small as USD $2,000. The average investment period is approximately five years; this is the holding period of properties for sponsors before they sell the properties and exit the investment. This shows that RECF projects are usually short-term to medium-term investment opportunities.

< Please insert Tables 4–6 about here >

Descriptive statistics of RECF neighborhoods (Panel A) and the remaining neighborhoods of the MSA (Panel B) are given in Table 7. The mean of most of the variables, such as rent, sale price and sale volume, are higher for neighborhoods with RECFs.

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5.2. Comparison of neighborhoods with real estate crowdfunding properties within the MSA

5.2.1. Univariate results

In the first step, I discuss the result of univariate regressions to find if there is a significant difference in the means of my two samples: the neighborhoods selected for RECFs properties and the remaining neighborhoods in the MSA. To investigate the considerable difference between the variables, I ran a two-sided T-test assuming unequal variances as shown in Table 8. The results show that neighborhoods with RECF properties are significantly different in absorption rate, rent and sale price. The population density is considerably higher in neighborhoods with RECF properties; there is also a growing per capita income. Business establishments are also significantly higher in number in such neighbourhoods than in other neighborhoods. The univariate results consistently show that neighborhoods containing RECF properties are more attractive than other neighborhoods in the same MSA. Therefore, I can conclude that these neighborhoods are more desirable areas for investment because, as a result of the high-demand real estate market, sponsors can benefit from an increase in rent and price appreciation.

5.2.2. Multivariate results

In the previous section, the T-tests show that RECF properties are in more attractive neighborhoods compared to other neighborhoods in the MSA. After the T-tests, I used a multivariate logit regression to test the possibility of multiple simultaneous factors causing differences between the neighborhoods.

Table 9 shows the correlation coefficients between all the applied variables. Rent, sale price and sale volume all show the property value conceptually and statistically. Thus, using these variables in the regression might cause a multicollinearity problem.

Table 10 provides a multivariate analysis comparing neighborhoods with RECF properties with the remaining neighborhoods in the MSA. The dependent variable equals 1 if the

neighborhood contains a RECF property and equals 0 if it is a non-RECF neighborhood in the same MSA. Specifications 1 to 5 show the univariate regression of the independent variables that demonstrate what neighborhoods have active real estate markets. I put these variables individually in the regressions to make the regressions interpretable. Afterwards, demographic variables were added as a block of variables, namely specifications 6 to 10. In the next step, economic characteristics of the neighborhoods were added as a block of variables, namely specifications 11 to 15. I included RECF type as a dummy variable in the model because of differences that neighborhoods with single-property RECFs and fund RECFs might have. Moreover, I considered property type as a fixed effect.

This table shows that higher absorption rate, rent and sale volume increase the probability of the neighborhood being chosen for RECF projects. These variables indicate an active real estate market. When the block of demographic variables is added to the regressions, the significant positive relation of absorption rate does not change, while the rent variable is less significant and sale price is no longer significant. In these regressions, population density is significantly positive, the likelihood that the neighborhood will be selected for RECF properties increasing as the population density increases. Even though the per capita income is significantly negative, the per capita income growth is significantly positive.

RECF properties are generally found in neighborhoods with a high population density that drives a higher demand for real estate properties in the area. This results in an increase in rent and a possible increase in the rate at which people move in and out of these neighborhoods. Per capita income growth provides more demand for real estate properties as consumption or investment goods. When the block of economic variables is added to regressions, the absorption rate, rent and sale price remain significantly positive, and, at the same time, the percentage of business establishments becomes significantly positive. There is a substantially higher percentage of business establishments in RECF property neighborhoods, creating more job opportunities and better economic conditions for the RECFs. In general, these results are consistent with the univariate regression, indicating that RECF property neighborhoods have better real estate market conditions and a better socio-economic situation than other neighborhoods in the same MSA. Variance inflation factors (VIF) were also calculated to explain how much multicollinearity exists

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in the regression analyses. Mean and maximum VIFs were included in Table 10. Since all the VIF values are below 2, there is no multicollinearity problem.

< Please insert Table 10 about here >

5.3. Distance and attractiveness of RECF neighborhoods

For the second hypothesis, I examine the relation between RECF property location and the distance of RECF properties from their sponsors. As Eichholtz et al. (2015) note, local information has a substantial effect on the performance of real estate market investment because of the illiquid nature of this type of investment. They also show that the physical distance of the investors from their real estate property reduces the rental price of the property. Accordingly, in this study, the logic of choosing properties at a shorter distance is that monitoring costs are less, property management is easier, and sponsors have access to more information about the market. When sponsors select a property far from their headquarters, since they have less information about the market and bear higher monitoring costs due to distance, it is more likely for sponsors to pick a property located in an attractive area. According to my hypothesis, I expected that there would be a positive relation between the attractiveness of the counties in which RECF properties are located and sponsors' distance from their properties.

An attractiveness score index assists me in ranking county attractiveness. I applied the factor analysis (FA) method to determine variables showing the attractiveness of the location according to its socio-economic status. Exploratory factor analysis is a statistical method that becomes applicable and comprehensive in research when there are high correlations between the variables and extracted factors. Additionally, it is important for several of the variables to load onto the factors strongly (Costello et al., 2005). Velicer and Fava (1998) also emphasize the importance of the high correlation between variables and factors. They state that a variable has a strong communality when a variable is correlated with a factor by a communality score of 0.8 or higher, while correlations between 0.4 and 0.7 are acceptable as low-to-moderate communality scores. For scores lower than 0.4, the researchers must drop the variable or substitute the variable with a similar variable in order to continue the analyses.

I ran the factor analysis with all the variables. According to the matrix loading, there was a low correlation (below 0.4) between the factors of county attractiveness and per capita income

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growth, the percentage of financial establishments and the percentage of financial establishment growth (See Table A1). I dropped these variables according to the commonly accepted criteria and repeated the factor analysis with the remaining six variables. Initially, to ensure sample adequacy, the Kaiser-Meyer-Olkin (KMO) test was used. The measure must have a value of more than 0.5 to show the adequacy and representativeness of the data (Williams et al., 2010). In the sample, the overall KMO test of 0.6416 shows that the data sample is sufficient for factor extraction (the last row in Table 11).

< Please insert Table 11 about here >

There are different methods to determine the number of factors that should be extracted from the available variables. Among all the available methods, Kaiser's criteria (eigenvalue>1) and the Scree plot are the most common approaches (Williams et al., 2010). According to Kaiser's criteria, in my dataset, two factors with eigenvalues greater than one can be obtained from the variables (see Table 12). On the other hand, a Scree plot shows a breakpoint after two factors (see Figure 2). Both approaches show that two factors are the appropriate number of factors.

< Please insert Table 12 about here >

< Please insert Figure 2 about here >

The results of matrix loading show that population density, per capita income, available business establishments and the employment ratio have a positive correlation with factor 1. Thus, this factor shows the current status of the area. I can name factor 1 "*Attractiveness Index for the Current Situation.*" Moreover, establishment growth and population density growth have a strong positive correlation with factor 2. These variables show the ten years' change in the establishment and population density in the area. Therefore, this factor is an indicator of a medium-term trend of the population density and establishments in the area. I can name factor 2 "*Attractiveness Index for the Trend*" (Table 13).

Population density, per capita income, the employment ratio and establishment density have a higher correlation with the first factor. This factor generally shows the current socio-economic condition of the county. These variables all have positive coefficients. Per capita income has the largest positive coefficient; it indicates that when per capita income is higher in the county, people have more money available and more inclination to invest in the real estate market,

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increasing the demand. The demand for real estate properties can be in the shape of creating new businesses in the area or in sponsors' inclination to buy and invest in residential properties. The employment ratio and establishment density also have a high correlation with this factor. They have positive coefficients effect the current attractiveness of the county. When there are more job opportunities and business establishments, more people live and reside in these counties. Higher population brings a demand for living spaces and investment strategies. Client-based businesses that sell services or consumption goods (retail, insurance and financial companies, for example) prefer to have offices near populated areas with higher per capita income. This also leads to more establishments being available in the county.

