

Shades of Green:
Potential Drivers for Adopting Voluntary Environmental Programs in the
California State University System

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Abstract

Sustainability has become a primary policy objective for the California State University (CSU) system. Over the decades, universities and colleges have become front runners for innovative “green” practices as a way to tackle new ideas and test those ideas in a controlled environment. Yet, little is understood in terms of what drives the adoption of new policies. Using archival research composed of third-party data collection, this research focuses on identifying the primary drivers for adopting environmental programs, policies, and practices between the following causal variables: policy learning and constituent values from campus leaders and prospective and current student influences. By analyzing and comparing sustainability efforts and policies at select CSU campuses, I show that overall, CSU campuses with the most occurrences between policy learning, campus leaders, and student influences adopted the highest commitment offered through *Second Nature*, a voluntary environmental program used in higher education.

Introduction

The World Health Organization (2016) estimates that 12.6 million deaths worldwide are attributed to pollution, extreme weather, and climate-related disorders each year, accounting for nearly one in four deaths globally. The path to improved health, sustainability, and resource conservation is an ever changing and moving target which poses unique challenges to policymakers. In 2014, the California State University (CSU) system began implementation of the expanded Sustainability Report (*CSU Sustainability Report, 2014*). The Sustainability Report includes areas of focus such as transportation, land use, water, and waste management, among others, which is the foundation for defining *sustainability* in this study. Over the decades, universities and colleges have become front runners for innovative “green” practices as a way to tackle new ideas and test those ideas in a controlled environment. Although California has adopted a wide variety of environmental legislation that must be followed by state agencies and institutions, voluntary programs have also emerged as a viable policy tool (Segerson & Miceli, 1998).

With mandated protocols established by the State of California and the CSU Chancellors Office, *why do some CSU campuses voluntarily sign onto environmental regulatory programs and others do not?* Using the voluntary program, *Second Nature*, to learn if select CSU campuses have signed onto the *Climate, Carbon, or Resilience Commitments*, it is the intent of this research to learn why some CSU campuses have chosen to adopt additional regulations beyond state mandates. By analyzing and comparing items such as the context of the university, student body preferences, and influences from campus leaders at select CSU campuses, to discover what drives campuses to choose voluntary environmental programs is the intent of this research. To date, federal and state regulation has proven inadequate in addressing climate

change as the political climate ensures that environmental legislation is not aggressive enough, nor implemented in a timely manner therefore, voluntary environmental programs may become more crucial in affecting positive change.

In the following sections, I discuss the current scholarly work pertaining to policy choice and policy tools as they apply to voluntary environmental programs and apply that knowledge to the higher education system, specifically CSU campuses. This is followed by an interpretation of the current research with an outline of the proposed hypotheses. I then detail the chosen methodological technique for exploring the research question and lay out the methods and procedures and case selection process used to conduct this study for replicability purposes. Lastly, I show that overall, CSU campuses with the most occurrences between policy learning, campus leaders, and student influences adopted the highest commitment offered through *Second Nature* in the data analysis section which leads to a discussion of proposed future research in this field of study.

What We Currently Know About Policy Choice Motivators

Problem Recognition

Without recognizing that there is a problem, there would be no need for the establishment of problem solving and raising an issue as important (Kingdon, 1995). If a problem is seen as critically important, policy entrepreneurs have a greater advantage of grabbing the attention of decision makers in order to persuade them that their problem should be supported above all others (Kingdon, 1995). Since not everyone can be an expert in all relevant policy issues, subject matter experts or policy entrepreneurs can better portray policy issues in a favorable light by explaining the issue through simplified and advantageous language to decision makers and the general public, which is often referred to as a policy image (Baumgartner & Jones, 1993). A

policy problem is not truly a problem until there is an attainable solution which can be solved (Baumgartner & Jones, 1993). In fact, establishing a connection between a problem and a specific solution is seen as critical to the policy process (Kingdon, 1995).

Public Participation

Americans tend to have a short attention span when it comes to policy issues, regardless of whether the problem is considered relatively or immensely important to society (Downs, 1972). Through the theory of bounded rationality, people or leaders can only focus on one item at a time despite the many issues plaguing modern society (Baumgartner & Jones, 1993). Bounded rationality was first developed by Herbert Simon in 1947 as a way of explaining that preferences and choices are bounded, or limited, to the cognitive, emotional, and timing constraints of people's past experiences and therefore, human behavior assumptions do not always fit within our boundaries (Jones, Boushey, & Workman, 2006). Since people are unable to focus on every issue at once, it is critically important to capture the attention of policymakers in order to act on a policy window (Baumgartner & Jones, 1993; Kingdon, 1995). Anthony Downs' (1972) issue-attention cycle illustrates established stages where there is first an issue which has elicited a heightened public interest (the pre-problem stage) and ends with the public's eventual boredom with the issue (the post-problem stage). Problems that have experienced this cycle have a "higher average level of attention, public effort, and general concern than those still in the pre-discovery stage" (Downs, 1972, p. 41).

Mandatory Regulatory Approaches

Traditionally, mandatory regulations are a fundamental tool for governments and provide agencies with a central platform from which to oversee (Arora & Cason, 1996; May, 2005). The most common forms of mandated regulations, especially in the environmental industry, are

command and control regulation and pollution taxes (Arora & Cason, 1996). Organizations must abide by these government regulations or else be in violation which could lead to fines or other forms of criminal damages (Becker, 1968; May, 2005). The fear of these types of consequences aligns people to abide by established laws and regulations under the assumption that organizations would be unwilling to follow these actions unless they were mandated (May, 2005).

