

Getting to Green: Niche-driven or Government-led Entrepreneurship and Sustainability in the Wine Industry

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Through the framework of Michael Porter's five forces, this article compares sustainability in the Oregon and British Columbia wine industries. After describing the contrasting characteristics of the green niche model and the government-led model of environmental change, the article analyzes the emerging challenges for each type of change. The distinct sources for profitability and future innovation suggests diversity within the sustainability movement and two very different processes of translating environmental values into entrepreneurial practice.

Keywords: green niche; entrepreneurship and sustainability; business and environmental sustainability

A growing number of entrepreneurs in Oregon's wine industry demonstrate strong commitment to sustainability. With diversity and grassroots collaboration, winery owners are changing practices through a network of support that fosters individual creativity at the same time that it institutionalizes cooperation and collective innovation. As a contrasting case, the wine industry in British Columbia includes some front runners of sustainability but the changes are guided by government standards and regulations. Both of these northwest regions enjoy reputations as a "green" state and a "green" province relative to the other states and provinces in their respective countries. However, the path toward adopting sustainable practices in Oregon's wine industry through a grassroots green niche contrasts with the government-oriented model in British Columbia. Through purposive case studies, this article unpacks the entrepreneurial contexts and characteristics of these very different processes of transforming environmental values into business practices. After describing the differences of these two types of sustainability paths, the emerging challenges are outlined through the lens of Michael Porter's five forces model of industry analysis. Contrasting sources for profitability in the respective regions and implications for future research are explored in the conclusion.

Market, Government, and Green Niche: Entrepreneurship Models for Environmental Change

In 1968 Garrett Hardin predicted the "tragedy of the commons" because individuals would not easily absorb additional costs for the collective good. Within the more recent trends of sustainability, one model for environmental change suggests that marketization and privatization (which implies the driving forces of supply and demand rather than regulation) are the ideal vehicles for change (Porter and Kramer 2003, 2006; O'Neill 2004; Conklin 2010). This sustainability path implies that entrepreneurs can earn the traditional profit rewards by adopting green products, green processes, and green marketing. In recent years, there are success stories of green markets that affirm the possibilities of privatizing the solutions to common pool problems (Baumol 2007). Many entrepreneurs not only are incorporating the externality costs into their production processes voluntarily, but also they are benefiting from the decisions through profits (Porter and Kramer 2003, 2006; Conklin 2010; see also Sustainability in the Supply Chain 2007). Further, some theorists have argued that not only is the market mechanism capable of introducing innovations to support environmental recovery, but the market may be better equipped than government to deal with the complexity of the environment (O'Neill 2004).

Another model of environmental change centers on the conceptualization of the environment as a public good and therefore the necessary role of government to secure its protection (Ostrom 1990). Like other public goods, individual rational practices contribute to seemingly irrational and potentially devastating outcomes (Olson 1965). In defining the best role for government, recent discussions have weighed the ways in which government can be most effective along the lines of centralization/decentralization, regulatory/responsive, extent of participation and extent of public/private cooperation (Dovers 2005; Pahlke and Torgerson 2005).

Both market and government models of environmentalism carry a perception of the entrepreneur as individualistic and motivated by cost benefit analysis of existing profit opportunities, independent of "values," community, and collective

innovation. However, Anderson (1998) affirmed that the entrepreneur is not (merely) a profit-seeking automaton but he or she often brings more collective interest values into business practices (for a concise summary of emerging trends with Corporate Social Responsibility, see Conklin 2010). If both profit values and moral values characterize the entrepreneur, then the puzzle becomes unleashing the “Garden of Eden” values so as to recognize emerging opportunities. There has been modest attention to environmental values in studies of entrepreneurship, but Carsrud and Johnson’s (1989) seminal work placed entrepreneurship success as a byproduct and potential beneficiary of social investments. From this perspective, several studies of entrepreneurship incorporated culture and community as a potential benefit for entrepreneurship (Anderson and Jack 2002; Frederking 2004; Zhang and Wong 2008) but also as defining a type of entrepreneurial practice distinct from an individual oriented model (Steyaert and Hjorth 2006; Nicholls 2006; Besser, Miller, Perkins 2006; Townsend and Hart 2008).

Johnstone and Lionais (2004) presented community as a distinct type or stage of entrepreneurial process focused on community benefits rather than personal profit (226). A more recent contribution by Seyfang and Smith (2007) incorporated these social factors of values, community, and collective innovation as central features of an alternative model of environmental change. In contrast to market or government solutions, Seyfang and Smith (2007) identified the possibility of endogenous, community-driven change around environmental issues. They emphasized the importance of community action as a source for both innovation and policy formation in sustainability. With their theoretical emphasis on bridging the diverse literatures of innovation and community action, through identification of the particular characteristics of the community as a green niche, Seyfang and Smith called for qualitative analysis to understand the conditions for adoption of new practices and the process of change (599). The Oregon case offers this type of empirical study of a green niche, and with the contrasting case of British Columbia, provides empirical insight into the conditions, process, and limitations of green niches.

The concept of green niche provides a rich distinction from the sharp dichotomy of either market or government and it emphasizes grassroots emergence and community focus. In this way, the Oregon case of green niche contributes to discussions of entrepreneurship as “relationally and communally constituted” (Katz and Steyaert 2004). Focusing on entrepreneurship as a societal phenomenon, Fletcher (2006) presented a framework identifying different relational types. Fletcher emphasized social structure and its central role in the entrepreneurial process and, like Seyfang and Smith, addressed the missing piece in empirical research. While her research included background experiences and networks,

much less attention was given “to the wider societal, economic or cultural structures or patterns that shape entrepreneurship practices” (425). This article extends Fletcher’s study to emphasize *how* an entrepreneur adopts opportunities, like sustainability, and its impact on the collective possibilities for future change.

