



**Towards a framework for Innovation Orientation within  
Business and Management Studies: A Systematic Review  
and Paths for Future Research**

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# Towards a framework for Innovation Orientation within Business and Management Studies: A Systematic Review and Paths for Future Research

## **Introduction**

Research shows that innovativeness and the ability to innovate are more important contributors to corporate performance than some of the more traditional business orientation approaches, including market orientation (Deshpnade et al, 1997; Neely et al, 2001). It has been argued that embedding innovation into organisational behaviour is a positive way to enhance business performance (Merx-Chermin and Nijhof, 2005). ~~It is important however how this can be assisted by the managers.~~ One of the attempts to operationalise the concept of innovation for management purposes is the notion of innovation orientation. **Innovation orientation is a sub-construct positioned within the wider field of innovation and relates to an innovation based strategic orientation, where orientation is used to describe the overall dominant approach that represents an organisation's competitive posture and strategic focus (Human and Naude, 2010). This paper advocates a holistic perspective on innovation orientation by incorporating systematically reviewed literature. It offers updated conceptualisation of innovation orientation and discussion of the internal organisational and external factors that can help in creating innovative businesses. In doing that we are advancing innovation orientation as a distinctive theoretical field of research.**

**Innovation orientation is a growing field of study and** has garnered much research interest in the past 11 years, with a large volume of work ~~showing interest in~~ the role of innovation orientation as a strategic orientation that can impact upon business performance (Antindag and Zehir 2012; Prajogo et al, 2013; Dehwanto and Sohal, 2014) and show connections with other areas of management and

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2  
3 innovation studies such as knowledge management (Fidel et al, 2015), organisational  
4 ambidexterity (Kortmann, 2015) and organisational learning (Ussahawanitchakit, 2008), innovation  
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6 (e.g. Caertling et al. 2011; Baregheh et al. 2012; Kraiczy et al 2015; Kortmann 2015), marketing (e.g.  
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8 Theodosiou et al. 2012; Chen and Tseng 2014) and strategic management (e.g. Teixeira and Werther  
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2014). Though there is no consistent agreed model of innovation orientation that is widely adopted  
however, there is an acceptance that innovation orientation is a multifaceted construct that includes a  
range of core common variables (Hurley and Hult, 1998; Siguaw et al, 2006). The variables often cited as  
overarching factors or core antecedents are variables such as creating a culture that supports innovation  
(Ettlie and O'Keefe, 1982; Hurley and Hult, 1998; Baregheh et al, 2012; Grundstrom et al, 2012),  
competition based understanding (Dobni, 2010; Ayuso et al, 2011; Stock and Zacharias, 2011; Ergun  
and Kuscu, 2013), organisational flexibility (Van Muijen and Koopman, 1994; Maltz et al, 2006) and  
specific capital and knowledge capabilities (Chen et al, 2009; Baregheh et al, 2012; Silva et al, 2014).

Dobni (2010) suggests that innovation orientation must be viewed through an organisational behaviour  
perspective that is linked with an internal capabilities approach to strategy, suggesting that the strategic  
direction selected by a firm is determined by its internal capabilities, such as resources and knowledge  
base. However, other researchers consider innovation orientation from the perspective of its ability for  
firms to decide to create markets and customers, which is often used to highlight the linkage between  
innovation orientation and new technology (Berthon et al, 2012), where firms believe that if they  
continuously develop innovative products or services that give the organisation a perceived competitive  
advantage, customers will migrate towards innovation.

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3 | Much of the ~~Secondly, innovation~~ orientation research to date often focuses on innovation orientation  
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6 driving business outcomes or other aspects of the business, such as firm efficiency, customer  
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8 engagement, process performance and job satisfaction – both positively and negatively (Appiah- Adu  
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10 and Singh, 1998; Wang and Cheung, 2004; Olson et al, 2005; Caerteling et al, 2011; Luo and Wang, 2012).  
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12  
13 | The measurements of innovation orientation on business outcomes and performance ~~has have~~ primarily  
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15 relied-upon two general approaches that have involved the use of either objective or subjective  
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17 measures of performance (Zehir et al, 2011). The objective approach uses the absolute values of  
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19 quantitative performance measures such as profitability, sales levels and organisational growth rate  
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21 (Chou and Yang, 2011; Wu et al, 2015). The second approach has often used subjective measures of  
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23 performance, for example, where employees are asked to state their companies' performance on criteria  
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25 perceived measures such as profitability and market share relative to that of their competitors or  
26  
27 perceived new product success (Zehir et al 2011; Zhang et al. 2015). In addition, much of the research  
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29 within the field has focussed on business based capability development outcomes, in linking innovation  
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31 orientation with other aspects of wider management studies such as ~~P~~process improvement (Caertling,  
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33 2011), ~~s~~Service ~~D~~elivery (Chen et al, 2009) and ~~s~~Supply ~~C~~hain-~~M~~anagement (Teichert and Bouncken,  
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35 2011).  
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43 | Recent research into organisational wide innovation orientation has primarily utilised quantitative  
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45 analysis to identify specific antecedents, or linked characteristics, but this approach has resulted in a  
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47 silo effect being observed in the development of innovation orientation as a holistic construct. A  
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49 minority of research to date on innovation orientation has consisted of developing a framework or  
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51 model of innovation orientation, with the intention that future scholars can apply these frameworks to  
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53 explore innovation orientation in practice and through empirical study (Pearson, 1993; Berthon et al.,  
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1999; Siguaw et al., 2006; Simpson et al., 2006; Jones and Rowley, 2011). A larger amount of research has empirically examined innovation orientation as a holistic concept, or more specifically a small number of its suggested antecedent factors, in researching how it relates to other aspects of various management theory (Hurley and Hult, 1998; Zhou et al., 2005; Dobni., 2010; Ayuso et al., 2011; Talke et al., 2011; Prajogo et al., 2013; Kraiczy et al., 2015). Siguaw et al (2006) did move the study of innovation orientation forward in the seminal work that provided a conceptual framework for study and integration of innovation research and gave the rise of interest and publication by researchers into innovation orientation, -but a comprehensive and up to date summary of work into innovation orientation does not exist. As a method of advancing innovation orientation theory, it is argued that a systematic approach towards identifying relevant studies in this field is required.

In this paper we systematically review literature where innovation orientations is a key theoretical foundation, to develop an the updated framework of innovation orientation and its antecedents. In particular we focus on the questions: -what constitutes innovation orientation at the firm level and what are its potential (positive) outcomes at company's performance. -in a wide sense. Therefore, this paper offers a holistic view on innovation orientation and its broader conceptualisation.

## **Method**

This article focuses on peer-reviewed journals and the adopted approach was to conducted a series of keyword searches in 3 reference databases; (1) Emerald; (2) Business Source Premier; and (3) Science Direct. The keyword combination of; 'Innovation Orientation', was searched for within keywords, abstract OR title. The time period for this study held no boundaries where date of publication was not added as part of the search criteria. These search criteria yielded 152 articles. Because of the overlap

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3 between the publications contained within each database, there were 28 duplicate results. Thus, the  
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5 initial database of 152 results represents 124 articles. This relatively small return represents the scope  
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7 of the research within this field and stands to highlight that this area of research is still developing and  
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9 has so far been under researched.  
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13 The initial database followed a range of secondary screening processes as identified by other systematic  
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15 reviews (Parris and Peachey, 2013; Xiao and Nicholson, 2013) and excluded books, dissertations (Manu,  
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17 1989) and conference proceedings (Sebjan et al 2016; Nagy and Babaita, 2016). Secondly it was  
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19 appropriate to exclude articles that were not written in the English Language (four articles – Gretry et al,  
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21 2013; Correa et al, 2015; ИЛЯКОВА and САВИНА, 2016; Hancioglu and Yesilaydin, 2016). Thirdly the  
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23 authors reviewed all of the articles in detail to assess the remaining articles and check to see if  
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25 **i**nnovation **o**rientation was in fact a focus of the paper. This led to the removal of 38 articles. The  
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27 excluded articles at this stage were excluded as they often only referred to **i**nnovation **o**rientation but  
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29 did not discuss this concept in any detail or even address this term in the **main body of the** article. Finally,  
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31 in keeping with other systematic literature review **SLR** processes (~~SLR~~), additional articles meeting the  
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33 inclusion criteria were identified by examining the reference lists of the articles (~~Parris and Peachey,~~  
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35 ~~2013~~) remaining after the secondary screening process (n=2) (Parris and Peachey, 2013). The final  
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37 number of articles included in this study was 82; 8 conceptual, 69 employed quantitative methods, 1  
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39 employed qualitative methods, 2 employed mixed methods and 2 utilised a case-based approach. Over  
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41 three quarters of the articles (n=64) have been published since 2006. The remainder of this study focuses  
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43 on categorising the empirical work within the identified sample (74 articles).  
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## Results

### Defining Innovation Orientation

Whilst a range of key definitions are utilised within the innovation orientation research field, the research has not settled on one widely accepted definition and instead much of the empirical investigations ~~instead~~ either do not define innovation orientation (n=24) (for example, Pearson, 1993; Dobni, 2006; Saenz et al, 2007; Prajogo and McDermott, 2014; Zobel et al, 2017) or utilise a range of definitions without selecting a firm single definition on which to frame the study (n=6) (for example, Grinstein, 2008; Chou and Yang, 2011; Kraczy et al, 2014; Lee et al, 2016).

Hurley and Hult (1998) state that innovation orientation refers to an organization's openness to new ideas and propensity to change through adopting new technologies, resources, skills, and administrative systems. Most of the studies in the sample citing Hurley and Hult's (1998) (n=12) definition of innovation orientation do so from an innovation culture perspective, again linking innovation culture to innovation orientation based outcomes (Zhou et al, 2005; Naranjo-Valencia et al, 2011) or innovation orientation antecedent factors (Siguaw et al, 2006; Ayuso et al, 2011; Simpson et al, 2006; Ngo and O'Cass, 2011).