Select Mandated Environmental Programs

Since the planet is steadily warming and is expected to surpass the global budget of 2 degrees Celsius set by the 2016 Paris Agreement, it is predicted that a rise of global temperatures beyond this threshold may render mitigation or adaptation measures ineffective as life will be forever altered (Strickland, 2017). This budget was supposed to last until 2100 so it is imperative that drastic changes are made and made quickly in order to slow this warming trend to preserve quality of life from climate related impacts. California is uniquely vulnerable to climate-related threats such as wildfires, heat waves, sea-level rise, and drought (Mastrandrea & Luers, 2012). In response to these vulnerabilities, California has become a global leader in addressing climate change by implementing regulations to reduce greenhouse gas (GHG) emissions (Mastrandrea & Luers, 2012). For the purposes of this study, there are two mandated environmental programs that CSU campuses must abide by: Assembly Bill 32 and the 2014 CSU Sustainability Policy.

In 2006, Governor Arnold Schwarzenegger signed a landmark executive order requiring California to reduce GHG emissions to 1990 levels by 2020 as well as continue to achieve reductions beyond 2020 ("California Global Warming Solutions," 2006). This law was the first of its kind in the United States by clearly addressing climate change while providing protection for the environment through achievable goals and building a strong economy ("Assembly Bill 32

Overview," 2014). While there are many other assembly and legislative bills that address climate change, the California Global Warming Solutions Act of 2006 (Assembly Bill 32) was a historical turning point in the reduction of GHG emissions and a huge step in shifting the state towards a more sustainable and carbon-reduced future ("Assembly Bill 32 Overview," 2014).

The California State University (CSU) system is the largest higher education system in the country; faculty and staff number more than 45,000 and serve more than 447,000 students throughout 23 campuses (*CSU Sustainability Report*, 2014). Due to the environmental impacts generated by these campuses, in May 2014, the CSU Board of Trustees approved a comprehensive sustainability policy to help further align the 23 campuses in making significant and constant progress towards reducing employee and student environmental impacts (*CSU Sustainability Report*, 2014). As shown in Table 1, the Sustainability Report has outlined eleven areas of focus as well as specific policy goals to which all CSU campuses throughout the state must adhere (*CSU Sustainability Report*, 2014).

[Table 1 about here]

Voluntary Regulatory Approaches

A voluntary approach provides governments with the means to limit their role and instead provide incentives and various forms of assistance to avoid excessive regulation through mandated controls (May, 2005). Arora and Cason (1996) argue that when an organization provides the choice to opt for a voluntary program, these types of programs will only be successful if the organization receives some kind of benefit for devoting increased time and resources toward improving their environmental operations. Voluntary programs are growing in favor and effectiveness primarily due to their ability to decrease environmental protection costs, provide organizations with more flexibility when compared to mandated programs, and incur

possible positive publicity from joining a voluntary program (Henriques & Sadorsky, 2008; Prakash & Potoski, 2012). In fact, the U.S. Environmental Protection Agency (EPA) has been increasingly reliant on voluntary regulations as these approaches decrease monitoring and enforcement costs affiliated with regulatory activities (Arora & Cason, 1996).

The emergence of voluntary environmental programs (VEPs) provide firms and organizations the opportunity to build positive environmental impacts such as public goods, appealing to consumers who prefer “greener” products, preempting government regulations, and gaining a competitive advantage in the free market (Prakash & Potoski, 2012; Videras & Alberini, 2000). At their core, these programs are not required and therefore have to appeal to firms to act beyond what is legally required (Videras & Alberini, 2000). Videras and Alberini (2000) argue that any potential publicity from signing onto a voluntary program could be an important factor to firms who want to report positive environmental metrics to their consumers. Along these lines, organizations who participate in VEPs should see a higher yield of pollution reduction efforts than if they had not joined the voluntary program (Prakash & Potoski, 2012). Organizations that currently have a negative environmental report might also wish to join a voluntary program in order to show their consumers and stakeholders that they are making efforts towards specific pollution issues within their firm (Videras & Alberini, 2000). Policymakers are finding VEPs to be an appealing option over traditional regulations or legislation as VEPs tend to have a higher likelihood of decreasing costs associated with compliance and oversight when compared to other traditional methods (Segerson & Miceli, 1998).

While there are any number of voluntary third-party environmental programs that a CSU could choose to adopt, the program selected for this study is *Second Nature*. *Second Nature* is a

commitment made by presidents and chancellors in higher education to enact impactful changes at their institutions and supports strong leaders, tangible outcomes, and the ability to track progress to achieve commitments on campuses ("The Presidents' Climate Leadership Commitments," 2017) (see Figure 1). This program has been successful in attracting 91 institutions to become Charter Signatories and 15 of these institutions are CSU campuses ("The Presidents' Climate Leadership Commitments," 2017).