Methodology

Both Oregon and British Columbia represent critical cases in the study of environmental change. Precisely from their cutting-edge position (*Wine Spectator* 2007) they are purposive cases providing greater understanding about two different types of processes translating values into practice. The British Columbia case, through interviews with winery owners, revealed the process and implications of government-oriented sustainability, while the Oregon winery owners guided an understanding of a grass-roots, green niche path toward sustainability.

After five years of informal observation and discussions with workers in the Oregon industry, the interviewees were selected in order to understand the very different types of practices that make up the sustainability movement for Oregon wineries. The winery owner interviewees are self-recognized as pioneers in terms of sustainability and they mutually recognize each other for the differences and similarities of their perceptions and practices within the community. The respondent-driven sample¹ emerged from the first two interviews with Sallie Schullinger-Krause of Oregon Environmental Council and Susan Sokol Blosser (wine owner identified through *Wine Spectator* 2007) with the goal to understand the process (Yin 1993, 34) of adopting sustainability practices, and in particular, the social and values context of change within the Oregon and British Columbia wine industry. I conducted 16 interviews with entrepreneurs in the wine industry who have shifted farming and business practices toward great sustainability. Eight were in Oregon, of which six were with Oregon vineyard and winery owners, including a vineyard owner and owner of Oregon Vineyard Supply (supplier for 90% of Oregon vineyards), a representative from the Oregon Environmental Council, and the executive director of the Oregon Wine Board. In British Columbia, I conducted seven interviews with BC vineyard and winery owners and one with a trade representative of BC Wine Institute. Questions (Table 1) focused on motivation, innovation, perception of relationships with other winery owners, and reflections on the community in terms of industry and in terms of potential wider communities of sustainability.

The comparative framework contrasts two very different processes of translating environmental values into entrepreneurial practice. Certainly, any comprehensive explanation of the differences between Oregon and British Columbia sus-

Table 1. Interview Questions

1. Please share your story about the history of the winery.
2. Describe how your winery fits into the Oregon/BC wine industry?
3. How would you describe the relationship among wineries in the Oregon wine industry?
4. What are some examples to support this description?
5. Describe how the Oregon/BC wine industry is similar/different from other regions?
6. Describe your “green story.”
7. How does your “green story” compare to other wineries within Oregon/BC?
8. How do you perceive Oregon/BC wineries in terms of sustainability compared to other regions? In particular how do you compare the sustainability efforts within your wine industry with other regions?
9. What are some examples to support this description?
10. Compare Oregon/BC wine industry in terms of sustainability with other Oregon/BC industries—for example nursery industry and other agricultural products?
11. What is the relationship between wine industry and other industries in terms of sustainability in particular? Do you have examples of cooperation? Conflict?
12. What role has government played in terms of sustainability and Oregon/BC wine industry?
13. Specific examples?
14. What is the ideal role of government in terms of sustainability and wine industry?
15. Specific examples?
16. How does the wine industry lobby government?
17. What are examples where government, nonprofit organizations have pushed sustainability forward? Backward?
18. Do you see or have any evidence of the ways in which cooperation within the wine industry about sustainability issues has led to cooperation over other issues or with other activities?

tainability practices extends into differences within the societal, economic, and cultural contexts of these two regions. Explaining the causes for these contrasting paths is determined by these broader differences in government, economy, and society. However, the goal of this article is to probe these information-rich cases [“information-rich cases are those from which one can learn a great deal about issues of central importance to the purpose of the inquiry” (Patton 2002, 173)]. This study cannot explain comprehensively why the different models of change exist but explores “the themes and parameters of the problem” (Moustakas 1990, 117) to understand how these different models impact the individual decisions about sustainability, the particular practices an entrepreneur adopts, and the consequences of sustainability within the industry. There are two models of transition from environmental values into entrepreneurial practices: (1) a grassroots-driven, green niche model, and (2) a government-directed model. Rather than explaining why one and not the other, this article uncovers the process of change within each system in terms of business practices and the subsequent trajectory of sustainability.

Oregon’s Wineries: Sustainability Through Collaboration

Wine grapes reach 10 in the top 40 list of value from Oregon’s agricultural commodities. Nevertheless, this is a relatively small producing industry with output of a modest 1 percent of national wine grapes produced, and a total of 13,000 acres with a value of \$68,400,000 (Oregon Department of Agriculture). Compared to British Columbia, Oregon’s wine grape production is approximately twice as large with BC at 7,000 acres and a value of \$36,856,597 (British Columbia Wine Institute 2007). Certainly, Oregon’s wine industry is unique in terms of the number of wineries adopting sustainability practices. Many grape growers adopt sustainability practices without applying for formal certification, making aggregate data and direct comparisons difficult. However, one of the interviewees, Kevin Chambers, is a grape grower and also an Oregon supplier of equipment, products, and advisor to approximately 85 percent of all grape growers in the region. He estimates that while only 25 percent adopt formal certification, there is an excess of 40 percent of Oregon’s grape growers practicing sustainability at some level of certi-

fication.

Like many other agricultural crops, grape farming is commonly associated with herbicides, pesticides, and other chemical products throughout the growth cycle. The shift toward sustainability involves reducing or eliminating the use of these chemicals in an effort to restore the ecosystem within which the farm exists and also to restore the natural taste and nutrients of the particular crop. Central to the story among Oregon winery owners is the diversity in the adoption of sustainability practices.

- In the 1980s Ted Casteel and Pat Dudley of Bethel Heights were looking for nonchemical solutions to the toughest problems of grape growing from mildew and weeds.
- Susan Sokol Blosser of Sokol Blosser winery attended a Natural Step training session in 1999 that initiated an entirely new vision for her and the life of her business.
- When Josh Bergstrom of Bergstrom winery began farming grapes in Oregon in 1996, salespeople offered products to eradicate the weeds, and the herbicide was effective enough that the weeds died but the chemicals also severely threatened his vines, most curiously leaving neon orange strips on them.
- Sam Tannahill is co-owner of the newly acclaimed largest winery in Oregon, AtoZ. His early consciousness about sustainability focused on his family and personal food consumption. In the process of cultivating a healthier life, he extended the values into his workplace.
- Kevin Chambers was a student at “Berkeley North” (University of Oregon) and in 1974 he has introduced to the “Earth First!” movement. He carried the principles of organic and sustainability into his business.
- For Stoller winery, it was the decision to build a winery in 2002 that led Bill and Cathy Stoller to hire premium architects who suggested LEED (Leadership in Energy and Environmental Design) certification as a possible direction.