Population density growth and establishment growth have high correlations with the second factor. Both have the highest coefficients with factor 2. These variables show the population density change and establishment change during a 10-year period. This factor mostly indicates the trend in population and business establishment density in the area. The positive population change indicates that this county has had a growing population and that more people have been inclined to reside there. This growing population rate has caused growth in the demand for real estate properties to satisfy the population's housing and rental needs. In the long run, the county may experience a similar trend, if there are no abrupt changes economically, politically and environmentally.

< Please insert Table 13 about here >

Due to the trade-off between distance and information availability, when a property is farther from a sponsor's headquarters, the sponsor selects a more attractive county to compensate for future costs and information asymmetry. To test whether counties with RECF properties have better socio-economic conditions than adjacent counties, an attractiveness score was created based on the most influential demographic and economic variables, which were determined according to a factor analysis. The counties with a higher attractiveness score have a higher rank value. As noted, to control for the overall socio-economic conditions of MSAs, "Dif. Rank" was calculated for each county. This variable helps to detect whether the county has a higher rank than the average county in the MSA or not. A positive Dif. Rank value indicates that the county has a better rank than the average county in the MSA, and a negative Dif. Rank value indicates that the county has worse rank than the average county in the MSA. Table 14 shows the mean difference between

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counties with RECFs and the counties without RECFs in the same MSA. A two-sided T-test with variances assumed to be unequal was applied. RECF properties are found in counties with a higher attractiveness score than unselected counties; these counties have a higher Dif. Rank, which shows that these counties are more attractive than the average of the other counties in the MSA. Moreover, the attractiveness score is higher, and all the economic and demographic variables are substantially more favourable to investment than in the unselected counties. The results consistently show that the counties where RECF properties are located are more attractive than adjacent counties.

< Please insert Table 14 about here >

Table 15 shows the effect of distance on the ranking of the chosen RECF counties by considering the average rank of counties in the same MSA. Property type is included in the regression because some locations might be more attractive for a specific type of property. Absorption, cap rate and rent are also controlled for in the specificatons. I excluded sale price and sale volume from this group of real estate market variables because there is a high correlation with the rest of the variables (Table 9). Distance has a significant relation to Dif. Rank. When distance is higher, the selected RECF counties have a higher rank than the average of the other counties of the MSA. Real estate market characteristics, property type and RECF type are also controlled for in the model. The results show that when sponsors invest in a more distant market, the selected county has a higher level of attractiveness than the average of the other counties in the MSA.

< Please insert Table 15 about here >

To wrap up, both hypotheses of the study hold true and it can be shown that RECF sponsors try to consider the importance of location in their offerings. In the next section, I will explain some additional tests to verify the accuracy of the results.

6. Robustness checks

In this thesis, I investigate the location of RECF properties. The empirical results show that these properties are mostly in attractive neighborhoods that provide potential growth for the chosen properties. An attractive real estate market has higher demand, and higher demand is caused by increasing property rent and price appreciation. Empirical results show that RECF properties are in more favorable and attractive neighborhoods than the other adjacent neighborhoods in an MSA. According to CoStar Market analyses, there is more demand for smaller properties than there is for larger properties. This also shows that smaller properties have a higher rental yield per square feet than larger properties. As a result, I controlled for the effect of property size on variables such as rent (per SF) and sale price (per SF), which highly depend on size. For offices, industrial and retail properties the size represents the average of the building size, and for multifamily properties, the size represents the average of the unit size (see Table A2). The results remain the same; the RECF properties are still found in more attractive neighborhoods than the average neighbourhood in the MSA.

< Please insert Table A2 about here >

I defined another attractiveness score for each county, ranking them according to the six influential variables individually. The overall rank of each county is the equally weighted average of each rank. The Dif. Rank is calculated as the definition. The T-test shows that there is a significant difference between the rank of RECF counties and other counties, the RECF counties having a higher attractiveness score and higher rank than the average of the other counties in the MSA (see Table A3). The results prove that there is a significant positive relation between the Dif. Rank of RECF counties and the sponsors' distance from the property. When sponsors' headquarter offices are at a considerable distance from the RECF property, they consider counties in the MSA with better-than-average conditions (see Table A4).

< Please insert Table A3 about here >

< Please insert Table A4 about here >

The distance also can be defined when sponsors decide to invest in a property outside of the state (or city) in which their current headquarters is. There might be a difference in the state's regulations and laws that sponsors might not be aware of and which brings them more costs.

Therefore, I expect that if the selected property is in another state than that in which the sponsors' headquarters is located, the sponsors would select more attractive counties. I defined a dummy variable for state, naming it "within state." The dummy variable has a value of 1 if the selected property is in the same state as the sponsors' headquarters, and has a value of 0 if the selected property is located in another state. I also repeated the examination by defining a dummy variable for city. naming it "within city." The dummy variable has a value of 1 if the selected property is in the same city as the sponsors' headquarters, and has a value of 0 if the selected property is in another city. Table A5 and Table A6 show the results for each of these definitions of distance. The negative relation between the dummy variables and the Dif. Rank shows that when a RECF property is not located in the same state (or city) as the RECF sponsors, the selected location is more attractive than the average of the counties in the MSA. The results show that when a property is located at a further distance from the sponsors' headquarters, the selected counties have above-average attractiveness within their MSA.

< Please insert Table A5 about here >

< Please insert Table A6 about here >

Table A7 shows the correlation matrix between the variables. It is clear that there is a significant positive correlation between the Dif. Rank of the selected RECF counties and distance. There might be a weak causality problem, however, between the attractiveness of the counties and distance. Since investors might be more interested in projects that offer properties in more attractive locations. RECF sponsors look for attractive locations to purchase properties. It is probable that when sponsors find an attractive county for real estate investment, they do not consider the monitoring costs and information disadvantages of investing in a further market. To examine both the effect of distance on the attractiveness of the county and the effect of finding an attractive county at a distance, I used distance as the dependent variable. Table A8 shows that the relation between distance and Dif. Rank is almost zero. There is no benefit granted by performing this regression, and the hypothesis of the existence of a causality does not hold.

< Please insert Table A7 about here >

< Please insert Table A8 about here >

7. Conclusions, limitations and future studies

In this study, I examine the neighborhoods where RECFs are situated, comparing them to the remaining neighborhoods in the same MSA. Results show that RECF properties are in more attractive neighborhoods relative to other neighborhoods in the same MSA. I also investigate how a sponsor's distance from an RECF property affects their decision to select a county for property investment. I hypothesize that when sponsors decide to invest in a property far from their office headquarters, they select properties in more attractive locations that have better socio-economic conditions, in order to benefit from the potential growth in rent and the value of the properties. I defined an attractiveness score to rank the counties, as well as a new variable that determined the attractiveness of a county by considering the average attractiveness of the counties in the MSA. The results support the hypothesis that sponsors pick counties with above-average attractiveness within an MSA to compensate for the information asymmetry and monitoring costs that come with geographical distance from the property. To conclude, the RECF sponsors try to select locations provide them with a potential growth in the property's value.

One of the limitations of the study is that it does not investigate the performance of selected RECF properties. Unfortunately, RECF platforms only release periodic updates and reports to the funders of RECF opportunities; there are no public performance reports regarding the performance of properties. The limited availability of information on RECF platforms prohibits me from examining the performance. As a further study, I suggest examining the ex-ante performance of selected properties by the rental price or the sale transaction price of the properties. REIS,[5] as one of the leading providers of commercial properties data, can be a source to find the historical prices of the properties. Moreover, the performance of the location can be evaluated according to the macroeconomic conditions of the counties over a specific period of time: for instance, change in the employment ratio or population density over a period after the acquisitions of the properties. This historical information can be gathered from the U.S. Census Bureau.

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[5] https://www.reis.com/

References

Ahlers, G. K., Cumming, D., Günther, C., & Schweizer, D. (2015). Signaling in equity crowdfunding. *Entrepreneurship Theory and Practice*, 39(4), 955-980.

Appadu, N., Faelten, A., Moeller, S., & Vitkova, V. (2016). Assessing market attractiveness for mergers and acquisitions: the M&A attractiveness index score. *European Journal of Finance,* 22(8-9), 732-755.