[Figure 1 about here]

Social Justice Motivations

Consumers, or those who influence an organizations actions, are becoming progressively aware of the need for environmental protection and expect organizations to not only focus on turning a profit but to also act as decent fellow citizens (Albus & Ro, 2013). This concept has mostly been referred to as corporate social responsibility (CSR) (Albus & Ro, 2013; Clarkson, 1995). CSR refers to organizational activities that appear to benefit the social good beyond what is mandated by law through economic, legal, ethical, or discretionary actions (Albus & Ro, 2013; Clarkson, 1995). From an environmental standpoint, these activities usually include increased best management practices, support for local communities, and participation in charitable events or actions (Albus & Ro, 2013). Even though there has been an increase in the awareness of CSR, there are some who raise the validity of performance outcomes as well as the financial investment (Kemper, Schilke, Reimann, Wang, & Brettel, 2013).

Some organizations are motivated to participate in VEPs as a way to promote better relationships with their stakeholders, the people or groups who have a right, interest or title to an organization (Henriques & Sadowsky, 2008; Clarkson, 1995). Some of the key stakeholders to consider when dealing with environmental concerns are the client or end users, those who are

demanding the ecofriendly alternatives (Arora & Cason, 1996; Henriques & Sadosky, 2008; Videras & Alberini, 2000); regulators, those who control and oversee an organizations execution of the requirements (Henriques & Sadosky, 2008; May, 2005; Videras & Alberini, 2000); and secondary stakeholders, those who have influence over an organization but do not any control over economic decisions (Clarkson, 1995; Henriques & Sadosky, 2008). Prakash and Potoski (2012) state that VEPs allow a more varied level of stakeholders to join the discussion when compared to the traditional command and control format.

Efficiency Motivations

While there are many ways an organization could define *efficiency* when adopting VEPs, some effective opportunities include: achieving environmental improvements in a shorter amount of time (Henriques & Sadosky, 2008; Segerson & Miceli, 1998); reducing costs associated with monitoring and enforcement strategies (Arora & Cason, 1996); reducing costs associated with improved allocation of resources (Henriques & Sadosky, 2008); and encouraging a more cohesive relationship between regulators and the industry (Segerson & Miceli, 1998). Since VEPs encourage the sharing and adoption of best management practices, this allows businesses to reveal information to better develop new principles, reduce risks, and shorten timelines for implementation as other companies no longer have to duplicate efforts (Henriques & Sadosky, 2008). The flexible nature of VEPs also allows organizations to make the most cost-effective solution for their own needs which could lead to the previously mentioned cost reduction benefits, among others (Arora & Cason, 1996).

Another important policy tool that organizations can use to spur innovation are incentive or technical assistance programs (Henriques & Sadosky, 2008; Khanna, 2002). These programs can provide firms with the means to address environmental concerns when they might not

otherwise have the resources or capacities necessary to dedicate to these issues (Henriques & Sadorsky, 2008). Environmental management systems (EMSs) are tools that are used as a way to internally motivate self-regulation, track decisions, identify opportunities for reduction efforts, and implement best management practices (Khanna, 2002). Although these systems can be extremely useful, they can take a considerable amount of up-front capital to establish, where incentive programs could assist with these costs (Henriques & Sadorsky, 2008). A country's compliance and regulatory culture is also important to note when considering incentives since regulatory relief may provide little incentive in less-developed countries where regulations and enforcement are not as strong (Prakash & Potoski, 2012).

Theory and Hypothesis

Based on the literature, three theories and hypotheses were developed to further explore the topic of policy choice in regards to voluntary environmental programs: policy learning and constituent values in terms of campus leaders and student body influences.

Policy Learning

In order for people to accept regulatory alternatives, such as voluntary programs, they first need to learn how those policy choices can help benefit their community. Learning from policies is an important factor as they help influence decision makers and those in power while also setting the stage for others to follow in their footsteps and adopt additional programs. As more programs are accepted, this adds more knowledge to the success (or failure) of specified programs which promotes continued learning and adaptation methods. Policy change is extremely important to the potential adoption of future voluntary regulation programs therefore, I hypothesize:

H₁: A fundamental shift towards the acceptance of environmental policy changes stems from increased knowledge of environmental issues.

Constituent Values

Campus Leaders. As with any organization, a strong administration provides guidance and a sense of leadership for their employees and other constituents. Without this sense of purpose, an organization could dive into a feeling of chaos with unclear objectives and goals which could jeopardize morale and public standing. Campus leaders that are involved and active within their institution would also have a sense of pride for furthering the interests of the establishment and would strive to adopt positive changes to achieve this goal. A CSU campus with environmentally-focused campus leaders shows to prospective students that their institution is open to progressive climate and environmental action as well as preparing their students for careers in environmentally focused industries could help attract similarly focused students to their institutions. Therefore, I hypothesize that:

H₂: As the involvement of campus leaders increases, the likelihood of signing onto a voluntary regulatory program also increases.

Student Body. Even though a strong level of involvement from campus leadership is important, within the context of universities, it is also vitally important that there is a clear and present student voice on campus as they represent one of the most important stakeholders on an educational campus. Universities exist as a safe place for the next generation to learn and grow so including this particular set of stakeholders in the environmental discussion, or in any discussion, is essential. If students are disengaged, campus leaders will only be able to take sustainability objectives so far as students will not care to apply these learning objectives in their daily lives. Also, if students are not vocal and if the campus does not have leaders who have the

capacity or interest to dedicate efforts towards improving environmental concerns on campus, these issues will not become a priority and the campus will continue to operate unsustainably.

Thus, I propose the following hypothesis:

H₃: Sustainability objectives are more likely to be approved on campuses with strong student body participation.