With their sustainability practices, these Oregon winery owners do not fit with the assumption presented in the literature described above as the ‘tragedy of the commons’ phenomenon. Similarly, the winery owners defy the generalized claim that profit interests drive environmentalism. Josh Bergstrom of Bergstrom Winery figures the biodynamic process adds approximately \$3,000 per acre. In spite of real costs that often are not returned, and far removed from the authority of government regulation, individual entrepreneurs in this region’s wine industry are choosing sustainable practices.

Oregon wineries are adopting environmental initiatives independent of government action, legislation, and regula-

tion. In fact, all of the interviews confirm that those adopting these environmental changes in the industry don’t want government regulation or guidance toward sustainability. Nor are these vineyard and winery owners actively capturing the economic benefits of their green products. They express concern for government regulations that may not be appropriate to distinct industries, and they all share a deep suspicion of the green market label of “greenwashing”—cultivating or manipulating a product’s origins solely to meet the appearance of green qualities for consumer, but at the expense of sacrificing quality.

For example, while all three of the winery owners who farm biodynamically² affirm the value of treating the vineyard like an ecosystem, they are wary of associating their wines with this brand certification as opposed to the quality of the wine. Each expressed strong concern that the consumer might be attracted to biodynamic as a brand and then taste a wine of less quality and forever associate biodynamic wines with poor quality. Whether correct or not, this perception is a driving force in their unwillingness to push the environmental association in a market context. And for many Oregon winery owners, quality of environment issues are about themselves and their relationship with the farming process, not so much an interest of consumers.

British Columbia Wineries: Uniform Certification and Marketing

In British Columbia, the government has played the central role in development of the wine region and it continues to be a central player in the movement toward sustainability. At the same time, the market and the effort to capture profits from “green” is also prominent. Winery owners view the government’s standards and stakeholder interest as relevant factors in considering the pace and effectiveness of change in practices. From government negotiations with native populations at the provincial level over land rights, to federal interstate trade negotiations and agreements with subsidies to grape growers, the British Columbia wine region is a product of active government participation and legislation. Differences in soil and climate conditions can account for some of the independence evident from interviews with winery owners. There are approximately 60 varietals and the wine region represents desert-like terrain with the Sonora desert reaching some of the most prestigious wineries and then lush vineyards circling the Okanagan Lake. Also significant is the sharp divide between very established and high-producing wineries within the region compared to the relatively new and small-scale wineries. This contrasts with much great equality in Oregon in terms of size and production of its wineries.

Collaboration is very limited and in contrast to the Oregon region, winery owners in British Columbia work within existing political and economic institutions and have adopted sus-

tainable practices that focus on a well-recognized standard organic certification. Those adopting new standards heavily market them to capture profit through branding in a traditional profit model. Whereas there are many types of certifications that define Oregon wineries in terms of sustainability, certification is limited to organic in British Columbia. In sharp contrast with Oregon winery owners' reluctance to market sustainability practices, there is a rush for some to identify with organic standards even prior to formal certifications. At least one winery was threatened with a fraud lawsuit for advertising organic without certifications. The early adoption of sustainability practices has focused on existing government "organic" regulation much more than informal community networks. In contrast to new certifications and grassroots cooperation, government in British Columbia has been a central focus as wineries try to change sulfite standards in order to receive organic certification for wine production (see Table 2 for convergence around organic certification). In January 2009, the Certified Organic Associations of British Columbia (COABC) adopted Canada Organic standards with amendments that include higher level of sulfites to permit organic wine production with better longevity characteristics in terms of the bottled wine (CAN/CGSB-32.311 Permitted Substances). Rather than community-defined standards that reflect existing norms or community-defined goals, action for sustainability is being adopted unilaterally and is the focus for significant change taking place through government.

Directly relevant in terms of participation in sustainability transformation, British Columbia is the first provincial government to legislate mandatory carbon emissions standards. While setting the standards for the future, it is up to individ-

ual industries to provide solutions. On the one hand, there is independence to find practices compatible within the particular diverse industries, but on the other hand, it is necessary to figure out new practices within a constrained time period. The government is creating the incentive for those in the wine industry to work together. According to several winery owners, however, it is not clear whether the environment will be an issue to overcome existing conflicts between small and large producers. Instead of creating community, the issues around creating and adopting new environmental standards could exacerbate conflict and it is not clear whether small or large producers are in a better position to adapt to new standards.

Table 2 identifies the very different practices across Oregon wineries; descriptions of the different certifications are described in the sidebar.

Comparing Green Niche and Government-led Sustainability Through Porter's Five Forces

In 1980, Porter described a model of competitive strategy. Firms may adopt strategies to manipulate any one of these five forces in order to maximize profits. Similarly, intensity of the characteristics overall suggests the level of returns for the industry more generally. This is a useful framework to begin to explore the evidence and implications of adopting sustainability practices in terms of rivalry among existing competitors, threat of new entrants, threat of substitutes, bargaining power of suppliers, and the bargaining power of consumers through these two different trajectories of change—one green niche and the other government-led (Figure 1).³