Beugelsdijk, S., Kostova, T., Kunst, V. E., Spadafora, E., & van Essen, M. (2018). Cultural distance and firm internationalization: A meta-analytical review and theoretical implications. *Journal of Management*, 44(1), 89-130.

Bieri, D. S. (2015). Crowdfunding the city: the end of "cataclysmic money"? *Environment and Planning A*, 47(12), 2429-2435.

Carling, K. & Lundberg, S. (2005). Asymmetric information and distance: an empirical assessment of geographical credit rationing. *Journal of Economics and Business*, 57(1), 39–59.

Chen, Z., Cho, S., Poudyal, N.C., & Roberts, R. K. (2009). Forecasting housing prices under different market segmentation assumptions. *Urban Studies*, 46 (1), 167–187.

Chervachidze, S., & Wheaton, W. (2013). What determined the great cap rate compression of 2000–2007, and the dramatic reversal during the 2008–2009 financial crisis? *Journal of Real Estate Finance and Economics*, 46(2), 208-231.

Chiarazzo, V., Caggiani, L., Marinelli, M., & Ottomanelli, M. (2014). A neural network based model for real estate price estimation considering environmental quality of property location. *Transportation Research Procedia*, 8(3), 810-817.

Clapp, J. M., & Giaccotto, C. (1994). The influence of economic variables on local house price dynamics. *Journal of Urban Economics,* 36(2), 161-183.

Cohen, J. (2016). A study on the history and functionality of real estate crowdfunding. Available online: https://repository.upenn.edu/joseph_wharton_scholars/19/.

CoStar Glossary (2019). Available online: https://www.costar.com/about/costar-glossary.

Costello, Anna B. & Jason Osborne (2005). Best practices in exploratory factor analysis: four recommendations for getting the most from your analysis. *Practical Assessment Research & Evaluation*, 10(7), 1-9. Available online: http://pareonline.net/getvn.asp?v=10&n=7.

Cumming, D. J., Hornuf, L., Karami, M., & Schweizer, D. (2016). Disentangling crowdfunding from fraudfunding. *Max Planck Institute for Innovation & Competition Research Paper* (16-09). Available online: https://ssrn.com/abstract=2828919

Cypher, M., Price, S. M., Robinson, S., & Seiler, M. J. (2018). Price signals and uncertainty in commercial real estate transactions. *Journal of Real Estate Finance and Economics*, 57(2), 246-263.

Dennison T. (2018). Real Estate and Property. In Dennison T (Ed.). *Invest Outside the Box* (pp. 55-73). Singapore: Palgrave Macmillan. Available online: https://link.springer.com/book/10.1007/978-981-13-0372-2

DiPasquale, D. & Wheaton, W.C. (1992). The markets for real estate assets and space: A conceptual framework. *Real Estate Economics*, 20(2), 181–198.

Eichholtz, P., Holtermans, R. & Yönder, E. (2015). The economic effects of owner distance and local property management in US office markets. *Journal of Economic Geography*, 16(4), 781–803.

Fisher, J.D. & Webb, R.B. (1992). Current issues in the analysis of commercial real estate. *Real Estate Economics*, 20(2), 211–227.

Formigle, I. (2016). Top 6 Reasons to Invest in Commercial Real Estate. Available online: https://www.crowdstreet.com/top-6-reasons-invest-commercial-real-estate/

Frequently asked questions (2019). Available online: https://fundrise.com/education/faq

Fullerton, T.M. & Villalobos, E. (2011). Street widths, international ports of entry and border region housing values. *Journal of Economic Issues*, 45(2), 493–510.

Gabe, J. & Rehm, M. (2014). Do tenants pay energy efficiency rent premiums? *Journal of Property Investment & Finance*, 32(4), 333–351.

Gao, G., Bao, Z., Cao, J., Qin, A. K., Sellis, T., & Wu, Z. (2019). Location-centered house price prediction: A multi-task learning approach. Available online: https://arxiv.org/abs/1901.01774

Geltner, D., Miller, N. (2001). Commercial real estate analysis and investments. Upper Saddle River, NJ: Prentice-Hall.

Giroud, X. (2013). Proximity and investment: Evidence from plant-level data. *Quarterly Journal of Economics*, 128(2), 861-915.

Gu, Y. (2018). What are the most important factors that influence the changes in London real estate prices? How to quantify them? Available online: https://arxiv.org/abs/1802.08238

Guenther, C., Johan, S., & Schweizer, D. (2018). Is the crowd sensitive to distance?—How investment decisions differ by investor type. *Small Business Economics*, *50*(2), 289-305.

Hardin III, W., Hill, M. & Hopper, J. (2009). Ownership structure, property performance, multifamily properties, and REITs. *Journal of Real Estate Research*, 31(3), 285–306.

Hochberg, Y. V, Ljungqvist, A. & Lu, Y. (2007). Whom you know matters: Venture capital networks and investment performance. *Journal of Finance*, 62(1), 251–301.

Hornuf, L., & Schwienbacher, A. (2018). Market mechanisms and funding dynamics in equity crowdfunding. *Journal of Corporate Finance*, 50, 556-574.

Humphery-Jenner, M. (2013). Diversification in private equity funds: On knowledge sharing, risk aversion, and limited attention. *Journal of Financial and Quantitative Analysis*, 48(05), 1545–1572.

Hwang, M., & Quigley, J. M. (2006). Economic fundamentals in local housing markets: evidence from US metropolitan regions. *Journal of Regional Science*, 46(3), 425-453.

Ivković, Z., & Weisbenner, S. (2005). Local does as local is: information content of the geography of individual investors' common stock investments. *Journal of Finance*, 60(1), 267– 306.

Kalnins, A. & Lafontaine, F. (2013). Too far away? The effect of distance to headquarters on business establishment performance. *American Economic Journal: Microeconomics*, 5(3), 157–179.

Kumar, E. S., Talasila, V., Rishe, N., Kumar, T. S., & Iyengar, S. S. (2019). Location identification for real estate investment using data analytics. *International Journal of Data Science and Analytics*, 1-25.

Lehner, O.M. (2013). Crowdfunding social ventures: a model and research agenda. *Venture Capital*, 15(4), 289–311.

Lieser, K. & Groh, A.P. (2014). The determinants of international commercial real estate investment. *Journal of Real Estate Finance and Economics*, 48(4), 611–659.

Ling, D.C., Naranjo, A. & Petrova, M.T. (2018). Search costs, behavioral biases, and information intermediary effects. *Journal of Real Estate Finance and Economics*, 57(1), 114–151.

Ling, D. C., Naranjo, A., & Scheick, B. (2018). Asset location, timing ability and the cross-section of commercial real estate returns. *Real Estate Economics, forthcoming*.

Ling, D. C., Wang, C., & Zhou, T (2018). The geography of real property information and investment: Firm location, asset location, and institutional ownership. Available online: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3154082

Malpezzi, S., Chun, G. H., & Green, R. K. (1998). New place-to-place housing price indexes for US metropolitan areas, and their determinants. *Real Estate Economics*, 26(2), 235-274.

Mollick, E. (2014). The dynamics of crowdfunding: An exploratory study. *Journal of business venturing*, 29(1), 1–16.

Pace, R. K., & Zhu, S., (2019). The influence of house, seller, and locational factors on the probability of sale. *Journal of Housing Economics*, 43, 72-82.

Petersen, M.A. & Rajan, R.G. (2002). Does distance still matter? The information revolution in small business lending. *The journal of Finance*, 57(6), 2533–2570.

Proelss, J., Schweizer, D., & Zhou, T. (2018). Economics of philanthropy—evidence from health crowdfunding. Available online: https://ssrn.com/abstract=3169823

Real estate investment trusts (2019). Available online: https://www.sec.gov/fast-answers/answersreitshtm.html

Reed, R. (2016). The relationship between house prices and demographic variables: An Australian case study. *International Journal of Housing Markets and Analysis*, 9(4), 520-537.

Rivera, M. (2015). The benefits of real estate prefunding. Available online: https://patchofland.com/blog/building-wealth/2015/01/12/the-benefits-of-crowdfunding-real-estate-prefunding/

Rosen, K.T. (1984). Toward a model of the office building sector. *Real Estate Economics*, 12(3), 261–269.

