CEO Political Preferences and the Sustainability of REITs

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I. Introduction

Over the past decade, corporate sustainability has become an increasingly important issue for business in general and for the real estate sector in particular. The U.S. real estate industry is responsible for about 40 percent of greenhouse gas emissions and buildings represent some 75 percent of total U.S. electricity consumption. Following increasing environmental concerns and higher energy prices, environmentally efficient "green" buildings have gained the attention of investors. In parallel, green certification schemes, such as Energy Star and LEED in the United States and Energy Performance Certificates (EPCs) and BREEAM in Europe, have gained considerable momentum. According to McGraw-Hill Construction's Report (2012), for example, LEED certified properties covered just two percent of new construction in the United States in 2005, but made up one third of new construction in 2012.

However, building green is often perceived as costly and investors have been uncertain about the economic benefits of green-certified buildings. Recent studies have focused on the economic implications of environmentally efficient real estate, documenting that environmentally certified buildings tend to generate premiums in rents and transaction prices relative to conventional buildings (Eichholtz, Kok and Quigley 2010; Eichholtz, Kok and Quigley 2013; Fuerst and McAllister 2011; Miller, Spivey and Florance 2008; Wiley, Benefield and Johnson 2010). On the cost side, Chegut, Eichholtz and Kok (2013) show that the additional cost to building green tends to be lower than the value premiums found in the literature, except for very sustainable buildings. In their British sample, BREEAM certified buildings cost between 0 and 3 percent more to build than conventional, but otherwise comparable buildings, while buildings with a BREEAM

Outstanding label cost 17 percent more, on average.

The only paper that aims to analyze the net added value of green property investments is Eichholtz, Kok and Yönder (2012). That study shows that owning "green" properties increases operating performance and decreases market beta for U.S. Real Estate Investment Trusts (REITs) over the 2000-2010 period.

In other words, the available evidence suggests that investment in green property creates financial value, but this evidence is still limited to only a handful of studies, mostly focused on the U.S. office sector. Thus, for real estate investors, investing in the sustainability of assets may still be a matter of belief or ideology.

There is a nascent finance literature investigating the effects of ideology and political preferences on investor behavior. For example, Hutton, Jiang and Kumar (2011) document that Republican-oriented managers follow less risky investment strategies and spend less on research and development than Democrat-leaning managers. Hong and Kostovetsky (2012) investigate the consequences of political preferences of mutual fund managers. They show that relative to managers of comparable mutual funds, Democrat-oriented fund managers are less exposed to tobacco, guns, defense and the natural resources industries.

The contribution of the paper is twofold. First, the real estate sector offers an interesting laboratory to investigate the effects of political preferences of investors on investment decision-making. REITs provide an ideal testing ground, since the researcher can identify the people who are ultimately in charge of the investment decisions: the CEO and the other members of the management team. And that also holds for the outcomes of these decisions, since REITs provide detailed information about all the buildings in their

portfolio. Knowing the identity of the CEOs, we can determine political preferences by observing political contributions in federal elections. These data on individual CEOs allow us to answer our main research question: the effect of political preferences of REIT CEOs on the sustainability of these REITs' property investments. This is the first paper to address the effects if investors' ideology or political color on investment decisions in real estate.

Second, this paper is among the few studies that investigate investor motivations to invest in energy-efficient real estate. The only other paper with this aim is a recent study by Kok, McGraw and Quigley (2011), who address the determinants of green property investments at the U.S. MSA level. They show that MSAs with higher incomes, lower vacancy rates and higher property values have a higher adoption rate of energy-efficient and green buildings. The study also document that the availability of human capital, measured by green building professionals and policies encouraging green building, increase the share of certified properties at the MSA level. Political preferences at the MSA level do not have an impact on the adoption of green buildings.

Controlling for financial and local determinants of green building adoption, such as the "locational greenness" of a city, we hypothesize that Democrat-leaning managers are more likely to invest in green-certified properties than Republican-oriented managers. Our hypothesis is based on two notions. First, American politics are strongly partisan when it comes to environmental issues and Democrats are more likely to pursue environmental policies (Hirshleifer, Low and Teoh 2012). Second, Republicans are generally more conservative and are more reluctant to make new types of investments,

which may include investments in green-certified properties (Hutton, Danling and Kumar 2011).

The relative risk aversion of Republican CEOs can have offsetting effects when considering investments in "green" real estate. On the one hand, green property investment implies investment in new types of buildings, incorporating innovative technologies. And although the importance of green property investments for REITs is growing, their investments are still in their early stages (Eichholtz, Kok and Yönder 2012). On the other hand, if the risk aversion of Republican CEOs is of a more financial nature, one would expect them to prefer green buildings to conventional buildings, given the general evidence that occupancy risk is lower for green buildings than for conventional buildings (Eichholtz, Kok and Quigley 2013) and that portfolio greenness decreases market beta (Eichholtz, Kok and Yönder 2012).

Using the political contributions of REIT CEOs in federal elections as a proxy, we find that REITs led by Democrat-leaning CEOs are more likely to invest in green-certified properties than those managed by their Republican-leaning peers. Managerial political preferences especially affect the likelihood and intensity of REIT ownership of Energy Star labeled buildings. REITs led by Democrat-leaning CEOs are more likely to own Energy Star labeled buildings, while Republican CEOs seem to have a preference for LEED labeled properties. Interestingly, REITs whose CEO is strongly Democratic, indicated by the fact that (s)he only contributes to Democratic political candidates, are less likely to invest in LEED-certified buildings than in conventional buildings (and Energy Star labeled buildings). So while REITs with Republican managers are less likely

to own environmentally rated buildings in general, there also seems to be an ideologically-driven preference for either of the two labels.

In addition, more experienced CEOs are less likely to invest in green-certified real estate and we document that larger firms are more likely to own LEED-labeled buildings. Besides that, local greenness and the local political climate are important factors determining the likelihood of green property investments.

The findings in this paper have some implications for REIT management teams and for policy makers. The adoption of energy-efficient building practices is not evenly spread among REITs and the political predisposition of the management team seems to affect the heterogeneity in adoption. If energy efficiency and other sustainability attributes of buildings affect the financial performance of REIT portfolios, this finding implies that some management teams make financially suboptimal investment decisions, potentially affecting shareholder value. For policy makers, our findings show that sustainability remains a politically sensitive topic – reaching the (many) energy efficiency goals set by (local) government hinges on more than market forces alone.

The opposing results for Energy Star and LEED are less intuitive and it remains unclear why we document a relation between political orientation and the degree to which a REIT owns Energy-Star-labeled buildings, but why such a relation is absent for LEED-certified buildings. One reason could be that Energy Star is a government-initiated certification system, which may be more acceptable for Democrats, but less appealing to Republicans. LEED, on the other hand, is market-initiated and may therefore be politically less sensitive. This suggests that Energy Star and LEED are complementary in the constituency they serve and that the establishment of the LEED system serves an

important role in supporting the environmental awareness of property owners who would otherwise not have been interested in environmental sustainability.

The remainder of this paper is organized as follows: Section II reviews the literature on green buildings, political preferences and investment behavior. In Section III, we describe the data and provide some descriptive analyses. Section IV and V present the method and results of the regression analyses and the results of the robustness tests. Section VI provides a summary and concluding remarks.