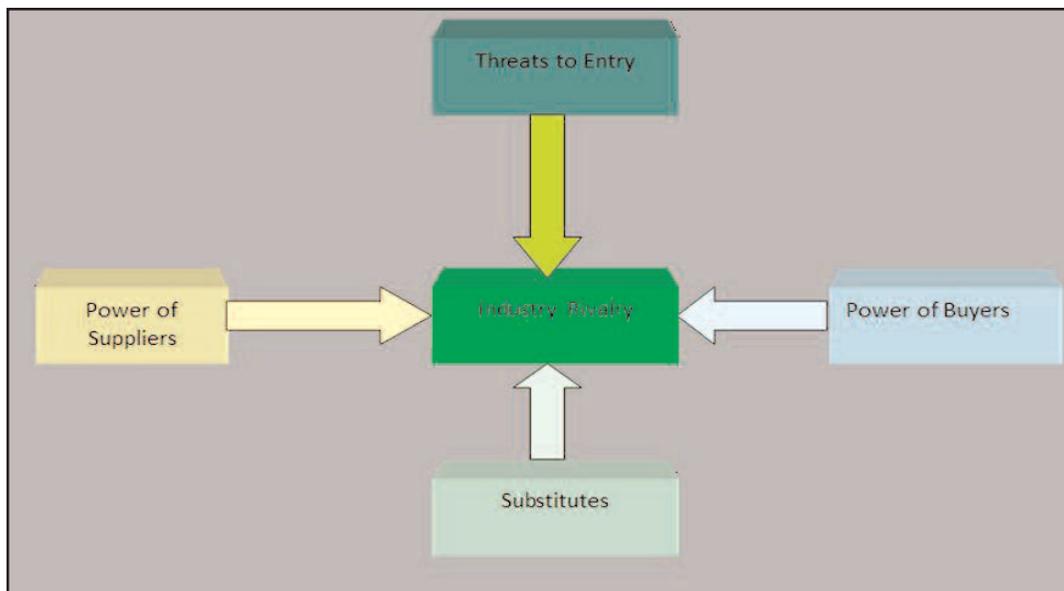


Figure 1. Trajectories of Change

Description of Organic, Biodynamic, LIVE, Salmon-Safe

Demeter Certified Biodynamic

In a word, biodynamic farming is rigorous. It means growing grapes and making wines completely free of synthetic pesticides and fertilizers. A step further than organic, biodynamic farming means managing the entire farm (or vineyard) as a living organism, with a high degree of self-sufficiency.

The Demeter Association is the world's leader in biodynamic certification and awareness. It has a long history of promoting sustainability, dating back to 1928, when it was founded to support and promoted the biodynamic agricultural methods of Rudolf Steiner. The U.S. Demeter Association certified its first farm in 1982.

LIVE, Inc.

Low Input Viticulture & Enology, Inc. (LIVE, Inc.) is a program that certifies vineyards for following international guidelines for environmental stewardship, social responsibility, and economic accountability. LIVE, Inc. also provides education and resources to winegrowers interested in sustainable farming.

Oregon Tilth Certified Organic

Many of Oregon's wineries are certified organic through Oregon Tilth, which has been a leader in certification since 1974. Oregon Tilth is an internationally recognized organization of organic farmers, gardeners, and consumers who are dedicated to biologically sound and socially equitable agriculture. Their goal is to educate people about the need to develop and use sustainable growing practices that promote soil health, conserve natural resources, and prevent environmental degradation while producing a clean and healthful food supply.

Salmon-Safe

Founded in 1995 by an Oregon-based river and native fish protection organization, Salmon-Safe has become one of the nation's leading regional eco-labels. Erosion and runoff from hillside vineyards can bring silt into streams, reducing the ability of native salmon to survive. Salmon-Safe has partnered with LIVE, VINEA, and Oregon Tilth to work with pioneering wine grape growers to protect Oregon's important salmon watersheds. Since first certifying vineyards in the Willamette Valley more than a decade ago, Salmon-Safe has certified 110 Oregon vineyards representing a third of Oregon's wine grape acreage.

Rivalry Among Existing Competitors: Oregon

In terms of collaboration and innovation, the community wineries in Oregon have become an example of experimentation through collective diversity, sharing, and cultivation of best practices. For example, members of the community experimented with organic wine production in addition to organic farming and an emerging consensus dismissed it as an unacceptable set of procedures for good wine. Regularly, Oregon State University scientists get together with a dozen other winery owners to discuss ways to expand the technological frontier to make sustainability viable, available, and

Table 2. Sustainability Certifications across Samples of Oregon and BC Wineries

Oregon Wineries	Sustainability Certification
AtoZ	Biodynamic practices (no certification) Organic Farming (no certification)
Bergstrom	Biodynamic
Bethel Heights	LIVE
Resonance	Biodynamic
Sokol Blosser	Natural Step Organic Farming Salmon Safe Certification
Stoller	LEED Salmon Safe Certification
British Columbia Wineries	Sustainability Certification
Blue Mountain	None (native species preservation)
Lotusland	Organic Farming Organic Wine
Mission Hill	None (native species preservation)
Rollingdale	Organic Farming Organic Wine
Summerhill	Organic Farming
Quails' Gate	Organic Farming (1991-1997)

economical. It is the evidence of these types of spontaneous collective groups and cooperation that define the green niche. For the Oregon green niche, its innovation is grassroots driven but it is spurred by articulation and cooperation of community practices to groups outside of the green niche (Pat Dudley of Bethel Heights). The green niche has institutionalized diversity, and individual creativity, at the same time that it has cultivated shared values, community, and cooperation.

Innovation underlies competitive strategy and it is also an important part of the green niche paradigm (Seyfang and Smith 2007). An interesting characteristic of the green niche entrepreneurship is how innovation emerges from the *interaction* between the deepening values within the community and the effort to extend those values to other groups. In the process of building bridges of values translated to mainstream, they are developing unique grassroots-driven certifications and centers for grassroots research. The diversity of environmental practices fosters a community of experimentation with models of alternative paths to sustainability. The winery owners of Bethel Heights led a grassroots group generating a new certification to include the diversity of sustainable practices. "Oregon Certified Sustainable" is pushing beyond the vineyard to include the winery and wine-making processes. The emerging branding image signifies and unifies

all vineyards and wineries that have adopted the practices and performance criteria for any other sustainable certification. There is much more marketing potential with one clear symbol that identifies the Oregon wine industry only and also represents a set of practices that fosters sustainability. This new certification represents a shift from identity formation toward capturing the market benefits from these identities. Through the Oregon Certified Sustainable label, the community preserves its environmental diversity and competitiveness, while articulating a vehicle for mainstream education, and collective market potential.