Methods and Procedures

Comparison is essential in any empirical scientific study as a finding can only be identified as such when recognized as something different from another item (Ragin, 2009). In order to test the previously stated hypotheses for factors pertaining to policy learning and constituent values, I use the Qualitative Comparative Analysis (QCA) method, specifically a crisp-set Qualitative Comparative Analysis (csQCA) to evaluate data compiled through archival (website) research. This method is used as a qualitative approach for establishing logical comparisons between cases with an intermediate-n sample size (Halperin & Heath, 2012). QCA is an exploratory method and is especially useful to test hypotheses relative to policy choice, the dependent variable in this study, by providing researchers with the ability to understand perceived behavioral expectations with single or multiple cases (Olive, Gunasekara, & Raymond, 2011). While traditional csQCA uses Boolean algebra to analyze data, for the purposes of this study, the QCA Truth Table approach is used as a visual representation of the data to interpret patterns. A further discussion of the analysis and results of the data is provided in the following sections.

The variables for this study were selected based on their ability to best explore the research question and hypotheses. The variables for the policy learning hypothesis include climate action plans, campus sustainability reports, certification programs, third-party

recognitions, and pledge programs as a way for campuses to gather information about their campus from both internal and external sources. This way, they can learn from these sources in order to make the best decisions for their campus regarding sustainability policy. The variables for campus leader influences include sustainability related undergraduate degree programs, president's support of sustainability, campus sustainability reports, campus-affiliated sustainability centers or institutes, and a dedicated sustainability staff positions. These were selected as potential ways that campus leaders could show their support of sustainability efforts on campus. The variables selected for the third hypothesis, student influences, are the total number of students currently enrolled, sustainability-related social media accounts, sustainability-related student clubs, sustainability events, and third-party recognitions for prospective students. These variables were selected as the most likely to explain how a student body may help influence sustainability efforts on campus. Archival research was used as a tool to explore how people consume public information from a general pool of knowledge, such as websites.

Case Selection

Since California has a special set of laws and regulations, especially pertaining to environmental issues, California universities are the focus of this study, specifically the California State University (CSU) system. *Second Nature* is the voluntary program of choice for this study, which is an approach used by presidents and chancellors in higher education to integrate carbon neutrality goals with climate resilience, mitigation, and adaptability ("The Presidents' Climate Leadership Commitments," 2017). This study compares select CSU campuses to determine whether they have or have not signed onto the program and if they have,

which commitment they selected. This program helped determine which campuses have been open to voluntary policy changes.

There are 23 CSU campuses across California and this study focuses on eight campuses, four of which have signed onto *Second Nature* and four of which have not to introduce variation between signatories. Altogether, these campuses represent an intermediate-n sample size to impart a level of comparison between signing onto the program versus not signing onto the program. The CSU campuses in this study were selected based on their location within California, either northern, southern, coastal, or inland in order to introduce variation between campus locations. A map of the 23 CSU campuses was obtained from the 2014 CSU Sustainability Report and the selected campuses chosen based on their visual position within the state established by these factors (see Figure 2). As it is very difficult to establish causal inference by analyzing a single case study, it is imperative that this study obtain data from multiple cases in order to impart cross-case comparisons through key findings and conclusions (Ragin, 2009).

[Figure 2 about here]

This study controls for mandated policies as all CSU campuses must abide by California state law, such as Assembly Bill 32, as well as CSU policies, primarily the CSU Sustainability Policy. Control is also established by focusing on CSU campuses instead of incorporating other higher education systems such as University of California as these campuses are not within the CSU system and therefore, most likely have their own policies in place.

Data Analysis

Campus Leaders Analysis

Based on the data, the strongest support appears to be for the Campus Leaders' influences hypothesis when choosing to adopt the voluntary environmental program, *Second Nature*. Of the four CSU campuses which have signed onto *Second Nature*, each campus has hired a dedicated sustainability staff position (see Table 2). Dominguez Hills was the only campus to hire a sustainability coordinator but has not signed onto *Second Nature*. In addition to the dedicated staff position, every CSU campus that has signed onto *Second Nature* also has a sustainability center or institute associated with the school. These centers and institutes were evaluated based on whether sustainability was listed as a core value or in their mission statement on their website. The exception to this trend was Sonoma State who has an environmental center but has not signed onto *Second Nature*. This shows that overall, having a strong level of sustainability and climate action leadership and guidance on campus could help explain why a CSU campus would voluntarily sign onto a formal environmental program such as *Second Nature* as this action aligns with a campus' core values.

[Table 2 about here]

Three CSU campuses, Cal Poly San Luis Obispo, Chico, and San Diego State University, have a management level sustainability position per their facilities organizational chart, such as a manager or director, and have also signed onto *Second Nature*, with the exception of Cal Poly Pomona. San Bernardino, which has not signed onto *Second Nature*, has a manager listed on their organizational chart however, this person was not searchable in the school's online directory. Since departments may not keep their organizational charts up to date, if a chart listed a specific person by name, this was cross-checked by the school's online directory to see if they

were still employed. There was a focus on management level positions between all the facility department organizational charts where analyst or coordinator positions were not listed. While this data was inconsistent regarding whether a campus signed onto *Second Nature*, half of the campuses studied listed a management level sustainability position where the other half did not. This shows that overall, there is a focus of sustainability efforts at the management level across the state of California as two of the campuses were located in the central and northern portion of the state where the other two were located in the south but does not help to explain the research question.