II. Literature Review

A. Political Preferences and Investment Behavior

In the finance literature, recent research suggests that one of the determinants of corporate investment decisions is the political preference of managers and individual investors.[1] Hutton, Jiang and Kumar (2011) examine whether Republican corporate managers – who are expected to be more conservative than their Democratic peers – also follow more conservative strategies for their companies. They show that Republican managers implement less risky and more profitable investment strategies and have lower R&D expenditures. Their companies also have lower leverage and pay higher dividends.

Hong and Kostovetsky (2012) investigate whether political values affect socially responsible investment decisions, using a large sample of mutual fund managers. The authors hypothesize that Democrats are more prone to follow environmental and labor protection policies and are more likely to be against smoking, guns and defense spending

[1] Kaustia and Torstila (2011) investigate the political color of individual investors and show that investors with "left wing" political preference participate less in stock markets. This can be explained by their anti-capital market attitude. Bonaparte, Kumar and Page (2012) also look at individual investors and document that Democrat (Republican) -leaning investors become more optimistic when Democrat (Republican) party is in charge and accordingly, they make riskier investment decisions.

than Republicans. The results show that Democratic fund managers are less exposed to companies active in the tobacco, guns and defense and natural resources industries, at about one percentage point less than a manager of a comparable fund. Interestingly, the investment performance of Democrat fund managers does not significantly differ from their Republican-leaning peers, but both perform better than managers that do not contribute to a political party at all.

Di Giuli and Kostovetsky (2011) investigate the relationship between political preferences of stakeholders as a proxy for socially responsible behavior and corporate social responsibility ("CSR"). The authors show that Democratic CEOs, founders and directors are associated with higher firm CSR ratings as measured by KLD scores. Additionally, it is documented that if the headquarter of their firm is located in a Democrat region, the company is shown to be more socially responsible, while controlling for firm and CEO characteristics.

B. "Green" Real Estate Investments

Following the fast growth of "green" certified commercial real estate (Kok, McGraw and Quigley 2011), the empirical research on the financial performance of these buildings is evolving rapidly. The literature mostly investigates whether green-certified buildings generate economic premiums and whether these properties are profitable to owners, such as REITs. The majority of the research on green-certified buildings has been performed at the property level.

Eichholtz, et al. (2010) investigate marginal effect of LEED and Energy Star certification on the rents and transaction prices of office buildings in the United States.

The authors find a rental premium of five and eight percent for LEED-certified and Energy-Star-rated office buildings, respectively; the premiums in transaction prices are 11 percent and 19 percent, respectively, both while controlling for differences in building quality. Other related papers are Fuerst and McAllister (2011), Miller, et al. (2008) and Wiley, et al. (2010). These studies mainly differ from each other in the samples they study and the methods they use, but all test for the presence of economic premiums, showing that green-certified buildings have significantly higher rents and asset values as compared to conventional buildings, while controlling for differences in quality and location.

Eichholtz, et al. (2013) extend the literature by exploiting a much larger sample than previous studies, by applying propensity-score weights to properly control for quality differences between the treatment and control samples and by extending the analysis into the 2009 crisis period. Interestingly, the authors find that economic premiums to building green did not change significantly between 2007 and 2009, despite the large increase in the supply of certified buildings and the significant decrease in office demand following the global financial crisis. The authors are also able to investigate to what extent the rent premiums are comparable to the energy savings for the tenants of green buildings. The results show for each one-dollar reduction in the energy bill, the building cash flow increases by 95 cents. This suggests that premiums to more energy efficient buildings are not necessarily driven by ideology or tenant preferences, but rather the result of financially optimizing managers.

Compared to the large body of literature on the asset level implications of "green" certification, there is limited research at the portfolio level. Eichholtz, et al. (2012)

investigate the relation between the performance of U.S. REITs and the degree to which these hold green properties, as measured by LEED and Energy Star labels. The authors show that the share of certified properties is positively related to operating performance and negatively related to systematic risk. A recent study by Bauer, et al. (2011) investigates the environmental and financial performance of listed property companies globally. The authors find that better environmental performance is associated with better operating performance.

To our knowledge, there is little evidence regarding the motivations of building owners to opt for more efficient, more sustainable properties. Kok, et al. (2011) show that larger property companies, especially those from Australia, are superior environmental performers. Additionally, the authors show that property companies investing in retail and office properties display better environmental performance than companies active in residential and industrial real estate. At the regional level, Kok, et al. (2011) find that MSAs with higher incomes, lower vacancy rates, higher property values, more educated green building professionals and more policies supporting green buildings have a higher share of green building in their overall building stock.

Besides these papers, it remains an empirical question why some property companies invest in green buildings, while others do not. We know little about who chooses to invest in green buildings. In fact, despite the recent academic evidence surveyed above, there is still a debate among practitioners regarding the financial benefits of "green" properties. In a survey of some 200 REIT CEOs, real estate operating companies and property development companies (Pivo 2008) many of the respondents state that insufficient information on the financial performance of "green" buildings and a

lack of tenant demand for environmentally-friendly buildings are the main obstacles to invest in certified properties.

III. Data and Univariate Analysis

A. Managerial Political Preferences

To determine the political preference of REIT CEOs, we collect data from the Federal Elections Committee (FEC) website.[2] The FEC records data on political contributions to candidates and political action committees (PACs) during federal elections by any individual since 1979. It also presents data on donors' home address and employer. We manually search for the name of each REIT CEO using annual reports of REITs and then match this with the FEC records to identify contributions by each CEO to candidates and PACs. For each contribution, we collect information on the recipient, such as state, associated party (if available) and date and contribution to the recipient.

If a candidate or a PAC to which a REIT CEO has contributed is associated with a party in the FEC database, we assume that the REIT CEO contributes to the associated party. Additionally, for the PACs that are not associated with a party in the FEC database, we look at the candidates who are supported by those committees. We label a PAC as associated with a party if at least two-thirds of the candidates it contributes to are associated with the same party.[3] Once we have determined the candidates' and PACs' associations with the political parties, we sum up the dollar value of contributions for Democratic/Republican candidates and committees for each REIT CEO. To measure political preferences, we use the following equation:

[2] For more information, please visit http://www.fec.gov.

[3] We find similar results if we exclude those committees which are not associated with a party in the FEC database.

$$Dem\_Ratio_i = \frac{Contributions\ to\ Democrats_i}{Contributions\ to\ Democrats_i + Contributions\ to\ Republicans_i} \quad (1)$$

where *i* stands for the CEO of REIT *i.*

If a REIT CEO contributes to Democrats only, *Dem_Ratio* equals 1, while a REIT CEO who contributes to Republicans only has a *Dem_Ratio* of 0. The value of *Dem_Ratio* for CEOs that do not contribute to a political party is 0.5. As the CEO becomes more Democratic, the *Dem_Ratio* increases.

Figure 1 presents a histogram of *Dem_Ratio*, covering all observations in our analysis for the 2004-2012 period. Overall, we observe that REIT CEOs tend to be Republican-leaning. The mean is around 0.4, which is in the Republican region. The frequency at the tails is larger in the Republican region than in Democrat region, which is in line with our (intuitive) expectations: the real estate industry tends to be a rather conservative industry and Republicans are more likely to be conservative. There are two other interesting observations to be made in Figure 1. First, we observe spikes at the extremes on the distribution, which implies strong political predisposition (even if this may be contrasting the political predisposition in the jurisdiction of the company). This tendency seems to be especially strong on the Republican side. Second, the great majority of REIT CEOs in the sample make financial contributions to political parties, making more than six-seventh of the observations in the whole sample. Third, the graph shows that more than half of the observations lie between the two extremes, indicating that REIT CEOs tend to contribute to both parties, which suggests opportunistic behavior in the political contributions of REIT CEOs. The ratio spikes in the middle consisting of

105 observations from "non-donor" CEOs and 45 observations from CEOs contributing to both parties.