Schweizer, D. & Zhou, T. (2017). Do principles pay in real estate crowdfunding? *Journal of Portfolio Management*, 43(6), 120–137.

Sivitanidou, R. & Sivitanides, P. (1999). Office capitalization rates: Real estate and capital market influences. *Journal of Real Estate Finance and Economics*, 18(3), 297–322.

Sorenson, O. & Stuart, T.E. (2001). Syndication networks and the spatial distribution of venture capital investments. *American Journal of Sociology*, 106(6), 1546–1588.

Teo, M. (2009). The geography of hedge funds. *Review of Financial Studies*, 22(9), 3531–3561.

Velicer, W. F., & Fava, J. L. (1998). Effects of variable and subject sampling on factor pattern recovery. *Psychological Methods,* 3(2), 231-251.

What is a 1031 exchange and why is it important? (2019). Available online: https://www.realtymogul.com/knowledge-center/article/what-1031-exchange-and-why-it-important

Williams, B., Onsman, A., & Brown, T. (2010). Exploratory factor analysis: A five-step guide for novices. *Australasian Journal of Paramedicine*, 8(3), 1-13.

Figures and Tables

Property distribution of RECFs on US MAP
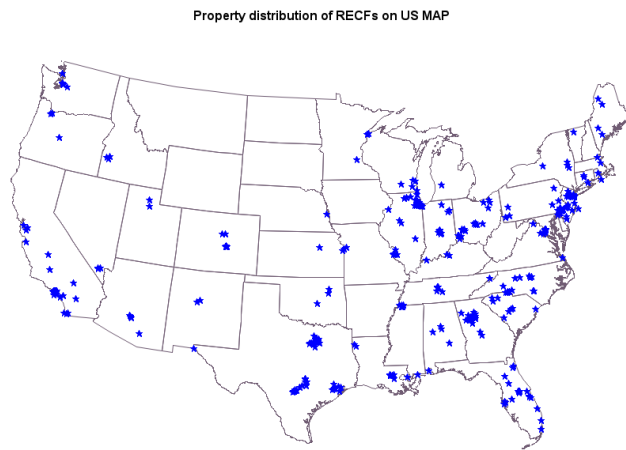
Figure 1. Location of real estate crowdfunding properties
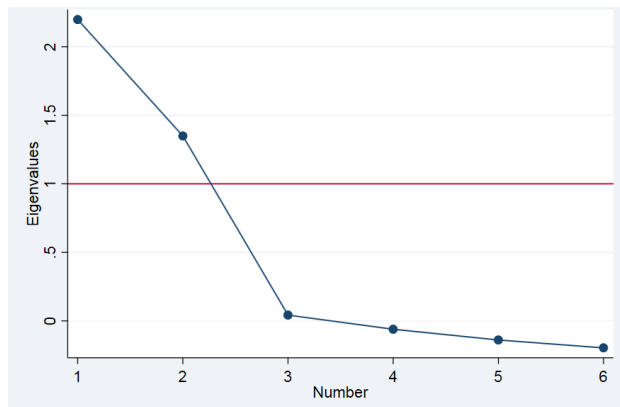
Figure 2. Scree plot of eigenvalues

Table 1. The difference among different real estate investment vehicles

	REITs			Real estate crowdfunding		
	Public listed REITs	**Public non-listed REITs**	**Private REITs**	**Crowdfunding eREITs**	**Crowdfunding eFunds**	**Single property and fund Crowdfunding**
Regulation	SEC disclosures (quarterly and yearly financial reports)	SEC disclosures (quarterly and annual financial statements)	Exempt from SEC regulation	SEC disclosures (quarterly and annual financial statements)	SEC disclosures (quarterly and annual financial statements)	Exempt from SEC regulation
Tax	They are not required to pay US Federal income tax as long as meet the distribution requirement[6].	They are not required to pay US Federal income tax as long as meet the distribution requirement.	They are not required to pay US Federal income tax as long as meet the distribution requirement.	Tax treatment is similar to REITs. Undistributed taxable income is subject to federal income and excise taxes[7].	Tax treatment is similar to REITs. Undistributed taxable income is subject to federal income and excise taxes.	Entity (LP or LLC) of private funds are subject to the tax.
Dividends	REITs typically pay out at least 90% of income to shareholders.	REITs typically pay out at least 90% of income to shareholders.	REITs typically pay out at least 90% of income to shareholders.	They treated as REITs, typically pay out at least 90% of income to shareholders.	They treated as REITs, typically pay out at least 90% of income to shareholders.	Variable, the sponsors decide about payout ratio.
Return	Price fluctuations in the market exchange and dividends	Dividends and proceeds from the liquidation	Dividends and proceeds from the liquidation	Dividends and proceeds from the liquidation	Dividends and proceeds from the liquidation	Dividends and proceeds from the liquidation
Liquidity	Liquid, shared traded on market exchange	Redemption plan before the end of fund lifetime; liquidation event at the end of fund lifetime (e.g. listing on a market exchange, M&A, selling the properties)	Redemption plan (limited or subject to change), liquidation event when holding period ends	Redemption plan (limited or subject to change), liquidate the properties when holding period ends	Redemption plan (limited or subject to change), liquidate the properties when holding period ends	Illiquid (no redemption plan), liquidate the properties when holding period ends
Transparency	Share price available at the market exchange, and reporting transparency	No market price available (share valuation is according to periodic appraisals of properties), while they are subject to SEC reporting.	No market price available, No public or independent source of providing performance data	No market price available (share valuation is according to periodic appraisals of properties), while they are subject to SEC reporting.	No market price available (share valuation is according to periodic appraisals of properties), while they are subject to SEC reporting.	No market price available, no public or independent source of providing performance data
Type of investors	Accredited and non-accredited	Accredited and non-accredited	Accredited	Accredited and non-accredited	Accredited and non-accredited	Accredited

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[6] A company must distribute at least 90% of its taxable income as dividend to the shareholders.

[7] The undistributed taxable income and gain are expose to federal income and excise taxes. Therefore, the managers are inclined to pay higher than distribution requirement.

Transaction costs	Brokerage cost, front-end underwriting fees, and management fee	Brokerage-dealer commission, upfront fee, and ongoing management fees are also charged.	Variable brokerage cost (depend on the company), ongoing management fees	No commission fee (no intermediary or brokerage), ongoing management fees	No commission fee (no intermediary or brokerage), ongoing management fees	No commission fee (no intermediary or brokerage), ongoing management fees
Minimum investment	One share	$1,000 - $2,500	$1,000 - $25,000	100 shares (Usually 10$ per share)	N.A.[8]	$2,000 – $5,000
Holding period	No	Typically ten years	Yes	Approximately five years	Approximately five years	Variable, one to ten years
Listing status on an exchange	Yes	No	No	No	No	No
Secondary market	Yes	No	No	No	No	No
Blind-pool characteristic[9]	No	Yes	Yes	Yes	Yes	They can start with seed properties and gradually add properties during the fund lifetime.
Raising Capital	The initial public offering, exchanges	Continuous initial offering at the fixed share price	Continuous initial offering at the adjusted share price	Continuous initial offering (best efforts offering[10])	Continuous initial offering (best efforts offering)	Projects are offered via platforms when the required amount raised, the offering closes.

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[8] There are not much information regarding eFunds, because they are recently offered, and so far has had a limited activity. Only one of them (Totally there are 3 of them) have presented its first acquired asset!

[9] The company starts as a blind pool of properties, they acquired and add properties gradually.

[10] The per share purchase price in these offerings would be changed at the beginning of each fiscal quarter, and will equal the greater of (I) $10.00 per share or (II) the NAV per share.

Table 2. Definition of characteristics of RECF opportunities.