Almost all of the campuses in this study, regardless of the adoption of *Second Nature*, offered a sustainability related undergraduate major and minor program with the exception of Cal Poly Pomona and Stanislaus who offered sustainability related master's programs but not an undergraduate degree. It is important to note that master level programs were not analyzed in this study across all campuses. This shows that this particular variable, offering undergraduate degree programs, does not explicitly explain why a campus would sign onto *Second Nature*.

Policy Learning Analysis

The QCA Truth Table for Policy Learning (see Table 3) showcases how campuses gather information about their campus from either internal or external sources as a way to learn how other campuses approach sustainability initiatives to make the best decisions for their campus regarding sustainability policy. For example, campuses can explore the STARS AASHE results as they are public knowledge in order to learn how others have approached sustainability initiatives. Based on these results, those with the power to do so can implement changes to bolster their own sustainability programs as needed.

[Table 3 about here]

According to *Second Nature's* Commitments Implementation Handbook (2018), a Climate Action Plan (CAP) is required within three years of signing onto either the climate or resilient commitments whereas a CAP is required within two years of adopting the carbon commitment. While each CSU campus that has signed onto *Second Nature* has completed this CAP requirement, it seems that two of the campuses, Cal Poly San Luis Obispo and CSU Chico, took it upon themselves to create their CAP prior to signing onto *Second Nature* as the dates of their CAPs either precede or are within a month of signing onto the program. CAPs often take years to create so it is likely that these two campuses started the process well before signing onto *Second Nature*. It is also likely that the other two CSUs, Cal Poly Pomona and SDSU, used the *Second Nature* criterion to help push the implementation of their CAP since their plans were published after signing onto *Second Nature*. It is also interesting to note that the other CSU campuses, those which have not signed onto *Second Nature*, do not currently have a published CAP.

The Policy Learning Truth Table also illustrates that the CSU campuses which signed onto *Second Nature*, with the exception of one campus, were also recognized as a *Green College* by Princeton Review, a *Top Public School in Regional Universities West* by US News Best Colleges, as well as signed onto the pledges, *We Are Still In* and *American Campuses Act on Climate*. It is important to note that the methodology for the *Top Public School* ranking does not include sustainability criterion but is significant to this study as a potential influence. This shows that these campuses' climate action goals are similarly aligned and they have publicly indicated their support of addressing climate reduction and mitigation measures beyond what is mandated by the CSU Chancellors office. The notable exception to this trend is San Diego State University which signed onto *Second Nature* but has not signed onto or received recognition from any of

previously mentioned programs, pledges, or rating programs. Also, some of the CSU campuses which have not signed onto *Second Nature*, including San Bernardino, Dominguez Hills, and Stanislaus, have adopted at least one of the pledges observed. This would indicate that these measures are not indicative of whether a campus signs onto *Second Nature* but are rather extra steps a campus can take to show their support of climate action and sustainability efforts.

The four campuses which have signed onto *Second Nature* all have at least one LEED certified building on campus. Cal Poly San Luis Obispo, Chico, Cal Poly Pomona, and San Diego State all have at least one gold and silver certified building and San Diego was the only campus to have a LEED platinum building. Of the four campuses which have not signed onto *Second Nature*, two campuses, Stanislaus and San Bernardino have one LEED certified building on campus. The other two campuses, Dominguez Hills and Sonoma, laid out minimum construction plans where every new building will be LEED Silver at a minimum but there were no current LEED buildings on these campuses. Overall, I show support for campuses which have built at least one, often more than one, LEED certified building and signing onto *Second Nature*. New construction, especially at the various LEED certified levels, is extremely expensive so the campuses which have made the commitment to fund LEED certified are also showing their support for sustainable measures on campus.

Student Influences Analysis

Based on the QCA Truth Table for Student Influences (see Table 4), campuses that signed onto *Second Nature* each have at least one sustainability related social media account, such as Facebook, Twitter, or Instagram and maintains a dedicated website for listing sustainability related student clubs on campus. While San Bernardino and Sonoma also have sustainability related social media accounts and Stanislaus has a webpage dedicated to student

clubs, there is more observed variation between the four campuses that have not signed onto *Second Nature*. Therefore, these variables may help explain why some CSU campuses voluntarily sign onto environmental programs as there were more occurrences with the campuses that signed onto *Second Nature*. A press release from Princeton Review found that, “among more than 10,000 teens and parents who participated in [the] 2017 College Hopes & Worries Survey, 64% [stated] that having information about a school’s commitment to the environment would influence their decision to apply to or attend the college” (“Guide to 375 Green Colleges: 2017 Edition Press Release”, 2017). By creating an avenue for the public and prospective students to gather information easily specific to sustainability, this could be viewed as vitally important to the decision-making process.

[Table 4 about here]

As previously discussed in the Policy Learning analysis, the campuses that obtained the *Green College* and *Top Public School* rankings may also attract environmentally-minded prospective students to attend their university. This could lead to a stronger environmentally focused student body once on campus which could lead to stronger programs. The data also shows that most schools with a student body population less than 20,000 have not signed onto *Second Nature*. Of the four campuses that have signed onto the VEP, three have a student body population over 20,000 and one (Chico) has a student population under this threshold. A larger student body population may promote more demand for environmental responsiveness which would explain why three out of the four campuses with a student population over 20,000 have signed onto *Second Nature*.