To measure the effect of polarized political convictions on sustainable investment decisions, we specifically address strong Democrats and strong Republicans. We create two dummy variables, *Dem_Dummy* and *Rep_Dummy* for REIT CEOs who only contribute to one of the parties. *Dem_Dummy* equals 1 if *Dem_Ratio* is equal to 1 while *Rep_Dummy* is 1 if *Dem_Ratio* equals 0.

B. Portfolio Greenness

Following the literature on energy efficiency in the commercial real estate sector, we define a property as "green" if it is Energy Star labeled by the Environmental Protection Agency (EPA) or LEED certified by the U.S. Green Building Council.

The U.S. Environmental Protection Agency (EPA) and the U.S. Department of Energy (DOE) initiated the Energy Star program in 1992. The label solely concentrates on energy consumption by evaluating energy consumption and the efficiency of buildings' energy use relative to a set of comparable buildings, defined by CBECs (the Commercial Building Energy Consumption Survey). Since the Energy Star program assesses energy consumption, it can only be applied to buildings in use, which is different from the LEED label. Since 1999, residential and office buildings have been certified with the Energy Star label and the EPA currently also labels retail properties, hotels and warehouses. 21,420 commercial properties had received an Energy Star label as of May 2013.

The other main certification program for green buildings in the United States is

the LEED program, developed by the U.S. Green Building Council (USGBC) in 1998. The certification program evaluates sustainability within six categories and encourages improving the performance and the design of the buildings across energy consumption, water use, CO_2 emissions, indoor environmental quality and stewardship of resources.

Although the take-up of the LEED label was initially slow, the growth of the LEED label has recently accelerated. While two percent of new construction was LEED labeled in 2005, this has increased to one third in 2012 according to McGraw-Hill Construction's Report (2012). The total number of LEED-certified commercial buildings as of June 2012 was 12,206.

To measure the "greenness" of REIT property portfolios, we follow the method used by Eichholtz, et al. (2012). SNL Financial provides data on all properties in the portfolios of U.S. REITs. We use a GIS script to obtain the longitude and the latitude of each property in the database and then match them with the files maintained by the EPA and USGBC to determine whether these buildings are Energy Star and/or LEED certified, respectively. Considering the year of certification from the EPA and USGBC databases and the year of acquisition and the year of sale from the SNL database, we calculate the share of green assets in the property portfolio of each REIT for each year. In this way, we create an annual measure of "portfolio greenness." The equation to construct the greenness measure is as follows:

$$Greenness_{it}^{g} = \frac{\sum_l Sqft\ of\ Certified\ Property_{ilt}^{g}}{\sum_l Sqft\ of\ Property_{ilt}} \tag{2}$$

where *i* stands for REIT *i*, *t* stands for year *t*, *l* stands for property *l* and *g* is the certification, which is either LEED or Energy Star.

Figure 2 shows the evolution of green building shares in the property portfolio of REITs. The figure shows the average portfolio greenness among REITs that own labeled properties and the portfolio greenness of the greenest REIT each year. We evaluate portfolio greenness for the period from 2004 until 2012. In 2004, we observe that there are very few certified buildings owned by REITs. But while there is limited adoption of "green" building among REITs in the first half of the past decade, we observe an increasing trend in the second half. We document a faster increase in the portfolio shares of Energy Star labeled properties than of LEED labeled properties.

We also address the portfolio greenness of the greenest REITs in each year. Until 2004, the share of Energy-Star-labeled properties in the greenest REIT's property portfolio was less than 10 percent, but this increased to more than 80 percent in 2012. The portfolio share of LEED-labeled buildings was zero in 2004 and we observe a slower increase than in Energy Star take-up. The share of LEED labeled properties in the portfolio of the greenest REIT was 25 percent by 2012.

Overall, green property investment seems to have increased only very recently among REITs and we are still at the very early stages of this development. The numbers presented in Figure 2 suggest that REITs generally prefer the Energy Star label over LEED certification and the increase in portfolio shares is higher for Energy-Star-labeled properties. But of course, Energy Star is related to the energy consumption of buildings and is easier (and cheaper) to apply for than LEED, which has a more complex (and more

expensive) approach.

– Insert Figure 2 here –

C. Descriptive Statistics

Table 1 provides sample statistics regarding the "portfolio greenness" of REITs whose CEOs are either strong Democrats or strong Republicans. The table shows the descriptive statistics of Energy Star and LEED shares for REITs led by Democrats, Republicans and others including non-donors for the complete sample period. From strong Republicans to the middle group and from the middle group to strong Democrats, there is a clear increase in the share of Energy Star certified buildings in the property portfolio: the Energy Star share is 1.9 percent for strong Republicans, it is 3.8 percent for the middle group and increasing to 10.6 percent for Democrats. The difference between strong Democrats and strong Republicans in the Energy Star share is 8.7 percent and significant at the one-percent level.

We observe quite a different picture for the LEED portfolio shares. Here, we do not observe a clear pattern from REITs managed by strong Republicans to strong Democrats. There are, on average, no LEED-certified properties owned by REITs managed by strong Democrats, even thoughy the Energy Star share for this group of REITs is 10.6 percent. REITs led by strong Democrats have a lower LEED share than those led by strong Republicans. The difference is 1.1 percent, which is significant at the 1 percent level.

These simple statistics suggest that the market-driven LEED label is adopted to

mostly by REITs led by (more conservative) Republican CEOs, whereas the government-initiated Energy Star label is adopted more by REITs managed by Democrat-leaning CEOs. But even within the group of REITs led by strong Republicans, the portfolio share of Energy Star labeled buildings is a bit higher than the percentage of LEED labeled buildings, so this ideological preference does not seem very strong in economic terms.

In absolute numbers, we observe that REITs led by strong Republicans own fewer green properties, which is in line with the more conservative perspective of Republicans. These CEOs seem to be less open to implementing energy efficiency investments in commercial property, which may partly be determined by the relative novelty of the investment style: green property investments did not exist as an investment style by the beginning of 2000s and have only become more prevalent after the second half of the last decade. So, it is possible that more conservative CEOs have a wait-and-see attitude towards energy efficiency in property. Another explanation could be that energy efficiency policies for real estate are associated with the debate on CO_2 and global warming, in which the Republican party tends to take a rather opposing stand. This may create skepticism towards green properties, even if their financial performance is attractive – the evidence of that attractive financial performance is quite recent.

REITs led by strong Democrats have, in absolute numbers, higher property shares of green properties than the middle group and REITs led by strong Republicans. This supports our expectations that Democrats are more open to making environmental investments than Republicans. We will investigate this issue in more detail in the next section of the paper.

– Insert Table 1 here –

D. Local Controls

To increase the robustness of our analysis, we also control for local characteristics in the region where REITs invest. As in Kok, McGraw and Quigley (2011) and Eichholtz, Kok and Yönder (2012), we develop a local greenness measure. *Local Greenness* is the ratio of total square feet of green buildings to the total square feet by MSA. *Portfolio Weight* is the weight of total square feet at each MSA to total square feet of REIT property portfolio by year.

