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# Recessionary period activities in forest sector firms: Impacts on innovativeness

Eric Hansen[a,*], Casper Claudi Rasmussen[b], Erlend Nybakk[b]

[a] Department of Wood Science and Engineering, Oregon State University, 119 Richardson Hall, Corvallis, OR 97331, United States
[b] Kristiania University College, PB 1190 Sentrum, 0107, Oslo, Norway

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ABSTRACT

The Global Financial Crisis (GFC) provides a unique setting to study innovativeness and customer orientation in forest sector firms. Considerable research has focused generally on innovativeness in forest sector firms, but little attention has been given to the actions of firms to the chaotic market environment during the GFC. Our objective is to clarify how a customer orientation and the practice of developing new markets during a market downturn results in enhanced knowledge-based resources, manifested as increased innovativeness. Our longitudinal design includes data representing 2012 and 2015 from 89, US-based forest sector firms. Responding firms are more focused on process than product innovativeness. During the GFC, responding firms concentrated more on foreign market development than on domestic market development. Firms with a stronger customer orientation in response to the GFC realized higher innovativeness post-GFC. Also, firms actively developing new foreign markets in response to the GFC realized higher process innovativeness. Our results support a stronger customer focus for forest sector firms as it translates to increased innovativeness and potentially improved product development. In addition, allocating resources to foreign market development during financial downturns can be a strategy to build innovativeness.



## 1 Introduction

The recent Global Financial Crisis (GFC) provides a unique setting for investigating the response of firms to market decline. The literature suggests that firms tend to react to decline either via a conservative approach, where costs are reduced and risks are avoided, or through an approach where risk is embraced and the focus is on innovating out of the decline situation (McKinley et al., 2013). A focus on customer orientation to maintain current customers and actively developing new markets are examples of activities that a firm might embrace to mitigate the impacts of a declining market. In turn, these efforts may pay long-term dividends as companies improve their innovativeness and extend their resource base with regard to product and process innovation. By analyzing the effects of post-recession market development activities of forest sector [1] firms, we provide insights into the impacts of the recession on product and process innovativeness. Accordingly, this article contributes to the research stream on knowledge-based resources in forest sector companies (Cohen and Kozak, 2001; Han and Hansen, 2016; Hansen et al., 2006; Hansen and Nybakk, 2016; Hugosson and McCluskey, 2009; Niemelä and Smith, 1995; Toppinen et al., 2013; Rich, 1986).

The US forest industry is a sector heavily impacted by the GFC, as its primary market, residential housing, fell by nearly 80% between 2005 and 2009 (Ince and Nepal, 2012), and overall employment fell by over 40% between 2005 and 2011 (US Census. 2013). The intensity of the decline in the US housing sector was unprecedented in modern history, and provides a rare lens through which to study the effects on innovativeness of the actions taken by companies in response to a recession. Forest sector firms are considered to be conservative by nature, to lack innovation (Leavengood and Bull, 2013; Hansen et al., 2007) and lack a marketing and customer focus

* Corresponding author.
*E-mail addresses:* Eric.Hansen@oregonstate.edu (E. Hansen), CasperClaudi.Rasmussen@kristiania.no (C.C. Rasmussen), erlend.nybakk@kristiania.no (E. Nybakk).

[1] Forest Sector: a broad set of firms along the value chain from the forest floor to the retail floor. Here we focus on primary and secondary manufacturing firms from the US.

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(Han and Hansen, 2017). Analyzing firms in a low-innovation sector enhances the opportunity for unique insights because new actions or activities in response to the GFC by low-innovative firms has the potential to increase overall firm innovativeness.

Little work has been performed following the paths of companies as they adapted to the GFC and eventually to what is now referred to as the "new normal" (Panwar et al., 2012). Anecdotal evidence suggests that firms increased their focus on customers and becAme more flexible to customer demands during the GFC. United States trade data show that increased exports were one way that companies adapted to the GFC. For example, lumber exports from the US grew from $900 million in 2009 to nearly $1.6 billion in 2011 (US GATS, 2016). Additionally, evidence suggests that firms in the forest sector actively pursued new domestic markets outside of housing (Han and Hansen, 2016; Merchant Magazine, 2010).

By engaging in new market activities, companies force themselves to contact new customers, competitors and local authorities. In doing so, they increase their knowledge base and are able to enhance their knowledge-based resources (Hitt et al., 1997). However, previous research tends to disagree on the direction of causality (Monreal-Pérez et al., 2012). Hitt et al., (1997) state that firms should act cautiously when entering new markets, and they call for more in-depth research on international diversification and innovativeness. Entering foreign markets, even if through intermediaries, likely requires manufacturers to innovate their products and processes. Accessing export markets means being in contact with new customers and producing different products, for example, to meet differing product standards.

