



# *New influencing dimensions to creating a climate for innovation – case of the Egyptian telecommunications industry*

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## **New Influencing Dimensions to Creating a Climate for Innovation- Case of the Egyptian Telecommunications Industry**

### **Summary**

The interest in leading and managing for innovation is growing among practitioners and academics (Isaksen and Akkermans, 2011). The aim of this research is to investigate and identify further dimensions of climate for innovation within the Egyptian telecommunications industry. This study contributes to the innovation management literature by identifying further dimensions of climate for innovation that foster organisation innovativeness in a real-life setting. This study pinpoints dimensions of climate for innovation that were not identified in previous climate for innovation frameworks. This study contributes to the climate for innovation by adding insights from the Egyptian telecommunications sector.

**Track- Full Paper: 6000 words**

# **New Influencing Dimensions to Creating a Climate for Innovation- Case of the Egyptian Telecommunications Industry**

## **Introduction**

The interest in leading and managing for innovation is growing among practitioners and academics alike (Isaksen and Akkermans, 2011). Innovation is considered as a competitive tool for organisation's long term performance and an important means for adapting to the needs of a changing and evolving business environment (Uzkurt et al., 2013). Therefore, it is vital for organisations to develop work environments that promote innovation. This study contributes to the innovation management literature by identifying further dimensions of climate for innovation that foster organisation innovativeness in a real-life setting. Most studies conceptualise climate for innovation in terms of certain variables or determinants. An in-depth understanding of further factors that foster innovation in organisations is required (Černe et al., 2014; Hon and Lui, 2016). There is a need to develop a framework that includes more dimensions of climate for innovation to investigate the relationship between climate for innovation and product/service innovation at an organisational level (Lowenberger, 2013; Dul and Ceylan, 2014). This study pinpoints dimensions of climate for innovation that were not identified in previous climate for innovation frameworks. This study contributes to the innovation management literature by adding insights from the Egyptian telecommunications sector. Previous studies on climate for innovation were in Western and Asian contexts. This is the first study to investigate the employees' perceptions of climate for innovation within the telecommunications industry in Egypt.

## **Literature Review**

Innovation is of interest to practitioners and researchers across a range of business and management disciplines. Research on innovation points out that the innovation process must commence with strategic intent to provide a sense of direction for employees (Martins and Terblanche, 2003; Bate, 2010). Employees represent the best resource for any organisation striving to maintain a competitive advantage (Agbor, 2008). Mumford and Gustafson (1998) argue that even when employees have the capability to innovate, their willingness to do so depends on the organisational climate for innovation. King et al. (2007) argue that maintenance of a climate which supports the production and implementation of innovative ideas or processes is related to the performance of organisations.

Climate for innovation can be defined as the extent to which the values and norms of an organisation emphasise innovation (West and Anderson, 1996). The climate for innovation is concerned with an employee's perceptions of the extent to which his/her organisation is open to and accepts new ideas, promotes new ideas that challenge current practices, and stimulates risk-taking (Coelho et al., 2010). A climate for innovation enables employees to develop new mechanisms or improve work-related processes (King et al., 2007). Therefore, organisations must create climates that stimulate and encourage employees to engage in activities that result in innovation. Although numerous studies have investigated the topic of organisational innovation, the studies focusing on the dimensions of climate for innovation are still limited (Satsomboon and

Pruetipibultham, 2014). It is important to highlight the factors characterising an organisational climate that enhances innovative behaviours and facilitates the innovation process.

Reviewing the extant literature, researchers propose dimensions that influence the climate for innovation. Several frameworks have been developed for climate for creativity and innovation encompassing several dimensions. Examples include KEYS (Amabile et al. 1996), the Creative Climate Questionnaire (Ekvall 1996), the similar Situational Outlook Questionnaire (Isaksen, Lauer, and Ekvall 1999), Siegel Scale of Support of Innovation (Siegel and Kaemmerer 1978), Team Climate for Innovation (Anderson and West 1998) and the Climate for Innovation Measure (Scott and Bruce 1994). Dimensions of climate for innovation include leadership styles, autonomy and empowerment, idea time and support, risk-taking, work group cohesiveness, conflict and debate, employee involvement, organisation structure and rewards and recognition.