Multiplying the two variables for each MSA and summing them up, we obtain the *Green Local Share* for each REIT. This way, we determine the greenness of the location that REITs invest in. We expect that in "greener" locations, REITs are more likely to own green buildings.

$$Green\ Local\ Share_{it} = \sum_{j=1}^{48} Local\ Greenness_{jt} * Portfolio\ Weight_{ijt} \quad (3)$$

where *i* stands for REIT *i*, *j* stands for MSA *j* and *t* stands for year *t*.

The second local control variable is related to the political preference in the location in which REITs invest. From the FEC database, we obtain information on whether Democrats or Republicans won a congressional district during each federal election since 2002. We create a dummy variable, *Dem_District*, which is *1* if Democrats win and *0* if Republicans win.

Then, we determine congressional districts where REIT properties are located, by

matching counties in the SNL Financial database with congressional districts. Finally, we calculate *Local_Dem*, which is a weighted local political preference measure. *Local_Dem* has a value between 0 and 1. As it increases, the weighted location where REITs own properties becomes more Democrat-oriented.

$$Local\_Dem_{it} = \sum_k Dem\_District_{kt} * Portfolio\ Weight_{ikt} \quad (4)$$

where *i* stands for REIT *i*, *k* stands for congressional district *k* and *t* stands for year *t*.

We expect that in more Democrat-oriented locations, REITs are more likely to own green properties, since Democrats are more open to environmental issues. As the location becomes more Democratic, there might be an increase in the demand for green space by building users and REITs might own more green properties to meet that demand.

E. CEO Characteristics and Financial Controls

In our regression analysis, we also control for CEO characteristics, such as *CEO age* and *CEO tenure*. We collect data for CEO characteristics from SEC 14-F filings. We expect that younger and less experienced CEOs are more open to new types of investment strategies, such as green property investments.

We obtain financial data from SNL Financial. The data set covers U.S. REITs from 2004 through 2012.[4] We control for *log(Size)* measured as the logarithm of total assets; *Firm Q* calculated as the ratio of book value of total assets plus market

[4] We do not include data before 2004 since there are very few Energy Star and LEED certified properties owned by REITs before that year.

capitalization minus common equity to book value of total assets; *Firm Age*, which is the number of years since IPO; and property type dummies for residential, retail, office and hotel. We expect that larger, younger firms are more likely to own green properties. Regarding firms' growth opportunities, it is not very clear what to expect. Firms with high growth opportunities may aggressively invest in more innovative property products, such as green buildings, but it is also possible that firms with lower growth opportunities could defensively seek investments in green properties.

Table 2 provides descriptive statistics, showing that 4 and 1 percent of REIT property portfolios are Energy Star and LEED certified, respectively. For the REIT with the greenest portfolio, 86 percent of the portfolio consists of Energy Star labeled buildings. The highest LEED share is 37 percent of the portfolio (by square footage).

The mean of *Dem_Ratio* is 40 percent, indicating that REIT CEOs contribute more to Republicans than to Democrats. When looking at strong Democrats and Republicans, we observe that 13 percent of the CEO-years in the sample are strongly Republican, whereas 6 percent of the observations is strongly Democrat. Additionally, the locations where REITs own buildings are slightly more Democrat-oriented, since the average value of *Dem_Local* is 0.53 in these regions.

The average REIT CEO is around 54 years old and has been working as a director for 12 years in our sample. REITs are quite young: the number of years since the IPO is 18 years for the average REIT. On average, REITs had just over US$4 billion in assets under management over the sample period.

– Insert Table 2 here –

IV. Method and Results

A. Empirical Model

To investigate the determinants of the likelihood for REITs to own Energy Star and LEED-certified properties, we regress the portfolio shares of Energy Star and LEED-labeled buildings on political preference measures and a vector of control variables.

We employ a fractional logit model following Papke and Wooldridge (1996) to explain the portfolio greenness of REITs. When the dependent variable is a fraction, ordinary least squares might predict values of smaller than 0 and larger than 1 and cannot guarantee fractional predicted values of the dependent variable. For that reason, Papke and Wooldridge (1996) develop the fractional logit model to estimate equations with fractional dependent variables. The model we estimate is as follows:

$$E(Green\ Share_{it}|Controls_{it})=G(\delta_0+\delta_1 Political\ Taste_i+\delta_2 Financial\ Controls_{i,t-1} +\delta_3 Local\ Controls_{i,t-1}+\delta_4 CEO\ Controls_{i,t-1}+\varepsilon_{it}) \quad (5)$$

where G(.) is a function satisfying $0 < G(z) < 1$ for all $z \in R$.

B. Results

We present the regression results of REIT portfolios' Energy Star and LEED share on *Dem_Ratio* and control variables in Table 3. In the first three columns, the dependent variable is the Energy Star share and in the last three columns, it is the LEED share. In all regressions, we control for time trends using year-fixed effects and for property type using sector-fixed effects. The standard errors are heteroscedasticity robust

and clustered by firm. We present the odds ratio, which is the ratio of the probability of the green share being equal to 1 and the probability of the green share being equal to 0, instead of the coefficients themselves. Odds ratios between 0 and 1 indicate a *negative* relationship and odds ratios larger than 1 show a *positive* relationship. Additionally, a lower BIC indicates a better model specification.

In column (1), we regress the Energy Star share on *Dem_Ratio* and the set of control variables. We find that if *Dem_Ratio* increases from 0 to 1, that is, a REIT with a strongly Republican CEO would switch to a strongly Democrat CEO, the odds ratio of observing Energy Star labeled buildings in the portfolio increases by a factor of 6.80 and this is significant at the one-percent level.

In column (2), we add controls for local greenness. We document that the coefficient of *Green_Local* is above 1, indicating the expected relationship with REITs' portfolio greenness, but it is statistically insignificant. The coefficient on *Dem_Ratio* again indicates a positive and significant relationship with portfolio greenness.

In column (3), we add CEO age and tenure to the model. We document that younger and especially CEOs with a shorter tenure, are more likely to own Energy-Star-certified properties. The coefficient of *Dem_Ratio* is still significant, after controlling for local determinants and CEO characteristics. Including these controls slightly decreases the political effect: turning from a strong Republican CEO to a strong Democrat increases the likelihood of a REIT owning properties certified by Energy Star by a factor of 4.9. None of the control variables is significantly related to the odds ratio of the green portfolio share measured by the Energy Star label.

In columns (4) to (6), we regress the LEED portfolio share on *Dem_Ratio* and other controls. In none of these regressions we find a significant coefficient for *Dem_Ratio* – although the fact that the coefficient is below 1 suggests that Republican-leaning managers are more likely to LEED-certified buildings. We find that firm size increases the likelihood of owning LEED certified properties.[5]

The overall findings are in line with our expectations. Republicans tend to be relatively conservative and may be more cautious in engaging in new types of investment, such as investments in the energy efficiency of properties. Democrats, on the other hand, are more likely to include environmental considerations into their decision-making and are therefore more likely to invest in green certified properties.

