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Building affective commitment in a financial institution through an ambidexterity context¹

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Abstract

Purpose

Ambidexterity refers to the tension between two different business models within the same organisation. This paper examines the significance of individuals' knowledge exploration and exploitation activities in an organisation's ambidexterity context, along with how they affect the creation of an affective commitment in the workforce. The study then investigates how an organisation's ambidexterity context contributes to employees' affective commitment to learning.

Design

These relationships are examined through an empirical investigation of 219 employees in the financial sector, using structural equation modelling validated by factor analysis.

Findings

The results indicate that in order to be ambidextrous, managers need to address an ambidexterity context, so could happen simultaneously explorative and exploitative activities. Another interesting contribution of this study has been questioning how explorative and exploitative activities are linked to affective commitment and the respective weight placed upon each of them. The results suggest that while the effect of the ambidexterity context on the affective commitment by way of explorative activities is statistically insignificant, the effects of exploitative activities on affective commitment are statistically significant.

Originality

While the relationship between contextual ambidexterity and organisational performance has been researched, the relationship between ambidexterity and affective commitment is less researched. The research has shown that an ambidexterity context is a key component of the process of combining knowledge in a way that is both appropriate for exploring value to the company and effective in exploiting its memory.

Keywords: Contextual ambidexterity, exploration and exploitation of knowledge, employees' affective commitment, financial sector, Spain.

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1. Introduction

Although employee commitment and employee engagement are terms often used to describe different properties of the relationship between an organisation and its employees, the truth is that it is not always easy to differentiate both concepts. While employee commitment may refer to the extent to which employees are emotionally bound to their organisations (Rhoades et al., 2001; Meyer & Herscovitch, 2001), employee engagement often refers to the degree to which employees feel passionate either about what they do (Attridge, 2009) or about their work in general (Schaufeli & Bakker, 2004; Scheepers & Elstob, 2016). For stylistic parsimony, instead of ‘commitment’ and/or ‘engagement’ this paper makes use of the term ‘affective commitment’ as a most encompassing approach to describing the behaviour of those employees who strongly identify themselves with the goals of the organisation and whose desire is to remain a part of it (Mercurio, 2015). When employees feel that the organisational environment is ‘their own’ while remaining a ‘true organisation’, they are likely to develop a positive perception of the organisation and its performance (Allen & Meyer, 1990).

Affective commitment in the context of this paper may therefore be understood as an outcome of organisational support and as a result a concept closely related to employee behaviour (Shore & Wayne, 1993). Affective commitment relies on a clear psychological contract between the employer and the employee (Pekrun & Linnenbrink-Garcia, 2014). In this contract, the employer provides job security and in return the employee offers commitment and a strong performance (Hall & Mirvis, 1995). Meanwhile, emotional bonds are likely to result from employee interactions in the context of the organisation, mainly as a result of remaining sensitive towards others and taking others’ perspectives into account (Pekrun & Linnenbrink-Garcia, 2014). Thus, organisations are expected to offer a work environment which not only supports employee development but also provides an atmosphere that encourages employees to find out meaning, purpose and developmental relationships (Cullinane & Dundon, 2006; Goh & Sandhu, 2013).

An organisation is regarded as ambidextrous if it has relatively equal emphasis on both explorative and exploitive processes (Tushman & O’Reilly, 1996; He & Wong, 2004). However, the knowledge structures needed for knowledge exploration are radically different from those required for its exploitation. The simultaneous pursuit of both processes therefore becomes a challenging endeavour for the firm. (Leonard-Barton, 1992; Levinthal & March, 1993; Hannan *et al.*, 1996; Macinnes, 2005). In that sense, the concept of a knowledge corridor emerge as a valuable intervention to support sharing of knowledge structures within the organisation. The term ‘knowledge corridors’ refers to structures (routines, procedures, values etc.) that provide employees with mechanisms and therefore an opportunity for the examination of new perceptions or relationships for either their rejection or adoption (Martelo-Landroguez and Cegarra 2014).

In this paper, the different combinations of factors that facilitate exploration and exploitation of knowledge represent distinct types of knowledge corridors. Such corridors potentially allow employees to change the way they interpret their perceptions and create new knowledge using both exploration and exploitation of new information, skills, and processes (He & Wong, 2004; Martelo-Landroguez and Cegarra 2014). At the same time, in order to strengthen the distinct types of knowledge corridors and thus become an ambidextrous organisation, consistency and unity of purpose, along with a context where both exploration

and exploitation can be supported, become a requirement (He and Wong 2004, Gibson and Birkinshaw 2004).

There is consensus about the importance of maintaining an appropriate balance between exploration and exploitation of knowledge for organisations to thrive in the current socio-economic context (March, 1991; Gupta *et al.*, 2006; Gibson and Birkinshaw, 2004). Furthermore, Goh & Sandhu (2013) argue that such a balance becomes an imperative if affective commitment is expected to flourish and drive performance within the firm. Although improving the commitment of employees to an organisation and its vision is a key challenge for management in the current socio-economic context, particularly in the banking sector (Wright *et al.*, 2009; Abdullah & Muhammad, 2012; Sohaib *et al.*, 2013), to the best of our knowledge no research has been conducted which seeks to understand the challenges associated to achieving a balance between exploration and exploitation in the context of the Spain financial sector. Attempts to improve employees' affective commitment in banks are often unsuccessful. In a sector which is under pressure from different directions, the human resources (e.g. cashiers, assistant managers, finance managers and branch managers) cannot always "manage" the tension between exploring new practices and exploiting old certainties, often failing to perceive threats or appropriately respond to ongoing changes.

In order to address this gap, this study investigates the impact of knowledge corridors on affective commitment in a commercial bank in Spain. In doing so, we seek to help organisations to understand how an ambidexterity context can help maintain an appropriate balance between exploration and exploitation of knowledge, and how it comes to be a primary factor in the creation of affective commitment in their employees. The rest of this paper is organised as follows: the key factors defining an ambidexterity context and affective commitment are discussed in section 2; the research hypotheses are presented in section 3; section 4 describes the conceptual model that was developed and tested to confirm the relationship between an ambidexterity context and affective commitment, as well as its effects on organisational performance. Finally, results of the analysis are presented in sections 5, with the discussion and conclusions in section 6.