Table 3 summarizes the contrasts between the two paths toward sustainability in terms of innovation, motivation, and relationships of bridge building and collaboration with government and other environmental groups.

Whereas the single “organic” certification is the focus for change in British Columbia, Oregon continues to foster diversity. Curiously, its innovation as a green niche community emerges from the encouraged diversity of practices as well as its effort to coordinate and articulate values to groups outside of the community. At the same time as the extension of values and articulation of community pushes innovation, it is shifting into more formalized political interests and profit-oriented marketization through “Oregon certified sustainable” as a uniform certification. In spite of the grist for innovation and deepening cooperation within the community, the emerging politicization and marketization also shows signs of tension with early motivating values. How this balance can be maintained—a balance of deepening values within the community and expanding influence of values beyond the community—depends upon leaders who both initiated community

and continue to push their sustainability values in other sectors. In particular, as the Oregon green niche shifts from propagating stronger identity-oriented values within the community toward a balance between goals—thicker environmental values and ties within the community—it also spreads influence through more formal interest-oriented politics and more marketable uniform certifications. Through leadership, nonmarket principles and early environmental decisions nurtured this green niche with a focus on the intrinsic benefits of the transformations. As the green niche extends the influence and relevance of these values into the broader political and economic and cultural context, there is a feedback effect as the green niche responds to the changing broader context that it helped to create.

Rivalry Among Existing Competitors: British Columbia

While each winery owner in British Columbia affirmed the value and responsibility to shepherd the environment, many have realized that some practices, often those pressed by environmental groups through government, have unintended consequences that produce much more harm than benefit. For these wineries, decisions to adopt new practices are more cautious than driven, more incremental than innovative, less oriented around certification standards, and more concerned with deriving measures appropriate for the particular vineyards of the winery. For example, Tony Stewart of Quails’ Gate contributed to the diversity of sustainability practices and also suggested the potential to “market” orientation of the entire region for sustainable wines. Their comprehensive practices range from replacing traditional vehi-

Table 3. Characteristics of Niche-driven and Government-oriented Sustainability

	<i>Innovation</i>	<i>Motivation</i>	<i>Relationship with Government/ Environmental Groups</i>	<i>Collaboration</i>
Green Niche	Diversity of sustainable practices and certifications LIVE Organic Biodynamic Salmon Safe	Intrinsic benefits Collective culture Independent from market and profit motive Active branding around sustainability absent in early stages Fear of losing brand around quality	Partnership with government and environmental groups Creating standards together	Cross-industry collaboration
Government-oriented sustainability	Uniformity organic	Actively marketing even prior to certification	Regulated and motivated by government standards and regulations Responsive to environmental groups	Government regulation establishes uniformity across industries without endogenous collaboration within or between industries

cles with more efficient models, recycling restaurant waste to a biodiesel company, switching the irrigation system from overhead to drip, and changing packaging materials for shipping and wine bags. While they were certified from 1991 to 1997, they have continued low-impact practices but also maintain flexibility for adopting different strategies that may extend beyond organic recommendations. After the practices were in place in the early 1990s, Stewart began to question the overarching wisdom of some of them in terms of environmental sensitivity. For example, instead of some pesticides and herbicides, organic practices recommend using chicken manure. However runoff from the chicken manure into the lake raised questions, from his perspective, about community health standards even more than some of the chemical applications. Similarly, less product means more runs through the vineyards with machines to keep up with weeds and plants that can harm the vines. The benefits of a chemical-free vineyard can confront the unsustainable outcome of using tractors too much, and potentially contributing soil erosion through excessive hoeing. Stewart felt his approach is in line with the environmental movement but certification is not a priority, and indeed, certification can become a detriment if it is not accompanied by attention to the overriding goal of meaningful and comprehensive sustainability. Unlike the Oregon case, his decisions are independent of other wineries and removed from a community of cooperation.

Ian Mavety, winery owner of Blue Mountain, bought land in 1971 and grew grapes for other wineries until 1995 when he began to make his own estate wines. His fertilizers are either compost or organic, and since 1997, when his son joined the business, he has continued to search for sustainable remedies like more mechanical means for weed control rather than herbicides and biodynamic sprays. Close to the Sonora Desert, there are soil and topography limits that pose additional challenges for finding the right equipment. In terms of sustainable solutions, Mavety looks to France much more than the local community. The diversity of soil and climate makes it unreasonable to share information within the wine industry community. His goals for more sustainable practices are philosophical, and focus on the quality of wine product as well as minimizing water use through reservoirs filled with snow pack, for example. Like Stewart at Quails' Gate, Mavety questions the drive of some environmental trajectories without contingency thinking. In response to one group, he willingly put in Moor gates so that the deer could graze in his vineyard only to realize that the fence sometimes trapped the deer inside and made them easy prey for cougars and packs of dogs. In another instance, Nature Trust confronted him when he tore down trees in the process of clearing the path for his water pipeline. He tried to shift his path to accommodate their demands. However, since a devastating fire in 2003, people recognized that overpopulation of trees

without clearing could contribute to forest fire crises. Blindly whipping up the cause of tree preservation could miss protection of the environment's life cycle, and sometimes cause further damage

Dan Zepponi, President of Mission Hill, admitted that the sustainability measures in the region are largely ad hoc at this point, but he suggested that it could become a platform for the region. Dan perceived the marketing potential for the wine industry, especially given Canada's reputation as a "purist" country, in terms of the wider picture of the environment. Recognizing the lack of cohesion compared to Washington and Oregon in terms of varieties and cooperation, the sustainability issue could be a central point for organization and enhancing cooperation. Zepponi also articulated the complexity of the sustainable trajectory but he was optimistic that certain areas could be a focus for working together in the future. For example, whereas water reclamation has taken place on a small scale, it is possible to create regional change through cooperative efforts.