The opposing results for Energy Star and LEED are less intuitive and it remains unclear why we document a relation between political orientation and the degree to which a REIT owns Energy-Star-labeled buildings, but why such a relation is absent for LEED-certified buildings. One reason could be that Energy Star is a government-initiated certification system, which may be more acceptable for Democrats, but less appealing to Republicans. LEED, on the other hand, is market-initiated and may therefore be politically less sensitive. This suggests that Energy Star and LEED are complementary in the constituency they serve and that the establishment of the LEED system serves an important role in supporting the environmental awareness of property owners who would otherwise not have been interested in environmental sustainability.

[5] In unreported results, when we merge the Energy Star and LEED shares, we confirm that as a CEO is more Democrat, the REITs (s)he manages is more likely to invest in certified properties. The results are similar to those in the regressions of the Energy Star share reported in Table 3.

– Insert Table 3 here –

In Table 4, we regress green portfolio shares on dummies for strongly Democratic (Republican) CEOs, defined as CEOs who only contribute to Democrats (Republicans). Columns (1) to (3) of Table 4 focus on the Energy Star share in a given REIT portfolio. The results are in line with Table 3: in all specification, we find that REITs led by a strong Democrat demonstrate higher odds of having Energy Star buildings in the property portfolio. The effects are quite strong: moving from the reference group to "strong Democrats" increases the likelihood of owning Energy Star certified properties by a factor of 1.97. We do not find a coefficient that differs significantly for strong Republican CEOs relative to the middle group. Testing the difference between the coefficients of the strong Democrat dummy and the strong Republican dummy, we find that REITs led by strongly Democratic CEOs are more likely to invest in Energy Star labeled properties as compared to their peers led by strong Republicans, at the five-percent significance level.

In columns (4) to (6), we address the LEED share of REIT portfolios. Importantly, we document that REITs led by strong Democrats are significantly less likely to own LEED-certified properties, although the economic impact is quite small. REITs led by strongly Democratic CEOs invest Energy Star labeled buildings for (relatively) large fractions of the portfolio, but own smaller fractions of LEED-certified properties.

We do not find evidence that REITs managed by Republican CEOs investing *more* in LEED-certified properties, but the contrast between the two groups is quite remarkable. The table suggests that a strong political conviction is associated with an

ideological preference for either of the two labels. REITs with strongly Democrat CEOs, while being more likely to own environmentally labeled buildings in general, show a big difference in their preference of Energy Star over LEED. For REITs having strongly Republican CEOs, the difference in label predilection is not as pronounced: even apart from the lack of significance, the coefficients for *Rep_Dummy* are much closer to one than those for *Dem_Dummy*, indicating relative indifference.

– Insert Table 4 here –

C. Causality and Robustness Checks

In the analyses above, we document that REITs managed by Democrat-leaning CEOs are more likely to invest in Energy-Star-certified properties, but less likely to invest in LEED certification. Our findings can be interpreted in two ways. One possibility is that Democrat-leaning managers are more prone to environmental issues and specifically, energy efficiency issues, than Republican-leaning managers and therefore these CEOs invest more in Energy Star certification. An alternative explanation is that REITs that have sustainability "in their DNA" may be more prone to hiring managers who are more Democrat-leaning and correspondingly, those managers may make "green" property investments. This is a form of sorting of like-minded CEOs into companies that adhere to their political preferences. Comparably, REITs with a more conservative culture might pick Republican-leaning managers. In this section, we evaluate this issue of reverse causality.

i. Founders and Company Culture

One way to investigate the causality issue is to assess at the political culture at the very beginning of a REIT. Our identification strategy is to study the political preferences of the founders of the company – the founders create the company's roots and are likely to leave a lasting imprint on the company culture.

We first determine the identity of the founders of each REIT from SEC 14-F filings. Then, we collect data on the political contributions of these founders and we again create the *Dem_Ratio* for the founders. First, we investigate the impact of political preference of the founders on portfolio greenness. If the company culture is influential on the investment style of the company, we can test whether the political preference of the founders affects the likelihood of owning more "green" properties. This approach can tackle the problem of the sorting issue of REIT CEOs into certain REITs, based on political predisposition of the company.

Table 5 shows the regression results, using the political predisposition of the founders rather than the donations of the current CEO as a proxy for the greenness of a management team. The results are quite comparable to those documented for CEOs. REITs with more Democrat-leaning founders are more likely to invest in Energy-Star-certified properties. We do not document any significant impact of *Founder_Dem_Ratio* on portfolio greenness measured by LEED certifications, although the coefficient is above one (indicating a positive relationship). Overall, REITs founded by Democrats invest more in efficient properties. The results provide an indication that REITs with Democrat-leaning founders tend to opt for Energy Star certification over LEED certification.

– Insert Table 5 here –

ii. Difference-in-Difference Approach

Of course, some of the effects documented in the previous section may be due to unobservables – variables that are related to the political preferences of a REIT CEO or founder and to portfolio greenness, but that cannot be observed in our dataset. Therefore, we also investigate the impact of the *change* in the *Dem_Ratio* of REIT CEOs on the change in portfolio greenness. We observe a change in *Dem_Ratio* when there is a change in the CEO position. We examine the impact of a change in *Dem_Ratio* of CEOs with different political preferences, when a new CEO takes control. We expect that company culture and values are constant over the two years between federal elections, so the possible impact of company culture disappears from our regressions by using a difference-in-difference approach with company-fixed effetcs. Our hypothesis is that if a more Democrat (Republican) CEO takes the helm at a company, then a REIT is more (less) likely to increase its portfolio greenness.

We present the regression results in Table 6. The dependent variable is the change in portfolio greenness. We again apply a fractional logit model, where the dependent variable is a fraction but cannot hVE a negative value.[6] We find that if the difference in *Dem_Ratio* increases from 0 to 1, implying that a Democrat-leaning CEO takes over from a Republican-leaning CEO, then the likelihood of a REIT owning Energy Star certified

[6] We restrict the difference in portfolio greenness to be larger than zero. If the difference in portfolio greenness receives a negative value (in less then one tenth of the cases), we give a value of zero to that observation. We believe that this lower bound does not materially impact our results, because a decline in portfolio greenness is usually caused by adding a non-certified asset to the REIT property portfolio, rather than purposefully removing "green properties" from the portfolio.

properties goes up by a factor of almost 17. The coefficient is significant at the 5 percent level. So, our main finding that Democrat (Republican) managers are more (less) likely to invest in Energy-Star-certified properties still holds with a difference-in-difference approach. The coefficient of the difference in *Dem_Ratio* has a positive sign when LEED certifications are considered, but the impact is again not significant.

We also document that, as the location that REITs operate in becomes greener and as the political preferences of the people in the locations that REITs operate become less Democrat-leaning, the likelihood of having higher "portfolio greenness" increases. In addition, differences in company size and firm value have a negative impact on the difference in portfolio greenness, but only when measured by Energy Star certification. (Of course, if a company grows by adding non-certified assets, the fraction of greenness automatically decreases.)

– Insert Table 6 here –

V. Concluding Remarks

The real estate sector plays an increasingly important role in the ambitions to reduce global carbon emissions, since it is responsible for a substantial part of electricity consumption (some 74% in the U.S. alone) and thus greenhouse gas emissions. But despite the fact that the existing literature concerning the economic performance of sustainable buildings finds significant rent and value increments in these buildings, there is still a large heterogeneity in the adoption of "green" buildings in investor portfolios.