Previous research pinpoints that organisation's structure is a significant determinant of innovation and it can expedite or encumber innovation (Dalton et al. 1980; Damanpour 1991; Cosh, Fu, and Hughes 2012). An organisational organic structure can enhance an innovative climate in the organisation (Ahmed 1998). Cosh, Fu, and Hughes (2012) posit that decentralized decision-making, functional specialisation and informality increases an organisation's propensity to innovate. According to Ekvall and Ryhammar (1999), leadership is a crucial source of influence on organisational culture as well as climate for innovation. Numerous research studies highlight the imperative role of leadership as an antecedent of fostering climate for innovation (Amabile et al. 1996; Amabile et al. 2004; Sarros, Cooper, and Santora 2008; Hsu and Fan 2010; Isaksen and Akkermans 2011). Among leadership styles, research has shown that transformational leadership promotes innovation more than any other leadership style (Choi et al. 2016; Khalili 2016). When leaders encourage employees to voice their concerns, provide supportive feedback, and develop employees' skills and competencies, they are showing themselves as supportive, thus leveraging employees' innovativeness (Prieto and Pérez-Santana 2014). Empowerment enables employees to experiment and try several approaches to conduct their work and exploit ideas and develop them (Hennessey and Amabile 2010). Previous research indicates that idea time and idea support are crucial for an appropriate climate for innovation (Amabile et al. 1996; Isaksen, Lauer, and Ekvall 1999). Idea time refers to the amount of available for employees to elaborate new ideas (Isaksen 2007). In a supportive climate for innovation, novel ideas are considered in an attentive way by leaders and co-workers (Isaksen and Ekvall 2010). In contrast, when idea support is low, new ideas are spurned and derogatory counter-arguments emerge (Isaksen 2007).

Another significant dimension of climate for innovation is risk-taking. Previous research signifies that innovation requires risk-taking at all levels of the organisation (Isaksen 2007; King et al. 2007; García-Granero et al. 2015). As innovation requires development of new products and processes, risk-taking is characteristic of highly innovative organisations (Ruvio et al., 2014). Previous literature shows that employees are more innovative when they work as a team rather than individually (Hon and Chan 2013; Anderson, Potočnik, and Zhou 2014; Hon and Lui 2016). Collaboration, exchange of knowledge and sharing of information between employees across the organisation is an important source for innovation as new and novel ideas emerge when employees share experiences and insights, provide feedback and help (Keller 2001). Co-workers' mutual consideration and encouragement of novel ideas and support for innovation leads to a greater

degree of successful innovation outcomes (Gundry et al. 2016). Thus, work group cohesiveness is an essential dimension of climate for innovation.

Conflict and debate among employees in the organisation are essential for innovation (Isaksen and Ekvall 2010). Previous research show that when the level of conflict is high, employees tend to dislike each other and disagreements arise (Isaksen and Ekvall 2010). Conversely, in debating organisations, employees are encouraged to put forward new ideas, discuss different thoughts and share diversity of views. Preceding research indicates that involving employees in operations, strategic decision-making, and issues facing the organisation provides them with a sense of responsibility, and thus stimulates their innovative work behaviours (Isaksen 2007).

One of the most important dimensions of climate for innovation is rewarding and recognising employees for innovation. Reviewing the literature on extrinsic rewards, there are different arguments regarding the influence of extrinsic rewards on innovative behaviour at the workplace. Some researchers suggest that innovative behaviour can be enhanced by extrinsic rewards (Eisenberger et al. 2001; Eisenberger and Aselage 2009). In contrast, other scholars propose that extrinsic rewards can abridge creativity and innovation (Amabile, Hennessey, and Grossman 1986). Prieto and Pérez-Santana (2014) study results show that employees respond more innovatively to skill enhancing, job nature, and opportunities for growth than to compensation and incentives. Therefore, rewarding creativity and innovation is more complex than rewarding an ordinary performance (Baer, Oldham, and Cummings 2003). Thus, effectual reward and recognition systems for fostering innovation require further research (Prieto and Pérez-Santana 2014).