2. Conceptual framework

There is consensus in the organisational learning community that while knowledge management deals contents acquired, created or used by the organisation (Nonaka, 1994), organisational learning studies focus on the processes through which members of the organisation acquire new knowledge related to its environment, functions and culture (Easterby-Smith & Lyles, 2003; Argote, 1999). Productivity and quality-of-work-life have been defined in terms of people's reaction to work, particularly individual outcomes related to job satisfaction and mental health (Cummings & Worley, 2015). It is no surprise that organisational learning has been described as a tool used to support cooperation among employees (Christensen *et al.*, 2006). Thus, Benner & Tushman (2003) have argued that organisational learning requires assessing the organisation along the following two critical dimensions: (1) individuals within the organisation exploring new facts or procedures, and (2) individuals exploiting the knowledge already available within the organisation.

The exploration of new knowledge has been defined as "the pursuit of knowledge of things that might come to be known," whereas the exploitation of available knowledge is "the use and development of things already known" (Levinthal and March, 1993: 105). In this respect,

building on a previous work (Jansen et al., 2006), Jansen et al. (2009) demonstrated the following hypothesis: while organisations that engage in exploratory innovation pursue new knowledge and develop products and services for emerging customers and markets, organisations pursuing exploitative innovation build on existing knowledge resources and extend existing products and services for current customers and markets. As our study focuses on individuals' perceptions, we argue that exploration and exploitation of knowledge are in fact structures through which members of the organization work with tools that allow them to create new knowledge, skills and processes or to use existing knowledge, skills and processes (Martelo-Landroguez and Cegarra 2014).

In the context of a bank, knowledge exploration potentially provides branch members with new opportunities that are identified as a result of the sharing of customer information (Sohaib et al., 2013; Tippins and Sohi, 2003). Furthermore, the multitude of services offered by banks, combined with the wide variety of their customer needs, make of knowledge 'exploration' processes an important mechanism to support the identification and adoption of suitable financial products and alternative solutions to satisfy their customers' demands (Wright et al., 2009). The 'exploitation' process, on the other hand, is understood as the procedural knowledge essential to support processes such as development, decision making, production, efficiency, selection, implementation or execution of new services (Tippins and Sohi, 2003; Fernandez et al., 2014). On these principles, Holmqvist (2004) stresses that knowledge exploitation contributes to understanding and predicting the effects of knowledge already acquired by the organisation and often realised in the form of routines and procedures.

Using the above definitions as a starting point, we would argue that 'explorative activities' facilitate the use of information available internally for the exploration of new opportunities in the relationship with clients. Furthermore, we understand that 'exploitative activities' allow members of the organisation to analyse, interpret, and understand the information available for their internal use. In the specific case of the banking sector it can be argued that organisations need to actively develop both exploration and exploitation activities in order to facilitate organisational learning and hence the achievement of their strategic goals (Wright et al., 2009; Fernandez et al., 2014). It should also be noted that the Spanish banking business is very complex and requires intensive use of such activities to operate competitively (Carballo-Cruz, 2001). Individual members of banking institutions, at both employee and management levels, need access to relevant and up-to-date knowledge in their efforts to effectively deal with a number of challenges to the business including increasing complex customer demands, a global competition for deposits, loans and underwriting fees, shrinking profit margins, and the need to keep up with new technologies (Ali and Ahmad, 2006). In addition to this, banks need knowledge in the provision of services to different categories of customers, which include individuals, associations, businesses and public organisations, each with different service requirements including cash saving, money transfers, loans and foreign trade services (Kubo et al., 2001).

In describing exploration and exploitation as a dichotomous choice, some argue that when an organisation invests in enabling its workforce to explore new knowledge, it must accept that it will be less likely for them to fully exploit existing knowledge (Rothaermel, 2001). Instead of having a notion of exploration and exploitation as mutually exclusive concepts, the authors consider that these are mutually dependent processes. Through exploration, new ideas and actions flow from the employee to the organisation. At the same time, the new knowledge

feeds back from the organisation to the individual, affecting how the human resources think and act. In this dynamic process, Crossan *et al.* (1999) assert that not only does learning occur over time and across levels, but it also creates a tension between individuals' ability to assimilate new knowledge (feed-forward) and exploiting or using what has already been learned (feedback). In this organisational learning process tension arises when the use of existing knowledge by employees hinders their ability to assimilate new knowledge, or vice versa (Hannan *et al.*, 1996). This tension manifests itself not only at the individual level but also at an organisational level and this has been recognised by researchers through the concept of ambidexterity (e.g. Tushman & O'Reilly, 1996; He & Wong, 2004).

The above considerations point to a need for a new approach to management whereby the focus moves away from the individual towards the organisations as a complex adaptive systems that enable continuous creation and capture of knowledge (Uhl-Bien *et al.*, 2007). As Vera and Crossan (2004) have noted, the use of generative organisational activities can lead to both explorative and exploitative knowledge processes.

This paper adopts a knowledge perspective of explorative and exploitative knowledge activities on insights gained through an understanding of these as complementary corridors (Martelo-Landroguez & Cegarra, 2014). Views like this enable and encourage individuals to make their own judgment about how to divide their time between conflicting demands for alignment and adaptability (Tushman & O'Reilly, 1996; He & Wong, 2004). In line with these views, early work by Cegarra and Cepeda (2007) proposed a comparison among three knowledge perspectives. The framework placed its emphasis on how managers could promote change and renewal in SMEs. To achieve this, three models are surveyed and compared in terms of how explorative and exploitative knowledge corridors interact and interfere with each other (ER→ET; ET→ER; ER=ET). The study results found that it was seen necessary to encourage the alignment and parallelism of knowledge exploitation and exploration in order to develop better products and services. This research contributes to better understand how the alignment and parallelism of knowledge exploitation and exploration can be fostered through an ambidexterity context. In line with the above, the aim is to assess the mutual impacts between explorative activities and the successful adoption and use of exploitative knowledge activities (Tushman & O'Reilly, 1996; He & Wong, 2004).

3. The proposed research model

The basic dilemma confronting organisations in this context consists of finding mechanisms to allow for sufficient exploitation to ensure its current viability and, at the same time, to devote enough energy to exploration to ensure its future viability (He & Wong, 2004). Yu *et al.* (2013) for instance show that managers should let service workers exercise their own judgment when deciding when or what to up- or cross-sell. In order to address this challenge, some authors have argued that ambidexterity can arise from punctuated equilibrium or sequential attention to exploration and exploitation (Burgelman, 2002). However, some other authors suggest that such a balance can be achieved through the use of both exploration and exploitation in parallel or simultaneously (He & Wong, 2004; O'Reilly & Tushman, 2008; Jansen *et al.*, 2008).

