Understanding the joint effects of Cognitive Distance and Competition on Pioneering Innovations through the Dynamics between Suppliers and Competitors - DTU Orbit

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The relationships between cognitive distance, competition and innovation have drawn great attention from economists and management researchers. First, with regard to cognitive distance and innovation, it is suggested that a moderate level of cognitive distance between firms is associated with an optimal innovation performance, because a too small cognitive distance provides the focal innovating firm with too little novelty value, while a too large cognitive distance makes it difficult for firms to learn and collaborate with each other. Second, the empirical evidence for the relationship between competition and innovation remains inconsistent. On the one hand, the Schumpeterian viewpoint credits that firms with substantial market power, which implies a low level of competition intensity, master resources and incentives to innovate. On the other hand, it is also possible for such firms to have incentives to suppress subsequent innovation. Therefore, a perfectly competitive market is more likely to foster innovation. If cognitive distance allows potential external learning opportunities for firms to innovate, then the competitive environment where firms operate provides incentives and motivations for firms to take these potential opportunities. As far as innovation is concerned, the joint effects of cognitive distance and competition have only been roughly discussed and rarely investigated in an empirical setting in the literature. Thus, the aim of this study is not only to empirically test the individual effects of cognitive distance and competition on innovation but also try to understand their joint effects in a coherent way based on a resource-based view and through the product life cycle as a link of cognitive distance and competition. Competition is multidimensional and innovation has many types. The inquiry on the relationship between competition and innovation will be relevant and meaningful only when the content of competition and the type of innovation activities are specified. In this study, competition is specified as the number of competitors, and pioneering innovation is defined as an exploratory innovation that is technologically new to the innovating focal firm and introduced first to the world. The result of the empirical tests using a Canadian innovation dataset, which contains information on product/process innovations across four decades, confirms an inverted U-shaped relationship between cognitive distance and pioneering innovations, and a negative effect of competition on pioneering innovations. It also suggests that the relationship between cognitive distance and pioneering innovations is negatively moderated by competition. These findings and the research design in this study advance our understanding why and how firms take potential external learning opportunities to undertake pioneering innovations under various levels of competitive pressure.

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