## **Methodology**

Methodologically, researchers placed emphasis on determining and measuring the climate for innovation dimensions through quantitative approaches (Amabile et al, 1996; Ekvall and Rhyammar, 1999). It is evident that additional qualitative research needs to be conducted to identify more practices and procedures of climate for innovation (Isaksen and Ekvall, 2010; Prieto and Pérez-Santana, 2014). Further, there is a need for more studies of climate for innovation using case study, observational and ethnographic approaches within organisational settings (Anderson, Potočnik and Zhou, 2014). Hence, this research adopts a qualitative research method using in-depth semi-structured interviews in the Egyptian telecommunications industry. The qualitative research allows the inquirer to study participants in their natural settings in which data is collected in the field at the site where participants experience the phenomena under study (Creswell 2013). For this study, the data is collected by talking directly to the participants (employees) in the telecommunications industry in Egypt and observing them behaving and acting within their contexts. This is to illustrate the climate for innovation as it is in a real-life setting rather than over-reliance upon large-scale questionnaires that are predominant in the literature (Anderson, Potočnik and Zhou, 2014). The natural setting provided the researchers with face-to-face interaction throughout the data collection process.

With a purposive and snowballing sampling, thirty-five in-depth semi-structured interviews were conducted to integrate a broad range of perspectives from employees in the telecommunications industry and to reach data saturation (Creswell 1998). The interviewed employees represent a variety of age, occupation and department. The sampling process ceased when theoretical saturation was reached, indicated by data redundancy where further interviews added no new information.

The semi-structured interviews were selected for data collection because they are a powerful method for generating description and interpretation of participants' social world (Ritchie et al. 2014). The interview process was flexible and less rigid than structured interviews (Bryman and Bell 2011). An initial interview guide was developed with open-ended questions and followed-up by probes. Starting with a general discussion of professional background, interviewees were asked if they consider their organisation innovative and how do they perceive climate for innovation. They were asked then to elaborate on the practices, policies, and procedures conducive to innovation at their organisation as well as to what extent does the organisation support new ideas and implement them. Probing and follow-up questions were used when necessary to encourage interviewees to elaborate on or clarify a response to obtain further depth and detail and to elicit further examples (Rubin and Rubin 2012).

A provisional list of climate for innovation codes was created prior to the fieldwork phase developed from the research themes. Each category from the provisional list of codes was given an operational definition to ensure consistency of meaning throughout the research process. Interview transcripts were reviewed and coded based on the provisional start list codes. The coding schemes were established and modified several times until final themes and categories were identified. An initial (first cycle coding) was undertaken, in which descriptive coding, simultaneous coding, and In Vivo coding were used (Saldana 2012). This initial coding process was followed by an axial coding to reassemble and refine the data and to explore connections between themes (Saldana 2012). Axial coding enabled the researchers to determine which codes in the research are dominant ones and reorganize the data in which synonyms were crossed out, redundant codes were deleted and the best representative codes were selected. A final list of current codes of dimensions of climate for innovation was established. NVivo software was used for data analysis to enhance the validity of the research and strengthen the rigour of the study (Siccama and Penna 2008). Intercoder reliability was conducted to enhance the quality of the findings and the rigour of the analysis process. Two stages of independent coding were undertaken by two external coders to ensure the trustworthiness of the data (Campbell et al. 2013). Further, triangulation was adopted to enhance the trustworthiness of the study. Researchers used company documents, such as annual reports, mission statement, company profile, press releases, company presentations and reports, events' brochures, and newspaper clippings. These documents were collected to corroborate the findings from the interviews. By triangulating data from various sources, the researchers were able to provide convergence of evidence to increase reliability and credibility.