The finance literature shows that political preferences play an important role in investment decisions, but little is known about the consequences of real estate investors' political color for their investment behavior. This paper investigates whether investors' political ideology plays a role in the adoption of energy efficient and "green" buildings in U.S. REIT portfolios. We measure political preferences by calculating the ratio of political contributions of REIT CEOs to Democrats compared to CEO contributions to both Democrats and Republicans during federal elections. We document that REIT CEOs are generally contributing more to Republicans than to Democrats, but even CEOs contribute to both political parties.

We then define the "greenness" of a REIT property portfolio as the ratio of Energy Star and LEED-certified floor space to total floor space, by REIT by year. In our analysis, we control for financial and local characteristics of REITs, including a measure of the locational greenness of the properties and the political choices regarding sustainability in REIT portfolios and we also control for CEO characteristics.

Importantly, we find that as the ratio of CEO Democrat contributions to total CEO contributions increases from 0 to 1, the odds ratio of a REIT owning Energy-Star-labeled space increases by a factor of almost 5. We also investigate "strong Democrats" and "strong Republicans," defined as REIT CEOs contributing only to one political party. We document that REITs managed by strong Democrats have a significantly higher likelihood to invest in Energy Star certified properties, but are significantly less likely to invest in LEED-certified assets.

Our findings are generally in line with the hypothesis that Democrats are more predisposed towards environmental issues and that Republicans generally tend to be more

conservative and less open to "green" property investments. In addition, Democratic REIT CEOs are more likely to opt for a government-designed energy efficiency certificate, but less so for a market-driven green building label.

Among other determinants, firm size and local greenness are important factors increasing the likelihood of green property investments. As a CEO has a longer tenure at a company, (s(he is less likely to invest in energy-efficient or sustainable real estate, possibly due to an ingrained investment style and a reluctance to make changes in the investment strategy. Our findings are robust to analyzing the political preference of founders (who are not influenced by pre-existing company values) and when we employ a difference-in-difference approach.

For LEED certified buildings, our results are quite different. We do not find a significant relation between a CEO's political preference and the likelihood of a REIT to own LEED-labeled buildings. And when we investigate committed Democrats and Republicans, we document that REITs led by strong Democrats are even significantly less likely to own LEED certified properties. There seems to be a clear preference for one type of building label over the other among the politically most committed CEOs: Democrats prefer Energy Star certifications to LEED and Republicans' preferences are vice versa. We also find that larger REITs, with less experienced CEOs, generally prefer LEED-certified buildings. The opposing results for Energy Star and LEED are less intuitive and it remains unclear why we document a relation between political orientation and the degree to which a REIT owns Energy-Star-labeled buildings, but why such a relation is absent for LEED-certified buildings. One reason could be that Energy Star is a government-initiated certification system, which may be more acceptable

for Democrats, but less appealing to Republicans. LEED, on the other hand, is market-initiated and may therefore be politically less sensitive. This suggests that Energy Star and LEED are complementary in the constituency they serve and that the establishment of the LEED system serves an important role in supporting the environmental awareness of property owners who would otherwise not have been interested in environmental sustainability. So government policy makers should not see LEED as a competitor to Energy Star, but as a welcome complement to it, possibly fostering sustainability initiatives by parties that could otherwise not have been interested in these.

The findings in this paper also have some implications for REIT management teams and investors. The adoption of energy-efficient building practices is not evenly spread among REITs and the political predisposition of the management team seems to affect the heterogeneity in adoption. Energy efficiency and other sustainability attributes of buildings in REIT portfolios affect REITs' financial performance (Eichholtz, Kok and Yönder 2012), so our finding implies that some management teams make financially suboptimal investment decisions, associated with their political preferences, and this potentially affects shareholder value.

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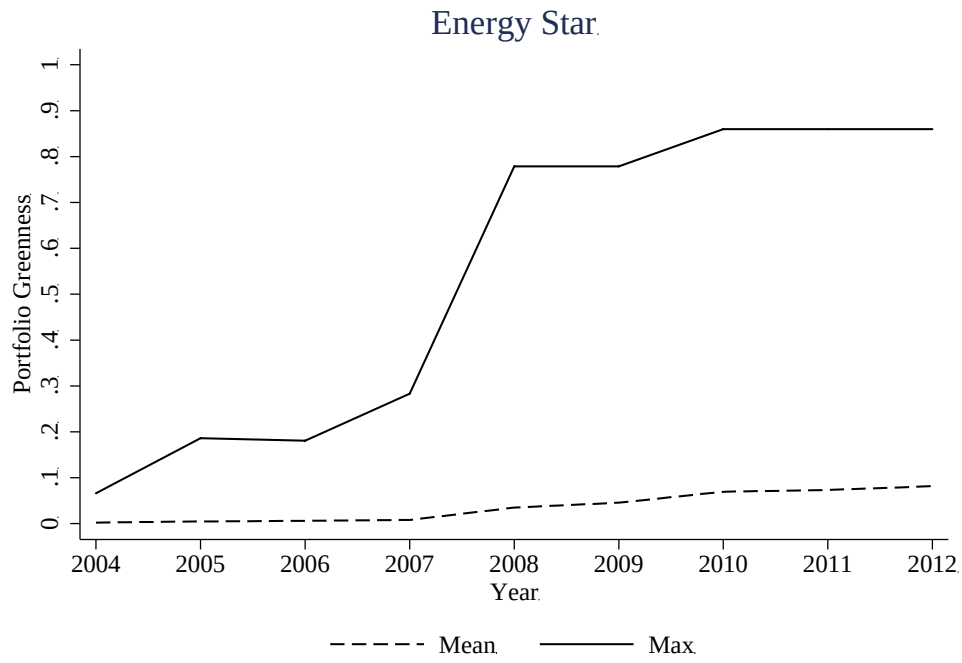
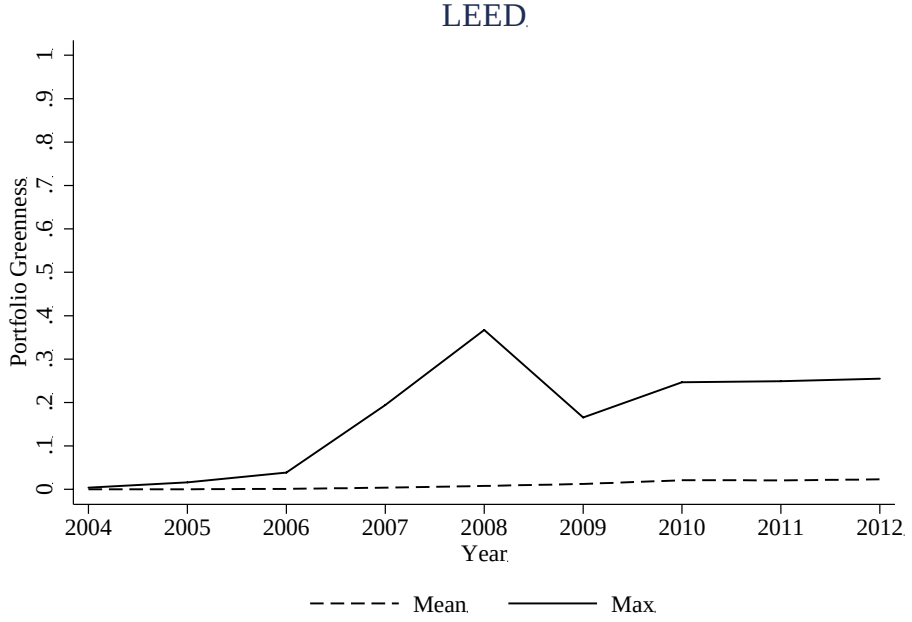
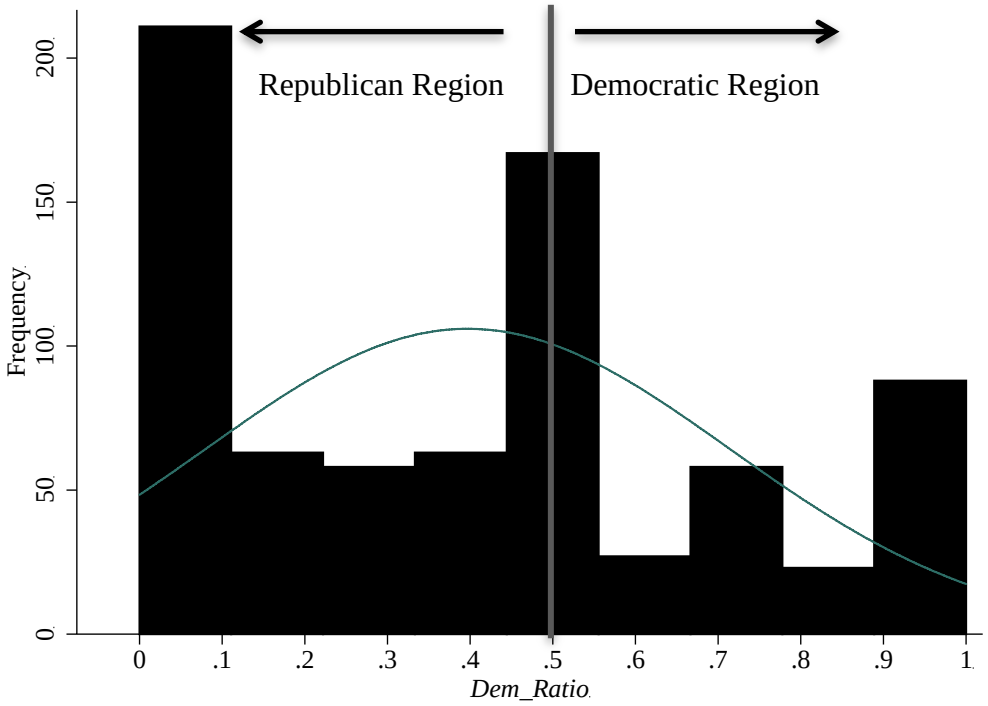
Figure 1
Evolution of "Green" Property Ownership by REITs