Variable name	Description
Debt amount	Debt amount in the capital stack of RECF offerings. (1~1000 USD)
Equity amount	Equity amount in the capital slack of RECF offerings. (1~1000 USD)
Distribution period	Payment period to the investors.
Investment needs	Required funds to raise by the sponsors. (1~1000 USD)
Investment period	Target investment period that sponsors want to hold and manage the properties. (Year)
Investment type	RECF can be equity-financed or debt-financed.
Minimum investment	Minimum required amount for contributing to the RECF project. (1~1000 USD)
Property type	Property can be office, retails, industrial building or residential apartments (multifamily)

Table 3. Variable definitions, calculations and sources of data.

Variable Name	Description and Calculation	Data Source
Dependent variable		
Neighborhood (NBHD)	The neighborhood equals to 1 if it is the neighborhood that real estate crowdfunding property is located, and it equals to 0 if it is the rest of neighborhoods in the same MSA.	CoStar
Independent variable	*Real estate market characteristics*	
Absorption Rate	Absorption refers to the change in occupancy for over a year. According to CoStar definition, it is the sum of all the positive changes in occupancy (move-in) subtracting by negative changes in occupancy (move-out)	CoStar
Cap Rate	The income rate of return (%) for a total property (annual net operating income divided by sale price or value.)	CoStar
Concessions Rate	Concessions are granted by the landlord in a slow market to attract tenants	CoStar
Rent	Rent per SF (USD $). For commercial, it is NNN/Gross rent. For multifamily, it is asking rent per unit divided by average unit size.	CoStar
Sale Price	Sale price of property per SF.	CoStar
Sales Volume	Sale volume (USD $) of properties have sold within the past year divided by existing SF.	CoStar
Vacancy Rate	Vacancy rate demonstrates the amount of vacant area divided by the existing rentable building area (RBA)	CoStar
Independent variable	*Economic characteristics*	
Employment Ratio	Employment to population ratio that measures the working age population (people over 16 years old)	American community survey 2011 and 2016 five-year estimates
Establishment	The number of establishment in all industries divided by population	County Business patterns 2015
Establishment Growth	The growth of the number of establishment in all industries in the past ten years	County Business patterns 2005-2015
% Financial Establishment	Percentage of financial and real estate industry in the property market	County Business patterns 2015
% Financial Establishment Growth	The growth of the percentage of financial and real estate industry in the property market in the past ten years	County Business patterns 2005-2015
Independent variable	*Demographics characteristics*	
Population Density	Log of per square mile population (Log of the population divided by total land area)	Bureau of Economic Analysis 2015
Population Density Growth	The growth of per square mile population in the past ten years	Bureau of Economic Analysis 2005-2015
Per Capita Income	Log of per capita income	Bureau of Economic Analysis 2015
Per Capita Income Growth	The growth of per capita income in the past ten years	Bureau of Economic Analysis 2005-2015
Control variable	*Control variables*	
Average Building Size	The average size (SF) of the building (for retails, industrial and office properties)	CoStar
Average Unit Size	The average size (SF) of units (for multifamily properties)	CoStar
Internet Coverage	Percentage of the allocated Internet to the total available households of the county.	American community survey 2011 and 2016 five-year estimates
Labor Cost	The annual employees' salary over the total number of establishment in construction businesses (NAIC 23)	American community survey 2011 and 2016 five-year estimates

Table 4. Capital structure distribution of RECF opportunities.

Variable	Obs.	Mean	Std. Dev.	Min	Max
Investment needs	127	3197.14	5647.02	275	44244
Minimum investment	124	40.036	187.146	2	2100
Investment period	132	5.32	2.71	1	12
Debt amount	124	20464.65	39668.61	0	215570
Equity amount	123	10232.52	17833.05	0	110000

Table 5. Investment type distribution of RECF opportunities.

	Fund		
Investment type	0	1	Total
Debt	13	0	13
Equity	68	50	118

Table 6. Distribution period distribution of RECF opportunities.

	Fund		
Distribution period	0	1	Total
Annual	1	4	5
Monthly	20	24	44
Quarterly	45	20	65
Semi annually	6	0	6

Table 7. Statistical description of variables.

The two panels show statistical distribution of variables for the neighborhood of real estate crowdfunding properties, and the rest of the neighborhoods are in the same MSA.

Panel A: Real estate crowdfunding neighborhood						Panel B: Rest of neighborhood in the same MSA					
Variable	Obs.	Mean	Std. Dev.	Min	Max	Variable	Obs.	Mean	Std. Dev.	Min	Max
Real estate market characteristics						*Real estate market characteristics*					
Absorption	353	0.018	0.030	-0.034	0.362	Absorption	353	0.011	0.008	-0.011	0.055
Cap Rate	272	0.067	0.017	0.013	0.133	Cap Rate	272	0.067	0.012	0.038	0.111
Rent	345	12.042	12.877	0.725	77.310	Rent	345	10.560	9.066	0.747	37.923
Sale Price	294	199.680	194.242	25.000	1133.000	Sale Price	294	168.482	96.231	20.212	886.812
Sale Volume	341	6.432	9.481	0.000	58.716	Sale Volume	341	6.113	4.436	0.000	29.686
Demographic characteristics						*Demographic characteristics*					
Population Density	359	7.111	1.394	3.474	11.252	Population Density	359	6.288	0.918	3.503	8.009
Population Density Growth	359	0.131	0.105	-0.057	0.553	Population Density Growth	359	0.128	0.096	-0.090	0.375
Per Capita Income	359	10.801	0.244	10.172	11.941	Per Capita Income	359	10.795	0.190	10.384	11.625
Per Capita Income Growth	359	0.342	0.104	0.092	0.868	Per Capita Income Growth	359	0.331	0.081	0.092	0.864
Economic characteristics						*Economic characteristics*					
Employment ratio	357	60.624	4.422	41.700	74.500	Employment ratio	357	60.153	3.933	41.700	69.000
Establishment	357	0.049	0.012	0.021	0.128	Establishment	357	0.047	0.006	0.021	0.063
Establishment Growth	357	0.063	0.122	-0.156	0.640	Establishment Growth	357	0.065	0.103	-0.156	0.414
Finance Establishment	357	0.057	0.008	0.032	0.081	Finance Establishment	357	0.057	0.006	0.038	0.070
Finance Establishment Growth	357	-0.032	0.066	-0.344	0.223	Finance Establishment Growth	357	-0.033	0.045	-0.175	0.138
Property characteristics						*Property characteristics*					
Unit Size	129	823.698	84.282	641.000	1087.000	Unit Size	129	867.987	45.627	796.215	1009.913
Building Size	218	19.433	15.961	3.926	148.351	Building Size	218	17.563	9.342	6.389	62.219

Table 8. Univariate analysis of neighborhoods with RECF properties and the remaining neighborhoods within the MSAs.

This table shows the results of a two-sided T-test between the neighborhoods in which real estate crowdfunding properties are located and the remaining neighborhoods in the same MSA. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	Mean (Main)	#Obs.	Mean (Others)	#Obs.	Diff.
Real estate market characteristics					
Absorption	0.018	353	0.011	353	-0.007***
Cap Rate	0.067	272	0.067	272	0.001
Rent	12.042	345	10.560	345	-1.483*
Sale Price	199.680	294	168.482	294	-31.198**
Sale Volume	6.432	341	6.113	341	-0.319
Demographic characteristics					
Population Density	7.111	359	6.288	359	-0.823***
Population Density Growth	0.131	359	0.128	359	-0.002
Per Capita Income	10.801	359	10.795	359	-0.006
Per Capita Income Growth	0.342	359	0.331	359	-0.011
Economic characteristics					
Employment Ratio	60.624	357	60.153	357	-0.471
Establishment	0.049	357	0.047	357	-0.002***
Establishment Growth	0.063	357	0.065	357	0.002
Finance Establishment	0.057	357	0.057	357	-0.000
Finance Establishment Growth	-0.032	357	-0.033	357	-0.002
Property characteristics					
Unit Size	823.698	129	867.987	129	44.289***
Building Size	19.433	218	17.563	218	-1.870

Table 9. Correlation matrix.

This table shows the Pearson correlation coefficients for the variables. All variables are considered in subsequent analyses (see Table 3 for variable descriptions and calculation methods). * indicates statistical significance at least at a 1% level.