Siguaw et al (2006, p. 558) state that 'long term survival through innovation appears based not on specific, discrete innovations or on a single market or learning orientation but rather on an overarching, organisation-wide knowledge structure, termed innovation orientation'. Authors in the SLR sample used Siguaw et al's (2006) definition to help conceptualise the innovation orientation theory whilst drawing out a range of antecedent factors, for empirical investigation. Siguaw et al's (2006) definition was cited in 11 studies (for example, Simpson et al, 2006; Stock and Zacharias, 2011; Altindag and Zehir, 2012; Baregheh et al, 2012; Engelen et al, 2014; Wang et al, 2015; Yang et al, 2016); discussing components such as learning philosophy, strategic direction, and transfunctional acclimation. Given that much of the

work in the SLR sample and the innovation orientation research field has been produced since the publication of the conceptual model presented by Siguaw et al (2006). It is important to acknowledge some key developments that have been empirically proven to impact upon innovation orientation, but that were not incorporated into the definition provided by Siguaw et al (2006). Some of these key developments are, namely the impact of transformational leadership (Engelen et al, 2014), the key factors of a customer centric approach (Grinstein, 2008; Chou and Yang, 2011; Stock and Zacharias, 2011; Talke et al, 2011) and firm efficacy (Ussahawanitchakit, 2008), which should be further reinforced and incorporated into a multi variable construct of innovation orientation (Dobni, 2010). For this study, innovation orientation will be defined as a multiple construct with a focus on driving innovation based practices and values throughout the organisation primarily through four core aspects; culture, flexibility in structures, capital and knowledge capabilities and understanding environmental dynamics with the aim of driving positive organisational performance. Many studies have identified the positive impact of innovation orientation on organisational performance (Zhou et al, 2005; Ngo and O’Cass, 2011) however; few studies have addressed the multivariable nature of innovation orientation and identified numerous factors and categorisation of those factors that can be identified as antecedents of this construct.

### Ontological approaches

In initially reviewing the articles contributing to this study and identified throughout the conducted systematic literature review, it became apparent that different ontological perspectives existed within the breadth of the studies, as is common within management based research (Van de Ven and Poole, 2005). A key aspect worthy of consideration within innovation based research is whether we view organisations as consisting of things or processes (Tsoukas and Chia, 2002). The work of Van de Ven and



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2  
3 Poole (2005) that aimed to provide typologies of four approaches for studying organisational change, is  
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5 useful and applicable to an innovation orientation context ~~where we can consider whether.~~

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9 This paper posits that combining the pluralistic insights from various ontological research perspectives,  
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11 where innovation orientation is viewed as a 'thing' (Whetten, 2005) or as a 'process' (Tsoukas, 2005)  
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13 provides a deeper understanding of innovation orientation than any one single approach. Therefore in  
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15 reviewing innovation orientation from a holistic perspective the authors have taken a dual approach of  
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17 categorising whether innovation orientation was considered as a 'process' whereby different antecedent  
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19 variables were identified as antecedents towards an innovation orientation, whilst also including analysis  
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21 on innovation orientation as a 'thing' that is fixed in existence and is used as a variable that links  
22  
23 innovation orientation as a defined construct or 'thing' (Whetten, 2005) with varying organisation based  
24  
25 outputs. The following sections review work from these perspectives.

### 31 Antecedents of Innovation Orientation

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34 Manu (1992) identified Innovation Orientation through an environment, strategy and performance  
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36 paradigm, where a range of factors in each area influence the ability of the successful implementation  
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38 of ~~an i~~innovation ~~o~~orientation. This approach is in keeping with the ontological stance that places  
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40 innovation orientation as a process (Van De Ven and Poole, 2005). Siguaw et al (2006) presented a  
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42 conceptual model that identified a range of potential antecedent factors, categorised as 'organizational  
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44 competences' and in addition identified a range of overarching factors, that were derived from the  
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46 literature, that also impact on an organisations innovation orientation. Stock and Zacharias (2011)  
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48 identified patterns of innovation orientation that utilised configuration theory tradition drawn on the  
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50 internal arrangements of the company's strategy, structures, processes, systems, culture, and leadership  
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as fundamental variables that shape organizational design (Meyer et al. 1993; Vorhies and Morgan 2003). These variables also appear in several conceptual papers and studies related to innovation orientation (e.g., Manu, 1992; Siguaw et al., 2006) and thus appear to be important elements of innovation orientation. Like much of the literature (Manu, 1992; Hurley and Hult, 1998; Berthon et al, 1999; Nambisan, 2002; Olson et al, 2005; Zhou et al, 2005; Siguaw et al, 2006; Keskin, 2009; Wu et al, 2015), Dobni (2010) defined innovation orientation as a multi-dimensional concept that is built on four overarching areas; Intention, Infrastructure, Influence and Implementation. This paper proposes a new categorisation of antecedents as a means of allowing the multi-dimensional concept of innovation orientation to be progressed and includes recent work. The four areas of innovation culture, flexible structures, capital and knowledge capabilities and understanding environmental dynamics are used as a means of categorising the range of antecedent factors that have been empirically examined within the articles identified in the SLR (table 1). A total of 30 articles identified antecedent factors of innovation orientation that were empirically examined.

<Insert table 1 about here>

A clear bias towards examining antecedent factors grouped in the innovation culture, and capital and knowledge capabilities categories emerged with empowering employees, gathering information on customers, consumers and competitors and managing market dynamism and competitiveness being considered as central antecedents in a large number of separate studies.

Innovation culture was defined within this study as an organization's overall innovative capability of introducing new products to the market, or opening up new markets, through combining strategic orientation with innovative behaviour and process (Wang and Ahmed, 2004). Empowering employees

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3 was seen as central in a number of studies (Ettlie and O'Keefe, 1982; Hurley and Hult, 1998; Baregheh et  
4 al, 2012; Grundstrom et al, 2012) with this often being linked to elements of organisational innovation  
5  
6 al, 2012; Grundstrom et al, 2012) with this often being linked to elements of organisational innovation  
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8 culture, such as encouraging new ideas (Baregheh et al 2012), leadership (Engelen et al, 2014),  
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10 supporting individual creativity (Acikzog and Gonsel, 2016) and organisational commitment (Zhou et al,  
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12 2005). The work of Grundstrom et al (2012) investigated empowered employees from a different  
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14 perspective and actually considered whether innovation orientation was affected by a change in  
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16 leadership, where the study found that change in leadership had limited impact, so long as empowered  
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18 employees were present, and this cultural factor was maintained. Engelen et al (2014) expanded on the  
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20 role of the leaders within the organisation in highlighting the role of leadership as providing an  
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22 appropriate model of behaviour.  
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28 Ettlie and O'Keefe (1982) considered innovation orientation as a personal trait that was present amongst  
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30 individuals within an organisation that was linked with a culture of innovation, but also concluded that  
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32 this individual based approach was not enough for innovation orientation to be implemented and that  
33  
34 an environment and organisational structure was required to support this.  
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39 The concept that innovation culture requires supporting through appropriate structures was supported  
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41 by Hurley and Hult (1998) who found that when members of a group are encouraged to learn and  
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43 develop and are able to influence group decisions, the group has more innovativeness, but that multiple  
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45 factors have an effect on an ~~an~~ organisations ability to deliver this encouragement to learn and develop.  
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49 Flexibility is seen through various aspects of innovation orientation, but flexibility in structure has  
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51 received interest from multiple researchers (for example, Van Muijen and Koopman, 1994; Maltz et al,  
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53 2006; Kraiczy et al, 2015; Zobel et al, 2017). Van Muijen and Koopman (1994) and Maltz et al (2006)  
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3 identified that flexibility in structure and within organisational approach were essential elements of  
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5 innovation orientation. Within this innovation based study, flexible structures are defined from an  
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7 organisation wide perspective, where organisations draw their innovative capabilities through  
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9 capabilities of dynamic integration and change, with a focus on structures that allow for employees to  
10  
11 be creative and feel empowered (Lazonick, 2010).  
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16 An aspect of flexible structures is the ability of the organisation to focus on multiple targets and results  
17  
18 through organisational ambidexterity (McDermott and Prajogo, 2012). The organisational structure was  
19  
20 considered in multiple studies with links being made with the diversity of the the 'tTop mManagement  
21  
22 tTeam' (TMT) (Talke et al, 2011) and the use of flat structures (Kraiczy et al, 2015) that links heavily to  
23  
24 supporting the innovation culture discussed previously. Three areas that were considered as essential in  
25  
26 supporting flexibility were organisational learning, formality of mechanisms and processes, and speed of  
27  
28 decision making. Organisational learning helps with flexibility in structure due to a shared understanding  
29  
30 and responsibility for what is required to be done (Hurley and Hult, 1998; Saenz et al, 2007). Interestingly  
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32 whilst speed of decision making is considered a benefit of flexible structures, due to a lack of bureaucracy  
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34 and hierarchical centralised decision making, work by Maltz et al (2006) found that speed of decision  
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36 making had limited impact on organisational innovation orientation. In addition, Zobel et al (2017) found  
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38 that high speed innovation through innovation orientation often had the by-product of informal  
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40 mechanisms having to be utilised and then integrated into the business over time.  
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49 The role of capital and knowledge capability factors within innovation orientation are essential (Dobni,  
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51 2010). Within this study capital and knowledge capability was defined as a set of distinct and well-  
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53 defined approaches and processes, that processes that consider the organisations internal capability to  
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3 manage positive and negative critical knowledge functions in different kinds of operations, and the  
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6 availability of resource to support the organisations development (Wiig, 1998). Key antecedent factors  
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8 linked with the utilisation and acquisition of capital and knowledge in innovation orientation are the  
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10 utilisation of information on customers, consumers and competitors, and all of these variables are  
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12 conceptually closely linked with market orientation (Grinstein, 2008; Ergun and Kuscu, 2013). This  
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14 information gathering on key stakeholders, further interrelates with research that considers factors such  
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16 as human capital in the form of internal and external knowledge (Stock and Zacharias, 2011; Kuan-Liang  
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18 and Chao-Hung, 2014). Work focussing on using gathered information from key stakeholders (for  
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20 example, Wu et al, 2015; Zacharias, 2011; Dobni, 2010) is interesting in that none of the studies consider  
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22 this factor as the sole focus of the research and instead consider information utilisation alongside various  
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24 other factors. The ability to allocate resource (Silva et al, 2014) to various aspects of the business is an  
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26 essential aspect of knowledge and capital and links with the dynamic management of resources and also  
27  
28 links with organisational flexibility (Maltz et al, 2006). The role of IT capability in driving and supporting  
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30 capital and knowledge capability is unsurprisingly important. ~~in the study by~~ Chen et al (2009) ~~it was~~  
31  
32 found that IT capability was closely linked with ~~i~~nnovation ~~o~~rientation and helps to facilitate a range  
33  
34 of other core antecedent factors. The work by Roach et al (2016) is interesting in that it suggests  
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36 effectuation contained within the organisation, particularly amongst staff has a mediating role on  
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38 innovation orientation and performance, where, networks and the ability to leverage that network  
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40 and experiment are seen to have a positive relationship on innovation orientation and ultimately firm  
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42 performance, and pre-commitment in relationship to future partnerships, ~~have no role or impact on~~  
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44 innovation orientation and firm performance.  
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3 It is argued that a positive relationship between environmental uncertainty and innovation exists  
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5 (Prajogo and McDermott, 2014). This is considered to be consistent with the common argument  
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7 suggesting that dynamic environments drive firms to be innovative (Stock and Zacharias, 2011; Zhang et  
8  
9 al, 2015). The category on understanding environmental dynamics is multifaceted and not only focusses  
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11 on direct competition but factors that can influence competition within a market place. It is therefore  
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13 understandable that a range of studies found there to be a link between the ability of firms to manage  
14  
15 market dynamism, competitiveness and innovation orientation (Manu, 1992; Stock and Zacharias, 2011;  
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17 Prajogo and McDermott, 2014; Wu et al, 2015; Zhang et al, 2015; Sundstrom et al, 2016). Within this  
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19 study, understanding environmental dynamics are based upon two key areas, technological dynamics  
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21 and market dynamics, whereby technological dynamics are viewed as the rate and predictability of  
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23 technological changes and market dynamics involve changes in customer preferences and market  
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25 competition (Wu et al, 2015).  
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33 Early work in this antecedent area used the broad term of 'understanding of environment' (Manu, 1992,  
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35 p. 336), whereas more recent studies have focussed on environmental dynamics (Wu et al, 2015). In  
36  
37 recent work, environmental turbulence and an ability to manage this dynamically has gathered interest,  
38  
39 where technological turbulence, perceived market turbulence and competitive intensity are argued to  
40  
41 have a significant positive impact upon [innovation orientation](#) (Zhang et al, 2015).  
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46 Relationship [orientation](#) has been suggested (Zehir et al 2011) to provide a solution in mediating the  
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48 impact of dynamic environments and the uncertainty that can result from them, through proactive  
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50 creation, development and maintenance of relationships with customers and other parties that would  
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52 result in mutual exchange and fulfilment of promises at a profit. It is argued that innovation orientation  
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3 and relationship orientation have a strong positive link in negating the impact of environmental  
4 uncertainty (Zehir et al, 2011). This link in relationship orientation is further supported through various  
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6 studies that emphasise the importance of knowledge sourced from internal and external  
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8 stakeholders (Ayuso et al, 2011) and the effective acquisition of information sourced from customers,  
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10 consumers and competitors (Dobni, 2010; Stock and Zacharias, 2011; Baregheh, et al, 2012; Silva et al,  
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12 2014, Wu et al, 2015).

