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Open innovation in Aida Furniture UKM in Pasuruan: A Study on The Influence of Entrepreneurial Founders on Open Innovation Practices

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Abstract

The purpose of this research is to deepen our knowledge about the role of the "human" Aida Furniture UKM in Pasuruan in adopting Open Innovation. To do this, we examine the characteristics of Aida Furniture SME managers, viz. main founder/CEO. influencing the dynamics of adoption (i.e. mechanism, partners, incentives and sequence of adoption) of open innovation in SMEs. Empirical analysis based on seven case studies of Irish medical device SMEs that have achieved international high growth targets Our results show that examples of open innovation adoption by project-based Furniture SMEs as opposed to organizational reasons and a natural tendency to return to a closed paradigm Through a "switchback" strategy after necessity fulfilled. UKM Furniture Aida, on the other hand, developed project-based open innovation skills and matured as a result. This highlights the importance of the "do, use, interact" learning mode in the development of OI SMEs. In addition, Aida Furniture UKM can embark on a general sequential and temporal path focusing on commercialization through an inside-out mode, followed by a complex co-creation mode. This study also finds that West and Bogers (2014) acquire, integrate and commercialize the framework, and thus extend Upper Echelon Theory (UET), the characteristics of the Founder/CEO. It also provides insight into how that affects OI adoption dynamics. The link between the two is strengthened by the Open Innovation and Entrepreneurship Theory.

Keywords:Communication, conflict management, goal setting, clear vision.

INTRODUCTION

The open innovation paradigm (OI) has in recent years dominated the attention of many innovation study scholars (Martin, 2012; Stanko et al., 2017;

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Bogers et al., 2017; Randhawa et al., 2016). While there are many definitions of OI in the literature (Chesbrough, 2003; Gassmann and Enkel, 2004; Chesbroughet al., 2006; West and Gallagher, 2006), Chesbrough and Bogers (2014: 17) offer the most recent: "…distributed innovation processes based on flows purposively managed knowledge across organizational boundaries, using monetary and non-monetary mechanisms in line with each organization's business model". Significant research has been undertaken to advance our understanding of OI since its inception by Chesbrough (2003), however, most of its origins are in large-scale, well-resourced firms (LSE), where OI has been adopted as an explicit corporate strategy. . As a result, there is an imbalance in our understanding of OI, with smaller scale, less influential companies (SMEs) only in recent years attracting attention. (Vanhaverbeke et al., 2018; Greul et al., 2016; Kraus et al., 2019). While OI offers both monetary and non-monetary benefits (Dahlander and Gann, 2010), regardless of organizational size, OI challenges can be more difficult for SMEs to overcome due to scale, resource constraints, and managerial ambition (Dooley and O'Sullivan, 2018) and thus can influence how OI manifests itself within the company.

OI SME research (Greul et al., 2016; Kraus et al., 2019; Usman et al., 2018) to advance our understanding of OI in this important sector. However, the micro-level perspective of the 'human' has received negligible attention (Ahn et al., 2017; Bogers et al., 2018; Gassmann et al., 2010; Bianchiet al., 2011), an important dimension in our understanding of contexts. SMEs recall the scale and dominance of the individual entrepreneurial founder/CEO in both the operations and strategic development of the company (Saunders et al., 2012). Hence, it is an acknowledgment of the centrality of SME leaders as important decision makers, asking whether, when, who and how to engage in OI essentially acting as a conduit for OI, coupled with a lack of knowledge on an individual micro-level perspective (Salteret al., 2015) , that this research seeks to explore the observable managerial characteristics of entrepreneurial founders/CEOs and the influence these characteristics have on the dynamics of OI adoption in SMEs. Ahn et al. (2017) call for increased research on this 'human' dimension through in-depth case studies exploring the identification of new upper echelon (UET) managerial characteristics. The adoption of UET theory is beneficial because it strengthens the relationship between the entrepreneurial founder/CEO, the top management team (TMT) and the strategic focus of the firm (Hambrick, 2007; Hambrick and Mason, 1984). Therefore, by focusing on the micro level of SME founders/CEOs and their leadership role in OI adoption, this research seeks to deepen our understanding of why and how SMEs adopt OI. To achieve this, the research conducted a case study analysis of Aida Furniture SME in Pasuruan, developed new technology products and led by an