## **Findings**

The study identifies twenty-one dimensions of climate for innovation, categorized into four main themes of climate for innovation: leadership for innovation, organisation support for innovation, organisation structure, and human resources practices. The results of the semi-structured interviews reported that the thirty-five employees believe that it is crucial for an organisation to have a supportive climate for innovation. Respondents argued that even if they have the capability to be innovative, their willingness depends on the organisation's climate for innovation. They reported that to implement ideas successfully, there needs to be supportive policies, practices, and procedures. They believed that the climate for innovation is behind the success of the organisation's innovations in the market. As one respondent states: "Climate for innovation is the

reason for all the innovations we are coming up with. We have a climate that encourages us to express our ideas and opinions freely.”

However, differences in climate for innovation perceptions among employees in various functional units are reported. Employees in non-commercial teams had lower perception levels of climate for innovation than employees in the commercial teams. They believed that the organisation supports ideas coming out from the commercial teams because they generate more revenue, and not all employees are given the opportunity to come up with ideas and innovate. One employee mentions: “not all ideas are supported because the company cares about the targets and is keen to achieve them. It depends on the department or function you belong to. There are people who are allowed to think and innovate while others have to do the jobs.”

Leadership for innovation is one of the main themes identified in the results. It includes senior management, line managers’ support, establishing values, customer centricity, challenging jobs, employee involvement and empowerment. Out of thirty-five interviewed employees, thirty-two have confirmed the crucial influence of leadership on climate for innovation. Results showed support for innovation and creation of appropriate climate for innovation is the main responsibility of the CEO. This was evident from quotes such as “The digital e-Bookstore innovation is one of our top innovations...I believe that the sponsorship from the CEO at that point, really made it happen because he was really passionate about it.” Twenty-two employees also spoke about the vital role of line managers and supervisors in fostering creativity and innovation. One employee stated: “I am working under the supervision of a good supervisor that can spot a talent, correct me, allocate me where I fit best and pushes me forward.”

One of the identified dimensions of climate for innovation is the value-based organisation. Having innovation as one of the main organisation’s values, was mentioned by twelve employees. Employee interview results indicate that the organisation’s values are the root for climate for creativity and innovation. This was revealed in quotes such as: “We have the innovation hungry value as one of our values, which encourages and enforces the innovation climate.” Interview results acknowledged customer centricity as a crucial dimension of climate for innovation. Customer centricity was mentioned by thirty-one employees. It is defined in this research as the extent to which the organisation places the customer at the heart of its strategy to deliver superior customer experience, in which the organisation becomes customer-obsessed, seeks to understand the customer, and innovates products and services to add value to the customer. Results posited that being customer-obsessed encourages employees to think from a customer mindset and, hence, innovate value-added products, services and processes that would enhance the customer experience. Employees summarized the importance of customer centricity by stating, “So when we perceive this importance or focus on customer experience, this makes us more innovative when thinking of new products and services to our customers,” and “The main thing that contributes to the company’s innovativeness is being customer-centric.”

Findings showed that highly challenging job tasks encourage employees to continuously think out-of-the-box to innovate products and services. Employees conduct various tasks and move from one unit to another to broaden their perspectives and think in a divergent way and, thus, innovate. One employee posited that: “Our jobs are challenging... we always have to think of something new. Here in the organisation, we have challenges in everything. Challenge, yes, contributes to



innovation.” Results showed that when employees get involved in the innovation process, they are more likely to get engaged in proactive and discretionary behaviours to implement innovations. A senior manager emphasised that involving young employees in projects provides them with more of a sense of responsibility and encourages them to be more innovative. This was evident in quotes such as: “the organisation involves all layers in whatever decision it is. When an innovation is addressed, the commercial team starts by involving the junior employees, then team leaders, then senior managers and then the CEO.” Empowerment is one of the highly-cited dimensions of climate for innovation, where nineteen employees mentioned that the extent to which the organisation empowers them affects the climate for innovation in the organisation. An employee pointed out: “I believe the laissez-faire way is the best for innovation. When you are empowered, you are able to be creative and innovative.”