### 19 Outcomes of Innovation Orientation and Performance Measures

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21 It is argued that the concept of performance and outcomes are often not well defined or specified (Lebas  
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23 and Euske, 2004; Pollanen, 2005) and that convenience often guides the choice of measure of  
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25 performance (compare Amsteus, 2011; Wiklund, 1999). Within these studies 'innovation orientation' is  
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27 viewed from an ontological perspective as a 'thing', where it is accepted that innovation orientation as  
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29 an existing construct that impacts on other aspects of an organisation (Tsoukas, 2005). Through the  
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31 conducted SLR it appears that outcomes have been considered across many variables. Within these  
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33 studies 'innovation orientation' is viewed from an ontological perspective as a 'thing', where it is  
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35 accepted that innovation orientation as an existing construct that impacts on other aspects of an  
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37 organisation (Tsoukas, 2005). In order to better understand the outcomes presented within the  
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39 innovation orientation literature base, a simple coding system was utilised that focussed on objective  
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41 and subjective measures of performance (Zehir et al, 2011) and outcomes that whilst linked with  
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43 innovation orientation did not directly link innovation orientation with performance measures (for  
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45 example, Appiah- Adu and Singh, 1998; Caerteling et al, 2011; Chou and Yang, 2011; N'go and O'Cass,  
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47 2011).

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3 A range of measures have been used to measure performance in relation to innovation orientation  
4 (Altindag and Zehir, 2012; Stock and Zacharias, 2011; Kraiczy et al, 2015). Within this study 43 papers  
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6 identified outcomes related to innovation orientation, with the majority linking innovation orientation  
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8 to improved performance, as shown in table 2.  
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14 <insert table 2 about here>  
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17 The majority of papers focussed on objective performance measures of innovation orientation whilst a  
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19 smaller number focussed on subjective performance measures of innovation orientation. This is not an  
20  
21 unusual bias given that performance is being measured within a business context (Amsteus, 2014).  
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23 However, the range of performance measures from the sample is striking and highlights a clear bias  
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25 towards a small range of objective performance measures; profitability, Growth rate, New product  
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27 success, Sales, return on investment (ROI) and market share (see table 2).  
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32 A total of 27 studies identified objective measures 'only' as measurements of performance with 18  
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34 studies considering organisational profitability as a key measure of organisational performance within  
35  
36 the innovation orientation research field (for example, Chen et al, 2009; Chou and Yang, 2001; Prajogo  
37  
38 et al, 2013). This profitability measure is considered within a range of contexts and geographical  
39  
40 locations. However rarely is profitability used as the sole measure of innovation orientation in any single  
41  
42 study. It is much more common that profitability is used as one variable in a matrices of financial  
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44 performance measures (Altindag and Zehir, 2012; Cheung et al, 2012; Wu et al, 2015; Cheung and Lin,  
45  
46 2017). This combinational approach is argued as being quite common given that data for the various  
47  
48 measures used in combination such as sales (Maltz et al, 2006; Jaakkola et al 2010), market share  
49  
50 (Theodosiou et al, 2012; Prajogo et al, 2012) and growth rate (Altindag and Zehir, 2012; Wu et al, 2015)  
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3 are often easy to calculate and provide fixed measures that often interrelate (Amsteus, 2014). Much of  
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5 the research found that innovation orientation has a strong positive effect on objective  
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7 organisational performance, using a range of measures (Appiah-Adu and Singh, 1998; Cheung et al,  
8  
9 2012). Objective performance measures were categorised into four key areas; financial; Growth;  
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11 innovativeness and Market position, with a range of performance measures highlighted within each  
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13 category.  
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19 A smaller number of studies considered innovation orientation performance measures using subjective  
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21 measurement (n=17), such as improved supplier integration (Yang et al, 2016) and employee confidence  
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23 of future performance (Zhou et al, 2005). Three key categories were highlighted to aid in categorising  
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25 subjective measures; organisation related, internal capability related and customer related. Organisation  
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27 related subjective measures included measures such as image (Chen et al, 2009); perceived  
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29 organisational performance (Olson et al, 2005; Zheir et al, 2011) and job satisfaction (Zhou et al, 2005).  
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31 For each of the measures within the organisation related grouping innovation orientation positively  
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33 linked with improved perceptions of the organisation, with the exception of the study by Lee et al (2016)  
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35 that highlighted that innovation orientation can negatively impact on brand performance/image if  
36  
37 used as the sole orientation driving the change, but linked with brand orientation can have a positive  
38  
39 effect. Internal capability development was measured through organisational learning within one study  
40  
41 (Maltz et al, 2006), where organisational learning is viewed as an output of innovation orientation,  
42  
43 however in other studies it is considered an antecedent factor of innovation orientation (Hurley and  
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45 Hult, 1998; Saenz et al, 2007). Customer related subjective performance measures emerged as a key  
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47 theme through analysing the contributing studies, in that two studies (Ngo and O’Cass, 2011; Teichert  
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3 and Bouncken, 2011) identified the subjective measures of a range of variables related to customer  
4 based measurements such as customer equity, customer recommendations and customer satisfaction.  
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9 Only 7 studies utilised wholly subjective measures of performance (Zhou et al, 2005; Ngo and O’Cass,  
10 2011; Yang et al, 2013; Guo et al, 2015; Lee et al, 2016; Sundstrom et al, 2016; Yang et al, 2016). An  
11 equally common approach to measuring innovation orientation through subjective performance  
12 measures only was to use both subjective and objective measures of performance, where 10 studies  
13 identified a range of performance measures across the two coding areas (Olson et al, 2005; Maltz et al,  
14 2006; Chen et al, 2009; Teichert and Bouncken, 2011; Zehir et al, 2011; Theodosiou et al, 2012; Lii and  
15 Kuo, 2016; Roach et al, 2016; Chuang and Lin, 2017; Jalilvand, 2017).  
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27 Interestingly a range of studies focussed on linking innovation orientation with a range of other  
28 outcome based factors and theories (n=25), that whilst can be thematically grouped into the same  
29 areas as the subjective performance measures; organisation related, internal capability related and  
30 customer related, do not often directly link to measures of performance (table 3). Organisation related  
31 based outcomes were highlighted within a range of studies and focussed on linking innovation  
32 orientation with a range of outcomes; culture (Cheung et al, 2011), Strategy implementation  
33 (Kortmann, 2015), new product development NPD and nNew Market Entry (Olson et al, 2005),  
34 relationship development (Walter, 1999), firm efficiency (Ussahawanitchakit, 2008), technology  
35 commercialisation capability (Dhewanto and Sohal (2015), supplier integration (Yang et al, 2016)  
36 and e-business Intent (Wang and Cheung, 2004). These factors commonly focussed on highlighting  
37 innovation orientation as having a positive relationship with organisation-level outcomes.  
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3 Internal capability related outcomes were also well represented within the studies examined and again  
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5 innovation orientation was linked with a wide range of outcomes and internal capabilities; pProcess  
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8 pPerformance (Caerteling et al, 2011), sService dDelivery (Chen et al , 2009), eEmergent sStrategy  
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10 dDevelopment (Dobni, 2015), cCompetitive sStrategy dDevelopment (Dobni, 2010), cCustomer  
11  
12 kKnowledge mManagement (CKM) (Fidel et al, 2015), iinternal integration and adoption of new  
13  
14 processes (Lii and Kuo, 2016), hHigh sSupply cChain mManagement competences (Hsu et al, 2011;  
15  
16 Teichert and Bouncken, 2011), procedural and declarative memory on projects (Keskin, 2009), iinfluence  
17  
18 tactics (Steensma et al, 2009), mmarketing caCapabilities (Theodosiou et al, 2012), mMass  
19  
20 cCustomisation (Wang et al, 2015) and tTechnology cCommercialisation capability/R&D (Dhewanto and  
21  
22 Sohal, 2014). Few of these studies then linked these internal capability developments to organisational  
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24 performance measures (Caerteling et al, 2011; Chen et al , 2009; Dobni et al, 2015; Teichert and  
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26 Bouncken, 2011; Theodosiou et al, 2012; Dhewanto and Sohal, 2014; Guo et al, 2015; Lii and Kuo, 2016;  
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28 Yang et al, 2016).