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entrepreneurial founder/CEO. Given our modest understanding of OI in the SME context, this study seeks to explore the dynamics of OI adoption within high-tech SMEs tracing down to the individual project-level unit of analysis (Bogers et al., 2017) within each SME to enrich our understanding. After the dynamics of OI SME adoption was revealed, research then focused on organizational leaders, namely the 'human' perspective (Ahn et al., 2017; Bogers et al., 2018; Bianchi et al., 2011), and asked the following research questions: “How entrepreneurial founder/CEO characteristics influencing OI SME adoption dynamics?” This not only contributes to our understanding of the OI paradigm in this often neglected but important sector, but also identifies how SMEs can enhance OI maturity and future competitiveness.

This study aims to contribute as follows. First, this study explores the dynamics of OI adoption at the individual project level (Du et al., 2014; Vanhaverbeke et al., 2014; Bahemia and Squire, 2010) and provides evidence of the reality of project-led and operationally driven SME OI. Thus highlighting the dynamic and agile nature of SMEs and also contributing to a more comprehensive and precise understanding of how SMEs adopt OI (Chesbroughet al., 2006; Vanha verbeke et al., 2014; Randhawa et al., 2016). This study also focuses on temporality in innovation management (Ellwood and Horner, 2020) and reinforces the centrality of organizational leaders in determining the 'competitive switchbacks' through which they advance their technologies and grow their businesses. Second, an exploration of the influence of the characteristics of the founder/CEO which gerials on IO adoption of SMEs is then carried out through the lens of West and Bogers (2014) acquiring, integrating and commercializing the model. Finally, our research contributes to our understanding of OI's SME maturity path and management maturity gathered through a pragmatic 'learning by doing' approach (Revans, 1983; Enkel et al., 2011; Carayannis and Meissner, 2017). The research highlights the importance of learning from OI's experience while recognizing the positive benefits for UKM Furniture Aida in Pasuruan for nurturing progress along OI's maturity path. Our findings demonstrate the natural position of SMEs to return to closed technology development unless constraints or opportunities at the project level push them towards OI. Overall, this study reveals the dominant perspective of the OI project in SMEs and reveals how the managerial characteristics of the leader of Aida Furniture UKM in Pasuruan manifest in the dynamics of OI adoption. It emphasizes the strong literature link between OI and entrepreneurship facilitating a deeper understanding of SME OI adoption. This article is organized as follows. First, we review the SME OI literature followed by the UET literature. We then present our case study research design. The findings and subsequent analysis are presented. By dynamics, we mean the variety and variety of OI adoptions that are realized through the adopted OI

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projects. Within each OI project, we explore mechanisms (modes/forms), collaboration partners, motives and modes of adoption sequentially in/in each case. These OI dynamics show how effective these projects are in maintaining and developing organizational capabilities, both now and in the future.

Such challenges include partner selection (Bouncken and Kraus, 2013), knowledge protection (Holgersson, 2013) and managerial capabilities (Brunswicker and Van De Vrande, 2014), Recognizing these limiting challenges, opportunities to leverage external resources through OI appear to be trajectory. that makes sense towards innovation (Narula, 2004; Van De Vrande et al., 2009; Usman et al., 2018). However, as described, the management and organization of OI in UKM Furniture Aida in Pasuruan is different from that of large-scale organizations and therefore, poses unique challenges to adoption (Vanhaverbeke et al., 2018). Dufour and Son (2015) highlight the differences between large-scale enterprises and SMEs in various factors including structure, procedures, behavior, processes, people, and contacts. Likewise, depending on the position of UKM Meubel Aida in Pasuruan along the spectrum of R&D intensity, the characteristics of their innovation activities, the relative scale of available resources and even their ability to attract potential cooperation partners can differ significantly (Hirsch-Kreinsen, 2008; Heidenreich , 2009 ; Dooley et al., 2017, Dooley and O' Sullivan, 2018) and the consequences may influence their adoption of OI practices. Marullo et al. (2018) analyzed the sectoral innovation system in which Aida Furniture UKM in Pasuruan operates and identified four science-oriented, technology-based, application-oriented, and community-based OI implementation paths thereby demonstrating the various challenges faced by Aida Furniture UKM in Pasuruan and the “hidden costs” that hinder effectiveness.