The second theme for climate for innovation identified is the organisation support for innovation that includes creation of an innovation unit, open innovation, idea support and implementation, idea time, and risk taking. The importance of establishing a dedicated unit for innovation was mentioned by seventeen employees. Findings revealed that the creation of an innovation team triggers innovation across the whole organisation by encouraging employees throughout the organisation to come up with fresh ideas, as well as facilitating the innovation process. Employees mentioned that the main role of the innovation unit is to go beyond telecommunications categories and look into adjacent markets for business opportunities to enable the organisation to produce diversified innovations. An innovation unit manager summarized the importance of the creation of a dedicated unit for innovation: “My team helps the company to create a climate conducive to innovation. We are an entity responsible at looking at business opportunities. Our job is to go beyond communications categories into adjacent categories to diversify what we provide to our customers.” The interview results revealed that the telecommunication organisation does not depend only on employees as a source of innovative ideas, which is referred to as open innovation. Employees mentioned that the organisation uses external sources to increase the efficiency and effectiveness of the innovation process, to get new technologies and gain access to new and creative ideas from outside the organisation. Employees perceived open innovation practices positively and it was mentioned as an important dimension of climate for innovation. Results reveal that the telecommunication organisation launched ventures incubators, which aim to develop small technology companies to expand the scope of their business, support youth entrepreneurship, and encourage innovation and creativity. This was evident in quotes by innovation managers such as: “I am responsible for ventures, which is outsourcing innovation rather than inventing in-house. I go to a company and acquire it or buy some of its shares and sponsor whatever they are innovating,” and “we don’t get ideas from employees only, we go and search external sources such as universities. We get new ideas from internal and external sources and all this supports the climate for innovation.”

Thirty-one employees mentioned that the extent to which the organisation encourages and supports the generation and implementation of new ideas and initiatives is of paramount importance. This was evident in quotes such as “We have the catalyst tool, which is available for employees to propose and submit new ideas. People are overly excited to submit ideas. We have an unbelievable number of ideas submitted daily.” Employees reported that the practical implementation of new ideas encourages them to be more creative and innovative. On the other hand, some employees pointed out that the extent to which an idea is supported depends highly on the employee’s relationship with the line manager, as well as the department he/she belongs to. They emphasised

that the ideas coming up from the commercial teams, such as marketing teams, are likely to be supported more than the other functional units. An employee mentioned that “When I was in the commercial team, heaven’s doors were open. The management listens to the marketing people more.” Twenty-two employees stated that the amount of time available for them to think and elaborate on new ideas is an important dimension of climate for innovation. Results revealed that there is a significant difference in the way commercial and non-commercial teams perceive the amount of time they have for elaborating new ideas. An employee from the sales team stated that: “the dark side of the sales job is that we don’t have enough time dedicated for brainstorming ideas. We are drained in our jobs and sales targets. When I was in the marketing team, we had more time for coming up with new ideas.” Twenty-one employees argued that risk-taking is a significant dimension of climate for innovation. They mentioned that novelty is related to high risk-taking such as investing in unexplored technology or introducing new products and services. This was evident in an employee stating “when we think of new ideas or are competing to be the market leaders, we take a risk. We don’t go with the traditional way of thinking; we think out-of-the-box, and this is a risk.” Employees from the Commercial and Innovation teams reported that their organisations are risk-takers, while employees from the Customer Experience and Sales reported that their organisations are moderate risk-takers. A possible explanation for this is the high support of the organisation to the commercial teams, as discussed earlier.