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36 The role of innovation orientation as a moderating factor between concepts and performance  
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38 measures was also considered in a number of studies (Bhaskaran, 2006; Cheung et al, 2012; Yang et al,  
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40 2013; Tseng and Chen, 2014; Roach et al, 2016, Wu, 2016). In the study by Bhaskaran (2006) innovation  
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42 orientation was empirically found to have a moderating effect on profitability in highly competitive and  
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44 dynamic markets. Interestingly only a small number of studies (Jaakola et al, 2010; Olson et al, 2005;  
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46 Simpson et al, 2006; Lee et al, 2016) highlighted that innovation orientation had a negative impact upon  
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48 any of the measures of performance identified.  
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## Discussion

The review presented, evidences the scope and impact of innovation orientation within innovation, marketing and management research generally. Two areas were considered of particular interest: the innovation orientation antecedent factors and their link to performance improvement.

### Antecedent factors and their impact upon organisational Innovation Orientation

The work focussing on the core thematic antecedent grouping of 'innovation culture' has seemingly been under researched, with a focus limited thus far to; eEncouraging new ideas (Baregheh et al, 2012), "oOrganization commitment and group work culture" (Zhou et al, 2005; Engelen et al, 2014), lLeadership focus (TMT) (Zhou et al, 2005; Kraiczy et al, 2015), lLeadership providing appropriate value based models (Engelen et al, 2014), oOrganisational trust and respect (Zehir et al, 2011) and most commonly studied 'empowering employees' (Ettlie and O'Keefe, 1982; Hurley and Hult, 1998; Baregheh et al, 2012; Grundstrom et al, 2012). Given the broad definition used to identify innovation culture, loosely considered as culture that encourages innovation that is heavily linked with employee involvement (Dobni, 2010), it is surprising to see so few articles focussing on this area as an antecedent variable, given that the majority of empirical measurement tools of innovation orientation currently adopted to investigate innovation orientation, highlight a focus on this culture of innovation and employee involvement as important contributing factors of innovation orientation (Chen et al, 2011; Ngo and O'Cass, 2011; Luo and Wang, 2012; Theodosiou et al, 2012; Fidel et al, 2015; Wang et al, 2015). One of the limitations of much of the work in these studies was that cultural factors were being investigated from only the perspective of senior managers. It is argued that respondents in the best position to have a high level of insight into "the factors that may affect firm wide innovation orientation are high level

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2  
3 executives and entrepreneurs instrumental in setting and monitoring firm strategy” (Simpson et al, 2006,  
4 p.1134). However, when considering elements linked with culture and organisational culture it is  
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6 important to gain a wide range of views from a diverse representative sample from across an  
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8 organisation (Hofstede, 2001). Tidd et al (2005) define a culture of innovation through characteristics  
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10 such as: shared vision, a leader’s will to innovate, appropriate structures, effective team working,  
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12 effective communication channels, employee focus and a creative outlook. It can be seen through  
13  
14 reviewing the literature that whilst an innovative culture cannot be enforced, certain structures and  
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16 values must be adhered to in order to achieve a culture of innovation (Tidd et al, 2005; Zhou et al, 2005).  
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19 Research focussing on the core thematic antecedent grouping of flexible structures was highly diverse  
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21 and represented a wide range of empirically investigated contributing antecedent factors. As would be  
22  
23 expected, a range of factors highlighted structural aspects such as flat structures (Kraiczy et al, 2015),  
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25 however much more work focussed on aspects of, or related to, the concept of a learning organisation  
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27 (Hurley and Hult, 1998; Saenz et al, 2007), Organisational Ambidexterity (McDermott and Prajogo,  
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29 2012), Diversity of TMT (Talke et al, 2011), speed of decision making (Maltz et al, 2006) and flexibility  
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31 viewed as flexibility in strategic approaches, idea sharing mechanisms and structures (Van Muijen and  
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33 Koopman, 1994; Maltz et al, 2006).

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36 The notion that to achieve a positive innovation orientation requires Flexibility (Van Muijen and  
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38 Koopman, 1994; Maltz et al, 2006) and Organisational Learning (Hurley and Hult, 1998; Saenz et al,  
39  
40 2007) as part of the infrastructure has been researched on multiple occasions and incorporated into  
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42 many of the conceptual models of innovation orientation (Siguaw et al, 2006). **Given the obvious  
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44 requirement to find linkages within structures and between studies, it is unusual that internal flexibility**

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3 is linked with external turbulence and market dynamics in only one study (Baregheh et al, 2012). Linkages  
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5 between flexibility, learning and organisational culture have been previously noted as a baseline for  
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7 building innovating organisations (Achtenhagen, Melin and Mullern, 2003). Learning, Learning, both as  
8  
9 internal sensing and development of new ideas, contributes to reshaping processes in organisations in  
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11 changing contexts.  
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16 Antecedents of Innovation Orientation that are grouped thematically under the heading of 'Capital and  
17  
18 knowledge capabilities' is dominated by Utilising human Capital, and internal and external  
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20 knowledge (Stock and Zacharias, 2011; Kuan-Liang and Chao-Hung, 2014). Capital and knowledge based  
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22 antecedents also draws upon the resource based view of innovation (Silva et al, 2014). However, within  
23  
24 this area it is important to also note the focus on the role of IT capabilities (Chen et al, 2009).  
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29 Much work clusters in the thematic grouping of understanding environmental dynamics. Within this  
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31 grouping area are antecedent factors linked to the management of market dynamism (Manu, 1992;  
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33 Stock and Zacharias, 2011; Prajogo and McDermott, 2014; Wu et al, 2015; Zhang et al, 2015) and  
34  
35 competitive intensity (Zhang et al, 2015). There are also links made with market orientation directly  
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37 (Grinstein, 2008; Ergun and Kuscü, 2013) and also other aspects linked with market orientation such as  
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39 gathering information on customers, consumers and competitors (Dobni, 2010; Stock and Zacharias,  
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41 2011; Baregheh, et al, 2012; Silva et al, 2014, Wu et al, 2015) and adopting a cross functional approach  
42  
43 (Baregeheh, 2012); all of which are aspects identified within seminal market orientation literature (Kohli  
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45 and Jaworski, 1990; Narver and Slater, 1990).  
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### Links between organisation performance measures and innovation orientation

Multiple studies highlight how innovation orientation is linked with organisational performance (for example, Maltz et al, 2006; Chen et al, 2009; Zehir et al, 2011; Theodosiou et al, 2012; Jalilvand, 2017) and this link with organisation wide performance is a crucial link for the development of innovation orientation as an organisational wide construct. ~~A major focus~~~~One of the focuses~~ of this study was to categorise those performance measures linked with innovation orientation, and the categories used were objective and subjective measures. None of the studies considered performance over a sustained period of time and all the studies that utilised a performance measure did so through a cross sectional approach. Only one study (Maltz et al, 2006) considered innovation orientations potential to utilise different measures through a longitudinal approach, and considered performance outputs of innovation orientation in both the short term and also the longer term. Interestingly none of the studies considered a comparative approach where innovation orientation within firms with differing performance profiles would be analysed, for example a highly profitable organisation in comparison to an organisation with smaller profitability levels, to consider the 'implementation formulas' for innovation orientation within those businesses to identify any key variables that had disproportionate impact within two different settings.

For each measure of organisational performance highlighted within the sample of studies, innovation orientation was found to have a mainly positive impact upon performance, with only a small number of studies linking innovation orientation with negative organisational performance (Olson et al, 2005; Simpson et al, 2006; Jaakola et al, 2010; Lee et al, 2016). One such study was the study by Olson et al (2005) where it was found that there exists a negative effect of innovation orientation on perceived performance in some organisational settings; namely slower low growth markets. This study highlights

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3 a particular combinational approach that not only considers multiple performance measures, but also  
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5 contextualises performance within different market types, for example low growth markets. This  
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7 approach requires further exploration to consider the impact of innovation orientation within different  
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9 contextual settings using market growth rate as a key variable to ensure that performance relates to the  
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11 organisation not the industry.  
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### 16 **Conclusions and further research agenda**