One of the last variables for the student influences hypothesis was whether a campus currently offers an annual week- or month-long sustainability event. Based on the research for

this study, six universities offered either a week- or month-long sustainability event and are equally distributed between the campuses which have signed and have not signed onto *Second Nature*. Therefore, this variable does not appear to help explain why a CSU campus would sign onto *Second Nature* but could further promote a strong sustainability presence to students and the community.

A limitation during the data collection phase was the inconsistency in search result data from student newspaper websites for specific keywords: sustainability, environmental, and climate change. As each website structured their search functions differently, resulting data was not sorted in the same manner and was therefore unusable for the purposes of this study. In looking ahead, it would be interesting to interview student clubs and newspaper personnel to learn whether they think environmental issues are important on campus which could help influence campus leader's decisions when choosing to adopt voluntary programs.

Truth Tables and *Second Nature* Analysis

As previously stated, there are three commitments a president or chancellor could adopt when signing onto the program *Second Nature*. The carbon commitment focuses on reducing greenhouse gas emissions, the resilience commitment focuses on adaptation goals and building the capacity to deal with climate extremes, and the climate commitment integrates the “goals of carbon neutrality with climate resilience” (“Climate Leadership”, 2018). The two campuses which signed the highest level of commitment to sustainability, the climate commitment, were Cal Poly San Luis Obispo and Chico. These campuses had the most occurrences of sustainability indicators, overall, as measured by the QCA Truth Table variables. This demonstrates a correlation between CSU campuses with occurrences across policy learning, campus leaders, and student influences (see Figure 3). When a campus incorporates sustainability and climate action

initiatives throughout a variety of focus areas on campus, the data suggests that they are more likely to adopt a formal, yet voluntary, environmental program at the highest level possible. The other two campuses which have signed onto *Second Nature* at a lower commitment level, Cal Poly Pomona and San Diego, had fewer occurrences across the variables overall yet still adopted the Carbon commitment which shows that the campus is still dedicated to reducing greenhouse gas emissions. It is not the intent of this research to diminish the importance of signing onto any *Second Nature* commitment overall but does illustrate that campuses with fewer sustainability focused arenas on campus may sign onto a less intensive commitment or no commitment at all.

[Figure 3 about here]

Conclusion

Due to the nature of qualitative research, clear distinctions were made in order to evaluate variables evenly across CSU campuses where data was not the same nor, at times, readily available in the same manner ("Reporting Platform", 2018). In fact, it can be extremely difficult to evaluate higher education institutions impartially due to the inherent diversity that these institutions foster and the interpretation of variable conditions observed ("Reporting Platform", 2018). It is the intent of this research to not diminish the strides any one campus has made in pursuing sustainability goals and climate action but rather to highlight the differences between these campuses with a similarly aligned goal: to preserve the natural world for future generations through education and action.

The purpose of this study is to learn *why some CSU campuses voluntarily sign onto environmental regulatory programs when others do not*. While the data did not explicitly answer "why," it was interesting to learn that overall, CSU campuses with the most occurrences between policy learning, campus leaders, and student influences adopted the highest commitment offered

through *Second Nature*. While it is difficult to determine if signing onto the VEP drove them to participate in more sustainability focused activities on campus or if they already supported climate action and adopted the VEP in support of those efforts, it is still interesting to learn that campuses with a wide variety of sustainability efforts signed onto the highest commitment in the program.

There was marginal support for the policy learning hypothesis through the use of Climate Action Plans and LEED certified buildings however, overall, the variables selected did not conclusively support this hypothesis. There seems to be support for the campus leader's hypothesis as there is a strong correlation between climate action leadership and guidance through dedicated staff positions and sustainability-focused centers and institutes on campus and whether those schools signed onto *Second Nature*. I also show support for the student body influences hypothesis through the use of sustainability-focused social media accounts and interdepartmental student club websites as well as student body population sizes less than 20,000 however, the other variables selected for this hypothesis were inconclusive.

In order to better learn the motivations behind what prompted a CSU campus to sign onto a voluntary environmental program, it would be beneficial to look at external factors and influences from local government, interest groups, and the surrounding community. While these factors were originally part of the proposal for this study, they were removed due to time and resource constraints. Another variable that would be beneficial is to learn how many students are currently participating in the undergraduate degree and minor programs to see how influential those programs are at each institution. Due to the nature of how this study was constructed, this data was unobtainable. Given additional time and resources, conducting interviews with campus leaders would prove invaluable to further learning the motivational conditions behind why a

CSU campus would chose to sign onto a voluntary program such as *Second Nature*. During these interviews, administrative and campus leaders would be given the opportunity to fully describe what drove their decision to either sign or not sign onto the program.

