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The impact of social norms on entrepreneurial action: Evidence from the environmental entrepreneurship context

William R. Meek [a,*,1], Desirée F. Pacheco [b,1,2], Jeffrey G. York [c,1,3]

[a] University of Dayton, School of Business Administration, Dayton, OH 45469-2271, United States
[b] Portland State University, School of Business Administration, P.O. Box 751, Portland, OR 97207-0751, United States
[c] University of Virginia, Darden Graduate School of Business, Charlottesville, VA 22902, United States

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ABSTRACT

Using insights from institutional theory, sociology, and entrepreneurship we develop and test a model of the relationship between centralized and decentralized institutions on entrepreneurial activity. We suggest that both decentralized institutions that are socially determined as well as centralized institutions that are designed by governmental authorities are important in promoting firm foundings in the environmental context. In a sample of the U.S. solar energy sector we find that state-sponsored incentives, environmental consumption norms, and norms of family interdependence are related to new firm entry in this sector. Our findings also suggest that the efficacy of state-level policies in the sponsoring of entrepreneurial growth is dependent upon the social norms that prevail in the entrepreneur's environment. We expand entrepreneurship theory and the study of institutions and the natural environment by demonstrating the integral role that social norms play in influencing the creation of new firms and by illustrating the potential effect social norms have on the effect of policy that seeks to encourage environmentally responsible economic activity.

1. Executive summary

The study of business and the natural environment continues to gain ground and attention in academic research (Bansal and Roth, 2000, Berrone and Gomez-Mejia, 2009; Delmas et al., 2007). Environmental entrepreneurship has emerged within this stream of research to examine the drivers of environmentally responsible entrepreneurial action and the consequences of such behavior (Anderson and Leal, 2001; Dean and McMullen, 2007; Larson, 2000). While this area of study offers a fascinating perspective on the nature of entrepreneurial opportunities for environmental goods and services, it has mostly adopted an economic approach (Dean and McMullen, 2007; Cohen and Winn, 2007). This study offers one of the first empirical studies of the sociological component of environmental entrepreneurship by offering social norms, defined as unwritten rules of conduct in a group (Elster, 1989), as a factor which influences engagement in environmental entrepreneurship.

Integrating theory from entrepreneurship, sociology, and institutional theory, we argue that both centralized (government designed) and decentralized (socially determined) institutions impact entrepreneurial activity. Specifically, we suggest that (1) state-sponsored incentives; (2) environmental consumption norms; (3) norms of conformity; and (4) norms of family interdependence influence firm foundings in the environmental context. Using a unique dataset on solar energy firm foundings

* Corresponding author. Tel.: +1 937 229 3760.
E-mail addresses: bill.meek@udayton.edu (W.R. Meek), pacheco@pdx.edu (D.F. Pacheco), yorkj@darden.virgina.edu (J.G. York).
[1] Authors contributed equally.
[2] Tel.: +1 503 725 9684.
[3] Tel.: +1 804 922 9099.

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and the General Social Survey (GSS) we empirically demonstrate that social norms, by themselves and in conjunction with state-level incentives, have the ability to influence environmental entrepreneurship. Specifically, our analysis finds that state-level incentives, environmental consumption norms, and norms of family interdependence are related to the formation of solar energy firms, and that conformity and family interdependence norms influence the effect of state policies on firm foundings.

Our findings have implications for theory and practice. For researchers, the results of this study provide some of the first empirical evidence that social norms explain some of the variation in the level of entrepreneurial foundings in a given region. Thus, future entrepreneurship research would be well served to consider the potential explanatory power that social norms play. In addition, and perhaps of greater theoretical interest, is our contention that while centralized government incentives may contribute to entrepreneurial growth and economic development, such effect is dependent on the overall social environment and its influence on entrepreneurial decision-making. This is particularly relevant, although not exclusive, to the context of the natural environment where social norms and the values that they espouse likely serve as an important motivation in the exploitation of entrepreneurial opportunities.