The third theme of climate for innovation identified is the organisation structure. Twenty-eight respondents mentioned that organic organisation structure is crucial for a climate for innovation. Interviewees explained that an innovative organisation should be non-hierarchical, informal, has little red tape, enjoys flexibility and is playful and dynamic. This is reflected in quotes such as: “we are more of a flat organisation; we don’t have too much hierarchy like other big corporations. We have an open-door policy; the CEO is very approachable. So, people don’t feel that there are barriers.” An interesting finding was the structure of the functional unit that was emphasised by twenty employees. Findings reveal that the telecommunications organisations divide the commercial teams into mass market segment, aspiring customer segment, high-end customer segment, and the youth segment. Results revealed that the continuous restructuring of the functional units fosters creativity and innovation: “every year we re-think our organisation’s structure and how it can foster creativity and innovation. In the earlier days, the structure was different than now where we were working by product, such as pre-paid and post-paid. We decided to organise the company’s structure in term of customer segments.” The physical environment dimension is suggested by sixteen employees as a significant dimension of climate for innovation. Employees spoke positively about the influence of the office space, colours, odour, cafes, sports area, and other facilities on the climate for innovation. One employee mentioned: “sometimes we go sit in the garden or open-air area to come up with potential innovative ideas. The physical environment plays a major role in contributing to this climate for innovation. We don’t sit at our desks like the regular settings in other companies; we move a lot. We have TV areas, cafes, gardens, and special rooms for brainstorming new ideas.” Another noteworthy dimension is playfulness and dynamism. A third of the interviewed employees spoke positively about the level of playfulness and dynamism in the organisations. They described their work environments as “a non-stop fun spirit”, as quoted by several employees. Employees mentioned that playfulness and dynamism encourage the generation of novel ideas and new initiatives. This was obvious in quotes such as: “the funny atmosphere that we have; it might sound a small thing but the events and parties

that we have in the company are really amusing. This creates a fun spirit that makes employees happy when they are coming to work; it encourages them to think of new things and be more innovative.”

More than two-thirds of the employees mentioned the effectiveness of the human resource practices within the organisation and its role in facilitating an appropriate climate for innovation. Interview results suggested that effective human resource practices incorporating approaches to rewards and recognitions, performance appraisal, internal communications, training and recruitment predict a positive climate for innovation. Interviewees emphasised the importance of rewarding and recognising innovative ideas in quotes such as: “We have a specific reward policy for innovation where we have a prize called ‘I’m innovative’ for employees who think out-of-the-box and come up with innovative ideas.” Findings showed that performance appraisal based on innovative behaviours is a significant practice that stimulates innovation because it enables the organisation to identify employees with lower innovative behaviours and, thus, conduct training programmes to strengthen their performance. Employees emphasised the critical role of the internal communication dimension in creating an appropriate climate for innovation. Employees spoke about various internal communication practices that the organisation adopts to create an appropriate climate for innovation, such as devising programmes that encourage innovation, foster the use of online networks in work teams, disseminate best practices, fostering the exchange of knowledge through newsletters and hosting events dedicated to innovation and encouraging collaboration between functional departments. An internal communication director mentioned that “the role of the internal communication department is basically the central nervous system of the organisation’s communication system ... we remind our employees daily about the importance of innovation.” Another identified human resources dimension is training and development. Employees mentioned that the Human Resources department conducts periodical training programmes about innovation and how to think in an innovative way as well as e-learning modules on innovation, to encourage employees to think differently and be more efficient and effective. Last, but not least, employees indicated that recruitment and selection policies are an important part of promoting climate for innovation. Results suggested that even if the leaders are supporting innovation, the organisation cannot be innovative unless it recruits the right people. The telecommunications organisations conduct programmes to discover the talents of universities’ graduates and chooses the top talents to be recruited. Apart from personality traits, diversity was reported as of utmost importance in the selection and recruitment of innovative people. The importance of diversity is reflected in the following quote: “One of the most important factors of the climate for innovation is diversity. I mean diversity in mindsets; you have people coming from a very strong telecom background, FMCG background, some people are introverts while others are extroverts ... you need to have the normal distribution within the team. If your team is coming from the same background, ideas or innovations will be the same.”

