

Determinants of firm performance: a structural equation approach

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Abstract. This research analyzes specific determinants of firm Performance (FP) taking the Resource Based View (RBV) theory into account. Our conceptual model defines the Dynamic Capabilities (DC) as the result of firm's Learning (LO), Market (MO) and Entrepreneurial Orientations (EO), which mediate the development of Competitive Advantages (CA) and improving firm Performance (FP). For the first time, the mediator role of DC between specific business orientations – MO, EO and LO – and the development of CA and FP is analyzed. The study supports the view that DC enhances CA (Differentiation and Cost Leadership) as well as enhances FP.

3. Data

The population of the study consists of 1 168 964 Portuguese firms in 2010 (INE, 2012). The sample of 1 190 Portuguese firms was obtained from a Portuguese database of approximately 91 000 firms. The CEO or other top manager from those firms were contacted by e-mail and the scope and objectives of the study were clarified. The data collection of the items used to measure the constructs and control variables was conducted online using the Google Drive platform.

4. Results

These scales were validated through an exploratory factor analysis (EFA) using software SPSS v20 and MPlus 6.0. Based on the EFA results, items with low factor loadings were eliminated as they were unreliable indicators to measure the construct. Then, the computation of Cronbach's alpha, composite reliability (CR), and average variance extracted (AVE) for all the scales show satisfactory levels of reliability, except for Cost Leadership, with a variance extracted below 0.5.

The structural equation model is estimated by the maximum likelihood method. The estimation of the structural relations shows that: LO positively affects MO, EO, and DC (H1, H2, and H3); MO and EO positively influence DC (H4 and H5); the same conclusion can be drawn from the relationship between DC and CA differentiation (H6) and cost leadership (H7). Finally, both CAs (Differentiation and Cost Leadership) have a positive impact on Performance (H8 and H9).

Variables	Market Orientation	Entrepreneurial Orientation	Dynamic Capabilities	Differentiation	Cost Leadership	Performance
Learning Orientation	0.834*** (0.863;0.037)	0.601*** (0.380;0.037)	0.394*** (0.494;0.073)	0.522*** (0.852;0.061)	0.292*** (0.289;0.039)	0.259*** (0.327;0.031)
Market Orientation			0.292*** (0.354;0.064)	0.087*** (0.103;0.033)	0.049*** (0.035;0.012)	0.043*** (0.040;0.013)
Entrepreneurial Orientation			0.395*** (0.785;0.086)	0.097*** (0.154;0.032)	0.054*** (0.052;0.012)	0.048*** (0.059;0.013)
Dynamic Capabilities				0.675*** (0.657;0.025)	0.412*** (0.394;0.030)	0.291*** (0.270;0.024)
Differentiation						0.609*** (0.718;0.039)
Cost Leadership						0.106*** (0.127;0.035)

***p<0.001, **p<0.01, *p<0.05; In brackets: (nonstandardized coefficients; standard errors).

The results of the control variables show that firms with a higher sales volume perform better and sustain a higher differentiation competitive advantage. Relating the type of activity and compared to services, industrial firms show the lowest differentiation, and firms from the construction sector has the lowest business Performance. In terms of cost leadership, firms from Madeira and Azores perform better than Lisbon and Vale do Tejo firms. Finally, firms which develop R&D activities tend to increase their differentiation competitive advantage.

5. Conclusion

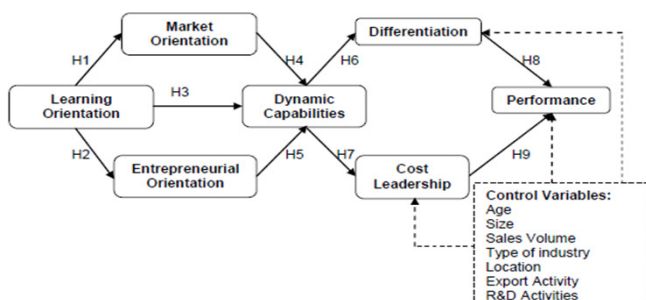
This study found the mediator role of DC between specific business orientations – MO, EO and LO – and the development of CA and consequent Performance. Results support the view that firms with better Dynamic Capabilities can develop Competitive Advantages as differentiation and cost leadership, as well to improve their performance.

1. Introduction

The determinants of firm Performance are framed under the Resource Based View (RBV) theory in an attempt to explain how firms achieve sustained competitive advantages based on their VRIN (valuable, rare, inimitable and not replaceable) resources and capabilities (BARNEY, 1991). TEECE et al. (1997) introduced the concept of Dynamic Capabilities (DC) as an RBV extension. Our conceptual model defines these capabilities as a mediator between two sets of variables: 1) firm's Learning, Market and Entrepreneurial Orientations as antecedents; and 2) the development of Competitive Advantages (CA) and improving firm Performance as consequent variables.

2. Model

LIN et al. (2008) argue that Market Orientation (MO) is heavily determined by Learning Orientation (LO), and this is our first hypothesis (H1). Firms that learn quickly tend to improve their ability to respond to the market and to identify potential fields of entrepreneurial activities (ZAHRA, 2012). Consequently, we test how LO affects Entrepreneurial Orientation (EO) (H2). A dynamic learning mechanism is a distinctive process that promotes the firm DC (LEE et al., 2011), i.e., we assume the relation between LO and DC (H3). One of the key firm resources and capabilities is MO (ZHOU et al., 2008), and its relation with DC defines a new hypothesis to be tested (H4). TEECE (2007) suggests that one of the DC antecedents is the entrepreneurial component, thus, it is suggested the relationship between EO and DC (H5). According to AMBROSINI et al. (2009), DC are one of the key antecedents to CA. This suggest testing the relation between DC and Differentiation (H6) and Cost Leadership (H7). Finally, the relationship between the development and/or the maintenance of a CA and the firm Performance has already been proven in literature (NAIDOO, 2010). Thus, we assume that Differentiation and Cost Leadership have a positive influence on the firm Performance (H8 and H9, respectively). Seven firms' control variables are added to the model: age, size, sales volume, location, type of industry, export activity and development of Research & Development (R&D) activities.



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