Notes: The figure shows the average portfolio shares of properties with Energy Star and LEED certifications for REITs owning at least one certified building. For each of the two labels, we also present the portfolio share for the REIT with the highest share of certified buildings.

Figure 2
The Political Predisposition of REIT CEOs
(measured by *Dem_Ratio*)



Notes: The figure shows the distribution of the ratio of contributions to Democrats to total contributions during federal elections (*Dem_Ratio)* by REIT CEOs. Values of *Dem_Ratio* larger than 0.5 represent CEOs more contributing to Democrats while values smaller than 0.5 represent CEOs more contributing to Republicans. Non-donors get a value of 0.5.

Table 1
Descriptive Statistics
Portfolio Greenness by Strong Democrats/Republicans

	Energy Star						
	Obs	Mean	Std. Dev.	Min	Max	Dem-Rep	Energy Star-LEED
Dem_Dummy = 1	45	0.106	0.238	0.000	0.860	0.087***	0.106***
Others	621	0.038	0.115	0.000	0.860		
Rep_Dummy = 1	102	0.019	0.060	0.000	0.339		0.008***
	LEED						
	Obs	Mean	Std. Dev.	Min	Max	Dem-Rep	
Dem_Dummy = 1	45	0.000	0.001	0.000	0.005	-0.011***	
Others	621	0.011	0.036	0.000	0.367		
Rep_Dummy = 1	102	0.011	0.027	0.000	0.116		

Notes: Table 1 shows shares of properties with Energy Star and LEED certifications in REIT annual property portfolios by strong Democrats (*Dem_Dummy)* who only contribute to Democratic candidates and strong Republicans (*Rep_Dummy)* who only contribute to Republican candidates during federal elections for the full 2004-2012 sample period. The last column shows the difference in Energy Star and LEED shares for strong Democrats and strong Republicans.

Table 2
Descriptive Statistics

	Obs	Mean	Std. Dev.	Min	Max
	Portfolio Greenness				
Energy Star Share	758	0.04	0.11	0	0.86
LEED Share	758	0.01	0.03	0	0.37
	Political Preference				
Dem_Ratio	758	0.40	0.32	0	1.00
Dem_Dummy	758	0.06	0.24	0	1.00
Rep_Dummy	758	0.13	0.34	0	1.00
	Local Controls				
Energy Star_Local Share	758	0.21	0.12	0.00	0.71
Dem_Local	758	0.53	0.18	0.14	1.00
	CEO Controls				
CEO Age	758	54.49	9.39	30	84.00
CEO Tenure	758	12.47	7.87	0	44.00
	Firm Controls				
Total Assets (in mlns)	758	4,111	5041	3.16	32,600
Firm Age	758	18.15	11.88	1.00	52.00
Firm Q	758	1.39	0.38	0.60	4.65

Notes: Table 2 shows the descriptive statistics. *Energy Star (LEED) Share* is the square feet of Energy Star (LEED) certified buildings to total square feet of buildings in annual REIT portfolios. *Dem_Ratio is* the ratio of contributions to Democrats to total contributions during federal elections by REIT CEOs. *Dem_Dummy* (*Rep_Dummy)* represents CEOs who only contribute to Democratic (Republican) candidates during federal elections. *Energy Star_Local Share* is a weighted share of the square feet of Energy Star certified buildings to total square feet of buildings where REIT properties are located. *Dem_Local* is a weighted local political preference measure where REITs own properties and gets a value between 0 and 1. As it increases, the weighted location where REITs own properties gets more Democrat-oriented. *CEO Tenure* is the number of years the CEO has been working for the REIT as a director. *Firm Age* is the number of years since the IPO and *Firm Q* is calculated as the ratio of book value of total assets plus market capitalization minus common equity to book value of total assets.