In this paper, the authors refer to 'ambidexterity context' as the combination of factors that facilitate positive behaviours in the workforce, such as openness to creative ideas, valuing a healthy communication with colleagues and management, and a management style that

values all employees and their contributions (He & Wong, 2004; O'Reilly & Tushman, 2008). This context enables organisations to use both the exploration and exploitation processes equally (Birkinshaw & Gibson, 2004). In order to operationalise the ambidexterity context, the authors argue that managers need to actively develop an ambidexterity context which maintains a balance between exploration and exploitation (Cegarra & Dewhurst, 2007). An ambidexterity context which aims at stimulating organisational learning should promote knowledge sharing across the organisation by encouraging different types of learning processes (Cegarra & Dewhurst, 2007). Thus, by supporting continuous learning, inquiry, dialogue and team learning, organisations are able to find a balance between flexibility with respect to organisation procedures and an increased participation in the decision-making process, promoting values such as risk-taking and reward failure (Amabile, 1998). This specific type of context enables managers to attain their objectives (Sánchez-Quirós 2009) and fosters the continuous improvement of existing processes (Gil-López and Gallego-Gil 2012). Below is a description of the three proposed processes.

- Continuous learning structures (routines, procedures, values etc.) are factors that provide employees with the opportunity to examine and either reject or adopt new or modified knowledge structures. That is, allowing for employees to consider alternative interpretations of the information available within the organisation. This potentially allows for individuals to change the way they interpret their perceptions and create new knowledge (Song *et al.*, 2009).
- Organisational structures (routines, procedures, values etc.) facilitate enquiry and dialogue. An example of this is how organisations facilitate the adoption of new individual habits (routines, assumptions) in situations where individuals both recognise the need to change existing habits (routines, assumptions) and are also motivated to change their old habits, routines and assumptions (Song *et al.*, 2009).
- Finally, team learning flourishes when employees respect each others' views (Song *et al.*, 2009). This way, they will be able to collaborate and share ideas in order to create a new shared understanding that will become new knowledge for the organisation (Song *et al.*, 2009).

At this point it is understood that ambidexterity manifests itself through attributes such as well informed and motivated staff, which calls for employees to make choices between alignment-oriented and adaptation-oriented activities in their everyday activities (Birkinshaw and Gibson, 2004). From employee's perspective, they benefit from an ambidexterity context by having access to better knowledge structures (e.g. routines and processes) from management and colleagues, by enjoying management support when needed, and by feeling that their work is meaningful and valuable to the company (Simsek, 2009).

This suggests that an ambidexterity context is not necessarily an ambidextrous organisation. While ambidextrous organisations are companies capable of simultaneously exploit existing competencies and explore new opportunities (e.g. Duncan, 1976; Tushman and O'Reilly, 1996), an ambidexterity context at the organisational level refers to cultural factors that enable firms to balance potential conflicting demands of the simultaneous processes of exploring and exploiting knowledge (Gibson and Birkinshaw, 2004).

According to Meyer and Herscovitch (2001), commitment is “a force that binds an individual to a course of action of relevance to one or more targets”. Employees with high organisational commitment are more committed to the goals and values of the organisation,

willing to expend considerably more effort for the benefit of the business (Yousef, 2000). Commitment is linked to positive behavioural intentions and actions that are directly under the control of individuals. Such a behaviour is essential in situations such as those where organisational change programmes are being planned or implemented which involve new work goals, new working methods or new structures (Swailes, 2004). Meyer and Allen's (2007) model of commitment involves three components: affective, normative, and continuance, which reflect emotional ties, perceived obligation, and perceived risks in relation to a target.

Previous research has shown that the workplace environment plays a vital role in motivating employees to perform their assigned work (Chandrasekar, 2010; Kraus et al., 2011). Also, a statistically significant relationship has been found between work environment and affective commitment (e.g. Abdullah & Muhammad, 2012; Dorgham, 2012; Danish et al, 2013). As such, an ambidexterity context becomes a key management objective and therefore the focus of this paper. The use of an ambidexterity context to provide and support continuous and team learning and enquiry and dialogue is expected to improve the affective commitment by enabling employees as well as management to have the freedom to learn from their successes as well as their mistakes.

Therefore, this research proposes the following hypothesis:

H1: The extent to which an ambidexterity context exists will positively determine the levels of affective commitment in their workforce

A set of management practices that enable employees to do their best work and be happy doing it, makes people prone to develop a reasonably clear mental model of the organisation (Cegarra & Dewhurst, 2007), while enabling them to stay engaged in any organisational changes which may take place (O'Reilly & Tushman, 2008; Jansen *et al.*, 2008; Tushman & O'Reilly, 1996). Under this framework, employees feel able to interact with colleagues, discover what goes on in different parts of the organisation, and learn about the organisation's history and future customers (O'Reilly & Tushman, 2013). As Pitaloka and Paramita-Sofia (2012) note, the happier the employees are, the more delightful the customer will be. This means that not only do an ambidexterity context enhance an employee's commitment towards his work and organization (Abdullah & Muhammad, 2012; Dorgham, 2012; Danish et al, 2013), but it also helps employees to perform better explorative activities with information related to customers (Cegarra & Dewhurst, 2007).

Therefore, this research proposes the following hypotheses:

H2: The extent to which an ambidexterity context exists will positively determine the extent to which a company achieves explorative activities

H3: The extent to which an ambidexterity context exists will positively determine the extent to which a company achieves exploitative activities

It should be noted, however, that in certain situations an attempt to create affective commitment may become problematic for management. These situations include for example, those where employees' beliefs, habits, assumptions or previous knowledge do not match existing organisational knowledge structures (Darr *et al.*, 1995). Other contexts include those associated with dysfunctional aspects of management such as excessive centralisation

(Han *et al.*, 1995), or lack of quality (accuracy, completeness or timeliness) of data structures available (Starbuck, 1996). All of these factors generate uncertainty in the workforce. The resulting stress or anxiety can distance employees from the organisation and its vision (Chapman & Ferfolja, 2001).

In order to build affective commitment from its employees, a given organisation needs to favour both exploring and adopting new knowledge, as well as exploiting knowledge that has already been accumulated by its human resources and incorporated into routines, systems, rules or procedures (March, 1991). While exploratory processes such as reliability, openness to employees' adopting new ideas, equity, and role and purpose clarity meet the needs of employees' feeling comfortable in the workplace (Rhoades *et al.*, 2001), exploitative processes built upon existing procedures, goals and feedback strategies followed by management may lead the human resources to feel competent in their roles (Allen & Meyer, 1990).