For entrepreneurs and investors, the findings point to the potential importance of location decisions. While some research on founding rates suggest that the regulatory environment (Rao, 2004), political leanings (Hiatt et al., Forthcoming) and institutions (Russo, 2001) play a crucial role, locating environmentally conscious new businesses in areas with high levels of environmentally responsible consumption and family interdependence norms may also be important. In addition, our results provide insights to policymakers. This study suggests that government-sponsored incentives are more effective at promoting new firm foundings in the solar energy sector when surrounded by family interdependence norms; but that this relationship is weakened by the increased presence of norms of conformity.

The paper begins with a review of the emerging literature on environmental entrepreneurship. Next, we provide the background and theoretical rationale for why social norms may impact firm founding rates of environmentally responsible ventures. Finally, we present the empirical results and end with a discussion of the study's limitations, implications, and conclusions.

2. Introduction

The past decades have witnessed a growing interest and attention to the role of business in driving sustainability in general (Bansal and Roth, 2000; Hart, 1995; Porter and van der Linde, 1995; Shrivastava, 1995), and to the ability of entrepreneurs to promote environmental welfare in particular (Anderson and Leal, 2001; Dean and McMullen, 2007; Larson, 2000). This interest has brought with it the emergence of a variety of academic and popular areas of research—including the subject of "eco-preneuring" (Bennett, 1991; Blue, 1990; Kivirist and Ivanko, 2008) and environmental entrepreneurship (Anderson and Huggins, 2008; Cohen and Winn, 2007; Dean and McMullen, 2007)—which address the pursuance of opportunities for profit that simultaneously deliver environmental benefits. Within this research, the concept of environmental entrepreneurship was introduced and defined as "the process of discovering, evaluating, and exploiting economic opportunities that are present in environmentally relevant market failures" (Dean and McMullen, 2007; 58). This conceptualization points to the important role of entrepreneurs in mitigating market failures and promoting social welfare through the exploitation of environmentally responsible opportunities. To date, this perspective offers a foundation for explaining environmental entrepreneurship primarily from an economic lens. Yet we know little about how social dimensions such as social norms can further explain the emergence of entrepreneurship, and specifically, environmental entrepreneurship.

In this study, we use the concept of social norms, defined as unwritten rules of conduct of a group (Elster, 1989), as a way to study how private, decentralized institutions (Ingram and Silverman, 2002) impact the creation of environmentally responsible new ventures. Social norms could shed light on how group-level values impact the individual-level decision-making of entrepreneurs. In addition, we study how social norms influence the ability of state-sponsored centralized institutions to foster or inhibit entrepreneurial action by means of firm foundings. In conducting this research we make several contributions. First, we apply the concept of social norms to the study of entrepreneurship, its relationship with centralized government institutions, and the implications of such on entrepreneurial activity. Second, we enhance and expand the emerging literature in environmental entrepreneurship by identifying and empirically examining the role of specific social norms that explain the emergence of environmentally responsible firms. While work in environmental entrepreneurship has addressed the impact of social *movements* in environmentally responsible firm foundings (Sine and Lee, 2009), this literature has been mostly concentrated on the economic factors that drive entrepreneurial action towards environmental welfare (Anderson and Leal, 2001; Cohen and Winn, 2007; Dean and McMullen, 2007).

Third, we raise important implications for the study of institutions and the natural environment (Anderson and Leal, 1992; Atkinson and Tietenberg, 1991; Dorfman and Dorfman, 1993; Ostrom, 1990). While research in institutions recognizes both the usefulness of government intervention (Atkinson and Tietenberg, 1991; Bator, 1958; Dorfman and Dorfman, 1993) as well as socially determined institutions for the encouragement of environmentally responsible behavior (Ostrom, 1990; Oses-Eraso and Viladrich-Grau, 2007), we know little about the co-dependencies across these different types of institutions and their collective effect on environmental outcomes. Our approach helps to address this gap by concurrently examining how these different types of institutions influence environmentally relevant economic activity.

In the following section we develop our theoretical motivation. We briefly describe the context of environmental entrepreneurship. We then review the literature on the impact of public, centralized institutions (Ingram and Silverman, 2002) on entrepreneurial action and advance hypotheses regarding the impact of these institutions on environmental entrepreneurship.