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19 The development of innovation orientation as a research area has been significant, particularly in the  
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21 last decade; and this development shows the potential of this area to contribute in the broader areas of  
22  
23 innovation and management studies. However, this growth could lead to inconsistency in the theoretical  
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25 understanding and application of innovation orientation. The growth in the number of studies focussing  
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27 on this field has largely centred on considering antecedent factors of innovation orientation, linking  
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29 innovation orientation with other aspects of management studies or considering the impact of  
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31 innovation orientation on organisational performance. Whilst this approach has yielded greater interest  
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33 and increased publications on this topic, what has been missing has been a consolidated view of this  
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35 rapidly developing research field. It is important that innovation orientation is not studied in isolation  
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37 and that links between different theories and fields of research are made to advance this field of  
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39 research, such as considering the role of innovation orientation and its impact upon organisational  
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41 leadership and culture. A wider range of research methodologies would also enhance the research of  
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43 innovation orientation, given the major bias towards cross sectional quantitative based data collection,  
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45 and the notable limited application of qualitative, or mixed, methodological approaches conducted  
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47 within a longitudinal framework, the utilisation of more varied methodological approaches could yield  
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49 currently undiscovered phenomena within innovation orientation studies.  
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3 The application of performance measures within innovation orientation research is positive given the  
4 potential promise of the concept of innovation orientation to drive organisational improvement and  
5 enhanced performance. Whilst the approaches contained within the current literature base are useful  
6 and create insight, the lack of performance measure comparability present creates questions regarding  
7 the causal effect of innovation orientation and one major question that still remains is; does innovation  
8 orientation correlate to or cause enhanced organisational performance? Much work is required to  
9 further consider the construct of innovation orientation, so that researchers within this field of study  
10 reach an agreed basis from which innovation orientation as a holistic concept can be evaluated.  
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27 The use of thematic based groupings has been used to provide an overview of the conceptual model of  
28 innovation orientation within the existing literature base (Figure 1). This model represents consolidation  
29 and advancement in innovation orientation theory, as it provides a current and inclusive framework for  
30 future innovation orientation based research. The use of the four 'core antecedent themes' of innovation  
31 orientation allows for the categorisation of antecedent factors which in itself provides a consolidated  
32 view of the current research within the field.  
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42 This models presents practitioners managers with a guidelines of how to implement and measure the  
43 impact of innovation orientation in their organisations. The practical approach used in innovation  
44 orientation literature seem to be targeted towards managers, who are in need for more specific advice  
45 on how to make their organisations sustainably innovative in the long term. The four pillars of innovation  
46 orientation indicate the areas in need of investment and development: innovation culture, flexible  
47 structures, capital and knowledge capabilities, and understanding environmental dynamics. The  
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3 literature provides with multiple examples of how each of those factors might be implemented in the  
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5 local setting (see table 2). Particular focus should be given to development of internal capabilities:  
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7 organisational, internal processes and customer orientated approaches.  
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11 The model also poses further theoretical questions for academics that can inform a future research  
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13 agenda in this area. The innovation orientation research thus far has a rather practical focus and  
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15 shows less interest in discussing the ontological standings. This is one of the reasons why more holistic  
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17 approach is necessary to consolidate the field. For example a range of antecedent factors have been  
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19 explored in isolation, some of them very complex like 'culture of innovation' and some having limited  
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21 impact upon innovation orientation like 'speed of decision making' (Maltz et al, 2006). It would be  
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23 productive to analyse how different factors within this area integrate and relate with one another to  
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25 form a more coherent understanding of core capital and knowledge capabilities linked with innovation  
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27 orientation. For instance, resource management in a wide sense can link with IT capability and human  
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29 capital, however this has not been investigated and no links have been considered within the extant  
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31 innovation orientation literature with reference to these variables. Zien and Buckler (1997, p.276) argue  
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33 that all innovative firms have the same key practices at work, but that each firm "implementation  
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35 'formula' is particular and specific to that company". What has been found through this study is that  
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37 implementation variables or 'key practices' are often considered in isolation rather than collectively thus  
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39 far in innovation orientation studies. Whilst the clustering of themes identified within this study  
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41 progresses the research of innovation orientation in providing a synthesis of current research, it is  
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43 important that further research is undertaken to consider the relationship between these core  
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45 antecedent themes and to ensure that antecedent factors are not viewed in isolation, but instead are  
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47 considered as one of a number of contributing factors or 'formula' in developing and facilitating  
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3 innovation orientation. Furthermore, in order to progress this area of research it would be interesting to  
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5 consider all of these factors individually and collectively within one study and then link this with  
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7 organisational performance measures. A longitudinal case based study would also be an advancement  
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9 within the field, to see how resource allocation and cross functional operation evolves over a period of  
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11 time and with what effect.  
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16 Finally, this paper looked at the wide spectrum of innovation in organisations and shows innovation as  
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18 a relative concept defined with an organisational context. Further exploration of what constitute  
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20 innovation in organisations and interaction between new ideas, their diffusion and adoption across  
21  
22 organisations should also be considered.  
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### 33 **References**

34  
35  
36 Achtenhagen, L., Melin, L. and Müllern, T. 2003. "Learning and continuous change in innovating  
37  
38 organisations", in Pettigrew, A.M., Whittington, R., Melin, L., Sánchez-Runde, C., Van Den Bosch, F. A.  
39  
40 J., Ruigrok, W. and Numagami, T. (Eds.), Innovative forms of organising, London: Sage: 72-94.  
41  
42

43 Acikgoz, A. and Gunsel, A. 2016. Individual Creativity and Team Climate in Software Development  
44  
45 Projects: The Mediating Role of Team Decision Processes, *Creativity & Innovation Management*, 25  
46  
47 (4): 445-463.  
48  
49

50 Altindag, E. and Zehir, C. 2012. Back to the Past: Re-Measuring the Levels of Strategic Orientations and  
51  
52 Their Effects on Firm Performance in Turkish Family Firms: An Updated Empirical Study, *Procedia -*  
53  
54 *Social and Behavioral Sciences*, 41:288-295.  
55  
56  
57

- 1  
2  
3 Amsteus, M. 2011. Managers' foresight matters. *Foresight: The journal for future studies, strategic*  
4 *thinking and policy*, 13(2): 64–78.  
5  
6  
7  
8 Amsteus, M. 2014. Subjective Performance, Managerial Foresight, and Objective Performance, *Strategic*  
9 *Change*, 23: 133-146.  
10  
11  
12  
13 Appiah-Adu, K. and Singh, S. 1998. Customer orientation and performance: A study of SMEs,  
14 *Management Decision*, 36(5/6): 385-395.  
15  
16  
17  
18 Ayuso, S., Rodriguez, M. Á., Garcia-Castro, R. and Arino, M. Á. 2011. Does stakeholder engagement  
19 promote sustainable innovation orientation?, *Industrial Management & Data Systems*, 111(9): 1399-  
20 1417.  
21  
22  
23  
24  
25 Baregheh, A., Rowley, J., Sambrook, S. and Davies, D. 2012. Innovation in food sector SMEs, *Journal of*  
26 *Small Business and Enterprise Development*, 19(2): 300-321.  
27  
28  
29  
30 Berthon, P., Hulbert, J. M. and Pitt, L. F. 1999. To Serve or Create? Strategic Orientations toward  
31 Customers and Innovation, *California management review*, 42(1): 37-58.  
32  
33  
34  
35 Bhaskaran, S. 2006. Incremental Innovation and Business Performance: Small and Medium-Size Food  
36 Enterprises in a Concentrated Industry Environment, *Journal of Small Business Management*, 44(1):  
37 64-80.  
38  
39  
40  
41  
42 Caerteling, J.S., Di Benedetto, C. A., Dorée, A.G., Halman, Johannes I.M. and Song, M. 2011. Technology  
43 development projects in road infrastructure: The relevance of government championing behaviour,  
44 *Technovation*, 31(5/6): 270-283.  
45  
46  
47  
48  
49 Chen, J., Tsou, H. and Ching, R. K. H. 2011. Co-production and its effects on service innovation, *Industrial*  
50 *Marketing Management*, 40(8): 1331-1346.  
51  
52  
53  
54  
55  
56  
57

- 1  
2  
3 Chen, J-S., Tsou, H.T. and Huang, A.Y-H. 2009. Service Delivery Innovation, *Journal of Service Research*,  
4  
5 12(1): 36-55.  
6  
7
- 8 Cheung, S.O., Wong, P.S.P. and Lam, A.L. 2012. An investigation of the relationship between  
9  
10 organizational culture and the performance of construction organizations, *Journal of Business*  
11  
12 *Economics & Management*, 13(4): 688-704.  
13  
14
- 15 Cheung, S.On., Wong, P.S.P. and Wu, A.W.Y. 2011. Towards an organizational culture framework in  
16  
17 construction, *International Journal of Project Management*, 29(1): 33-44.  
18  
19
- 20 Chou, C. and Yang, K. 2011. The interaction effect of strategic orientations on new product performance  
21  
22 in the high-tech industry: A nonlinear model, *Technological Forecasting and Social Change*, 78(1): 63-  
23  
24 74.  
25  
26
- 27 Chuang, S-H. and Lin, H-N. 2017. Performance implications of information-value offering in e-service  
28  
29 systems: Examining the resource-based perspective and innovation strategy, *The Journal of Strategic*  
30  
31 *Information Systems*, 26(1): 22-38  
32  
33
- 34 Correa, C.P.M., Nascimento, T.M., Grillo, T.L.H. and Damacena, C. 2014. Gamers inovadores e  
35  
36 comprometidos: relações entre personalidade do consumidor, seu comprometimento com a marca  
37  
38 e sua propensão a colaborar em processos de inovação, *RAI Revista de Administração e Inovação*,  
39  
40 12,(4): 26-48  
41  
42  
43
- 44 Deshpande, R., Farley, J. U. and Webster, F. E. 1997. Factors Affecting Organizational Performance: A  
45  
46 Five-country Comparison, Report No. 97-108, Marketing Science Institute, Cambridge, MA.  
47  
48
- 49 Dhewanto, W. and Sohal, A. 2015. The relationship between organisational orientation and research and  
50  
51 development/technology commercialisation performance, *R&D Management*, 45(4): 339-360.  
52  
53  
54  
55  
56  
57

- 1  
2  
3 Dobni, B.C., Klassen, M. and Nelson, T.W. 2015. Innovation strategy in the US: top executives offer their  
4  
5 views, *Journal of Business Strategy*, 36(1): 3-13.  
6  
7
- 8 Dobni, C. B. 2006. Developing an innovation orientation in financial services organisations, *Journal of*  
9  
10 *Financial Services Marketing*, 11(2): 166-179.  
11  
12
- 13 Dobni, C. B. 2010. The Relationship between an Innovation Orientation and Competitive Strategy,  
14  
15 *International Journal of Innovation Management*, 14(2): 331-357.  
16  
17
- 18 Engelen, A., Schmidt, S., Strenger, L. and Brettel, M. 2014. Top Management's Transformational Leader  
19  
20 Behaviors and Innovation Orientation: A Cross-Cultural Perspective in Eight Countries, *Journal Of*  
21  
22 *International Management*, 20(2): 124-136.  
23  
24
- 25 Ergün, H.S. and Kuşcu, K. 2013. Innovation Orientation, Market Orientation and e-Loyalty: Evidence from  
26  
27 Turkish e-Commerce Customers, *Procedia - Social and Behavioral Sciences*, 99: 509-516.  
28  
29
- 30 Ettlíe, J.E. and O'Keefe, R.D. 1982. Innovative Attitudes, Value and Intentions in Organisations, *Journal*  
31  
32 *of Management Studies*, 19(2): 163-182.  
33  
34
- 35 Fidel, P., Schlesinger, W. and Cervera, A. 2015. Collaborating to innovate: Effects on customer knowledge  
36  
37 management and performance, *Journal of Business Research*, 68(7): 1426-1428.  
38  
39
- 40 Gretry, A., Brandt, C. and Delcourt, C. 2013. How does the Organizational context influence the  
41  
42 competitive intelligence process among Walloon SME's?. *Revue Française du Marketing*, 241: 73-87  
43  
44
- 45 Grinstein, A. 2008. The relationships between market orientation and alternative strategic orientations:  
46  
47 A meta-analysis. *European Journal of Marketing*, 42(1): 115-134.  
48  
49
- 50 Grundström, C., Öberg, A. and Rönnbäck, A.Ö. 2012. Family-owned manufacturing SMEs and  
51  
52 innovativeness: A comparison between within-family successions and external takeovers, *Journal of*  
53  
54 *Family Business Strategy*, 3(3):162-173  
55  
56  
57