METHODE

Multiple qualitative case studies were selected for their ability to provide a holistic view of the important role of the founder/CEO in OI adoption (Berends et al., 2014; Gummesson, 2000; Yin, 2009). This approach is useful because OI theory is largely dispersed (Gassmann et al., 2010) and some SMEs define an OI strategy explicitly but evolve into one. Thus, a qualitative approach is considered the most suitable for revealing the dynamics, intricacies and richness of OI adoption insights (Mortara and Minshall, 2011). Some case studies are expected to produce results that are more robust, accurate, and generalizable (Eisenhardt, 1989; Eisenhardt and Graebner, 2007; Yin, 2009; Goffin et al., 2019) and are considered appropriate if context, understanding, and depth are a concern of the study (Miles and Huberman, 1994).

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The intended criteria sampling strategy was used and consisted of several criteria (Eisenhardt, 1989) including: Aida Furniture UKM in Pasuruan; international from the start; innovative products/services and an entrepreneurial founder/CEO with high involvement in the business. This sampling strategy allows for comparison across cases, thereby contributing to the reliability and generalizability of our findings, so that the sample population at UKM Furniture Aida in Pasuruan can be identified as follows

Table 1. Managerial Characteristics of UKM Founders

Number	Founding father	Information
1	Functional background	Functional background is experience gained from working in different functional paths. “Output” functions eg sales, marketing, product R&D – emphasis on growth and exploring new domain opportunities versus “throughput” functions eg finance, process engineering – work to increase efficiency.
2	Career	Other career experience including founder or CEOs at working (and managing) across different types of organizations – multinationals, SMEs, start-ups, etc. Basically knowledge accumulated over time – an understanding of what to do (& what not to do) and how to do it in the context of organizational management.
3	Experience	As such, the founder/CEO's previous industry experience has specialized knowledge of competition, R&D, and regulatory challenges, as well as the elements that require focus.
4	Network	The inter-organizational networks embedded within the founder/CEO of the entrepreneur – both informal (personal networks) and formal (professional networks).
5	Entrepreneurial Orientation	Entrepreneurship is defined as a new entry i.e. what it consists of. Entrepreneurial Orientation is how this new entry is done, i.e. process, practice, and decision-making activities that lead to new entry

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Five dimensions of entrepreneurial orientation, namely autonomy, innovation, risk-taking, proactivity, and competitive aggressiveness, have been used to characterize and differentiate key entrepreneurial processes (Lumpkin and Dess, 1996). A founder can use all of these dimensions when making a new entry. However, in some cases, only a few can be used.

Participation in studies. This process resulted in seven detailed case studies of this population to explore research questions. Entrepreneurial founders of these firms were selected as research participants because they are key leaders, key decision makers and influencers (Calori et al., 1994; Arendt et al., 2005) and ultimately, they drive firm results (Finkelstein and Hambrick , 1996). As SME leaders, they also juggle operational demands with the strategic effort required to compete (Lubatkin et al. 2006; Rajagopalan and Spreitzer, 1997). As a result, SME leaders (often embodied in the founding entrepreneur/CEO) are rationalizing

if, when and how they should seek to leverage OI practices. Each case study relies on three sources of data: (1) multiple semi-structured interviews with the founder/CEO of UMKM Furniture Aida Pasuruan (fifteen interviews in total), in person at UKM Furniture Aida in Pasuruan City (2) email follow-up and telephone calls for clarification purposes, (3) secondary data including company and industry reports, master note presentations, product brochures and company announcements.