Threat of New Entrants

As a value, sustainability advocates support widespread adoption, but as an industry competing with traditional wine making, there can be advantages to more limited adoption of sustainable practices. Considering Porter's five forces, the competitiveness of sustainability through either the green niche model or government-led model fosters a competitive advantage in terms of weakening the threat of new entrants. If one assumes that the thick relationships describing Oregon's green niche evolve from the sustainability interest and carry into other areas of doing business, it may serve as a barrier for potential new entrants into the wine industry as well as the niche itself. With the British Columbia case, government regulation in terms of sustainability can also create a barrier to entry (Porter 1980), especially for the current wine producers. The costs of shifting practices to become sustainable may be more prohibitive than for the potential new entrants to the industry. Whether sustainability manifests in grassroots green niche or government regulation, entry barriers are created. It may be that government's role in the industry exacerbates barriers to community building around the sustainability issue as well. When government directs and sets the pace of sustainability, it becomes the focus for incentives and decisions. Rather than emerging standards from the grassroots community, in this model standards are imposed (Sherman 1991). When there is negotiation, it is between winery and government, and it takes the form of lobbying rather than cooperation. Because lobbying offers an advantage to large numbers, perhaps the wineries in British Columbia can foster greater cooperation and community as they begin to recognize solidarity of interests in response to government action. Even so, this type of cooperation as a response to govern-

ment decisions reinforces government's central role in defining, legislating, and regulating sustainability. And while cooperation within the industry may still emerge, interviews suggest much more independence, skepticism around practices pressured by environmental groups and government, and a market competitive focus in terms of decisions to adopt more sustainable practices.

Threat of Substitutes

Considering nonsustainable wine as the substitute for sustainable wine, the green niche model poses much more threat in terms of substitutes. Under market pressure, one might expect that suppliers and producers will abandon more costly practices of sustainability for the traditional products. However, the Oregon green niche is creating a brand that preserves diversity of practice and flexibility to incorporate innovation appropriate for the wine industry. Community orientation on values suggests that change occurs but with consultation, community pressure, and accountability around the overarching goals of preserving sustainability values, and secondarily, fostering a competitive advantage for the region. The goal of the region is to preserve quality with integrity. In contrast, British Columbia organic suggests a trend toward brand distortion. Innovation is oriented around best practices to create wine that meets government standards, whether or not those standards are apt for the wine industry.

Certainly, sustainability imposed through government regulations eliminates the threat of substitution between sustainable and nonsustainable wine. Nonsustainable wine becomes viable only through illegal distribution. However, while government regulation sets uniform standards, it also entrenches those standards with the risk of missing opportunities to develop new, more innovative ones. Also problematic is the risk of appropriate implementation. Mazmanian and Sabatier argued that "the most damaging criticism raised against regulatory programs is that they are often unable to achieve their stated objectives" (1983, 351). It is not only beyond the scope of this article to analyze all six criteria that they identify can increase the likelihood that government achieves its objectives, but it is also much too early to fully recognize government regulatory success in British Columbia. However, their analysis of the extensive challenges suggests skepticism around government solutions to sustainability.

While strong government regulation of environmental standards prevents the possibility for substitutes of sustainable wine, it also establishes an incentive to change the product to accommodate standards rather than creating standards to fit with the innovation possibilities of the product. Among Oregon winery owners there were expressions of disdain and frustration with the possibility of government responsi-

bility for initiating, developing, and regulating sustainable practices. For example, in the interviews every winery owner praised but also lamented the organic label. On the one hand, it sets a standard for reduced chemicals and this is good for the end product and its education potential for the consumer has been significant. However, at the same time that it has set a standard for certification, Oregon wineries perceive the bar too low: these federal regulations will continue to attract businesses that settle and celebrate with substandard practices. They protest the weak standards, but they also oppose the lack of flexibility or appropriateness of the standards for wineries. In particular, while wine growers can comply with certification for organic farming, organic principles for processing grapes into wine can be devastating for the final product. Organic certification for the final wine product requires that no sulfites be used throughout the processing. Sulfites are essential for the preservation of wine. Without them, wine turns to fizzy pop ready to implode—certainly not good drinking and definitely not a good cellar product. It makes sense that no winery aspires for the organic label on the wine bottle. British Columbia wineries adopting sustainable practices gravitate toward the uniform standard of organic and lobby government to change the benchmarks of organic. Oregon wineries have the collective action potential to affect change through government, but it is clear that they want to preserve diverse sustainability practices.

Uniformly and independently, Oregon winery owners share a perspective that organic certification generally has become diluted. For example, one winery owner asserted that the goodness of organic certification becomes especially weakened when consumers buy organic produce from distant places. The cooling systems for preservation and the transportation systems that allow the organic product to be sold to the U.S. consumer may cause more environmental destruction than any wider collective environmental benefit from the farming practice. So while organic may provide a good benchmark for sustainability practices, Oregon wineries will continue to benefit from ongoing diversity and competition around sustainability practices. In contrast, the government orientation around organic guides British Columbia wineries to focus on this sustainability measure and practice.