- 1  
2  
3 Gundry, L.K., Munoz-Fernandez, A., Ofstein, L.F. and Ortega-Egea, T. 2016. Innovating in Organizations:  
4  
5 A Model of Climate Components Facilitating the Creation of New Value, *Creativity and Innovation*  
6  
7  
8 *Management*, 25(2): 223-238  
9
- 10 Guo, A., Li, Y., Zuo, Z. and Chen, G. 2015. Influence of organizational elements on manufacturing firms'  
11  
12 service-enhancement: An empirical study based on Chinese ICT industry, *Technology in Society*, 43:  
13  
14  
15 183-190  
16  
17
- 18 Hancioglu, Y. and Yesilaydin, G. 2016. A new competition approach to strategic management: Strategic  
19  
20 Innovation, *Uluslararası Yönetim İktisat ve İşletme Dergisi*, 12(29): 105-124  
21  
22
- 23 Hsu, C-C., Tan, K.C., Laosirihongthong, T. and Leong, G.K. 2011. Entrepreneurial SCM competence and  
24  
25 performance of manufacturing SMEs, *International Journal of Production Research*, 49,(22): 6629-  
26  
27 6649.  
28  
29
- 30 Hurley, R. F. and Hult, G.T. M. 1998. Innovation, Market Orientation, and Organizational Learning: An  
31  
32 Integration and Empirical Examination, *Journal of Marketing*, 62(3): 42–54.  
33  
34
- 35 ИЛЯКОВА, И. and САВИНА, Т.Н. 2016. The Scientific Potential of Innovative Development of Major  
36  
37 Domestic Corporation: Support, Assessment, Challenges, Trends. *National Interests Priorities &*  
38  
39 *Security*, 7: 131-143  
40  
41
- 42 Jaakkola, M., Moller, K., Parvin, P., Evanschitzkye, H. and Muhlbacher, H. 2010. Strategic marketing and  
43  
44 business performance: A study in three European 'engineering countries', *Industrial Marketing*  
45  
46 *Management*, 39(8): 1300-1310.  
47  
48
- 49 Jalilvand, M.R. 2017. The effect of innovativeness and customer-oriented systems on performance in the  
50  
51 hotel industry of Iran, *Journal of Science and Technology Policy Management*, 8(1): 43-61  
52  
53  
54  
55  
56  
57

- 1  
2  
3 Jones, R. and Rowley, J. 2011. Entrepreneurial marketing in small businesses: A conceptual exploration,  
4  
5  
6 *International Small Business Journal*, 29(1): 25-36  
7
- 8 Kamal, E.M., Yusof, N.A. and Iranmanesh, M. 2016. Innovation creation, innovation adoption, and firm  
9  
10 characteristics in the construction industry, *Journal of Science & Technology Policy Management*, 7(1):  
11  
12 43-57  
13  
14
- 15 Keskin, H. (2009) Antecedents and consequences of team memory in software development projects,  
16  
17  
18 *Innovation and Management*, 46(7): 388-396.  
19
- 20 Kortmann, S. 2015. The Mediating Role of Strategic Orientations on the Relationship between  
21  
22  
23 Ambidexterity-Oriented Decisions and Innovative Ambidexterity, *Journal of Product Innovation*  
24  
25 *Management*, 32(5): 666-684.  
26
- 27 Kraiczy, N., Hack, A. and Kellermanns, F. 2014. New product portfolio performance in family firms,  
28  
29  
30 *Journal Of Business Research*, 67(6): 1065-1073.  
31
- 32 Kraiczy, N., Hack, A. and Kellermanns, F. 2015. The relationship between Top Management Team  
33  
34  
35 Innovation Orientation and Firm Growth: The mediating role of Firm Innovativeness, *International*  
36  
37 *Journal Of Innovation Management*, 19(1): 1550005-1-1550005-24  
38
- 39 Kuan-Liang, C. and Chao-Hung, W. 2014. Who Pioneers and Who Follows: The Role of Intellectual Capital,  
40  
41  
42 *Journal of Business Studies Quarterly*, 6(1): 232-247.  
43  
44
- 45 Lazonick, W. 2010. The Chandlerian Corporation and the Theory of Innovative Enterprise , *Industrial and*  
46  
47 *Corporate Change*, 1: 317-349.  
48
- 49 Lebas, M. and Euske, K. 2004. A conceptual and operational delineation of performance. In Neely, A.  
50  
51  
52 (ed.), *Business Performance Measurement: Theory and Practice*. Cambridge University Press:  
53  
54 Cambridge.  
55  
56  
57



- 1  
2  
3 Lee, W.J., O’Cass, A. and Sok, P. 2016. Why doesn’t our branding pay off: optimising the effects of  
4 branding through innovation, *European Journal of Marketing*, 50(3/4): 509-529  
5  
6  
7  
8 Lii, P. and Kuo, F. 2016. Innovation-oriented supply chain integration for combined competitiveness and  
9 firm performance, *International Journal of Production Economics*, 174: 142-155  
10  
11  
12  
13 Luo, Y. and Wang, S.L. 2012. Foreign direct investment strategies by developing country multinationals:  
14 A diagnostic model for home country effects, *Global Strategy Journal*, 2(3): 244-261.  
15  
16  
17  
18 Maltz, E., Menon, A. and Wilcox, J. 2006. The effects of flexible firm orientations on market information  
19 use: intended and unintended consequences, *Journal of Strategic Marketing*, Vol. 14 Iss. 2, pp. 147-  
20  
21  
22  
23 164.  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
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38  
39  
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45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60
- Manu, F. A. 1992. Innovation Orientation, Environment and Performance: a Comparison of U.S. and European Markets, *Journal of International Business Studies*, 23(2): 333-359.
- McDermott, C.M and Prajogo, D.I. 2012. Service innovation and performance in SMEs, *International Journal of Operations & Production Management*, 32(2): 216-237.
- Merx-Chermin, M., & Nijhof, W. J. 2005. Factors influencing knowledge creation and innovation in an organization, *Journal of European Industrial Training*, 29(2): 135-147
- Meyer, A. D., Tsui, A. S., & Hinings, C. R. 1993. Configurational approaches to organizational analysis. *Academy of Management Journal*, 36(6): 1175–1195.
- Miles, R.E. and Snow, C.C. 1978. *Organization Strategy, Structure, and Process*, McGraw-Hill, New York.
- Nagy, A. and Babaita, C. 2016. Factors influencing the orientation towards innovation in the hospitality industry – the case of Romanian hotels. *Annals of the University of Oradea, Economic Science Series*, 25(1): 584-595

- 1  
2  
3 Nambisan, S. (2002) Software firm evolution and innovation-orientation, *Journal of Engineering &*  
4  
5  
6 *Technology Management*, 19(2): 141.  
7
- 8 Naranjo-Valencia, J., Jimenez-Jimenez, D. and Sanz-Valle, R. 2011. Innovation or imitation? The role of  
9  
10 organizational culture, *Management Decision*, 49(1): 55-72.  
11  
12
- 13 Neely, A., Filippini, R., Forza, C., Vinelli, A. and Hii, J. (2001), "A framework for analyzing business  
14  
15 performance, firm innovation and related contextual factors: perceptions of managers and policy  
16  
17 makers in two European regions", *Integrated Manufacturing Systems*, Vol. 12, No. 2, pp. 114-24.  
18  
19
- 20 Ngo, L. V. and O'Cass, A. 2011. The relationship between business orientations and brand performance:  
21  
22 A cross-national perspective. *Asia Pacific Journal of Marketing and Logistics*, 23(5): 684-713.  
23  
24
- 25 Olson, E. M., Slater, S. F. and Hult, G. T. M. 2005. The Performance Implications of Fit Among Business  
26  
27 Strategy, Marketing Organization Structure, and Strategic Behavior, *Journal of Marketing*, 69: 49–65  
28  
29
- 30 Parris, D, L. and Peachey, J, W. 2012. A Systematic Literature Review of Servant Leadership Theory in  
31  
32 Organizational Contexts, *Journal of Business Ethics*, 113: 377–393.  
33  
34
- 35 Pearson, G. J. 1993. Business Orientation: Cliché or Substance?, *Journal of Marketing Management*, 9(3):  
36  
37 233-243.  
38  
39
- 40 Pollanen, R.M . 2005. Performance measurement in municipalities: Empirical evidence in Canadian  
41  
42 context, *International Journal of Public Sector Management*, 18(1): 4–24.  
43  
44
- 45 Prajogo, D. and McDermott, C. 2014. Antecedents of Service Innovation in SMEs: Comparing the Effects  
46  
47 of External and Internal Factors, *Journal of Small Business Management*, 52(3): 521-540.  
48  
49
- 50 Prajogo, D., McDermott, C. and McDermott, M. 2013. Innovation orientations and their effects on  
51  
52 business performance: contrasting small- and medium-sized service firms', *R&D Management*, 43(5):  
53  
54 486-500.  
55  
56  
57