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
(1) Absorption Rate	1													
(2) Cap Rate	-0.1168	1												
(3) Rent	0.0227	-0.1824*	1											
(4) Sale Price	0.132	-0.6152*	0.5804*	1										
(5) Sales Volume	0.2727*	-0.3970*	0.5253*	0.6037*	1									
(6) Population Density	0.0284	-0.1007	0.1114	0.2577*	0.1304	1								
(7) Population Density Growth	0.0903	-0.1462	-0.002	0.0356	0.0217	-0.0397	1							
(8) Per Capita Income	0.039	-0.1986*	0.1091	0.2225*	0.1868*	0.3616*	0.035	1						
(9) Per Capita Income Growth	-0.0506	-0.1688*	0.0335	0.1992*	-0.0199	0.2523*	-0.0851	0.3963*	1					
(10) Employment Ratio	0.0161	-0.0243	0.0234	0.0191	0.0441	0.2601*	0.4263*	0.5237*	0.1213	1				
(11) Establishment	0.045	-0.1768*	0.0657	0.2080*	0.2111*	0.2536*	-0.0389	0.7099*	0.1656*	0.3705*	1			
(12) Establishment Growth	0.059	-0.2328*	0.0431	0.2259*	0.0464	0.2907*	0.6686*	0.0977	0.2911*	0.2906*	-0.0194	1		
(13) % Financial Establishment	0.1046	-0.0696	-0.073	-0.002	0.0828	0.099	0.3915*	0.1321*	-0.1321*	0.2234*	0.2102*	0.1522*	1	
(14) % Financial Establishment Growth	0.0416	-0.0492	-0.0203	-0.0581	-0.0782	-0.1901*	0.1769*	0.0799	0.0529	0.065	-0.0659	-0.0785	0.1808*	1

Table 10. Multivariate analysis of neighborhoods with RECF properties and the remaining neighborhoods within the MSAs.

This table shows logit regressions to compare the neighborhood in which real estate crowdfunding properties are located with the remaining neighborhoods in the same MSA. Dependent variable equals to 1 if it is a neighborhood in which real estate crowdfunding property is located, and it equals to 0 if it is the remaining neighborhoods in the same MSA. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1) Neighborhood (NBHD)	(2) NBHD	(3) NBHD	(4) NBHD	(5) NBHD	(6) NBHD	(7) NBHD	(8) NBHD	(9) NBHD	(10) NBHD	(11) NBHD	(12) NBHD	(13) NBHD	(14) NBHD	(15) NBHD
Real estate market characteristics															
Absorption	26.471***					26.082***					25.405***				
	(4.14)					(3.54)					(3.82)				
Cap Rate		-3.076					-6.989					-5.277			
		(-0.50)					(-0.96)					(-0.78)			
Rent			0.037***					0.030*					0.037**		
			(2.82)					(1.81)					(2.51)		
Sale Price				0.001**					0.001					0.002**	
				(2.47)					(0.88)					(2.23)	
Sale Volume					0.007					0.007					0.003
					(0.62)					(0.49)					(0.22)
Demographic characteristics															
Population Density						0.868***	0.771***	0.835***	0.908***	0.831***					
						(8.43)	(7.06)	(8.20)	(7.90)	(8.22)					
Population Density Growth						-0.333	0.043	0.005	1.020	0.136					
						(-0.39)	(0.04)	(0.01)	(1.05)	(0.16)					
Per Capita Income						-2.715***	-2.249***	-2.750***	-2.469***	-2.613***					
						(-4.83)	(-3.74)	(-4.89)	(-4.22)	(-4.66)					
Per Capita Income Growth						3.797***	3.328***	3.753***	2.880**	3.674***					
						(3.38)	(2.78)	(3.39)	(2.42)	(3.31)					
Economic characteristics															
Employment Ratio											-0.015	-0.011	-0.013	-0.004	-0.015
											(-0.70)	(-0.46)	(-0.60)	(-0.15)	(-0.67)
Establishment											30.356***	26.083**	25.476**	20.087*	29.555***
											(3.00)	(2.34)	(2.51)	(1.81)	(2.89)
Establishment Growth											-0.154	0.134	-0.161	-0.025	0.310
											(-0.20)	(0.15)	(-0.20)	(-0.03)	(0.39)
Finance Establishment											-11.567	-9.087	-4.898	-6.339	-9.762
											(-0.91)	(-0.63)	(-0.39)	(-0.46)	(-0.78)
Finance Establishment Growth											0.836	1.439	1.026	1.273	1.246
											(0.50)	(0.75)	(0.72)	(0.43)	(0.78)
Constant	-0.314	0.215	-0.649**	-0.249	-0.037	21.770***	18.244***	22.116***	19.259***	21.168***	-0.204	0.278	-0.823	-0.666	-0.021
	(-1.59)	(0.45)	(-2.21)	(-1.14)	(-0.19)	(3.90)	(2.98)	(3.97)	(3.30)	(3.81)	(-0.15)	(0.18)	(-0.59)	(-0.45)	(-0.02)
Mean VIF	1.14	1.15	1.7	1.14	1.2	1.25	1.22	1.61	1.27	1.28	1.19	1.27	1.53	1.21	1.22
Maximum VIF	1.32	1.37	2.9	1.27	1.45	1.55	1.43	3.04	1.53	1.58	1.34	1.61	3.07	1.34	1.43
Observations	706	544	690	588	682	678	519	663	566	656	678	519	663	566	656
Pseudo R^2	0.024	0.000	0.009	0.008	0.000	0.139	0.107	0.123	0.131	0.115	0.032	0.013	0.020	0.016	0.012
Property type FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
RECF type dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 11. KMO measure of sampling adequacy.

The overall KMO is above 0.5. The data sample meets the requirement for extracting factors using factor analysis.

Variable	KMO
Population Density	0.8734
Population Density Growth	0.5221
Per Capita Income	0.649
Employment Ratio	0.7465
Establishment	0.672
Establishment Growth	0.5486
Overall	**0.6416**

Table 12. Factor analysis/correlation for finding principal factors.

This table shows that two factors have eigenvalues above 1. Two factors must be extracted form the sample.

Factor	Eigenvalue
Factor1	2.19832
Factor2	1.34914
Factor3	0.04263
Factor4	-0.06077
Factor5	-0.13883
Factor6	-0.19644

Table 13. Rotated factor loadings.

The blanks show the correlation is less than 0.4. Population density, per capita income, employment ratio and establishment load positively on factor 1. I named the first factor as the current socio-economic situation of the county. Population density growth and establishment grow load positively on factor 2, this factor indicates the 10-year trend of the socio-economic situation of the county.

Variable	Factor 1	Factor 2	Uniqueness
Population Density	0.562		0.6758
Population Density Growth		0.8685	0.2457
Per Capita Income	0.8454		0.2627
Employment Ratio	0.57		0.5524
Establishment	0.7451		0.43
Establishment Growth		0.8362	0.286

Table 14. Univariate analysis of counties have been selected for RECFs properties and the adjacent counties in the MSA.

This table shows the results of a two-sided T-test between the counties have been selected for RECFs and the counties are in the MSA of RECFs and have not been selected for RECF opportunities. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	Mean (Chosen Counties)	# Obs.	Mean (Other counties)	# Obs.	Diff.
Population Density	7.054	415	3.490	2592	-3.564***
Per Capita Income	10.800	415	10.567	2622	-0.233***
Employment ratio	60.181	419	54.105	2677	-6.077***
Establishment	0.049	415	0.046	2620	-0.003***
Population Density Growth	0.121	415	0.023	2592	-0.097***
Establishment Growth	0.060	419	-0.028	2672	-0.088***
Attractiveness Score	41.377	415	32.523	2590	-8.854***
Dif. Rank	245.683	419	-38.169	2697	-283.851***

Table 15. Multivariate regression to show the relation between the sponsors' distance and their choices within the MSA.