## **Discussion**

One of the main themes identified in the current study is leadership for innovation. It includes senior management and line managers’ support, establishing values, customer centricity, trust and

openness, challenging jobs, employee involvement and empowerment. This research findings identify customer centricity practices as a crucial dimension of climate for creativity and innovation, which was not included in previous climate for creativity and innovation scales (Ekvall, Arvonen and Waldenstrom-Lindblad, 1983; Isaksen, Lauer and Ekvall 1999). Results reveal that the telecommunications organisations implement practices and policies to ensure high levels of customer centricity to stimulate employees to think from a customer mindset. Such practices included the launch of a customer experience excellence programmes, placing customer centricity as one of the organisation' key pillars and establishing commercial teams dedicated to each customer segment. Customer centric organisations are more likely to provide successful innovative products and services that are congruent with customer needs and wants (Grisseemann, Plank and Brunner-Sperdin, 2013). Literature also suggests that customer centric organisations have high chances of producing new-to-the-world innovations (Lukas and Ferrell, 2000), and retain their customers (Grisseemann, Plank and Brunner-Sperdin, 2013). Thus, this study proposes customer centricity is an important dimension of climate for innovation.

Another identified dimension of the climate for innovation theme of leadership for innovation is value-based organisation that is not suggested in previous measurements of climate for innovation. The current study results show that an organisation should have innovation as one of its main values and pillars to encourage employees to innovate. Previous research investigated the role of cultural values for innovation in fostering employees' innovative work behaviours and enhancing organisation innovation (Martins and Terblanche, 2003; Naranjo Valencia, Sanz Valle and Jiménez Jiménez, 2010). However, establishing a shared core value emphasising the importance of innovation was not explicitly addressed in previous climate for innovation frameworks. The findings of this research posit that having innovation as one of the organisation's main values is the root for climate for innovation.

Consistent with the literature, the findings reveal that senior leadership is a crucial dimension of climate for innovation (Ekvall, 1996; Ekvall and Ryhammar, 1999; Amabile et al., 2004; Isaksen, 2007). Findings show that the Chief Executive Officer plays an important role in the creation of climate for innovation). Results posit that line managers or supervisors influence climate for innovation. The findings suggest that anyone can be innovative, but it depends largely on direct supervision of line managers (Prieto and Pérez-Santana, 2014, and Cheung and Wong, 2011).

This study shows that in order to promote innovation in an organisation, employees must be open and frank with each other and willing to share ideas, experiences and views, and that depends on the level of openness and trust (Gundry et al., 2016). Challenging jobs is found to be another dimension of climate for innovation in the leadership for innovation theme. Findings suggest that jobs should be designed in a way to push employees out of their comfort zone. The research results convey that involving employees in operations, strategic decision-making and issues facing the organisation provides them with a sense of responsibility and, thus, stimulates their creative and innovative work behaviours. Further, the findings point out that a high level of empowerment leads to positive perceptions of climate for innovation.

The second theme of climate for innovation identified is the organisation support for innovation that includes creation of an innovation unit, open innovation, idea support and implementation, idea time, and risk-taking. Findings indicate that the creation of a dedicated team for innovation triggers and fosters innovation across the whole organisation and facilitates the innovation process. This unit is responsible for encouraging innovation across the organisation as well as examining

new ideas and exploring new potential opportunities in the market that are not related to the core products and services. However, establishing a dedicated unit for innovation was not addressed earlier in previous climate for innovation frameworks (Amabile et al., 1996; Isaksen, Lauer and Ekvall, 1999). Thus, the current study proposes that the creation of a dedicated unit for innovation is an important dimension of climate for innovation. Open innovation is identified as a substantial dimension of climate for innovation theme of organisation support for innovation. Research findings point out that an organisation should use external sources for creative ideas to enhance the organisation's innovation capability and innovativeness. Within the telecommunications industry, Bigliardi, Ivo Dormio and Galati (2012) argue that open innovation provides significant advantages to the organisation, ranging from improved service quality, service innovation customisation, to cost reduction. Thus, confirming the results of previous research, this study postulates that open innovation is a significant practice that enhances organisation innovativeness. Nonetheless, open innovation was not included in prior climate for innovation frameworks and its relationship with organisation innovativeness was examined separately. Hence, this study identifies open innovation as a main dimension of climate for innovation.