FINDING AND DISCUSSION

The case of the Aida Furniture SME in Pasuruan studied is an established furniture company that achieves high growth ambitions at the international level. While our main research focus is to explore how the observable managerial characteristics of the founder/CEO influence the adoption of OI practices in the SME context, we must first determine the dynamics of OI adoption in case firms to support their innovation process. Thus, the initial section of the findings section explores OI dynamics in SME innovation processes followed by exploring the influence of founder/CEO managerial characteristics on these SME OI practices through a Western lens and Bogers (2014) obtain,

Dynamics of OI SME adoption

The Aida Furniture UKM in Pasuruan is in the process where innovation development is managed, it is relatively less explicit and structured than is the case for larger scales. Once respondents focus on a particular innovation, they describe a consistent process that cuts across the sub-phases of acquiring, integrating, and

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commercializing (West and Bogers, 2014) through inter-organizational interactions to achieve innovation outcomes.

In the context of the innovation activities that flow through this process, the adoption of IO practices by SMEs to support activities is evident in the Aida Furniture UKM in Pasuruan, although its manifestations are still modest and determined by the specific challenges and opportunities for each project at the time, in this case related to the adoption results, namely how the Aida Furniture UKM in Pasuruan is able to create innovative and highly competitive products.

Managerial Characteristics of the Founder / CEO

Given the scale of small to mid-sized companies, individual influence is keycertain areas tend to have a greater impact on the direction taken. This perspective is in line with the theory of SMEs recognizing the centrality of entrepreneurs (Cornelius et al., 2006) and also UET (Hambrick, 2007; Hambrick and Mason, 1984) regarding how managerial characteristics and individual beliefs can influence the company's strategic choices.

After studying the dynamics of OI SMEs, explore research questions how do these characteristics of the founder/CEO, influence the process by which UKM Meubel Aida in Pasuruan acquires complementary external knowledge, integrates it with internal resources for value creation, and commercializes this value for profit (West and Bogers, 2014)

With the Managerial Characteristics of the Founder / CEO of UKM Furniture, Aida in Pasuruan was able to survive the world economic shocks by carrying out a Founder Managerial Characteristics strategy who is highly experienced in the furniture business which has been carried out for approximately 20 years, so that he is able to create products with character so that the customer feels it fits and the furniture model that is wanted can also be custom or according to the customer's wishes even though the order is only a few, this is an advantage in the Managerial Characteristics of the Founder / CEO

CONCLUSION

This research study asks the question how the characteristics of the founder/entrepreneurial CEO influence the practice of OI UKM conducted at Aida Furniture UKM in Pasuruan? The first study demonstrated that high-tech SMEs can afford and leverage OI practices to advance their core technology towards market adoption. Evidence is presented of the practice of OI with a large concentration of outsiders in and a mode of pairwise interaction across a relatively narrow range of partners. This study shows that the adoption of SME OI at Aida Furniture Pasuruan

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exhibits project-based rather than organizational level LSE OI, and a natural tendency to pivot back to a closed paradigm via a 'switchback' strategy once the need has been addressed. This research highlights the main role of the entrepreneurial founder/CEO in both the decision to utilize OI and the dynamics of OI underlying it, thereby emphasizing the strong overlap between OI and entrepreneurial theory in understanding OI SME practices and decisions at Meubel Aida Pasuruan. The key managerial characteristics of the founder/CEO were identified as influencing the manifestation of OI Furniture SME Aida Pasuruan in West and Bogers (2014) acquiring, integrating, and commercializing the framework, expanding UET theory, and our understanding of how OI adoption can be fostered. This research sheds light on the maturity and capability development that occurs when founders/CEOs learn through 'doing, using, and engaging' OI in interactions and the importance it has in nurturing the adoption of more complex and potentially valuable forms of OI. Our research has provided evidence of how these characteristics have been used by the leaders of UKM Furniture Aida Pasuruan in shaping the implementation of OI such as knowing how to navigate organizational power structures and how to embody good faith from past network relationships; have the self-efficacy to work with 'best in class' partners; have the confidence to take the necessary risks and know when and how to 'selectively disclose'.

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