This table shows the OLS regressions to test whether when sponsors invest in a county far from their headquarters consider the attractiveness of the county than the average of counties in the MSA. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1) Dif. Rank	(2) Dif. Rank	(3) Dif. Rank	(4) Dif. Rank
Distance	82.420***	83.733***	88.681***	78.697***
	(3.37)	(2.68)	(3.04)	(2.92)
Absorption		4740.761*	3659.334	3018.033
		(1.81)	(1.50)	(1.34)
Cap Rate		1828.127	2913.395	2830.291
		(0.40)	(0.69)	(0.72)
Rent		-7.968	-6.004	-6.847
		(-0.94)	(-0.76)	(-0.94)
Internet Coverage			-1.98e+04***	-2.12e+04***
			(-3.95)	(-4.59)
Labor Cost				0.788***
				(6.76)
Fund	-3.142	23.001	6.823	50.856
	(-0.03)	(0.16)	(0.05)	(0.40)
Industrial	-109.993	-23.678	-4.480	110.882
	(-0.59)	(-0.11)	(-0.02)	(0.58)
Office	80.367	182.488	153.942	204.250
	(0.50)	(0.84)	(0.77)	(1.10)
Multifamily	-25.414	-111.591	-51.323	-49.267
	(-0.21)	(-0.51)	(-0.25)	(-0.26)
Constant	486.519**	350.392	905.343*	434.262
	(2.46)	(0.73)	(1.95)	(1.00)
Observations	381	267	261	261
R^2	0.034	0.062	0.122	0.258

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Appendix

In this part, I try to explain data gathering from CoStar in more details. As an example, consider the following screenshot for one of RECF property. It shows a table from which the market information was extracted.

Figure A1. Screen shot of properties' market information from CoStar.

This table reflects the market information for one of the RECF property. The third column shows market information as the average of all properties are in the neighborhood of the RECF property, and the fourth column shows market information as the average of all properties are in the MSA of the RECF property, this area includes the information of the neighborhood in which RECF property is located also. Because the number of properties is available in the MSAs and neighborhoods, I decided to subtract the neighborhood data from the MSA data. In this way, I can compare the neighborhood that RECF properties are located with the remaining neighborhoods are in the same MSA of RECF properties. For further illustration find Figure A2.
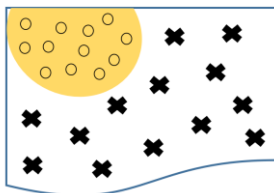
Figure A2. Neighborhood of a RECF property and the remaining neighborhood in the same MSA.

In this illustration the blue frame represents an MSA, and the yellow area represents the neighborhood of a RECF property. According to my calculation, the circle points show the neighborhood of RECF properties and x points show the remaining neighborhoods in the MSA.

Table A1. This table shows the correlation of variables with the factors according to factor analysis. As the table shows "Per Capita Income", "% Financial Establishment", and "%Financial Establishment Growth" do not have enough correlation with the factors and have a high degree of uniqueness which shows they are not relevant with the factors.

Variable	Factor1	Factor2	Uniqueness
Population Density	0.5646	0.0674	0.6767
Population Density Growth	-0.0093	0.9193	0.1547
Per Capita Income	0.8684	0.1129	0.2332
Per Capital Income Growth	0.2837	0.0431	0.9177
Employment Ratio	0.5467	0.3506	0.5782
Establishment	0.778	-0.1079	0.3831
Establishment Growth	0.1075	0.8352	0.2908
%Financial Establishment	0.3064	0.3207	0.8033
%Financial Establishment Growth	-0.0662	0.2231	0.9458

Table A2. Robustness check. Multivariate analysis of neighborhoods with RECF properties and the remaining neighborhoods within the MSAs.

This table shows logit regressions to compare the neighborhood in which real estate crowdfunding properties are located with the remaining neighborhoods in the same MSA. Dependent variable equals to 1 if it is a neighborhood that real estate crowdfunding property is located, and it equals to 0 if it is the remaining neighborhoods in the same MSA. The "size" of properties include the regressions as the control variable. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1) NBHD	(2) NBHD	(3) NBHD	(4) NBHD	(5) NBHD	(6) NBHD	(7) NBHD	(8) NBHD	(9) NBHD	(10) NBHD	(11) NBHD	(12) NBHD	(13) NBHD	(14) NBHD	(15) NBHD
Real estate market characteristics															
Absorption	34.183***					32.369***					33.136***				
	(4.57)					(3.78)					(4.31)				
Cap Rate		5.111					-1.049					1.314			
		(0.77)					(-0.14)					(0.18)			
Rent			0.035***					0.031*					0.038**		
			(2.68)					(1.88)					(2.56)		
Sale Price				0.001*					0.000					0.001	
				(1.71)					(0.42)					(1.62)	
Sale Volume					0.007					0.008					0.005
					(0.60)					(0.58)					(0.41)
Demographic characteristics															
Population Density						0.847***	0.755***	0.819***	0.903***	0.817***					
						(8.06)	(6.81)	(7.94)	(7.79)	(7.97)					
Population Density Growth						-0.646	0.097	-0.177	0.983	-0.030					
						(-0.75)	(0.10)	(-0.21)	(1.01)	(-0.04)					
Per Capita Income						-2.841***	-2.313***	-2.927***	-2.523***	-2.768***					
						(-4.87)	(-3.75)	(-5.05)	(-4.27)	(-4.81)					
Per Capita Income Growth						2.966**	2.560**	2.960***	2.381*	2.916**					
						(2.56)	(2.09)	(2.61)	(1.96)	(2.56)					
Economic characteristics															
Employment Ratio											-0.011	-0.004	-0.007	-0.001	-0.009
											(-0.48)	(-0.17)	(-0.33)	(-0.06)	(-0.42)
Establishment											23.892**	20.769*	17.731*	16.920	22.140**
											(2.22)	(1.76)	(1.66)	(1.49)	(2.07)
Establishment Growth											-0.705	-0.028	-0.608	-0.133	-0.124
											(-0.86)	(-0.03)	(-0.75)	(-0.15)	(-0.15)
Finance Establishment											-8.527	-3.865	-2.071	-4.279	-6.997
											(-0.65)	(-0.26)	(-0.16)	(-0.31)	(-0.55)
Finance Establishment Growth											0.614	1.555	1.032	1.152	1.272
											(0.41)	(0.93)	(0.69)	(0.69)	(0.86)
Control variable															
Size	-0.010***	-0.011***	-0.009***	-0.006***	-0.009***	-0.009***	-0.010***	-0.008***	-0.005**	-0.008***	-0.011***	-0.011***	-0.009***	-0.006***	-0.009***
	(-4.68)	(-4.26)	(-4.30)	(-2.65)	(-4.30)	(-3.84)	(-3.48)	(-3.64)	(-2.12)	(-3.54)	(-4.58)	(-4.09)	(-4.29)	(-2.72)	(-4.17)
Constant	-0.231	-0.142	-0.481	-0.072	0.089	23.681***	19.079***	24.549***	20.201***	23.351***	-0.234	-0.400	-0.799	-0.571	-0.001
	(-1.14)	(-0.29)	(-1.62)	(-0.32)	(0.45)	(4.07)	(3.03)	(4.26)	(3.41)	(4.07)	(-0.17)	(-0.25)	(-0.57)	(-0.38)	(-0.00)
Observations	694	544	690	588	682	667	519	663	566	656	667	519	663	566	656
Pseudo R^2	0.054	0.030	0.032	0.017	0.023	0.158	0.126	0.139	0.137	0.131	0.062	0.041	0.043	0.027	0.034
Property type FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
RECF type dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table A3. Robustness check. Univariate analysis of counties have been selected for RECFs properties and the adjacent counties in the MSA.

This table shows the results of a two-sided T-test between the counties have been selected for RECFs and the counties are in the MSA of RECFs and have not been selected for RECF opportunities. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	Mean (Chosen Counties)	#Obs.	Mean (Other counties)	#Obs.	Diff.
Population Density	7.054	415	3.490	2592	-3.564***
Per Capita Income	10.800	415	10.567	2622	-0.233***
Employment ratio	60.181	419	54.105	2677	-6.077***
Establishment	0.049	415	0.046	2620	-0.003***
Population Density Growth	0.121	415	0.023	2592	-0.097***
Establishment Growth	0.060	419	-0.028	2672	-0.088***
Attractiveness Score	2219.106	419	1455.870	2697	-763.237***
Dif. Rank	248.907	419	-38.670	2697	-287.576***

Table A4. Robustness check. Multivariate regression to show the relation between the sponsors' distance and their choices within the MSA.