Bargaining Power of Suppliers

Another challenge of the transformation from niche into mainstream comes from the entrepreneurial leadership and the relationship between the grape growers and wine production. In Oregon, Bergstrom winery owns its own acreage but the winery has also purchased grapes from local growers. Over the years Josh Bergstrom has encouraged growers to consider more biodynamic farming techniques but the resistance has been significant. They have ended relationships with some of those growers and established new long-

term contracts with growers to farm new acreage along the guidelines set by biodynamics. Similarly, as the largest winery in Oregon, AtoZ purchases grapes from many growers throughout the area. Part of its five-year strategic plan includes ultimatums to these growers to adopt more sustainable practices or risk losing their annual buyer. It is clear that these winery owners will make a difference in fundamentally shifting the industry paradigm in Oregon to adopt more sustainable practices. From an environmental perspective, this particular outcome is ideal and the process of power and influence may be comfortable and entirely expected as those within the community become more certain of the importance of change, and as they wield more strength within the industry. However, it is unclear whether the more clearly defined “power” approach eventually undermines the community characteristics that drive sustainability creativity and possibilities.

In contrast, the uniformity of government regulation affects practices of all grape growers and does not require pressure from individual wine makers. Within this trajectory of sustainability, suppliers of grapes gain some bargaining power in relation to the wine producers. They can pass on the costs of transitioning their crops at the same time that they reap the benefits of any tax breaks or incentives that come through government regulation.

Bargaining Power of Consumers

The brand “Oregon Certified Sustainable” translates the diversity of good sustainability practices into a uniform brand for consumer education and recognition. The adoption of Oregon Certified Sustainable as a marketing label carries the possibility of enhancing the viability of Oregon wineries’ sustainable practices. In particular, as the brand identification becomes a profit mechanism, the numbers and commitment of other wineries likely will increase. As a brand it identifies independent certification (LIVE, organic, biodynamic certifications qualify), responsible agriculture, and responsible winemaking. Ted Farthing, executive director of the Oregon Wine Board, emphasized the importance of bringing together all the diverse practices into identifiable brand recognition. Although at this point no wine region has captured a market-oriented environmental niche, given the increasing number of Oregon wineries adopting these practices, sustainability seems a very promising area for regional recognition and association for consumers. With the bargaining power currently residing with consumers, there is a critical need to educate them about the meaning of sustainability in terms of wine. The 2007 Final Full Glass Research Oregon Wine Board Study revealed that many consumers are not sure what sustainable wine is, and that although wine consumers tend to be more oriented toward sustainability purchases, this does not translate into the purchase of sustainable wine as a prior-

ity consideration. The creation of a uniform brand, even while environmental practices remain diverse, is a significant bridge moving from the community green niche of some Oregon wineries to more mainstream identification of greater numbers within the industry.

Government regulation eliminates the choice that gives consumers bargaining power in the green niche model. However, as much as government guides sustainability practices, consumers remain powerful in terms of lobbying and voting. Oregon winery relationships with environmental groups can be characterized as much more of a partnership than adversarial relationship. This kind of alliance is unique compared to other regions. An interview with the Oregon Environmental Council confirmed the ways in which a significant state environmental lobbying group perceives the wine industry as a potential leader in adopting best practices. The council identified a sharp divide within the industry that puts Oregon’s wine industry on the right side of the environmental effort. Oregonians for Food and Shelter, Rural Coop utilities, Oregon’s Cattleman Association, and Dairy Farmers of Oregon represent traditional farming in contrast to wine representing a new direction and potential partner for sustainability. Through emerging initiatives described below, Oregon brings together entrepreneurs across sectors and industries, environmental groups, and government in partnership toward the goal of enhancing sustainability. In terms of a bridge from community green niche to mainstream recognition and influence, this model of partnership is critical for ongoing successful transformation in the wider state community. While there are obvious possibilities for extending the relevance and influence of Oregon wineries as a model for sustainability, there are also challenges that constrain the transformation from community niche to mainstream. Some of these challenges are intrinsic to the competing values of community and market or community and mainstream, and some of these challenges emerge from the encroaching role of other stakeholders including government.

Government regulation can lead to uniform and comprehensive change. It removes the backdrop of consumer choice that prevents many wine growers from bearing the additional cost of sustainable crops. At the same time, government becomes a permanent direct influence on the practices of sustainability within the industry and this can prevent the innovative shifts that come from a diversity practices framework of the green niche.

Conclusion

The study of environmental values and the transformation toward sustainability practices offers a rich set of cases to emphasize social processes underlying entrepreneurship more generally. The communities of Oregon and British Columbia wineries present contrasting social processes and

moves toward understanding how people enact sustainability practices the way they do in relation to broader societal, economic, and political processes (Fletcher 2006).

While the profitability of sustainability has not been the focus of this article, several relevant observations contribute to understanding the contrasting sources for profitability. In Oregon, the green niche maximizes flexibility in terms of experimental farming, collaborative decision-making, and cultivating consumer demand toward sustainability while preserving the opportunities from traditional farming as well. The thick social relations characterizing the green niche, social capital cannot be measured precisely but some studies confirm that social capital gives business an edge in terms of investment opportunities and cost savings (see Frederking 2007, 2004). Finally, the culture of innovation surrounding the green niche continually pushes the production possibility curve and forwards cost cutting possibilities to maximize the profitability of sustainability practices. The likely winners within this industry are those producers who are able to differentiate with both traditional and sustainability practices. In this way, they are able to minimize risk while they cultivate consumer preferences for sustainable wines. Potential losers within the Oregon industry include the new entrants who are outside the niche, and also specialists in either sustainable or traditional wines who may suffer from the vagaries of market shifts.

In British Columbia, as government regulations prioritize environmentalism, they can entrench consumer values and decisively eliminate competition between firms in terms of this strategy of sustainability. The government and wine producers can promote profitability of the entire BC industry as a specialized style within the global market. However, as long as the costs for transition to sustainability are realized through price, consumers end up losing the most in the transition. Where choice is already limited in British Columbia through provincial regulations on supply from other provinces as well as other countries, consumers may be caught paying for more expensive and less desirable wines. The most likely winners are the large producers who are in a better position to influence provincial and national government in terms of regulations, pace, and standards that benefit them. These interests may benefit small producers. Certainly low-cost, specialized wine producers who are not practicing sustainably will likely lose in the transition as will high-cost producers who want to experiment with practices that don't fit new regulations.

