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## Green innovation, indeed a cornerstone in linking market requests and business performance. Evidence from the Spanish automotive components industry

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## ABSTRACT

Many studies uphold market orientation as a key factor in creating and sustaining a firm's competitive advantage. This research aims to explore this topic further by including within the model the concept of green innovation. In particular, this paper empirically tests the mediating role of green innovation performance in the relationship between market orientation and organizational performance. This study relies on a sample of 145 firms belonging to the Spanish automotive components manufacturing sector. The results obtained by applying Partial Least Squares (PLS) path-modeling, a variance-based structural equations modeling technique, reveal that market orientation exerts a direct impact on organizational performance. Subsequently, we observe how the green innovation performance construct partially mediates the market orientation-organizational performance link. The paper brings some theoretical conclusions and implications for research and practice.

### 1. Introduction

The environmental impact of human activity is a constantly growing global ethical concern for citizens, policy-makers and organizations. In this sense, corrective policies have been implemented in recent years to reduce or palliate this environmental damage (Chen, 2008). Organizations are not immune to this reality. On the contrary, as every complex system in search of the balance that will ensure long-term survival, companies should respond effectively to a double adjustment dynamic. On the one hand it is competitive adjustment, to achieve a certain level of market efficiency that requires optimizing the use of resources and capabilities, which are always limited. On the other hand it is legitimacy adjustment, to conquer a certain degree of consistency with the society within which the organization operates.

It is widely acknowledged that to survive within the currently turbulent and hypercompetitive scenarios, firms must foster innovativeness. To this end, it is essential to remain up to date with the multiple market changes, fluctuations and trends that are continually arising. This requires firms to be oriented to their customers and proactively embrace a market orientation (MO) strategy. In this line, the ultimate aim of developing a market orientation strategy is to enhance firms'

innovativeness and performance (Laforet, 2009).

In addition, sustainability has gradually become a pivotal concern for managers and policy-makers, to the extent that Esty and Winston (2006, p.18) highlight that “in today's world, no company, big or small, operating locally or globally, in manufacturing or services, can afford to ignore environmental issues”. The increasing societal demands compel companies to integrate sustainability topics into their regular activity so that their social, environmental, and economic goals can be attained. There are two major driving forces that promote environmental management (Chen, 2008): (i) the international set of norms and regulations concerning environmental protection and (ii) consumers' environmental awareness (Chen et al., 2006). Whatever the reasons that lead firms to undertake environmental management—e.g., complying with environmental laws and regulations, becoming more competitive, gaining legitimacy—integrating environmental sustainability issues into business strategy and greening the innovation process are becoming strategic opportunities for companies (Porter and Reinhardt, 2007).

Plenty of studies have examined the direct influence of market orientation on organizational performance and most of these works point out that market orientation is positively related to performance (Ellis,

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2006; Vieira, 2010). Very few works show negative or non-significant findings (Agarwal et al., 2003; Sandvik and Sandvik, 2003). Nonetheless, regardless of the reasonably reliable positive findings, there is still scarce knowledge about how market orientation should be arranged in order to attain superior performance (Becker and Brettel, 2017). In this vein, some scholars propose that a firm's market orientation should be complemented by a set of organizational capabilities (i.e., organizational learning capability, absorptive capacity or innovation capacity) that contribute to add superior value (Baker and Sinkula, 1999; Slater and Narver, 1995). Such capabilities allow firms to uphold sustained competitive advantages by continuously refining the processing of market information (Becker and Brettel, 2017). Therefore, with the aim of covering this gap, this paper questions whether a firm's green innovation performance (GIP) might mediate the link between market orientation and organizational performance.

Another source of novelty in this study roots in the research setting. Prior related works have frequently devoted their attention to large multinational corporations rather than small and medium-sized enterprises (SMEs), although curiously, SMEs are the most widespread type of company among Western countries (Aragón-Correa et al., 2013). On the contrary, this paper is grounded in the automotive components manufacturing sector (ACMS) in Spain, one of the fastest growing sectors in the country. Most ACMS firms are SMEs; we consider SMEs to be companies comprising fewer than 250 employees (European Commission, 2003). This industry is characterized by its knowledge intensity, innovativeness, and the orientation of the firms' products towards their customers, principally major automobile manufacturers (i.e., Ford, Citroën, Renault, and Peugeot). These firms provide components and highly customized products and services to large automakers. On the one hand, they act as external knowledge sources for their client firms, and on the other hand, they are increasingly becoming independent innovation creators. Firms that are able to incorporate the specialist knowledge and cumulative learning needed to develop green innovations will be better positioned to differentiate their outputs from their competitors.