This table shows the OLS regressions to test whether when RECF sponsors invest in a county far from their headquarters consider the attractiveness of the county than the average of counties in the MSA. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1) Dif. Rank	(2) Dif. Rank	(3) Dif. Rank	(4) Dif. Rank
Distance	104.720***	103.047***	108.516***	97.038***
	(3.94)	(3.01)	(3.30)	(3.22)
Absorption		4210.417	3167.859	2430.598
		(1.47)	(1.16)	(0.97)
Cap Rate		-739.269	662.550	567.011
		(-0.15)	(0.14)	(0.13)
Rent		-11.053	-8.417	-9.386
		(-1.19)	(-0.94)	(-1.15)
Internet Coverage			-2.18e+04***	-2.35e+04***
			(-3.87)	(-4.53)
Labor Cost				0.906***
				(6.94)
Fund	-56.659	-18.531	-35.923	14.700
	(-0.45)	(-0.12)	(-0.23)	(0.10)
Industrial	-42.118	75.873	111.984	244.608
	(-0.21)	(0.32)	(0.48)	(1.15)
Office	155.640	285.937	262.690	320.526
	(0.89)	(1.20)	(1.16)	(1.55)
Multifamily	-4.318	-140.333	-71.502	-69.139
	(-0.03)	(-0.58)	(-0.31)	(-0.32)
Constant	389.935*	497.361	1070.590**	529.020
	(1.82)	(0.95)	(2.05)	(1.09)
Observations	381	267	261	261
R^2	0.046	0.064	0.120	0.262

Table A5. Robustness check. Multivariate regression to show the relation between the sponsors' investment outside their states and their choices within the MSA.

This table shows the OLS regressions to test whether when RECF sponsors invest in a property which is outside their state consider the attractiveness of the county than the average counties in the MSA. Within state is a dummy variable which has the value of 1 if the RECF property is located in the sponsors' state and it has the value of 0 if the RECF property is not in the sponsors' state. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1) Dif. Rank	(2) Dif. Rank	(3) Dif. Rank	(4) Dif. Rank
Within State	-476.701***	-588.854***	-515.286***	-444.381***
	(-3.62)	(-3.47)	(-3.20)	(-2.99)
Absorption		5064.745*	4116.779*	3448.427
		(1.96)	(1.71)	(1.55)
Cap Rate		232.865	1672.800	1663.479
		(0.05)	(0.39)	(0.42)
Rent		-7.883	-6.870	-8.034
		(-0.96)	(-0.89)	(-1.13)
Internet Coverage			-1.85e+04***	-1.99e+04***
			(-3.69)	(-4.30)
Labor Cost				0.782***
				(6.72)
Fund	48.014	81.925	59.305	94.003
	(0.41)	(0.56)	(0.43)	(0.74)
Industrial	-96.347	-0.954	7.942	118.258
	(-0.52)	(-0.00)	(0.04)	(0.62)
Office	122.291	247.388	218.870	272.556
	(0.76)	(1.17)	(1.11)	(1.50)
Multifamily	-23.125	-95.126	-52.646	-63.030
	(-0.19)	(-0.44)	(-0.26)	(-0.34)
Constant	1028.412***	1007.374**	1536.832***	1006.916**
	(8.20)	(2.30)	(3.54)	(2.46)
Observations	381	267	261	261
R^2	0.038	0.078	0.126	0.259

Table A6. Robustness check. Multivariate regression to show the relation between the sponsors' investment outside their cities and their choices within the MSA.

This table shows the OLS regressions to test whether when RECF sponsors invest in a city outside their city consider the attractiveness of the county than the average of counties in the MSA. Within city is a dummy variable which has the value of 1 if the RECF property is located in the sponsors' state and it has the value of 0 if the RECF property is not in the sponsors' state. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1) Dif. Rank	(2) Dif. Rank	(3) Dif. Rank	(4) Dif. Rank
Within City	-432.540**	-589.173**	-611.074***	-623.684***
	(-2.27)	(-2.45)	(-2.74)	(-3.05)
Absorption		5297.425**	4318.428*	3541.914
		(2.03)	(1.78)	(1.59)
Cap Rate		3284.446	4355.073	3926.847
		(0.73)	(1.04)	(1.02)
Rent		-9.819	-8.445	-9.106
		(-1.18)	(-1.09)	(-1.28)
Internet Coverage			-1.84e+04***	-1.98e+04***
			(-3.65)	(-4.27)
Labor Cost				0.809***
				(6.97)
Fund	21.313	47.309	19.221	62.748
	(0.18)	(0.32)	(0.14)	(0.50)
Industrial	-138.343	-71.331	-59.736	62.654
	(-0.74)	(-0.33)	(-0.29)	(0.33)
Office	62.428	159.992	130.002	189.685
	(0.39)	(0.75)	(0.66)	(1.04)
Multifamily	-68.047	-150.635	-102.582	-94.530
	(-0.57)	(-0.70)	(-0.51)	(-0.51)
Constant	1022.330***	820.098*	1386.013***	859.361**
	(8.06)	(1.87)	(3.19)	(2.12)
Observations	381	267	261	261
R^2	0.018	0.057	0.116	0.260

Table A7. Correlation matrix.

This table shows the Pearson correlation coefficients. All variables are considered in subsequent analyses. * indicates statistical significance at least at a 1% level.

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(1) Dif. Rank	1										
(2) Distance	0.1728*	1									
(3) Absorption	0.1023	0.057	1								
(4) Cap Rate	0.1237	0.2810*	-0.1168	1							
(5) Rent	-0.0455	-0.0649	0.0227	-0.1824*	1						
(6) Internet Coverage	-0.2119*	-0.0217	-0.0433	0.0083	0.0312	1					
(7) Labor cost	0.3705*	0.0251	0.0495	0.0074	0.0437	0.0151	1				
(8) Fund	0.0027	0.059	-0.0748	0.11	-0.1071	0.0308	-0.1127	1			
(9) Industrial	-0.053	0.0098	-0.0578	0.0241	-0.0383	-0.0552	-0.0751	0.0749	1		
(10) Office	0.0432	0.0813	-0.0082	0.0678	0.5632*	0.0132	-0.0089	-0.0997	-0.1408*	1	
(11) Multifamily	-0.0377	-0.1993*	0.1172	-0.2818*	-0.6281*	0.0165	-0.0022	-0.1009	-0.2690*	-0.3214*	1

Table A8. Multivariate regression to show the relation between the sponsors' distance and their choices within the MSA.

This table shows the OLS regressions to test whether when RECF sponsors find more attractive counties than the average of counties in the MSA, they will invest in these counties regardless of the high distance of the property from their headquarters. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1) Distance	(2) Distance	(3) Distance	(4) Distance
Dif. Rank	0.0004***	0.0003***	0.0004***	0.0004***
	(3.38)	(2.67)	(3.03)	(2.91)
Absorption		8.663*	9.537*	9.542*
		(1.68)	(1.85)	(1.85)
Cap Rate		17.040*	16.000*	15.946*
		(1.92)	(1.79)	(1.78)
Rent		-0.049***	-0.051***	-0.051***
		(-2.95)	(-3.10)	(-3.07)
Internet Coverage			18.350*	18.909*
			(1.68)	(1.71)
Labor Cost				-0.000
				(-0.34)
Fund	0.178	0.056	-0.035	-0.041
	(0.73)	(0.19)	(-0.12)	(-0.14)
Industrial	-0.261	-0.495	-0.554	-0.568
	(-0.68)	(-1.16)	(-1.27)	(-1.30)
Office	0.060	0.413	0.383	0.373
	(0.18)	(0.97)	(0.90)	(0.87)
Multifamily	-0.847***	-1.352***	-1.490***	-1.489***
	(-3.46)	(-3.19)	(-3.47)	(-3.46)
Constant	5.899***	5.447***	4.972***	5.012***
	(20.98)	(6.22)	(5.27)	(5.26)
Observations	381	267	261	261
R^2	0.071	0.156	0.174	0.174