Table 4 summarizes the challenges between green niche entrepreneurship and government-oriented sustainability.

For many Oregon entrepreneurs, sustainability is an emerging issue of identity as much as interest. They reject government intervention as the solution to environmental degradation and as the foundation for rejuvenation. However,

they also reject the market drive for sustainability and they are reluctant to participate in the wave of green profits. Over time, however, ecopreneurs are organizing collectively in ways that transform small communities focused on intrinsic environmental values to more mainstream recognition and identification. On the one hand, this transformation shifts cooperative values and diverse practices into profitable and institutionalized, therefore viable, enduring sustainability. On the other hand, this transformation presents challenges in terms of introducing power and profit to community-guided values of sustainability.

The strength of the green niche is the innovation coming from cooperation and evolving from the strategy to articulate and "create value systems" (Sherman 1991). Power and profit reflect these mainstream efforts and while they can generate the next stage of sustainability, it may be at the expense of the next round of creativity and cooperation. As the green niche intersects with the wider public domain, it extends its influence at the risk of compromising some of its core values of community and informal communication. Anderson and Smith (2007) articulated that the space of public and private intersection can be a place of tension and, in accordance with the characteristics identified by Seyfang and Smith, a green niche can generate value change for the wider communities. As the case of Oregon wineries reveals, there is potential in the public and private intersection for innovation that affects both the green niche and the values of the wider communities. Cooperation with diversity of sustainability practices also maintains interfirm rivalry while orienting around a regional competitive advantage. This win-win possibility carries innovative possibilities that are not so present in the

Table 4. Challenges of Niche-driven Entrepreneurship and Government-oriented Sustainability	
	<i>Intrinsic Values and Diffusion Challenges</i>
Green Niche	Diffusion through market and cross-sector collaboration compromises intrinsic values and core relationships. Grassroots transformation shifts to power transformation. Government participation invites government regulation.
Government-oriented sustainability	Government practices are not likely to be best practices. Rather than value transformation entrepreneurial sustainability remains "greenwashing." Inequality limits cooperation and limits ability to adapt creatively to government standards. Compliance rather than values change.

government-directed model. Where government regulates and enforces, there is the possibility that firms lobby government rather than innovate.

Another path of sustainability is government oriented. Not surprisingly, the role of government in directing sustainable entrepreneurship likely follows from a central role of government in the industry prior to environmental expectations and changes in sustainability practices. An existing framework of regulatory policies and government directives merely incorporate the environmental needs of sustainability. In this type of externally imposed context, industries respond or adopt a strategy of adaptation (Sherman 1991) to government standards more than creating innovative options to environmental challenges. In effect, innovation among entrepreneurs and around policy formation issues carries more risk in settings such as Canada and in contrast to the United States for example. There is an expectation that ultimately government will determine its own standards with the enforcement mechanism to ensure adaptation. While there is less community and endogenous development of innovative solutions to environmental problems and opportunities, there are benefits from the government-led uniformity in terms of standardization across industries and across countries. Studies of these two distinct types of social processes underlying entrepreneurship suggests that transition from government-led environmentalism to green niche is not likely. At the same time, by Anderson and Smith's conceptualization of legitimizing entrepreneurship, the contrasting paths of sustainable entrepreneurship may be a good fit for the respective political and social contexts.

Future Research

It will be important to study the wine industry, specifically the market viability of more sustainable wine, over time. By measuring the change in national and international market share of sustainable wines, it will become clear if sustainability is a luxury interest that responds sensitively to recessionary market conditions. Comparing regions within each country provides additional insight about the relevance of national political and socioeconomic cues such as the history and density of government intervention. In terms of future research on sustainable entrepreneurship, it is essential to

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incorporate contrasting paths toward the goals of sustainability and environmental protection. To some extent there is a path dependency and underlying affinity for government intervention contributing to the government-led model in British Columbia compared to the green niche model in Oregon.

Whether managing a multinational company or a winery start-up, these contrasting paths affect costs as well as the culture of running a business. In Oregon, the potential as well as increasing expectation for experimental farming and collaborative decision making is much higher. However, there is also a layer of informality that lacks transparency for newcomers, and carries relevance in terms of the investment decisions and costs relevant for incorporating successful sustainable practices. In British Columbia, the rules and expectations can be uniform and transparent, and the expectation to utilize formal lobbying channels to influence sustainability is more important and more likely to be a focus. In terms of sustainability, it is government officials who are leading and setting standards in British Columbia, whereas government officials in Oregon participate but follow the lead of green niche outcomes with financial support, not so much regulatory directives.

In 1776 Adam Smith developed the theory of the invisible hand emphasizing the efficiency and effectiveness of the marketplace for creating and managing change. Certainly, in terms of self-regulation the Oregon wineries manifest this principle more clearly than the British Columbia wineries. However, while Adam Smith developed his theory of the invisible hand in *The Wealth of Nations* (1776), he explored the invisible hand concept in his earlier *The Theory of Moral Sentiments* (1759). It is in this earlier opus that Smith articulated the importance of community and social relations as a foundation crucial for efficient and effective market relations. Here also, the Oregon wineries in this green niche capitalize on the moral sentiments as well as the market mechanism to drive competitiveness. Smith's emphasis on the social fabric of economic exchange is often overlooked but this case of sustainability affirms that informal relationships may be as important as the formal market principles in terms of maximizing long-run profitability and maximizing innovation around more sustainable practices.

Notes

1. Informal observations guided an initial selection and then these two interviews confirmed the sample as best representatives of sustainability practices.
2. The three wineries from my sample that farm biodynamically are AtoZ (Sam Tannahill), Bergstrom (Josh Bergstrom), and Resonance (Kevin Chambers).
3. According to Porter, "it is usually more illuminating to consider how government affects competition through the five competitive forces than to consider it as a force in and of itself" (1980, 29).

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