It is also important to note that organisational commitment is a psychological concept which reflects the relationship between the employees and the perceived levels of organisational support (Meyer & Herscovitch, 2001) and the way the workforce respond to perceived support (Rhoades *et al.*, 2001; Sayğan, 2011). It is with this in mind that this research proposes that in organisations that are able to balance exploration and exploitation of knowledge, employees will both feel valued and have a positive attitude towards acquiring and applying new knowledge.

The hypotheses put forward under this framework are:

H4: The extent to which a company achieves explorative activities will positively determine the levels of affective commitment in their workforce

H5: The extent to which a company achieves exploitative activities will positively determine the levels of affective commitment in their workforce

Figure 1 provides a synopsis of above arguments. As in a partial mediation model, the independent variable influences the dependent variable directly and indirectly via other variable. In our case, the model assumes that the extent to which an ambidexterity context exists affects the levels of affective commitment directly and indirectly via both explorative and exploitative activities.

Insert Figure 1 about here

4. The empirical study

The target population for this study were employees from the 188 branches of a Spanish commercial bank which operates in the south-eastern region of Spain and in other countries. Before starting with data collection, managers from all 188 Spanish branches were contacted individually and invited to participate in the study. They were informed by telephone of the objectives of the research and were reassured of its strictly scientific and confidential nature, as well as the how the anonymity of participants would be maintained. Out of the 188 managers who were invited, a total of 76 agreed for their employees to participate in the study, representing the 40.42% of all branches.

At the time of the research, 480 employees had worked in those 76 branches for one year or longer. Those 480 employees represented the total population targeted by the research. A total of 219 responses were received, yielding a response rate of 45.6%. The roles of the 2019 respondents were: 36 cashiers, 107 assistant managers and financial managers, and 76 branch managers. The age profile of the sampling population varied between 25 and 60 years.

Descriptive analysis of the data provides the main characteristics of the sample in terms of the variables that are traditionally related to knowledge needs, such as gender, age, and education levels. In this case, 54.8% of the sample was female, the average age of the employees at the time of data collection was 40.37 years, 67.2% of the workers had a first degree and 11.9% had completed postgraduate studies such as a Masters degree or doctorate. Informed and closely monitored by the research team, the data was collected by a company that provides specialist data collection services for research in several domains including information and knowledge management. A visit to each of the branches in the south east region of Spain allowed for managers to be interviewed. The presence of an interviewer increased the co-operation rates and facilitated immediate clarification as and when needed. A structured questionnaire was used to conduct the interviews. In order to collect high-quality data, the interviewers were trained by the research team in a variety of situations likely to be encountered when discussing concepts such as knowledge sharing, learning, etc. As these meetings took place during working hours, the option was given to some respondents to complete the questionnaire at a convenient time and sent it to the team by post.

On completion of the data collection, the authors did a high-level analysis looking for common methods variance (Podsakoff *et al.*, 2003) which is a potential challenge arising from the use of a single informant when collecting data in each company. To do so, two statistical analyses were conducted to ensure the absence of non-response bias (Armstrong and Overton, 1977). Firstly, a factor analysis of all the variables to identify non-response bias showed five factors with eigenvalues greater than 1.0 and the total variance explained was 67.59% of the total variance. Later, in a comparison of early and late respondents (1=June 2011 and 2=July 2011) in terms of explorative activities and exploitative activities, the independent sample t-test revealed no significant difference between the two groups ($p = .41$ and $p = .18$, respectively). In such conditions, non-response bias was not an issue in this study (Armstrong and Overton, 1977).

Measures

The interviews with managers and key employees within the organisation provided an insight into the organisational structure, different tasks and key performance indicators. Several items were modified and a first draft of the questionnaire was tested. All items of the final version of the questionnaire are available in appendix A. The questionnaire constructs were as follows:

- The initial measures for explorative activities (ER) consisted of 4 items adapted from Tippins and Sohi's (2003) scale. Consistent with Tippins and Sohi, ER indicators were closely related to factors encouraging bank employees to track changing markets and share market intelligence with their customers. These items described the way employees face up to change and whether they actively share information, collaborate with other members of the organisation, and recognise the value of new information about

customers. In all cases, responses were drawn from a five-Likert scale (1= strongly disagree and 5= strongly agree).

- The measures for exploitative activities (ET) consisted of 4 items, also adapted from Tippins and Sohi's (2003) scale. The data showed that ET indicators were interwoven with employees' acknowledgement of support available from policies, rules, reporting structures and decision-making protocols in the bank. These facilitate understanding in the workforce of the knowledge and skills available for each organisational member to tap into. In all cases, responses were drawn from a 5-point scale (1= strongly disagree and 5= strongly agree).
- The three dimensions of an ambidexterity context (AC) in the bank were explored:
 - a. Measures for continuous learning (CL) consisted of 3 items taken from a scale designed by Song *et al.* (2009) which focuses on employees' self-awareness of their own mistakes, ways of addressing daily tasks, and behaviours that guide everyday attitudes.
 - b. The framework for enquiry and dialogue (ID) was measured using 3 items adapted from a scale designed by Song *et al.* (2009). Such items describe the way the organisational culture supports questioning, feedback and experimentation among its human resources. This allows for employees to gain productive reasoning skills and express their views, as well as the capacity to listen and inquire into the views of others.
 - c. Finally, team learning (TL) was measured using 3 items adapted from Song *et al.* (2009), which encourage the sharing of ideas between all employees.In all cases, responses were drawn from a 5-point scale (1= strongly disagree and 5= strongly agree).
- Affective commitment (AfC) was measured using 4 items adapted from a scale designed by Rhoades *et al.* (2001). These items focus on a sense of belonging and emotional attachment to the organisation, identification with the organisation's problems and feeling that the organisation has personal meaning for oneself. In all cases, responses were drawn from a 5-point scale (1= strongly disagree and 5= strongly agree).
- This study considers gender as a control variable in order to verify whether the hypothesized relationships still hold even after controlling for this variable. Such incorporation is justified due to the fact that gender can be associated to feelings of engagement (Schaufeli & Salanova, 2007; Kraus *et al.*, 2011).

Assessment of the measures

The data collected was analysed using the PLS-Graph software version 03.00 Build 1058. PLS was selected due to the characteristics of the model and population sample, which met Chin's (2003) criteria. The proposed model is complex and uses reflective indicators, and the data collected is non-normal. Other techniques of structural equation modelling (e.g. the covariance-based model performed by LISREL or AMOS) cannot be applied in these circumstances (Reinartz *et al.*, 2009; Chin & Newsted, 1999; Chin, 2010; Hair *et al.*, 2013). Using PLS involves a two-stage approach (Barclay *et al.*, 1995). The first step required an assessment of the measurement model. This allows for the relationships between the observable or manifest variables and the theoretical concepts or latent variables to be specified. This analysis is performed in relation to individual item reliability, construct reliability, average variance extracted (AVE), and discriminant validity of the indicators of latent variables.