Bibliography

- Albus, H., & Ro, H. (2013). Corporate Social Responsibility: The Effect Of Green Practices In A Service Recovery. *Journal of Hospitality & Tourism Research*, 41(1), 41-65.
doi:10.1177/1096348013515915
- An estimated 12.6 million deaths each year are attributable to unhealthy environments.* (2016). *World Health Organization*. Retrieved 2 December 2017, from <http://www.who.int/mediacentre/news/releases/2016/deaths-attributable-to-unhealthy-environments/en/>
- Arora, S., & Cason, T. N. (1996). Why do firms volunteer to exceed environmental regulations? Understanding participation in. *Land Economics*, 72(4), 413.
- Assembly Bill 32 Overview. (2014). Retrieved from <https://www.arb.ca.gov/cc/ab32/ab32.htm>
- Baumgartner, F. R., & Jones, B. D. (1993). *Agendas and Instability in American Politics*. Chicago: The University of Chicago Press.
- Becker, G. S. (1968). Crime and Punishment: An Economic Approach. *Journal of Political Economy*, 76(2), 169.
- California Global Warming Solutions, Assem. Bill 32, California State Legislature (2006).
- Clarkson, M. B. E. (1995). A stakeholder framework for analyzing and evaluating corporate social performance *Academy of Management. The Academy of Management Review*, 20(1), 92.
- Climate Leadership.* (2018). *Second Nature*. Retrieved 26 February 2018, from <http://secondnature.org/what-we-do/climate-leadership/>
- Commitments Implementation Handbook.* (2018). *Second Nature*. Retrieved 26 February 2018, from <http://secondnature.org/climate-guidance/handbook/>
- CSU Sustainability Report.* (2014). Retrieved from <https://www.calstate.edu/cpdc/sustainability/policies-reports/documents/CSUSustainabilityReport2014.pdf>
- Downs, A. (1972). Up and down with ecology - the "issue-attention cycle". *The Public Interest*, 28, 38-50.
- Guide to 375 Green Colleges: 2017 Edition Press Release.* (2017). *Princetonreview.com*. Retrieved 2 February 2018, from <https://www.princetonreview.com/press/green-guide/press-release?ceid=green-colleges>

- Halperin, S., & Heath, O. (2012). *Political research: Methods and practical skills*. New York: Oxford University Press.
- Henriques, I., & Sadorsky, P. (2008). Voluntary environmental programs: A Canadian perspective. *Policy Studies Journal*, 36(1), 143-166. doi:10.1111/j.1541-0072.2007.00257.x
- Jones, B. D., Boushey, G., & Workman, S. (2006). Bounded Rationality and Rational Choice Theory. *The Handbook of Public Policy*.
- Kemper, J., Schilke, O., Reimann, M., Wang, X., & Brettel, M. (2013). Competition-motivated corporate social responsibility. *Journal of Business Research*, 66(10), 1954-1963. doi:<https://doi.org/10.1016/j.jbusres.2013.02.018>
- Khanna, M. (2002). Corporate Environmental Management: Regulatory and Market-Based Incentives. *Land Economics*, 78(4), 539-558.
- Kingdon, J. W. (1995). *Agendas, Alternatives, and Public Policies* (2nd ed.). New York: Addison-Wesley.
- Mastrandrea, M. D., & Luers, A. L. (2012). Climate change in California: scenarios and approaches for adaptation. *Climatic Change*, 111(1), 5-16. doi:<http://dx.doi.org/10.1007/s10584-011-0240-4>
- May, P. J. (2005). Regulation and compliance motivations: Examining different approaches. *Public Administration Review*, 65(1), 31-44. doi:10.1111/j.1540-6210.2005.00428.x
- Olive, A., Gunasekara, V., & Raymond, L. (2011). Normative Beliefs in State Policy Choice. *Political Research Quarterly*, 65(3), 642-655. doi:10.1177/1065912911408110
- Prakash, A., & Potoski, M. (2012). Voluntary environmental programs: A comparative perspective. *Journal of Policy Analysis and Management*, 31(1), 123-138. doi:10.1002/pam.20617
- The Presidents' Climate Leadership Commitments. (2017). Retrieved from <http://secondnature.org/what-we-do/climate-leadership/>
- Ragin, C. C. (2009). *Configurational Comparative Methods: Qualitative Comparative Analysis (QCA) and Related Techniques*. Thousand Oaks: SAGE Publications, Inc.
- Reporting Platform. (2018). *Reporting*. [secondnature.org](http://reporting.secondnature.org). Retrieved 5 March 2018, from <http://reporting.secondnature.org/>

- Segerson, K., & Miceli, T. J. (1998). Voluntary Environmental Agreements: Good or Bad News for Environmental Protection? *Journal of Environmental Economics and Management*, 36(2), 109-130. doi:<https://doi.org/10.1006/jeem.1998.1040>
- Strickland, A. (2017). Earth to warm 2 degrees Celsius by the end of this century, studies say. Retrieved from <http://www.cnn.com/2017/07/31/health/climate-change-two-degrees-studies/index.html>
- Videras, J., & Alberini, A. (2000). The appeal of voluntary environmental programs: which firms participate and why? *Contemporary Economic Policy*, 18(4), 449.

Appendix

Figure 1: *Second Nature* Commitments

CLIMATE COMMITMENT
CLIMATE LEADERSHIP

The Climate Commitment

Integrates a goal of carbon neutrality with climate resilience and provides a systems approach to mitigating and adapting to a changing climate. Designed to blend these two critical components of climate leadership.

[More >](#)

CARBON COMMITMENT
CLIMATE LEADERSHIP

The Carbon Commitment

Focused on reducing the emissions of harmful greenhouse gases to zero and mitigating campuses' contribution to climate change.

[More >](#)

RESILIENCE COMMITMENT
CLIMATE LEADERSHIP

The Resilience Commitment

Focused on climate adaptation-specific goals, as well as building community capacity to deal with a constantly changing climate and resulting extremes.