Using data collected in 2013, representing the situation in 2012, and 2016, representing the situation in 2015, from the same firms provides us with insights into how customer orientation and the development of new markets impact innovativeness over the cycle of a recession. We chose these years because they represent the initial recovery from the GFC (2012) and a relatively stabilized market in 2015. Accordingly, our objectives are the following:

- To evaluate the time-based impacts of customer orientation on product innovativeness;
- To evaluate the time-based impacts of new market entry on product and process innovativeness.

Our longitudinal view across the time surrounding the GFC facilitates several important contributions of this work. The underlying contribution aims to clarify how activities in response to recession lead to increased innovativeness in forest sector companies. Previous research tends to focus on product innovativeness (Keupp et al., 2012); however, it may be insufficient to focus solely on one type of innovativeness. In order to bring the literature forward, we examine the effect on both product and process innovativeness.

The remainder of our paper is organized as follows. First, the theoretical background provides an overview of the conceptual approach taken in the research. This section includes an explanation of our hypotheses. Next, we explain our methods and results and follow with a discussion, including the implications of our findings.

## 2 Theoretical Background and Hypotheses

The definitions of innovation and innovativeness are not consistent in the literature (Damanpour, 1987), and the two terms are often used interchangeably (Garcia and Calantone, 2002). Rogers (2003) defines innovation as an idea, practice or object that is perceived to be new by an individual or other unit of adoption. Innovativeness is generally characterized as a function of adoption (Rogers, 2003) and/or creation (Gebert et al., 2003). Hult et al. (2004) state that innovativeness relates to a firm's capacity to engage in innovation. Following this stream of literature, we consider innovativeness as a characteristic of an organization, and an innovative firm tends to be an early adopter and/or creator of new products and processes. We apply the two most common types of innovativeness used in the literature. Product innovativeness refers to the ability of a company to develop new products, whereas process innovativeness refers to the ability to develop and implement new production methods (Keupp et al., 2012; Monreal-Pérez et al., 2012).

In the resource-based view (RBV) of the firm, both tangible and intangible resources are seen as strengths of the firm (Barney, 1991; Wernerfelt, 1984). Firms within an industry possess differing resources and these resources may be difficult to obtain, making the differences among firms long-lasting (Barney, 1991). Recent work in the RBV paradigm concludes that intangible, rather than tangible, resources are more likely to produce sustained competitive advantage (Kozlenkova et al., 2014; Martín-de Castro et al., 2013). Innovativeness has previously been recognized as a knowledge-based (intangible) resource that provides competitive advantage (Cassia and Minola, 2012; Rasmussen, 2014; Wiklund and Shepherd, 2003). An innovative culture can lead to continuous innovations that translate to competitive advantage and improved firm performance (Martín-de Castro et al., 2013). The hypotheses below focus on mechanisms for developing innovativeness based on the belief that increased innovativeness can translate to sustained competitive advantage and, ultimately, improved firm performance.

### *2.1 Hypotheses*

The ability of an organization to gain information about its customers can be crucial for obtaining sustainable competitive advantage (Parasurman, 1997; Woodruff, 1997). In order to gain valuable information, companies must stay close to their customers and follow their needs closely. Market orientation emerged from the early marketing literature (Borch 1957; McKitterick, 1957) with customer orientation as a key element (Narver and Slater, 1990). Customer orientation refers to how an organization meets customer needs, provides value to customers, and to how it keeps its customers satisfied (Hansen et al., 2006; Narver and Slater, 1990). Customer orientation has since received considerable attention in the literature regarding its impacts on a variety of other constructs (Brockman et al., 2012; Hult and Ketchen, 2001; Kirca et al., 2005; Rapp et al., 2008; Tajeddini 2010).

Previous research suggests that a focus on customer orientation leads to several performance outputs. However, the directionality between customer orientation and innovativeness is not fully clear since an organization's ability to address customer needs and act accordingly can have a significant and positive impact on innovativeness, new product development and even directly on company performance (Brockman et al., 2012), yet innovativeness leads to the ability to be more customer oriented (Hansen and Nybakk, 2016), The relationship between the two has seen considerable attention in the literature (Theoharakis and Hooley, 2008; Han et al., 1998; Lukas and Ferrell, 2000; Gatignon and Xuereb, 1997). In the service-based sector, Tajeddini (2010) finds no relationship between customer orientation and innovativeness and calls for further insight into this complex relationship. While customer orientation is found to interact positively with innovativeness among small firms (Brockman et al., 2012), other work shows ambiguous results (Matsuo, 2006; Tajeddini et al., 2006). Matsuo (2006) has studied customer orientation in Japanese sales departments, while Tajeddini et al. (2006) and Tajeddini (2010) studied the hotel industry and the Swiss watch industry, respectively. In sum, previous research tends to describe the relationship as complex and authors