In the second stage, the partially mediated model is evaluated. Sobel's test is not as potent when working with small sample sizes (Pardo & Román, 2013) and several experts, including Dinç (2015) and Tabachnick and Fidell (2013), agree when recommending the use of structural equation models (SEM) in order to soften the problems that derive from the Baron & Kenny's proposal (1986). For example, it allows controlling the measurement error, it offers information on the complete model adjustment degree and it is more flexible than linear regression models. It should also be noted that assessing data normality (along with skewness and kurtosis) is important because many model estimation methods are based on an assumption of normality with small sample sizes (Tabachnick & Fidell 2013). Although inflated goodness of fit statistics and underestimated standard errors are lessened with larger sample sizes (Lei and Lomax, 2005), non-normal data may result in these side effects (MacCallum et al., 1992). Weighted least square, ordinary least square, and asymptotically distribution free estimation methods do not require normality. The normalised multivariate kurtosis was 14.42 and Mardia's coefficient was 44.96 (Mardia, 1970). Therefore, given the non-normality of the data and the sample size of this study, we make use of bootstrapping procedure to test the hypothesised relationships.

In order to analyse the relationship between the different constructs and their indicators, a latent model perspective was adopted in which the latent variable is understood to be the cause of the indicators. First-order constructs or dimensions are therefore referred to as reflective indicators. Four constructs in the model were operationalised as first-order reflective constructs. These were explorative activities, exploitative activities, affective commitment and organisational performance. The ambidexterity context was modelled as a second-order reflective construct. For the measurement model, individual item reliability was assessed (Table 1). The indicators exceeded the accepted threshold of 0.7 for each factor loading (Carmines and Zeller, 1979).

Insert Table 1 about here

The results in Table 2 show that all of the constructs considered are reliable. The values for composite reliability are greater than the stricter value of 0.8 for basic research (Nunnally, 1978). The AVE should be greater than 0.5, meaning that at least 50% variance of the indicators should be accounted for (Fornell and Larcker, 1981). All the constructs in this model exceeded this condition. To assess the discriminant validity, the square root of the AVE (the diagonal in Table 2) was compared with the correlations between the constructs (the off-diagonal elements). On average, each construct relates more strongly to its own measures than to others.

Insert Table 2 about here

As noted above, the ambidexterity context (AC) was operationalised as a second-order construct with three dimensions (i.e. the three facets of the ambidexterity context). A second-order confirmatory factor analysis of a model depicting the continuous learning, the enquiry and dialogue and the framework for team learning was conducted. An examination of the results in Table 3 shows that all first-order and second-order factor loadings were significant, thereby providing evidence that AC is a multifaceted construct construed from continuous learning, enquiry and dialogue, and the framework for team learning. Hence, the second-order factor model demonstrated a composite AC in this study.

Insert Table 3 about here

5. Results

Since PLS makes no distributional assumptions in its parameter estimation, traditional parameter-based techniques for significance testing and modelling were used for this study (Chin, 1998). A significant outcome of the comparison between covariance structure analysis modelling approaches and PLS is that no proper overall goodness-of-fit measures exist for models using the latter (Hulland, 1999). Following the recommendations of Dinç (2015) and Hayes and Preacher (2014), it is tested whether a less restricted model worsened the fit using sequential chi-squared difference tests. This was performed by comparing the partially and fully mediated models in which ambidexterity context affects affective commitment directly and indirectly via the explorative and the exploitative processes with a fully mediated model where ambidexterity context influences affective commitment through the explorative and the exploitative processes. Next, it is tested whether an even less restricted model worsened the fit.

Figure 2 summarizes structural competing links, where the standardised path coefficients (β) and the variance of endogenous variables (R^2) are also included in Figure 2. Chin's F^2 ratio (1998) indicates a significant improvement of the partial mediation model over the fully mediation model ($\Delta R^2=6$; $F^2=.09$). Such an improvement is significant in those cases where F^2 is greater than .02. As shown in Figure 2, a comparison between the two models permits the conclusion that the partially mediated model fits better to the observable data than the fully mediated model. This means that there is strong support for a model where most but not all the knowledge associated to the ambidexterity context is channelled through the explorative and the exploitative activities. Figure 2 also illustrates that the relationship between gender and the studied variables becomes statistically insignificant in both models.

Once the properties of the models had been checked, the next step was the evaluation of the hypothesised relationships developed from consideration of relevant literature. A positive relationship was found between the ambidexterity context and the affective commitment ($a_1=.35$, $p<.01$). In addition, positive relationships exist between the ambidexterity context and explorative activities ($a_2=.40$, $p<.01$) and between the ambidexterity context and exploitative activities ($a_3=.70$, $p<.01$). It is important to highlight that while the direct effect of the explorative activities on affective commitment achieved full statistical verification in the fully mediated model, the direct effect of the ambidexterity context on the affective commitment by way of explorative activities becomes statistically insignificant in the partially mediated model. As illustrated in partially mediated model, the relationship between the explorative activities and the affective commitment was positive, as hypothesised, but not statistically significant ($a_4=.06$, $n.s$). Finally, exploitative activities at a level of ($a_5=.22$, $p<.01$) had a significant effect on affective commitment.

Insert Figure 2 about here

Following the recommendations by Preacher and Hayes (2008), this study has carried out a post-hoc indirect effect analysis to tests the indirect effect of the ambidexterity context on the affective commitment by way of explorative activities and exploitative activities (Table 4). In doing so, this study constructed bias-corrected confidence intervals (CI) around the

coefficient of the indirect effect using the SPSS MEDIANTE macro and a bootstrapping technique (Preacher & Hayes, 2008; Hayes & Preacher, 2014). This is justified by the fact that the bias corrected limits may have slightly elevated error rates (Fritz et al., 2012; Hayes & Scharkow, 2013). Therefore, if the 95% CI surrounding the standardized indirect effect did not include 0, we deemed the indirect effect significant. As Table 4 shows, explorative activities do not mediate the relationship between the ambidexterity context on the affective commitment. However, the indirect effect of the ambidexterity context on the affective commitment via the exploitative activities was 0.154 (i.e. 0.70×0.22), which is statistically significant as the bootstrap interval does not contain the zero value.