[More >](#)

Source: Climate Leadership *Second Nature*

Figure 2: California State University Campuses



Source: The 2014 CSU Sustainability Report

Figure 3: Sum of QCA Conditional Variables

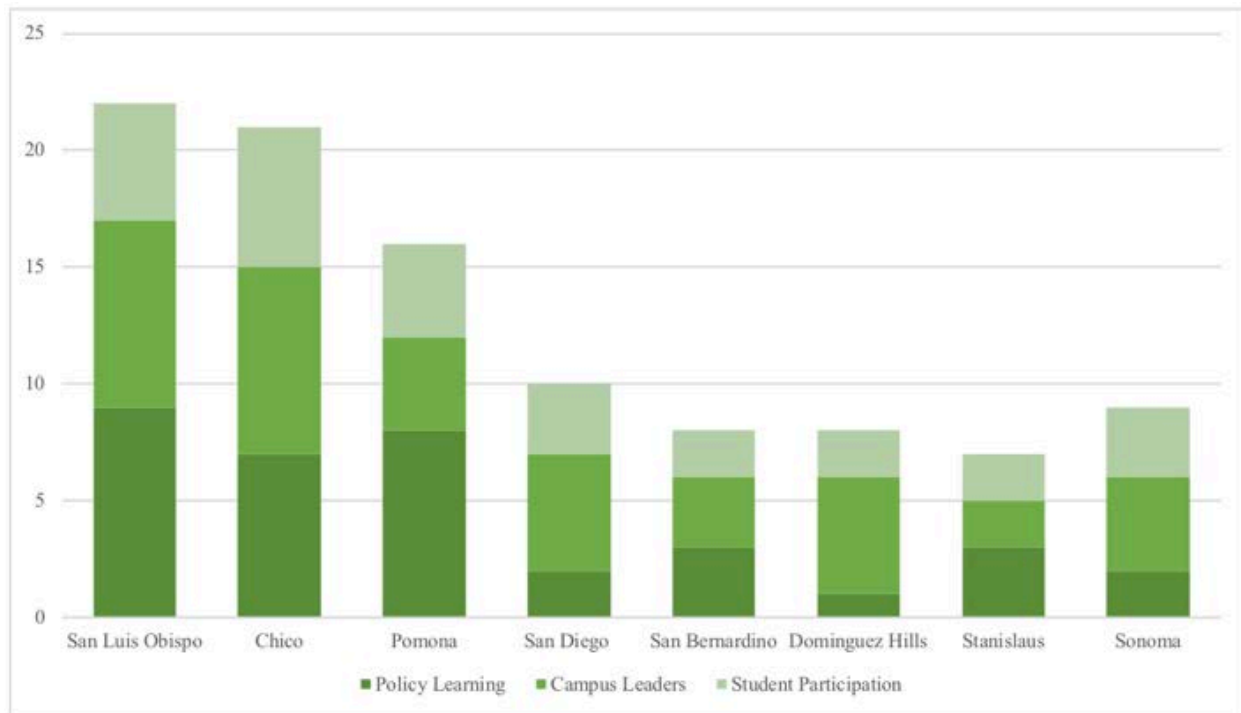


Table 1: CSU Sustainability Policy Goals

Sector	Policy Goal(s)
Academic Programs and Institutes	1. Integrate sustainability into the curriculum
Climate Action Plan	1. Reduce GHG emissions to 1990 levels by 2020 and 80% below 1990 levels by 2040 2. Promote alternative transportation on campus
Renewable Generation and Energy Independence	1. Increase on-site self-regulation capacity to 80MW 2. Procure more than 1/3 of electricity purchased from renewable sources
Energy Conservation and Utility Management	1. Identify and implement energy efficiency measure to reach GHG reduction goals
Water Conservation	1. 10% reduction by 2016 2. 20% reduction by 2020
Waste Management	1. Reduce solid waste disposal by 50% by 2016 2. Reduce solid waste disposal by 80% by 2020 3. Move to zero waste
Sustainable Procurement	<i>No specific goals listed</i>
Sustainable Food Services	<i>No specific goals listed</i>
Sustainable Building Practices	1. Build to LEED Silver equivalent, strive for Gold 2. Consider energy use and life cycle cost in construction or renovation of any building
Facilities Operations and Management	<i>No specific goals listed</i>
Transportation Demand Management	1. Promote alternative transportation or fuels

Source: The 2014 CSU Sustainability Report

Table 4: QCA Truth Table for Student Influences

	Variables						Outcomes		
	Less than 20,000 Students Enrolled	Sustainability Social Media Accounts	Sustainability Related Clubs	Advertised Sustainability Events	Princeton Review Green Colleges Ranking	Top Public Schools (West) Ranking	Adopted Second Nature	Climate Commitment	Carbon Commitment
CSU Cases									
San Luis Obispo	0	1	1	1	1	1	1	1	0
Chico	1	1	1	1	1	1	1	1	0
Pomona	0	1	1	0	1	1	1	0	1
San Diego	0	1	1	1	0	0	1	0	1
San Bernardino	0	1	0	1	0	0	0	0	0
Dominguez Hills	1	0	0	1	0	0	0	0	0
Stanislaus	1	0	1	0	0	0	0	0	0
Sonoma	1	1	0	1	0	0	0	0	0