- 1  
2  
3 Ripolles-Melia, M., Blesa Perez, A. and Roig Dobon, S. 2010. The influence of innovation orientation on  
4 the internationalisation of SMEs in the service sector, *Service Industries Journal*, 30(5): 777-791.  
5  
6  
7  
8 Roach, D.C., Ryman, J.A. and Makani, J. 2016. Effectuation, innovation and performance in SMEs: an  
9 empirical study, *European Journal of Innovation Management*, 19(2): 214-238  
10  
11  
12  
13 Saenz, S., Aramburu, N. and Rivera, O. 2007. Innovation focus and middle-up-down management model:  
14 Empirical evidence, *Management Research News*, 30(11): 785-802.  
15  
16  
17  
18 Sebjan, U., Bobek, S. and Tominc, P. 2016. Factors Influencing Attitudes Towards the Use of CRM's  
19 Analytical Tools in Organizations, *Organizacija*, 49(1): 28-41  
20  
21  
22  
23 Siguaw, J. A., Simpson, P. M. & Enz, C. A. 2006. Conceptualizing innovation orientation: A framework for  
24 study and integration of innovation research, *Journal of Product Innovation Management*, 23(6): 556-  
25 574.  
26  
27  
28  
29  
30 Silva, G.M., Gomes, P.J., Lages, L.F. and Pereira, Z.L. 2014. The role of TQM in strategic product  
31 innovation: an empirical assessment, *International Journal of Operations & Production Management*,  
32 34(10): 1307-1337.  
33  
34  
35  
36  
37 Simpson, P. M., Siguaw, J. A. and Enz, C. A. 2006. Innovation orientation outcomes: The good and the  
38 bad, *Journal of Business Research*, 59(10): 1133-1141.  
39  
40  
41  
42 Steensma, H., Jansen, S. and Vonk, C. 2003. Organization Culture and the use of Influence Tactics by  
43 Managers, *Journal of Collective Negotiations in the Public Sector*, 30(1): 47.  
44  
45  
46  
47 Stock, R.M. and Schnarr, N.L. 2016. Exploring the Product Innovation outcomes of corporate culture and  
48 executive leadership, *International Journal of Innovation Management*, 20(1): 1-33  
49  
50  
51  
52 Stock, R. M. and Zacharias, N. A. 2011. Patterns and performance outcomes of innovation orientation,  
53 *Journal of the Academy of Marketing Science*, 39:870-888.  
54  
55  
56  
57

- 1  
2  
3 Sundström, A., Ahmadi, Z. and Hyder, A.S. 2016. Market and innovation orientation typology:  
4 proposition and illustrations, *Marketing Intelligence & Planning*, 34(3): 376-393  
5  
6  
7  
8 Talke, K., Salomo, S. and Kock, A. 2011. Top Management Team Diversity and Strategic Innovation  
9 Orientation: The Relationship and Consequences for Innovativeness and Performance, *Journal of*  
10 *Product Innovation Management*, 28(6): 819-832.  
11  
12  
13  
14  
15 Teichert, T. and Bouncken, R. 2011. Rigidities Considered: Supplier Strategies for Integrated Innovation,  
16 *International Journal of Management*, 15(1): 95-119.  
17  
18  
19  
20 Teixeira, E. and Werther, W. 2013. Resilience: Continuous renewal of competitive advantages, *Business*  
21 *Horizons*, 56(3): 333-342.  
22  
23  
24  
25 Theodosiou, M., Kehagias, J. and Katsikea, E. 2012. Strategic orientations, marketing capabilities and firm  
26 performance: An empirical investigation in the context of frontline managers in service organizations,  
27 *Industrial Marketing Management*, 41(7): 1058-1070.  
28  
29  
30  
31  
32 Tseng, C. and Chen, L. 2014. Determinants of subsidiary's technological capability - examining the roles  
33 of subsidiary-local supplier linkage, *Journal of Business & Industrial Marketing*, 29(5): 374-386.  
34  
35  
36  
37 Ussahawanitchakit, P. 2008. Impacts of Organizational Learning on Innovation Orientation and Firm  
38 Efficiency: an Empirical Assessment of Accounting Firms in Thailand, *International Journal of Business*  
39 *Research*, 8(4):1-12.  
40  
41  
42  
43  
44  
45 Van Muijen, J.J. and Koopman, P.L. 1994. The Influence of National Culture on Organizational Culture: A  
46 Comparative Study Between 10 Countries, *European Work & Organizational Psychologist*, 4(4):367-  
47 380.  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57

1  
2  
3 Vorhies, D. W., & Morgan, N. A. 2003. A configuration theory assessment of marketing organization fit  
4 with business strategy and its relationship with marketing performance, *Journal of Marketing*, 67(1):  
5  
6 100–115.  
7  
8

9  
10  
11 Walter, A. 1999. Relationship Promoters: Driving Forces for Successful Customer Relationships, *Industrial*  
12  
13 *Marketing Management*, 28(5):537-551.  
14

15  
16 Wang, S. and Cheung, W. 2004. E-Business Adoption by Travel Agencies: Prime Candidates for Mobile e-  
17  
18 Business, *International Journal of Electronic Commerce*, 8(3): 43-63.  
19

20  
21 Wang, C.L. and Ahmed, P.K. .2004. The development and validation of the organizational innovativeness  
22  
23 construct using confirmatory factor analysis, *European Journal of Innovation Management*, 7(4): 303-  
24  
25 13.  
26

27  
28 Wang, Q., Wang, Z. and Zhao, X. 2015. Strategic orientations and mass customisation capability: the  
29  
30 moderating effect of product life cycle, *International Journal Of Production Research*, 53(17): 5278-  
31  
32 5295.  
33  
34

35  
36 Watson, R.T., Boudreau, M-C., Chen, A.J. and Sepúlveda, H.H. 2011. Green projects: An information  
37  
38 drives analysis of four cases, *The Journal of Strategic Information Systems*, 20(1): 55-62.  
39

40  
41 Wiig, K.M. 1997. Integrating intellectual capital and knowledge management, *Long Range Planning*,  
42  
43 30(3): 399-405.  
44

45  
46 Wiklund, J. 1999. The sustainability of the entrepreneurial orientation–performance relationship,  
47  
48 *Entrepreneurship Theory and Practice*, 24(1): 37–48.  
49

50  
51 Wu, C-W. 2016. The performance impact of social media in the chain store industry, *Journal of Business*  
52  
53 *Research*, 69(11): 5310-5316  
54  
55  
56  
57

- 1  
2  
3 Wu, X., Dou, W., Du, J. and Jiang, Y. 2015. Production network positions, innovation orientation and  
4  
5 environmental dynamics: an empirical analysis of Chinese firms, *International Journal of Technology*  
6  
7  
8 *Management*, 67(1): 77-102.  
9
- 10 Xiao, S.H. and Nicholson, M. 2013. A Multidisciplinary Cognitive Behavioural Framework of Impulse  
11  
12 Buying: A Systematic Review of the Literature, *International Journal of Management Reviews*, 15(3):  
13  
14 333-356  
15  
16  
17
- 18 Yang, J., Rui, M., Rauniar, R., Ikem, F. and Xie, H. 2013. Unravelling the link between knowledge  
19  
20 management and supply chain integration: an empirical study, *International Journal Of Logistics:*  
21  
22 *Research & Applications*, 16(2): 132-143  
23  
24
- 25 Yang, J., Yu, G., Liu, M. and Rui, M. 2016. Improving learning alliance performance for manufacturers:  
26  
27 Does knowledge sharing matter, *International Journal of Production Economics*, 171: 301-308  
28  
29
- 30 Yusof, N.A., Lai, K.S. and Kamal, E.M. 2017. Characteristics of innovation orientations in construction  
31  
32 companies, *Journal of Engineering, Design and Technology* (STILL TO PRESS)  
33  
34
- 35 Zehir, C., Altindag, E. and Acar, A.Z. 2011. The Effects of Relationship Orientation through Innovation  
36  
37 Orientation on Firm Performance: An Empirical Study on Turkish Family-Owned Firms, *Procedia -*  
38  
39 *Social and Behavioral Sciences*, 24: 896-908.  
40  
41
- 42 Zhang, J. and Duan, Y. 2010. Empirical study on the impact of market orientation and innovation  
43  
44 orientation on new product performance of Chinese manufacturers, *Nankai Business Review*  
45  
46 *International*, 1(2): 214-231.  
47  
48
- 49 Zhang, J., Jiang, Y. and Zhu, M. 2015. Perceived environmental turbulence, strategic orientations and  
50  
51 new product success : A comparative study of SMEs and large manufacturing exporters, *Journal of*  
52  
53 *Advances in Management Research*, 12(1): 43-54.  
54  
55  
56  
57

- 1  
2  
3 Zhang, J. and Zhu, M. 2016. Market orientation, product innovation and export performance: evidence  
4  
5 from Chinese manufacturers, *Journal of Strategic Marketing*, 24(5): 377-397  
6  
7  
8 Zhou, K. Z., Gao, G. Y., Yang, Z. and Zhou, N. 2005. Developing strategic orientation in China: antecedents  
9  
10 and consequences of market and innovation orientations, *Journal of Business Research*, 58(8): 1049-  
11  
12 1058  
13  
14  
15 Zobel, A-K., Lokshin, B. and Hagedoorn, J. 2017. Formal and informal appropriation mechanisms: The  
16  
17 role of openness and innovativeness, *Technovation*. 59: 44-54  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
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Antecedents of Innovation Orientation		References
Innovative culture	Encouraging new ideas	Baregheh et al, 2012
	Organization commitment, group work culture	Zhou et al, 2005; Engelen et al, 2014; Gundry et al, 2016; Acikzog and Gonsel, 2016
	Leadership focus (TMT)	Zhou et al, 2005; Kraiczy et al, 2015 Zehir et al, 2011
	Organisational trust and respect of borders between employees Leadership that provides an appropriate model that is 'consistent with the values the leader espouses'	Engelen et al, 2014
	Empowering employees and supporting individual creativity	Ettlie and O'Keefe, 1982; Hurley and Hult, 1998; Baregheh et al, 2012; Grundstrom et al, 2012; Acikzog and Gonsel, 2016
	Learning organisation	Hurley and Hult, 1998; Saenz et al, 2007
Flexible structures	Flat structure	Kraiczy et al, 2015
	Flexibility	Van Muijen and Koopman, 1994; Maltz et al, 2006; Zobel et al, 2017
	Organisational ambidexterity	McDermott and Prajogo, 2012
	Diversity of TMT	Talke et al, 2011
	Speed of decision making has limited impact	Maltz et al, 2006
Capital & knowledge capabilities	Utilising human capital, internal and external knowledge	Stock and Zacharias, 2011; Kuan-Liang and Chao-Hung, 2014
	Availability of resources	Silva et al 2014
	IT Capability	Chen et al, 2009
	Effectuation	Roach et al, 2016
Understanding Environmental Dynamics	Innovating faster than competitors, adopting a cross functional approach	Baregheh et al, 2012
	Gathering information on customers, consumers, and competitors	Dobni, 2010; Stock and Zacharias, 2011; Baregheh, et al, 2012; Silva et al, 2014, Wu et al, 2015
	Market orientation	Grinstein, 2008; Ergun and Kuscu, 2013
	Managing market dynamism and competitiveness	Manu, 1992; Stock and Zacharias, 2011; Prajogo and McDermott, 2014; Wu et al, 2015; Zhang et al, 2015; Sundstrom et al, 2016
	Competitive intensity	Zhang et al, 2015
	Knowledge sourced from Internal and External stakeholders	Ayuso et al, 2011
	Relationship orientation	Zehir et al, 2011
	Managing technological and market turbulence	Zhang et al, 2015