Findings reveal that idea support is a crucial dimension of climate for innovation, where organisations should applaud novel ideas and initiatives. To support new idea generation, organisations should adopt various practices, such as establishing forums for idea generation, conducting programmes and competitions, and providing showrooms and think boxes. The current study suggests idea implementation, the extent to which an organisation practically implements new ideas, as a dimension of climate for innovation theme of organisation support for innovation. Idea implementation is not identified as a dimension of climate for innovation in previous studies. Congruent with previous research, findings from this study confirm that idea time is an essential dimension of climate for innovation to allow employees to explore and elaborate on novel ideas and projects (Martins and Terblanche, 2003; Isaksen, 2007). The current study's results are consistent with earlier research confirming that the higher the organisation's tolerance for risk-taking, the higher the organisation's innovation (Ruvio et al., 2014).

The third theme of climate for innovation identified is the organisation structure. Findings show that the organisations under study have organic structure including less-bureaucracy, non-hierarchy, structure of functional units, flexibility, informality, playfulness and dynamism. Though functional units structuring is not mentioned as a dimension of climate for innovation, the current study argues that continuous restructuring of the functional units according to customer segments fosters innovation and enhances the climate for innovation. The current study's findings reveal that the physical environment is a significant dimension of climate for innovation. However, previous research concerned with climate for innovation did not consider physical environment in their frameworks (Amabile et al., 1996; Isaksen, Lauer and Ekvall, 1999). Results of this study indicate that a non-traditional and relaxing office setting enhances employees' creativity and innovation (Oksanen and Ståhle, 2013; Dul and Ceylan, 2014).

The fourth theme of climate for innovation identified in the current study is human resources practices including rewards and recognition, performance appraisal, internal communication, training and development, and recruitment. The human resources practices have never been fully investigated in terms of climate for innovation (Heffernan et al., 2016). Findings posit that recognition awards that increase intrinsic motivation are more effective to promote innovative behaviours, where employees feel more proud when they get recognised for proposing novel ideas and innovations. The current study suggests that performance appraisal is a significant practice

that enhances and stimulates creativity and innovation. The current study's results are consistent with the findings of Cooke and Saini (2010) who argue that performance management programmes are important HRM practices that promote innovation. However, the performance appraisal dimension does not receive attention in the climate for innovation literature and is not considered in the climate for innovation frameworks and measurements.

The current study proposes that internal communication is an important dimension of climate for innovation. Congruent with the existing literature, the findings of this study postulate that internal communication across functional units has a positive influence on an organisation's innovation (Rodríguez, Pérez and Gutiérrez, 2008). However, despite the crucial role of internal communication in fostering innovation, internal communication is not cited as a dimension of climate for innovation in earlier research and frameworks.

In line with previous research, the current study's findings point out that an organisation should run a variety of training and development sessions to encourage innovation across the organisation (Cooke and Saini, 2010). However, despite the importance of training and development in fostering innovation, the extant literature on climate for innovation did not consider training and development as a dimension. Finally, results of the current study suggest that recruitment and selection policies represent an important dimension of climate for innovation. The organisation adopts an innovation-oriented recruitment policy, which is the extent to which the selection and recruitment of employees is focused on leveraging the organisation innovativeness (Stock, Totzauer and Zacharias, 2014). Despite that, the climate for innovation frameworks in the literature did not mention recruitment.

## **Conclusion**

This study contributes to the innovation management literature by identifying further dimensions of climate for innovation that foster organisation innovativeness in a real-life setting. This study pinpoints dimensions of climate for innovation that enhances organisation innovativeness that were not identified in previous climate for innovation frameworks, including: customer centricity, a dedicated unit for innovation, open innovation, idea implementation, structure of functional units, hierarchy, bureaucracy, informality, performance appraisal, physical environment, flexible working conditions, internal communication, training and development, and recruitment. Some of these dimensions, such as open innovation, training and development, and recruitment, were studied separately as practices that enhances employees' innovative behaviours and organisation innovativeness, but not integrated in climate for innovation frameworks. The study provides practitioners and organisations a greater understanding of what are the appropriate practices, policies and procedures needed to stimulate innovation in their organisations.

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