Table 3
Regressions Results
Portfolio Greenness and Political Preferences

VARIABLES	(1) Energy Star	(2) Energy Star	(3) Energy Star	(4) LEED	(5) LEED	(6) LEED
	Odds Ratio					
Dem_Ratio	6.800***	6.977***	4.907***	0.802	0.800	0.598
	[3.943]	[4.021]	[3.027]	[0.434]	[0.467]	[0.324]
Dem_Local		0.305	0.237*		1.195	1.118
		[0.300]	[0.197]		[1.004]	[1.026]
Green_Local		24.229	14.718		0.170	0.115
		[51.919]	[27.152]		[0.281]	[0.156]
CEO Age			0.989			1.000
			[0.023]			[0.020]
CEO Tenure			0.919**			0.941*
			[0.031]			[0.034]
Log(Size)	1.144	1.272	1.380	1.535	1.496	1.565**
	[0.243]	[0.266]	[0.298]	[0.417]	[0.381]	[0.351]
Age	1.002	1.003	1.018	1.014	1.013	1.022
	[0.014]	[0.016]	[0.013]	[0.024]	[0.025]	[0.025]
Firm Q	0.483	0.526	0.543	0.935	0.946	1.125
	[0.240]	[0.256]	[0.247]	[0.550]	[0.558]	[0.689]
Constant	Y	Y	Y	Y	Y	Y
Year Dummies	Y	Y	Y	Y	Y	Y
Property Type	Y	Y	Y	Y	Y	Y
Observations	758	758	758	758	758	758
BIC	-4,857	-4,848	-4,840	-4,894	-4,881	-4,869

Notes: Table 3 shows odds ratios from the fractional logit regression of *Energy Star (LEED) Share*, which is the square feet of Energy Star (LEED) certified buildings to total square feet of buildings in annual REIT portfolios on *Dem_Ratio*, which is the ratio of contributions to Democrats to total contributions during federal elections by REIT CEOs and other controls. We present the odds ratio, which is the ratio of the probability of the green share being equal to 1 and the probability of the green share being equal to 0, instead of the coefficients themselves. Odds ratios between 0 and 1 indicate a *negative* relationship and odds ratios larger than 1 show a *positive* relationship. Heteroskedasticity robust and firm-clustered standard errors are in brackets. * indicates significance at the 10 percent level. ** indicates significance at the 5 percent level. *** indicates significance at the 1 percent level.

Table 4
Regressions Results
Portfolio Greenness and Strong Democrats/Republicans

VARIABLES	(1) Energy Star	(2) Energy Star	(3) Energy Star	(4) LEED	(5) LEED	(6) LEED
	Odds Ratio					
Dem_Dummy	3.293**	2.370*	1.972*	0.005***	0.006***	0.004***
	[1.800]	[1.223]	[0.786]	[0.006]	[0.007]	[0.005]
Rep_Dummy	0.321	0.373	0.512	1.093	1.047	1.219
	[0.237]	[0.290]	[0.338]	[0.550]	[0.542]	[0.702]
Dem_Local		0.624	0.331		1.306	1.160
		[0.673]	[0.287]		[1.015]	[0.955]
Green_Local		16.082	7.541		0.435	0.241
		[35.369]	[14.132]		[0.863]	[0.377]
CEO Age			0.990			0.999
			[0.027]			[0.018]
CEO Tenure			0.899***			0.932*
			[0.032]			[0.035]
Log(Size)	1.260	1.332	1.476*	1.503	1.464	1.520*
	[0.274]	[0.269]	[0.302]	[0.417]	[0.378]	[0.338]
Age	0.999	1.002	1.018	1.013	1.012	1.025
	[0.015]	[0.016]	[0.013]	[0.027]	[0.027]	[0.026]
Firm Q	0.494	0.461	0.513	0.855	0.859	1.103
	[0.263]	[0.246]	[0.247]	[0.484]	[0.493]	[0.637]
Constant	Y	Y	Y	Y	Y	Y
Year Dummies	Y	Y	Y	Y	Y	Y
Property Type	Y	Y	Y	Y	Y	Y
Observations	758	758	758	758	758	758
BIC	-4,848	-4,837	-4,831	-4,889	-4,876	-4,863

Notes: Table 4 shows odds ratios from the fractional logit regression of *Energy Star (LEED) Share*, which is the square feet of Energy Star (LEED) certified buildings to total square feet of buildings in annual REIT portfolios on *Dem_Dummy*, *Rep_Dummy and* other controls. *Dem_Dummy* (*Rep_Dummy)* represents strong Democrats (Republicans) who only contribute to Democratic (Republican) candidates during federal elections. We present the odds ratio, which is the ratio of the probability of the green share being equal to 1 and the probability of the green share being equal to 0, instead of the coefficients themselves. Odds ratios between 0 and 1 indicate a *negative* relationship and odds ratios larger than 1 show a *positive* relationship. Heteroskedasticity robust and firm-clustered standard errors are in brackets. * indicates significance at the 10 percent level. ** indicates significance at the 5 percent level. *** indicates significance at the 1 percent level.

Table 5
Robustness Check
Portfolio Greenness and Founders' Political Preferences

VARIABLES	(1) Energy Star	(2) Energy Star	(3) LEED	(4) LEED
	Odds Ratio			
Founder_Dem_Ratio	7.374***	9.755***	1.196	1.229
	[5.326]	[6.162]	[0.575]	[0.728]
Dem_Local		0.100***	1.448	1.439
		[0.082]	[0.388]	[0.373]
Green_Local		179.585**	1.011	1.009
		[452.672]	[0.023]	[0.025]
Log(Size)	1.161	1.459*	0.940	1.009
	[0.239]	[0.289]	[0.589]	[0.643]
Age	1.003	1.013		0.852
	[0.014]	[0.015]		[0.787]
Firm Q	0.538	0.524		0.151
	[0.255]	[0.288]		[0.272]
Constant	Y	Y	Y	Y
Year Dummies	Y	Y	Y	Y
Property Type	Y	Y	Y	Y
Observations	660	660	660	660
BIC	-4,122	-4,118	-4,157	-4,145

Notes: Table 5 shows odds ratios from the fractional logit regression of *Energy Star (LEED) Share*, which is the square feet of Energy Star (LEED) certified buildings to total square feet of buildings in annual REIT portfolios on *Dem_Ratio*, which is the ratio of contributions to Democrats to total contributions during federal elections by REIT founders and other controls. We present the odds ratio, which is the ratio of the probability of the green share being equal to 1 and the probability of the green share being equal to 0, instead of the coefficients themselves. Odds ratios between 0 and 1 indicate a *negative* relationship and odds ratios larger than 1 show a *positive* relationship. Heteroskedasticity robust and firm-clustered standard errors are in brackets. * indicates significance at the 10 percent level. ** indicates significance at the 5 percent level. *** indicates significance at the 1 percent level.

Table 6
Robustness Check
Difference-in-Difference Analysis

VARIABLES	(1) ΔEnergy Star	(2) ΔLEED
	Odds Ratio	
Δ*Dem_Ratio*	16.666**	3.472
	[22.811]	[5.771]
Δ*Dem_Local*	0.294**	21.266
	[0.176]	[58.358]
Δ*Green_Local*	427.743***	0.103
	[788.264]	[1.361]
Δ*Log(Size)*	0.227**	0.228
	[0.159]	[0.213]
Δ*Firm Q*	0.308***	0.405*
	[0.106]	[0.208]
Constant	Y	Y
Observations	684	684
BIC	-4,399	-4,411

Notes: Table 6 shows odds ratios from the fractional logit regression of *Energy Star (LEED) Share*, which is the square feet of Energy Star (LEED) certified buildings to total square feet of buildings in annual REIT portfolios on *Dem_Ratio*, which *is* the ratio of contributions to Democrats to total contributions during federal elections by REIT founders and other controls. We present the odds ratio, which is the ratio of the probability of the green share being equal to 1 and the probability of the green share being equal to 0, instead of the coefficients themselves. Odds ratios between 0 and 1 indicate a *negative* relationship and odds ratios larger than 1 show a *positive* relationship. Heteroskedasticity robust and firm-clustered standard errors are in brackets. * indicates significance at the 10 percent level. ** indicates significance at the 5 percent level. *** indicates significance at the 1 percent level.