Table. 1 – Thematic categorisation of Antecedent factors



Category	Performance Areas	Measures	References
Objective	Financial	Profitability	Maltz et al, 2006; Simpson et al, 2006; Chen et al, 2009; Jaakkola et al, 2010; Chou and Yang, 2011; Zehir et al, 2011; Altindag and Zehir, 2012; Baregheh et al, 2012; Cheung et al, 2012; Grundström et al, 2012; Theodosiou et al, 2012; Prajogo et al, 2013; Wu et al, 2015; Lii and Kuo, 2016; Roach et al, 2016; Wu, 2016; Chuang and Lin, 2017; Jalilvand, 2017
		Revenues before taxes	Altindag and Zehir, 2012; Grundström et al, 2012
		Sales	Appiah-Adu and Singh, 1998; Walter, 1999; Maltz et al, 2006; Chen et al, 2009; Jaakkola et al, 2010; Chou and Yang, 2011; Theodosiou et al, 2012; Prajogo et al, 2013; Kraiczy et al, 2015; Wu et al, 2015; Lii and Kuo, 2016; Roach et al, 2016; Wu, 2016; Jalilvand, 2017
		Return on Investment (ROI)	Manu, 1992; Appiah-Adu and Singh, 1998; Simpson et al, 2006; Jaakkola et al, 2010; Stock and Zacharias, 2011; Cheung et al, 2012; McDermott and Prajogo, 2012; Lii and Kuo, 2016; Wu, 2016; Jalilvand, 2017
		Return on Sales (ROS)	Manu, 1992; Lii and Kuo, 2016
		Gross margin	Manu, 1992; Stock and Zacharias, 2011
		Cash flow	Manu, 1992; Zehir et al, 2011
	Growth	Growth rate	Chou and Yang, 2011; Altindag and Zehir, 2012; Baregheh et al, 2012; Grundström et al, 2012; Dobni et al, 2015; Kraiczy et al, 2015; Wu et al, 2015; Roach et al, 2016; Wu, 2016; Chuang and Lin, 2017
		Employee numbers	Altindag and Zehir, 2012; Kraiczy et al, 2015
		Number of new customers	Altindag and Zehir, 2012
	Innovativeness	Number of patents	Ayuso et al, 2011; Dhewanto and Sohal, 2014
		Number of innovations introduced	Bhaskaran, 2006
		Process improvements linked to efficiency	Ussahawanitchakit, 2008; Caerteling et al, 2011; Cheung et al, 2012; Ripolles-Melia et al, 2010; Gundry et al, 2016; Lii and Kuo, 2016
		New Product Programme (NPP)	Olson et al, 2005; Appiah-Adu and Singh, 1998; Zhang and Duan, 2010; Stock and

		success	Zacharias, 2011; Chou and Yang, 2011; Altindag and Zehir, 2012; Dhewanto and Sohal, 2014; Kraiczy et al, 2014; Zhang et al, 2015; Gundry et al, 2016; Stock and Schnarr, 2016; Zhang and Zhu, 2016
	Market position	Repeat Business	Teichert and Bouncken, 2011; Cheung et al, 2012
		Market Share	Manu, 1992; Simpson et al, 2006; Jaakkola et al, 2010; Zehir et al, 2011; Theodosiou et al, 2012; Prajogo et al, 2013; Lii and Kuo, 2016; Wu, 2016; Chuang and Lin, 2017
Subjective	Organisation-related	Brand performance/ Image	Chen et al, 2009; Lee et al, 2016
		Reputation	Chen et al, 2009; Teichert and Bouncken, 2011
		Perceived organisation performance	Olson et al; 2005; Zehir et al, 2011; Guo et al, 2015; Roach 2016; Sundstrom et al, 2016
		Employee confidence of future performance	Zhou et al, 2005
		Job Satisfaction	Zhou et al, 2005
		Supplier Integration/ relationships	Lii and Kuo, 2016; Yang et al, 2013; Yang et al, 2016
	Internal Capability-related	Organisational learning	Maltz et al, 2006
	Customer-related	Customer equity	Ngo and O'Cass, 2011; Teichert and Bouncken, 2011; Lii and Kuo, 2016; Jalilvand, 2017
		Customer recommendations	Teichert and Bouncken, 2011
		Customer satisfaction	Teichert and Bouncken, 2011; Theodosiou et al, 2012; Jalilvand, 2017
		Service Improvement	Guo et al, 2015; Chuang and Lin, 2017; Jalilvand, 2017

Table 2. Thematic categorisation of performance measures

Category	Outcomes	Measures	References
Capability Development	Organisation Related	Culture	Cheung et al, 2011
		Strategy Implementation	Kortmann, 2015
		Relationship Development	Walter, 1999; Lii and Kuo, 2016; Yang et al, 2016
		Firm Efficiency	Ussahawanitchakit, 2008
		e-Business Intent	Wang and Cheung, 2004
	Internal capability - related	Administrative capability	Gundry et al, 2016
		Process performance	Caerteling et al, 2011
		Service delivery	Chen et al , 2009; Guo et al, 2015
		Emergent strategy development	Dobni, 2015
		Competitive strategy development	Dobni, 2010
		Customer knowledge management (CKM)	Fidel et al, 2015;
		High supply chain management competences	Hsu et al, 2011; Teichert and Bouncken, 2011
		Procedural and declarative memory on projects	Keskin, 2009
		Influence tactics	Steensma et al, 2009
		Marketing capabilities	Theodosiou et al, 2012
		Mass customisation	Wang et al, 2015
		Tech commercialisation capability/R&D	Dhewanto and Sohal, 2015
		Internal integration and adoption of new processes	Lii and Kuo, 2016
	Customer related	Customer orientation	Appiah- Adu and Singh, 1998
		Customer benefits	Caerteling et al, 2011
Market orientation		Chou and Yang, 2011; Sundstrom et al, 2016	
Customer Centric Brand Values		Ngo and O’Cass, 2011	

Table 3. Thematic categorisation of capability development

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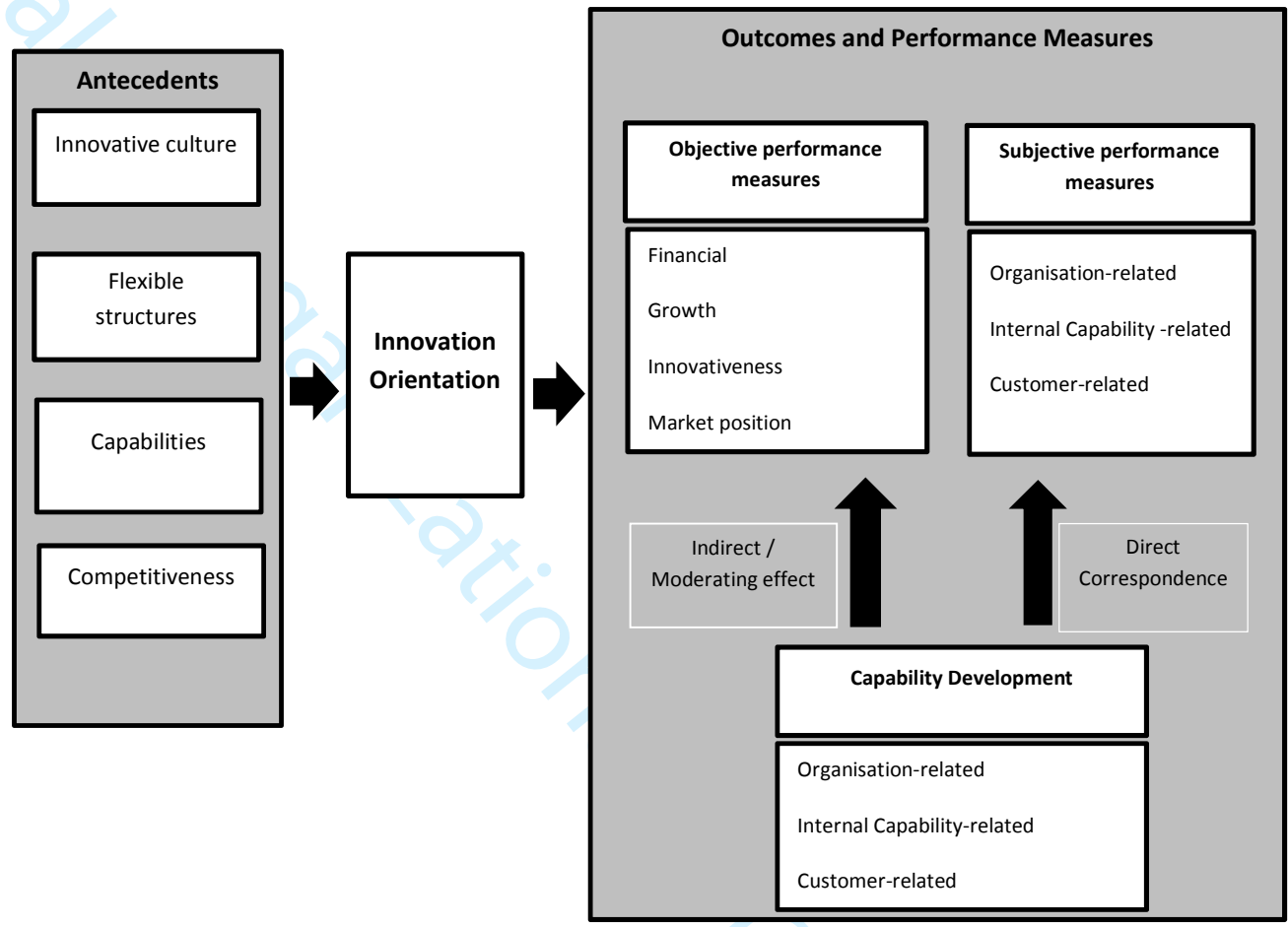


Figure 1. Comprehensive Model of Innovation Orientation (source: the authors)