Together, from the above analysis, hypotheses 1, 2, 3 and 5 found support, while hypothesis 4 was not supported because, though the direction of the relationship was as hypothesised, the relationship was not significant.

Insert Table 4 about here

6. Discussion

The first contribution of this research is an extension of the basic learning models by adding the consequent variables of an ambidexterity context and affective commitment. This was performed by comparing the partially and fully mediated models in which ambidexterity context affects affective commitment directly and indirectly via the explorative and the exploitative processes with a fully mediated model where ambidexterity context influences affective commitment through the explorative and the exploitative processes.

The partially mediated model fitted better than a likely alternative model with no direct effects of ambidexterity context. The results of these links fully support H1, which means that most but not all the effects associated with the ambidexterity context is channelled through the explorative and the exploitative processes. This confirms as the position adopted by Pitaloka and Paramita-Sofia (2014) when they argue that a working environment (in this case an ambidexterity context) where people have the freedom to learn from their successes as well as their mistakes is associated to feelings of engagement.

The results of this study fully support hypotheses H2 and H3, indicating that an ambidexterity context can be viewed as a prerequisite for employees to pursue both types of processes (Gibson and Birkinshaw, 2004), and overcoming inertia (Becker & Lazaric, 2003). An ambidexterity context -characterised by continuous learning, enquiry and dialogue, and team learning, is one where knowledge is combined by teams to drive different thinking models (Gibson and Birkinshaw, 2004). Teams adopt new ideas and adapt these to the needs of the organisation. Through an ambidexterity context employees have some control over explorative-exploitative processes, that is, over what is being done.

With regard to the testing of hypotheses H4, results did not appear to support the hypothesis that the extent to which a company achieves explorative activities will positively determine the levels of affective commitment in their workforce. A plausible explanation for this may be the fact that while the ambidexterity context strives to ensure that internal stakeholders (e.g. managers and employees) use newly acquired skills for interaction through collective efforts, the resulting knowledge from this context takes time to be understood and

transformed into value by internal stakeholders across the organisation. This could mean that the solutions to the problems resulting from the ambidexterity context need to be adapted through further consultation (e.g. through meetings concerning any issues currently faced by customers) in order to respond to current and prospective customers' needs. Another possible explanation would be the fact that although branch bank employees have some control over explorative activities, they don't have time or resources to check all what is being done through these explorative activities, which in turn could lead to think that bank managers are under-using the effect of explorative activities on affective commitment. Taking these findings into account, it may also be interesting to observe the change in the affective commitment of employees after adopting explorative and exploitative processes through future case studies.

With regard to the testing of hypotheses H5, this research shows that in order to foster affective commitment, organisations need to exploit knowledge, based on the utilisation of already learned routines and procedures. This means that the ability to foster explorative activities have the power to encourage employees to give their best to the organisation. This is in line with the findings of previous researcher (e.g. Birkinshaw and Gibson, 2004) who argue that an ambidextrous organisation benefits from attributes such as a well informed and motivated staff, which in turn drive positive feelings or emotions towards the organisation (Muthuveloo and Che Rose, 2005). A possible explanation for these findings may relate to the fact that using the available knowledge structures sends a positive signal to employees with regard to the extent to which the organisation is willing to invest in their development, seeing the workforce as a key asset to attain added value and caring for their well-being (Dutton *et al.*, 1994). Positive employee perception of these activities leads to higher levels of affective commitment which in turn develops employees' responsibility to react equitably by showing positive attitudes and behaviour (Scandura & Lankau, 1997; Lin, 2007).

The links associated with gender provide somewhat surprising results. The link between gender and the studied variables becomes statistically insignificant in all the relationships. This contradicts the belief inherent in the literature that gender can be associated to feelings of engagement (Schaufeli & Salanova, 2007; Kraus *et al.*, 2011). A possible explanation for this result would be the fact that an ambidexterity context relates to equality between women and men with respect to their treatment, opportunities, and achievements in the workplace. However, although men and women have the same opportunities in an ambidexterity context, this idea cannot be extrapolated to the gender pay gap or the presence of women on corporate boards. In this regard, not only are there fewer women in governing bodies of private companies, but they also receive lower salaries than their male colleagues (Mauleón *et al.*, 2013). Therefore, future research will need to include these control variables to guarantee this equality between women and men.

The above considerations can be assumed to imply that organisations with the highest levels of ambidexterity are supporting both explorative and exploitative processes. These findings have important implications for theories related to organisational learning. In research it is often stated that organisational characteristics are antecedents of organisational commitment (e.g. Dutton *et al.*, 1994; Scandura and Lankau, 1997; Muthuveloo and Che Rose, 2005; Lin, 2007). The results of this research support these traditional views, as they suggest that in order to become ambidextrous, organisations have to reconcile internal tensions and conflicting demands in their task environments. In doing so, an ambidexterity context is an important prerequisite for a shift in the exploration-exploitation balance in organisations.

This has significant implications for management practice. Employees' perception is a key factor to consider when nurturing an ambidexterity context. Whilst the human resources make choices between paradoxical activities (Gibson & Birkinshaw, 2004), an ambidexterity context adds realism to explorative and exploitative processes at the bank's operational level. When branch managers do not consciously seek to understand their employees' information and knowledge needs, the bank is at risk of either over-investing in the development of institutional initiatives to explore new knowledge, or under-investing in mechanisms to translate lessons learnt from employees into an appropriate action plan. Additionally, this research highlights the importance of exploitative activities for individuals, so that not only the firm but its human resources can benefit from exploitation processes. This is important, as most of prior studies on ambidexterity have focused on the organisational level (O'Reilly & Tushman, 2013).

There are some limitations to be acknowledged in this study. First, the total sample size of 219 banking employees may limit the generalisability of these results to a wider population within the financial sector. Secondly, although there is a clear relation between organisational learning (i.e. exploration and exploitation) and an ambidexterity context, the researchers have only provided a snapshot of what are by nature ongoing processes. Third, the constructs for ambidexterity, explorative activities and exploitative activities have been defined as precisely as the literature allowed, and validated by practitioners. However, these constructs can realistically only be thought of as proxies to understand organisational learning, a phenomenon which in itself is not fully measurable. Finally, it is not possible for a model like the one presented in this study to capture all possible moderating effects of environmental turbulence and uncertainty within organisations. Prior research has shown that the effects of cognitive factors on individual, group and organisational performance can vary substantially with environmental conditions. Thus, under the current, unstable conditions in which many organisations operate, the ambidexterity context might produce different results in different types of businesses and where different types of human relations exist.