This research hence intends to assess the roles of market orientation (MO) and green innovation performance (GIP) as drivers of organizational performance (OP) at the firm level. The results of this study suggest that market orientation is positively related to business performance and that this relationship is indirectly driven by GIP. We hence propose that the green innovation performance variable mediates the direct link between market orientation and organizational performance.

The paper proceeds as follows. First, the theoretical background is presented, comprising the research model and hypotheses arising from the literature review. This second section firstly includes a brief conceptual delimitation of the different constructs that shape the research model—market orientation, green innovation performance and organizational performance. Subsequently, several paragraphs have been included in order to enounce and justify the different linkages between these constructs according to the literature review. The third section contains a description of the research methodology followed to test the hypotheses posited. The fourth section involves a description of the main results derived from the data analysis through Partial Least Squares (PLS) path-modeling. Finally, the fifth section presents the discussion, conclusions, implications and limitations of this study.

## 2. Theoretical background

This section approaches the theoretical foundations concerning the distinct variables and hypotheses included in the research model. Subsequently, we assess the direct relationship between market orientation and business performance, and then, we examine the mediating role played by green innovation performance in this link.

### 2.1. Conceptual delimitation of the research variables

#### 2.1.1. Market orientation

Market orientation is a concept that has been widely examined by the marketing and management academic literature. Narver and Slater (1990) delimit it as a second-order multidimensional construct shaped by three dimensions: (i) customer orientation, i.e., an organization's actions oriented to identify customers' perceptions, needs and desires and to try to satisfy them through an adapted supply; (ii) competitor orientation, i.e., a firm's actions intended to understand competitors' strengths, weaknesses, opportunities and strategies, to be able to react to them and to design the proper response; and (iii) inter-functional coordination, i.e., the joint and efficient use of a firm's resources and capacities to provide greater customer value. Essentially, market orientation might be defined as a business approach or philosophy aimed at identifying and meeting the customers' stated or hidden needs and requirements. According to Narver and Slater (1990, p. 21), “the desire to create superior value for customers and attain sustainable competitive advantages drives a business to create and maintain the culture that will produce the necessary behaviors”.

#### 2.1.2. Green innovation

Corporate environmental strategies range from reactive strategies—merely aimed at complying with legal requirements and implementing controls—to proactive strategies involving deliberate and voluntary eco-efficient practices aimed at reducing energy consumption, waste and pollution. The latter set of strategies requires product, process or operational innovations to diminish firms' ecological footprint (Aragón-Correa, 1998; Sharma, 2000). According to Hart (2005), proactive environmental practices involve intangible managerial innovations and routines that entail firms' commitment to the improvement of the natural environment and are not mandatory or required by legislative norms or regulations.

The term “green” is typically used interchangeably with “pro-environmental”, and it is broadly employed to indicate concern about the physical environment. In this vein, when customers engage in this type of consumption, they might be called “green customers”. These green customers' purchasing behaviour tends to be influenced by environmental concerns, such as sustainability, pollution reduction, energy saving or recycling. It must be highlighted that within our framework, the customers are the car manufacturers, and it should be noted that this is one of the most highly polluting industries. Therefore, these large automobile manufacturers are expected to develop a special sensitivity with respect to environmental issues in order to reduce the serious impact generated by their daily activity on the natural environment. Thus, companies belonging to the automotive auxiliary industry ought to orient their activities, products and services towards the new demands and needs of its customers through MO and green innovation processes.

But what is understood by green innovation? This concept has drawn much attention in the academic literature on business management and economic policy. However, we are facing a new phenomenon characterized as complex, diffuse and susceptible to different interpretations. Therefore, there is some confusion about the different notions and terminologies to describe innovations that contribute to actively reducing the negative impacts of humans and business on the environment (Schiederig et al., 2012). Fussler and James (1996) were the first authors to introduce the concept of eco-innovation in their book *Driving Eco-innovation: A Breakthrough Discipline for Innovation and Sustainability*. They consider green innovations to be new products and processes that provide customer and business value while significantly decreasing environmental impacts. Since then, the term eco-innovation—also called environmental innovation, green innovation or sustainable innovation—has often been used to identify those innovations that contribute to maintaining a sustainable environment through the development of ecological improvements (Halila and Rundquist,

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