Future research in this area would benefit from including in the sample stakeholders beyond management and employees, such as customers and other holders of key knowledge related to the business. This would allow for the testing for inter-rater reliability, improving the internal validity of other ambidexterity studies.

7. Conclusions

There is limited research in the area where this study has focused by examining, through an empirical study of 219 employees of a bank, how the existence of an ambidexterity context in an organisation contributes to the exploration and exploitation of knowledge by its employees and how knowledge activates are linked to the nurturing of affective commitment in staff. Subsequently, a first contribution of this research is to shed some light on what may prove to be an important role for employees when it comes to carrying out explorative and exploitative activities. The research has shown that an ambidexterity context is a key component of the process of combining knowledge in a way that is both appropriate for exploring value to the company and effective in exploiting its memory.

Another relevant contribution from this research consists of the analysis of links between affective commitment and both explorative and exploitative activities, as well as the

significant of the effect that each of these types of activities may have on affective commitment. The comparison obtained between the partially and fully mediated models shows that an ambidexterity context will lead to either an improvement on affective commitment or an overestimating of the effect of exploitative activities on affective commitment. Our results suggest that the effect of the ambidexterity context on the affective commitment by way of explorative activities is statistically insignificant. A plausible explanation for this is that while exploitative activities in an organisation encourage individuals to make their own choices as to how they relate to each other in learning-related activities, explorative activities after a banking crisis may challenge that freedom, especially for employees, due in part to the caution derived from uncertainty about the future. In other words, it seems logical to think that when job security is at risk individuals choose to use information available for the delivery of services to clients instead of using it for the exploration of new, potentially high-risk opportunities with clients. Therefore, organisational members may need time to adjust to explorative activities, which will allow them to feel confident as they adjust.

This is important in the current debate of the relationship between affective commitment of staff and organisational structures and models, particularly as staff mobility increases and technologies continue to blur the boundaries of the organisation. The research findings acquire further relevance in the current Spanish and European contexts, where banks have to play a key role in society while they experience significant cuts in budgets.

Finally, this research would support banks and other organisations who are currently over-investing management resources areas such as task autonomy, task significance, task identity, skill variety and supervisory feedback, instead of focusing their management and leadership efforts in developing mechanisms to facilitate an ambidexterity context as a way to improve performance.

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Appendix A: Questionnaire items

<p>Explorative activities: with respect to your organisation indicate the extent to which you agree or disagree (1= strong disagreement and 5= strong agreement):</p> <p>P7.1 ER1: Sharing customer information is the norm within our organisation. P7.2 ER2: Information about our customers is easily accessible to those who need it most within our organisation. P7.4 ER3: Customer information is rarely shared between departments within our organisation. ^a P7.5 ER4: Information concerning our customers is readily available to each department within our organisation. (Source: Tippins & Sohi, 2003)</p>
<p>Exploitative activities: with respect to your organisation indicate the extent to which you agree or disagree (1= strong disagreement and 5= strong agreement):</p> <p>P11.1 ET1: We have a set procedure for handling routine purchase orders from our customers. P11.2 ET2: We have learned from past experience how best to deal with 'hard to please' customers. P11.3 ET3: We have standard procedures that we follow in order to determine the needs of our customers. P11.5 ET4: Experience has taught us what questions to ask our customers. (Source: Tippins & Sohi, 2003)</p>
<p>Continuous Learning: with respect to your organisation indicate the extent to which you agree or disagree (1= strong disagreement and 5= strong agreement):</p> <p>P12.1 CL1: Employees are able to see mistakes from my colleagues. P12.2 CL2: Employees are able to identify problems (new ways of doing things) easily. P12.3 CL3: Employees try to help each other to learn from their own mistakes. (Source: Adapted from Song <i>et al.</i>, 2009)</p>
<p>Inquiry and Dialogue: with respect to your organisation indicate the extent to which you agree or disagree (1= strong disagreement and 5= strong agreement):</p> <p>P13.1 ID1: Open and honest feedback is provided to all other employees. P13.2 ID2: They listen to the views of others before speaking. P13.5 ID3: They treat other employees with respect. (Source: Adapted from Song <i>et al.</i>, 2009)</p>
<p>Team Learning: with respect to your organisation indicate the extent to which you agree or disagree (1= strong disagreement and 5= strong agreement):</p> <p>P14.1 TL1: Employees are free to adjust their goals as needed. P14.2 TL2: Employees treat their members as equals, regardless of rank, culture or other differences. P14.3 TL3: Employees focus on the tasks of the group and how well the group works. (Source: Adapted from Song <i>et al.</i>, 2009)</p>
<p>Affective Commitment: with respect to your organisation indicate the extent to which you agree or disagree (1= strong disagreement and 5= strong agreement):</p> <p>P21.1 AC1: I am proud to work for the company. P21.2 AC2: I feel committed to the company. P21.3 AC3: I feel I belong to the company. P21.5 AC4: I would be proud to stay with the company for the rest of my career. (Source: Adapted from Rhoades <i>et al.</i>, 2001)</p>

Figure: 1. Conceptual Framework

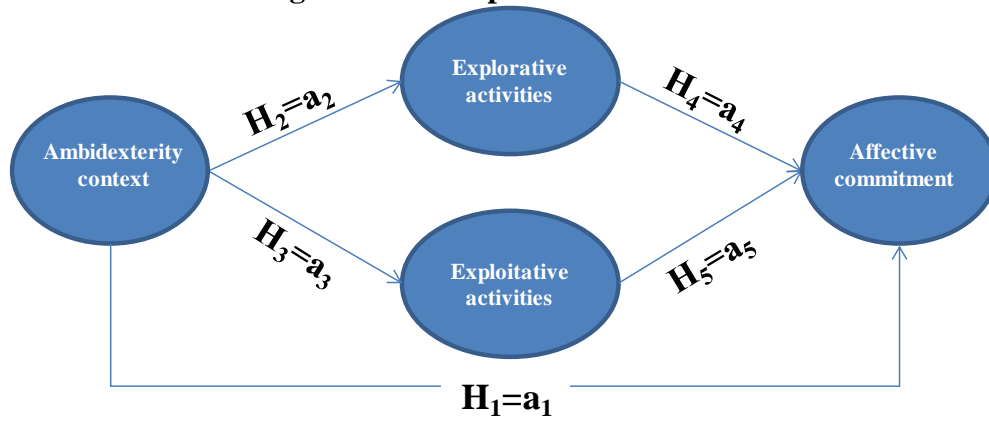
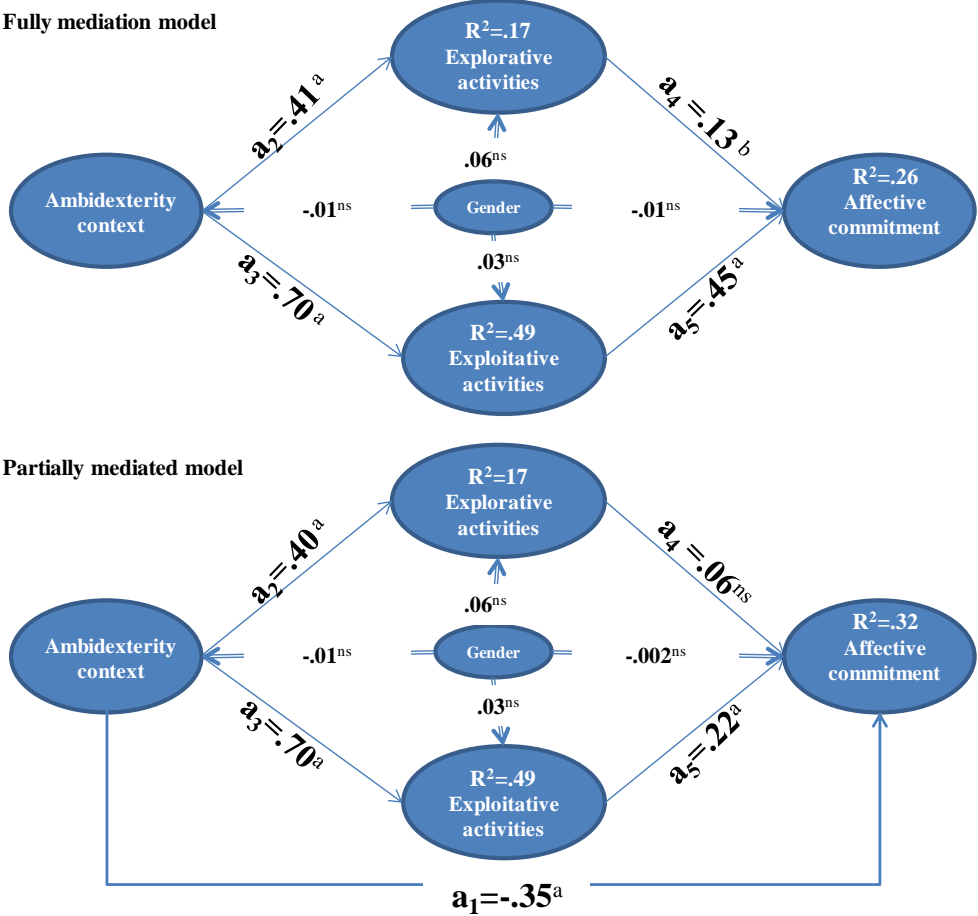


Figure: 2. Structural equation models of the effects of affective commitment



Notes: ^a <.01; ^b <.05; ns = not significant (based on a Student t (4999) distribution with one tail)

Table 1: Factor Loadings of reflective constructs

	ER	ET	CL	ID	TL	AC
ER1	.77	.18	.25	.19	.32	.21
ER2	.78	.19	.21	.14	.32	.15
ER3	.84	.36	.37	.31	.37	.32
ER4	.82	.35	.32	.26	.43	.20
ET1	.33	.80	.52	.43	.47	.36
ET2	.29	.86	.66	.65	.54	.45
ET3	.32	.71	.42	.27	.34	.32
ET4	.24	.84	.60	.56	.47	.45
CL1	.33	.66	.91	.68	.62	.40
CL2	.42	.62	.90	.65	.66	.46
CL3	.24	.60	.87	.78	.58	.45
ID1	.25	.55	.70	.89	.58	.36
ID2	.29	.57	.73	.92	.58	.43
ID3	.23	.52	.65	.84	.56	.53
TL1	.36	.36	.40	.28	.70	.23
TL2	.30	.48	.58	.58	.89	.41
TL3	.46	.56	.70	.68	.90	.48
AC1	.26	.49	.48	.47	.43	.92
AC2	.24	.48	.45	.48	.44	.91
AC3	.30	.42	.42	.41	.40	.90
AC4	.24	.41	.41	.44	.40	.88

Notes:

ER= Explorative activities. ET = Exploitative activities. CL= Continuous Learning. ID=Inquiry and Dialogue. TL= Team Learning. AC= Affective commitment.

Table 2: Construct correlation matrix

	Mean	S.D	CA	CR	AVE	R ²	Correlation matrix						
							1	2	3	4	5	6	
1. Explorative activities	3.12	.70	.82	.88	.64	.17	.80						
2. Exploitative activities	3.71	.57	.82	.88	.65	.50	.35	.81					
3. Continuous Learning	3.78	.72	.87	.92	.80	.87	.37	.70	.89				
4. Inquiry and Dialogue	3.84	.72	.85	.91	.77	.82	.29	.62	.79	.88			
5. Team Learning	3.55	.79	.77	.87	.69	.73	.45	.57	.70	.65	.83		
6. Affective Commitment	3.96	.87	.93	.95	.82	.26	.29	.50	.49	.50	.46	.90	

Notes:

Mean = the average score for all of the items included in this measure; S.D. = Standard Deviation; CA= Cronbachs Alpha; CR = Composite Reliability; AVE = Average Variance Extracted; n.a. = not applicable. The bold numbers on the diagonal are the square root of the Average Variance Extracted. Off-diagonal elements are correlations among construct.

Table 3: Second-order confirmatory factor analysis of the ambidexterity context

First-order construct	First-order			Second-order	
	Indicator	Loading	<i>t</i> -value	Loading	<i>t</i> -value
Continuous Learning	CL1	.91	68.90	.93	87.26
	CL2	.90	52.41		
	CL3	.87	37.35		
Inquiry and Dialogue	ID1	.89	48.05	.91	62.20
	ID2	.91	66.59		
	ID3	.84	26.19		
Team Learning	TL1	.69	11.52	.85	33.64
	TL2	.88	50.60		
	TL3	.90	61.85		

Table 4: Indirect effects

Indirect effects on	Point estimate	Percentile bootstrap 95% confidence interval			
		Lower	Upper	p-value	
Affective commitment	$AMB \rightarrow ER \rightarrow AC = a_2 \times a_4$	0.024	-0.029	0.16	0.195
	$AMB \rightarrow ET \rightarrow AC = a_3 \times a_5$	0.154	0.010	0.268	0.040

Notes:

AMB= Ambidexterity context. ER= Explorative activities. ET = Exploitative activities. AC= Affective commitment.